

Appendix A Notice of Preparation and Public Comment Letters

Appendices

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NOTICE OF PREPARATION AND SCOPING MEETING CITY OF ONTARIO

Date: July 7, 2021

Subject: Notice of Preparation (NOP) and Scoping Meeting for The Ontario Plan 2050 Supplemental Environmental Impact Report

To: State Clearinghouse, State Responsible Agencies, State Trustee Agencies, Other Public Agencies, Interested Organizations

Lead Agency/Sponsor: City of Ontario, Planning Department

Project Title: The Ontario Plan (TOP) 2050 Supplemental Environmental Impact Report

NOTICE IS HEREBY GIVEN that the City of Ontario (Latitude 34°03'N / Longitude 117°39'W) will prepare a Supplemental Environmental Impact Report (SEIR) for The Ontario Plan 2050 (TOP 2050). The City is the lead agency for the project. The purpose of this notice is (1) to serve as a Notice of Preparation of an EIR pursuant to the California Environmental Quality Act (CEQA) Guidelines § 15082, (2) to advise and solicit comments and suggestions regarding the scope and content of the EIR to be prepared for the proposed project, and (3) to notice the public scoping meeting.

Consistent with § 15168 and § 15163 of the CEQA Guidelines, the City will prepare a Supplemental EIR to address program-level environmental impacts associated with amendments to the City's previous The Ontario Plan, which was adopted pursuant to the EIR (SCH 2008101140) certified in January 2010 (Certified EIR). The proposed project is an update to the City's long-term plan of policies that will guide future development activities and City actions (TOP 2050). No specific development projects are proposed as part of this TOP 2050. However, the program-level SEIR can serve to streamline environmental review of future projects.

Notice of Preparation: The City of Ontario, as lead agency, requests that responsible and trustee agencies respond in a manner consistent with § 15082(b) of the CEQA Guidelines and § 21080.4 of the Public Resources Code. Responsible agencies must submit any comments in response to this notice during the 30-day public review period. The public review period will commence on **Tuesday, July 20, 2021**, and will close on **Thursday, August 19, 2021**. A copy of the NOP can be viewed electronically on the City's web page at: <https://www.ontarioplan.org/top2050/>.

Written Comments: Comments in response to this notice can be emailed to Thomas Grahn at tgrahn@ontarioca.gov or can be physically mailed in writing to the address below by the close of the 30-day NOP review period at 5:00 pm on August 19, 2021:

City Hall, Planning Department
303 East "B" Street
Ontario, CA 91764

Please include the name, email, and/or telephone number of a contact person at your agency or organization who can answer questions about the comment.

Scoping Meeting: The City will hold a scoping meeting in conjunction with this NOP in order to present the project and the SEIR process and to provide an opportunity for agency representatives and the public to assist the lead agency in determining the scope and content of the environmental analysis for the SEIR. As a result of COVID-19 and restrictions placed on in-person gatherings throughout the State of California under Executive Order N-29-20 and N-08-21, the City will host an online public meeting to receive public comments on the scope of the SEIR rather than an

in-person event. The online public meeting will be hosted on the evening of **Thursday, August 5, 2021, at 6:00 pm** and conducted via a live Zoom meeting. To participate in the scoping meeting, please access the TOP 2050 Update website for meeting information. Information on how to participate will be posted 72 hours before the scoping meeting. The scoping meeting will begin with a presentation at 6:00 pm, followed by questions from the public.

Project Location

The City of Ontario is located in the southwestern corner of San Bernardino County and is surrounded by the cities of Chino and Montclair and unincorporated San Bernardino County to the west; the cities of Upland and Rancho Cucamonga to the north; the City of Fontana and unincorporated San Bernardino County to the east; and the City of Eastvale and unincorporated Riverside County to the south (see Figures 1, *Regional Location*, and 2, *Aerial Photograph*). Regional circulation to and through the city is provided by Interstate 10 and State Route 60 (east-west) and by Interstate 15 and State Route 83 (north-south).

Project Description

THE ONTARIO PLAN

The Ontario Plan (TOP) is the City's policy and implementation framework that guides the long-term growth and improvement of the Ontario community through six interrelated components of city governance:

- » A **Vision** that provides a sense of the purpose and mission for city governance and sets the tone for the other components of TOP. The Vision's central theme is a sustained, community-wide prosperity that continuously adds value and yields benefits.
- » A **Governance Manual** that establishes a set of goals and policies to promote consistent City leadership based on the principles of regional leadership, transparency, long-term value, accountability, and inclusivity.
- » A **Policy Plan** that serves as the City's legally required General Plan and that states long-term goals, principles, and policies to achieve Ontario's Vision through nine elements: land use, housing, mobility, safety, environmental resources, parks and recreation, community economics, community design, and social resources.
- » A list of **City Council Priorities** that shape the City's ongoing annual budgeting process, with a focus on a variety of short- and long-term goals and objectives.
- » An **Implementation Plan** that identifies the actions needed to carry out the TOP's policies. This includes initiatives by the City as well as decisions on public and private development projects and City activity programs.
- » A **Tracking and Feedback** system that charts the City's progress toward achieving the Policy Plan goals, providing data and analysis that enables decision makers to make strategic course corrections in response to changing circumstances and monitor ongoing operational effectiveness.

TOP 2050

The proposed project, TOP 2050, is an update to TOP to guide the City's development and conservation for the next 30 years through 2050. The proposed project is a focused effort, with particular emphasis on conducting technical refinements to the Policy Plan to comply with state housing mandates; conform with new state laws related to community health, environmental justice, climate adaption, resiliency, and mobility; bring long-term growth and fiscal projections into alignment with current economic conditions; and advance the Tracking and Feedback system and Implementation Plan.

Policy Plan

The TOP 2050 update focuses on technical updates to the Policy Plan to comply with state housing mandates and conform with new state laws related to community health, environmental justice, climate adaption, resiliency, and

mobility. The majority of updates created through the proposed project will weave refinements throughout the existing structure of the Policy Plan, which is organized into nine broad categories:

- » **Land Use Element** establishes how land is developed, used, and arranged to ensure compatibility and add value to the community in terms of function, design, and fiscal return.
- » **Housing Element** ensures greater production, preservation, and improvement of housing in the community in the context of existing and future housing needs, constraints to the production of housing, and available land and financial resources.
- » **Parks and Recreation Element** establishes broad direction for the Ontario park system and recreation programs, emphasizing the vital role parks and recreation programs play in economic development, land use, housing, community health, infrastructure, and transportation goals.
- » **Environmental Resources Element** addresses how resources are managed comprehensively using systems that are environmentally and economically sustainable and meet growth demand in Ontario.
- » **Community Economics Element** articulates the City’s approach to developing and maintaining the local economy, retaining and attracting further investments, and connecting economic development with the City’s long-term fiscal health.
- » **Safety Element** addresses how the City protects life, property, and commerce from impacts associated with human-made and natural hazards, disasters, and other threats to public safety; also identifies ways the City can establish strategies to adapt to increased hazard risks and strategies to become more resilient.
- » **Mobility Element** coordinates the circulation system with future land use patterns and buildout to satisfy local and subregional mobility needs, as well as access and connectivity among the various neighborhoods, villages, and districts.
- » **Community Design Element** establishes design guidance and requirements to protect existing investments; achieve sustainable environments; add value to the community; and create safe and pleasant places where people want to live, work, and recreate.
- » **Social Resources Element** improves access to quality and accessible health care, education, community services and cultural activities—critical components to achieving a prosperous, more equitable, and complete community.

The land use designations in the City of Ontario will remain as designated under the current General Plan, with adjustments made to the projected land use mix and boundaries of the mixed-use areas. Table 1, *Buildout Statistical Summary*, provides a statistical summary of the buildout potential associated with the TOP 2050 Policy Plan compared to existing conditions and compared to the buildout potential under the currently approved TOP (“approved project” or “approved TOP”). Figures 3, *Current Land Use Plan Map*, and 4, *Proposed Land Use Plan Map*, include the approved TOP and proposed TOP 2050 land use maps for the City.

Table 1 Buildout Statistical Summary

Scenario	Acres	Units	Population	Nonresidential Square Feet	Employment
Existing Conditions	32,022	52,466	179,597	156,065,382	131,999
Approved TOP	32,022	102,358	350,716	260,399,271	313,067
Proposed TOP 2050	32,022	128,419	414,704	253,472,682	285,577
Net Difference (Proposed TOP 2050 -Approved TOP)	0	26,061	63,988	6,926,589	-27,490

Other Components of The Ontario Plan

Originally adopted in 2010, the City’s Vision still provides a strong foundation for the TOP 2050 and does not need to be overhauled or altered in any way. The City Council Priorities are updated concurrently with the annual budgeting process. The Governance Manual will receive minor (if any) refinements to reflect new information and available technologies that could improve municipal operations and decision making. The Implementation Plan will be updated to reflect changes to the Policy Plan. The Tracking and Feedback system will be advanced and formalized through additional coordination and software improvements.

Related Implementation Actions

To implement the update Policy Plan and new requirements in state housing law, the proposed project will also include minor refinements to the City’s Development Code—primarily to the Medium-High Density Residential and Mixed-Use Zoning Districts—to facilitate affordable housing and implement changes from the Housing Element update.

Public Agency Approvals

The proposed TOP 2050 will require adoption by the Ontario City Council. The Planning Commission and other decision-making bodies will review the proposed project and make recommendations to City Council. Though other agencies may be consulted during the project process, their approval is not required for adoption of TOP 2050. However, subsequent development under TOP 2050 may require approval of state or federal responsible or trustee agencies that may rely on the programmatic SEIR for decisions in their areas of expertise.

Environmental Factors Potentially Affected

The City determined that the TOP 2050 would require preparation of a SEIR to address all 20 environmental topics identified in the CEQA Guidelines; thus, an Initial Study was not prepared in conjunction with this NOP.

The TOP 2050 could potentially affect the following environmental factors, and each will be addressed in the Supplemental EIR:

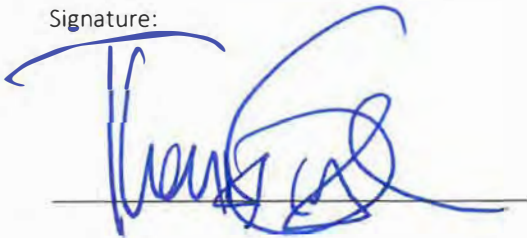
- » Aesthetics
- » Agriculture & Forestry Resources
- » Air Quality
- » Biological Resources
- » Cultural Resources
- » Energy
- » Geology/Soils
- » Greenhouse Gas Emissions
- » Hazards & Hazardous Materials
- » Hydrology/Water Quality
- » Land Use & Planning
- » Mineral Resources
- » Noise
- » Population & Housing
- » Public Services
- » Recreation
- » Transportation
- » Tribal Cultural Resources
- » Utilities & Service Systems
- » Wildfire

The City includes properties that are on a list compiled pursuant to Government Code Section 65962.5.

If you have further questions or require additional information, please contact Thomas Grahn, Senior Planner at 909-395-2413, or email at tgrahn@ontarioca.gov.

Date: July 7, 2021

Signature:






A handwritten signature in blue ink, appearing to read 'Thomas Grahn', is written over a horizontal line. The signature is stylized and cursive.

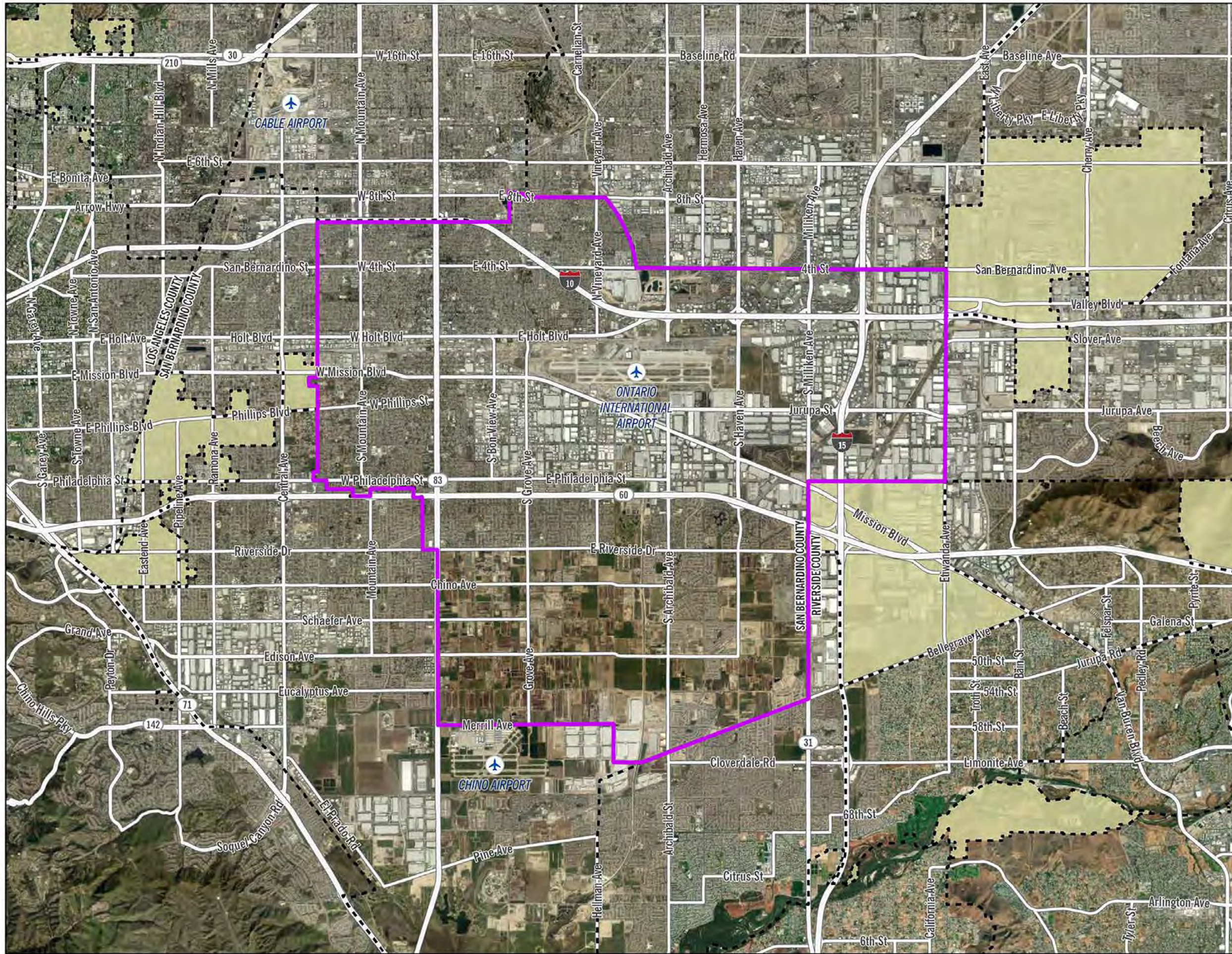
Thomas Grahn, Senior Planner

ATTACHMENTS:

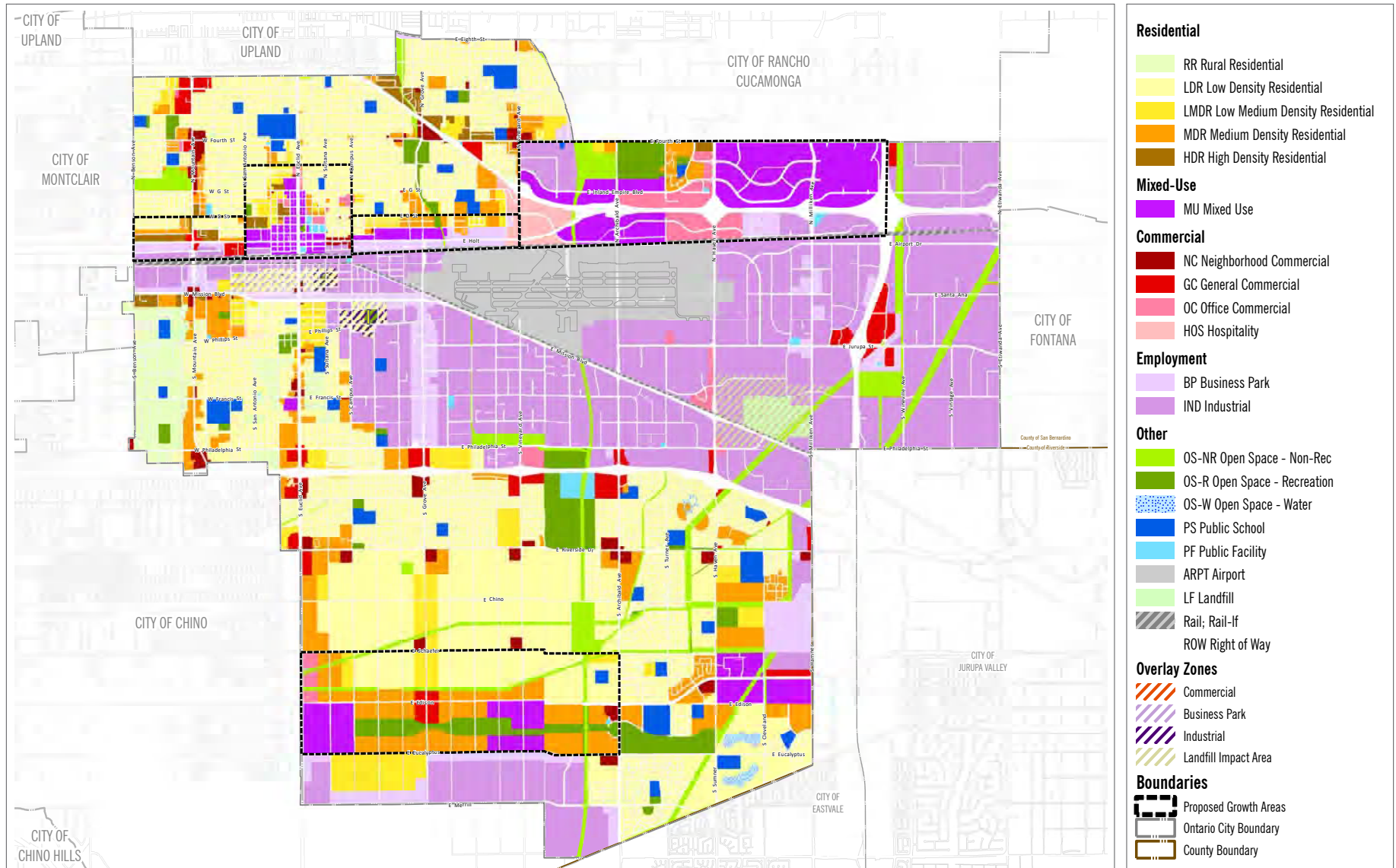
- » Figure 1: Regional Location
- » Figure 2: Aerial Photograph
- » Figure 3: Current Land Use Plan Map
- » Figure 4: Proposed Land Use Plan Map

DRAFT AERIAL MAP

-  Airports
-  City Boundary Line
-  Ontario City Limit
-  County Boundary
-  Unincorporated County



Notice of Preparation

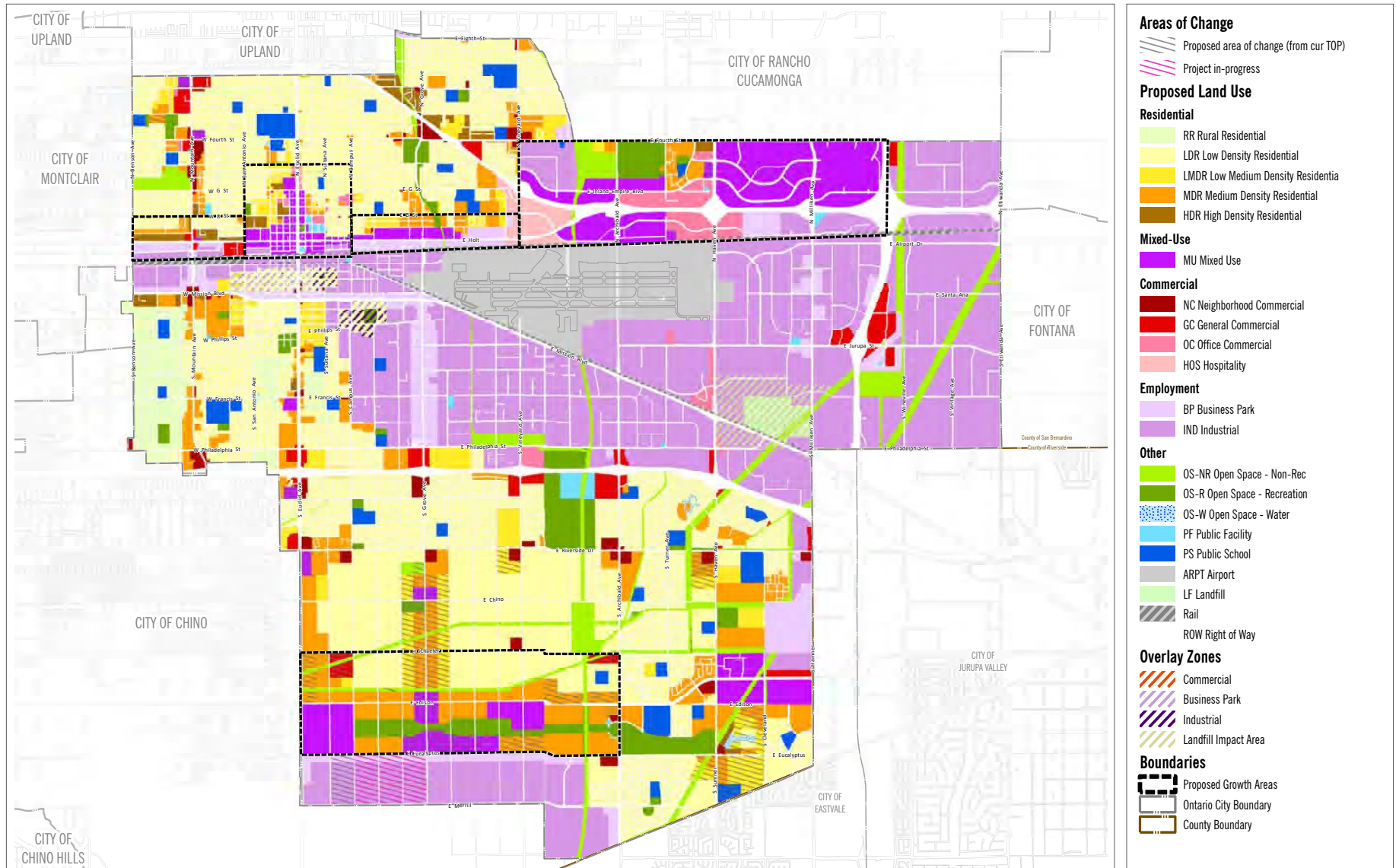


Source: 2050 The Ontario Plan, 2021.



Figure 3
Current Land Use Plan Map

Notice of Preparation



Source: 2050 The Ontario Plan, 2021.



Figure 4
Proposed Land Use Plan Map

From: MATHEW, JACOB K@DOT <Jacob.MATHEW@dot.ca.gov>
Sent: Thursday, July 22, 2021 11:38 AM
To: Thomas Grahn <TGrahn@ontarioca.gov>
Subject: Ontario Plan 2050

Hi,
Thank you for providing the California Department of Transportation (Caltrans) the opportunity to review and comment on the Notice of Preparation (NOP) of a Supplemental Environmental Report for the Ontario Plan 2050 (Project), for the City of Ontario. The proposed plan is an update to the City's long-term plan of policies that will guide development activities and City actions (TOP 2050).

As the owner and operator of the State Highway System (SHS), it is our responsibility to coordinate and consult with local jurisdictions when a proposed development may impact our facilities. As the responsible agency under the California Environmental Quality Act, it is also our responsibility to make recommendations to offset associated impacts with the proposed project. Although the project is under the jurisdiction of the City of Ontario, due to the project's potential impact to the State facilities, it is also subject to the policies and regulations that govern the SHS.

In the preceding Supplemental EIR, we recommend a Traffic Impact Analysis (TIA) be prepared to accurately evaluate the extent of potential impacts of the project to the operational characteristics of the existing State facilities by the project area. We recommend the TIA be submitted prior to the circulation of the Supplemental EIR to ensure timely review of the submitted materials to address any potential issues. We offer the following comments:

- 1) **Submit copies of all traffic related documents for review.** The data used in the TIA should not be more than 2 years old, and shall be based on the Southern California Association of Governments 2016 Regional Transportation Plan Model. Use the Highway Capacity Manual 6 methodology for all traffic analyses.

Caltrans is committed to providing a safe transportation system for all users. We encourage the City to embark a safe, sustainable, integrated and efficient transportation system and complete street to enhance California's economy and livability. A pedestrian/bike-friendly environment served by multimodal transportation would reduce traffic congestion prevalent in the surrounding areas.

- 2) Design the local streets to serve vehicular and pedestrian circulation equally, and for safe pedestrian friendly environment. Consider both Americans with Disability Act and California Highway Design Manual standards and requirements to provide transportation routes for all users and modes, including pedestrian and bicyclists. Provide a continuous multi-modal circulation system throughout the City, specifically for pedestrians, allowing current/future residents, employees, and guests to access the attraction places.
- 3) Relegate the parking spaces to the back of the buildings and locate preferential parking for vanpools and carpools, along with, secure, visible, and convenient bicycle parking/racks accessible to retail and office locations. Consider installing electric vehicle charging stations, and locate parking space for low-emitting, fuel-efficient, alternative-fueled vehicle visitor parking in commercial and office uses.

These recommendations are preliminary and summarize our review of materials provided for our evaluation. If you have any questions regarding this email, please contact me.

Thanks,
Jacob Mathew
D-8, Planning



NATIVE AMERICAN HERITAGE COMMISSION

July 22, 2021

Thomas Grahn
City of Ontario
303 East B Street
Ontario, CA 91764

CHAIRPERSON
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Luiseño

VICE CHAIRPERSON
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Pomo

NAHC HEADQUARTERS
1550 Harbor Boulevard
Suite 100
West Sacramento,
California 95691
(916) 373-3710
nahc@nahc.ca.gov
NAHC.ca.gov

Re: 2021070364, The Ontario Plan (TOP) 2050 Supplemental Environmental Impact Report (SEIR) Project, San Bernardino County

Dear Mr. Grahn:

The Native American Heritage Commission (NAHC) has received the Notice of Preparation (NOP), Draft Environmental Impact Report (DEIR) or Early Consultation for the project referenced above. The California Environmental Quality Act (CEQA) (Pub. Resources Code §21000 et seq.), specifically Public Resources Code §21084.1, states that a project that may cause a substantial adverse change in the significance of a historical resource, is a project that may have a significant effect on the environment. (Pub. Resources Code § 21084.1; Cal. Code Regs., tit.14, §15064.5 (b) (CEQA Guidelines §15064.5 (b)). If there is substantial evidence, in light of the whole record before a lead agency, that a project may have a significant effect on the environment, an Environmental Impact Report (EIR) shall be prepared. (Pub. Resources Code §21080 (d); Cal. Code Regs., tit. 14, § 5064 subd.(a)(1) (CEQA Guidelines §15064 (a)(1)). In order to determine whether a project will cause a substantial adverse change in the significance of a historical resource, a lead agency will need to determine whether there are historical resources within the area of potential effect (APE).

CEQA was amended significantly in 2014. Assembly Bill 52 (Gatto, Chapter 532, Statutes of 2014) (AB 52) amended CEQA to create a separate category of cultural resources, "tribal cultural resources" (Pub. Resources Code §21074) and provides that a project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment. (Pub. Resources Code §21084.2). Public agencies shall, when feasible, avoid damaging effects to any tribal cultural resource. (Pub. Resources Code §21084.3 (a)). **AB 52 applies to any project for which a notice of preparation, a notice of negative declaration, or a mitigated negative declaration is filed on or after July 1, 2015.** If your project involves the adoption of or amendment to a general plan or a specific plan, or the designation or proposed designation of open space, on or after March 1, 2005, it may also be subject to Senate Bill 18 (Burton, Chapter 905, Statutes of 2004) (SB 18). **Both SB 18 and AB 52 have tribal consultation requirements.** If your project is also subject to the federal National Environmental Policy Act (42 U.S.C. § 4321 et seq.) (NEPA), the tribal consultation requirements of Section 106 of the National Historic Preservation Act of 1966 (154 U.S.C. 300101, 36 C.F.R. §800 et seq.) may also apply.

The NAHC recommends consultation with California Native American tribes that are traditionally and culturally affiliated with the geographic area of your proposed project as early as possible in order to avoid inadvertent discoveries of Native American human remains and best protect tribal cultural resources. Below is a brief summary of portions of AB 52 and SB 18 as well as the NAHC's recommendations for conducting cultural resources assessments.

Consult your legal counsel about compliance with AB 52 and SB 18 as well as compliance with any other applicable laws.

AB 52 has added to CEQA the additional requirements listed below, along with many other requirements:

- 1. Fourteen Day Period to Provide Notice of Completion of an Application/Decision to Undertake a Project:** Within fourteen (14) days of determining that an application for a project is complete or of a decision by a public agency to undertake a project, a lead agency shall provide formal notification to a designated contact of, or tribal representative of, traditionally and culturally affiliated California Native American tribes that have requested notice, to be accomplished by at least one written notice that includes:

 - a. A brief description of the project.
 - b. The lead agency contact information.
 - c. Notification that the California Native American tribe has 30 days to request consultation. (Pub. Resources Code §21080.3.1 (d)).
 - d. A "California Native American tribe" is defined as a Native American tribe located in California that is on the contact list maintained by the NAHC for the purposes of Chapter 905 of Statutes of 2004 (SB 18). (Pub. Resources Code §21073).
- 2. Begin Consultation Within 30 Days of Receiving a Tribe's Request for Consultation and Before Releasing a Negative Declaration, Mitigated Negative Declaration, or Environmental Impact Report:** A lead agency shall begin the consultation process within 30 days of receiving a request for consultation from a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project. (Pub. Resources Code §21080.3.1, subds. (d) and (e)) and prior to the release of a negative declaration, mitigated negative declaration or Environmental Impact Report. (Pub. Resources Code §21080.3.1(b)).

 - a. For purposes of AB 52, "consultation shall have the same meaning as provided in Gov. Code §65352.4 (SB 18). (Pub. Resources Code §21080.3.1 (b)).
- 3. Mandatory Topics of Consultation If Requested by a Tribe:** The following topics of consultation, if a tribe requests to discuss them, are mandatory topics of consultation:

 - a. Alternatives to the project.
 - b. Recommended mitigation measures.
 - c. Significant effects. (Pub. Resources Code §21080.3.2 (a)).
- 4. Discretionary Topics of Consultation:** The following topics are discretionary topics of consultation:

 - a. Type of environmental review necessary.
 - b. Significance of the tribal cultural resources.
 - c. Significance of the project's impacts on tribal cultural resources.
 - d. If necessary, project alternatives or appropriate measures for preservation or mitigation that the tribe may recommend to the lead agency. (Pub. Resources Code §21080.3.2 (a)).
- 5. Confidentiality of Information Submitted by a Tribe During the Environmental Review Process:** With some exceptions, any information, including but not limited to, the location, description, and use of tribal cultural resources submitted by a California Native American tribe during the environmental review process shall not be included in the environmental document or otherwise disclosed by the lead agency or any other public agency to the public, consistent with Government Code §6254 (r) and §6254.10. Any information submitted by a California Native American tribe during the consultation or environmental review process shall be published in a confidential appendix to the environmental document unless the tribe that provided the information consents, in writing, to the disclosure of some or all of the information to the public. (Pub. Resources Code §21082.3 (c)(1)).
- 6. Discussion of Impacts to Tribal Cultural Resources in the Environmental Document:** If a project may have a significant impact on a tribal cultural resource, the lead agency's environmental document shall discuss both of the following:

 - a. Whether the proposed project has a significant impact on an identified tribal cultural resource.
 - b. Whether feasible alternatives or mitigation measures, including those measures that may be agreed to pursuant to Public Resources Code §21082.3, subdivision (a), avoid or substantially lessen the impact on the identified tribal cultural resource. (Pub. Resources Code §21082.3 (b)).

- 7. Conclusion of Consultation:** Consultation with a tribe shall be considered concluded when either of the following occurs:
- a.** The parties agree to measures to mitigate or avoid a significant effect, if a significant effect exists, on a tribal cultural resource; or
 - b.** A party, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached. (Pub. Resources Code §21080.3.2 (b)).
- 8. Recommending Mitigation Measures Agreed Upon in Consultation in the Environmental Document:** Any mitigation measures agreed upon in the consultation conducted pursuant to Public Resources Code §21080.3.2 shall be recommended for inclusion in the environmental document and in an adopted mitigation monitoring and reporting program, if determined to avoid or lessen the impact pursuant to Public Resources Code §21082.3, subdivision (b), paragraph 2, and shall be fully enforceable. (Pub. Resources Code §21082.3 (a)).
- 9. Required Consideration of Feasible Mitigation:** If mitigation measures recommended by the staff of the lead agency as a result of the consultation process are not included in the environmental document or if there are no agreed upon mitigation measures at the conclusion of consultation, or if consultation does not occur, and if substantial evidence demonstrates that a project will cause a significant effect to a tribal cultural resource, the lead agency shall consider feasible mitigation pursuant to Public Resources Code §21084.3 (b). (Pub. Resources Code §21082.3 (e)).
- 10. Examples of Mitigation Measures That, If Feasible, May Be Considered to Avoid or Minimize Significant Adverse Impacts to Tribal Cultural Resources:**
- a.** Avoidance and preservation of the resources in place, including, but not limited to:
 - i.** Planning and construction to avoid the resources and protect the cultural and natural context.
 - ii.** Planning greenspace, parks, or other open space, to incorporate the resources with culturally appropriate protection and management criteria.
 - b.** Treating the resource with culturally appropriate dignity, taking into account the tribal cultural values and meaning of the resource, including, but not limited to, the following:
 - i.** Protecting the cultural character and integrity of the resource.
 - ii.** Protecting the traditional use of the resource.
 - iii.** Protecting the confidentiality of the resource.
 - c.** Permanent conservation easements or other interests in real property, with culturally appropriate management criteria for the purposes of preserving or utilizing the resources or places.
 - d.** Protecting the resource. (Pub. Resource Code §21084.3 (b)).
 - e.** Please note that a federally recognized California Native American tribe or a non-federally recognized California Native American tribe that is on the contact list maintained by the NAHC to protect a California prehistoric, archaeological, cultural, spiritual, or ceremonial place may acquire and hold conservation easements if the conservation easement is voluntarily conveyed. (Civ. Code §815.3 (c)).
 - f.** Please note that it is the policy of the state that Native American remains and associated grave artifacts shall be repatriated. (Pub. Resources Code §5097.991).
- 11. Prerequisites for Certifying an Environmental Impact Report or Adopting a Mitigated Negative Declaration or Negative Declaration with a Significant Impact on an Identified Tribal Cultural Resource:** An Environmental Impact Report may not be certified, nor may a mitigated negative declaration or a negative declaration be adopted unless one of the following occurs:
- a.** The consultation process between the tribes and the lead agency has occurred as provided in Public Resources Code §21080.3.1 and §21080.3.2 and concluded pursuant to Public Resources Code §21080.3.2.
 - b.** The tribe that requested consultation failed to provide comments to the lead agency or otherwise failed to engage in the consultation process.
 - c.** The lead agency provided notice of the project to the tribe in compliance with Public Resources Code §21080.3.1 (d) and the tribe failed to request consultation within 30 days. (Pub. Resources Code §21082.3 (d)).

The NAHC's PowerPoint presentation titled, "Tribal Consultation Under AB 52: Requirements and Best Practices" may be found online at: http://nahc.ca.gov/wp-content/uploads/2015/10/AB52TribalConsultation_CalEPAPDF.pdf

SB 18

SB 18 applies to local governments and requires local governments to contact, provide notice to, refer plans to, and consult with tribes prior to the adoption or amendment of a general plan or a specific plan, or the designation of open space. (Gov. Code §65352.3). Local governments should consult the Governor's Office of Planning and Research's "Tribal Consultation Guidelines," which can be found online at: https://www.opr.ca.gov/docs/09_14_05_Updated_Guidelines_922.pdf.

Some of SB 18's provisions include:

1. **Tribal Consultation:** If a local government considers a proposal to adopt or amend a general plan or a specific plan, or to designate open space it is required to contact the appropriate tribes identified by the NAHC by requesting a "Tribal Consultation List." If a tribe, once contacted, requests consultation the local government must consult with the tribe on the plan proposal. **A tribe has 90 days from the date of receipt of notification to request consultation unless a shorter timeframe has been agreed to by the tribe.** (Gov. Code §65352.3 (a)(2)).
2. **No Statutory Time Limit on SB 18 Tribal Consultation.** There is no statutory time limit on SB 18 tribal consultation.
3. **Confidentiality:** Consistent with the guidelines developed and adopted by the Office of Planning and Research pursuant to Gov. Code §65040.2, the city or county shall protect the confidentiality of the information concerning the specific identity, location, character, and use of places, features and objects described in Public Resources Code §5097.9 and §5097.993 that are within the city's or county's jurisdiction. (Gov. Code §65352.3 (b)).
4. **Conclusion of SB 18 Tribal Consultation:** Consultation should be concluded at the point in which:
 - a. The parties to the consultation come to a mutual agreement concerning the appropriate measures for preservation or mitigation; or
 - b. Either the local government or the tribe, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached concerning the appropriate measures of preservation or mitigation. (Tribal Consultation Guidelines, Governor's Office of Planning and Research (2005) at p. 18).

Agencies should be aware that neither AB 52 nor SB 18 precludes agencies from initiating tribal consultation with tribes that are traditionally and culturally affiliated with their jurisdictions before the timeframes provided in AB 52 and SB 18. For that reason, we urge you to continue to request Native American Tribal Contact Lists and "Sacred Lands File" searches from the NAHC. The request forms can be found online at: <http://nahc.ca.gov/resources/forms/>.

NAHC Recommendations for Cultural Resources Assessments

To adequately assess the existence and significance of tribal cultural resources and plan for avoidance, preservation in place, or barring both, mitigation of project-related impacts to tribal cultural resources, the NAHC recommends the following actions:

1. Contact the appropriate regional California Historical Research Information System (CHRIS) Center (http://ohp.parks.ca.gov/?page_id=1068) for an archaeological records search. The records search will determine:
 - a. If part or all of the APE has been previously surveyed for cultural resources.
 - b. If any known cultural resources have already been recorded on or adjacent to the APE.
 - c. If the probability is low, moderate, or high that cultural resources are located in the APE.
 - d. If a survey is required to determine whether previously unrecorded cultural resources are present.
2. If an archaeological inventory survey is required, the final stage is the preparation of a professional report detailing the findings and recommendations of the records search and field survey.
 - a. The final report containing site forms, site significance, and mitigation measures should be submitted immediately to the planning department. All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum and not be made available for public disclosure.

From: Rull, Paul <PRull@RIVCO.ORG>
Sent: Thursday, July 29, 2021 2:19 PM
To: Thomas Grahn <TGrahn@ontarioca.gov>
Subject: Ontario GP transmittal

Hi Thomas,

Thank you for transmitting the above reference project to ALUC for review.

While the project is located outside the jurisdictions of the Riverside County ALUC, it is important to note that the ALUC has prepared an airport land use compatibility plan for the Chino Airport, which includes properties on both sides of the Riverside County and San Bernardino County sides of the boundary line. This plan identifies the City property located within Zones B1, C, D and E of the Chino Municipal Airport Land Use Compatibility Plan. You can find the plan criteria at the following website <http://www.rcaluc.org/Plans/New-Compatibility-Plan> [rcaluc.org].

The inevitable corollary of continued encroachment of urbanization in the vicinity of an airport, unless open areas are planned in advance, is a continual reduction in the number and size of open areas where an aircraft may safely land without endangering the populace.

If you have any questions, please feel free to contact me.

Paul Rull
ALUC Director



Riverside County Airport Land Use Commission

4080 Lemon Street, 14th Floor
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From: Ryan Nordness <Ryan.Nordness@sanmanuel-nsn.gov>
Sent: Monday, July 26, 2021 2:48 PM
To: Thomas Grahn <TGrahn@ontarioca.gov>
Subject: RE: Notice of Preparation (NOP) for The Ontario Plan (TOP) 2050 Supplemental Environmental Impact Report (SEIR)


Hello Thomas,

Thank you for contacting the San Manuel Band of Mission Indians (SMBMI) regarding the above referenced project. SMBMI appreciates the opportunity to review the project documentation, which was received by our Cultural Resources Management Department on July 20th. The project is located within Serrano ancestral territory, and the area for the project is of interest, but Tribe sees no conflicts with the zoning changes at this time. However, when specific projects are planned and implemented, SMBMI might have comments and/or request formal consultation with the Lead Agency pursuant to CEQA (as amended, 2015) and CA PRC 21080.3.1.

This communication concludes SMBMI's input on this project, at this time, and no additional consultation under SB18 is required. If you should have any further questions with regard to this matter, please do not hesitate to contact me at your convenience, as I will be your Point of Contact (POC) for SMBMI with respect to this project.

Respectfully,
Ryan Nordness

Ryan Nordness
CULTURAL RESOURCE ANALYST
Email: Ryan.Nordness@sanmanuel-nsn.gov
O: (909) 864-8933 Ext 50-2022
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SAN MANUEL
BAND OF MISSION INDIANS [\[sanmanuel-nsn.gov\]](http://sanmanuel-nsn.gov)

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August 19, 2021

Mr. Thomas Grahn, Senior Planner
City of Ontario, Planning Department
202 East "B" Street
Ontario, California 91764
Phone: (909) 395-2413
E-mail: tgrahn@ontarioca.gov

RE: SCAG Comments on the Notice of Preparation of a Supplemental Environmental Impact Report for The Ontario Plan 2050 [SCAG NO. IGR6519]

Dear Mr. Grahn,

Thank you for submitting the Notice of Preparation of a Supplemental Environmental Impact Report for The Ontario Plan 2050 ("proposed project") to the Southern California Association of Governments (SCAG) for review and comment. SCAG is responsible for providing informational resources to regionally significant plans, projects, and programs per the California Environmental Quality Act (CEQA) to facilitate the consistency of these projects with SCAG's adopted regional plans, to be determined by the lead agencies.¹

Pursuant to Senate Bill (SB) 375, SCAG is the designated Regional Transportation Planning Agency under state law and is responsible for preparation of the Regional Transportation Plan (RTP) including the Sustainable Communities Strategy (SCS). SCAG's feedback is intended to assist local jurisdictions and project proponents to implement projects that have the potential to contribute to attainment of Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) goals and align with RTP/SCS policies. Finally, SCAG is also the authorized regional agency for Inter-Governmental Review (IGR) of programs proposed for Federal financial assistance and direct Federal development activities, pursuant to Presidential Executive Order 12372.

SCAG staff has reviewed the Notice of Preparation of a Supplemental Environmental Impact Report for The Ontario Plan 2050 in San Bernardino County. The proposed project includes an update to the City's long-term plan of policies, including technical updates to the Policy Plan to comply with state housing mandates and conform with new state laws related to community health, environmental justice, climate adaptation, resiliency, and mobility.

When available, please email environmental documentation to IGR@scag.ca.gov providing, at a minimum, the full public comment period for review.

If you have any questions regarding the attached comments, please contact the Intergovernmental Review (IGR) Program, attn.: Anita Au, Senior Regional Planner, at (213) 236-1874 or IGR@scag.ca.gov. Thank you.

Sincerely,



Frank Wen, Ph.D.
Manager, Planning Strategy Department

¹ Lead agencies such as local jurisdictions have the sole discretion in determining a local project's consistency with the 2020 RTP/SCS (Connect SoCal) for the purpose of determining consistency for CEQA.

**COMMENTS ON THE NOTICE OF PREPARATION OF A
SUPPLEMENTAL ENVIRONMENTAL IMPACT REPORT FOR
THE ONTARIO PLAN 2050 [SCAG NO. IGR6519]**

CONSISTENCY WITH CONNECT SOCIAL

SCAG provides informational resources to facilitate the consistency of the proposed project with the adopted 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS or Connect SoCal). For the purpose of determining consistency with CEQA, lead agencies such as local jurisdictions have the sole discretion in determining a local project’s consistency with Connect SoCal.

CONNECT SOCIAL GOALS

The SCAG Regional Council fully adopted [Connect SoCal](#) in September 2020. Connect SoCal, also known as the 2020 – 2045 RTP/SCS, builds upon and expands land use and transportation strategies established over several planning cycles to increase mobility options and achieve a more sustainable growth pattern. The long-range visioning plan balances future mobility and housing needs with goals for the environment, the regional economy, social equity and environmental justice, and public health. The goals included in Connect SoCal may be pertinent to the proposed project. These goals are meant to provide guidance for considering the proposed project. Among the relevant goals of Connect SoCal are the following:

SCAG CONNECT SOCIAL GOALS	
Goal #1:	<i>Encourage regional economic prosperity and global competitiveness</i>
Goal #2:	<i>Improve mobility, accessibility, reliability and travel safety for people and goods</i>
Goal #3:	<i>Enhance the preservation, security, and resilience of the regional transportation system</i>
Goal #4:	<i>Increase person and goods movement and travel choices within the transportation system</i>
Goal #5:	<i>Reduce greenhouse gas emissions and improve air quality</i>
Goal #6:	<i>Support healthy and equitable communities</i>
Goal #7:	<i>Adapt to a changing climate and support an integrated regional development pattern and transportation network</i>
Goal #8:	<i>Leverage new transportation technologies and data-driven solutions that result in more efficient travel</i>
Goal #9:	<i>Encourage development of diverse housing types in areas that are supported by multiple transportation options</i>
Goal #10:	<i>Promote conservation of natural and agricultural lands and restoration of habitats</i>

For ease of review, we encourage the use of a side-by-side comparison of SCAG goals with discussions of the consistency, non-consistency or non-applicability of the goals and supportive analysis in a table format. Suggested format is as follows:

SCAG CONNECT SOCIAL GOALS	
Goal	Analysis
Goal #1: <i>Encourage regional economic prosperity and global competitiveness</i>	<i>Consistent: Statement as to why; Not-Consistent: Statement as to why; Or Not Applicable: Statement as to why; SEIR page number reference</i>
Goal #2: <i>Improve mobility, accessibility, reliability and travel safety for people and goods</i>	<i>Consistent: Statement as to why; Not-Consistent: Statement as to why; Or Not Applicable: Statement as to why; SEIR page number reference</i>
etc.	etc.

Connect SoCal Strategies

To achieve the goals of Connect SoCal, a wide range of land use and transportation strategies are included in the accompanying twenty (20) technical reports. Of particular note are multiple strategies included in Chapter 3 of Connect SoCal intended to support implementation of the regional Sustainable Communities Strategy (SCS) framed within the context of focusing growth near destinations and mobility options; promoting diverse housing choices; leveraging technology innovations; supporting implementation of sustainability policies; and promoting a Green Region. To view Connect SoCal and the accompanying technical reports, please visit the [Connect SoCal webpage](#). Connect SoCal builds upon the progress from previous RTP/SCS cycles and continues to focus on integrated, coordinated, and balanced planning for land use and transportation that helps the SCAG region strive towards a more sustainable region, while meeting statutory requirements pertinent to RTP/SCSs. These strategies within the regional context are provided as guidance for lead agencies such as local jurisdictions when the proposed project is under consideration.

SCAG staff would like to call your attention to resources available from SCAG’s [Regional Climate Adaptation Framework](#) including the [Southern California Climate Adaptation Planning Guide](#), [Communication and Outreach Toolkit](#), [Library of Model Policies](#), and [SB 379 Compliance Curriculum for Local Jurisdictions](#).

DEMOGRAPHICS AND GROWTH FORECASTS

A key, formative step in projecting future population, households, and employment through 2045 for Connect SoCal was the generation of a forecast of regional and county level growth in collaboration with expert demographers and economists on Southern California. From there, jurisdictional level forecasts were ground-truthed by subregions and local agencies, which helped SCAG identify opportunities and barriers to future development. This forecast helps the region understand, in a very general sense, where we are expected to grow, and allows SCAG to focus attention on areas that are experiencing change and may have increased transportation needs. After a year-long engagement effort with all 197 jurisdictions one-on-one, 82 percent of SCAG’s 197 jurisdictions provided feedback on the forecast of future growth for Connect SoCal. SCAG also sought feedback on potential sustainable growth strategies from a broad range of stakeholder groups – including local jurisdictions, county transportation commissions, other partner agencies, industry groups, community-based organizations, and the general public. Connect SoCal utilizes a bottom-up approach in that total projected growth for each jurisdiction reflects feedback received from jurisdiction staff, including city managers, community development/planning directors, and local staff. Growth at the neighborhood level (i.e., transportation analysis zone (TAZ) reflects entitled projects and adheres to current general and specific plan maximum densities as conveyed by jurisdictions (except in cases where entitled projects and development agreements exceed these capacities as calculated by SCAG). Neighborhood level growth projections also feature strategies that help to reduce greenhouse gas emissions (GHG) from automobiles and light trucks to achieve Southern California’s GHG reduction target, approved by the California Air Resources Board (CARB) in accordance

with state planning law. Connect SoCal’s Forecasted Development Pattern is utilized for long range modeling purposes and does not supersede actions taken by elected bodies on future development, including entitlements and development agreements. SCAG does not have the authority to implement the plan -- neither through decisions about what type of development is built where, nor what transportation projects are ultimately built, as Connect SoCal is adopted at the jurisdictional level. Achieving a sustained regional outcome depends upon informed and intentional local action. To access jurisdictional level growth estimates and forecasts for years 2016 and 2045, please refer to the [Connect SoCal Demographics and Growth Forecast Technical Report](#). The growth forecasts for the region and applicable jurisdictions are below.

	Adopted SCAG Region Wide Forecasts				Adopted City of Ontario Forecasts			
	Year 2020	Year 2030	Year 2035	Year 2045	Year 2020	Year 2030	Year 2035	Year 2045
Population	19,517,731	20,821,171	21,443,006	22,503,899	192,072	221,806	236,012	269,050
Households	6,333,458	6,902,821	7,170,110	7,633,451	51,841	60,602	64,787	74,521
Employment	8,695,427	9,303,627	9,566,384	10,048,822	124,571	143,699	152,116	169,331

MITIGATION MEASURES

SCAG staff recommends that you review the [Final Program Environmental Impact Report](#) (Final PEIR) for Connect SoCal for guidance, as appropriate. SCAG’s Regional Council certified the PEIR and adopted the associated Findings of Fact and a Statement of Overriding Considerations (FOF/SOC) and Mitigation Monitoring and Reporting Program (MMRP) on May 7, 2020 and also adopted a PEIR Addendum and amended the MMRP on September 3, 2020 (please see the [PEIR webpage](#) and scroll to the bottom of the page for the PEIR Addendum). The PEIR includes a list of project-level performance standards-based mitigation measures that may be considered for adoption and implementation by lead, responsible, or trustee agencies in the region, as applicable and feasible. Project-level mitigation measures are within responsibility, authority, and/or jurisdiction of project-implementing agency or other public agency serving as lead agency under CEQA in subsequent project- and site- specific design, CEQA review, and decision-making processes, to meet the performance standards for each of the CEQA resource categories.

REGIONAL HOUSING NEEDS ALLOCATION

On March 4, 2021 SCAG’s Regional Council adopted the [6th cycle Final Regional Housing Needs Assessment \(RHNA\) Allocation Plan](#) which covers the planning period October 2021 through October 2029. The 6th cycle Final RHNA allocation for the applicable jurisdiction is below.

SCAG 6 th Cycle Final RHNA Allocation for City of Ontario	
Very low income	5,640
Low income	3,286
Moderate income	3,329
Above moderate income	8,599
Total RHNA Allocation	20,854

Sixth cycle housing elements are due to the California Department of Housing and Community Development (HCD) by October 15, 2021. SCAG encourages jurisdictions to prepare the draft housing element in advance of the due date to ensure adequate time to address HCD comments and adopt a final housing element. Jurisdictions that do not have a compliant housing element may be ineligible for certain State funding and grant opportunities and may be at risk for legal action from stakeholders or HCD.

SCAG staff would like to call your attention to SCAG's [HELPR 2.0](#), a web-mapping tool developed by SCAG to help local jurisdictions and stakeholders understand local land use, site opportunities, and environmental sensitivities for aligning housing planning with the state Department of Housing and Community Development's (HCD) [6th cycle housing element requirements](#).

ENVIRONMENTAL JUSTICE

Per [Senate Bill 1000](#) (SB 1000), local jurisdictions in California with disadvantaged communities are required to develop an Environmental Justice (EJ) Element or consider EJ goals, policies, and objectives in their General Plans when updating two or more General Plan Elements. SCAG staff recommends that you review the [Environmental Justice Technical Report](#) and the updated [Environmental Justice Toolbox](#), which is a resource document to assist local jurisdictions in developing EJ-related goals and policies regarding solutions for EJ-related community issues.

SENT VIA E-MAIL:

August 10, 2021

tgrahn@ontarioca.gov

Thomas Grahn, Senior Planner
City of Ontario, Planning Department
303 East B Street
Ontario, California 91764

Notice of Preparation of a Supplemental Environmental Impact Report for the Ontario Plan 2050

South Coast Air Quality Management District (South Coast AQMD) staff appreciates the opportunity to comment on the above-mentioned document. Our comments are recommendations on the analysis of potential air quality impacts from the Proposed Project that should be included in the Supplemental Environmental Impact Report (EIR). Please send a copy of the Supplemental EIR upon its completion and public release directly to South Coast AQMD as copies of the Supplemental EIR submitted to the State Clearinghouse are not forwarded. **In addition, please send all appendices and technical documents related to the air quality, health risk, and greenhouse gas analyses and electronic versions of all emission calculation spreadsheets, and air quality modeling and health risk assessment input and output files (not PDF files). Any delays in providing all supporting documentation for our review will require additional review time beyond the end of the comment period.**

CEQA Air Quality Analysis

Staff recommends that the Lead Agency use South Coast AQMD's CEQA Air Quality Handbook and website¹ as guidance when preparing the air quality and greenhouse gas analyses. It is also recommended that the Lead Agency use the CalEEMod² land use emissions software, which can estimate pollutant emissions from typical land use development and is the only software model maintained by the California Air Pollution Control Officers Association.

South Coast AQMD has developed both regional and localized significance thresholds. South Coast AQMD staff recommends that the Lead Agency quantify criteria pollutant emissions and compare the emissions to South Coast AQMD's CEQA regional pollutant emissions significance thresholds³ and localized significance thresholds (LSTs)⁴ to determine the Proposed Project's air quality impacts. The localized analysis can be conducted by either using the LST screening tables or performing dispersion modeling.

The Lead Agency should identify any potential adverse air quality impacts that could occur from all phases of the Proposed Project and all air pollutant sources related to the Proposed Project. Air quality impacts from both construction (including demolition, if any) and operations should be calculated. Construction-related air quality impacts typically include, but are not limited to, emissions from the use of heavy-duty equipment from grading, earth-loading/unloading, paving, architectural coatings, off-road mobile sources (e.g., heavy-duty construction equipment) and on-road mobile sources (e.g., construction worker vehicle trips, material transport trips, and hauling trips). Operation-related air quality impacts may include, but are not limited to, emissions from

¹ South Coast AQMD's CEQA Handbook and other resources for preparing air quality analyses can be found at: <http://www.aqmd.gov/home/rules-compliance/ceqa/air-quality-analysis-handbook>.

² CalEEMod is available free of charge at: www.caleemod.com.

³ South Coast AQMD's CEQA regional pollutant emissions significance thresholds can be found at: <http://www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf>.

⁴ South Coast AQMD's guidance for performing a localized air quality analysis can be found at: <http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/localized-significance-thresholds>.

stationary sources (e.g., boilers and air pollution control devices), area sources (e.g., solvents and coatings), and vehicular trips (e.g., on- and off-road tailpipe emissions and entrained dust). Air quality impacts from indirect sources, such as sources that generate or attract vehicular trips, should be included in the analysis. Furthermore, emissions from the overlapping construction and operational activities should be combined and compared to South Coast AQMD's regional air quality CEQA *operational* thresholds to determine the level of significance.

If the Proposed Project generates diesel emissions from long-term construction or attracts diesel-fueled vehicular trips, especially heavy-duty diesel-fueled vehicles, it is recommended that the Lead Agency perform a mobile source health risk assessment⁵.

The California Air Resources Board's (CARB) *Air Quality and Land Use Handbook: A Community Health Perspective*⁶ is a general reference guide for evaluating and reducing air pollution impacts associated with new projects that go through the land use decision-making process with additional guidance on strategies to reduce air pollution exposure near high-volume roadways available in CARB's technical advisory⁷.

The South Coast AQMD's *Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning*⁸ includes suggested policies that local governments can use in their General Plans or through local planning to prevent or reduce potential air pollution impacts and protect public health. It is recommended that the Lead Agency review this Guidance Document as a tool when making local planning and land use decisions.

Mitigation Measures

In the event that the Proposed Project results in significant adverse air quality impacts, CEQA requires that all feasible mitigation measures that go beyond what is required by law be utilized to minimize these impacts. Any impacts resulting from mitigation measures must also be analyzed. Several resources to assist the Lead Agency with identifying potential mitigation measures for the Proposed Project include South Coast AQMD's CEQA Air Quality Handbook¹, South Coast AQMD's Mitigation Monitoring and Reporting Plan for the 2016 Air Quality Management Plan⁹, and Southern California Association of Government's Mitigation Monitoring and Reporting Plan for the 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy¹⁰.

South Coast AQMD staff is available to work with the Lead Agency to ensure that air quality, greenhouse gas, and health risk impacts from the Proposed Project are accurately evaluated and mitigated where feasible. If you have any questions regarding this letter, please contact me at lsun@aqmd.gov.

Sincerely,

Lijin Sun

Lijin Sun

Program Supervisor, CEQA IGR

Planning, Rule Development & Area Sources

LS

SBC210720-04

Control Number

⁵ South Coast AQMD's guidance for performing a mobile source health risk assessment can be found at: <http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/mobile-source-toxics-analysis>.

⁶ CARB's *Air Quality and Land Use Handbook: A Community Health Perspective* can be found at: <http://www.arb.ca.gov/ch/handbook.pdf>.

⁷ CARB's technical advisory can be found at: <https://www.arb.ca.gov/ch/landuse.htm>.

⁸ South Coast AQMD. 2005. *Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning*. Available at: <http://www.aqmd.gov/docs/default-source/planning/air-quality-guidance/complete-guidance-document.pdf>.

⁹ South Coast AQMD's 2016 Air Quality Management Plan can be found at: <http://www.aqmd.gov/docs/default-source/Agendas/Governing-Board/2017/2017-mar3-035.pdf> (starting on page 86).

¹⁰ Southern California Association of Governments' 2020-2045 RTP/SCS can be found at: https://www.connectsocial.org/Documents/PEIR/certified/Exhibit-A_ConnectSoCal_PEIR.pdf.

Appendix B New and Modified TOP 2050 Policies

Appendices

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Goal / Policy No.	Goal / Policy (Approved Project)	Proposed Goal / Policy Revision (Proposed Project) <i>(where column is blank, no change from the approved project is proposed)</i>
LAND USE ELEMENT		
LU1 Balance		
LU1 A Community that has a spectrum of housing types and price ranges, and price ranges that match the jobs in the City and that make it possible for people to live and work in Ontario and maintain a quality of life.		
LU1-1	Strategic Growth. We concentrate growth in strategic locations that help create place and identity, maximize available and planned infrastructure, and foster the development of transit.	Strategic Growth. We concentrate growth in strategic locations that help create place and identity, maximize available and planned infrastructure, and foster the development of transit, and support the expansion of the active and multimodal transportation networks throughout the City. (Link to Mobility Element Policies M-2.1, M-3.3; Community Design Element <i>Image and Identity</i> Section; Community Design Policies CD-2.6, CD-3.1, CD-3.3, CD-3.6)
LU1-2	Sustainable Community Strategy. We integrate state, regional, and local Sustainable Community/Smart Growth principles into the development and entitlement process.	
LU1-3	Adequate Capacity. We require adequate infrastructure and services for all development.	
LU1-4	Mobility. We require development and urban design, where appropriate, that reduces reliance on the automobile and capitalizes on multi-modal transportation opportunities. (Refer to Mobility Element Policy M3-3)	Multimodal Mobility. We require development and urban design, where appropriate, that reduces reliance on the automobile and capitalizes on active transportation, transit, electric vehicles, and multi-modal multimodal transportation opportunities. (ReferLink to Mobility Element Policies M-2.1, M-3.3; Community Design Element Policies CD-2.6, CD-3.1, CD-3.3, CD3.6)
LU1-5	Jobs-Housing Balance. We coordinate land use, infrastructure, and transportation planning and analysis with the regional, county, and other local agencies to further regional and sub-regional goals for jobs-housing balance. (Refer to Community Economics Element Policy CE1-1)	Jobs-Housing Balance. We coordinate land use, infrastructure, and transportation planning and analysis with the regional, county, and other local agencies to further regional and sub-regional goals for jobs-housing balance. (ReferLink to Community Economics Element Policy CE-1.1; Mobility Element Policy M-1.6)
LU1-6	Complete Community. We incorporate a variety of land uses and building types in our land use planning efforts that result in a complete community where residents at all stages of life, employers, workers, and visitors have a wide spectrum of choices of where they can live, work, shop and recreate within Ontario. (Refer to Complete Community Section of Community Economics Element)	Complete Community. We incorporate a variety of land uses and building types in our land use planning efforts that result in a complete community where residents at all stages of life, employers, workers, and visitors have a wide spectrum of choices of where they can live, work, shop and recreate within Ontario. (ReferLink to Community Economics Element <i>Complete Community</i> Section of Community Economics Element ; Community Design Element <i>Urban Mixed Use, and Transit-oriented Place Types</i> Section)
LU1-7	Revenues and Costs. We require future amendments to our Land Use Plan to be accompanied by analysis of fiscal impacts. (Refer to Community Economics Policy CE-3.2)	
LU2 Compatibility		
LU2 Compatibility between a wide range of uses.		Compatibility between a wide range of uses and resultant urban patterns and forms.
LU2-1	Land Use Decisions. We minimize adverse impacts on adjacent properties when considering land use and zoning requests.	
LU2-2	Buffers. We require new uses to provide mitigation or buffers between existing uses where potential adverse impacts could occur. (Refer to Community Design)	Buffers. We require new uses to provide mitigation or buffers between existing uses where potential adverse impacts could occur. Additional mitigation is required when new uses could negatively impact environmental justice areas. (ReferLink to Community Design Element)
LU2-3	Hazardous Uses. We regulate the development of industrial and similar uses that use, store, produce, or transport toxic substances, air emissions, other pollutants, or hazardous materials. (Link to Safety Element <i>Hazardous Materials & Waste</i> Section, including Policies S-6.4 and S-6.5)	
LU2-4	Regulation of Nuisances. We regulate the location, concentration, and operation of potential nuisances.	
LU2-5	Regulation of Uses. We regulate the location, concentration, and operation of uses that have impacts on surrounding land uses.	
LU2-6	Infrastructure Compatibility. We require infrastructure to be aesthetically pleasing and in context with the community.	
LU2-7	Inter-jurisdictional Coordination. We maintain an ongoing liaison with LAWA, Caltrans, Public Utilities Commission, the railroads, and other agencies to help minimize impacts and improve the operations and aesthetics of their facilities.	Inter-jurisdictional Coordination. We maintain an ongoing liaison with IEUA ONT, LAWA, Caltrans, Public Utilities Commission, the railroads, and other agencies to help minimize impacts and improve the operations and aesthetics of their facilities. [UPDATE references to IEUA and LAWA]
LU2-8	Transitional Areas. We require development in transitional areas to protect the quality of life of current residents.	
LU2-9	Methane Gas Sites. We require sensitive land uses and new uses on former dairy farms or other methane-producing sites to be designed to minimize health risks.	
LU2-10	NEW POLICY proposed to meet requirements of new State laws.	Sensitive Uses. We monitor and share information with the community about stationary and non-stationary emission sources. We encourage siting and design of facilities to minimize health and safety risks on existing and proposed sensitive uses, especially in environmental justice areas.
LU2-11	NEW POLICY to integrate with changed to the Community Design Element	Context-Aware Transitions and Connections. We require new development projects and land-planning efforts to provide context-aware and appropriate transitions and connections between existing and planned neighborhoods, blocks, sites, and buildings. (Link to Community Design Element Policies CD-1.1, CD-1.3, CD-3.4)

Goal / Policy No.	Goal / Policy (Approved Project)	Proposed Goal / Policy Revision (Proposed Project) <small>(where column is blank, no change from the approved project is proposed)</small>
LU3 Flexibility		
LU3 Staff, regulations, and processes that support and allow flexible responses to conditions and circumstances in order to achieve the Vision.		
LU3-1	Development Standards. We maintain clear development standards that allow flexibility to achieve our Vision.	Development Standards. We maintain clear development standards that allow flexibility to achieve our Vision and provide objective standards that ensure predictability and deliver the intended physical outcomes. (Link to Community Design Element <i>Design Quality</i> and <i>Urban, Mixed Use, and Transit-oriented Place Types</i> Sections)
LU3-2	Design Incentives. We offer design incentives to help projects achieve the Vision. (Link to Community Design Element)	
LU3-3	Land Use Flexibility. We consider uses not typically permitted within a land-use category if doing so improves livability, reduces vehicular trips, creates community gathering places and activity nodes, and helps create identity.	
LU4 Phased Growth		
LU4 Development that provides short-term value only when the opportunity to achieve our Vision can be preserved.		
LU4-1	Commitment to Vision. We are committed to achieving our Vision but realize that it may take time and several interim steps to get there.	
LU4-2	Interim Development. We allow development in growth areas that is not immediately reflective of our ultimate Vision, provided it can be modified or replaced when circumstances are right. We will not allow development that impedes, precludes, or compromises our ability to achieve our Vision. (Refer to Community Economics Policy CE2-3).	Interim Development. We allow development in urban, mixed-use, and transit-oriented Place Types growth areas that is not immediately reflective of our ultimate Vision for the Place Type, provided it can be modified or replaced when circumstances are right to support development aligned with the Place Type Vision. We will not allow development that impedes, precludes, or compromises our ability to achieve our Vision. (Refer Link to Community Economics Element Policy CE-2.3, and Community Design Element <i>Urban, Mixed Use, and Transit-oriented Place Types</i> section).
LU4-3	Infrastructure Timing. We require that the necessary infrastructure and services be in place prior to or concurrently with development.	
LU4-4	NEW POLICY to integrate with changed to the Community Design Element	Shared Infrastructure: We encourage and facilitate the use of shared infrastructure (including shared or managed parking) in urban, mixed-use, and transit-oriented Place Types. (Link to Community Design Element Policy CD-3.6)
LU5 Airport Planning		
LU5 Integrated airport facilities that minimize negative impacts and maximize economic benefit.		
LU5-1	Coordination with Airport Authorities. We collaborate with FAA, Caltrans Division of Aeronautics, airport owners, neighboring jurisdictions, and other shareholders in the preparation, update, and maintenance of airport-related plans.	
LU5-2	Airport Planning Consistency. We coordinate with airport authorities to ensure The Ontario Plan is consistent with state law, federal regulations, and/or adopted master plans, and airport land use compatibility plans for ONT and Chino Airport.	
LU5-3	Airport Impacts. We work with agencies to maximize resources to mitigate the impacts and hazards related to airport operations - their homes.	
LU5-4	ONT Growth Forecast. We support and promote an ONT that accommodates 30 million annual passengers and 1.6 million tons of cargo per year, as long as the impacts associated with that level of operations are planned for and mitigated.	
LU5-5	Airport Compatibility Planning for ONT. We create and maintain the Airport Land Use Compatibility Plan for ONT.	
LU5-6	Alternative Process. We fulfill our responsibilities and comply with state law with regard to the Alternative Process for proper airport land use compatibility planning.	
LU5-7	ALUCP Consistency with Land Use Regulations. We comply with state law that requires general plans, specific plans, and all new development to be consistent with the policies and criteria set forth within an Airport Land Use Compatibility Plan for any public-use airport.	
LU5-8	Chino Airport. We will support the creation and implementation of the Airport Land Use Compatibility Plan for Chino Airport.	
HOUSING ELEMENT		
H1 Neighborhoods & Housing		
H1 Stable neighborhoods of quality housing, ample community services and public facilities, well-maintained infrastructure, and public safety that foster a positive sense of identity.		
H1-1	Housing Rehabilitation. We support the rehabilitation, maintenance, and improvement of single-family, multiple-family, and mobile homes through code compliance, removal of blight where necessary, and provision of rehabilitation assistance where feasible.	
H1-2	Neighborhood Conditions. We direct efforts to improve the long-term sustainability of neighborhoods through comprehensive planning, provision of neighborhood amenities, rehabilitation and maintenance of housing, and community building efforts.	
H1-3	Community Amenities. We shall provide adequate public services, infrastructure, open space, parking and traffic management, pedestrian, bicycle, and equestrian routes and public safety for neighborhoods consistent with City master plans and neighborhood plans.	
H1-4	Historical Preservation. We support the preservation and enhancement of residential structures, properties, street designs, lot configurations, and other reminders of Ontario's past that are considered to be local historical or cultural resources.	
H1-5	Neighborhood Identity. We strengthen neighborhood identity through creating parks and recreational outlets, sponsoring neighborhood, events and encouraging resident participation in the planning and improvement of their neighborhoods.	

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H2 Housing Supply & Diversity		
H2 Diversity of types of quality housing that are affordable to a range of household income levels, accommodate changing demographics, and support and reinforce the economic sustainability of Ontario.		
H2-1	Corridor Housing. We revitalize transportation corridors by encouraging the production of higher density residential and mixed-uses that are architecturally, functionally, and aesthetically suited to corridors.	
H2-2	Historic Downtown. We foster a vibrant historic downtown through facilitating a wide range of housing types and affordability levels for households of all ages, housing preferences, and income levels.	
H2-3	Ontario Airport Metro Center. We foster a vibrant, urban, intense, and highly amenitized community in the Ontario Airport Metro Center Area through a mix of residential, entertainment, retail, and office-oriented uses.	
H2-4	New Model Colony. We support a premier lifestyle community in the New Model Colony distinguished by diverse housing, highest design quality, and cohesive and highly amenities neighborhoods.	New Model Colony Ontario Ranch. We support a premier lifestyle community in the New Model Colony Ontario Ranch, distinguished by diverse housing, highest design quality, and cohesive and highly amenitized neighborhoods.
H2-5	Housing Design. We require architectural excellence through adherence to City design guidelines, thoughtful site planning, environmentally sustainable practices, and other best practices.	
H2-6	Infill Development. We support the revitalization of neighborhoods through the construction of higher-density residential developments on underutilized residential and commercial sites.	
H3 Governmental Regulations		
H3 A City regulatory environment that balances the need for creativity and excellence in residential design, flexibility and predictability in the project approval process, and the provision of an adequate supply and prices of housing.		
H3-1	Incentives. We maintain incentive programs that can be offered to projects that provide benefits to the community such as exceptional design quality, economic advantages, environmental sustainability, or other benefits that would otherwise be unrealized.	
H3-2	Flexible Standards. We allow flexibility in the application of residential and mixed-use development standards in order to gain benefits such as exceptional design quality, economic advantages, sustainability, or other benefits that would otherwise be unrealized.	
H3-3	Development Review. We maintain a residential development review process that provides certainty and transparency for project stakeholders and the public, yet allows for the appropriate review to facilitate quality housing development.	
H3-4	Financial Incentives. We consider financial incentives to facilitate and encourage the production, rehabilitation or improvement of housing, or provision of services where such activity furthers housing and community-wide goals.	
H4 Housing Assistance		
H4 Increased opportunities for low and moderate income households and families to afford and maintain quality ownership and rental housing opportunities, including move-up opportunities.		Increased opportunities for low- and moderate-income households and families to afford and maintain quality ownership and rental housing opportunities, including move-up opportunities. Inclusive communities, racial equity, fair housing choice and access to opportunity.
H4-1	Preservation of Affordable Apartments. We strive to facilitate the preservation of the affordability of publicly assisted apartments for lower-income households through financial assistance, technical assistance, rehabilitation, and collaborative partnerships.	
H4-2	Homeownership Opportunities. We increase and expand homeownership rates for lower- and moderate-income households by offering financial assistance, low-interest loans, and educational resources, and by working in collaboration with partnerships.	
H4-3	Rental Assistance. We support the provision of rental assistance for individuals and families earning extremely low, very low, and low income with funding from the state and federal government.	
H4-4	Mixed-income Housing. We encourage the integration of affordable housing in the New Model Colony, Ontario Airport Metro Center Area, and existing neighborhoods.	Mixed-income Housing. We encourage the integration of affordable housing in the New Model Colony Ontario Ranch, Ontario Airport Metro Center area, and existing neighborhoods.
H4-5	Collaborative Partnerships. We support collaborative partnerships of nonprofit organizations, affordable housing developers, major employers, and for-profit developers to produce affordable housing.	
H4-6	Fair Housing. We further fair housing by prohibiting discrimination in the housing market and providing education, support, and enforcement services to address discriminatory practices	Fair Housing. We further fair housing by prohibiting discrimination in the housing market, lifting barriers that restrict access to housing , and providing education, support, and enforcement services to address discriminatory practices.
H5 Special Needs		
H5 A full range of housing types and community services that meet the special housing needs for all individuals and families in Ontario, regardless of income level, age, or other status.		
H5-1	Senior Housing. We support the development of accessible and affordable senior housing and provide financial assistance for seniors to maintain and improve their homes.	
H5-2	Family Housing. We support the development of larger rental apartments that are appropriate for families with children, including, as feasible, the provision of services, recreation, and other amenities.	
H5-3	Disabled People. We increase the supply of permanent, affordable, and accessible housing for people with disabilities, and provide assistance to allow them to maintain and improve their homes.	
H5-4	Homeless People. We partner with nonprofit partners to provide emergency shelters, transitional housing, permanent supportive housing, and supportive services for people who are homeless.	
H5-5	Supportive Services. We financially support organizations, as feasible, that provide support services that meet the needs of those with special needs and further the greatest level of independence.	

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H5-6	Partnerships. We collaborate with nonprofit organizations, private developers, employers, government agencies, and other interested parties to develop affordable housing and provide support services.	
PARKS & RECREATION ELEMENT		
PR1 Planning & Design		
PR1 A system of safe and accessible parks that meets the needs of the community.		
PR1-1	Access to Parks. We strive to provide a park and/or recreational facility within walking distance (¼ mile) of every residence.	Access to Parks. In all new residential development areas, we strive to provide a park and/or recreational facility within walking distance (¼ mile) of every residence and prioritize the establishment of parks in environmental justice areas that do not have adequate access to parks.
PR1-2	Adjacency to Schools. We examine locating parks adjacent to school sites to promote joint-use opportunities.	
PR1-3	Funding. We shall seek outside, one-time sources of funding for capital improvements and reserve ongoing City funds primarily for operations and maintenance.	
PR1-4	Joint-use Opportunities. In areas where there is a need but no City recreational facility, we explore joint-use opportunities (e.g., school sites).	
PR1-5	Acreage Standard. We strive to provide 5 acres of parkland (private and public) per 1,000 residents.	
PR1-6	Private Parks. We expect the development to provide a minimum of 2 acres of developed private park space per 1,000 residents.	
PR1-7	Special Needs/Universal Design. We attempt to provide recreational opportunities at parks for people of all ages and abilities.	
PR1-8	Renovation. We examine renovating existing facilities prior to building replacement facilities.	
PR1-9	Phased Development. We require parks to be built in new communities before a significant proportion of residents move in.	
PR1-10	Master Plans for Individual Park Facilities. We require an individual park master plan for parks in excess of 10 acres.	
PR1-11	Environmental Function of Parks. We require new parks to meet environmental management objectives.	
PR1-12	Trails. We promote connections between parks and local trails, including those managed by other public agencies.	
PR1-13	Equestrian Trails. We require the design, construction, and maintenance of equestrian trails in Rural Residential designated areas.	
PR1-14	Multi-family Residential Developments. We require that new multi-family residential developments of five or more units provide recreational facilities or open space, in addition to paying adopted impact fees.	
PR1-15	Trail Connectivity. We strengthen and improve the equestrian, bike, and multipurpose trail connections within the City and work to improve trail connections into adjacent jurisdictions.	
PR1-16	Equestrian Master Plan. We use Homer Briggs Park as the primary focal point for the development of a Master Plan of Equestrian Trails in the Rural Residential area.	
PR2 Recreational Programs		
PR2 A range of recreational programs provided by public, private, and nonprofit organizations that meet the needs of the community's varied interests, age groups, and abilities		
PR2-1	Participation. We program park facilities to maximize utilization and participation while considering park size, location, and population served.	
PR2-2	Needs Assessment. We track the needs and priorities for recreational programming and look for ways to meet demand.	
PR2-3	Community Involvement. We involve the local community in planning programs for neighborhood and community park facilities.	
PR2-4	Access to Programs. We provide a range of program opportunities for residents of all income levels.	Access to Programs. We provide a range of recreational and physical exercise programs that are accessible to opportunities for residents of all income levels throughout the community and prioritize establishing and maintaining equitable access for residents in environmental justice areas.
PR2-5	Partnerships. We partner with local and regional agencies, nonprofit organizations, and the private sector to provide a comprehensive range of recreational programs.	
PR2-6	Crime Deterrents. We promote and participate in recreational programming as part of our crime prevention effort.	
ENVIRONMENTAL RESOURCE ELEMENT		
ER1 Water and Wastewater		
ER1 A reliable and cost-effective system that permits the City to manage its diverse water resources and needs.		
ER1-1	Local Water Supply. We increase local water supplies to reduce our dependence on imported water.	Local Water Supply. We increase local water supplies to reduce our dependence on imported water. New and redevelopment projects are aligned with our available water supply and/or to enhance our available water supply.
ER1-2	Matching Supply to Use. We match the water supply and quality to the appropriate use.	
ER1-3	Conservation. We require conservation strategies that reduce water usage.	Conservation and Sustainable Water Supply. We work with regional water providers and users to conserve water and ensure sustainable local water supplies as more frequent droughts reduce long term local and regional water availability. We require conservation strategies that reduce water usage.
ER1-4	Supply-Demand Balance. We require that available water supply and demands be balanced.	
ER1-5	Groundwater Management. We protect groundwater quality by incorporating strategies that prevent pollution, require remediation where necessary, capture and treat urban runoff, and recharge the aquifer.	Groundwater-Water Resource Management. Environmental justice areas are prioritized as we coordinate with local agencies to protect water quality, prevent pollution, address existing contamination, and remediate contaminated surface water and groundwater. We protect groundwater quality by incorporating strategies that prevent pollution, require remediation where necessary, capture and treat urban runoff, and recharge the aquifer.
ER1-6	Urban Run-Off Quantity. We encourage the use of low impact development strategies to intercept run-off, slow the discharge rate, increase infiltration, and ultimately reduce discharge volumes to traditional storm drain systems.	Urban Run-off Quantity. We encourage the use of low impact development strategies, including green infrastructure, to intercept run-off, slow the discharge rate, increase infiltration, and ultimately reduce discharge volumes to traditional storm drain systems.

Goals and Policies
(Approved Project and Draft Revisions Proposed as Part of Proposed Project)

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ER1-7	Urban Run-Off Quality. We require the control and management of urban runoff, consistent with Regional Water Quality Control Board regulations.	
ER1-8	Wastewater Management. We require the management of wastewater discharge and collection consistent with waste discharge requirements adopted by the Regional Water Quality Control Board.	
ER2 Solid Waste & Recycling		
ER2 Cost-effective integrated waste management system that meets or exceed state and federal recycling and waste diversion mandates.		
ER2-1	Waste Diversion. We shall meet or exceed the AB 939 requirements.	
ER2-2	Hazardous and Electronic Wastes. We prohibit the disposal of hazardous and electronic waste into the municipal waste stream pursuant to state law.	
ER2-3	Purchase Products Made from Recycled Materials. We purchase recycled-content products where it is cost-effective.	
ER3 Energy		
ER3 Cost-effective and reliable energy system sustained through a combination of low impact buildings, site and neighborhood energy conservation, and diverse sources of energy generation that collectively helps to minimize the region's carbon footprint.		
ER3-1	Conservation Strategy. We require conservation as the first strategy to be employed to meet applicable energy-saving standards.	
ER3-2	Green Development - Communities. We require the use of best practices identified in green community rating systems to guide the planning and development of all new communities.	Green Development - Communities. We require encourage the use of best practices identified in green community the LEED Neighborhood Development rating systems, or similar mechanism, to guide the planning and development of all new communities.
ER3-3	Building and Site Design. We require new construction to incorporate energy-efficient building and site design strategies, which could include appropriate solar orientation, maximum use of natural daylight, passive solar, and natural ventilation.	
ER3-4	Green Development - Public Buildings. We require all new and substantially renovated City buildings in excess of 10,000 square feet to achieve a LEED Silver Certification standard, as determined by the U.S. Green Building Council.	
ER3-5	Fuel-Efficient and Alternative Energy Vehicles and Equipment. We purchase and use vehicles and equipment that are fuel-efficient and meet or surpass state emissions requirements and/or use renewable sources of energy.	Fuel-Efficient and Alternative Energy Vehicles and Equipment. We require purchase and use vehicles and equipment that are fuel-efficient and meet or surpass state emissions requirements and/or use renewable sources of energy.
ER3-6	Generation - Renewable Sources. We promote the use of renewable energy sources to serve public and private sector development.	Generation - Renewable Sources. We promote the use of renewable energy sources (e.g., solar, wind, biomass) in to serve public and private sector development.
ER4 Air Quality		
ER4 Improve indoor and outdoor air quality and reduced locally generated pollutant sources.		
ER4-1	Land Use. We reduce GHG and other local pollutant emissions through compact, mixed use, and transit-oriented development and development that improves the regional jobs-housing balance.	
ER4-2	Sensitive Land Uses. We prohibit the future siting of sensitive land uses within the distances defined by the California Air Resources Board for specific source categories without sufficient mitigation.	
ER4-3	Greenhouse Gases (GHG) Emissions Reductions. We reduce GHG emissions in accordance with regional, state, and federal regulations.	
ER4-4	Indoor Air Quality. We will comply with State Green Building Codes relative to indoor air quality.	Indoor Air Quality. We will comply with State Green Building Codes relative to indoor air quality. We seek funding to improve indoor air quality for households with poor indoor air quality, with priority for lower income households in environmental justice areas.
ER4-5	Transportation. We promote mass transit and non-motorized mobility options (walking, biking) to reduce air pollutant emissions.	
ER4-6	Particulate Matter. We support efforts to reduce particulate matter to meet State and Federal Clean Air Standards.	
ER4-7	Other Agency Collaboration. We collaborate with other agencies within the South Coast Air Basin to improve regional air quality at the emission source.	Other Agency Collaboration. We collaborate with other agencies within the South Coast Air Basin to improve regional air quality at the emission source, with a particular focus on sources that affect environmental justice areas in Ontario.
ER4-8	Tree Planting. We protect healthy trees within the City and plant new trees to increase carbon sequestration and help the regional/local air quality.	Tree Planting. We protect healthy trees within the City and plant new trees to increase carbon sequestration and help the regional/local air quality. We expand the tree canopy in environmental justice areas to enhance air quality and reduce the "heat island" effect.
ER4-9	NEW POLICY proposed to meet requirements of new State laws.	New Localized Air Pollution Sources Near Existing Sensitive Receptors. We require new developments to conduct a Health Risk Assessment for land uses that generate more than 100 trucks per day or 40 trucks per day by trucks operating transportation refrigeration units (TRU's) within 1,000 feet from sensitive land uses (California Health and Safety Code § 42705.5(a)(5)). If the health risk assessment determines the new development poses health hazards that increase the incremental cancer risk above the threshold established by the South Coast Air Quality Management District (AQMD), we will only approve permits upon the condition that adequate mitigation measures are proposed and implemented for potential impacts on the sensitive uses around the site and along the route within Ontario taken by the trucks to and from freeways. We require new developments that must perform a health risk assessment to conduct additional public outreach by sending notifications in multiple languages to all residents living within 500 feet, and encourage hosting a public meeting.

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ER5 Biological, Mineral and Agricultural Resources		
ER5 Protect high-value habitat and farming and mineral resources extraction activities that are compatible with adjacent development.		
ER5-1	Habitat Conservation Areas. We support the protection of biological resources through the establishment, restoration, and conservation of high-quality habitat areas.	
ER5-2	Entitlement and Permitting Process. We comply with state and federal regulations regarding protected species.	
ER5-3	Right to Farm. We support the right of existing farms to continue their operations within the New Model Colony.	Right to Farm. We support the right of existing farms to continue their operations within the New Model Colony Ontario Ranch .
ER5-4	Transition of Farms. We protect both existing farms and sensitive uses around them as agricultural areas transition to urban uses.	
ER5-5	Mining Operations. We prohibit future mining operations where the resource extraction activities are incompatible with existing or proposed adjacent land uses.	
COMMUNITY ECONOMICS ELEMENT		
CE1 Complete Community		
CE1 A complete community that provides for all incomes and stages of life.		
CE1-1	Jobs-Housing Balance. We pursue improvement to the Inland Empire's balance between jobs and housing by promoting job growth that reduces the regional economy's reliance on out-commuting.	
CE1-2	Jobs and Workforce Skills. We use our economic development resources to 1) attract jobs suited for the skills and education of current and future City residents; 2) work with regional partners to provide opportunities for the labor force to improve its skills and education, and 3) attract businesses that increase Ontario's stake and participation in growing sectors of the regional and global economy. (Link to Social Resources Policy SR-2.2)	
CE1-3	Regional Approach to Workforce Development. We work with our partners to provide workforce training and development services throughout the region, recognizing that Ontario employers rely on workers living outside of the City.	
CE1-4	Business Retention and Expansion. We continuously improve two-way communication with the Ontario business community and emphasize customer service to existing businesses as part of our competitive advantage.	
CE1-5	Business Attraction. We proactively attract new and expanding businesses to Ontario in order to increase the City's share of growing sectors of the regional and global economy.	
CE1-6	Diversity of Housing. We collaborate with residents, housing providers and the development community to provide housing opportunities for every stage of life; we plan for a variety of housing types and price points to support our workforce, attract business and foster a balanced community.	Diversity of Housing. We collaborate with residents, housing providers, and the development community to provide housing opportunities for every stage of life; we plan for a variety of housing types and price points to encourage the development of housing supportive of our efforts to attract business in growing sectors of the community while being respectful of existing viable uses. our workforce, attract business and foster a balanced community.
CE1-7	Retail Goods and Services. We seek to ensure a mix of retail businesses that provide the full continuum of goods and services for the community.	
CE1-8	Regional Attraction. We encourage the development and programming of regional cultural and entertainment destinations in Ontario.	
CE1-9	Regional Leadership. We provide leadership for public, quasi-public, and private-sector partners that help Ontario and its residents and businesses realize our goals and achieve our Vision.	
CE1-10	Life-Long Education. We work with our partners who provide life-long learning to ensure that our residents and workforce have access to education at all stages of life.	
CE1-11	Socioeconomic Trends. We continuously monitor, plan for, and respond to changing socioeconomic trends.	
CE1-12	Circulation. We continuously plan and improve public transit and non-vehicular circulation for the mobility of all, including those with limited or no access to private automobiles. (Link to Mobility Element <i>Public Transit</i> Section)	
CE1-13	Safety and Security. We invest in public safety and communicate our successes because the perception and reality of safety and security are necessary prerequisites for private investment and economic growth.	
CE2 Placemaking		
CE2 A City of distinctive neighborhoods, districts, and corridors, where people choose to be.		A City of distinctive neighborhoods, districts, and corridors, and centers where people choose to be.
CE2-1	Development Projects. We require new development and redevelopment to create unique, high-quality places that add value to the community. (Link to Community Design Element)	
CE2-2	Development Review. We require those proposing new development and redevelopment to demonstrate how their projects will create appropriately unique, functional, and sustainable places that will compete well with their competition within the region.	
CE2-3	Interim Development. We require interim development that does not reflect the long-term Vision, be limited in the scale of development so that the investment can be sufficiently amortized to make Vision-compatible redevelopment financially feasible.	
CE2-4	Protection of Investment. We require that new development and redevelopment protect the existing investment by providing architecture and urban design of equal or greater quality.	
CE2-5	Private Maintenance. We require adequate maintenance, upkeep, and investment in private property because proper maintenance on private property protects property values. (Link to Community Design Element Policy CD-5.1)	
CE2-6	Public Maintenance. We require the establishment and operation of maintenance districts or other vehicles to fund the long-term operation and maintenance of the public realm, whether on private land, in rights-of-way, or on publicly owned property. (Link to Community Design Element Policy CD-5.1)	
CE3 Fiscal Decision Making		
CE3 Decision-making deliberations that incorporate the full short-term and long-term economic and fiscal implications of proposed City Council actions.		
CE3-1	Fiscal Impact Disclosure. We require requests for City Council action to disclose the full fiscal impacts, including direct and indirect costs.	

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CE3-2	General Plan Amendments. We require those proposing General Plan amendments to disclose reasonably foreseeable impacts through a fiscal analysis.	
CE3-3	Long-Term Funding Disclosure. We require those requesting City support or funding for projects or programs to disclose if and how they can be continued without further City support.	
CE3-4	Improving Fiscal Decision-Making. We periodically assess the accuracy of projections for staff time and City resources and use the assessment results to improve our fiscal decision-making process.	
CE3-5	Sustainable Development. We recognize impacts to municipal finances as an element of sustainability, and we require claims of sustainability to assess fiscal impacts.	
CE3-6	Fully Funded Liability. We require long term liabilities such as retiree medical benefits, employee accrued leave balances, and self-insured liability claims to be fully funded to ensure sound, long term fiscal health.	
CE3-7	Programmatically Balanced Budget. We require that the annual budget include appropriations allocated in a manner to meet the goal of the programmatically balanced budget.	
CE3-8	Budget Margins. We require that the adopted budget for revenues and expenditures reflect sufficient budget margins to minimize negative impacts to City services due to economic uncertainties.	
CE3-9	Complete Comparative Context. We require that our annual budget process provide the complete comparative context for proposed new and increased funding so decision makers can fully understand the trade-offs among budget choices.	
SAFETY ELEMENT		
S1	Seismic/Geologic Hazards	
S1	Minimize risk of injury, loss of life, property damage, and economic and social disruption caused by earthquake-induced or other geological hazards.	
S1-1	Implementation of Regulations and Standards. We require that all new habitable structures be designed in accordance with the most recent California Building Code adopted by the City, including provisions regarding lateral forces and grading.	
S1-2	Entitlement and Permitting Process. We follow state guidelines and the California Building Code to determine when development proposals must conduct geotechnical and geological investigations.	
S1-3	Continual Update of Technical Information. We maintain up-to-date California Geological Survey seismic hazard maps.	
S1-4	Seismically Vulnerable Structures. We conform to state law regarding unreinforced masonry structures.	Seismically Vulnerable Structures. We conform to state law regarding unreinforced masonry structures and coordinate with not-for-profits to facilitate seismic retrofits in environmental justice areas and for low-income households.
S2	Flood Hazards	
S2	Minimize risk of injury, loss of life, property damage and economic and social disruption caused by flooding and inundation hazards.	
S2-1	Entitlement and Permitting Process. We follow State guidelines and building codes to determine when development proposals require hydrological studies prepared by a State-certified engineer to assess the impact that the new development will have on the flooding potential of existing development down-gradient.	Entitlement and Permitting Process. We require hydrological studies prepared by a state-certified engineer when new development is located in a 100-year or 500-year floodplain follow State guidelines and building codes to determine when development proposals require hydrological studies prepared by a State-certified engineer to assess the impact that the new development will have on the flooding potential of existing development down-gradient.
S2-2	Flood Insurance. We will limit development in flood plains and participate in the National Flood Insurance Program.	Floodplain Insurance Mapping. We require any new development partially or entirely in 100-year flood zones or 100-year flood awareness areas to provide detailed floodplain mapping for 100- and 200-year storm events as part of the development approval process will limit development in flood plains and participate in the National Flood Insurance Program.
S2-3	Facilities that Use Hazardous Materials. We comply with state and federal law and do not permit facilities using, storing, or otherwise involved with substantial quantities of onsite hazardous materials to be located in the 100-year flood zone unless all standards of elevation, floodproofing, and storage have been implemented to the satisfaction of the Building Department.	Facilities that Use Hazardous Materials. We comply with state and federal law and do not permit facilities using, storing, or otherwise involved with substantial quantities of onsite hazardous materials to be located in the 100-year flood zone or 500-year flood zone unless all standards of elevation, floodproofing, and storage have been implemented to the satisfaction of the Building Department.
S2-4	Prohibited Land Uses. We prohibit the development of new essential and critical facilities in the 100-year floodplain.	Prohibited Land Uses. We prohibit the development of new essential and critical facilities in the 100-year floodplain and discourage the development of new essential and critical facilities in the 500-year floodplain unless all standards of elevation and flood proofing demonstrate that a facility can be safe and operational during a flood event, implemented to the satisfaction of the Building Department.
S2-5	Storm Drain System. We maintain and improve the storm drain system to minimize flooding.	Stormwater Management Drain System. We maintain and improve the storm drain system to convey a 100-year storm, when feasible, and encourage environmental site design practices to minimize flooding and increase groundwater recharge, including natural drainage, green infrastructure, and permeable ground surfaces. (Link to Environmental Resources Element)
S2-6	Use of Flood Control Facilities. We encourage the joint use of flood control facilities as open space or other types of recreational facilities.	
S2-7	NEW POLICY to address requirements of Gov. Code.	Collaboration Between Agencies. Collaborate with the San Bernardino County Flood Control District and other state and federal agencies to maintain flood-control infrastructure to minimize flood damage.
S3	Fire & Rescue & Related Services	
S3	Reduce the risk of death, injury, property damage and economic loss due to fires, accidents and normal everyday occurrences through prompt and capable emergency services.	
S3-1	Prevention Services. We proactively mitigate or reduce the negative effects of fire, hazardous materials release, and structural collapse by implementing the adopted Fire Code.	Prevention Services. We proactively mitigate or reduce the negative effects of fire, hazardous materials release, and structural collapse by implementing the regularly adopted California Fire Code and California Building Code.
S3-2	Community Outreach. We provide education to local schools and community groups to promote personal and public safety.	

Goals and Policies
(Approved Project and Draft Revisions Prospected as Part of Proposed Project)



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S3-3	Fire and Emergency Medical Services. We maintain sufficient fire stations, equipment, and staffing to respond effectively to emergencies.	Fire and Emergency Medical Services. We maintain sufficient fire stations, equipment and staffing to respond effectively to emergencies and meet the needs of the community and state requirements.
S3-4	Special Team Services. We maintain effective special rescue services.	
S3-5	Emergency Communication Services. We maintain a 9-1-1 emergency communication and dispatch center.	Emergency Notifications-Communication Services. We maintain a public alert notification system that efficiently conveys information about imminent, developing, ongoing, and concluding emergency events to all residents and visitors working with network providers that translate information into other languages.
S3-6	Interagency Cooperation. In order to back up and supplement our capabilities to respond to emergencies, we participate in the California Fire Rescue and Mutual Aid Plan.	
S3-7	Water Supply and System Redundancy. We monitor our water system to manage firefighting water supplies.	Water Supply and System Redundancy. We monitor our water system to manage and ensure adequate firefighting water supplies.
S3-8	Fire Prevention through Environmental Design. We require new development to incorporate fire prevention considerations in the design of streetscapes, sites, open spaces, and buildings. (Link to Community Design Element).	
S3-9	Resource Allocation. We analyze fire data to evaluate the effectiveness of our fire prevention and reduction strategies and allocate resources accordingly.	
S4	Noise	
S4	An environment where noise does not adversely affect the public's health, safety, and welfare.	
S4-1	Noise Mitigation. We utilize the City's Noise Ordinance, building codes, and subdivision and development code regulations to mitigate noise impacts.	
S4-2	Coordination with Transportation Authorities. We collaborate with airport owners, FAA, Caltrans, SANBAG, SCAG, neighboring jurisdictions, and other transportation providers in the preparation and maintenance of and updates to transportation-related plans to minimize noise impacts and provide appropriate mitigation measures.	Coordination with Transportation Authorities. We collaborate with airport owners, FAA, Caltrans, SANBAG SBCTA, SCAG, neighboring jurisdictions, and other transportation providers in the preparation and maintenance of and updates to transportation-related plans to minimize noise impacts and provide appropriate mitigation measures.
S4-3	Airport Noise Mitigation. We aggressively pursue funding and utilize programs to reduce the effects of aircraft noise in impacted areas of our community.	
S4-4	Truck Traffic. We manage truck traffic to minimize noise impacts on sensitive land uses.	
S4-5	Roadway Design. We design streets and highways to minimize noise impacts.	
S4-6	Airport Noise Compatibility. We utilize information from Airport Land Use Compatibility Plans to prevent the construction of new noise-sensitive land uses within airport noise impact zones.	
S4-7	New Policy to address noise and vibration near rail lines	Rail Noise Mitigation. We require residential and mixed use development of vibration-sensitive uses in areas within 200 feet of rail to evaluate for indoor vibration levels and mitigate any exceedances of the Federal Transit Administration vibration-annoyance criteria.
S5	Wind-related Hazards	
S5	Reduce risk of injury, property damage, and economic loss resulting from windstorms and wind-related hazards.	Reduced-Minimize the risk of injury, property damage, and economic loss resulting from windstorms and wind-related hazards.
S5-1	Backup Power in Critical Facilities. We require backup power to be maintained in critical facilities.	Relocate to S8-9 [This policy applies to more than windstorms and wind related hazards]
S5-21	Dust Control Measures. We require the implementation of Best Management Practices for dust control at all excavation and grading projects.	
S5-32	Grading in High Winds. We prohibit excavation and grading during strong wind conditions, as defined by the Building Code.	
S5-3	NEW POLICY to address resiliency requirements related to wind events	Public Safety Power Shutoffs. We coordinate with utility companies to minimize service interruptions, such as Public Safety Power Shutoffs, before, during, and after windstorms and wind-related hazards.
S6	Hazardous Materials	
S6	Reduce the potential for hazardous materials exposure and contamination.	
S6-1	Disclosure and Notification. We enforce disclosure laws that require all users, producers, and transporters of hazardous materials and wastes to clearly identify the materials that they store, use, or transport.	
S6-2	Response to Hazardous Materials Releases. We respond to hazardous materials incidents and coordinate these services with other jurisdictions.	
S6-3	Safer Alternatives. We minimize our use of hazardous materials by choosing non-toxic alternatives that do not pose a threat to the environment.	Safer Alternatives. We minimize our use of pesticides and other hazardous materials by choosing non-toxic alternatives that do not pose a threat to the environment, especially when it could affect public park facilities and open spaces.
S6-4	Safe Storage and Maintenance Practices. We require that the users of hazardous materials be adequately prepared to prevent and mitigate hazardous materials releases.	
S6-5	Location of Hazardous Material Facilities. We regulate facilities that will be involved in the production, use, storage, or disposal of hazardous materials, pursuant to federal, state, county, and local regulations so that impacts to the environment and sensitive land uses are mitigated.	Location of Hazardous Material Facilities. We regulate facilities that will be involved in the production, use, storage, or disposal of hazardous materials, pursuant to federal, state, county, and local regulations, so that impacts to the environment and sensitive land uses are mitigated. We prohibit new hazardous waste facilities in close proximity to sensitive land uses and environmental justice areas.
S6-6	Location of Sensitive Uses. We prohibit new sensitive land uses from locating within airport Safety Zones and near existing sites that use, store, or generate large quantities of hazardous materials. (Refer to Land Use Element)	Location of Sensitive Uses. We prohibit new sensitive land uses from locating within airport S safety Z zones and near existing sites that use, store, or generate large quantities of hazardous materials. (Refer Link to Land Use Element)
S6-7	Household Hazardous Waste. We support the proper disposal of household hazardous substances.	
S6-8	Mitigation and Remediation of Groundwater Contamination. We actively participate in local and regional efforts directed at both mitigating environmental exposure to contaminated groundwater and taking action to clean up contaminated groundwater once exposure occurs.	
S6-9	Remediation of Methane. We require development to assess and mitigate the presence of methane, per regulatory standards and guidelines.	

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S7 Law Enforcement		
S7	Neighborhood and commercial and industrial districts that keep safe through a multi-faceted approach of prevention, enforcement, suppression, community involvement and a system of continuous monitoring.	Residential neighborhoods, and commercial areas, and industrial districts that keep safe through a multi-faceted approach of prevention, enforcement, and community involvement in public safety and a system of continuous monitoring.
S7-1	Police Unit Response. We respond to calls requiring service in a timely manner.	
S7-2	Community Oriented Problem Solving (C.O.P.S.). We support and maintain the mission of COPS to identify and resolve community problems.	
S7-3	Prevention Services. We provide crime prevention programs targeted to youth, parents, seniors, businesses, and neighborhoods.	
S7-4	Crime Prevention through Environmental Design (CPTED). We require new development to incorporate CPTED in the design of streetscapes, sites, open spaces, and buildings.	
S7-5	Interdepartmental Coordination. We utilize all City departments to help reduce crime and promote public safety.	
S7-6	Partnerships. We partner with other local, state, and federal law enforcement agencies and private security providers to enhance law enforcement service to Ontario.	Partnerships. We partner with other local, state, and federal law enforcement agencies and private security providers to enhance law enforcement public safety services to in Ontario.
S7-7	Resource Allocation. We analyze crime data to evaluate the effectiveness of crime prevention and reduction strategies and allocate resources accordingly.	
S7-8	NEW POLICY to reflect community minded public safety	Social Services. We support behavioral health and social services as part of the public safety solution.
S8 Emergency Management		
S8	Disaster resilient, prepared community through effective emergency/disaster preparedness, response, mitigation, and recovery	
S8-1	State and Federal Mandates. We maintain emergency management programs that meet the requirements of the State of California Standardized Emergency Management System (SEMS) and the National Incident Management System (NIMS).	
S8-2	Emergency Management Plans. We maintain, update, and adopt the Emergency Operations Plan (EOP) and the Hazard Mitigation Plan (HMP).	Emergency Management Plans. We maintain, update, and adopt the Emergency Operations Plan (EOP) and incorporate, by reference the City's Hazard Mitigation Plan (HMP).
S8-3	Emergency/Disaster Training and Exercises. We conduct training and exercises to prepare for and evaluate emergency/disaster response and recovery procedures.	
S8-4	Interagency Collaboration. We partner with public and private organizations, such as participation in the California Mutual Aid Agreement, in order to enhance and complement our planning and response capabilities.	Interagency Emergency Cooperation. We maintain partnerships, including automatic aid agreements, with fire protection, police and sheriff departments, and emergency management agencies in San Bernardino and Riverside County to strengthen emergency response. partner with public and private organizations, such as participation in the California Mutual Aid Agreement, in order to enhance and complement our planning and response capabilities.
S8-5	Interdepartmental Coordination. We utilize all City departments to help support emergency/disaster mitigation, preparedness, response mitigation, and recovery.	
S8-6	Community Outreach. We provide education to the community to promote personal, family, and community emergency preparedness.	Community Outreach. We provide education to the community to promote personal, family, and community emergency preparedness to both natural and human-generated hazards.
S8-7	NEW POLICY to address resiliency requirements related to extreme heat and air quality	Extreme Heat and Air Quality. We work to ensure that all community members are informed about and have access to community cooling centers and clean air centers during extreme heat events or wildfires, with a focus on serving environmental justice communities. We support the development of extreme heat emergency response policies and practices to address these critical health risks in the community.
S8-8	NEW POLICY to address resiliency requirements related to climate change	Regional Partnerships for Climate Adaptation. We partner with local governments in San Bernardino County, Riverside County, and Inland Southern California Climate Collaborative to develop regional climate change adaptation strategies and programs.
S8-9	Relocated from S5-1 - this policy should encompass all critical facilities, not just those vulnerable to wind events	Backup Power in Critical Facilities. We require backup power be maintained in critical facilities. We encourage backup power solutions that include renewable energy components.
S9 Energy Resiliency (NEW SECTION to address energy resilience)		
S9	NEW GOAL to address energy resilience	
S9-1	NEW Policy to address energy resilience	Solar Energy. We support and may incentivize the installation of residential and commercial solar panels and battery storage systems that can provide electricity during power outages.
S9-2	NEW Policy to address energy resilience	Renewable Energy. Renovate existing city-owned facilities and plan future facilities to include renewable energy generation capacity and battery storage as part of an effort to make public facilities and services greener and more resilient to power outages.
S9-3	NEW Policy to address energy resilience	Energy Efficiency Retrofits. We support and may incentivize retrofits to residential and commercial buildings that improve energy efficiency and insulation from extreme temperatures, giving priority towards low-income applicants.

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MOBILITY ELEMENT		
M1 Roadway Systems		
M1 A system of roadways that meets the mobility needs of a dynamic and prosperous Ontario.		
M1-1	Roadway Design and Maintenance. We require our roadways to: 1) Comply with federal, state and local design and safety standards; 2) Meet the needs of multiple transportation modes and users; 3) Handle the capacity envisioned in the Functional Roadway Classification Plan; 4) Maintain a peak hour Level of Service (LOS) E or better at all intersections; 5) Be compatible with the streetscape and surrounding land uses, and 6) Be maintained in accordance with best practices and our Right-Of-Way Management Plan.	Roadway Design and Maintenance. We require our roadways to: 1) Comply with federal, state, and local design and safety standards; 2) Meet the needs of multiple transportation modes and users; 3) Handle the capacity envisioned in the City of Ontario Master Plan of Streets and Highways Functional Roadway Classification Plan ; 4) Be maintained in accordance with best practices a peak hour Level of Service (LOS) E or better at all intersections ; 5) Be compatible with the streetscape and surrounding land uses; and 6) Promote the efficient flow of all modes of traffic through the implementation of intelligent transportation systems and travel demand management strategies. Be maintained in accordance with best practices and our Right-Of-Way Management Plan. (Link to Community Design Element Policies CD-2.5, CD-2.6, CD-2.16, CD-3.3)
M1-2	Mitigation of Impacts. We require development to mitigate its traffic impacts.	
M1-3	Roadway Improvements. We work with Caltrans, SANBAG, and others to identify, fund, and implement needed improvements to roadways identified in the Functional Roadway Classification Plan.	Agency Coordination on Roadway Improvements. We work with Caltrans, SANBAG, SBCTA, and others to identify, fund, and implement needed improvements to roadways when necessary. We work with neighboring jurisdictions to promote regional connectivity and access and meet operational level of service standards at the City limits. identified in the Functional Roadway Classification Plan.
M1-4	Adjacent Jurisdictions. We work with neighboring jurisdictions to meet our level of service standards at the City limits.	Adjacent Jurisdictions. We work with neighboring jurisdictions to meet our level of service standards at the City limits.
M1-54	Complete Streets. We work to provide a balanced context sensitive, multimodal transportation network that meets the needs of all users of streets, roads, and highways, including motorists, pedestrians, bicyclists, children, persons with disabilities, seniors, movers of commercial goods and users of public transportation.	Complete Streets. We work to provide a complete, balanced, context-aware sensitive, multimodal transportation network that meets the needs of all users of streets, roads, and highways, including motorists, pedestrians, bicyclists, children, persons with disabilities, seniors, movers of commercial goods, and users of public transportation. We prioritize implementation of complete streets improvements in environmental justice areas to facilitate opportunities for residents to use active transportation systems.
M1-5	NEW POLICY proposed to help mitigate LOS impacts	Level of Service. Maintain a peak hour Level of Service (LOS) E or better at all intersections. Maintain Level of Service D or better on arterial streets in the City. Develop and maintain a list of locations where LOS E or LOS F are considered acceptable and would be exempt from this level of service policy. Considerations for LOS exemption include being restricted by environmental constraints, lacking available right-of-way, deterring an increase in VMT, or degrading other modes of travel (such as bicycle or pedestrian infrastructure).
M1-6	NEW POLICY proposed to reflect changes in CEQA requirements (VMT)	Reduce Vehicle Miles Traveled. We will strive to reduce VMT through a combination of land use, transportation projects, travel demand management strategies, and other trip reduction measures in coordination with development projects and public capital improvement projects.
M2 Bicycles and Pedestrians Active Transportation		
M2 A system of trails and corridors that facilitate and encourage bicycling and walking.		
M2-1	Bikeway Plan. We maintain our Multipurpose Trails and Bikeway Corridor Plan to create a comprehensive system of on- and off-street bikeways that connect residential areas, businesses, schools, parks, and other key destination points.	Bikeway Plan-Active Transportation. We maintain our Multipurpose Trails and Bikeway Corridor-Active Transportation Master Plan to create a comprehensive system of on- and off-street bikeways and pedestrian facilities that are safe, comfortable, and accessible and that connect residential areas, businesses, schools, parks, and other key destination points.
M2-2	Bicycle System. We provide off-street multipurpose trails and Class II bikeways as our primary paths of travel and use the Class III for connectivity in constrained circumstances.	Bicycle System. We provide off-street multipurpose trails and Class II bikeways as our primary-preferred paths of travel and use the Class III for connectivity in constrained circumstances. When truck routes and bicycle facilities share a right-of-way, we prefer Class I or Class IV bicycle facilities. We require new development to include bicycle facilities, such as bicycle parking and secure storage areas.
M2-3	Pedestrian Walkways. We require walkways that promote safe and convenient travel between residential areas, businesses, schools, parks, recreation areas, and other key destination points.	Pedestrian Walkways. We require streets to include sidewalks and visible crosswalks at major intersections where necessary to walkways that promote safe and convenient travel-comfortable mobility between residential areas, businesses, schools, parks, recreation areas, and other key destination points. (Link to Community Design Policy CD-3.3)
M2-4	Network Opportunities. We explore opportunities to expand pedestrian and bicycle networks. This includes consideration of utility easements, levees, drainage corridors, road rights-of-way, medians and other potential options.	Network Opportunities. We use public rights-of-way and easements such as, explore opportunities to expand pedestrian and bicycle networks. This includes consideration of utility easements, levees, drainage corridors, road rights-of-way, medians, and other potential options to maintain and expand our bicycle and pedestrian network. In urban, mixed use, and transit-oriented Place Types, we encourage the use of underutilized public and private spaces to expand our public realm and improve pedestrian and bicycle connectivity. (Link to Community Design Element <i>Urban, Mixed Use, and Transit-oriented Place Types</i> Section)
M3 Public Transit		
M3 A public transit system that is a viable alternative to automobile travel and meets the basic transportation needs of transit-dependent.		
M3-1	Transit Partners. We maintain a proactive working partnership with transit providers to ensure that adequate public transit service is available	Transit Partners. We maintain a proactive working partnership with transit providers to ensure that adequate public transit service is available, cost-efficient, and convenient, particularly for residents in environmental justice areas.
M3-2	Transit Facilities at New Development. We require new development to provide transit facilities, such as bus shelters, transit bays, and turnouts, as necessary.	Alternative Transit Facilities at New Development. We require new development adjacent to an existing or planned transit stop to contribute to the creation of transit facilities, provide transit facilities, such as bus shelters, transit bays and turnouts, and bicycle facilities, such as secure storage areas.
M3-3	Transit-Oriented Development. We may provide additional development-related incentives to those inherent in the Land Use Plan for projects that promote transit use.	Transit-Oriented Development. We may provide additional development-related incentives to those inherent in the Land Use Plan for projects that promote transit use and reduce vehicle miles traveled.

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M3-4	Bus Rapid Transit (BRT) Corridors. We work with regional transit agencies to implement BRT service to target destinations and along corridors, as shown in the Transit Plan.	Bus Rapid Transit (BRT) Corridors. We work with regional transit agencies to implement BRT service and reduce vehicle miles traveled by to targeting destinations and along corridors, as shown in the Transit Plan with the highest number of potential riders.
M3-5	Light Rail. We support the extension of the Metro Rail Gold Line to Ontario and will work to secure station locations adjacent to the Meredith site and at the proposed multimodal transit center.	Light Rail. We support the extension of the Metro Rail Gold Line to Ontario and will work to secure station locations adjacent to the Meredith site and at the proposed multimodal transit center.
M3-6	Metrolink Expansion. We advocate expansion of Metrolink service to include the Downtown and the multimodal transit center.	
M3-7	High-Speed Rail. We encourage the development of high-speed rail systems that would enhance regional mobility in southern California and serve the City of Ontario.	
M3-8	Feeder Systems. We work with regional transit agencies to secure convenient feeder service from the Metrolink station and the proposed multimodal transit center to employment centers in Ontario.	
M3-9	Ontario Airport Metro Center Circulator. We will explore the development of a convenient mobility system, including but not limited to shuttle service, people mover, and shared car system for the Ontario Airport Metro Center.	
M3-10	Multimodal Transit Center. We intend to ensure the development of a multimodal transit center near LAONT airport to serve as a transit hub for local buses, BRT, the Gold Line, high-speed rail, the proposed Ontario Airport Metro Center circulator, and other future transit modes.	Multimodal Transit-Transportation Center. We intend to ensure the development of a multimodal transit-transportation center near LA ONT airport to serve as a transit hub with amenities for transit riders, pedestrians, and bicyclists transitioning to for local buses, BRT, the Gold Line, high-speed rail, the proposed Ontario Airport Metro Center C irculator, and other future transit modes. We support locations for the multimodal transportation center that are north of ONT airport, between Vineyard Avenue and Interstate 15.
M3-11	Transit and Community Facilities. We require the future development of community-wide serving facilities to be sited in transit-ready areas that can be served and made accessible by public transit. Conversely, we plan (and coordinate with other transit agencies to plan) future transit routes to serve existing community facilities.	
M4 Goods Movement		
M4 An efficient flow of goods through the City that maximizes economic benefit and minimizes negative impacts.		
M4-1	Truck Routes. We designate and maintain a network of City truck routes that provide for the effective transport of goods while minimizing negative impacts on local circulation and noise-sensitive land uses, as shown in the Truck Routes Plan.	Truck Routes. We designate and maintain a network of City truck routes that provide for the safe and efficient effective transport of goods while minimizing negative impacts on local circulation and noise-sensitive land uses, as shown on Exhibit M-04, Truck Routes in the Truck Routes Plan. We will minimize conflicts on truck routes through the design and implementation of buffers between travel lanes and pedestrian and bicycle facilities on designated truck routes.
M4-2	Regional Participation. We work with regional and sub-regional transportation agencies to plan and implement goods movement strategies, including those that improve mobility, deliver goods efficiently, and minimize negative environmental impacts. (Refer to Environmental Resources Policy ER4-3)	Regional Planning. We work with regional and subregional transportation agencies and adjacent cities to plan and implement goods movement strategies, including regional truck routes, plans and projects those that improve mobility, support the efficient movement of deliver goods efficiently , and minimize negative environmental impacts. (Refer Link to Environmental Resources Policy ER-4.3)
M4-3	Railroad Grade Separations. We eliminate at-grade rail crossings identified on the Functional Roadway Classifications Plan.	Railroad Grade Separations. We eliminate at-grade rail crossings identified on the Exhibit M-01, Functional Roadway Classifications Plan.
M4-4	Environmental Considerations. We support efforts to reduce/eliminate the negative environmental impacts of goods movement.	Environmental Considerations. We support both local and regional efforts to reduce/eliminate the negative environmental impacts of goods movement through the planning and implementation of truck routing and the development of a plan to evaluate the future needs of clean fueling/recharging and electrified truck parking.
M4-5	Air Cargo. We support and promote a LAONT that accommodates 1.6 million tons of cargo per year, as long as the impacts associated with that level of operations are planned for and mitigated.	Air Cargo. We support and promote an LA ONT that accommodates 1.6 million tons of cargo per year, as long as the impacts associated with that level of operations are planned for and mitigated.
M5 Regional Transportation		
M5 A productive leadership role to help identify and facilitate the implementation of strategies that address regional transportation challenges.		
M5-1	Regional Leadership. We maintain a leadership role to help identify and implement potential solutions to long-term regional transportation problems.	
M5-2	Land Use Compatibility with Regional Transportation Facilities. We work with LAWA, railroads, Caltrans, SANBAG, and other transportation agencies to minimize impacts.	Land Use Compatibility with Regional Transportation Facilities. We work with LAWA ONT, railroads, Caltrans, SANBAG SBCA, and other transportation agencies to minimize impacts.
COMMUNITY DESIGN ELEMENT		
CD1 Image & Identity		
CD1 A dynamic, progressive city containing distinct neighborhoods and commercial districts that foster a positive sense of identity and belonging among residents, visitors, and businesses.		
CD1-1	City Identity. We take actions that are consistent with the City being a leading urban center in Southern California while recognizing the diverse character of our existing viable neighborhoods.	City Identity. We take actions that are consistent with the City being a leading urban center in Southern California while recognizing, enhancing, and preserving the diverse character of our existing viable neighborhoods.
CD1-2	Growth Areas. We require development in growth areas to be distinctive and unique places within which there are cohesive design themes.	Growth Areas-Places Types. We establish Place Types in urban, mixed use, and transit-oriented areas to foster the City's identity as a premier community and require new development within each Place Type to incorporate prescribed urban patterns, forms, and placemaking priorities. require development in growth areas to be distinctive and unique places within which there are cohesive design themes. (Link to Community Design Element <i>Urban, Mixed Use, and Transit-oriented Place Types</i> Section)
CD1-3	Neighborhood Improvement. We require viable existing residential and non-residential neighborhoods to be preserved, protected, and enhanced in accordance with our land-use policies and themes.	Existing Neighborhoods Improvement. We require the existing character of viable existing residential and non-residential neighborhoods to be preserved, protected, and enhanced in accordance with our land-use policies and themes.

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CD1-4	Transportation Corridors. We will enhance our major transportation corridors within the City through landscape, hardscape, signage, and lighting.	Transportation Corridors. We will enhance our major transportation corridors within the City through landscape, hardscape, signage, and lighting. <i>The extent of enhancement should be appropriate to the use, type, and context of each corridor.</i>
CD1-5	View Corridors. We require all major north-south streets be designed and redeveloped to feature views of the San Gabriel Mountains, which are part of the City's visual identity and a key to geographic orientation. Such views should be free of visual clutter, including billboards, and maybe enhanced by framing with trees.	
CD2 Design Quality		
CD2	A high level of design quality resulting in public spaces, streetscapes, and developments that are attractive, safe, functional, and distinct.	A high level of design quality resulting in neighborhoods, commercial areas, public spaces, parks, and streetscapes, and developments that are attractive, safe, functional, human-scale, and distinct.
CD2-1	Quality Architecture. We encourage all development projects to convey visual interest and character through 1) Building volume, massing, and height to provide appropriate scale and proportion; 2) A true architectural style which is carried out in the plan, section and elevation through all aspects of the building and site design and appropriate for its setting; 3) Exterior building materials that are visually interesting, high quality, durable, and appropriate for the architectural style.	Quality Building Design and Architecture. We encourage all development projects to convey visual interest and character through: 1) Building volume, massing, and height to provide context-appropriate scale and proportion; 2) A true architectural style which is carried out in the plan, section, and elevation through all aspects of the building and site design and appropriate for its setting; and 3) Exterior building materials that are articulated, visually interesting, high quality, durable, and appropriate for the architectural style.
CD2-2	Neighborhood Design. We create distinct residential neighborhoods that are functional, have a sense of community, emphasize livability and social interaction, and are uniquely identifiable places through such elements as 1) A pattern of smaller, walkable blocks that promote access, activity, and safety; 2) Variable setbacks and parcel sizes to accommodate a diversity of housing types; 3) Traffic calming measures to slow traffic and promote walkability while maintaining acceptable fire protection and traffic flows; 4) Floor plans that encourage views onto the street and de-emphasize the visual and physical dominance of garages (introducing the street frontage as the "outdoor living room") and porches in front of homes, as appropriate; and 5) Landscaped parkways, with sidewalks separated from the curb.	Neighborhood Design. We create distinct residential neighborhoods that are functional, have promote a sense of community and identity; by emphasizing access, connectivity, livability, and social interaction; and are uniquely identifiable places through such elements as: 1) A pattern of smaller, walkable blocks that promote activity, safety, and access to nearby amenities and services activity and safety ; 2) Varied Variable parcel sizes and lot configurations to accommodate a diversity of housing types; 3) Traffic calming measures to slow traffic and promote walkability while maintaining acceptable fire protection and traffic flows and emergency and evacuation access; 4) Floor plans that encourage views onto the street and de-emphasize the visual and physical dominance of garages (introducing the street frontage as the "outdoor living room") and porches in front of homes, as appropriate; and 5) landscaped parkways, with sidewalks separated from the curb and designed to maximize safety, comfort, and aesthetics for all users.
CD2-3	Commercial Centers. We desire commercial centers to be distinctive, pedestrian-friendly, functional, and vibrant with a range of businesses, places to gather, and connectivity to the neighborhoods they serve.	Commercial Centers Areas. We desire commercial areas and centers to be distinctive, pedestrian-friendly, functional, and vibrant with a range of businesses, places to gather, and connectivity to the neighborhoods they serve.
CD2-4	Mixed-Use, Urban Office, and Transit Serving Areas. We require mixed-use, urban office and transit serving areas to be designed and developed as pedestrian-oriented "villages" that promote a vibrant, comfortable, and functional environment.	Urban, Mixed Use, Urban Office, and Transit-oriented Serving Areas. We establish Place Types to require mixed use, urban, office and transit-oriented serving areas to be designed and developed as pedestrian-oriented "villages" areas that are integrated with adjacent neighborhoods and promote a vibrant, comfortable, and functional environment, as defined for each Place Type. <i>(Link to Community Design Element Urban, Mixed Use, and Transit-oriented Place Types Section)</i>
CD2-5	Streetscapes. We design new and, when necessary, retrofit existing streets to improve walkability, bicycling and transit integration, strengthen connectivity, and enhance community identity through improvements to the public right-of-way such as sidewalks, street trees, parkways, curbs, street lighting, and street furniture.	
CD2-6	Connectivity. We promote development of street patterns and pedestrian networks that create and unify neighborhoods, rather than divide them, and create cohesive and continuous corridors, rather than independent "islands" through the following means (Link to Mobility): 1) Local street patterns that provide access between subdivisions, and within neighborhoods and discourage through traffic; 2) A local street system that is logical and understandable for the user. A grid system is preferred to avoid circuitous and confusing travel paths between internal neighborhood areas and adjacent arterials; and 3) Neighborhoods, centers, public schools, and parks that are linked by pedestrian greenways/open space networks. These may also be used to establish clear boundaries between distinct neighborhoods and/or centers.	Connectivity. We promote development of street patterns, and pedestrian multimodal networks, and connected public spaces that create and unify neighborhoods, rather than divide them, and create cohesive and continuous corridors, rather than independent "islands" through the following means (Link to Mobility): 1) Local street networks-patterns that provide access both between subdivisions and within a neighborhood and discourage through traffic; 2) A local street system that is logical and understandable for the user. A grid system is preferred to avoid circuitous and confusing travel paths between internal neighborhood areas and adjacent arterials, and to provide adequate emergency and evacuation access; and 3) Pedestrian and bicycle networks that provide convenient access to neighborhoods and nearby destinations, such as centers, public schools, and parks, other public spaces, commercial areas, and transit stops. that are linked by the pedestrian and bicycle greenways/open space networks. These may also be used to establish clear boundaries between distinct neighborhoods and/or centers.
CD2-7	Sustainability. We collaborate with the development community to design and build neighborhoods, streetscapes, sites, outdoor spaces, landscaping, and buildings to reduce energy demand through solar orientation, maximum use of natural daylight, passive solar and natural ventilation, building form, mechanical and structural systems, building materials, and construction techniques.	
CD2-8	Safe Design. We incorporate defensible space design into new and existing developments to ensure the maximum safe travel and visibility on pathways, corridors, and open space and at building entrances and parking areas by avoiding physically and visually isolated spaces, maintaining visibility and accessibility, and using lighting.	
CD2-9	Landscape Design. We encourage durable landscaping materials and designs that enhance the aesthetics of structures, create and define public and private spaces, and provide shade and environmental benefits.	Landscape Design. We encourage durable, sustainable, and drought-tolerant landscaping materials and designs that enhance the aesthetics of structures, create and define public and private spaces, and provide shade and environmental benefits.

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CD2-10	Surface Parking Areas. We require parking areas visible to or used by the public to be landscaped in an aesthetically pleasing, safe, and environmentally sensitive manner. Examples include shade trees, pervious surfaces, urban run-off capture and infiltration, and pedestrian paths to guide users through the parking field.	Parking Areas. We require all development, including single-family residential, to minimize the visual impact of surface, structured, and garage parking areas visible from the public realm to or used by the public to be landscaped in an aesthetically pleasing, safe, and environmentally sensitive manner. Examples include: 1) Surface parking: S shade trees, pervious surfaces, urban run-off capture and infiltration, and pedestrian paths to guide users through the parking field. 2) Structured parking: facade articulation, screening, appropriate lighting, and landscaping. 3) Garage parking: providing access to single-family residential garages through alley access, recessing garages from the frontage to emphasize front doors or active living spaces.
CD2-11	Entry Statements. We encourage the inclusion of amenities, signage, and landscaping at the entry to neighborhoods, commercial centers, mixed-use areas, industrial developments, and public places that reinforce them as uniquely identifiable places.	
CD2-12	Site and Building Signage. We encourage the use of sign programs that utilize complementary materials, colors, and themes. Project signage should be designed to effectively communicate and direct users to various aspects of the development and complement the character of the structures.	
CD2-13	Entitlement Process. We work collaboratively with all stakeholders to ensure a high degree of certainty in the efficient review and timely processing of all development plans and permits.	
CD2-14	Availability of Information. We provide easy access to information for developers, builders, and the public about design quality, construction quality, and sustainable building practices.	
CD2-15	Leverage Professional and Trade Organizations. We support excellence in design and construction quality through collaboration with trade and professional organizations that provide expertise, resources, and programs for developers, builders, and the public.	
CD3-7-2-16	Transit Stops. We require transit stops be well lit, safe, appealing to, and accessible by pedestrians.	Transit Stops. We require transit stops be conveniently located , well lit, safe, appealing to and clearly accessible by to pedestrians, bicyclists, and people of all abilities.
CD3 Pedestrian Environment Urban, Mixed Use, and Transit-Oriented Place Types		
CD3 Vibrant urban environments that are organized around intense buildings, pedestrian and transit areas, public plazas, and linkages between and within developments that are conveniently located, visually appealing and safe during all hours.		
CD3-1	New policy	Unique Identity. We promote development that heightens the unique character and identity of each Place Type by requiring compatible land uses and land planning, site design, and building design that promotes an active public realm.
CD3-2	Design. We require that pedestrian, vehicular, bicycle, and equestrian circulation on both public and private property be coordinated and designed to maximize safety, comfort, and aesthetics.	Comfortable, Safe, Human-Scale Public Realm Design. We require that public spaces, including streets, parks, and plazas pedestrian, vehicular, bicycle, and equestrian circulation on both public and private property be coordinated and designed to maximize safety, comfort, and aesthetics and connect to the citywide pedestrian, vehicular, and bicycle networks.
CD3-3	Connectivity Between Streets, Sidewalks, Walkways, and Plazas. We require landscaping and paving to be used to optimize visual connectivity between streets, sidewalks, walkways, and plazas for pedestrians.	Complete and Connected Network Connectivity Between Streets, Sidewalks, Walkways, and Plazas. We require that pedestrian, vehicular, and bicycle, and equestrian circulation on both public and private property be coordinated to provide connections internally and externally to adjacent neighborhoods and properties (existing and planned) through a system of local roads and trails that promote walking and biking to nearby destinations (including existing and planned parks, commercial areas, and transit stops) and are designed to maximize safety, comfort, and aesthetics. landscaping and paving to be used to optimize visual connectivity between streets, sidewalks, walkways, and plazas for pedestrians.
CD3-4	Building Entrances. We require all building entrances to be accessible and visible from adjacent streets, sidewalks, or public open spaces.	Context-Aware and Appropriate Design. We require appropriate building and site design that complements existing development, respects the intent and identity of the Place Type, and provides appropriate transitions and connections between adjacent uses to ensure compatibility of scale, maintain an appropriate level of privacy for each use, and minimize potential conflicts. Building Entrances. We require all building entrances to be accessible and visible from adjacent streets, sidewalks, or public open spaces.
CD3-5	Ground Floor Usage of Commercial Buildings. We create lively pedestrian streetscapes by requiring the location of uses, such as shopping, galleries, restaurants, etc., on ground floors adjacent to sidewalks.	Active Frontages Ground Floor Usage of Commercial Buildings. We create lively pedestrian streetscapes by requiring primary building, business, and residential entrances, outdoor dining, and storefronts the location of uses, such as shopping, galleries, restaurants, etc., be located on ground floors adjacent to sidewalks or public spaces and designed to maximize safety, comfort, aesthetics, and the intended functionality (as defined by the Place Type).
CD3-6	Paving. We require sidewalks and road surfaces to be of a type and quality that contributes to the appearance and utility of streets and public spaces.	Managed Infrastructure. We collaborate with developers and property owners to facilitate development that realizes the envisioned character and functionality of the Place Type through the use of green and shared infrastructure. Paving. We require sidewalks and road surfaces to be of a type and quality that contributes to the appearance and utility of streets and public spaces.
CD3-7	Landscaping. We utilize landscaping to enhance the aesthetics, functionality, and sustainability of streetscapes, outdoor spaces, and buildings.	Landscaping. We utilize landscaping to enhance the aesthetics, functionality, and sustainability of streetscapes, outdoor spaces, and buildings.
CD3-7	Transit Stops. We require transit stops be well lit, safe, appealing to, and accessible by pedestrians.	Transit Stops. We require transit stops be well lit, safe, appealing to, and accessible by pedestrians.
CD4 Historic Preservation		
CD4 Historic buildings, streets, landscapes, and neighborhoods, as well as the story of Ontario's people, businesses, and social and community organizations, have been preserved and serve as a focal point for civic pride and identity.		
CD4-1	Cultural Resource Management. We update and maintain an inventory of historic sites and buildings, professional collections, artifacts, manuscripts, photographs, documents, maps, and other archives.	Historic buildings, streets, landscapes, and neighborhoods, as well as the story of Ontario's people, businesses, and social and community organizations, that have been preserved and serve as a focal point for civic pride and identity.

Goal / Policy No.	Goal / Policy (Approved Project)	Proposed Goal / Policy Revision (Proposed Project) <small>(where column is blank, no change from the approved project is proposed)</small>
CD4-2	Collaboration with Property Owners and Developers. We educate and collaborate with property owners and developers to implement strategies and best practices that preserve the character of our historic buildings, streetscapes, and neighborhoods.	
CD4-3	Collaboration with Outside Agencies. We pursue opportunities to team with other agencies, local organizations, and nonprofits in order to preserve and promote Ontario's heritage.	
CD4-4	Incentives. We use the Mills Act and other federal, state, regional, and local programs to assist property owners with the preservation of select properties and structures.	
CD4-5	Adaptive Reuse. We actively promote and support the adaptive reuse of historic sites and buildings to preserve and maintain their viability.	
CD4-6	Promotion of Public Involvement in Preservation. We engage in programs to publicize and promote the City's and the public involvement in preservation efforts.	
CD4-7	Public Outreach. We provide opportunities for our residents to research and learn about the history of Ontario through the Planning Department, Museum of History and Art, Ontario, and the Robert E. Ellingwood Model Colony History Room.	Public Outreach. We provide opportunities for our residents to research and learn about the history of Ontario through the Planning Department, the Ontario Museum of History and Art, Ontario , and the Robert E. Ellingwood Model Colony History Room.
CD5 Protection of Investment		
CD5 A sustained level of maintenance and improvement of properties, buildings, and infrastructure that protects the property values and encourages additional public and private investments.		
CD5-1	Maintenance of Buildings and Property. We require all public and privately-owned buildings and property (including trails and easements) to be properly and consistently maintained.	
CD5-2	Maintenance of Infrastructure. We require the continual maintenance of infrastructure.	
CD5-3	Improvements to Property & Infrastructure. We provide programs to improve property and infrastructure.	
CD5-4	Neighborhood Involvement. We encourage active community involvement to implement programs aimed at the beautification and improvement of neighborhoods.	
SOCIAL RESOURCES ELEMENT		
SR1 Health		
SR1 A community where residents have access to information, services, and goods that improve their health and wellbeing.		A community where rResidents have access to information, services, and goods that improve their health and wellbeing.
SR1-1	Partnering for Healthcare. We work with healthcare providers, and local, regional, state, and federal agencies to attract and retain a diversity of affordable, quality healthcare and facilities for the entire community.	
SR1-2	Nutrition Choices. We support the promotion of healthy nutritional food choices in the community.	Nutrition Choices. We support the promotion of equitable access to affordable healthy nutritional food choices in the community, including community gardens, farmers markets, and cooking classes.
SR1-3	Healthy Education. We promote health education, including disease prevention, mental health, nutrition, and physical fitness	Health Education. We promote equitable access to health education, including disease prevention, mental health, nutrition and physical fitness.
SR1-4	Physical Activity. We encourage activities and community design that improves the physical fitness of our community members.	Physical Activity. We encourage activities and community design that improve the physical fitness of our community members, with an emphasis on the provision of activities and facilities in environmental justice areas.
SR2 Education		
SR2 A range of educational and training opportunities for residents and workers of all ages and abilities that improves their life choices and provides a skilled workforce for our businesses.		
SR2-1	Education Partners. We partner with educational institutions throughout the region in order to expand the range and quality of educational offerings available to the community.	
SR2-2	Workforce Training. We work with industrial organizations, businesses, and educational institutions to create opportunities for workforce training.	
SR2-3	Joint-use Facilities. We partner with public and private educational institutions to jointly use facilities for both City and educational purposes	
SR2-4	Access to Schools. We work with our local and regional partners to improve safety in and around schools and to improve access for all citizens of all ages and abilities to schools and community services such as afterschool and other programs.	
SR2-5	School Facilities. We plan and coordinate with the school districts for designing and locating school facilities to meet the City's goals, such as for health, walkability, and safety, and to minimize impacts to the existing neighborhood.	
SR2-6	New policy to address civic engagement	Language. We promote broad outreach in languages used by the community for proposed projects that could negatively affect environmental justice areas.
SR2-7	New policy to address civic engagement	Community Engagement. We promote targeted outreach and education to historically underrepresented groups to encourage meaningful participation in decision-making process for projects whose outcomes will affect land use in environmental justice areas.
SR3 Community and Leisure Activities		
SR3 A range of community and leisure programs and activities provided by public, private, and nonprofit organizations that meet the needs of the community's varied interests, age groups, and abilities		
SR3-1	Partnerships. We partner with local and regional agencies, nonprofit organizations, and the private sector to provide a comprehensive range of community activities and events to citizens.	
SR3-2	Needs Assessment. We track the needs and priorities for community services and look for ways to meet demands and avoid duplication of offerings.	
SR3-3	Program Outreach. We promote information about leisure activities, classes, and special events, and other services and activities in our community.	
SR3-4	Community Events. We plan and actively participate in regularly scheduled community events and seasonal or yearly citywide events.	
SR3-5	Community Activities as a Crime Deterrent. We promote and participate in community activities as part of our crime prevention efforts. (Link to Safety Element Policy S-7.3)	

Goal / Policy No.	Goal / Policy (Approved Project)	Proposed Goal / Policy Revision (Proposed Project) <i>(where column is blank, no change from the approved project is proposed)</i>
SR4 Library		
SR4 City libraries that connect community members of all ages and abilities to a broad range of programs, communication, and informational resources.		
SR4-1	Community Needs. We identify and monitor community needs for library services, technology, and facilities, and tailor them to effectively meet those needs.	
SR4-2	Interagency Coordination. We leverage relationships with outside agencies, educational institutions, and neighboring jurisdictions to share the library resources to the benefit of Ontario residents.	
SR4-3	Library Outreach. We outreach to the community to increase the patronage of the library.	
SR4-4	Coordination with other Community Services. We coordinate library programs with other recreational and community programs and facilities.	
SR4-5	Focal Points of the Community. We design and program Ontario's libraries as focal points of community engagement, including public outreach and community engagement.	
SR4-6	Robert E. Ellingwood Model Colony History Room. We work with the Museum of History and Art, Ontario in order to collect, preserve and display artifacts and images from Ontario's heritage and connect the City's past to the present through the History Room.	Robert E. Ellingwood Model Colony History Room. We work with the Ontario Museum of History and Art , Ontario in order to collect, preserve, and display artifacts and images from Ontario's heritage and connect the City's past to the present through the History Room
SR5 Entertainment and Culture		
SR5 Local heritage, entertainment, and cultural experiences that enrich the lives of Ontario's residents, workers, and visitors and serve to attract residents and businesses to the City.		
SR5-1	Provisions of Entertainment and Culture. We support a range of entertainment and cultural experiences, such as public art, exhibitions, and performances.	Provision of Entertainment and Culture. We support equitable access to a range of entertainment and cultural experiences such as public art, exhibitions and performances.
SR5-2	Local Heritage Education. We partner with educational providers to promote culture and heritage. (Link to Community Design Element <i>Historic Preservation</i> Section).	
SR5-3	Public Art. We encourage public art in buildings, parks, open spaces, and other public and private spaces.	
SR5-4	Private-Public Sector Events. We partner with private and nonprofit sectors to provide and promote participation in cultural activities, including fairs, festivals, and other events geared to neighborhoods, the City as a whole, and the region.	
SR5-5	Promotion of Ontario Artists and Musicians. We promote awareness of entertainment and culture produced in Ontario.	

Appendix C Air Quality Modeling

Appendices

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Land Use Statistics - Ontario, San Bernardino County

	Existing Conditions	TOP	Growth Factor from Existing for Current TOP	TOP 2050 Update	Growth Factor from Existing for TOP 2050	Changed from Approved Project	
	2021	2050		2050		2050	%
Housing Units	52,466	104,163	0.99	124,380	1.37	20,217	19%
Population	179,597	357,957	0.99	410,492	1.29	52,535	15%
Non-Residential SQFT	156,065,382	260,399,271	0.67	261,491,779	0.68	1,092,508	0%
Employment	131,999	313,067	1.37	296,002	1.24	-17,065	-5%
Service Population	311,596	671,024	1.15	706,494	1.27	35,470	5%

AQMP Consistency Analysis

Comparison of the Change in Population and VMT in Ontario (O-D Method)

Category	Existing	2050 Approved Project	2050 Proposed Project	Change from Existing		Change from the Approved Project	
				Change	Percent	Change	Percent
Population	179,597	357,957	410,492	230,895	129%	52,535	15%
Employment	131,999	313,067	296,002	164,003	124%	-17,065	-5%
SP	311,596	671,024	706,494	394,898	127%	35,470	5%
VMT per Day	12,400,139	19,968,991	20,197,558	7,797,419	63%	228,567	1%
VMT/SP	39.80	29.76	28.59	-11.21	-28%	-1.2	-4%

City of Ontario Community Criteria Air Pollutant Emissions Inventory and Forecast

Sources

¹ Source: F&P 2021; EMFAC2021 Version 1.0.1 Emissions Database (Sub-Area - San Bernardino -South Coast)

² Sources: SoCalGas 2021. and CalEEMod User's Guide for natural gas criteria air pollutant emission rates. Excludes criteria air pollutant emissions natural gas use from Permitted Sources within the City.

³ Source: OFFROAD 2017

⁴ Source: CalEEMod User's Guide

EXISTING

Phase	Existing (2021) Criteria Air Pollutant Emissions (pounds/day)					
	VOC	NO _x	CO	SO ₂	PM ₁₀	PM _{2.5}
Transportation ¹	427	6,649	20,047	83	630	257
Energy ²	122	1,068	642	7	84	84
Offroad Equipment ³	98	2,021	6,472	3	85	78
Consumer Products ⁴	2,096					
Total	2,742	9,738	27,162	93	799	419

Current TOP (Approved Project)

Phase	Approved Project 2050 Criteria Air Pollutant Emissions (pounds/day)					
	VOC	NO _x	CO	SO ₂	PM ₁₀	PM _{2.5}
Transportation ¹	121	2,019	10,419	66	599	215
Energy ²	307	2,720	1,828	17	212	212
Offroad Equipment ³	216	2,446	12,857	4	94	86
Consumer Products ⁴	4,991					
Total	5,634	7,185	25,103	87	905	512

TOP 2050 Update (Proposed Project)

Phase	Project (2050) Criteria Air Pollutant Emissions (pounds/day)					
	VOC	NO _x	CO	SO ₂	PM ₁₀	PM _{2.5}
Transportation ¹	122	1,981	10,568	67	597	213
Energy ²	296	2,634	1,830	16	205	205
Offroad Equipment ³	221	2,407	12,425	4	94	85
Consumer Products ⁴	6,123					
Total	6,762	7,022	24,822	86	895	503

NET CHANGE (from Existing)

Phase	Net Change (2050-2019) Criteria Air Pollutant Emissions (pounds/day)					
	VOC	NO _x	CO	SO ₂	PM ₁₀	PM _{2.5}
Transportation ¹	-304	-4,667	-9,479	-17	-33	-44
Energy ²	174	1,566	1,187	10	120	120
Offroad Equipment ³	123	386	5,953	1	8	7
Consumer Products ⁴	4,027	0	0	0	0	0
Total	4,020	-2,715	-2,340	-7	95	84
South Coast AQMD Threshold	55	55	550	150	150	55
Exceeds Threshold	Yes	No	No	No	No	Yes

NET CHANGE from Approved Project

City of Ontario Community Criteria Air Pollutant Emissions Inventory and Forecast

Phase	Net Change Criteria Air Pollutant Emissions (pounds/day)					
	VOC	NO _x	CO	SO ₂	PM ₁₀	PM _{2.5}
Transportation ¹	1	-38	149	0	-2	-1
Energy ²	-11	-86	2	-1	-7	-7
Offroad Equipment ³	5	-38	-433	0	-1	-1
Consumer Products ⁴	1,132	0	0	0	0	0
Total	1,128	-163	-281	0	-10	-9
South Coast AQMD Threshold	55	55	550	150	150	55
Exceeds Threshold	Yes	No	No	No	No	No

Energy Data Requests to SCE and SoCalGas

SoCalGas. September 22, 2021. Natural Gas Use in Ontario (2014-2020)							
Category	2014	2015	2016	Annual Therms			
				2017	2018	2019	2020
Commercial	12,545,799	12,960,377	12,595,489	14,264,799	15,518,146	15,742,697	12,160,232
Industrial	7,802,631	8,682,790	9,265,539	9,556,757	9,492,484	10,425,460	12,183,568
Single-Family Residential	9,436,543	9,836,689	10,092,900	10,054,113	10,114,228	12,026,805	12,058,567
Multi-Family Residential	4,379,560	4,439,414	4,502,300	4,478,207	4,451,860	4,918,579	4,824,733
Total Therms	34,164,533	35,919,270	36,456,228	38,353,876	39,576,718	43,113,541	41,227,100

Criteria Air Pollutants from Natural Gas

Rate	lbs/MBTU					
	ROG	NO _x	CO	SO ₂	PM ₁₀	PM _{2.5}
Natural Gas						
Residential	0.01078431	0.09215686	0.03921569	0.00058824	0.00745098	0.00745098
Non-Residential	0.01078431	0.09803922	0.08235294	0.00058824	0.00745098	0.00745098

Source: CalEEMod Version 2016.2.2 (October 2017)

Ontario	Existing	Current TOP	TOP 2050 Update
	Therms		
Residential	24,343,800	36,563,060	43,659,430
Nonresidential	16,883,300	63,686,090	60,214,690
Total	41,227,100	100,249,150	103,874,120

Natural Gas	2020 lbs/day					
	ROG	NO _x	CO	SO ₂	PM ₁₀	PM _{2.5}
Residential	72	615	262	4	50	50
Nonresidential	50	453	381	3	34	34
TOTAL	122	1068	642	7	84	84

Natural Gas	Current TOP lbs/day					
	ROG	NO _x	CO	SO ₂	PM ₁₀	PM _{2.5}
Residential	108	923	393	6	75	75
Nonresidential	188	1711	1437	10	130	130
TOTAL	296	2634	1830	16	205	205

Natural Gas	TOP 2050 Update lbs/day					
	ROG	NO _x	CO	SO ₂	PM ₁₀	PM _{2.5}
Residential	129	1102	469	7	89	89
Nonresidential	178	1617	1359	10	123	123
TOTAL	307	2720	1828	17	212	212

Area Sources - Consumer Products

Source: CalEEMod Users Guide. Version 2016.3.2

Residential Consumer Product Use^a

$$\text{Emissions} = \text{EF} \times \text{Building Area}$$

$$\text{EF} = 2.14\text{E-}05 \text{ lbs/sqft/day}$$

Sources/Notes:

a. California Emissions Estimator Model, Version 2016.3.2, Users Guide. Appendix A.

AVERAGE HOUSING SQFT ASSUMPTIONS

Year Structure was Built	Percent of Housing Stock ^a	Average Square Feet of New Single Family Homes ^b	Average Square Feet (Weighted)
2014 or Later	3.4%	2,617	89
2010 to 2013	1.6%	2,467	39
2000 to 2009	7.3%	2,404	175
1990 to 1999	10.1%	2,116	214
1980 to 1989	20.6%	1,819	375
1970 to 1979	20.8%	1,699	353
1960 to 1969	8.9%	1,715	153
1950 to 1959	16.5%	1,715	283
1940 to 1949	5.3%	1,715	91
1939 or earlier	5.5%	1,715	94
	100%		1,867

Sources/Notes:

<https://www.census.gov/acs/www/data/data-tables-and-tools/data-profiles/>

a. United States Census Bureau, Selected Housing Characteristics, City of Ontario, 2019. Table DP04. American Community Survey 5-Year Estimates, Year <https://www.census.gov/acs/www/data/data-tables-and-tools/data-profiles/2019/>

b. United States Census Bureau, Characteristics of New Housing, Characteristics of New Single-Family Houses Completed, Median and Average Square Feet by Location. <https://www.census.gov/construction/chars/pdf/c25ann2016.pdf>

	2021 Existing	2050 TOP 2050 Update	2050 Approved Project
Housing Units	52,466	124,380	104,163
Residential SQFT	97,936,598	286,111,564	233,210,414
lbs VOC per day	2,096	6,123	4,991

Source

1 New housing units constructed post-2014 assumed to be 2,617 square feet (based on Source 2).

Average Square feet of Floor Area in Single-Family Houses Completed - West

Area Sources

Source: OFFROAD2017. <https://arb.ca.gov/emfac/emissions-inventory/> San Bernardino Year 2021

on:

Agricultural Equipment	Based on the percentage of agricultural acreage within the City compared to the County of San Bernardino (San Bernardino County 2021, CDC 2017)
Construction Equipment	Based on the percentage of housing permits in the Ontario compared to the San Bernardino County (HUD 2021)
Lawn & Garden	Based on the percentage of housing units in Ontario compared to San Bernardino County (US Census 2021)
Light Commercial and Industrial Equipment	Based on the percentage of employment in Ontario compared to San Bernardino County (US Census 2021)

Sources

Farmland Acreage

Source: San Bernardino County, Agricultural / Weights & Measures. 2021. 2020 Crop Report.

<http://ams.sbcounty.gov/Portals/13/AWM%20CROP%20REPORT%202020%20080521.pdf?ver=2021-08-05-160649-640>

Source: California Department of Conservation (CDC), Farmland Mapping and Monitoring Program. 2017. 2016 Important Farmland Map. Note: 2016 data assumed to reflect existing conditions in Ontario.

Construction (Housing Permits)

Source: Housing and Urban Development (HUD). 2021, Accessed October 15. SOCDs Building Permits Database. <https://socds.huduser.gov/permits/>

Employment

Source. U.S. Census Bureau. Longitudinal Employer-Household Dynamics. 2020 Q3. <http://lehd.ces.census.gov/>

2021 Existing	ROG Exhaust	NO _x Exhaust	CO Exhaust	SO ₂ Exhaust	PM ₁₀ Exhaust	PM _{2.5} Exhaust*
Agricultural	0.4	2.4	2.5	0.0	0.1	0.1
Construction Equipment	2	1,706	1,713	3	79	72
Lawn & Garden	34	4	354	0	0	0
Light Commercial/ Industrial Equipment	62	309	4,402	0	6	6
TOTAL	98	2,021	6,472	3	85	78

TOP 2050 Update	ROG Exhaust	NO _x Exhaust	CO Exhaust	SO ₂ Exhaust	PM ₁₀ Exhaust	PM _{2.5} Exhaust*
Forecast Adjusted for:	lbs/day					
Agricultural	0	0	0	0	0	0
Construction Equipment	2	1,706	1,713	3	79	72
Lawn & Garden	80	10	839	0	1	1
Light Commercial/ Industrial Equipment	139	692	9,872	1	14	12
TOTAL	221	2,407	12,425	4	94	85

Current TOP	ROG Exhaust	NO _x Exhaust	CO Exhaust	SO ₂ Exhaust	PM ₁₀ Exhaust	PM _{2.5} Exhaust*
Forecast Adjusted for:	lbs/day					
Agricultural	0	0	0	0	0	0
Construction Equipment	2	1,706	1,713	3	79	72
Lawn & Garden	67	8	703	0	1	1
Light Commercial/ Industrial Equipment	147	732	10,441	1	15	13
TOTAL	216	2,446	12,857	4	94	86

ONTARIO — TRANSPORTATION SECTOR

Source: EMFAC2021, Web Database - Project Level Analysis. San Bernardino County (South Coast Air Basin) Sub Area, <https://arb.ca.gov/emfac/project-analysis>. Based on the Intergovernmental Panel on Climate Change (IPCC) Fifth Assessment Report (AR5) Global Warming Potentials (GWPs)

Note: MTons = metric tons; CO₂e = carbon dioxide-equivalent. Includes Pavley + California Advanced Clean Car Standards, the Low Carbon Fuel Standard (LCFS), on-road diesel fleet rules, and the Smartway/Phase I Heavy Duty Vehicle Greenhouse Gas Regulation.

Criteria Air Pollutant Emissions						
	lbs/day					
	ROG	NOx	CO	SOx	PM10	PM2.5
Existing (2021)	427	6,649	20,047	83	630	257
Approved Project (Current TOP)	121	2,019	10,419	66	599	215
TOP 2050	122	1,981	10,568	67	597	213
Change from Existing Conditions	-304	-4,667	-9,479	-17	-33	-44
Change from Approved Project	1	-38	149	0	-2	-1

Note: MTons = metric tons; CO₂e = carbon dioxide-equivalent.

San Bernardino County OFFROAD2017

Source: OFFROAD 2017 <https://arb.ca.gov/emfac/emissions-inventory/>

Construction includes: Over 25 horsepower, self-propelled, diesel equipment only subjected to In-Use Regulation; AND Under 25 horsepower equipment not subject to the In-Use Regulation

Region	CalYr	VehClass	MdIYr	HP_Bin	Fuel	ROG_tpd	NOx_tpd	CO_tpd	SOx_tpd	PM10_tpd	PM2_5_tpd
San Bernardino	2021	Agricultural - Agricultural Tractors	Aggregate	Aggregate	Gasoline	0.00	0.00	0.00	0.00	0.00	0.00
San Bernardino	2021	Agricultural - Agricultural Tractors	Aggregate	Aggregate	Diesel	0.07	0.43	0.34	0.00	0.03	0.02
San Bernardino	2021	Agricultural - ATVs	Aggregate	Aggregate	Gasoline	0.01	0.01	0.14	0.00	0.00	0.00
San Bernardino	2021	Agricultural - ATVs	Aggregate	Aggregate	Diesel	0.00	0.01	0.01	0.00	0.00	0.00
San Bernardino	2021	Agricultural - ATVs	Aggregate	Aggregate	Electric	0.00	0.00	0.00	0.00	0.00	0.00
San Bernardino	2021	Agricultural - Bale Wagons (Self Propelled)	Aggregate	Aggregate	Diesel	0.00	0.00	0.00	0.00	0.00	0.00
San Bernardino	2021	Agricultural - Balers (Self Propelled)	Aggregate	Aggregate	Diesel	0.00	0.00	0.00	0.00	0.00	0.00
San Bernardino	2021	Agricultural - Combine Harvesters	Aggregate	Aggregate	Diesel	0.00	0.01	0.01	0.00	0.00	0.00
San Bernardino	2021	Agricultural - Construction Equipment	Aggregate	Aggregate	Diesel	0.00	0.01	0.01	0.00	0.00	0.00
San Bernardino	2021	Agricultural - Cotton Pickers	Aggregate	Aggregate	Diesel	0.00	0.00	0.00	0.00	0.00	0.00
San Bernardino	2021	Agricultural - Forage & Silage Harvesters	Aggregate	Aggregate	Diesel	0.00	0.01	0.01	0.00	0.00	0.00
San Bernardino	2021	Agricultural - Forklifts	Aggregate	Aggregate	Diesel	0.00	0.01	0.01	0.00	0.00	0.00
San Bernardino	2021	Agricultural - Hay Squeeze/Stack Retriever	Aggregate	Aggregate	Diesel	0.00	0.00	0.00	0.00	0.00	0.00
San Bernardino	2021	Agricultural - Nut Harvester	Aggregate	Aggregate	Diesel	0.00	0.01	0.01	0.00	0.00	0.00
San Bernardino	2021	Agricultural - Other Harvesters	Aggregate	Aggregate	Diesel	0.00	0.01	0.01	0.00	0.00	0.00
San Bernardino	2021	Agricultural - Sprayers/Spray Rigs	Aggregate	Aggregate	Diesel	0.00	0.02	0.01	0.00	0.00	0.00
San Bernardino	2021	Agricultural - Swathers/Windrowers/Hay Conditioners	Aggregate	Aggregate	Diesel	0.00	0.01	0.00	0.00	0.00	0.00
TOTAL AGRICULTURAL OFFROAD						0.09	0.53	0.55	0.00	0.03	0.03
ESTIMATED ONTARIO						0.00	0.00	0.00	0.00	0.00	0.00
ESTIMATED ONTARIO (lbs/day)						0.4	2	3	0.003	0.1	0.1

Region	CalYr	VehClass	MdIYr	HP_Bin	Fuel	ROG_tpd	NOx_tpd	CO_tpd	SOx_tpd	PM10_tpd	PM2_5_tpd
San Bernardino	2021	Construction and Mining - Bore/Drill Rigs	Aggregate	Aggregate	Diesel	0.00	0.03	0.02	0.00	0.00	0.00
San Bernardino	2021	Construction and Mining - Cranes	Aggregate	Aggregate	Diesel	0.01	0.14	0.09	0.00	0.01	0.01
San Bernardino	2021	Construction and Mining - Crawler Tractors	Aggregate	Aggregate	Diesel	0.03	0.33	0.19	0.00	0.02	0.02
San Bernardino	2021	Construction and Mining - Excavators	Aggregate	Aggregate	Diesel	0.03	0.28	0.29	0.00	0.01	0.01
San Bernardino	2021	Construction and Mining - Graders	Aggregate	Aggregate	Diesel	0.02	0.25	0.12	0.00	0.01	0.01
San Bernardino	2021	Construction and Mining - Misc - Asphalt Pavers	Aggregate	Aggregate	Gasoline	0.00	0.00	0.02	0.00	0.00	0.00
San Bernardino	2021	Construction and Mining - Misc - Bore/Drill Rigs	Aggregate	Aggregate	Gasoline	0.00	0.00	0.00	0.00	0.00	0.00
San Bernardino	2021	Construction and Mining - Misc - Bore/Drill Rigs	Aggregate	Aggregate	Diesel	0.00	0.00	0.00	0.00	0.00	0.00
San Bernardino	2021	Construction and Mining - Misc - Cement And Mortar Mixers	Aggregate	Aggregate	Gasoline	0.00	0.00	0.03	0.00	0.00	0.00
San Bernardino	2021	Construction and Mining - Misc - Cement And Mortar Mixers	Aggregate	Aggregate	Diesel	0.00	0.00	0.00	0.00	0.00	0.00
San Bernardino	2021	Construction and Mining - Misc - Concrete/Industrial Saws	Aggregate	Aggregate	Gasoline	0.00	0.00	0.04	0.00	0.00	0.00
San Bernardino	2021	Construction and Mining - Misc - Concrete/Industrial Saws	Aggregate	Aggregate	Diesel	0.00	0.00	0.00	0.00	0.00	0.00
San Bernardino	2021	Construction and Mining - Misc - Cranes	Aggregate	Aggregate	Gasoline	0.00	0.00	0.01	0.00	0.00	0.00
San Bernardino	2021	Construction and Mining - Misc - Crushing/Proc. Equipment	Aggregate	Aggregate	Gasoline	0.00	0.00	0.00	0.00	0.00	0.00
San Bernardino	2021	Construction and Mining - Misc - Dumpers/Tenders	Aggregate	Aggregate	Gasoline	0.00	0.00	0.05	0.00	0.00	0.00
San Bernardino	2021	Construction and Mining - Misc - Dumpers/Tenders	Aggregate	Aggregate	Diesel	0.00	0.00	0.00	0.00	0.00	0.00
San Bernardino	2021	Construction and Mining - Misc - Excavators	Aggregate	Aggregate	Diesel	0.00	0.00	0.00	0.00	0.00	0.00
San Bernardino	2021	Construction and Mining - Misc - Other	Aggregate	Aggregate	Gasoline	0.00	0.00	0.01	0.00	0.00	0.00
San Bernardino	2021	Construction and Mining - Misc - Other	Aggregate	Aggregate	Diesel	0.00	0.00	0.00	0.00	0.00	0.00
San Bernardino	2021	Construction and Mining - Misc - Pavers	Aggregate	Aggregate	Diesel	0.00	0.00	0.00	0.00	0.00	0.00
San Bernardino	2021	Construction and Mining - Misc - Paving Equipment	Aggregate	Aggregate	Gasoline	0.00	0.00	0.06	0.00	0.00	0.00
San Bernardino	2021	Construction and Mining - Misc - Paving Equipment	Aggregate	Aggregate	Diesel	0.00	0.00	0.00	0.00	0.00	0.00
San Bernardino	2021	Construction and Mining - Misc - Plate Compactors	Aggregate	Aggregate	Gasoline	0.01	0.01	0.35	0.00	0.00	0.00
San Bernardino	2021	Construction and Mining - Misc - Plate Compactors	Aggregate	Aggregate	Diesel	0.00	0.00	0.00	0.00	0.00	0.00
San Bernardino	2021	Construction and Mining - Misc - Rollers	Aggregate	Aggregate	Gasoline	0.00	0.00	0.05	0.00	0.00	0.00
San Bernardino	2021	Construction and Mining - Misc - Rollers	Aggregate	Aggregate	Diesel	0.00	0.00	0.00	0.00	0.00	0.00
San Bernardino	2021	Construction and Mining - Misc - Rough Terrain Forklifts	Aggregate	Aggregate	Gasoline	0.00	0.00	0.04	0.00	0.00	0.00
San Bernardino	2021	Construction and Mining - Misc - Rubber Tired Loaders	Aggregate	Aggregate	Gasoline	0.00	0.00	0.03	0.00	0.00	0.00
San Bernardino	2021	Construction and Mining - Misc - Rubber Tired Loaders	Aggregate	Aggregate	Diesel	0.00	0.00	0.00	0.00	0.00	0.00
San Bernardino	2021	Construction and Mining - Misc - Signal Boards	Aggregate	Aggregate	Gasoline	0.00	0.00	0.01	0.00	0.00	0.00
San Bernardino	2021	Construction and Mining - Misc - Signal Boards	Aggregate	Aggregate	Diesel	0.00	0.01	0.01	0.00	0.00	0.00
San Bernardino	2021	Construction and Mining - Misc - Skid Steer Loaders	Aggregate	Aggregate	Gasoline	0.00	0.00	0.08	0.00	0.00	0.00
San Bernardino	2021	Construction and Mining - Misc - Skid Steer Loaders	Aggregate	Aggregate	Diesel	0.00	0.00	0.00	0.00	0.00	0.00
San Bernardino	2021	Construction and Mining - Misc - Surfacing Equipment	Aggregate	Aggregate	Gasoline	0.00	0.00	0.02	0.00	0.00	0.00
San Bernardino	2021	Construction and Mining - Misc - Tampers/Rammers	Aggregate	Aggregate	Gasoline	0.00	0.00	0.07	0.00	0.00	0.00
San Bernardino	2021	Construction and Mining - Misc - Tractors/Loaders/Backhoes	Aggregate	Aggregate	Gasoline	0.00	0.00	0.02	0.00	0.00	0.00
San Bernardino	2021	Construction and Mining - Misc - Tractors/Loaders/Backhoes	Aggregate	Aggregate	Diesel	0.00	0.00	0.00	0.00	0.00	0.00
San Bernardino	2021	Construction and Mining - Misc - Trenchers	Aggregate	Aggregate	Gasoline	0.00	0.00	0.10	0.00	0.00	0.00
San Bernardino	2021	Construction and Mining - Misc - Trenchers	Aggregate	Aggregate	Diesel	0.00	0.00	0.00	0.00	0.00	0.00
San Bernardino	2021	Construction and Mining - Off-Highway Tractors	Aggregate	Aggregate	Diesel	0.01	0.08	0.08	0.00	0.00	0.00
San Bernardino	2021	Construction and Mining - Off-Highway Trucks	Aggregate	Aggregate	Diesel	0.05	0.50	0.30	0.00	0.02	0.02
San Bernardino	2021	Construction and Mining - Other	Aggregate	Aggregate	Diesel	0.01	0.13	0.09	0.00	0.01	0.01
San Bernardino	2021	Construction and Mining - Pavers	Aggregate	Aggregate	Diesel	0.00	0.03	0.03	0.00	0.00	0.00

San Bernardino	2021	Construction and Mining - Paving Equipment	Aggregate	Aggregate	Diesel	0.00	0.02	0.01	0.00	0.00	0.00
San Bernardino	2021	Construction and Mining - Rollers	Aggregate	Aggregate	Diesel	0.01	0.08	0.09	0.00	0.00	0.00
San Bernardino	2021	Construction and Mining - Rough Terrain Forklifts	Aggregate	Aggregate	Diesel	0.00	0.06	0.09	0.00	0.00	0.00
San Bernardino	2021	Construction and Mining - Rubber Tired Dozers	Aggregate	Aggregate	Diesel	0.01	0.09	0.06	0.00	0.00	0.00
San Bernardino	2021	Construction and Mining - Rubber Tired Loaders	Aggregate	Aggregate	Diesel	0.07	0.71	0.47	0.00	0.03	0.03
San Bernardino	2021	Construction and Mining - Scrapers	Aggregate	Aggregate	Diesel	0.05	0.53	0.34	0.00	0.02	0.02
San Bernardino	2021	Construction and Mining - Skid Steer Loaders	Aggregate	Aggregate	Diesel	0.01	0.07	0.09	0.00	0.00	0.00
San Bernardino	2021	Construction and Mining - Surfacing Equipment	Aggregate	Aggregate	Diesel	0.00	0.01	0.00	0.00	0.00	0.00
San Bernardino	2021	Construction and Mining - Tractors/Loaders/Backhoes	Aggregate	Aggregate	Diesel	0.06	0.59	0.65	0.00	0.03	0.03
San Bernardino	2021	Construction and Mining - Trenchers	Aggregate	Aggregate	Diesel	0.00	0.03	0.03	0.00	0.00	0.00
TOTAL CONSTRUCTION OFFROAD						0.41	4.02	4.03	0.01	0.19	0.17
ESTIMATED ONTARIO						0.00	0.85	0.86	0.00	0.04	0.04
ESTIMATED ONTARIO (lbs/day)						2	1706	1,713	3	79	72

Region	CalYr	VehClass	MdlYr	HP_Bin	Fuel	ROG_tpd	NOx_tpd	CO_tpd	SOx_tpd	PM10_tpd	PM2_5_tpd
San Bernardino	2021	Industrial - Aerial Lifts	Aggregate	Aggregate	Diesel	0.00	0.01	0.02	0.00	0.00	0.00
San Bernardino	2021	Industrial - Forklifts	Aggregate	Aggregate	Diesel	0.01	0.09	0.09	0.00	0.01	0.01
San Bernardino	2021	Industrial - Misc - Aerial Lifts	Aggregate	Aggregate	Gasoline	0.00	0.00	0.07	0.00	0.00	0.00
San Bernardino	2021	Industrial - Misc - Aerial Lifts	Aggregate	Aggregate	Diesel	0.00	0.00	0.00	0.00	0.00	0.00
San Bernardino	2021	Industrial - Misc - Aerial Lifts	Aggregate	Aggregate	Electric	0.00	0.00	0.00	0.00	0.00	0.00
San Bernardino	2021	Industrial - Misc - Aerial Lifts	Aggregate	Aggregate	Nat Gas	0.00	0.00	0.04	0.00	0.00	0.00
San Bernardino	2021	Industrial - Misc - Forklifts	Aggregate	Aggregate	Gasoline	0.04	0.18	4.20	0.00	0.00	0.00
San Bernardino	2021	Industrial - Misc - Forklifts	Aggregate	Aggregate	Electric	0.00	0.00	0.00	0.00	0.00	0.00
San Bernardino	2021	Industrial - Misc - Forklifts	Aggregate	Aggregate	Nat Gas	0.00	0.31	2.91	0.00	0.00	0.00
San Bernardino	2021	Industrial - Misc - Other General Industrial Equipment	Aggregate	Aggregate	Gasoline	0.00	0.00	0.05	0.00	0.00	0.00
San Bernardino	2021	Industrial - Misc - Other General Industrial Equipment	Aggregate	Aggregate	Diesel	0.00	0.00	0.00	0.00	0.00	0.00
San Bernardino	2021	Industrial - Misc - Other Material Handling Equipment	Aggregate	Aggregate	Gasoline	0.00	0.00	0.01	0.00	0.00	0.00
San Bernardino	2021	Industrial - Misc - Sweepers/Scrubbers	Aggregate	Aggregate	Gasoline	0.00	0.01	0.14	0.00	0.00	0.00
San Bernardino	2021	Industrial - Misc - Sweepers/Scrubbers	Aggregate	Aggregate	Diesel	0.00	0.00	0.00	0.00	0.00	0.00
San Bernardino	2021	Industrial - Other General Industrial Equipment	Aggregate	Aggregate	Diesel	0.00	0.04	0.04	0.00	0.00	0.00
San Bernardino	2021	Industrial - Other Material Handling Equipment	Aggregate	Aggregate	Diesel	0.00	0.02	0.02	0.00	0.00	0.00
San Bernardino	2021	Light Commercial - Misc - Air Compressors	Aggregate	Aggregate	Gasoline	0.02	0.02	1.08	0.00	0.00	0.00
San Bernardino	2021	Light Commercial - Misc - Air Compressors	Aggregate	Aggregate	Diesel	0.00	0.01	0.01	0.00	0.00	0.00
San Bernardino	2021	Light Commercial - Misc - Air Compressors	Aggregate	Aggregate	Electric	0.00	0.00	0.00	0.00	0.00	0.00
San Bernardino	2021	Light Commercial - Misc - Gas Compressors	Aggregate	Aggregate	Nat Gas	0.00	0.03	0.32	0.00	0.00	0.00
San Bernardino	2021	Light Commercial - Misc - Generator Sets	Aggregate	Aggregate	Gasoline	0.05	0.03	1.64	0.00	0.00	0.00
San Bernardino	2021	Light Commercial - Misc - Generator Sets	Aggregate	Aggregate	Diesel	0.00	0.02	0.02	0.00	0.00	0.00
San Bernardino	2021	Light Commercial - Misc - Generator Sets	Aggregate	Aggregate	Electric	0.00	0.00	0.00	0.00	0.00	0.00
San Bernardino	2021	Light Commercial - Misc - Generator Sets	Aggregate	Aggregate	Nat Gas	0.00	0.00	0.01	0.00	0.00	0.00
San Bernardino	2021	Light Commercial - Misc - Pressure Washers	Aggregate	Aggregate	Gasoline	0.01	0.01	0.67	0.00	0.00	0.00
San Bernardino	2021	Light Commercial - Misc - Pressure Washers	Aggregate	Aggregate	Diesel	0.00	0.00	0.00	0.00	0.00	0.00
San Bernardino	2021	Light Commercial - Misc - Pressure Washers	Aggregate	Aggregate	Electric	0.00	0.00	0.00	0.00	0.00	0.00
San Bernardino	2021	Light Commercial - Misc - Pumps	Aggregate	Aggregate	Gasoline	0.01	0.01	0.23	0.00	0.00	0.00

San Bernardino	2021	Light Commercial - Misc - Pumps	Aggregate	Aggregate	Diesel	0.00	0.01	0.01	0.00	0.00	0.00
San Bernardino	2021	Light Commercial - Misc - Pumps	Aggregate	Aggregate	Electric	0.00	0.00	0.00	0.00	0.00	0.00
San Bernardino	2021	Light Commercial - Misc - Welders	Aggregate	Aggregate	Gasoline	0.01	0.01	0.53	0.00	0.00	0.00
San Bernardino	2021	Light Commercial - Misc - Welders	Aggregate	Aggregate	Diesel	0.01	0.04	0.04	0.00	0.00	0.00
San Bernardino	2021	Light Commercial - Misc - Welders	Aggregate	Aggregate	Electric	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL LIGHT COMMERCIAL + INDUSTRIAL OFFROAD						0.17	0.85	12.16	0.00	0.02	0.02
ESTIMATED ONTARIO						0.03	0.15	2.20	0.00	0.00	0.00
ESTIMATED ONTARIO (lbs/day)						62	309	4,402	0	6	6
TOTAL OFFROAD in the City						0.0	1	3.06	0.002	0.0	0.0

Region	CalYr	VehClass	MdIYr	HP_Bin	Fuel	ROG_tpd	NOx_tpd	CO_tpd	SOx_tpd	PM10_tpd	PM2_5_tpd
San Bernardino	2021	Lawn and Garden - Misc - Chainsaws	Aggregate	Aggregate	Gasoline	0.04	0.00	0.11	0.00	0.00	0.00
San Bernardino	2021	Lawn and Garden - Misc - Chainsaws	Aggregate	Aggregate	Electric	0.0	0	0.00	0.000	0.0	0.0
San Bernardino	2021	Lawn and Garden - Misc - Chainsaws Preempt	Aggregate	Aggregate	Gasoline	0.0	0	0.06	0.000	0.0	0.0
San Bernardino	2021	Lawn and Garden - Misc - Chainsaws Preempt	Aggregate	Aggregate	Electric	0.0	0	0.00	0.000	0.0	0.0
San Bernardino	2021	Lawn and Garden - Misc - Chippers/Stump Grinders	Aggregate	Aggregate	Gasoline	0.0	0	0.00	0.000	0.0	0.0
San Bernardino	2021	Lawn and Garden - Misc - Chippers/Stump Grinders	Aggregate	Aggregate	Diesel	0.0	0	0.00	0.000	0.0	0.0
San Bernardino	2021	Lawn and Garden - Misc - Chippers/Stump Grinders	Aggregate	Aggregate	Electric	0.0	0	0.00	0.000	0.0	0.0
San Bernardino	2021	Lawn and Garden - Misc - Lawn Mowers	Aggregate	Aggregate	Gasoline	0.0	0	0.49	0.000	0.0	0.0
San Bernardino	2021	Lawn and Garden - Misc - Lawn Mowers	Aggregate	Aggregate	Electric	0.0	0	0.00	0.000	0.0	0.0
San Bernardino	2021	Lawn and Garden - Misc - Leaf Blowers/Vacuums	Aggregate	Aggregate	Gasoline	0.1	0	0.32	0.000	0.0	0.0
San Bernardino	2021	Lawn and Garden - Misc - Leaf Blowers/Vacuums	Aggregate	Aggregate	Electric	0.0	0	0.00	0.000	0.0	0.0
San Bernardino	2021	Lawn and Garden - Misc - Other	Aggregate	Aggregate	Gasoline	0.0	0	0.01	0.000	0.0	0.0
San Bernardino	2021	Lawn and Garden - Misc - Other	Aggregate	Aggregate	Diesel	0.0	0	0.00	0.000	0.0	0.0
San Bernardino	2021	Lawn and Garden - Misc - Rear Engine Riding Mowers	Aggregate	Aggregate	Gasoline	0.0	0	1.04	0.000	0.0	0.0
San Bernardino	2021	Lawn and Garden - Misc - Rear Engine Riding Mowers	Aggregate	Aggregate	Diesel	0.0	0	0.00	0.000	0.0	0.0
San Bernardino	2021	Lawn and Garden - Misc - Rear Engine Riding Mowers	Aggregate	Aggregate	Electric	0.0	0	0.00	0.000	0.0	0.0
San Bernardino	2021	Lawn and Garden - Misc - Snowblowers	Aggregate	Aggregate	Gasoline	0.0	0	0.07	0.000	0.0	0.0
San Bernardino	2021	Lawn and Garden - Misc - Snowblowers	Aggregate	Aggregate	Electric	0.0	0	0.00	0.000	0.0	0.0
San Bernardino	2021	Lawn and Garden - Misc - Tillers	Aggregate	Aggregate	Gasoline	0.0	0	0.01	0.000	0.0	0.0
San Bernardino	2021	Lawn and Garden - Misc - Tillers	Aggregate	Aggregate	Electric	0.0	0	0.00	0.000	0.0	0.0
San Bernardino	2021	Lawn and Garden - Misc - Trimmers/Edgers/Brush Cutters	Aggregate	Aggregate	Gasoline	0.0	0	0.25	0.000	0.0	0.0
San Bernardino	2021	Lawn and Garden - Misc - Trimmers/Edgers/Brush Cutters	Aggregate	Aggregate	Electric	0.0	0	0.00	0.000	0.0	0.0
San Bernardino	2021	Lawn and Garden - Misc - Wood Splitters	Aggregate	Aggregate	Gasoline	0.0	0	0.09	0.000	0.0	0.0
TOTAL LAWN & GARDEN						0.24	0.03	2.47	0.00	0.00	0.00
ESTIMATED ONTARIO						0.02	0.00	0.18	0.00	0.00	0.00
ESTIMATED ONTARIO (lbs/day)						34	4	354	0	0	0

TOTAL UNITS: https://socds.huduser.gov/permits/		2018	2019	2020	Average
Housing Permits in San Bernardino County		5577	5607	5129	5,438
Housing Permits in Ontario		1326	1431	739	1,165
Percent in the City		24%	26%	14%	21%

EMPLOYMENT		2021
Employment in San Bernardino County		729,272
Employment in Ontario		131,999
Percent in the City		18%

AGRICULTURAL ACREAGE		2021
Farmland Acreage in San Bernardino County		1,378,859
Farmland Acreage in Ontario		3,183
Percent in the City		0.2%

HOUSING UNITS		2021
Housing Units in San Bernardino (2019)		731,400
Housing Units in Ontario		52,466
Percent in the City		7.2%

City of Ontario VMT

Source: F&P 2022. Based on the San Bernardino Transportation Analysis Model (SBTAM)

	Daily VMT			Total Daily VMT	Total with RTAC	%	Service Population	VMT/SP	VMT/SP w RTAC
	IX	XI	II						
Existing (Year 2021)	5,365,005	5,889,701	572,716	11,827,422	6,200,069		311,596	38.0	19.9
Passenger Vehicles	4,723,572	5,216,406	523,105	10,463,083	5,493,094	88.6%			
Light-Heavy Duty Trucks (LHDT)	95,693	101,956	15,795	213,444	114,620	1.8%			
Medium Heavy Duty Trucks (MHDT)	89,438	94,978	16,776	201,192	108,984	1.8%			
Heavy-Heavy Duty Trucks (HHDT)	456,302	476,361	17,040	949,703	483,372	7.8%			
Current TOP (in 2050)	8,715,472	8,634,964	1,309,277	18,659,713	9,984,495		671,024	27.8	14.9
Passenger Vehicles	7,639,121	7,553,273	1,226,454	16,418,848	8,822,651	88.4%			
Light-Heavy Duty Trucks (LHDT)	149,388	150,033	26,391	325,812	176,102	1.8%			
Medium Heavy Duty Trucks (MHDT)	138,528	139,065	27,441	305,034	166,238	1.7%			
Heavy-Heavy Duty Trucks (HHDT)	788,435	792,593	28,991	1,610,019	819,505	8.2%			
TOP 2050	8,741,194	8,656,751	1,399,807	18,797,752	10,098,780		706,494	26.6	14.3
Passenger Vehicles	7,685,979	7,598,132	1,323,976	16,608,087	8,966,032	88.8%			
Light-Heavy Duty Trucks (LHDT)	149,083	149,350	24,709	323,142	173,926	1.7%			
Medium Heavy Duty Trucks (MHDT)	136,226	136,456	25,161	297,843	161,502	1.6%			
Heavy-Heavy Duty Trucks (HHDT)	769,906	772,813	25,961	1,568,680	797,321	7.9%			

Notes: Total may not add to 100% due to rounding.

IX = Internal-External

XI = External- Internal

II = Internal-Internal

Modeling of vehicle miles traveled (VMT) provided by Fehr and Peers is based on the San Bernardino County Transit Authority's (SBCTA) San Bernardino Transportation Analysis Model (SBTAM). VMT from passenger vehicles and trucks that have an origin or destination in the City using a transportation origin-destination methodology. Accounting of VMT is based on the recommendations of CARB's Regional Targets Advisory Committee (RTAC) created under Senate Bill 375 (SB 375). For accounting purposes, there are three types of trips:

- » Vehicle trips that originated and terminated within the City (Internal-Internal, I-I). Using the accounting rules established by RTAC, 100 percent of the length of these trips, and their emissions, are attributed to the
- » Vehicle trips that either originated or terminated (but not both) within the City (Internal-External or External-Internal, I-X and X-I). Using the accounting rules established by RTAC, 50 percent of the trip length for
- » Vehicle trips that neither originated nor terminated within the City. These trips are commonly called pass-through trips (External-External, X-X). Using the accounting rules established by RTAC, these trips are not

Year 2021 Existing: Criteria Air Pollutants

Source: EMFAC2021 Version 1.0.1. PL Emission Rates, San Bernardino County - South Coast Air Basin

Uses 40 mph running exhaust emissions rates based on statewide average, as cited in the CalEEMod User's Guide.

¹ Based on data provided Fehr & Peers.

Passenger Vehicles	LHDT	MHDT	HHDT
89.87%	3.35%	1.80%	4.98%

Daily VMT		6,200,069		lbs/day					
Vehicle Type	Fuel Type	Percent of VMT	Adjusted Percent for Ontario	ROG	NOx	CO	SOx	PM10	PM2.5
All Other Buses	Diesel	0.02%	0.03%	0.80	14.27	2.37	0.05	0.71	0.51
All Other Buses	Natural Gas	0.01%	0.01%	0.01	0.16	2.68	0.00	0.06	0.02
LDA	Gasoline	50.96%	79.83%	132.75	580.67	9,957.09	31.99	184.16	64.57
LDA	Diesel	0.12%	0.18%	0.75	5.86	8.33	0.06	0.86	0.57
LDA	Electricity	0.97%	1.53%	0.00	0.00	0.00	0.00	2.58	0.74
LDA	Plug-in Hybrid	1.16%	1.82%	0.36	0.81	59.13	0.36	3.15	1.02
LDT1	Gasoline	3.73%	5.84%	46.02	203.58	2,095.09	2.81	15.82	6.17
LDT1	Diesel	0.00%	0.00%	0.04	0.20	0.24	0.00	0.03	0.03
LDT1	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
LDT1	Plug-in Hybrid	0.00%	0.00%	0.00	0.00	0.05	0.00	0.00	0.00
LDT2	Gasoline	17.89%	28.01%	67.06	420.68	4,487.14	14.14	69.16	24.39
LDT2	Diesel	0.04%	0.07%	0.15	0.74	1.28	0.03	0.22	0.12
LDT2	Electricity	0.02%	0.02%	0.00	0.00	0.00	0.00	0.04	0.01
LDT2	Plug-in Hybrid	0.08%	0.12%	0.02	0.05	3.76	0.02	0.20	0.07
LHD1	Gasoline	1.58%	3.66%	19.64	126.61	668.33	3.34	43.66	15.23
LHD1	Diesel	1.06%	2.47%	44.24	790.72	146.96	1.59	41.49	20.82
LHD2	Gasoline	0.27%	0.63%	1.89	17.24	77.71	0.63	8.65	3.01
LHD2	Diesel	0.44%	1.03%	16.20	249.72	46.20	0.80	18.57	8.83
MDV	Gasoline	14.32%	1.24%	5.10	29.35	259.82	0.76	3.13	1.11
MDV	Diesel	0.20%	0.02%	0.04	0.49	0.67	0.01	0.06	0.04
MDV	Electricity	0.02%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
MDV	Plug-in Hybrid	0.07%	0.01%	0.00	0.00	0.19	0.00	0.01	0.00
MH	Gasoline	0.09%	0.14%	1.31	9.07	41.52	0.34	1.08	0.37
MH	Diesel	0.03%	0.05%	0.49	28.50	2.25	0.06	1.31	1.01
Motor Coach	Diesel	0.02%	0.02%	0.16	7.68	0.72	0.05	0.43	0.22
OBUS	Gasoline	0.05%	0.07%	0.74	5.64	19.31	0.16	0.54	0.18
PTO	Diesel	0.10%	0.16%	2.52	86.04	10.28	0.44	0.42	0.40
SBUS	Gasoline	0.03%	0.05%	0.57	3.68	11.51	0.06	0.40	0.14
SBUS	Diesel	0.02%	0.03%	0.70	41.12	1.63	0.06	0.53	0.33
SBUS	Natural Gas	0.02%	0.04%	0.32	3.73	74.57	0.00	0.32	0.12
T6 CAIRP Class 4	Diesel	0.00%	0.00%	0.01	0.41	0.03	0.01	0.04	0.02
T6 CAIRP Class 5	Diesel	0.00%	0.01%	0.01	0.47	0.03	0.01	0.05	0.02
T6 CAIRP Class 6	Diesel	0.00%	0.01%	0.03	1.27	0.11	0.02	0.12	0.05
T6 CAIRP Class 7	Diesel	0.02%	0.09%	0.27	11.26	1.19	0.12	0.89	0.44
T6 CAIRP Class 7	Natural Gas	0.00%	0.00%	0.00	0.00	0.03	0.00	0.00	0.00
T6 Instate Delivery Class 4	Diesel	0.05%	0.22%	1.38	45.12	4.73	0.31	2.43	1.28
T6 Instate Delivery Class 4	Natural Gas	0.00%	0.00%	0.00	0.02	0.28	0.00	0.01	0.00
T6 Instate Delivery Class 5	Diesel	0.06%	0.27%	0.70	27.87	2.77	0.39	2.44	1.07
T6 Instate Delivery Class 5	Natural Gas	0.00%	0.00%	0.00	0.01	0.24	0.00	0.01	0.00
T6 Instate Delivery Class 6	Diesel	0.25%	1.08%	3.69	148.85	13.53	1.52	10.15	4.66
T6 Instate Delivery Class 6	Natural Gas	0.00%	0.00%	0.00	0.08	1.28	0.00	0.03	0.01
T6 Instate Delivery Class 7	Diesel	0.07%	0.31%	1.02	47.26	4.27	0.44	3.04	1.44
T6 Instate Delivery Class 7	Natural Gas	0.00%	0.01%	0.01	0.13	2.29	0.00	0.06	0.02
T6 Instate Other Class 4	Diesel	0.12%	0.51%	3.83	127.04	12.25	0.71	5.87	3.24
T6 Instate Other Class 4	Natural Gas	0.00%	0.00%	0.00	0.04	0.61	0.00	0.01	0.00
T6 Instate Other Class 5	Diesel	0.31%	1.36%	2.80	143.50	11.29	1.94	11.75	4.87
T6 Instate Other Class 5	Natural Gas	0.00%	0.00%	0.00	0.08	1.24	0.00	0.03	0.01
T6 Instate Other Class 6	Diesel	0.27%	1.16%	4.85	177.87	17.18	1.64	11.59	5.63
T6 Instate Other Class 6	Natural Gas	0.00%	0.00%	0.00	0.07	1.16	0.00	0.03	0.01
T6 Instate Other Class 7	Diesel	0.17%	0.75%	2.91	123.47	11.67	1.05	7.65	3.78
T6 Instate Other Class 7	Natural Gas	0.00%	0.02%	0.02	0.32	6.00	0.00	0.15	0.05
T6 Instate Tractor Class 6	Diesel	0.00%	0.01%	0.08	2.48	0.27	0.02	0.15	0.08
T6 Instate Tractor Class 6	Natural Gas	0.00%	0.00%	0.00	0.00	0.01	0.00	0.00	0.00
T6 Instate Tractor Class 7	Diesel	0.12%	0.53%	2.57	117.23	9.20	0.70	5.35	2.64
T6 Instate Tractor Class 7	Natural Gas	0.00%	0.01%	0.01	0.19	3.06	0.00	0.07	0.02
T6 OOS Class 4	Diesel	0.00%	0.00%	0.01	0.26	0.02	0.00	0.02	0.01

Year 2021 Existing: Criteria Air Pollutants

Source: EMFAC2021 Version 1.0.1. PL Emission Rates. San Bernardino County - South Coast Air Basin

Uses 40 mph running exhaust emissions rates based on statewide average, as cited in the CalEEMod User's Guide.

¹ Based on data provided Fehr & Peers.

Passenger Vehicles	LHDT	MHDT	HHDT
89.87%	3.35%	1.80%	4.98%

Daily VMT		6,200,069		lbs/day					
Vehicle Type	Fuel Type	Percent of VMT	Adjusted Percent for Ontario	ROG	NO _x	CO	SO _x	PM10	PM2.5
T6 OOS Class 5	Diesel	0.00%	0.00%	0.00	0.28	0.02	0.00	0.03	0.01
T6 OOS Class 6	Diesel	0.00%	0.01%	0.02	0.80	0.07	0.01	0.07	0.03
T6 OOS Class 7	Diesel	0.01%	0.06%	0.21	8.04	0.89	0.08	0.63	0.32
T6 Public Class 4	Diesel	0.01%	0.04%	0.20	32.49	0.65	0.05	0.41	0.22
T6 Public Class 4	Natural Gas	0.00%	0.00%	0.00	0.03	0.54	0.00	0.01	0.01
T6 Public Class 5	Diesel	0.02%	0.07%	0.19	24.68	0.72	0.10	0.66	0.31
T6 Public Class 5	Natural Gas	0.00%	0.01%	0.01	0.21	3.71	0.00	0.09	0.03
T6 Public Class 6	Diesel	0.01%	0.05%	0.39	46.52	1.15	0.08	0.69	0.40
T6 Public Class 6	Natural Gas	0.00%	0.01%	0.00	0.08	1.48	0.00	0.04	0.01
T6 Public Class 7	Diesel	0.04%	0.15%	1.33	141.71	3.83	0.23	2.16	1.35
T6 Public Class 7	Natural Gas	0.00%	0.01%	0.01	0.12	2.92	0.00	0.09	0.03
T6 Utility Class 5	Diesel	0.02%	0.07%	0.11	7.69	0.44	0.10	0.61	0.24
T6 Utility Class 5	Natural Gas	0.00%	0.00%	0.00	0.01	0.11	0.00	0.00	0.00
T6 Utility Class 6	Diesel	0.00%	0.01%	0.02	1.70	0.09	0.02	0.11	0.04
T6 Utility Class 6	Natural Gas	0.00%	0.00%	0.00	0.00	0.05	0.00	0.00	0.00
T6 Utility Class 7	Diesel	0.00%	0.02%	0.02	1.65	0.10	0.03	0.15	0.06
T6 Utility Class 7	Natural Gas	0.00%	0.00%	0.00	0.01	0.09	0.00	0.00	0.00
T6TS	Gasoline	0.20%	0.89%	11.43	82.60	304.75	2.02	6.75	2.29
T7 CAIRP Class 8	Diesel	0.83%	1.30%	5.26	383.85	21.88	2.63	26.48	12.61
T7 CAIRP Class 8	Natural Gas	0.00%	0.01%	0.01	0.27	5.03	0.00	0.08	0.03
T7 NNOOS Class 8	Diesel	0.98%	1.54%	8.71	433.54	39.50	3.17	34.23	17.59
T7 NOOS Class 8	Diesel	0.36%	0.56%	2.45	170.45	10.13	1.14	11.57	5.58
T7 POLA Class 8	Diesel	0.59%	0.92%	8.79	515.88	28.03	1.93	19.00	8.65
T7 POLA Class 8	Natural Gas	0.03%	0.04%	0.07	2.75	52.20	0.00	0.66	0.22
T7 Public Class 8	Diesel	0.08%	0.12%	1.23	177.97	4.92	0.26	3.15	1.68
T7 Public Class 8	Natural Gas	0.02%	0.04%	0.06	1.51	28.20	0.00	0.56	0.18
T7 Single Concrete/Transit A	Diesel	0.07%	0.11%	0.62	24.48	2.89	0.23	2.37	1.20
T7 Single Concrete/Transit A	Natural Gas	0.01%	0.01%	0.02	0.41	7.25	0.00	0.15	0.05
T7 Single Dump Class 8	Diesel	0.10%	0.16%	0.91	53.35	3.80	0.34	3.30	1.52
T7 Single Dump Class 8	Natural Gas	0.01%	0.01%	0.02	0.54	10.19	0.00	0.17	0.05
T7 Single Other Class 8	Diesel	0.31%	0.48%	2.36	134.89	9.98	1.01	9.61	4.37
T7 Single Other Class 8	Natural Gas	0.02%	0.03%	0.06	1.48	28.04	0.00	0.54	0.18
T7 SWCV Class 8	Diesel	0.10%	0.16%	0.05	302.31	0.23	0.75	5.55	2.02
T7 SWCV Class 8	Natural Gas	0.27%	0.43%	4.23	106.64	683.93	0.00	14.56	4.98
T7 Tractor Class 8	Diesel	0.68%	1.07%	5.81	367.41	22.91	2.16	21.73	10.15
T7 Tractor Class 8	Natural Gas	0.02%	0.03%	0.05	1.40	25.98	0.00	0.48	0.16
T7 Utility Class 8	Diesel	0.01%	0.02%	0.05	4.38	0.21	0.04	0.37	0.14
T7IS	Gasoline	0.00%	0.00%	0.50	2.59	27.15	0.00	0.02	0.01
UBUS	Gasoline	0.01%	0.02%	0.01	0.13	1.48	0.02	0.29	0.10
UBUS	Diesel	0.00%	0.00%	0.01	0.06	0.01	0.00	0.03	0.01
UBUS	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
UBUS	Natural Gas	0.09%	0.14%	0.67	9.48	573.68	0.00	2.62	0.87
		100.00%	142.10%	427	6,649	20,047	83	630	257

Year 2050: TOP 2050 Update Criteria Air Pollutants

Uses 40 mph running exhaust emissions rates based on statewide average, as cited in the CalEEMod User's Guide.

¹: Based on data provided Fehr & Peers.

Passenger Vehicles	LHDT	MHDT	HHDT
86.34%	3.01%	2.72%	7.93%

Daily VMT		10,098,780		lbs/day					
Vehicle Type	Fuel Type	Percent of VMT	Adjusted Percent for ROG	ROG	NOx	CO	SOx	PM10	PM2.5
All Other Buses	Diesel	0.02%	0.02%	0.05	2.31	0.28	0.04	0.27	0.10
All Other Buses	Natural Gas	0.01%	0.01%	0.01	0.09	2.98	0.00	0.08	0.03
LDA	Gasoline	40.49%	41.64%	26.11	174.37	4,587.84	21.71	149.30	47.37
LDA	Diesel	0.02%	0.02%	0.02	0.05	0.64	0.01	0.09	0.03
LDA	Electricity	5.10%	5.24%	0.00	0.00	0.00	0.00	14.47	4.13
LDA	Plug-in Hybrid	1.90%	1.95%	0.48	1.09	80.08	0.49	5.31	1.56
LDT1	Gasoline	2.48%	2.55%	1.74	11.48	300.33	1.53	9.91	3.18
LDT1	Diesel	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
LDT1	Electricity	0.08%	0.08%	0.00	0.00	0.00	0.00	0.22	0.06
LDT1	Plug-in Hybrid	0.06%	0.06%	0.02	0.04	2.61	0.02	0.17	0.05
LDT2	Gasoline	21.01%	21.60%	18.93	102.48	2,805.45	13.79	83.39	26.68
LDT2	Diesel	0.08%	0.08%	0.21	0.49	2.24	0.05	0.39	0.17
LDT2	Electricity	0.59%	0.61%	0.00	0.00	0.00	0.00	1.68	0.48
LDT2	Plug-in Hybrid	0.59%	0.60%	0.15	0.34	24.68	0.15	1.64	0.48
LHD1	Gasoline	0.73%	0.42%	0.13	1.43	53.35	0.44	8.07	2.81
LHD1	Diesel	0.48%	0.28%	2.38	9.67	4.47	0.27	6.21	2.50
LHD1	Electricity	1.19%	0.68%	0.00	0.00	0.00	0.00	7.13	2.37
LHD2	Gasoline	0.09%	0.05%	0.01	0.24	6.44	0.06	1.11	0.39
LHD2	Diesel	0.23%	0.13%	1.44	6.89	2.76	0.15	3.43	1.41
LHD2	Electricity	0.29%	0.17%	0.00	0.00	0.00	0.00	1.98	0.66
MCY	Gasoline	0.25%	0.26%	43.09	25.65	538.10	0.10	1.05	0.42
MDV	Gasoline	12.61%	12.97%	11.71	63.47	1,730.56	10.00	50.42	16.15
MDV	Diesel	0.14%	0.14%	0.13	0.35	4.11	0.10	0.56	0.19
MDV	Electricity	0.55%	0.57%	0.00	0.00	0.00	0.00	1.57	0.45
MDV	Plug-in Hybrid	0.38%	0.40%	0.10	0.22	16.22	0.10	1.08	0.32
MH	Gasoline	0.03%	0.03%	0.04	1.42	0.94	0.12	0.40	0.13
MH	Diesel	0.02%	0.02%	0.13	7.07	0.37	0.04	0.31	0.14
Motor Coach	Diesel	0.01%	0.01%	0.03	2.93	0.20	0.04	0.38	0.16
OBUS	Gasoline	0.01%	0.01%	0.01	0.53	0.34	0.03	0.12	0.04
OBUS	Electricity	0.01%	0.01%	0.00	0.00	0.00	0.00	0.10	0.03
PTO	Diesel	0.07%	0.07%	0.22	37.63	2.70	0.26	0.06	0.06
PTO	Electricity	0.08%	0.08%	0.00	0.00	0.00	0.00	0.00	0.00
SBUS	Gasoline	0.01%	0.01%	0.02	0.22	0.40	0.02	0.11	0.04
SBUS	Diesel	0.00%	0.00%	0.01	0.40	0.07	0.01	0.06	0.02
SBUS	Electricity	0.03%	0.03%	0.00	0.00	0.00	0.00	0.20	0.06
SBUS	Natural Gas	0.01%	0.01%	0.12	0.54	23.04	0.00	0.17	0.06
T6 CAIRP Class 4	Diesel	0.00%	0.00%	0.00	0.01	0.00	0.00	0.00	0.00
T6 CAIRP Class 4	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 CAIRP Class 5	Diesel	0.00%	0.00%	0.00	0.02	0.00	0.00	0.01	0.00
T6 CAIRP Class 5	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.01	0.00
T6 CAIRP Class 6	Diesel	0.00%	0.00%	0.00	0.05	0.01	0.00	0.02	0.01
T6 CAIRP Class 6	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.01	0.00
T6 CAIRP Class 7	Diesel	0.03%	0.02%	0.02	0.63	0.11	0.03	0.20	0.08
T6 CAIRP Class 7	Electricity	0.01%	0.00%	0.00	0.00	0.00	0.00	0.04	0.01
T6 CAIRP Class 7	Natural Gas	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Instate Delivery Class 4	Diesel	0.04%	0.02%	0.02	0.91	0.16	0.04	0.28	0.10
T6 Instate Delivery Class 4	Electricity	0.05%	0.03%	0.00	0.00	0.00	0.00	0.21	0.07
T6 Instate Delivery Class 4	Natural Gas	0.00%	0.00%	0.00	0.00	0.07	0.00	0.00	0.00
T6 Instate Delivery Class 5	Diesel	0.04%	0.03%	0.03	1.09	0.19	0.05	0.34	0.13
T6 Instate Delivery Class 5	Electricity	0.06%	0.03%	0.00	0.00	0.00	0.00	0.26	0.08
T6 Instate Delivery Class 5	Natural Gas	0.00%	0.00%	0.00	0.00	0.08	0.00	0.00	0.00
T6 Instate Delivery Class 6	Diesel	0.18%	0.10%	0.11	4.42	0.76	0.21	1.35	0.50
T6 Instate Delivery Class 6	Electricity	0.24%	0.14%	0.00	0.00	0.00	0.00	1.03	0.32
T6 Instate Delivery Class 6	Natural Gas	0.00%	0.00%	0.00	0.01	0.32	0.00	0.01	0.00
T6 Instate Delivery Class 7	Diesel	0.07%	0.04%	0.05	2.50	0.34	0.08	0.52	0.20
T6 Instate Delivery Class 7	Electricity	0.05%	0.03%	0.00	0.00	0.00	0.00	0.23	0.07
T6 Instate Delivery Class 7	Natural Gas	0.00%	0.00%	0.00	0.01	0.38	0.00	0.01	0.00
T6 Instate Other Class 4	Diesel	0.08%	0.05%	0.05	1.99	0.34	0.10	0.62	0.23

Year 2050: TOP 2050 Update Criteria Air Pollutants

Uses 40 mph running exhaust emissions rates based on statewide average, as cited in the CalEEMod User's Guide.

¹: Based on data provided Fehr & Peers.

Passenger Vehicles	LHDT	MHDT	HHDT
86.34%	3.01%	2.72%	7.93%

Daily VMT		10,098,780		lbs/day						
Vehicle Type	Fuel Type	Percent of VMT	Adjusted Percent for ROG	ROG	NOx	CO	SOx	PM10	PM2.5	
T6 Instate Other Class 4	Electricity	0.11%	0.07%	0.00	0.00	0.00	0.00	0.49	0.15	
T6 Instate Other Class 4	Natural Gas	0.00%	0.00%	0.00	0.00	0.14	0.00	0.00	0.00	
T6 Instate Other Class 5	Diesel	0.22%	0.13%	0.13	5.28	0.92	0.26	1.67	0.62	
T6 Instate Other Class 5	Electricity	0.30%	0.18%	0.00	0.00	0.00	0.00	1.31	0.41	
T6 Instate Other Class 5	Natural Gas	0.00%	0.00%	0.00	0.01	0.38	0.00	0.01	0.00	
T6 Instate Other Class 6	Diesel	0.19%	0.11%	0.11	4.60	0.79	0.22	1.43	0.53	
T6 Instate Other Class 6	Electricity	0.26%	0.15%	0.00	0.00	0.00	0.00	1.13	0.35	
T6 Instate Other Class 6	Natural Gas	0.00%	0.00%	0.00	0.01	0.33	0.00	0.01	0.00	
T6 Instate Other Class 7	Diesel	0.15%	0.09%	0.11	5.22	0.74	0.18	1.18	0.44	
T6 Instate Other Class 7	Electricity	0.14%	0.08%	0.00	0.00	0.00	0.00	0.61	0.19	
T6 Instate Other Class 7	Natural Gas	0.00%	0.00%	0.00	0.03	0.85	0.00	0.03	0.01	
T6 Instate Tractor Class 6	Diesel	0.00%	0.00%	0.00	0.05	0.01	0.00	0.02	0.01	
T6 Instate Tractor Class 6	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.01	0.00	
T6 Instate Tractor Class 6	Natural Gas	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	
T6 Instate Tractor Class 7	Diesel	0.16%	0.09%	0.11	5.20	0.76	0.17	1.23	0.46	
T6 Instate Tractor Class 7	Electricity	0.04%	0.03%	0.00	0.00	0.00	0.00	0.19	0.06	
T6 Instate Tractor Class 7	Natural Gas	0.00%	0.00%	0.00	0.03	0.86	0.00	0.03	0.01	
T6 OOS Class 4	Diesel	0.00%	0.00%	0.00	0.03	0.00	0.00	0.01	0.00	
T6 OOS Class 5	Diesel	0.00%	0.00%	0.00	0.03	0.00	0.00	0.01	0.00	
T6 OOS Class 6	Diesel	0.00%	0.00%	0.00	0.09	0.01	0.00	0.02	0.01	
T6 OOS Class 7	Diesel	0.02%	0.01%	0.02	0.69	0.09	0.02	0.18	0.07	
T6 Public Class 4	Diesel	0.00%	0.00%	0.00	0.08	0.01	0.00	0.02	0.01	
T6 Public Class 4	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.02	0.01	
T6 Public Class 4	Natural Gas	0.00%	0.00%	0.00	0.00	0.13	0.00	0.00	0.00	
T6 Public Class 5	Diesel	0.01%	0.00%	0.00	0.20	0.03	0.01	0.05	0.02	
T6 Public Class 5	Electricity	0.01%	0.01%	0.00	0.00	0.00	0.00	0.04	0.01	
T6 Public Class 5	Natural Gas	0.00%	0.00%	0.00	0.01	0.30	0.00	0.01	0.00	
T6 Public Class 6	Diesel	0.01%	0.00%	0.00	0.14	0.02	0.01	0.04	0.01	
T6 Public Class 6	Electricity	0.01%	0.00%	0.00	0.00	0.00	0.00	0.03	0.01	
T6 Public Class 6	Natural Gas	0.00%	0.00%	0.00	0.01	0.21	0.00	0.01	0.00	
T6 Public Class 7	Diesel	0.02%	0.01%	0.01	0.41	0.06	0.02	0.12	0.05	
T6 Public Class 7	Electricity	0.02%	0.01%	0.00	0.00	0.00	0.00	0.07	0.02	
T6 Public Class 7	Natural Gas	0.00%	0.00%	0.00	0.02	0.66	0.00	0.02	0.01	
T6 Utility Class 5	Diesel	0.01%	0.00%	0.00	0.10	0.02	0.01	0.05	0.02	
T6 Utility Class 5	Electricity	0.01%	0.01%	0.00	0.00	0.00	0.00	0.04	0.01	
T6 Utility Class 5	Natural Gas	0.00%	0.00%	0.00	0.00	0.01	0.00	0.00	0.00	
T6 Utility Class 6	Diesel	0.00%	0.00%	0.00	0.02	0.00	0.00	0.01	0.00	
T6 Utility Class 6	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.01	0.00	
T6 Utility Class 6	Natural Gas	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	
T6 Utility Class 7	Diesel	0.00%	0.00%	0.00	0.03	0.00	0.00	0.01	0.00	
T6 Utility Class 7	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	
T6 Utility Class 7	Natural Gas	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	
T6TS	Gasoline	0.07%	0.04%	0.07	0.51	1.25	0.12	0.48	0.16	
T6TS	Electricity	0.09%	0.05%	0.00	0.00	0.00	0.00	0.39	0.12	
T7 CAIRP Class 8	Diesel	1.20%	1.20%	2.86	299.14	9.60	3.19	39.19	17.33	
T7 CAIRP Class 8	Electricity	0.35%	0.35%	0.00	0.00	0.00	0.00	6.05	1.84	
T7 CAIRP Class 8	Natural Gas	0.00%	0.00%	0.01	0.15	2.78	0.00	0.12	0.04	
T7 NNOOS Class 8	Diesel	1.85%	1.84%	4.28	508.74	14.34	4.69	60.06	26.49	
T7 NOOS Class 8	Diesel	0.67%	0.67%	1.60	190.05	5.37	1.70	22.05	9.85	
T7 POLA Class 8	Diesel	0.68%	0.68%	1.50	166.40	5.34	1.92	21.66	9.31	
T7 POLA Class 8	Electricity	0.14%	0.14%	0.00	0.00	0.00	0.00	2.33	0.71	
T7 POLA Class 8	Natural Gas	0.03%	0.03%	0.08	0.92	17.91	0.00	0.73	0.24	
T7 Public Class 8	Diesel	0.02%	0.02%	0.06	5.12	0.21	0.05	0.53	0.21	
T7 Public Class 8	Electricity	0.04%	0.04%	0.00	0.00	0.00	0.00	0.71	0.22	
T7 Public Class 8	Natural Gas	0.03%	0.03%	0.09	1.16	22.37	0.00	0.84	0.28	
T7 Single Concrete/Transit Mi. Diesel	Diesel	0.03%	0.03%	0.05	3.87	0.17	0.08	0.77	0.30	
T7 Single Concrete/Transit Mi. Electricity	Electricity	0.04%	0.04%	0.00	0.00	0.00	0.00	0.68	0.21	
T7 Single Concrete/Transit Mi. Natural Gas	Natural Gas	0.00%	0.00%	0.01	0.07	1.36	0.00	0.05	0.02	

Year 2050: TOP 2050 Update Criteria Air Pollutants

Uses 40 mph running exhaust emissions rates based on statewide average, as cited in the CalEEMod User's Guide.

¹: Based on data provided Fehr & Peers.

Passenger Vehicles	LHDT	MHDT	HHDT
86.34%	3.01%	2.72%	7.93%

Daily VMT			10,098,780	lbs/day						
Vehicle Type	Fuel Type	Percent of VMT	Adjusted Percent for ROG	ROG	NOx	CO	SOx	PM10	PM2.5	
T7 Single Dump Class 8	Diesel	0.05%	0.05%	0.09	8.91	0.36	0.14	1.39	0.56	
T7 Single Dump Class 8	Electricity	0.05%	0.05%	0.00	0.00	0.00	0.00	0.89	0.27	
T7 Single Dump Class 8	Natural Gas	0.00%	0.00%	0.01	0.13	2.55	0.00	0.09	0.03	
T7 Single Other Class 8	Diesel	0.26%	0.26%	0.50	46.74	1.88	0.79	7.99	3.20	
T7 Single Other Class 8	Electricity	0.33%	0.33%	0.00	0.00	0.00	0.00	5.70	1.73	
T7 Single Other Class 8	Natural Gas	0.02%	0.02%	0.06	0.71	14.14	0.00	0.55	0.18	
T7 SWCV Class 8	Diesel	0.00%	0.00%	0.00	1.56	0.01	0.01	0.09	0.04	
T7 SWCV Class 8	Electricity	0.16%	0.16%	0.00	0.00	0.00	0.00	5.00	1.62	
T7 SWCV Class 8	Natural Gas	0.18%	0.18%	0.21	6.83	236.52	0.00	10.07	3.39	
T7 Tractor Class 8	Diesel	1.06%	1.05%	2.32	252.17	7.91	2.79	33.48	14.32	
T7 Tractor Class 8	Electricity	0.23%	0.23%	0.00	0.00	0.00	0.00	4.02	1.22	
T7 Tractor Class 8	Natural Gas	0.03%	0.03%	0.08	0.99	18.89	0.00	0.78	0.26	
T7 Utility Class 8	Diesel	0.01%	0.01%	0.01	1.03	0.05	0.02	0.19	0.07	
T7 Utility Class 8	Electricity	0.01%	0.01%	0.00	0.00	0.00	0.00	0.10	0.03	
T7IS	Gasoline	0.00%	0.00%	0.01	0.11	1.23	0.00	0.01	0.00	
T7IS	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	
UBUS	Gasoline	0.02%	0.02%	0.00	0.07	1.97	0.02	0.37	0.13	
UBUS	Electricity	0.10%	0.10%	0.00	0.00	0.00	0.00	2.05	0.64	
UBUS	Natural Gas	0.02%	0.02%	0.15	0.41	0.19	0.00	0.39	0.15	
		100.00%	100.00%	122	1,981	10,568	67	597	213	

Year 2050: TOP (Approved Project) Criteria Air Pollutants

Source: EMFAC2021 Version 1.0.1. San Bernardino County - South Coast Air Basin

¹: Based on data provided Fehr & Peers.

Passenger Vehicles	LHDT	MHDT	HHDT
86.34%	3.01%	2.72%	7.93%

Daily VMT		9,984,495		lbs/day					
Vehicle Type	Fuel Type	Percent of VMT	Adjusted Percent for Ontario	ROG	NOx	CO	SOx	PM10	PM2.5
All Other Buses	Diesel	0.02%	0.02%	0.05	2.38	0.29	0.04	0.28	0.11
All Other Buses	Natural Gas	0.01%	0.01%	0.01	0.09	3.06	0.00	0.08	0.03
LDA	Gasoline	40.49%	41.44%	25.69	171.58	4,514.47	21.36	146.91	46.61
LDA	Diesel	0.02%	0.02%	0.02	0.05	0.63	0.01	0.09	0.03
LDA	Electricity	5.10%	5.22%	0.00	0.00	0.00	0.00	14.24	4.06
LDA	Plug-in Hybrid	1.90%	1.94%	0.48	1.07	78.80	0.48	5.23	1.53
LDT1	Gasoline	2.48%	2.54%	1.71	11.29	295.53	1.50	9.75	3.13
LDT1	Diesel	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
LDT1	Electricity	0.08%	0.08%	0.00	0.00	0.00	0.00	0.22	0.06
LDT1	Plug-in Hybrid	0.06%	0.06%	0.02	0.03	2.56	0.02	0.17	0.05
LDT2	Gasoline	21.01%	21.50%	18.63	100.84	2,760.58	13.56	82.05	26.25
LDT2	Diesel	0.08%	0.08%	0.21	0.49	2.21	0.05	0.38	0.16
LDT2	Electricity	0.59%	0.61%	0.00	0.00	0.00	0.00	1.65	0.47
LDT2	Plug-in Hybrid	0.59%	0.60%	0.15	0.33	24.29	0.15	1.61	0.47
LHD1	Gasoline	0.73%	0.43%	0.14	1.45	54.02	0.45	8.17	2.84
LHD1	Diesel	0.48%	0.28%	2.41	9.79	4.53	0.27	6.29	2.53
LHD1	Electricity	1.19%	0.70%	0.00	0.00	0.00	0.00	7.22	2.40
LHD2	Gasoline	0.09%	0.05%	0.01	0.24	6.53	0.06	1.12	0.39
LHD2	Diesel	0.23%	0.13%	1.46	6.98	2.79	0.15	3.47	1.43
LHD2	Electricity	0.29%	0.17%	0.00	0.00	0.00	0.00	2.01	0.67
MCY	Gasoline	0.25%	0.26%	42.40	25.24	529.50	0.10	1.03	0.41
MDV	Gasoline	12.61%	12.91%	11.52	62.45	1,702.88	9.84	49.62	15.89
MDV	Diesel	0.14%	0.14%	0.13	0.35	4.04	0.10	0.55	0.19
MDV	Electricity	0.55%	0.57%	0.00	0.00	0.00	0.00	1.54	0.44
MDV	Plug-in Hybrid	0.38%	0.39%	0.10	0.22	15.96	0.10	1.06	0.31
MH	Gasoline	0.03%	0.03%	0.04	1.46	0.96	0.13	0.41	0.14
MH	Diesel	0.02%	0.02%	0.13	7.27	0.38	0.04	0.31	0.15
Motor Coach	Diesel	0.01%	0.01%	0.03	3.02	0.20	0.05	0.39	0.16
OBUS	Gasoline	0.01%	0.01%	0.01	0.55	0.35	0.03	0.13	0.04
OBUS	Electricity	0.01%	0.01%	0.00	0.00	0.00	0.00	0.10	0.03
PTO	Diesel	0.07%	0.07%	0.22	38.67	2.77	0.27	0.06	0.06
PTO	Electricity	0.08%	0.09%	0.00	0.00	0.00	0.00	0.00	0.00
SBUS	Gasoline	0.01%	0.01%	0.02	0.23	0.41	0.02	0.12	0.04
SBUS	Diesel	0.00%	0.00%	0.01	0.41	0.07	0.01	0.07	0.02
SBUS	Electricity	0.03%	0.03%	0.00	0.00	0.00	0.00	0.21	0.07
SBUS	Natural Gas	0.01%	0.01%	0.12	0.55	23.68	0.00	0.17	0.06
T6 CAIRP Class 4	Diesel	0.00%	0.00%	0.00	0.01	0.00	0.00	0.00	0.00
T6 CAIRP Class 4	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 CAIRP Class 5	Diesel	0.00%	0.00%	0.00	0.02	0.00	0.00	0.01	0.00
T6 CAIRP Class 5	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.01	0.00
T6 CAIRP Class 6	Diesel	0.00%	0.00%	0.00	0.05	0.01	0.00	0.02	0.01
T6 CAIRP Class 6	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.01	0.00
T6 CAIRP Class 7	Diesel	0.03%	0.02%	0.02	0.65	0.11	0.03	0.21	0.08
T6 CAIRP Class 7	Electricity	0.01%	0.01%	0.00	0.00	0.00	0.00	0.04	0.01
T6 CAIRP Class 7	Natural Gas	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Instate Delivery Class 4	Diesel	0.04%	0.02%	0.02	0.93	0.16	0.05	0.29	0.11
T6 Instate Delivery Class 4	Electricity	0.05%	0.03%	0.00	0.00	0.00	0.00	0.22	0.07
T6 Instate Delivery Class 4	Natural Gas	0.00%	0.00%	0.00	0.00	0.07	0.00	0.00	0.00
T6 Instate Delivery Class 5	Diesel	0.04%	0.03%	0.03	1.12	0.20	0.05	0.35	0.13
T6 Instate Delivery Class 5	Electricity	0.06%	0.04%	0.00	0.00	0.00	0.00	0.27	0.08
T6 Instate Delivery Class 5	Natural Gas	0.00%	0.00%	0.00	0.00	0.08	0.00	0.00	0.00
T6 Instate Delivery Class 6	Diesel	0.18%	0.11%	0.11	4.55	0.78	0.22	1.39	0.51
T6 Instate Delivery Class 6	Electricity	0.24%	0.14%	0.00	0.00	0.00	0.00	1.06	0.33
T6 Instate Delivery Class 6	Natural Gas	0.00%	0.00%	0.00	0.01	0.33	0.00	0.01	0.00
T6 Instate Delivery Class 7	Diesel	0.07%	0.04%	0.05	2.58	0.35	0.08	0.54	0.20
T6 Instate Delivery Class 7	Electricity	0.05%	0.03%	0.00	0.00	0.00	0.00	0.24	0.08
T6 Instate Delivery Class 7	Natural Gas	0.00%	0.00%	0.00	0.01	0.40	0.00	0.01	0.00
T6 Instate Other Class 4	Diesel	0.08%	0.05%	0.05	2.04	0.35	0.10	0.64	0.24
T6 Instate Other Class 4	Electricity	0.11%	0.07%	0.00	0.00	0.00	0.00	0.51	0.16
T6 Instate Other Class 4	Natural Gas	0.00%	0.00%	0.00	0.00	0.15	0.00	0.00	0.00

Year 2050: TOP (Approved Project) Criteria Air Pollutants

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¹: Based on data provided Fehr & Peers.

Passenger Vehicles	LHDT	MHDT	HHDT
86.34%	3.01%	2.72%	7.93%

Daily VMT		9,984,495		lbs/day					
Vehicle Type	Fuel Type	Percent of VMT	Adjusted Percent for Ontario	ROG	NOx	CO	SOx	PM10	PM2.5
T6 Instate Other Class 5	Diesel	0.22%	0.13%	0.14	5.44	0.94	0.27	1.72	0.64
T6 Instate Other Class 5	Electricity	0.30%	0.18%	0.00	0.00	0.00	0.00	1.35	0.42
T6 Instate Other Class 5	Natural Gas	0.00%	0.00%	0.00	0.01	0.39	0.00	0.01	0.00
T6 Instate Other Class 6	Diesel	0.19%	0.11%	0.12	4.74	0.81	0.23	1.47	0.55
T6 Instate Other Class 6	Electricity	0.26%	0.16%	0.00	0.00	0.00	0.00	1.16	0.36
T6 Instate Other Class 6	Natural Gas	0.00%	0.00%	0.00	0.01	0.34	0.00	0.01	0.00
T6 Instate Other Class 7	Diesel	0.15%	0.09%	0.11	5.37	0.76	0.19	1.21	0.46
T6 Instate Other Class 7	Electricity	0.14%	0.09%	0.00	0.00	0.00	0.00	0.63	0.20
T6 Instate Other Class 7	Natural Gas	0.00%	0.00%	0.00	0.03	0.87	0.00	0.03	0.01
T6 Instate Tractor Class 6	Diesel	0.00%	0.00%	0.00	0.05	0.01	0.00	0.02	0.01
T6 Instate Tractor Class 6	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.01	0.00
T6 Instate Tractor Class 6	Natural Gas	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Instate Tractor Class 7	Diesel	0.16%	0.10%	0.12	5.35	0.78	0.18	1.26	0.47
T6 Instate Tractor Class 7	Electricity	0.04%	0.03%	0.00	0.00	0.00	0.00	0.19	0.06
T6 Instate Tractor Class 7	Natural Gas	0.00%	0.00%	0.00	0.03	0.88	0.00	0.03	0.01
T6 OOS Class 4	Diesel	0.00%	0.00%	0.00	0.03	0.00	0.00	0.01	0.00
T6 OOS Class 5	Diesel	0.00%	0.00%	0.00	0.04	0.00	0.00	0.01	0.00
T6 OOS Class 6	Diesel	0.00%	0.00%	0.00	0.09	0.01	0.00	0.03	0.01
T6 OOS Class 7	Diesel	0.02%	0.01%	0.02	0.71	0.10	0.02	0.19	0.07
T6 Public Class 4	Diesel	0.00%	0.00%	0.00	0.09	0.01	0.00	0.03	0.01
T6 Public Class 4	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.02	0.01
T6 Public Class 4	Natural Gas	0.00%	0.00%	0.00	0.00	0.13	0.00	0.00	0.00
T6 Public Class 5	Diesel	0.01%	0.00%	0.00	0.21	0.03	0.01	0.05	0.02
T6 Public Class 5	Electricity	0.01%	0.01%	0.00	0.00	0.00	0.00	0.04	0.01
T6 Public Class 5	Natural Gas	0.00%	0.00%	0.00	0.01	0.31	0.00	0.01	0.00
T6 Public Class 6	Diesel	0.01%	0.00%	0.00	0.14	0.02	0.01	0.04	0.02
T6 Public Class 6	Electricity	0.01%	0.00%	0.00	0.00	0.00	0.00	0.03	0.01
T6 Public Class 6	Natural Gas	0.00%	0.00%	0.00	0.01	0.22	0.00	0.01	0.00
T6 Public Class 7	Diesel	0.02%	0.01%	0.01	0.42	0.06	0.02	0.13	0.05
T6 Public Class 7	Electricity	0.02%	0.01%	0.00	0.00	0.00	0.00	0.07	0.02
T6 Public Class 7	Natural Gas	0.00%	0.00%	0.00	0.02	0.67	0.00	0.02	0.01
T6 Utility Class 5	Diesel	0.01%	0.00%	0.00	0.11	0.02	0.01	0.05	0.02
T6 Utility Class 5	Electricity	0.01%	0.01%	0.00	0.00	0.00	0.00	0.04	0.01
T6 Utility Class 5	Natural Gas	0.00%	0.00%	0.00	0.00	0.01	0.00	0.00	0.00
T6 Utility Class 6	Diesel	0.00%	0.00%	0.00	0.02	0.00	0.00	0.01	0.00
T6 Utility Class 6	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.01	0.00
T6 Utility Class 6	Natural Gas	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Utility Class 7	Diesel	0.00%	0.00%	0.00	0.03	0.01	0.00	0.01	0.00
T6 Utility Class 7	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Utility Class 7	Natural Gas	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6TS	Gasoline	0.07%	0.04%	0.07	0.53	1.28	0.12	0.50	0.17
T6TS	Electricity	0.09%	0.06%	0.00	0.00	0.00	0.00	0.40	0.13
T7 CAIRP Class 8	Diesel	1.20%	1.25%	2.94	307.47	9.87	3.28	40.28	17.82
T7 CAIRP Class 8	Electricity	0.35%	0.37%	0.00	0.00	0.00	0.00	6.22	1.89
T7 CAIRP Class 8	Natural Gas	0.00%	0.00%	0.01	0.15	2.86	0.00	0.12	0.04
T7 NNOOS Class 8	Diesel	1.85%	1.91%	4.39	522.90	14.74	4.82	61.73	27.23
T7 NOOS Class 8	Diesel	0.67%	0.69%	1.65	195.33	5.52	1.75	22.67	10.13
T7 POLA Class 8	Diesel	0.68%	0.70%	1.54	171.03	5.48	1.97	22.26	9.57
T7 POLA Class 8	Electricity	0.14%	0.14%	0.00	0.00	0.00	0.00	2.40	0.73
T7 POLA Class 8	Natural Gas	0.03%	0.03%	0.08	0.94	18.41	0.00	0.75	0.25
T7 Public Class 8	Diesel	0.02%	0.02%	0.06	5.26	0.22	0.06	0.54	0.22
T7 Public Class 8	Electricity	0.04%	0.04%	0.00	0.00	0.00	0.00	0.73	0.22
T7 Public Class 8	Natural Gas	0.03%	0.03%	0.09	1.19	22.99	0.00	0.87	0.28
T7 Single Concrete/Transit ^ Diesel		0.03%	0.03%	0.05	3.98	0.17	0.08	0.79	0.31
T7 Single Concrete/Transit ^ Electricity		0.04%	0.04%	0.00	0.00	0.00	0.00	0.69	0.21
T7 Single Concrete/Transit ^ Natural Gas		0.00%	0.00%	0.01	0.07	1.39	0.00	0.06	0.02
T7 Single Dump Class 8	Diesel	0.05%	0.05%	0.10	9.16	0.37	0.14	1.43	0.58
T7 Single Dump Class 8	Electricity	0.05%	0.05%	0.00	0.00	0.00	0.00	0.91	0.28
T7 Single Dump Class 8	Natural Gas	0.00%	0.00%	0.01	0.13	2.62	0.00	0.10	0.03
T7 Single Other Class 8	Diesel	0.26%	0.27%	0.51	48.04	1.93	0.82	8.21	3.28

Year 2050: TOP (Approved Project) Criteria Air Pollutants

Source: EMFAC2021 Version 1.0.1. San Bernardino County - South Coast Air Basin

¹: Based on data provided Fehr & Peers.

Passenger Vehicles	LHDT	MHDT	HHDT
86.34%	3.01%	2.72%	7.93%

Daily VMT		9,984,495		lbs/day					
Vehicle Type	Fuel Type	Percent of VMT	Adjusted Percent for Ontario	ROG	NOx	CO	SOx	PM10	PM2.5
T7 Single Other Class 8	Electricity	0.33%	0.34%	0.00	0.00	0.00	0.00	5.86	1.78
T7 Single Other Class 8	Natural Gas	0.02%	0.02%	0.06	0.73	14.53	0.00	0.57	0.19
T7 SWCV Class 8	Diesel	0.00%	0.00%	0.01	1.60	0.01	0.01	0.09	0.04
T7 SWCV Class 8	Electricity	0.16%	0.17%	0.00	0.00	0.00	0.00	5.14	1.67
T7 SWCV Class 8	Natural Gas	0.18%	0.19%	0.21	7.02	243.10	0.00	10.35	3.49
T7 Tractor Class 8	Diesel	1.06%	1.09%	2.38	259.19	8.13	2.87	34.41	14.72
T7 Tractor Class 8	Electricity	0.23%	0.24%	0.00	0.00	0.00	0.00	4.13	1.25
T7 Tractor Class 8	Natural Gas	0.03%	0.03%	0.09	1.02	19.42	0.00	0.80	0.26
T7 Utility Class 8	Diesel	0.01%	0.01%	0.01	1.06	0.05	0.02	0.19	0.08
T7 Utility Class 8	Electricity	0.01%	0.01%	0.00	0.00	0.00	0.00	0.10	0.03
T7IS	Gasoline	0.00%	0.00%	0.01	0.12	1.26	0.00	0.01	0.00
T7IS	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
UBUS	Gasoline	0.02%	0.02%	0.00	0.07	2.03	0.02	0.38	0.13
UBUS	Electricity	0.10%	0.11%	0.00	0.00	0.00	0.00	2.10	0.65
UBUS	Natural Gas	0.02%	0.02%	0.16	0.42	0.20	0.00	0.41	0.15
		100.00%	100.00%	121	2,019	10,419	66	599	215

Region	Calendar Year	Vehicle Category	Fuel	PM10_RUNE				PM10_TOT	PM2.5_RUNE			PM2.5_TOT	CO2_RUNE	CH4_RUNE	N2O_RUNE	VMT	% of VMT			
				COG_RUNE	NOx_RUNE	CO_RUNE	SOx_RUNE		PM10_PMTW	PM10_PMSW	PM10_TOT							PM2.5_PMT	PM2.5_PMS	
San Bernardino (SC)	2021	All Other Buses	Diesel	0.16663086	2.98295309	0.49456453	0.00988424	0.09282765	0.012	0.04316746	1.48E-01	0.00881194	0.003	0.01510861	1.07E-01	1043.80788	0.00773937	0.16445236	8.784	0.0233%
San Bernardino (SC)	2021	All Other Buses	Natural Gas	0.000704109	0.13983002	0.23893977	0.00000000	0.00069515	0.012	0.04316746	5.59E-02	0.00086397	0.000	0.01510861	1.87E-02	871.216934	0.49292627	0.17760327	2.501	0.0052%
San Bernardino (SC)	2021	LDA	Gasoline	0.01216622	0.05321828	0.91256588	0.00293192	0.01423272	0.008	0.00745446	1.69E-02	0.00130909	0.002	0.00260904	5.92E-03	296.571993	0.00310794	0.00544633	20,038.949	50.9626%
San Bernardino (SC)	2021	LDA	Diesel	0.02987548	0.23451156	0.33322422	0.00282727	0.01908698	0.008	0.00751111	3.46E-02	0.001826128	0.002	0.00262854	2.29E-02	240.912343	0.00138766	0.03795584	45,885	0.1167%
San Bernardino (SC)	2021	LDA	Electricity	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.000	0.00043604	1.24E-02	0.00000000	0.000	0.00152615	3.53E-03	0.00000000	0.00000000	0.00000000	383,242	0.9742%
San Bernardino (SC)	2021	LDA	Plug-In Hybrid	0.00144029	0.00324881	0.23824140	0.00145985	0.00084661	0.008	0.00389353	1.27E-02	0.00077843	0.002	0.00134383	4.12E-03	147.061176	0.00046983	0.00062382	455,823	1.1927%
San Bernardino (SC)	2021	LD1	Gasoline	0.03574748	0.2517275	0.26494515	0.00354461	0.03574748	0.008	0.01299271	1.98E-02	0.0021623	0.002	0.0121623	7.28E-03	354.80021	0.0121623	0.00000000	1,433,316	3.7266%
San Bernardino (SC)	2021	LD1	Diesel	0.30551059	1.59339793	1.92840097	0.00395987	0.24595101	0.008	0.01019991	2.64E-01	0.23531128	0.002	0.00356997	2.41E-01	471.906021	0.01419038	0.06584126	23,313	0.0006%
San Bernardino (SC)	2021	LD1	Electricity	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.000	0.00439314	1.24E-02	0.00000000	0.000	0.00152615	3.54E-03	0.00000000	0.00000000	624	0.0016%	
San Bernardino (SC)	2021	LD1	Plug-In Hybrid	0.00137779	0.00310784	0.22790326	0.00139076	0.00053904	0.008	0.00384668	1.24E-02	0.00045653	0.002	0.00134634	3.84E-03	140.679648	0.00044649	0.00058943	406	0.0010%
San Bernardino (SC)	2021	LD1	Gasoline	0.01751345	0.10986078	1.17181395	0.00369337	0.0148845	0.008	0.00857349	1.81E-02	0.00136861	0.002	0.00300072	6.37E-03	373.595703	0.00426771	0.00824014	7,032,622	17.8852%
San Bernardino (SC)	2021	LD2	Diesel	0.01647562	0.07857053	0.13705818	0.00309936	0.00774465	0.008	0.00821211	2.40E-02	0.00740962	0.002	0.00287424	1.23E-02	327.091278	0.00076526	0.05153336	17,197	0.0437%
San Bernardino (SC)	2021	LD2	Electricity	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.000	0.00435033	1.24E-02	0.00000000	0.000	0.00152615	3.52E-03	0.00000000	0.00000000	0.00000000	6,143	0.0156%
San Bernardino (SC)	2021	LD2	Plug-In Hybrid	0.00139875	0.0031551	0.23136959	0.00141191	0.0007185	0.008	0.00838212	1.24E-02	0.00066063	0.002	0.00134509	4.01E-03	142.819338	0.00054282	0.00059724	29,865	0.0076%
San Bernardino (SC)	2021	LHD1	Gasoline	0.03923395	0.25295296	1.33524812	0.00665356	0.00123669	0.008	0.00780002	8.72E-02	0.00112544	0.002	0.00273001	3.04E-02	674.2204	0.00783714	0.01402281	619,589	1.5757%
San Bernardino (SC)	2021	LHD1	Diesel	0.13078638	2.33759859	0.4345725	0.00471145	0.03266949	0.012	0.07800002	1.23E-01	0.03125637	0.003	0.00273001	6.16E-02	497.224081	0.00607478	0.08733876	418,725	1.0649%
San Bernardino (SC)	2021	LHD2	Gasoline	0.02186876	0.19926159	0.89825968	0.00730391	0.00103118	0.008	0.09100003	1.00E-01	0.00098414	0.002	0.003185001	3.48E-02	738.811718	0.00468037	0.01203602	107,092	0.2724%
San Bernardino (SC)	2021	LHD2	Diesel	0.1154733	1.77943575	0.3291232	0.0056765	0.0293386	0.012	0.09100003	1.32E-01	0.00286942	0.003	0.003185001	6.29E-02	599.07062	0.00536351	0.09438382	173,715	0.4418%
San Bernardino (SC)	2021	MCT	Gasoline	1.26119817	0.3645035	1.48703905	0.00189371	0.01182831	0.004	0.012	1.78E-02	0.00117419	0.001	0.0042	6.91E-03	190.54321	0.18652801	0.04264663	121,109	0.3080%
San Bernardino (SC)	2021	MDV	Gasoline	0.03002782	0.17289585	1.53073753	0.00442178	0.00158384	0.008	0.00884246	1.84E-02	0.00145709	0.002	0.0030952	6.55E-03	454.45048	0.0061693	0.01155065	5,629,313	14.313%
San Bernardino (SC)	2021	MDV	Diesel	0.01909126	0.2074078	0.28476954	0.00421178	0.0106044	0.008	0.00870281	2.73E-02	0.00101467	0.002	0.00304598	1.52E-02	445.546385	0.00086875	0.07019601	77,799	0.1983%
San Bernardino (SC)	2021	MDV	Electricity	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.000	0.00434902	1.23E-02	0.00000000	0.000	0.00152216	3.52E-03	0.00000000	0.00000000	6,880	0.0175%	
San Bernardino (SC)	2021	MDV	Plug-In Hybrid	0.00144033	0.0032489	0.23824789	0.00145389	0.00094124	0.008	0.00383746	1.28E-02	0.00086543	0.002	0.00134311	4.21E-03	147.065161	0.00046823	0.00061984	26,738	0.0680%
San Bernardino (SC)	2021	MH	Gasoline	0.06759763	0.46905913	1.47101175	0.00173413	0.0133551	0.012	0.04282771	5.88E-02	0.00122796	0.003	0.01488925	1.91E-02	1754.12408	0.0151175	0.02725361	35,512	0.0903%
San Bernardino (SC)	2021	MH	Diesel	0.07338847	2.42494609	0.33584002	0.00738828	0.01372033	0.016	0.04282786	1.96E-01	0.3126788	0.004	0.01483226	1.50E-01	990.79326	0.00340873	0.15609999	12,337	0.0314%
San Bernardino (SC)	2021	Motor Coach	Diesel	0.05052536	2.34096044	0.22137129	0.01465454	0.03429534	0.012	0.08624948	1.33E-01	0.0277381	0.003	0.00301199	6.60E-02	1746.10183	0.00232784	0.27509905	6,003	0.0153%
San Bernardino (SC)	2021	OTD	Gasoline	0.07590234	0.58061669	1.98806515	0.01497339	0.00884735	0.012	0.04316746	5.60E-02	0.0007791	0.003	0.01510861	1.89E-02	1698.70161	0.01501263	0.02630567	17,838	0.0454%
San Bernardino (SC)	2021	PBUS	Diesel	0.11563592	3.9573023	0.47263184	0.02030918	0.0191909	0.0	1.93E-02	0.01848336	0.000	0.00000000	0.002	1.85E-02	2144.71572	0.00530709	0.33790083	39,949	0.1016%
San Bernardino (SC)	2021	SBUS	Gasoline	0.07969131	0.51077547	1.59807579	0.00897378	0.013417	0.008	0.04684503	5.42E-02	0.00123265	0.002	0.01639276	1.96E-02	907.724887	0.01597944	0.02776277	13,225	0.0336%
San Bernardino (SC)	2021	SBUS	Diesel	0.15092263	8.89442821	0.35338381	0.012136	0.05493281	0.012	0.04684503	1.14E-01	0.02525644	0.003	0.01639276	7.20E-02	1281.60195	0.00700997	0.20191691	8,491	0.0216%
San Bernardino (SC)	2021	SBUS	Natural Gas	0.06263776	0.7364919	1.47222088	0.00048287	0.00448287	0.012	0.04684503	6.33E-02	0.00412184	0.003	0.01639276	2.38E-02	1692.04246	0.38393381	0.34493393	9,302	0.0237%
San Bernardino (SC)	2021	CAI&R Class 4	Diesel	0.01149486	0.74424512	0.06259711	0.01058064	0.015447	0.012	0.04229235	6.48E-02	0.00087692	0.002	0.01197229	2.79E-02	1117.82249	0.00087692	0.17412194	362	0.0009%
San Bernardino (SC)	2021	CAI&R Class 4	Diesel	0.01046816	0.6307439	0.04452462	0.01058184	0.00691572	0.012	0.04229235	6.12E-02	0.00061555	0.003	0.01480264	2.44E-02	1112.86235	0.00048622	0.17333199	497	0.0013%
San Bernardino (SC)	2021	CAI&R Class 6	Diesel	0.01429167	0.64577052	0.05887747	0.01046355	0.00945629	0.012	0.04229235	6.37E-02	0.00090721	0.003	0.01480264	2.68E-02	1104.98553	0.00066381	0.17409992	1,299	0.0033%
San Bernardino (SC)	2021	CAI&R Class 7	Diesel	0.02000185	0.91664672	0.06967843	0.00989311	0.0185786	0.012	0.04229235	7.29E-02	0.01777524	0.003	0.01480264	3.56E-02	1038.28107	0.00102193	0.1638161	8,139	0.0207%
San Bernardino (SC)	2021	CAI&R Class 7	Natural Gas	0.00560112	0.14166884	2.29378048	0.00000000	0.00048582	0.012	0.04229235	5.47E-02	0.00041264	0.003	0.01480264	1.82E-02	774.995714	0.39201521	0.15798795	8	0.0000%
San Bernardino (SC)	2021	Instate Delivery Class 4	Diesel	0.04519013	1.47739811	0.15484866	0.01028532	0.0221827	0.012	0.04229235	7.97E-02	0.02403166	0.003	0.01489825	4.19E-02	1086.16347	0.00209966	0.1711255	20,243	0.0513%
San Bernardino (SC)	2021	Instate Delivery Class 4	Natural Gas	0.00502159	0.13912662	2.31049495	0.00000000	0.00055545	0.012	0.04229235	5.31E-02	0.00030979	0.003	0.01489825	1.84E-02	831.277934	0.43474112	0.16948144	362	0.0007%
San Bernardino (SC)	2021	Instate Delivery Class 5	Natural Gas	0.01894039	0.75058671	0.07470663	0.01049152	0.01128183	0.012	0.04229235	6.58E-02	0.01079379	0.003	0.01489825	2.87E-02	1107.93859	0.00080866	0.17455818	24,607	0.0626%
San Bernardino (SC)	2021	Instate Delivery Class 5	Natural Gas	0.0061759	0.14132595	2.32788977	0.00000000	0.00054045	0.012	0.04229235	5.51E-02	0.00049693	0.003	0.01489825	1.84E-02	824.476949	0.43224298	0.16807502	68	0.0002%
San Bernardino (SC)	2021	Instate Delivery Class 6	Diesel	0.02501835	1.00998553	0.09183662	0.01031408	0.0143789	0.012	0.04229235	6.89E-02	0.0134685	0.003	0.01489825	3.16E-02	1089.20051	0.00116204	0.17160398	97,686	0.2484%
San Bernardino (SC)	2021	Instate Delivery Class 6	Natural Gas																	

San Bernardino (SC)	2021	UBUS	Gasoline	0.0033257	0.04704916	0.51975313	0.00696906	0.00088344	0.00825879	0.09222926	1.01E-01	0.00081229	0.0020647	0.03228024	3.52E-02	704.940959	0.00116724	0.00614903	5,222	0.0133%
San Bernardino (SC)	2021	UBUS	Diesel	0.04340532	0.2242354	0.04143538	0.00920447	0.00326755	0.01589838	0.10970277	1.29E-01	0.0031262	0.00397459	0.03839597	4.55E-02	971.396326	0.00201607	0.15304389	455	0.0012%
San Bernardino (SC)	2021	UBUS	Electricity	0	0	0	0	0	0.01601801	0.05487065	7.09E-02	0	0.0040045	0.01920473	2.32E-02	0	0	0	43	0.0001%
San Bernardino (SC)	2021	UBUS	Natural Gas	0.03607696	0.50950272	30.8426431	0	0.00142414	0.03201267	0.10736342	1.41E-01	0.00136253	0.00800317	0.0375772	4.69E-02	1835.28956	2.07987787	0.37413578	34,161	0.0869%
																			39,320,898	100.0000%

Region	Calendar Year	Vehicle Category	Fuel	ROG_RUNEX	NOx_RUNEX	CO_RUNEX	SOx_RUNEX	PM10_PATW	PM10_PMBW	PM10_RUNE	PM10_Totals	PM2_5_PMT	PM2_5_PMB	PM2_5_RUNE	CO2(Pwley+ AACCI)_RUNE					
															PM2_5_Totals	CH4_RUNEX	N2O_RUNEX			
San Bernardino (SC)	2021	All Other Buses	Diesel	3.674E-04	6.574E-03	1.092E-03	2.179E-05	2.046E-04	2.646E-05	9.517E-05	3.263E-04	1.958E-04	6.614E-04	3.331E-05	2.537E-04	2.301E+00	1.704E-05	3.624E-04		
San Bernardino (SC)	2021	All Other Buses	Natural Gas	1.552E-05	3.083E-04	5.268E-05	8.000E-00	1.533E-06	2.646E-05	9.517E-05	1.232E-04	1.409E-06	6.614E-04	3.331E-05	4.133E-05	1.921E+00	1.086E-03	3.915E-04		
San Bernardino (SC)	2021	LDA	Gasoline	2.682E-05	1.173E-04	2.012E-03	6.464E-06	3.139E-06	1.764E-05	1.643E-05	3.721E-05	2.886E-06	4.409E-06	5.752E-06	1.305E-05	6.538E-01	6.852E-06	1.201E-05		
San Bernardino (SC)	2021	LDA	Diesel	6.586E-05	5.170E-04	7.346E-04	5.034E-06	4.208E-05	1.656E-05	7.627E-05	4.026E-05	4.409E-06	5.795E-06	5.046E-05	5.311E-01	3.059E-06	8.368E-05			
San Bernardino (SC)	2021	LDA	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.764E-05	9.613E-06	2.725E-05	0.000E+00	4.409E-06	3.365E-06	7.774E-06	0.000E+00	0.000E+00	0.000E+00		
San Bernardino (SC)	2021	LDA	Plug-in Hybrid	3.173E-06	7.162E-06	5.732E-04	3.205E-06	1.866E-06	2.797E-05	2.797E-05	1.716E-06	4.409E-06	2.963E-06	9.088E-06	3.242E-01	1.036E-06	1.373E-06			
San Bernardino (SC)	2021	LD1	Gasoline	1.271E-04	5.612E-03	6.799E-03	2.727E-04	1.764E-05	1.764E-05	3.711E-05	1.774E-04	1.445E-04	6.614E-04	3.331E-05	2.778E-04	7.840E-01	3.648E-05			
San Bernardino (SC)	2021	LD1	Diesel	6.735E-04	3.313E-03	4.231E-03	8.790E-06	5.422E-04	1.764E-05	2.249E-05	5.832E-04	5.188E-04	4.409E-06	7.870E-06	5.310E-04	9.213E-01	3.128E-05	1.452E-04		
San Bernardino (SC)	2021	LD1	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.764E-05	9.685E-06	2.732E-05	0.000E+00	4.409E-06	3.390E-06	7.799E-06	0.000E+00	0.000E+00	0.000E+00			
San Bernardino (SC)	2021	LD1	Plug-in Hybrid	3.037E-06	6.852E-06	5.024E-04	3.066E-06	1.188E-06	1.764E-05	8.480E-06	2.731E-05	1.093E-06	4.409E-06	2.968E-06	8.470E-06	3.101E-01	9.843E-07	1.299E-06		
San Bernardino (SC)	2021	LD2	Gasoline	3.861E-05	2.422E-04	2.583E-03	8.142E-06	3.281E-06	1.890E-05	3.982E-05	3.017E-06	4.409E-06	6.615E-06	1.404E-05	8.236E-01	9.428E-06	1.817E-05			
San Bernardino (SC)	2021	LD2	Diesel	3.632E-05	1.732E-04	3.022E-04	6.833E-06	1.707E-05	1.764E-05	1.810E-05	5.282E-05	1.634E-05	4.409E-06	6.337E-06	2.708E-05	7.211E-01	1.687E-06	1.136E-04		
San Bernardino (SC)	2021	LD2	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.764E-05	9.591E-06	2.725E-05	0.000E+00	4.409E-06	3.357E-06	7.766E-06	0.000E+00	0.000E+00	0.000E+00		
San Bernardino (SC)	2021	LD2	Plug-in Hybrid	3.084E-06	6.954E-06	5.110E-04	3.113E-06	1.580E-06	1.764E-05	8.473E-06	2.799E-05	1.455E-06	4.409E-06	2.995E-06	8.831E-06	3.149E-01	9.983E-07	1.317E-06		
San Bernardino (SC)	2021	LHD1	Gasoline	8.650E-05	5.577E-04	2.944E-03	1.469E-05	2.720E-06	1.764E-05	1.720E-04	1.923E-04	2.501E-04	4.409E-06	6.019E-05	6.710E-05	1.484E+00	1.728E-05	3.091E-05		
San Bernardino (SC)	2021	LHD1	Diesel	2.883E-04	5.153E-03	9.578E-04	1.039E-05	7.202E-05	2.646E-05	1.720E-04	2.704E-04	6.891E-05	6.614E-04	6.019E-05	1.357E-04	1.094E+00	1.339E-05	1.272E-04		
San Bernardino (SC)	2021	LHD2	Gasoline	4.821E-05	4.393E-04	1.980E-03	1.610E-05	2.273E-06	1.764E-05	2.006E-04	2.205E-04	2.090E-06	4.409E-06	7.022E-05	7.672E-05	1.629E+00	1.032E-05	2.633E-05		
San Bernardino (SC)	2021	LHD2	Diesel	2.546E-04	3.923E-03	7.258E-04	1.251E-05	6.468E-05	2.646E-05	2.006E-04	2.918E-04	6.188E-05	6.614E-04	7.022E-05	1.387E-04	1.321E+00	1.182E-05	2.081E-04		
San Bernardino (SC)	2021	MCT	Gasoline	2.792E-03	1.399E-03	3.278E-02	4.133E-06	4.031E-06	8.188E-06	2.646E-05	3.779E-06	2.205E-06	4.409E-06	9.259E-06	1.524E-05	4.201E-01	1.172E-06	9.318E-05		
San Bernardino (SC)	2021	MDV	Gasoline	6.620E-05	3.812E-04	3.374E-03	9.905E-06	4.929E-06	1.764E-05	1.950E-05	4.062E-05	3.212E-06	4.409E-06	6.824E-06	1.445E-05	1.002E+00	1.459E-05	2.566E-05		
San Bernardino (SC)	2021	MDV	Diesel	4.209E-05	4.573E-04	6.278E-04	9.307E-06	2.338E-05	1.764E-05	1.919E-05	6.020E-05	2.237E-05	4.409E-06	6.715E-06	3.349E-05	9.823E-01	1.955E-06	1.548E-04		
San Bernardino (SC)	2021	MDV	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.764E-05	9.588E-06	2.722E-05	0.000E+00	4.409E-06	3.366E-06	7.765E-06	0.000E+00	0.000E+00	0.000E+00			
San Bernardino (SC)	2021	MDV	Plug-in Hybrid	3.175E-06	7.163E-06	5.252E-04	3.205E-06	2.075E-06	1.764E-05	8.460E-06	2.817E-05	1.908E-06	4.409E-06	2.961E-06	9.278E-06	3.242E-01	1.032E-06	1.367E-06		
San Bernardino (SC)	2021	MH	Gasoline	1.490E-04	1.034E-03	4.734E-03	3.823E-05	2.944E-06	2.646E-05	9.364E-05	1.231E-04	2.870E-04	6.614E-04	3.278E-05	4.101E-05	3.867E+00	3.333E-05	6.071E-05		
San Bernardino (SC)	2021	MH	Diesel	1.618E-04	9.334E-03	7.392E-04	2.070E-05	3.025E-04	3.527E-05	9.343E-05	4.312E-04	2.894E-04	8.181E-06	3.270E-05	3.290E-06	2.184E+00	7.515E-06	3.441E-04		
San Bernardino (SC)	2021	Motor Coach	Diesel	1.107E-04	5.179E-03	4.800E-04	2.445E-05	1.907E-04	2.646E-05	1.907E-04	1.445E-04	6.614E-04	6.614E-04	9.229E-05	5.143E-06	1.452E-06	6.056E-04			
San Bernardino (SC)	2021	ORIS	Gasoline	1.673E-04	1.280E-03	4.438E-03	3.702E-05	1.868E-06	2.646E-05	9.517E-05	1.235E-04	1.718E-06	6.614E-04	3.331E-05	4.164E-05	3.745E+00	3.310E-05	5.799E-05		
San Bernardino (SC)	2021	P10	Diesel	2.549E-04	8.721E-03	1.042E-03	4.477E-05	4.259E-05	0.000E+00	0.000E+00	4.259E-05	0.000E+00	0.000E+00	4.075E-05	4.728E+00	1.184E-05	7.449E-04			
San Bernardino (SC)	2021	SBU	Gasoline	1.575E-04	1.126E-03	3.523E-03	1.978E-05	2.958E-06	1.764E-05	1.033E-04	1.239E-04	2.720E-04	4.409E-06	3.615E-05	4.327E-05	2.001E+00	3.523E-05	6.121E-05		
San Bernardino (SC)	2021	SBU	Diesel	3.327E-04	1.961E-02	7.794E-04	2.676E-05	1.211E-04	2.646E-05	1.033E-04	2.508E-04	1.159E-04	6.614E-04	3.615E-05	1.586E-04	2.825E+00	1.545E-05	4.431E-04		
San Bernardino (SC)	2021	SBU	Natural Gas	1.381E-04	1.624E-03	3.246E-02	0.000E+00	9.883E-06	2.646E-05	1.033E-04	1.396E-04	9.087E-06	6.614E-04	3.615E-05	5.185E-05	3.730E+00	9.635E-03	7.604E-04		
San Bernardino (SC)	2021	T6 CAIRP Class 4	Diesel	3.371E-05	1.641E-03	1.380E-04	2.334E-05	2.324E-05	2.646E-05	9.324E-05	1.429E-04	2.246E-04	6.614E-04	3.263E-05	4.058E-05	1.833E+00	9.846E-04	3.734E-04		
San Bernardino (SC)	2021	T6 CAIRP Class 5	Diesel	2.308E-05	1.391E-03	9.814E-05	1.525E-05	2.646E-05	2.646E-05	1.349E-04	1.459E-05	6.614E-04	3.263E-05	5.383E-05	2.433E+00	1.072E-06	3.865E-04			
San Bernardino (SC)	2021	T6 CAIRP Class 6	Diesel	3.151E-05	1.424E-03	1.232E-04	2.307E-05	2.085E-05	2.646E-05	9.324E-05	1.405E-04	1.995E-05	6.614E-04	3.263E-05	5.919E-05	2.436E+00	1.463E-06	3.838E-04		
San Bernardino (SC)	2021	T6 CAIRP Class 7	Diesel	4.851E-05	2.021E-03	2.131E-04	2.168E-05	4.096E-05	2.646E-05	9.324E-05	1.607E-04	3.919E-05	6.614E-04	3.263E-05	7.843E-05	2.289E+00	2.253E-06	3.606E-04		
San Bernardino (SC)	2021	T6 CAIRP Class 7	Natural Gas	1.235E-05	3.123E-04	0.000E+00	9.888E-07	2.646E-05	2.646E-05	9.324E-05	1.207E-04	9.092E-07	6.614E-04	3.263E-05	4.016E-05	1.709E+00	8.642E-04	3.483E-04		
San Bernardino (SC)	2021	T6 Institute Delivery Class 4	Diesel	9.936E-05	3.257E-03	5.417E-03	2.288E-05	5.338E-05	2.646E-05	9.384E-05	1.757E-04	5.298E-05	6.614E-04	3.284E-05	9.244E-05	2.393E+00	4.627E-06	3.773E-04		
San Bernardino (SC)	2021	T6 Institute Delivery Class 4	Natural Gas	1.349E-05	3.048E-04	5.094E-03	0.000E+00	0.000E+00	2.646E-05	9.384E-05	1.214E-04	1.124E-06	6.614E-04	3.284E-05	4.058E-05	1.833E+00	9.846E-04	3.734E-04		
San Bernardino (SC)	2021	T6 Institute Delivery Class 5	Diesel	4.180E-05	1.655E-03	1.647E-04	3.131E-05	2.487E-05	2.646E-05	9.384E-05	1.452E-04	2.380E-05	6.614E-04	3.284E-05	6.525E-05	2.443E+00	1.942E-06	3.848E-04		
San Bernardino (SC)	2021	T6 Institute Delivery Class 5	Natural Gas	1.362E-05	3.116E-04	5.123E-03	0.000E+00	1.191E-06	2.646E-05	9.384E-05	1.215E-04	1.094E-06	6.614E-04	3.284E-05	4.055E-05	1.818E+00	5.529E-04	3.705E-04		
San Bernardino (SC)	2021	T6 Institute Delivery Class 6	Diesel	5.516E-05	2.227E-03	2.025E-04	2.274E-05	3.157E-05	2.646E-05	9.384E-05	1.519E-04	3.020E-05	6.614E-04	3.284E-05	6.966E-05	2.401E+00	2.562E-06	3.783E-04		
San Bernardino (SC)	2021	T6 Institute Delivery Class 6	Natural Gas	1.329E-05	3.315E-04	5.242E-03	0.000E+00	1.063E-06	2.646E-05	9.384E-05	1.214E-04	9.776E-07	6.614E-04	3.284E-05	4.044E-05	1.822E+00	9.300E-04	3.714E-04		
San Bernardino (SC)	2021	T6 Institute Delivery Class 7	Diesel	5.284E-05	2.444E-03	2.209E-04	2.231E-05	3.669E-05	2.646E-05	9.384E-05	1.570E-04	3.510E-05	6.614E-04	3.284E-05	7.456E-05	2.379E+00	2.454E-06	3.745E-04		
San Bernardino (SC)	2021	T6 Institute Delivery Class 7	Natural Gas	1.420E-05	2.826E-04	4.939E-03	0.000E+00	1.426E-06	2.646E-05	9.384E-05	1.311E-04	4.077E-06	6.614E-04	3.284E-05	4.058E-05	1.833E+00	9.846E-04	3.697E-04		
San Bernardino (SC)	2021	T6 Institute Other Class 4	Diesel	1.213E-04	4.027E-03	3.884E-04	2.247E-05	4.500E-05	2.646E-05	1.862E-04	3.146E-05	6.614E-04	3.281E-05	3.281E-0						

San Bernardino (SC)	2021	UBUS	Gasoline	7.332E-06	1.037E-04	1.146E-03	1.536E-05	1.948E-06	1.821E-05	2.033E-04	2.235E-04	1.791E-06	4.552E-06	7.117E-05	7.751E-05	1.554E+00	2.573E-06	1.356E-05	
San Bernardino (SC)	2021	UBUS	Diesel	9.569E-05	4.943E-04	9.133E-05	2.029E-05	7.204E-06	3.505E-05	2.419E-04	2.841E-04	6.892E-06	8.762E-06	8.465E-05	1.003E-04	2.142E+00	4.445E-06	3.374E-04	
San Bernardino (SC)	2021	UBUS	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.531E-05	1.210E-04	1.563E-04	0.000E+00	8.828E-06	4.234E-05	5.117E-05	0.000E+00	0.000E+00	0.000E+00	
San Bernardino (SC)	2021	UBUS	Natural Gas	7.954E-05	1.123E-03	6.800E-02	0.000E+00	3.140E-06	7.058E-05	2.367E-04	3.104E-04	3.004E-06	1.764E-05	8.284E-05	1.035E-04	4.046E+00	4.585E-03	8.248E-04	

Region	Calendar Year	Vehicle Category	Fuel	PM10, RUNE										CO2(Pwley+ AACCI) RUNE				
				ROG_RUNEK	NOx_RUNEK	CO_RUNEK	SOx_RUNEK	PM10_PMTW	PM10_PMBW	PM10_TOTL	PM2_5_PMT	PM2_5_PMB	PM2_5_RUNE	PM2_5_TOTL	CH4_RUNEK	N2O_RUNEK		
San Bernardino (SC)	2021	All Other Buses	Diesel	1.664E-07	2.983E-06	4.935E-07	8.884E-09	9.283E-08	1.200E-08	4.317E-08	1.480E-07	8.881E-08	3.000E-09	1.511E-08	1.069E-07	1.044E-03	7.740E-09	1.645E-07
San Bernardino (SC)	2021	All Other Buses	Natural Gas	7.041E-09	1.398E-07	2.389E-06	0.000E+00	6.952E-10	1.200E-08	4.317E-08	5.584E-08	6.392E-10	3.000E-09	1.511E-08	1.875E-08	8.712E-04	4.928E-07	1.774E-07
San Bernardino (SC)	2021	LDA	Gasoline	1.217E-08	5.322E-08	9.124E-07	2.923E-09	1.424E-09	8.000E-09	7.454E-09	1.688E-08	1.309E-09	2.000E-09	2.609E-09	5.918E-09	2.966E-04	3.108E-09	5.444E-09
San Bernardino (SC)	2021	LDA	Diesel	2.988E-08	2.345E-07	3.332E-07	2.932E-09	1.909E-08	8.000E-09	7.510E-09	3.460E-08	1.824E-08	2.000E-09	2.629E-09	2.289E-08	2.409E-04	1.388E-09	3.794E-08
San Bernardino (SC)	2021	LDA	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	4.360E-09	1.236E-08	0.000E+00	2.000E-09	1.524E-09	3.524E-09	0.000E+00	0.000E+00	0.000E+00
San Bernardino (SC)	2021	LDA	Plug-in Hybrid	1.440E-09	3.249E-09	2.382E-07	1.454E-09	1.454E-09	8.000E-09	3.840E-09	1.269E-08	7.784E-10	2.000E-09	1.344E-09	4.122E-09	1.471E-04	4.698E-10	6.238E-10
San Bernardino (SC)	2021	LD1	Gasoline	5.747E-08	2.525E-07	3.000E-06	3.000E-09	1.200E-08	1.932E-08	2.728E-08	6.032E-08	1.200E-09	2.000E-09	2.785E-09	1.218E-03	2.985E-07	1.647E-08	1.647E-08
San Bernardino (SC)	2021	LD1	Diesel	3.055E-07	1.593E-06	1.928E-06	3.940E-09	2.460E-07	8.000E-09	1.020E-08	2.442E-07	2.353E-07	2.000E-09	3.570E-09	2.409E-07	4.179E-04	1.419E-08	6.584E-08
San Bernardino (SC)	2021	LD1	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	8.000E-09	1.239E-08	0.000E+00	2.000E-09	1.538E-09	3.538E-09	0.000E+00	0.000E+00	0.000E+00	0.000E+00
San Bernardino (SC)	2021	LD1	Plug-in Hybrid	1.378E-09	3.108E-09	2.279E-07	1.391E-09	5.390E-10	8.000E-09	3.847E-09	1.239E-08	4.956E-10	2.000E-09	1.346E-09	3.842E-09	1.407E-04	4.465E-10	5.894E-10
San Bernardino (SC)	2021	LD2	Gasoline	1.751E-08	1.099E-07	1.172E-06	3.693E-09	1.488E-09	8.000E-09	8.573E-09	1.806E-08	1.369E-09	2.000E-09	3.001E-09	6.369E-09	3.736E-04	4.277E-09	8.240E-09
San Bernardino (SC)	2021	LD2	Diesel	1.648E-08	7.857E-08	1.371E-07	3.099E-09	7.745E-09	8.000E-09	8.212E-09	2.394E-08	7.410E-09	2.000E-09	2.874E-09	1.238E-08	3.271E-04	7.653E-10	1.533E-08
San Bernardino (SC)	2021	LD2	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	8.000E-09	4.350E-09	1.239E-08	0.000E+00	2.000E-09	1.523E-09	3.523E-09	0.000E+00	0.000E+00	0.000E+00
San Bernardino (SC)	2021	LD2	Plug-in Hybrid	1.399E-09	3.155E-09	2.314E-07	1.412E-09	7.185E-10	8.000E-09	3.843E-09	1.254E-08	4.604E-10	2.000E-09	1.545E-09	4.006E-09	1.428E-04	5.922E-10	5.922E-10
San Bernardino (SC)	2021	LHD1	Gasoline	3.923E-08	2.530E-07	1.335E-06	6.665E-09	1.234E-09	8.000E-09	7.800E-08	8.723E-08	1.134E-09	2.000E-09	2.730E-08	3.043E-08	6.742E-04	7.837E-09	1.402E-08
San Bernardino (SC)	2021	LHD1	Diesel	1.308E-07	2.338E-06	4.345E-07	4.711E-09	3.267E-08	1.200E-08	7.800E-08	1.227E-07	3.124E-08	3.000E-09	2.730E-08	6.156E-08	4.972E-04	6.075E-09	7.834E-08
San Bernardino (SC)	2021	LHD2	Gasoline	2.187E-08	1.993E-07	8.983E-07	7.304E-09	1.031E-09	8.000E-09	9.100E-08	1.000E-07	9.481E-10	2.000E-09	3.185E-08	3.480E-08	7.388E-04	4.680E-09	1.204E-08
San Bernardino (SC)	2021	LHD2	Diesel	1.155E-07	1.779E-06	3.272E-07	5.676E-08	1.200E-08	1.200E-08	9.100E-08	1.323E-07	2.807E-08	3.000E-09	3.185E-08	6.292E-08	5.991E-04	5.364E-09	9.438E-08
San Bernardino (SC)	2021	HCT	Gasoline	1.242E-06	6.345E-07	1.487E-05	1.884E-09	1.828E-09	4.000E-09	1.200E-08	1.714E-08	1.000E-09	4.200E-09	6.914E-09	1.905E-04	1.865E-07	4.227E-08	1.761E-07
San Bernardino (SC)	2021	MDV	Gasoline	3.003E-08	1.729E-07	1.531E-06	4.495E-09	1.584E-09	8.000E-09	8.843E-09	1.843E-08	1.457E-09	2.000E-09	3.095E-09	6.525E-09	4.545E-04	6.417E-09	1.155E-08
San Bernardino (SC)	2021	MDV	Diesel	1.909E-08	2.074E-07	2.848E-07	4.222E-09	1.060E-08	8.000E-09	8.703E-09	2.731E-08	1.015E-08	2.000E-09	3.046E-09	1.519E-08	4.455E-04	8.868E-10	7.020E-08
San Bernardino (SC)	2021	MDV	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	8.000E-09	4.349E-09	1.235E-08	0.000E+00	2.000E-09	1.522E-09	3.522E-09	0.000E+00	0.000E+00	0.000E+00
San Bernardino (SC)	2021	MDV	Plug-in Hybrid	1.440E-09	3.249E-09	2.382E-07	1.454E-09	9.412E-10	8.000E-09	3.837E-09	1.278E-08	6.654E-10	2.000E-09	1.343E-09	4.209E-09	1.471E-04	4.682E-10	6.198E-10
San Bernardino (SC)	2021	MH	Gasoline	6.758E-08	4.691E-07	2.147E-06	1.734E-08	1.336E-09	1.200E-08	4.248E-08	5.582E-08	1.229E-09	3.000E-09	4.487E-08	1.910E-08	1.754E-03	1.152E-08	2.754E-08
San Bernardino (SC)	2021	MH	Diesel	7.319E-08	4.243E-06	2.214E-07	9.388E-08	1.372E-07	1.600E-08	4.238E-08	1.954E-07	1.313E-07	3.000E-09	1.483E-08	1.501E-07	9.908E-04	3.409E-09	1.581E-07
San Bernardino (SC)	2021	Motor Coach	Diesel	5.023E-08	2.349E-06	2.147E-07	1.653E-08	3.427E-08	2.000E-08	8.627E-08	1.324E-07	3.279E-08	3.000E-09	3.019E-08	6.598E-08	1.744E-03	2.333E-09	2.751E-07
San Bernardino (SC)	2021	OBUS	Gasoline	7.590E-08	5.804E-07	1.988E-06	1.679E-08	8.473E-10	1.000E+00	4.317E-08	5.601E-08	7.791E-10	3.000E-09	1.511E-08	1.889E-08	1.699E-03	1.501E-08	2.631E-08
San Bernardino (SC)	2021	P10	Diesel	1.156E-07	3.956E-06	4.726E-07	2.031E-08	1.932E-08	0.000E+00	1.932E-08	1.848E-08	0.000E+00	0.000E+00	1.848E-08	2.145E-03	5.371E-09	3.379E-07	1.761E-07
San Bernardino (SC)	2021	SBU1	Gasoline	7.949E-08	5.108E-07	1.598E-06	8.974E-09	1.342E-09	8.000E-09	4.685E-08	5.619E-08	1.234E-09	2.000E-09	1.640E-08	1.963E-08	9.077E-04	1.598E-08	2.774E-08
San Bernardino (SC)	2021	SBU1	Diesel	1.509E-07	8.849E-06	3.535E-07	1.214E-08	4.894E-08	1.200E-08	4.685E-08	1.138E-07	5.256E-08	3.000E-09	1.640E-08	7.195E-08	1.282E-03	7.010E-09	2.019E-07
San Bernardino (SC)	2021	SBU5	Natural Gas	6.264E-08	7.365E-07	1.472E-05	0.000E+00	4.483E-09	1.200E-08	4.685E-08	6.333E-08	4.122E-09	3.000E-09	1.640E-08	2.525E-08	1.692E-03	4.384E-06	3.449E-07
San Bernardino (SC)	2021	16 CAIRP Class 4	Diesel	1.149E-08	7.442E-07	6.240E-07	0.000E+00	1.676E-08	1.200E-08	4.229E-08	6.484E-08	1.009E-09	1.480E-08	2.879E-08	1.118E-02	7.872E-10	1.745E-07	1.745E-07
San Bernardino (SC)	2021	16 CAIRP Class 5	Diesel	1.047E-08	6.307E-07	4.452E-08	1.054E-08	6.914E-09	1.200E-08	4.229E-08	6.121E-08	6.617E-09	3.000E-09	1.480E-08	2.442E-08	1.113E-03	8.62E-10	7.53E-07
San Bernardino (SC)	2021	16 CAIRP Class 6	Diesel	1.429E-08	6.458E-07	5.588E-08	1.046E-08	9.456E-09	1.200E-08	4.229E-08	6.375E-08	9.047E-09	3.000E-09	1.480E-08	2.685E-08	1.105E-03	6.638E-10	1.741E-07
San Bernardino (SC)	2021	16 CAIRP Class 7	Diesel	2.200E-08	9.164E-07	9.668E-08	9.832E-09	1.858E-08	1.200E-08	4.229E-08	7.287E-08	1.778E-08	3.000E-09	1.480E-08	3.558E-08	1.038E-03	1.022E-09	1.634E-07
San Bernardino (SC)	2021	16 CAIRP Class 7	Natural Gas	5.601E-09	1.417E-07	2.294E-06	0.000E+00	4.851E-10	1.200E-08	4.229E-08	5.474E-08	4.124E-10	3.000E-09	1.480E-08	1.822E-08	7.750E-04	3.920E-07	1.580E-07
San Bernardino (SC)	2021	16 Instate Delivery Class 4	Diesel	4.519E-08	1.472E-06	1.548E-07	1.079E-08	2.552E-08	1.200E-08	4.257E-08	7.948E-08	2.403E-08	3.000E-09	1.490E-08	4.193E-08	1.084E-03	2.099E-09	1.711E-07
San Bernardino (SC)	2021	16 Instate Delivery Class 4	Natural Gas	6.312E-09	1.392E-07	2.311E-06	0.000E+00	5.444E-10	1.200E-08	4.257E-08	5.512E-08	5.098E-10	3.000E-09	1.490E-08	1.841E-08	8.313E-04	4.374E-07	1.695E-07
San Bernardino (SC)	2021	16 Instate Delivery Class 5	Diesel	1.894E-08	7.504E-07	7.471E-08	1.049E-08	1.128E-08	1.200E-08	4.257E-08	6.585E-08	1.079E-08	3.000E-09	1.490E-08	2.849E-08	1.108E-03	8.807E-10	1.746E-07
San Bernardino (SC)	2021	16 Instate Delivery Class 5	Natural Gas	6.174E-09	1.413E-07	2.324E-06	0.000E+00	5.405E-10	1.200E-08	4.257E-08	5.511E-08	4.969E-10	3.000E-09	1.490E-08	1.840E-08	8.245E-04	4.322E-07	1.681E-07
San Bernardino (SC)	2021	16 Instate Delivery Class 6	Diesel	2.502E-08	1.010E-06	9.184E-08	1.031E-08	1.432E-08	1.200E-08	4.257E-08	6.888E-08	1.370E-08	3.000E-09	1.490E-08	3.160E-08	1.089E-03	1.162E-09	1.716E-07
San Bernardino (SC)	2021	16 Instate Delivery Class 6	Natural Gas	6.028E-09	1.504E-07	2.378E-06	0.000E+00	4.823E-10	1.200E-08	4.257E-08	5.505E-08	4.435E-10	3.000E-09	1.490E-08	1.834E-08	8.265E-04	4.219E-07	1.685E-07
San Bernardino (SC)	2021	16 Instate Delivery Class 7	Diesel	2.397E-08	1.108E-06	1.002E-07	1.021E-08	1.664E-08	1.200E-08	4.257E-08	7.121E-08	1.592E-08	3.000E-09	1.490E-08	3.382E-08	1.078E-03	1.113E-09	1.699E-07
San Bernardino (SC)	2021	16 Instate Delivery Class 7	Natural Gas	6.439E-09	1.282E-07	2.035E-06	0.000E+00	4.488E-10	1.200E-08	4.257E-08	5.521E-08	4.999E-10	3.000E-09	1.490E-08	1.849E-08	8.245E-04	4.507E-07	1.677E-07
San Bernardino (SC)	2021	16 Instate Other Class 4	Diesel	5.502E-08	1.827E-06	1.762E-07	1.027E-08	1.648E-08	1.200E-08	4.252E-08	2.864							

San Bernardino (SC)	2021	UBUS	Gasoline	3.326E-09	4.705E-08	5.198E-07	6.969E-09	8.834E-10	8.259E-09	9.223E-08	1.014E-07	8.123E-10	2.065E-09	3.228E-08	3.516E-08	7.049E-04	1.167E-09	6.149E-09
San Bernardino (SC)	2021	UBUS	Diesel	4.341E-08	2.242E-07	4.144E-08	9.204E-09	3.268E-09	1.590E-08	1.097E-07	1.289E-07	3.126E-09	3.975E-09	3.840E-08	4.550E-08	9.714E-04	2.016E-09	1.530E-07
San Bernardino (SC)	2021	UBUS	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.602E-08	5.487E-08	7.089E-08	0.000E+00	4.005E-09	1.920E-08	2.321E-08	0.000E+00	0.000E+00	0.000E+00
San Bernardino (SC)	2021	UBUS	Natural Gas	3.608E-08	5.095E-07	3.084E-05	0.000E+00	1.424E-09	3.201E-08	1.074E-07	1.408E-07	1.363E-09	8.003E-09	3.758E-08	4.694E-08	1.835E-03	2.080E-06	3.741E-07

Region	Year	Calendar or Vehicle Category	Fuel	PM10					PM10_PMT	PM10_PMB	PM10_Total	PM2.5			PM2.5_Total	CO2_RUNEX	CH4_RUNEX	N2O_RUNEX	VMT	% of VMT
				ROG_RUNEX	NOx_RUNEX	CO_RUNEX	SOx_RUNEX	X				W	W	W							W
San Bernardino (SC)	2050	All Other Buses	Diesel	0.0107718	0.5333865	0.0649761	0.0089278	0.0059486	0.012	0.0437715	6.17E-02	0.0056912	0.003	0.01532	2.40E-02	942.80574	0.0005003	0.1485394	9,716	0.0196%
San Bernardino (SC)	2050	All Other Buses	Natural Gas	0.0086542	0.0666804	2.2655103	0	0.0012407	0.012	0.0437715	5.70E-02	0.0011408	0.003	0.01532	1.95E-02	763.67708	0.6056928	0.1556806	2,947	0.0059%
San Bernardino (SC)	2050	LDA	Gasoline	0.0028164	0.0188093	0.4948863	0.0023419	0.0004785	0.008	0.0072625	1.61E-02	0.000044	0.002	0.0026693	5.11E-03	236.89226	0.00099	0.003154	20,102,502	40.491%
San Bernardino (SC)	2050	LDA	Diesel	0.0037064	0.00881	0.1198184	0.0018063	0.0008061	0.008	0.0076355	1.64E-02	0.00007712	0.002	0.0026724	5.44E-03	190.62636	0.0001722	0.0300333	11,614	0.0234%
San Bernardino (SC)	2050	LDA	Electricity	0	0	0	0	0	0.008	0.004393	1.24E-02	0	0.002	0.0015376	3.54E-03	0	0	0	2,531,575	5.0993%
San Bernardino (SC)	2050	LDA	Plug-in Hybrid	0.0011151	0.0025031	0.1842038	0.0011195	0.0001953	0.008	0.0040201	1.22E-02	0.0001795	0.002	0.001407	3.59E-03	113.23875	0.0003446	0.0004331	942,708	1.8989%
San Bernardino (SC)	2050	LDT1	Gasoline	0.0030695	0.0202323	0.5294714	0.0026908	0.0005095	0.008	0.0089534	1.75E-02	0.0004685	0.002	0.0031337	5.60E-03	272.17873	0.0010537	0.0032484	1,229,993	2.4775%
San Bernardino (SC)	2050	LDT1	Diesel	0.0116256	0.026741	0.1249745	0.0033832	0.0041677	0.008	0.0089148	2.11E-02	0.00039874	0.002	0.0031202	9.11E-03	357.0494	0.00054	0.0562533	15	0.0000%
San Bernardino (SC)	2050	LDT1	Electricity	0	0	0	0	0	0.008	0.0043979	1.24E-02	0	0.002	0.0015393	3.54E-03	0	0	0	39,229	0.0790%
San Bernardino (SC)	2050	LDT1	Plug-in Hybrid	0.0011139	0.0025004	0.1840034	0.0011183	0.0001937	0.008	0.0040264	1.22E-02	0.0001781	0.002	0.0014093	3.59E-03	113.11559	0.0003398	0.0004219	30,719	0.0619%
San Bernardino (SC)	2050	LDT2	Gasoline	0.0039353	0.0213053	0.5832677	0.002866	0.0004895	0.008	0.0088473	1.73E-02	0.0004501	0.002	0.0030965	5.55E-03	289.90272	0.001314	0.0033316	10,429,931	21.0087%
San Bernardino (SC)	2050	LDT2	Diesel	0.0115518	0.0268754	0.1220027	0.0025648	0.0040948	0.008	0.0088407	2.09E-02	0.0039176	0.002	0.0030942	9.01E-03	270.67746	0.0005366	0.0426453	39,896	0.0804%
San Bernardino (SC)	2050	LDT2	Electricity	0	0	0	0	0	0.008	0.004396	1.24E-02	0	0.002	0.0015386	3.54E-03	0	0	0	294,206	0.5926%
San Bernardino (SC)	2050	LDT2	Plug-in Hybrid	0.0011148	0.0025026	0.1841653	0.0011192	0.000195	0.008	0.0040244	1.22E-02	0.0001793	0.002	0.0014085	3.59E-03	113.21508	0.0003401	0.0004222	290,612	0.5854%
San Bernardino (SC)	2050	LHD1	Gasoline	0.0014547	0.0154661	0.0758253	0.0047961	0.0011073	0.008	0.078	8.71E-02	0.0010181	0.002	0.0273	3.03E-02	485.14174	0.0004495	0.0015773	361,552	0.7283%
San Bernardino (SC)	2050	LHD1	Diesel	0.038545	0.1567247	0.0724664	0.0043666	0.0107084	0.012	0.078	1.01E-01	0.0102452	0.003	0.0273	4.05E-02	460.83191	0.0017903	0.0726043	240,687	0.4848%
San Bernardino (SC)	2050	LHD1	Electricity	0	0	0	0	0	0.008	0.039	4.70E-02	0	0.002	0.01365	1.57E-02	0	0	0	591,815	1.1921%
San Bernardino (SC)	2050	LHD2	Gasoline	0.0013284	0.0214927	0.5832305	0.0054145	0.0011058	0.008	0.091	1.00E-01	0.0010167	0.002	0.03185	3.49E-02	547.68959	0.0004161	0.0022942	43,119	0.0869%
San Bernardino (SC)	2050	LHD2	Diesel	0.0490585	0.2352373	0.0940596	0.0051032	0.0139026	0.012	0.091	1.17E-01	0.0133012	0.003	0.03185	4.82E-02	538.56588	0.0022787	0.0848513	114,367	0.2304%
San Bernardino (SC)	2050	LHD2	Electricity	0	0	0	0	0	0.008	0.0455	5.35E-02	0	0.002	0.015925	1.79E-02	0	0	0	144,719	0.2915%
San Bernardino (SC)	2050	MCY	Gasoline	0.7478132	0.445227	9.3396244	0.0018096	0.0021532	0.004	0.12	1.82E-02	0.0020073	0.001	0.0042	7.21E-03	183.0465	0.1276531	0.0342531	124,934	0.2517%
San Bernardino (SC)	2050	MDV	Gasoline	0.0040557	0.0219792	0.5993024	0.0034637	0.0004923	0.008	0.0089691	1.75E-02	0.0004526	0.002	0.0031392	5.59E-03	350.36273	0.0013501	0.0034001	6,261,626	12.6126%
San Bernardino (SC)	2050	MDV	Diesel	0.0040844	0.0123884	0.1314392	0.0033412	0.0009116	0.008	0.0089821	1.79E-02	0.0008722	0.002	0.0031437	6.02E-03	352.61371	0.0001897	0.0555544	67,801	0.1366%
San Bernardino (SC)	2050	MDV	Electricity	0	0	0	0	0	0.008	0.0044017	1.24E-02	0	0.002	0.0015406	3.54E-03	0	0	0	274,185	0.5523%
San Bernardino (SC)	2050	MDV	Plug-in Hybrid	0.0011151	0.0025031	0.1842008	0.0011195	0.0001964	0.008	0.0040283	1.22E-02	0.0001806	0.002	0.0014099	3.59E-03	113.23689	0.0003407	0.0004234	190,940	0.3846%
San Bernardino (SC)	2050	MH	Gasoline	0.0057997	0.1999058	0.1314893	0.0173946	0.0010683	0.012	0.0425495	5.56E-02	0.0009823	0.003	0.0148923	1.89E-02	1759.5181	0.0021402	0.0168528	15,945	0.0321%
San Bernardino (SC)	2050	MH	Diesel	0.0312674	1.7569257	0.0925547	0.0095027	0.0175784	0.016	0.0424318	7.60E-02	0.016818	0.004	0.0148511	3.57E-02	1002.8733	0.0014523	0.1580031	9,013	0.0182%
San Bernardino (SC)	2050	Motor Coach	Diesel	0.0093536	0.9385058	0.0631127	0.0141365	0.0142522	0.012	0.095244	1.21E-01	0.0136356	0.003	0.0333354	5.00E-02	1492.8579	0.0004345	0.2352004	7,003	0.0141%
San Bernardino (SC)	2050	OBUS	Gasoline	0.0052306	0.2449919	0.1560315	0.0140522	0.0010948	0.012	0.0437715	5.69E-02	0.0010066	0.003	0.01532	1.93E-02	1421.4178	0.0014247	0.0143239	4,866	0.0098%
San Bernardino (SC)	2050	OBUS	Electricity	0	0	0	0	0	0.012	0.0218857	3.39E-02	0	0.003	0.00766	1.07E-02	0	0	0	6,670	0.0134%
San Bernardino (SC)	2050	PTO	Diesel	0.0135672	2.3611367	0.1693905	0.0162162	0.0037588	0	0	3.76E-03	0.0035961	0	0	3.60E-03	1712.4837	0.0006302	0.2698025	35,690	0.0719%
San Bernardino (SC)	2050	PTO	Electricity	0	0	0	0	0	0.008	0.000E+00	0	0	0	0.000E+00	0	0	0	0	41,487	0.0836%
San Bernardino (SC)	2050	SBUS	Gasoline	0.0102375	0.1101786	0.1986871	0.0077509	0.0016977	0.008	0.046845	5.65E-02	0.001561	0.002	0.0163958	2.00E-02	784.0277	0.0023639	0.0099832	4,550	0.0092%
San Bernardino (SC)	2050	SBUS	Diesel	0.0097227	0.3859015	0.0647042	0.0105819	0.003344	0.012	0.046845	6.22E-02	0.0031994	0.003	0.0163958	2.26E-02	1117.484	0.0004516	0.1760601	2,326	0.0047%
San Bernardino (SC)	2050	SBUS	Electricity	0	0	0	0	0	0.012	0.0186666	0.234225	3.43E-02	0.0027167	0.0081979	1.09E-02	0	0	0	13,217	0.0266%
San Bernardino (SC)	2050	SBUS	Natural Gas	0.044721	0.2005974	8.6071029	0.0044829	0.012	0.046845	6.33E-02	0.0041218	0.003	0.0163958	2.35E-02	1432.1987	3.1299657	0.2919631	5,995	0.0121%	
San Bernardino (SC)	2050	T6 CAIRP Class 4	Diesel	0.0045841	0.1683743	0.0286797	0.0092915	0.0042462	0.012	0.0423225	5.86E-02	0.0040625	0.003	0.0148129	2.19E-02	981.21244	0.0002129	0.1545904	299	0.0006%
San Bernardino (SC)	2050	T6 CAIRP Class 4	Electricity	0	0	0	0	0	0.012	0.0211613	3.32E-02	0	0.003	0.0074064	1.04E-02	0	0	0	460	0.0009%
San Bernardino (SC)	2050	T6 CAIRP Class 5	Diesel	0.0045867	0.1686837	0.0286919	0.0092925	0.0042485	0.012	0.0423225	5.86E-02	0.0040647	0.003	0.0148129	2.19E-02	981.31749	0.000213	0.154607	410	0.0008%
San Bernardino (SC)	2050	T6 CAIRP Class 5	Electricity	0	0	0	0	0	0.012	0.0211613	3.32E-02	0	0.003	0.0074064	1.04E-02	0	0	0	631	0.0013%
San Bernardino (SC)	2050	T6 CAIRP Class 6	Diesel	0.004582	0.1707838	0.0286703	0.0092887	0.0042781	0.012	0.0423225	5.86E-02	0.004093	0.003	0.0148129	2.19E-02	980.91565	0.0002128	0.1545437	1,070	0.0022%
San Bernardino (SC)	2050	T6 CAIRP Class 6	Electricity	0	0	0	0	0	0.012	0.0211613	3.32E-02	0	0.003	0.0074064	1.04E-02	0	0	0	1,651	0.0033%
San Bernardino (SC)	2050	T6 CAIRP Class 7	Diesel	0.0049772	0.1872695	0.031143	0.0082155	0.0045538	0.012	0.0423225	5.89E-02	0.0043568	0.003	0.0148129	2.22E-02	867.58574	0.0002312	0.1366885	12,844	0.0259%
San Bernardino (SC)	2050	T6 CAIRP Class 7	Electricity	0	0	0	0	0	0.012	0.0211613	3.32E-02	0	0.003	0.0074064	1.04E-02	0	0	0	4,212	0.0085%
San Bernardino (SC)	2050	T6 CAIRP Class 7	Natural Gas	0.0073292	0.0437852	1.5045718	0.0010965	0.012	0.0423225	5.54E-02	0.0010082	0.003	0.0148129	1.88E-02	723.45757	0.512958	0.1474816	8	0.0000%	
San Bernardino (SC)	2050	T6 Instate Delivery Class 4	Diesel	0.004689	0.1894834	0.0328086	0.0092109	0.0038695	0.012	0.0426385	5.85E-02	0.0037021	0.003	0.0149235	2.16E-02	972.70525	0.0002178	0.1532501	18,118	0.0365%
San Bernardino (SC																				

San Bernardino (SC)	2050	T6 Instate Tractor Class 7	Electricity	0	0	0	0	0	0.012	0.0212823	3.33E-02	0	0.003	0.0074488	1.04E-02	0	0	0	21,332	0.0430%
San Bernardino (SC)	2050	T6 Instate Tractor Class 7	Natural Gas	0.0075713	0.0551466	1.7826341	0	0.0010965	0.012	0.0425645	5.57E-02	0.0010082	0.003	0.0148976	1.89E-02	754.04644	0.529905	0.1537173	1,827	0.0037%
San Bernardino (SC)	2050	T6 OOS Class 4	Diesel	0.0045366	0.213795	0.0283676	0.0087315	0.0044361	0.012	0.0423225	5.88E-02	0.0042442	0.003	0.0148129	2.21E-02	922.07603	0.0002107	0.1452735	448	0.0009%
San Bernardino (SC)	2050	T6 OOS Class 5	Diesel	0.0045447	0.2146798	0.0284028	0.0087343	0.0044426	0.012	0.0423225	5.88E-02	0.0042504	0.003	0.0148129	2.21E-02	922.37435	0.0002111	0.1453205	614	0.0012%
San Bernardino (SC)	2050	T6 OOS Class 6	Diesel	0.0045274	0.2128637	0.0283259	0.0087241	0.0044289	0.012	0.0423225	5.88E-02	0.0042373	0.003	0.0148129	2.21E-02	921.2945	0.0002103	0.1451503	1,604	0.0032%
San Bernardino (SC)	2050	T6 OOS Class 7	Diesel	0.004876	0.2250388	0.0305102	0.0078562	0.0046865	0.012	0.0423225	5.90E-02	0.0044837	0.003	0.0148129	2.23E-02	829.64509	0.0002265	0.1307109	11,667	0.0235%
San Bernardino (SC)	2050	T6 Public Class 4	Diesel	0.0047641	0.2021871	0.028864	0.0093532	0.0041764	0.012	0.0424318	5.86E-02	0.0039957	0.003	0.0148511	2.18E-02	987.72867	0.0002213	0.1556171	1,585	0.0032%
San Bernardino (SC)	2050	T6 Public Class 4	Electricity	0	0	0	0	0	0.012	0.0212159	3.32E-02	0	0.003	0.0074256	1.04E-02	0	0	0	2,074	0.0042%
San Bernardino (SC)	2050	T6 Public Class 4	Natural Gas	0.0074649	0.0460048	1.6068555	0	0.0011115	0.012	0.0424318	5.55E-02	0.001022	0.003	0.0148511	1.89E-02	754.54927	0.5224556	0.1538198	304	0.0006%
San Bernardino (SC)	2050	T6 Public Class 5	Diesel	0.0048193	0.2226972	0.0293623	0.0093824	0.004302	0.012	0.0424318	5.87E-02	0.0041159	0.003	0.0148511	2.20E-02	990.81565	0.0002238	0.1561034	3,418	0.0069%
San Bernardino (SC)	2050	T6 Public Class 5	Electricity	0	0	0	0	0	0.012	0.0212159	3.32E-02	0	0.003	0.0074256	1.04E-02	0	0	0	4,452	0.0090%
San Bernardino (SC)	2050	T6 Public Class 5	Natural Gas	0.0073567	0.0532457	1.6598172	0	0.0010709	0.012	0.0424318	5.55E-02	0.0009847	0.003	0.0148511	1.88E-02	757.73543	0.5148844	0.1544693	688	0.0014%
San Bernardino (SC)	2050	T6 Public Class 6	Diesel	0.0048039	0.2028921	0.0289258	0.0093549	0.0041275	0.012	0.0424318	5.86E-02	0.003949	0.003	0.0148511	2.18E-02	987.91237	0.0002231	0.155646	2,554	0.0051%
San Bernardino (SC)	2050	T6 Public Class 6	Electricity	0	0	0	0	0	0.012	0.0212159	3.32E-02	0	0.003	0.0074256	1.04E-02	0	0	0	3,301	0.0066%
San Bernardino (SC)	2050	T6 Public Class 6	Natural Gas	0.0074443	0.0475876	1.6184979	0	0.001104	0.012	0.0424318	5.55E-02	0.0010151	0.003	0.0148511	1.89E-02	756.24625	0.5210143	0.1541657	501	0.0010%
San Bernardino (SC)	2050	T6 Public Class 7	Diesel	0.0044619	0.1925122	0.0280403	0.0092411	0.0040393	0.012	0.0424318	5.85E-02	0.0038646	0.003	0.0148511	2.17E-02	975.89557	0.0002072	0.1537527	8,033	0.0162%
San Bernardino (SC)	2050	T6 Public Class 7	Electricity	0	0	0	0	0	0.012	0.0212159	3.32E-02	0	0.003	0.0074256	1.04E-02	0	0	0	8,021	0.0162%
San Bernardino (SC)	2050	T6 Public Class 7	Natural Gas	0.0074802	0.0451778	1.6008708	0	0.0011175	0.012	0.0424318	5.55E-02	0.0010275	0.003	0.0148511	1.89E-02	755.65441	0.5235295	0.1540451	1,553	0.0031%
San Bernardino (SC)	2050	T6 Utility Class 5	Diesel	0.003687	0.1289552	0.0240348	0.0092332	0.0035682	0.012	0.0424318	5.80E-02	0.0034138	0.003	0.0148511	2.13E-02	975.05327	0.0001713	0.15362	3,029	0.0061%
San Bernardino (SC)	2050	T6 Utility Class 5	Electricity	0	0	0	0	0	0.012	0.0212159	3.32E-02	0	0.003	0.0074256	1.04E-02	0	0	0	4,725	0.0095%
San Bernardino (SC)	2050	T6 Utility Class 5	Natural Gas	0.0074987	0.0440196	1.5924243	0	0.0011245	0.012	0.0424318	5.56E-02	0.0010339	0.003	0.0148511	1.89E-02	752.50989	0.5248216	0.1534041	17	0.0000%
San Bernardino (SC)	2050	T6 Utility Class 6	Diesel	0.0036869	0.1265889	0.0240345	0.0092332	0.0035506	0.012	0.0424318	5.80E-02	0.003397	0.003	0.0148511	2.12E-02	975.05443	0.0001712	0.1536202	572	0.0012%
San Bernardino (SC)	2050	T6 Utility Class 6	Electricity	0	0	0	0	0	0.012	0.0212159	3.32E-02	0	0.003	0.0074256	1.04E-02	0	0	0	893	0.0018%
San Bernardino (SC)	2050	T6 Utility Class 6	Natural Gas	0.0074987	0.0440196	1.5924243	0	0.0011245	0.012	0.0424318	5.56E-02	0.0010339	0.003	0.0148511	1.89E-02	752.50989	0.5248216	0.1534041	3	0.0000%
San Bernardino (SC)	2050	T6 Utility Class 7	Diesel	0.0036522	0.1231449	0.0238082	0.0092422	0.0035315	0.012	0.0424318	5.80E-02	0.0033787	0.003	0.0148511	2.12E-02	976.01101	0.0001696	0.1537709	788	0.0016%
San Bernardino (SC)	2050	T6 Utility Class 7	Electricity	0	0	0	0	0	0.012	0.0212159	3.32E-02	0	0.003	0.0074256	1.04E-02	0	0	0	1,250	0.0025%
San Bernardino (SC)	2050	T6 Utility Class 7	Natural Gas	0.0074987	0.0440196	1.5924243	0	0.0011245	0.012	0.0424318	5.56E-02	0.0010339	0.003	0.0148511	1.89E-02	752.50989	0.5248216	0.1534041	5	0.0000%
San Bernardino (SC)	2050	T6T5	Gasoline	0.0075823	0.058944	0.14423	0.0136647	0.0010765	0.012	0.0425495	5.56E-02	0.0009898	0.003	0.0148923	1.89E-02	1382.2295	0.00020529	0.006277	32,821	0.0661%
San Bernardino (SC)	2050	T6T5	Electricity	0	0	0	0	0	0.012	0.0212748	3.33E-02	0	0.003	0.0074462	1.04E-02	0	0	0	44,654	0.0899%
San Bernardino (SC)	2050	T7 CAIRP Class 8	Diesel	0.0107369	1.1218125	0.0360145	0.0119715	0.0282946	0.036	0.0826548	1.47E-01	0.0270706	0.009	0.0289292	6.50E-02	1264.2325	0.0004987	0.1991803	597,223	1.2030%
San Bernardino (SC)	2050	T7 CAIRP Class 8	Electricity	0	0	0	0	0	0.036	0.0413321	7.73E-02	0	0.009	0.0144662	2.35E-02	0	0	0	175,332	0.3532%
San Bernardino (SC)	2050	T7 CAIRP Class 8	Natural Gas	0.0129703	0.1510864	2.8531231	0	0.0018869	0.036	0.0826546	1.21E-01	0.001735	0.009	0.0289291	3.97E-02	1012.854	0.9077753	0.2064769	2,185	0.0044%
San Bernardino (SC)	2050	T7 NNOOS Class 8	Diesel	0.0104366	1.2419194	0.0350134	0.0114543	0.0279577	0.036	0.0826484	1.47E-01	0.0267483	0.009	0.0289269	6.47E-02	1209.6139	0.0004848	0.1905752	917,449	1.8480%
San Bernardino (SC)	2050	T7 NNOOS Class 8	Diesel	0.010768	1.2776876	0.0361183	0.0114519	0.0295996	0.036	0.082656	1.48E-01	0.0283191	0.009	0.0289296	6.62E-02	1209.3635	0.0005001	0.1905357	333,127	0.6710%
San Bernardino (SC)	2050	T7 POLA Class 8	Diesel	0.0099668	1.106432	0.0354808	0.0127528	0.024919	0.036	0.0830959	1.44E-01	0.023841	0.009	0.0290836	6.19E-02	1346.7394	0.0004629	0.2121793	336,830	0.6785%
San Bernardino (SC)	2050	T7 POLA Class 8	Electricity	0	0	0	0	0	0.036	0.0416695	7.77E-02	0	0.009	0.0145843	2.36E-02	0	0	0	67,316	0.1356%
San Bernardino (SC)	2050	T7 POLA Class 8	Natural Gas	0.0130955	0.1516528	2.9561723	0	0.0019038	0.036	0.0832003	1.21E-01	0.0017505	0.009	0.0291201	3.99E-02	1019.2031	0.9165336	0.2077712	13,568	0.0273%
San Bernardino (SC)	2050	T7 Public Class 8	Diesel	0.0155484	1.3278462	0.0551689	0.0141521	0.017938	0.036	0.08239	1.36E-01	0.0171621	0.009	0.0288365	5.50E-02	1494.5056	0.0007222	0.23546	8,634	0.0174%
San Bernardino (SC)	2050	T7 Public Class 8	Electricity	0	0	0	0	0	0.036	0.0415995	7.76E-02	0	0.009	0.0145598	2.36E-02	0	0	0	20,630	0.0416%
San Bernardino (SC)	2050	T7 Public Class 8	Natural Gas	0.0130454	0.1653509	3.1869146	0	0.0018681	0.036	0.0820992	1.20E-01	0.0017176	0.009	0.0287347	3.95E-02	1057.6924	0.9130289	0.2156175	15,719	0.0317%
San Bernardino (SC)	2050	T7 Single Concrete/Transit Mix Class 8	Diesel	0.0078539	0.6735869	0.0291165	0.0134305	0.0147489	0.036	0.083749	1.34E-01	0.0141109	0.009	0.0293122	5.24E-02	1418.3014	0.0003648	0.223454	12,867	0.0259%
San Bernardino (SC)	2050	T7 Single Concrete/Transit Mix Class 8	Electricity	0	0	0	0	0	0.036	0.0418859	7.79E-02	0	0.009	0.0146601	2.37E-02	0	0	0	19,429	0.0391%
San Bernardino (SC)	2050	T7 Single Concrete/Transit Mix Class 8	Natural Gas	0.0131786	0.1521418	3.0245465	0	0.0019131	0.036	0.0837478	1.22E-01	0.001759	0.009	0.0293117	4.01E-02	1050.0707	0.9223513	0.2140638	1,004	0.0020%
San Bernardino (SC)	2050	T7 Single Dump Class 8	Diesel	0.0091668	0.8821925	0.0358346	0.013637	0.018471	0.036	0.0828581	1.37E-01	0.017672	0.009	0.0290003	5.57E-02	1440.1075	0.0004258	0.2268895	22,616	0.0456%
San Bernardino (SC)	2050	T7 Single Dump Class 8	Electricity	0	0	0	0	0	0.036	0.0418764	7.79E-02	0	0.009	0.0146567	2.37E-02	0	0	0	25,459	0.0513%
San Bernardino (SC)	2050	T7 Single Dump Class 8	Natural Gas	0.0131492	0.164778	3.2492483	0	0.0018835	0.036	0.0828836	1.21E-01	0.0017319	0.009	0.0290093	3.97E-02	1062.7013	0.9202939	0.2166386	1,759	0.0035%
San Bernardino (SC)	2050	T7 Single Other Class 8	Diesel	0.0084796	0.7976105	0.0320408	0.013534	0.0171625	0.036	0.0831534	1.36E-01	0.0164201	0.009	0.0291037	5.45E-02	1429.2304	0.0003939	0.2251758	131,252	0.2644%
San Bernardino (SC)	2050	T7 Single Other Class 8	Electricity	0	0	0	0	0	0.036	0.0418804	7.79E-02	0	0.009	0.0146581	2.37E-02	0	0	0	164,050	0.3304%
San Bernardino (SC)	2050	T7 Single Other Class 8	Natural Gas	0.0131699	0.1559424	3.0913046	0	0.0019043	0.036	0.0831527	1.21E-01	0.0017509	0.009	0.0291034	3.99E-02	1054.7087	0.9217413	0.2150093	10,244	0.0206%
San Bernardino (SC)	2050	T7 SWCV Class 8	Diesel	0.014713	4.6021356	0.0258558	0.0320876	0.023619	0.036	0.2100001	2.70E-01	0.0225973	0.009	0.0735	1.05E-01	3388.5586	0.0006834	0.5338688	760	0.0015%
San Bernardino (SC)	2050	T7 SWCV Class 8	Electricity	0	0	0	0	0	0.036	0.105	1.41E-01	0	0.009	0.03675	4.58E-02	0	0	0	79,466	0.1601%
San Bernardino (SC)	2050	T7 SWCV Class 8	Natural Gas	0.0050228	0.1672569	5.7918105	0	0.0006326	0.036	0.2100001	2.47E-01	0.0005817	0.009	0.0735	8.31E-02	914.29496	0.3428896	0.186385	91,460	0.1842%
San Bernardino (SC)	2050	T7 Tractor Class 8	Diesel	0.0098863	1.0768048	0.033789														

Region	Year	Calendar or Vehicle Category	Fuel	CO2				PM10				PM2.5			CO2(Pavley +AACC)_RU			
				ROG_RUNEX	NOx_RUNEX	CO_RUNEX	SOx_RUNEX	W	PMB	RUNE	Total	W	PMB	EX	Total	NEX	CH4_RUNEX	N2O_RUNEX
San Bernardino (SC)	2050	All Other Buses	Diesel	2.375E-05	1.176E-03	1.432E-04	1.968E-05	1.311E-05	2.646E-05	9.650E-05	1.361E-04	1.255E-05	6.614E-06	3.377E-05	5.294E-05	2.079E+00	1.103E-06	3.275E-04
San Bernardino (SC)	2050	All Other Buses	Natural Gas	1.908E-05	1.470E-04	4.955E-03	0.000E+00	2.735E-06	2.646E-05	9.650E-05	1.257E-04	2.515E-06	6.614E-06	3.377E-05	4.290E-05	1.684E+00	1.335E-03	3.432E-04
San Bernardino (SC)	2050	LDA	Gasoline	6.209E-06	4.147E-05	1.091E-03	5.163E-06	1.055E-06	1.764E-05	1.681E-05	3.551E-05	9.700E-07	4.409E-06	5.885E-06	1.126E-05	5.223E-01	2.183E-06	6.953E-06
San Bernardino (SC)	2050	LDA	Diesel	8.171E-06	1.942E-05	2.642E-04	3.982E-06	1.777E-06	1.764E-05	1.683E-05	3.625E-05	1.700E-06	4.409E-06	5.892E-06	1.200E-05	4.203E-01	3.795E-07	6.621E-05
San Bernardino (SC)	2050	LDA	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.764E-05	9.685E-06	2.732E-05	0.000E+00	4.409E-06	3.390E-06	7.799E-06	0.000E+00	0.000E+00	0.000E+00
San Bernardino (SC)	2050	LDA	Plug-in Hybrid	2.458E-06	5.518E-06	4.061E-04	2.468E-06	4.305E-07	1.764E-05	8.863E-06	2.693E-05	3.958E-07	4.409E-06	3.102E-06	7.907E-06	2.496E-01	7.597E-07	9.549E-07
San Bernardino (SC)	2050	LDT1	Gasoline	6.767E-06	4.460E-05	1.167E-03	5.932E-06	1.123E-06	1.764E-05	1.974E-05	3.850E-05	1.033E-06	4.409E-06	6.909E-06	1.235E-05	6.000E-01	2.323E-06	7.161E-06
San Bernardino (SC)	2050	LDT1	Diesel	2.563E-05	5.895E-05	2.755E-04	7.459E-06	9.188E-06	1.764E-05	1.965E-05	4.648E-05	8.791E-06	4.409E-06	6.879E-06	2.008E-05	7.872E-01	1.190E-06	1.240E-04
San Bernardino (SC)	2050	LDT1	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.764E-05	9.696E-06	2.733E-05	0.000E+00	4.409E-06	3.393E-06	7.803E-06	0.000E+00	0.000E+00	0.000E+00
San Bernardino (SC)	2050	LDT1	Plug-in Hybrid	2.456E-06	5.512E-06	4.057E-04	2.465E-06	4.270E-07	1.764E-05	8.877E-06	2.694E-05	3.926E-07	4.409E-06	3.107E-06	7.909E-06	2.494E-01	7.492E-07	9.300E-07
San Bernardino (SC)	2050	LDT2	Gasoline	6.676E-06	4.697E-05	1.286E-03	6.318E-06	1.079E-06	1.764E-05	1.950E-05	3.822E-05	9.922E-07	4.409E-06	6.827E-06	1.223E-05	6.391E-01	2.897E-06	7.345E-06
San Bernardino (SC)	2050	LDT2	Diesel	2.547E-05	5.925E-05	2.690E-04	5.654E-06	9.027E-06	1.764E-05	1.949E-05	4.615E-05	8.637E-06	4.409E-06	6.822E-06	1.987E-05	5.967E-01	1.183E-06	9.402E-05
San Bernardino (SC)	2050	LDT2	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.764E-05	9.691E-06	2.733E-05	0.000E+00	4.409E-06	3.392E-06	7.801E-06	0.000E+00	0.000E+00	0.000E+00
San Bernardino (SC)	2050	LDT2	Plug-in Hybrid	2.458E-06	5.517E-06	4.060E-04	2.467E-06	4.300E-07	1.764E-05	8.872E-06	2.694E-05	3.954E-07	4.409E-06	3.105E-06	7.910E-06	2.496E-01	7.499E-07	9.308E-07
San Bernardino (SC)	2050	LHD1	Gasoline	3.207E-06	3.410E-05	1.269E-03	1.057E-05	2.441E-06	1.764E-05	1.720E-04	1.920E-04	2.245E-06	6.019E-05	6.684E-05	1.070E+00	9.909E-07	3.477E-06	
San Bernardino (SC)	2050	LHD1	Diesel	8.498E-05	3.455E-04	1.598E-04	9.627E-06	2.361E-05	2.646E-05	1.720E-04	2.220E-04	2.259E-05	6.614E-06	6.019E-05	8.939E-05	0.1016E+00	3.947E-06	1.601E-04
San Bernardino (SC)	2050	LHD1	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.764E-05	8.598E-05	1.036E-04	0.000E+00	4.409E-06	3.009E-05	3.450E-05	0.000E+00	0.000E+00	0.000E+00
San Bernardino (SC)	2050	LHD2	Gasoline	2.929E-06	4.738E-05	1.286E-03	1.194E-05	2.438E-06	1.764E-05	2.006E-04	2.207E-04	2.242E-06	4.409E-06	7.022E-05	7.687E-05	1.207E+00	9.174E-07	5.088E-06
San Bernardino (SC)	2050	LHD2	Diesel	1.082E-04	5.186E-04	2.074E-04	1.125E-05	3.065E-05	2.646E-05	2.006E-04	2.577E-04	2.932E-05	6.614E-06	7.022E-05	1.062E-04	1.187E+00	5.024E-06	1.871E-06
San Bernardino (SC)	2050	LHD2	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.764E-05	1.003E-04	1.179E-04	0.000E+00	4.409E-06	3.511E-05	3.952E-05	0.000E+00	0.000E+00	0.000E+00
San Bernardino (SC)	2050	MCY	Gasoline	1.649E-03	9.815E-04	2.059E-02	3.989E-06	4.747E-06	8.818E-06	2.646E-05	4.002E-05	4.425E-06	2.205E-06	9.259E-06	1.589E-05	4.035E-01	2.814E-04	7.551E-05
San Bernardino (SC)	2050	MDV	Gasoline	8.941E-06	4.846E-05	1.321E-03	7.636E-06	1.085E-06	1.764E-05	1.977E-05	3.850E-05	9.979E-06	4.409E-06	6.921E-06	1.233E-05	7.724E-01	2.977E-06	7.496E-06
San Bernardino (SC)	2050	MDV	Diesel	9.004E-06	2.478E-05	2.898E-04	7.366E-06	2.010E-06	1.764E-05	1.980E-05	3.945E-05	1.932E-06	4.409E-06	6.931E-06	1.326E-05	7.774E-01	4.182E-07	1.225E-04
San Bernardino (SC)	2050	MDV	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.764E-05	9.704E-06	2.734E-05	0.000E+00	4.409E-06	3.396E-06	7.806E-06	0.000E+00	0.000E+00	0.000E+00
San Bernardino (SC)	2050	MDV	Plug-in Hybrid	2.458E-06	5.518E-06	4.061E-04	2.468E-06	4.329E-07	1.764E-05	8.881E-06	2.695E-05	3.981E-07	4.409E-06	3.108E-06	7.916E-06	2.496E-01	7.510E-07	9.335E-07
San Bernardino (SC)	2050	MH	Gasoline	1.279E-05	4.407E-04	2.899E-04	3.835E-05	2.355E-06	2.646E-05	9.380E-05	1.226E-04	2.166E-06	6.614E-06	3.283E-05	4.161E-05	3.879E+00	4.718E-06	3.715E-05
San Bernardino (SC)	2050	MH	Diesel	6.893E-05	3.873E-03	2.040E-04	2.095E-05	3.875E-05	3.527E-05	9.355E-05	1.676E-04	3.708E-05	8.818E-06	3.274E-05	7.864E-05	2.211E+00	3.202E-06	3.483E-04
San Bernardino (SC)	2050	Motor Coach	Diesel	2.062E-05	2.069E-03	1.391E-04	3.117E-05	3.142E-05	2.646E-05	2.100E-04	2.679E-04	3.006E-05	6.614E-06	7.349E-05	1.102E-04	3.291E+00	9.578E-05	1.855E-04
San Bernardino (SC)	2050	OBUS	Gasoline	1.153E-05	5.401E-04	3.440E-04	3.098E-05	2.414E-06	2.646E-05	9.650E-05	1.254E-04	2.219E-06	6.614E-06	3.377E-05	4.261E-05	3.134E+00	3.141E-06	3.158E-05
San Bernardino (SC)	2050	OBUS	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.646E-05	4.825E-05	7.470E-05	0.000E+00	6.614E-06	1.689E-05	2.350E-05	0.000E+00	0.000E+00	0.000E+00
San Bernardino (SC)	2050	PTO	Diesel	2.991E-05	5.205E-03	3.734E-04	3.575E-05	8.287E-06	0.000E+00	0.000E+00	8.287E-06	7.928E-06	0.000E+00	0.000E+00	7.928E-06	3.775E+00	1.389E-06	5.948E-04
San Bernardino (SC)	2050	PTO	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
San Bernardino (SC)	2050	SBUS	Gasoline	2.257E-05	2.429E-04	4.380E-04	1.709E-05	3.743E-06	1.764E-05	1.033E-04	1.247E-04	3.441E-06	4.409E-06	3.615E-05	4.400E-05	1.728E+00	5.211E-06	2.201E-05
San Bernardino (SC)	2050	SBUS	Diesel	2.143E-05	8.508E-04	1.426E-04	7.372E-06	2.646E-05	1.033E-04	1.371E-04	7.053E-06	6.614E-06	3.615E-05	4.981E-05	2.464E+00	9.956E-07	3.881E-04	
San Bernardino (SC)	2050	SBUS	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.396E-05	5.164E-05	7.559E-05	0.000E+00	5.989E-06	1.807E-05	2.406E-05	0.000E+00	0.000E+00	0.000E+00
San Bernardino (SC)	2050	SBUS	Natural Gas	9.859E-05	4.422E-04	1.898E-02	0.000E+00	9.883E-06	2.646E-05	1.033E-04	1.396E-04	9.087E-06	6.614E-06	3.615E-05	5.185E-05	3.157E+00	6.900E-03	6.437E-04
San Bernardino (SC)	2050	T6 CAIRP Class 4	Diesel	1.011E-05	3.712E-04	6.323E-05	2.048E-05	9.361E-06	2.646E-05	9.330E-05	1.291E-04	8.956E-06	6.614E-06	3.266E-05	4.823E-05	2.163E+00	4.694E-07	3.408E-04
San Bernardino (SC)	2050	T6 CAIRP Class 4	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.646E-05	4.665E-05	7.311E-05	0.000E+00	6.614E-06	1.633E-05	2.294E-05	0.000E+00	0.000E+00	0.000E+00
San Bernardino (SC)	2050	T6 CAIRP Class 5	Diesel	1.011E-05	3.719E-04	6.325E-05	2.049E-05	9.366E-06	2.646E-05	9.330E-05	1.291E-04	8.961E-06	6.614E-06	3.266E-05	4.823E-05	2.163E+00	4.697E-07	3.408E-04
San Bernardino (SC)	2050	T6 CAIRP Class 5	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.646E-05	4.665E-05	7.311E-05	0.000E+00	6.614E-06	1.633E-05	2.294E-05	0.000E+00	0.000E+00	0.000E+00
San Bernardino (SC)	2050	T6 CAIRP Class 6	Diesel	1.010E-05	3.765E-04	6.321E-05	2.048E-05	9.431E-06	2.646E-05	9.330E-05	1.292E-04	9.023E-06	6.614E-06	3.266E-05	4.829E-05	2.163E+00	4.692E-07	3.407E-04
San Bernardino (SC)	2050	T6 CAIRP Class 6	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.646E-05	4.665E-05	7.311E-05	0.000E+00	6.614E-06	1.633E-05	2.294E-05	0.000E+00	0.000E+00	0.000E+00
San Bernardino (SC)	2050	T6 CAIRP Class 7	Diesel	1.097E-05	4.129E-04	6.866E-05	1.811E-05	1.004E-05	2.646E-05	9.330E-05	1.298E-04	9.605E-06	6.614E-06	3.266E-05	4.888E-05	1.913E+00	5.097E-07	3.013E-04
San Bernardino (SC)	2050	T6 CAIRP Class 7	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.646E-05	4.665E-05	7.311E-05	0.000E+00	6.614E-06	1.633E-05	2.294E-05	0.000E+00	0.000E+00	0.000E+00
San Bernardino (SC)	2050	T6 CAIRP Class 7	Natural Gas	1.616E-05	9.653E-05	3.317E-03	0.000E+00	2.417E-06	2.646E-05	9.330E-05	1.222E-04	2.223E-06						

San Bernardino (SC)	2050	T6 Instate Tractor Class 7	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.646E-05	4.692E-05	7.337E-05	0.000E+00	6.614E-06	1.642E-05	2.304E-05	0.000E+00	0.000E+00	0.000E+00	
San Bernardino (SC)	2050	T6 Instate Tractor Class 7	Natural Gas	1.669E-05	1.216E-04	3.930E-03	0.000E+00	2.417E-06	2.646E-05	9.384E-05	1.227E-04	2.232E-06	6.614E-06	3.284E-05	4.168E-05	1.662E+00	1.168E-03	3.389E-04	
San Bernardino (SC)	2050	T6 OOS Class 4	Diesel	1.000E-05	4.713E-04	6.254E-05	1.925E-05	9.780E-06	2.646E-05	9.330E-05	1.295E-04	9.357E-06	6.614E-06	3.266E-05	4.863E-05	2.033E+00	4.645E-07	3.203E-04	
San Bernardino (SC)	2050	T6 OOS Class 5	Diesel	1.002E-05	4.733E-04	6.262E-05	1.926E-05	9.794E-06	2.646E-05	9.330E-05	1.296E-04	9.371E-06	6.614E-06	3.266E-05	4.864E-05	2.033E+00	4.654E-07	3.204E-04	
San Bernardino (SC)	2050	T6 OOS Class 6	Diesel	9.981E-06	4.693E-04	6.245E-05	1.923E-05	9.764E-06	2.646E-05	9.330E-05	1.295E-04	9.341E-06	6.614E-06	3.266E-05	4.861E-05	2.031E+00	4.636E-07	3.200E-04	
San Bernardino (SC)	2050	T6 OOS Class 7	Diesel	1.075E-05	4.961E-04	6.726E-05	1.732E-05	1.033E-05	2.646E-05	9.330E-05	1.301E-04	9.885E-06	6.614E-06	3.266E-05	4.916E-05	1.829E+00	4.993E-07	2.882E-04	
San Bernardino (SC)	2050	T6 Public Class 4	Diesel	1.050E-05	4.457E-04	6.363E-05	2.062E-05	9.207E-06	2.646E-05	9.355E-05	1.292E-04	8.809E-06	6.614E-06	3.274E-05	4.816E-05	2.178E+00	4.878E-07	3.431E-04	
San Bernardino (SC)	2050	T6 Public Class 4	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.646E-05	4.677E-05	7.323E-05	0.000E+00	6.614E-06	1.637E-05	2.298E-05	0.000E+00	0.000E+00	0.000E+00	
San Bernardino (SC)	2050	T6 Public Class 4	Natural Gas	1.646E-05	1.014E-04	3.542E-03	0.000E+00	2.450E-06	2.646E-05	9.355E-05	1.225E-04	2.253E-06	6.614E-06	3.274E-05	4.161E-05	1.663E+00	1.152E-03	3.391E-04	
San Bernardino (SC)	2050	T6 Public Class 5	Diesel	1.062E-05	4.910E-04	6.473E-05	2.068E-05	9.484E-06	2.646E-05	9.355E-05	1.295E-04	9.074E-06	6.614E-06	3.274E-05	4.843E-05	2.184E+00	4.935E-07	3.441E-04	
San Bernardino (SC)	2050	T6 Public Class 5	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.646E-05	4.677E-05	7.323E-05	0.000E+00	6.614E-06	1.637E-05	2.298E-05	0.000E+00	0.000E+00	0.000E+00	
San Bernardino (SC)	2050	T6 Public Class 5	Natural Gas	1.622E-05	1.174E-04	3.659E-03	0.000E+00	2.361E-06	2.646E-05	9.355E-05	1.224E-04	2.171E-06	6.614E-06	3.274E-05	4.153E-05	1.671E+00	1.135E-03	3.405E-04	
San Bernardino (SC)	2050	T6 Public Class 6	Diesel	1.059E-05	4.473E-04	6.377E-05	2.062E-05	9.100E-06	2.646E-05	9.355E-05	1.291E-04	8.706E-06	6.614E-06	3.274E-05	4.806E-05	2.178E+00	4.919E-07	3.431E-04	
San Bernardino (SC)	2050	T6 Public Class 6	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.646E-05	4.677E-05	7.323E-05	0.000E+00	6.614E-06	1.637E-05	2.298E-05	0.000E+00	0.000E+00	0.000E+00	
San Bernardino (SC)	2050	T6 Public Class 6	Natural Gas	1.641E-05	1.049E-04	3.568E-03	0.000E+00	2.434E-06	2.646E-05	9.355E-05	1.224E-04	2.238E-06	6.614E-06	3.274E-05	4.159E-05	1.667E+00	1.149E-03	3.399E-04	
San Bernardino (SC)	2050	T6 Public Class 7	Diesel	9.837E-06	4.244E-04	6.182E-05	2.037E-05	8.905E-06	2.646E-05	9.355E-05	1.289E-04	8.520E-06	6.614E-06	3.274E-05	4.787E-05	2.151E+00	4.569E-07	3.390E-04	
San Bernardino (SC)	2050	T6 Public Class 7	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.646E-05	4.677E-05	7.323E-05	0.000E+00	6.614E-06	1.637E-05	2.298E-05	0.000E+00	0.000E+00	0.000E+00	
San Bernardino (SC)	2050	T6 Public Class 7	Natural Gas	1.649E-05	9.960E-05	3.529E-03	0.000E+00	2.464E-06	2.646E-05	9.355E-05	1.225E-04	2.265E-06	6.614E-06	3.274E-05	4.162E-05	1.666E+00	1.154E-03	3.396E-04	
San Bernardino (SC)	2050	T6 Utility Class 3	Diesel	8.128E-06	2.843E-04	5.299E-05	2.036E-05	7.866E-06	2.646E-05	9.355E-05	1.279E-04	7.526E-06	6.614E-06	3.274E-05	4.688E-05	2.150E+00	3.775E-07	3.387E-04	
San Bernardino (SC)	2050	T6 Utility Class 3	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.646E-05	4.677E-05	7.323E-05	0.000E+00	6.614E-06	1.637E-05	2.298E-05	0.000E+00	0.000E+00	0.000E+00	
San Bernardino (SC)	2050	T6 Utility Class 5	Natural Gas	1.653E-05	9.705E-05	3.511E-03	0.000E+00	2.479E-06	2.646E-05	9.355E-05	1.225E-04	2.279E-06	6.614E-06	3.274E-05	4.163E-05	1.659E+00	1.157E-03	3.382E-04	
San Bernardino (SC)	2050	T6 Utility Class 6	Diesel	8.128E-06	2.791E-04	5.299E-05	2.036E-05	7.828E-06	2.646E-05	9.355E-05	1.278E-04	7.489E-06	6.614E-06	3.274E-05	4.684E-05	2.150E+00	3.775E-07	3.387E-04	
San Bernardino (SC)	2050	T6 Utility Class 6	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.646E-05	4.677E-05	7.323E-05	0.000E+00	6.614E-06	1.637E-05	2.298E-05	0.000E+00	0.000E+00	0.000E+00	
San Bernardino (SC)	2050	T6 Utility Class 6	Natural Gas	1.653E-05	9.705E-05	3.511E-03	0.000E+00	2.479E-06	2.646E-05	9.355E-05	1.225E-04	2.279E-06	6.614E-06	3.274E-05	4.163E-05	1.659E+00	1.157E-03	3.382E-04	
San Bernardino (SC)	2050	T6 Utility Class 7	Diesel	8.052E-06	2.715E-04	5.249E-05	2.038E-05	7.786E-06	2.646E-05	9.355E-05	1.278E-04	7.449E-06	6.614E-06	3.274E-05	4.680E-05	2.152E+00	3.740E-07	3.390E-04	
San Bernardino (SC)	2050	T6 Utility Class 7	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.646E-05	4.677E-05	7.323E-05	0.000E+00	6.614E-06	1.637E-05	2.298E-05	0.000E+00	0.000E+00	0.000E+00	
San Bernardino (SC)	2050	T6 Utility Class 7	Natural Gas	1.653E-05	9.705E-05	3.511E-03	0.000E+00	2.479E-06	2.646E-05	9.355E-05	1.225E-04	2.279E-06	6.614E-06	3.274E-05	4.163E-05	1.659E+00	1.157E-03	3.382E-04	
San Bernardino (SC)	2050	T6T5	Gasoline	1.672E-05	1.299E-04	3.180E-04	3.013E-05	2.373E-06	2.646E-05	9.380E-05	1.226E-04	2.182E-06	6.614E-06	3.283E-05	4.163E-05	3.047E+00	4.526E-06	1.384E-05	
San Bernardino (SC)	2050	T6T5	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.646E-05	4.690E-05	7.336E-05	0.000E+00	6.614E-06	1.642E-05	2.303E-05	0.000E+00	0.000E+00	0.000E+00	
San Bernardino (SC)	2050	T7 CAIRP Class 8	Diesel	2.367E-05	2.473E-03	7.940E-05	2.639E-05	6.238E-05	7.937E-05	1.822E-04	3.240E-04	5.968E-05	1.984E-05	6.378E-05	1.433E-04	2.787E+00	1.099E-06	4.391E-04	
San Bernardino (SC)	2050	T7 CAIRP Class 8	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	7.937E-05	9.112E-05	1.705E-04	0.000E+00	1.984E-05	3.189E-05	5.173E-05	0.000E+00	0.000E+00	0.000E+00	
San Bernardino (SC)	2050	T7 CAIRP Class 8	Natural Gas	2.859E-05	3.331E-04	6.290E-03	0.000E+00	4.160E-06	7.937E-05	1.822E-04	2.657E-04	3.825E-06	1.984E-05	6.378E-05	8.744E-05	2.233E+00	2.001E-03	4.552E-04	
San Bernardino (SC)	2050	T7 NNOOS Class 8	Diesel	2.301E-05	2.378E-03	7.719E-05	2.525E-05	6.164E-05	7.937E-05	1.822E-04	3.232E-04	5.897E-05	1.984E-05	6.377E-05	1.426E-04	2.667E+00	1.069E-06	4.201E-04	
San Bernardino (SC)	2050	T7 NNOOS Class 8	Diesel	2.374E-05	2.817E-03	7.963E-05	2.525E-05	6.526E-05	7.937E-05	1.822E-04	3.268E-04	6.243E-05	1.984E-05	6.378E-05	1.461E-04	2.666E+00	1.103E-06	4.201E-04	
San Bernardino (SC)	2050	T7 POLA Class 8	Diesel	2.197E-05	2.439E-03	7.822E-05	2.811E-05	5.494E-05	7.937E-05	1.832E-04	3.175E-04	5.256E-05	1.984E-05	6.412E-05	1.365E-04	2.969E+00	1.021E-06	4.678E-04	
San Bernardino (SC)	2050	T7 POLA Class 8	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	7.937E-05	9.186E-05	1.712E-04	0.000E+00	1.984E-05	3.215E-05	5.199E-05	0.000E+00	0.000E+00	0.000E+00	
San Bernardino (SC)	2050	T7 POLA Class 8	Natural Gas	2.887E-05	3.343E-04	6.517E-03	0.000E+00	4.197E-06	7.937E-05	1.834E-04	2.670E-04	3.859E-06	1.984E-05	6.420E-05	8.790E-05	2.247E+00	2.021E-03	4.581E-04	
San Bernardino (SC)	2050	T7 Public Class 8	Diesel	3.428E-05	2.927E-03	1.216E-04	3.120E-05	3.955E-05	7.937E-05	1.816E-04	3.005E-04	3.784E-05	1.984E-05	6.357E-05	1.212E-04	3.295E+00	1.592E-06	5.191E-04	
San Bernardino (SC)	2050	T7 Public Class 8	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	7.937E-05	9.171E-05	1.711E-04	0.000E+00	1.984E-05	3.210E-05	5.194E-05	0.000E+00	0.000E+00	0.000E+00	
San Bernardino (SC)	2050	T7 Public Class 8	Natural Gas	2.876E-05	3.645E-04	7.026E-03	0.000E+00	4.118E-06	7.937E-05	1.810E-04	2.645E-04	3.787E-06	1.984E-05	6.335E-05	8.698E-05	2.332E+00	2.013E-03	4.754E-04	
San Bernardino (SC)	2050	T7 Single Concrete/Transit Mix Class 8	Diesel	1.731E-05	1.485E-03	6.419E-05	2.961E-05	3.252E-05	7.937E-05	1.846E-04	2.965E-04	3.111E-05	1.984E-05	6.462E-05	1.156E-04	3.127E+00	8.042E-07	4.926E-04	
San Bernardino (SC)	2050	T7 Single Concrete/Transit Mix Class 8	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	7.937E-05	9.234E-05	1.717E-04	0.000E+00	1.984E-05	3.232E-05	5.216E-05	0.000E+00	0.000E+00	0.000E+00	
San Bernardino (SC)	2050	T7 Single Concrete/Transit Mix Class 8	Natural Gas	2.905E-05	3.354E-04	6.668E-03	0.000E+00	4.218E-06	7.937E-05	1.846E-04	2.682E-04	3.878E-06	1.984E-05	6.462E-05	8.834E-05	2.315E+00	2.033E-03	4.719E-04	
San Bernardino (SC)	2050	T7 Single Dump Class 8	Diesel	2.021E-05	1.945E-03	7.900E-05	3.066E-05	4.072E-05	7.937E-05	1.827E-04	3.028E-04	3.896E-05	1.984E-05	6.393E-05	1.227E-04	3.175E+00	9.387E-07	5.002E-04	
San Bernardino (SC)	2050	T7 Single Dump Class 8	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	7.937E-05	9.232E-05	1.717E-04	0.000E+00	1.984E-05	3.231E-05	5.215E-05	0.000E+00	0.000E+00	0.000E+00	
San Bernardino (SC)	2050	T7 Single Dump Class 8	Natural Gas	2.899E-05	3.633E-04	7.163E-03	0.000E+00	4.152E-06	7.937E-05	1.827E-04	2.662E-04	3.818E-06	1.984E-05	6.395E-05	8.761E-05	2.343E+00	2.029E-03	4.776E-04	
San Bernardino (SC)	2050	T7 Single Other Class 8	Diesel	1.869E-05	1.758E-03	7.064E-05	2.984E-05	3.784E-05	7.937E-05	1.833E-04	3.005E-04	3.620E-05	1.984E-05	6.416E-05	1.202E-04	3.151E+00	8.683E-07	4.964E-04	
San Bernardino (SC)	2050	T7 Single Other Class 8	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	7.937E-05	9.233E-05	1.717E-04	0.000E+00	1.984E-05	3.232E-05	5.216E-05	0.000E+00	0.000E+00	0.000E+00	
San Bernardino (SC)	2050	T7 Single Other Class 8	Natural Gas	2.903E-05	3.438E-04	6.815E-03	0.000E+00	4.198E-06	7.937E-05	1.833E-04</									

Region	Calend or Year	Vehicle Category	Fuel	Emissions										CO2(Pavley +AACCR) RU				
				ROG_RUNEX	NOx_RUNEX	CO_RUNEX	SOx_RUNEX	PM10_PMT W	PM10_PMB W	PM10_RUNE X	PM10_Total	PM2_5_PMT W	PM2_5_PMB W	PM2_5_RUN EX	PM2_5_Total NEX	CH4_RUNEX	N2O_RUNEX	
San Bernardino (SC)	2050	All Other Buses	Diesel	1.077E-08	5.334E-07	6.498E-08	8.928E-09	5.949E-09	1.200E-08	4.377E-08	6.172E-08	5.691E-09	3.000E-09	1.532E-08	2.401E-08	9.428E-04	5.003E-10	1.485E-07
San Bernardino (SC)	2050	All Other Buses	Natural Gas	8.654E-09	6.668E-08	2.266E-06	0.000E+00	1.241E-09	1.200E-08	4.377E-08	5.701E-08	1.141E-09	3.000E-09	1.532E-08	1.946E-08	7.637E-04	6.057E-07	1.557E-07
San Bernardino (SC)	2050	LDA	Gasoline	2.816E-09	1.881E-08	4.949E-07	2.342E-09	4.785E-10	8.000E-09	7.627E-09	1.611E-08	4.400E-10	2.000E-09	2.669E-09	5.109E-09	2.369E-04	9.900E-10	3.154E-09
San Bernardino (SC)	2050	LDA	Diesel	3.706E-09	8.810E-09	1.198E-07	1.198E-07	8.061E-10	8.000E-09	7.636E-09	1.644E-08	7.712E-10	2.000E-09	2.672E-09	5.444E-09	1.906E-04	1.722E-10	3.003E-08
San Bernardino (SC)	2050	LDA	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	8.000E-09	4.393E-09	1.239E-08	0.000E+00	2.000E-09	1.538E-09	3.538E-09	0.000E+00	0.000E+00	0.000E+00
San Bernardino (SC)	2050	LDA	Plug-in Hybrid	1.115E-09	2.503E-09	1.842E-07	1.119E-09	1.953E-10	8.000E-09	4.020E-09	1.222E-08	1.795E-10	2.000E-09	1.407E-09	3.587E-09	1.132E-04	3.446E-10	4.331E-10
San Bernardino (SC)	2050	LDT1	Gasoline	3.069E-09	2.023E-08	5.295E-07	2.691E-09	5.095E-10	8.000E-09	8.953E-09	1.746E-08	4.685E-10	2.000E-09	3.134E-09	5.602E-09	2.722E-04	1.054E-09	3.248E-09
San Bernardino (SC)	2050	LDT1	Diesel	1.163E-08	2.674E-08	1.250E-07	3.383E-09	4.168E-09	8.000E-09	8.915E-09	2.108E-08	3.987E-09	2.000E-09	3.120E-09	9.108E-09	3.570E-04	5.400E-10	5.625E-08
San Bernardino (SC)	2050	LDT1	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	8.000E-09	4.398E-09	1.240E-08	0.000E+00	2.000E-09	1.539E-09	3.539E-09	0.000E+00	0.000E+00	0.000E+00
San Bernardino (SC)	2050	LDT1	Plug-in Hybrid	1.114E-09	2.500E-09	1.840E-07	1.118E-09	1.937E-10	8.000E-09	4.026E-09	1.222E-08	1.781E-10	2.000E-09	1.409E-09	3.587E-09	1.131E-04	3.398E-10	4.219E-10
San Bernardino (SC)	2050	LDT2	Gasoline	3.935E-09	2.131E-08	5.833E-07	2.866E-09	4.895E-10	8.000E-09	8.847E-09	1.734E-08	4.501E-10	2.000E-09	3.097E-09	5.547E-09	2.899E-04	1.314E-09	3.332E-09
San Bernardino (SC)	2050	LDT2	Diesel	1.155E-08	2.688E-08	1.220E-07	2.565E-09	4.095E-09	8.000E-09	8.841E-09	2.094E-08	3.918E-09	2.000E-09	3.094E-09	9.012E-09	2.707E-04	5.366E-10	4.256E-08
San Bernardino (SC)	2050	LDT2	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	8.000E-09	4.396E-09	1.240E-08	0.000E+00	2.000E-09	1.539E-09	3.539E-09	0.000E+00	0.000E+00	0.000E+00
San Bernardino (SC)	2050	LDT2	Plug-in Hybrid	1.115E-09	2.503E-09	1.842E-07	1.119E-09	1.950E-10	8.000E-09	4.024E-09	1.222E-08	1.793E-10	2.000E-09	1.409E-09	3.588E-09	1.132E-04	3.401E-10	4.222E-10
San Bernardino (SC)	2050	LHD1	Gasoline	1.455E-09	1.547E-08	5.758E-07	4.796E-09	1.107E-09	8.000E-09	7.800E-08	8.711E-08	1.018E-09	2.000E-09	2.730E-08	3.032E-08	4.851E-04	4.495E-10	1.577E-09
San Bernardino (SC)	2050	LHD1	Diesel	3.854E-08	1.567E-07	7.247E-08	4.367E-09	1.071E-08	1.200E-08	7.800E-08	1.007E-07	1.025E-08	3.000E-09	2.730E-08	4.055E-08	4.608E-04	1.790E-09	7.260E-08
San Bernardino (SC)	2050	LHD1	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	8.000E-09	3.900E-08	4.700E-08	0.000E+00	2.000E-09	1.365E-08	1.565E-08	0.000E+00	0.000E+00	0.000E+00
San Bernardino (SC)	2050	LHD2	Gasoline	1.328E-09	2.149E-08	5.832E-07	5.414E-09	1.106E-09	8.000E-09	9.100E-08	1.001E-07	1.017E-09	2.000E-09	3.185E-08	3.487E-08	5.477E-04	4.161E-10	2.294E-09
San Bernardino (SC)	2050	LHD2	Diesel	4.906E-08	2.352E-07	9.406E-08	5.103E-09	1.390E-08	1.200E-08	9.100E-08	1.169E-07	1.330E-08	3.000E-09	3.185E-08	4.815E-08	5.386E-04	2.279E-09	8.485E-08
San Bernardino (SC)	2050	LHD2	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	8.000E-09	4.550E-08	5.350E-08	0.000E+00	2.000E-09	1.593E-08	1.793E-08	0.000E+00	0.000E+00	0.000E+00
San Bernardino (SC)	2050	MCY	Gasoline	7.478E-07	4.452E-07	9.340E-06	1.810E-09	2.153E-09	4.000E-09	1.200E-08	1.815E-08	2.007E-09	1.000E-09	4.200E-09	7.207E-09	1.830E-04	1.277E-07	3.425E-08
San Bernardino (SC)	2050	MDV	Gasoline	4.056E-09	2.198E-08	5.993E-07	3.464E-09	4.923E-10	8.000E-09	8.969E-09	1.746E-08	4.526E-10	2.000E-09	3.139E-09	5.592E-09	3.504E-04	1.350E-09	3.400E-09
San Bernardino (SC)	2050	MDV	Diesel	4.084E-09	1.124E-08	1.314E-07	3.341E-09	9.116E-10	8.000E-09	8.982E-09	1.789E-08	8.722E-10	2.000E-09	3.144E-09	6.016E-09	3.526E-04	1.897E-10	5.555E-08
San Bernardino (SC)	2050	MDV	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	8.000E-09	4.402E-09	1.240E-08	0.000E+00	2.000E-09	1.541E-09	3.541E-09	0.000E+00	0.000E+00	0.000E+00
San Bernardino (SC)	2050	MDV	Plug-in Hybrid	1.115E-09	2.503E-09	1.842E-07	1.119E-09	1.964E-10	8.000E-09	4.028E-09	1.222E-08	1.806E-10	2.000E-09	1.410E-09	3.590E-09	1.132E-04	3.407E-10	4.234E-10
San Bernardino (SC)	2050	MH	Gasoline	5.800E-09	1.999E-07	1.315E-07	1.739E-08	1.068E-09	1.200E-08	4.255E-08	5.562E-08	9.823E-10	3.000E-09	1.489E-08	1.887E-08	1.760E-03	2.140E-09	1.685E-08
San Bernardino (SC)	2050	MH	Diesel	3.127E-08	1.757E-06	9.255E-08	9.503E-09	1.758E-08	1.600E-08	4.243E-08	7.601E-08	1.682E-08	4.000E-09	1.485E-08	3.567E-08	1.003E-03	1.452E-09	1.580E-07
San Bernardino (SC)	2050	Motor Coach	Diesel	9.354E-09	9.385E-07	6.311E-08	1.414E-08	1.425E-08	1.200E-08	9.524E-08	1.215E-07	1.364E-08	3.000E-09	3.334E-08	4.997E-08	1.493E-03	4.345E-10	2.352E-07
San Bernardino (SC)	2050	OBUS	Gasoline	5.231E-09	2.450E-07	1.560E-07	1.405E-08	1.095E-09	1.200E-08	4.377E-08	5.687E-08	1.007E-09	3.000E-09	1.532E-08	1.933E-08	1.421E-03	1.425E-09	1.432E-08
San Bernardino (SC)	2050	OBUS	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.200E-08	2.189E-08	3.389E-08	0.000E+00	3.000E-09	7.660E-09	1.066E-08	0.000E+00	0.000E+00	0.000E+00
San Bernardino (SC)	2050	PTO	Diesel	1.357E-08	2.361E-06	1.694E-07	1.622E-08	3.759E-09	0.000E+00	0.000E+00	3.759E-09	3.596E-09	0.000E+00	0.000E+00	3.596E-09	1.712E-03	6.302E-10	2.698E-07
San Bernardino (SC)	2050	PTO	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
San Bernardino (SC)	2050	SBUS	Gasoline	1.024E-08	1.102E-07	1.987E-07	7.751E-09	1.698E-09	8.000E-09	4.685E-08	5.654E-08	1.561E-09	2.000E-09	1.640E-08	1.996E-08	7.840E-04	2.364E-09	9.983E-09
San Bernardino (SC)	2050	SBUS	Diesel	9.723E-09	3.859E-07	6.470E-08	1.058E-08	3.344E-09	1.200E-08	4.685E-08	6.219E-08	3.199E-09	3.000E-09	1.640E-08	2.260E-08	1.117E-03	4.516E-10	1.761E-07
San Bernardino (SC)	2050	SBUS	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.087E-08	2.342E-08	3.429E-08	0.000E+00	2.717E-09	8.198E-09	1.091E-08	0.000E+00	0.000E+00	0.000E+00
San Bernardino (SC)	2050	SBUS	Natural Gas	4.472E-08	2.006E-07	8.607E-06	0.000E+00	4.483E-09	1.200E-08	4.685E-08	6.333E-08	4.122E-09	3.000E-09	1.640E-08	2.352E-08	1.432E-03	3.130E-06	2.920E-07
San Bernardino (SC)	2050	T6 CAIRP Class 4	Diesel	4.584E-09	1.684E-07	2.868E-08	9.291E-09	4.246E-09	1.200E-08	4.232E-08	5.857E-08	4.063E-09	3.000E-09	1.481E-08	2.188E-08	9.812E-04	2.129E-10	1.546E-07
San Bernardino (SC)	2050	T6 CAIRP Class 4	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.200E-08	2.116E-08	3.316E-08	0.000E+00	3.000E-09	7.406E-09	1.041E-08	0.000E+00	0.000E+00	0.000E+00
San Bernardino (SC)	2050	T6 CAIRP Class 5	Diesel	4.587E-09	1.687E-07	2.869E-08	9.292E-09	4.248E-09	1.200E-08	4.232E-08	5.857E-08	4.065E-09	3.000E-09	1.481E-08	2.188E-08	9.813E-04	2.130E-10	1.546E-07
San Bernardino (SC)	2050	T6 CAIRP Class 5	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.200E-08	2.116E-08	3.316E-08	0.000E+00	3.000E-09	7.406E-09	1.041E-08	0.000E+00	0.000E+00	0.000E+00
San Bernardino (SC)	2050	T6 CAIRP Class 6	Diesel	4.582E-09	1.708E-07	2.867E-08	9.289E-09	4.278E-09	1.200E-08	4.232E-08	5.860E-08	4.093E-09	3.000E-09	1.481E-08	2.191E-08	9.809E-04	2.128E-10	1.545E-07
San Bernardino (SC)	2050	T6 CAIRP Class 6	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.200E-08	2.116E-08	3.316E-08	0.000E+00	3.000E-09	7.406E-09	1.041E-08	0.000E+00	0.000E+00	0.000E+00
San Bernardino (SC)	2050	T6 CAIRP Class 7	Diesel	4.977E-09	1.873E-07	3.114E-08	8.216E-09	4.554E-09	1.200E-08	4.232E-08	5.888E-08	4.357E-09	3.000E-09	1.481E-08	2.217E-08	8.676E-04	2.312E-10	1.367E-07
San Bernardino (SC)	2050	T6 CAIRP Class 7	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.200E-08	2.116E-08	3.316E-08	0.000E+00	3.000E-09	7.406E-09	1.041E-08	0.000E+00	0.000E+00	0.000E+00
San Bernardino (SC)	2050	T6 CAIRP Class 7	Natural Gas	7.329E-09	4.379E-08	1.505E-06	0.000E+00	1.097E-09	1.200E-08	4.232E-08	5.542E-0							

San Bernardino (SC)	2050	T6 Instate Tractor Class 7	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.200E-08	2.128E-08	3.328E-08	0.000E+00	3.000E-09	7.449E-09	1.045E-08	0.000E+00	0.000E+00	0.000E+00
San Bernardino (SC)	2050	T6 Instate Tractor Class 7	Natural Gas	7.571E-09	5.515E-08	1.783E-06	0.000E+00	1.097E-09	1.200E-08	4.256E-08	5.566E-08	1.008E-09	3.000E-09	1.490E-08	1.891E-08	7.540E-04	5.299E-07	1.537E-07
San Bernardino (SC)	2050	T6 OOS Class 4	Diesel	4.537E-09	2.138E-07	2.837E-08	8.732E-09	4.436E-09	1.200E-08	4.232E-08	5.876E-08	4.244E-09	3.000E-09	1.481E-08	2.206E-08	9.221E-04	2.107E-10	1.453E-07
San Bernardino (SC)	2050	T6 OOS Class 5	Diesel	4.545E-09	2.147E-07	2.840E-08	8.734E-09	4.443E-09	1.200E-08	4.232E-08	5.877E-08	4.250E-09	3.000E-09	1.481E-08	2.206E-08	9.224E-04	2.111E-10	1.453E-07
San Bernardino (SC)	2050	T6 OOS Class 6	Diesel	4.527E-09	2.129E-07	2.833E-08	8.724E-09	4.429E-09	1.200E-08	4.232E-08	5.875E-08	4.237E-09	3.000E-09	1.481E-08	2.205E-08	9.213E-04	2.103E-10	1.452E-07
San Bernardino (SC)	2050	T6 OOS Class 7	Diesel	4.874E-09	2.250E-07	3.051E-08	7.856E-09	4.684E-09	1.200E-08	4.232E-08	5.901E-08	4.484E-09	3.000E-09	1.481E-08	2.230E-08	8.296E-04	2.265E-10	1.307E-07
San Bernardino (SC)	2050	T6 Public Class 4	Diesel	4.764E-09	2.022E-07	2.886E-08	9.353E-09	4.176E-09	1.200E-08	4.243E-08	5.861E-08	3.996E-09	3.000E-09	1.485E-08	2.185E-08	9.877E-04	2.213E-10	1.556E-07
San Bernardino (SC)	2050	T6 Public Class 4	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.200E-08	2.122E-08	3.322E-08	0.000E+00	3.000E-09	7.426E-09	1.043E-08	0.000E+00	0.000E+00	0.000E+00
San Bernardino (SC)	2050	T6 Public Class 4	Natural Gas	7.465E-09	4.600E-08	1.607E-06	0.000E+00	1.112E-09	1.200E-08	4.243E-08	5.554E-08	1.022E-09	3.000E-09	1.485E-08	1.887E-08	7.545E-04	5.225E-07	1.538E-07
San Bernardino (SC)	2050	T6 Public Class 5	Diesel	4.819E-09	2.227E-07	2.936E-08	9.382E-09	4.302E-09	1.200E-08	4.243E-08	5.873E-08	4.116E-09	3.000E-09	1.485E-08	2.197E-08	9.908E-04	2.238E-10	1.561E-07
San Bernardino (SC)	2050	T6 Public Class 5	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.200E-08	2.122E-08	3.322E-08	0.000E+00	3.000E-09	7.426E-09	1.043E-08	0.000E+00	0.000E+00	0.000E+00
San Bernardino (SC)	2050	T6 Public Class 5	Natural Gas	7.357E-09	5.325E-08	1.660E-06	0.000E+00	1.071E-09	1.200E-08	4.243E-08	5.550E-08	9.847E-10	3.000E-09	1.485E-08	1.884E-08	7.577E-04	5.149E-07	1.545E-07
San Bernardino (SC)	2050	T6 Public Class 6	Diesel	4.804E-09	2.029E-07	2.893E-08	9.355E-09	4.128E-09	1.200E-08	4.243E-08	5.856E-08	3.949E-09	3.000E-09	1.485E-08	2.180E-08	9.879E-04	2.231E-10	1.556E-07
San Bernardino (SC)	2050	T6 Public Class 6	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.200E-08	2.122E-08	3.322E-08	0.000E+00	3.000E-09	7.426E-09	1.043E-08	0.000E+00	0.000E+00	0.000E+00
San Bernardino (SC)	2050	T6 Public Class 6	Natural Gas	7.444E-09	4.759E-08	1.618E-06	0.000E+00	1.104E-09	1.200E-08	4.243E-08	5.554E-08	1.015E-09	3.000E-09	1.485E-08	1.887E-08	7.562E-04	5.210E-07	1.542E-07
San Bernardino (SC)	2050	T6 Public Class 7	Diesel	4.462E-09	1.925E-07	2.804E-08	9.241E-09	4.039E-09	1.200E-08	4.243E-08	5.847E-08	3.865E-09	3.000E-09	1.485E-08	2.172E-08	9.759E-04	2.072E-10	1.538E-07
San Bernardino (SC)	2050	T6 Public Class 7	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.200E-08	2.122E-08	3.322E-08	0.000E+00	3.000E-09	7.426E-09	1.043E-08	0.000E+00	0.000E+00	0.000E+00
San Bernardino (SC)	2050	T6 Public Class 7	Natural Gas	7.480E-09	4.518E-08	1.601E-06	0.000E+00	1.117E-09	1.200E-08	4.243E-08	5.552E-08	1.027E-09	3.000E-09	1.485E-08	1.888E-08	7.557E-04	5.235E-07	1.540E-07
San Bernardino (SC)	2050	T6 Utility Class 3	Diesel	3.687E-09	1.290E-07	2.403E-08	9.233E-09	3.568E-09	1.200E-08	4.243E-08	5.800E-08	3.414E-09	3.000E-09	1.485E-08	2.126E-08	9.751E-04	1.713E-10	1.536E-07
San Bernardino (SC)	2050	T6 Utility Class 3	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.200E-08	2.122E-08	3.322E-08	0.000E+00	3.000E-09	7.426E-09	1.043E-08	0.000E+00	0.000E+00	0.000E+00
San Bernardino (SC)	2050	T6 Utility Class 5	Natural Gas	7.499E-09	4.402E-08	1.592E-06	0.000E+00	1.124E-09	1.200E-08	4.243E-08	5.556E-08	1.034E-09	3.000E-09	1.485E-08	1.889E-08	7.525E-04	5.248E-07	1.534E-07
San Bernardino (SC)	2050	T6 Utility Class 6	Diesel	3.687E-09	1.266E-07	2.403E-08	9.233E-09	3.551E-09	1.200E-08	4.243E-08	5.798E-08	3.397E-09	3.000E-09	1.485E-08	2.125E-08	9.751E-04	1.712E-10	1.536E-07
San Bernardino (SC)	2050	T6 Utility Class 6	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.200E-08	2.122E-08	3.322E-08	0.000E+00	3.000E-09	7.426E-09	1.043E-08	0.000E+00	0.000E+00	0.000E+00
San Bernardino (SC)	2050	T6 Utility Class 6	Natural Gas	7.499E-09	4.402E-08	1.592E-06	0.000E+00	1.124E-09	1.200E-08	4.243E-08	5.556E-08	1.034E-09	3.000E-09	1.485E-08	1.889E-08	7.525E-04	5.248E-07	1.534E-07
San Bernardino (SC)	2050	T6 Utility Class 7	Diesel	3.652E-09	1.231E-07	2.381E-08	9.242E-09	3.531E-09	1.200E-08	4.243E-08	5.796E-08	3.379E-09	3.000E-09	1.485E-08	2.123E-08	9.760E-04	1.696E-10	1.538E-07
San Bernardino (SC)	2050	T6 Utility Class 7	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.200E-08	2.122E-08	3.322E-08	0.000E+00	3.000E-09	7.426E-09	1.043E-08	0.000E+00	0.000E+00	0.000E+00
San Bernardino (SC)	2050	T6 Utility Class 7	Natural Gas	7.499E-09	4.402E-08	1.592E-06	0.000E+00	1.124E-09	1.200E-08	4.243E-08	5.556E-08	1.034E-09	3.000E-09	1.485E-08	1.889E-08	7.525E-04	5.248E-07	1.534E-07
San Bernardino (SC)	2050	T6T5	Gasoline	7.582E-09	5.894E-08	1.442E-07	1.366E-08	1.077E-09	1.200E-08	4.255E-08	5.563E-08	9.898E-10	3.000E-09	1.489E-08	1.888E-08	1.382E-03	2.053E-09	6.277E-09
San Bernardino (SC)	2050	T6T5	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.200E-08	2.127E-08	3.327E-08	0.000E+00	3.000E-09	7.446E-09	1.045E-08	0.000E+00	0.000E+00	0.000E+00
San Bernardino (SC)	2050	T7 CAIRP Class 8	Diesel	1.074E-08	1.122E-06	3.601E-08	1.197E-08	2.829E-08	3.600E-08	8.265E-08	1.469E-07	2.707E-08	9.000E-09	2.893E-08	6.500E-08	1.264E-03	4.987E-10	1.992E-07
San Bernardino (SC)	2050	T7 CAIRP Class 8	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.600E-08	4.133E-08	7.733E-08	0.000E+00	9.000E-09	1.447E-08	2.347E-08	0.000E+00	0.000E+00	0.000E+00
San Bernardino (SC)	2050	T7 CAIRP Class 8	Natural Gas	1.297E-08	1.511E-07	2.853E-06	0.000E+00	1.887E-09	3.600E-08	8.265E-08	1.205E-07	1.735E-09	9.000E-09	2.893E-08	3.966E-08	1.013E-03	9.078E-07	2.065E-07
San Bernardino (SC)	2050	T7 NNOOS Class 8	Diesel	1.044E-08	1.242E-06	3.501E-08	1.145E-08	2.796E-08	3.600E-08	8.265E-08	1.466E-07	2.675E-08	9.000E-09	2.893E-08	6.468E-08	1.210E-03	4.848E-10	1.906E-07
San Bernardino (SC)	2050	T7 NNOOS Class 8	Diesel	1.077E-08	1.278E-06	3.612E-08	1.145E-08	2.960E-08	3.600E-08	8.266E-08	1.483E-07	2.832E-08	9.000E-09	2.893E-08	6.625E-08	1.209E-03	5.001E-10	1.905E-07
San Bernardino (SC)	2050	T7 POLA Class 8	Diesel	9.967E-09	1.106E-06	3.548E-08	1.275E-08	2.492E-08	3.600E-08	8.310E-08	1.440E-07	2.384E-08	9.000E-09	2.908E-08	6.192E-08	1.347E-03	4.629E-10	1.222E-07
San Bernardino (SC)	2050	T7 POLA Class 8	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.600E-08	4.167E-08	7.767E-08	0.000E+00	9.000E-09	1.458E-08	2.358E-08	0.000E+00	0.000E+00	0.000E+00
San Bernardino (SC)	2050	T7 POLA Class 8	Natural Gas	1.310E-08	1.517E-07	2.956E-06	0.000E+00	1.904E-09	3.600E-08	8.320E-08	1.211E-07	1.750E-09	9.000E-09	2.912E-08	3.987E-08	1.019E-03	9.165E-07	2.078E-07
San Bernardino (SC)	2050	T7 Public Class 8	Diesel	1.555E-08	1.328E-06	5.517E-08	1.415E-08	1.794E-08	3.600E-08	8.239E-08	1.363E-07	1.716E-08	9.000E-09	2.884E-08	5.500E-08	1.495E-03	7.222E-10	2.355E-07
San Bernardino (SC)	2050	T7 Public Class 8	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.600E-08	4.160E-08	7.760E-08	0.000E+00	9.000E-09	1.456E-08	2.356E-08	0.000E+00	0.000E+00	0.000E+00
San Bernardino (SC)	2050	T7 Public Class 8	Natural Gas	1.305E-08	1.654E-07	3.187E-06	0.000E+00	1.868E-09	3.600E-08	8.210E-08	1.200E-07	1.718E-09	9.000E-09	2.873E-08	3.945E-08	1.058E-03	9.130E-07	2.156E-07
San Bernardino (SC)	2050	T7 Single Concrete/Transit Mix Class 8	Diesel	7.854E-09	6.736E-07	2.912E-08	1.343E-08	1.475E-08	3.600E-08	8.375E-08	1.345E-07	1.411E-08	9.000E-09	2.931E-08	5.242E-08	1.418E-03	3.648E-10	2.235E-07
San Bernardino (SC)	2050	T7 Single Concrete/Transit Mix Class 8	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.600E-08	4.189E-08	7.789E-08	0.000E+00	9.000E-09	1.466E-08	2.366E-08	0.000E+00	0.000E+00	0.000E+00
San Bernardino (SC)	2050	T7 Single Concrete/Transit Mix Class 8	Natural Gas	1.318E-08	1.521E-07	3.025E-06	0.000E+00	1.913E-09	3.600E-08	8.375E-08	1.217E-07	1.759E-09	9.000E-09	2.931E-08	4.007E-08	1.050E-03	9.224E-07	2.141E-07
San Bernardino (SC)	2050	T7 Single Dump Class 8	Diesel	9.167E-09	8.822E-07	3.583E-08	1.364E-08	1.847E-08	3.600E-08	8.286E-08	1.373E-07	1.767E-08	9.000E-09	2.900E-08	5.567E-08	1.440E-03	4.258E-10	2.269E-07
San Bernardino (SC)	2050	T7 Single Dump Class 8	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.600E-08	4.188E-08	7.788E-08	0.000E+00	9.000E-09	1.466E-08	2.366E-08	0.000E+00	0.000E+00	0.000E+00
San Bernardino (SC)	2050	T7 Single Dump Class 8	Natural Gas	1.315E-08	1.648E-07	3.249E-06	0.000E+00	1.884E-09	3.600E-08	8.288E-08	1.208E-07	1.732E-09	9.000E-09	2.901E-08	3.974E-08	1.063E-03	9.203E-07	2.166E-07
San Bernardino (SC)	2050	T7 Single Other Class 8	Diesel	8.480E-09	7.976E-07	3.204E-08	1.353E-08	1.716E-08	3.600E-08	8.315E-08	1.363E-07	1.642E-08	9.000E-09	2.910E-08	5.452E-08	1.429E-03	3.939E-10	2.252E-07
San Bernardino (SC)	2050	T7 Single Other Class 8	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.600E-08	4.188E-08	7.788E-08	0.000E+00	9.000E-09	1.466E-08	2.366E-08	0.000E+00	0.000E+00	0.000E+00
San Bernardino (SC)	2050	T7 Single Other Class 8	Natural Gas	1.317E-08	1.559E-07	3.091E-06	0.000E+00	1.904E-09	3.600E-08	8.315E-08	1.211E-07	1.751E-09	9.000E-09	2.910E-08	3.985E-08	1.055E-03	9.217E-07	2.150E-07
San Bernardino (SC)	2050	T7 SWCV Class 8	Diesel	1.471E-08	4.602E-06	2.586E-0												

We Can Model Regional Emissions, But Are the Results Meaningful for CEQA?

Authors: AEP Climate Change Committee (Michael Hendrix, Dave Mitchell, Haseeb Qureshi, Jennifer Reed, Brian Schuster, Nicole Vermillion, and Rich Walters)

On December 24, 2018, the California Supreme Court, *Sierra Club v. County of Fresno (Friant Ranch, L.P.) (2018) 6 Cal.5th 502, Case No. S219783 (Friant Ranch)*, held that simply identifying that a project exceeds an emissions threshold is not sufficient to identify a project's significant effect on the environment relative to the health effects of project emissions. The Court found that an EIR should make a reasonable effort to substantively connect a project's criteria pollutant emissions to likely health consequences, or explain why it is not currently feasible to provide such an analysis. In 2019, there were several CEQA documents that included health effects modeling to provide additional analysis for projects with criteria air pollutant emissions that exceed a significance threshold. While it is technically possible to conduct this modeling, we argue that this additional layer of quantitative analysis may not always provide decision-makers and the public with additional meaningful information. It is the air districts that are best suited to provide frameworks for how to identify health effects of regional criteria pollutant emissions under CEQA.

Introduction

Significance thresholds for regional criteria pollutants used by California air districts and lead agencies represent the maximum emissions from a project that are not expected to cause or contribute to an exceedance of the most stringent applicable national or state ambient air quality standard (AAQS). By analyzing the project's emissions against these thresholds, the CEQA document assesses whether these emissions directly contribute to any regional or local exceedances of the applicable AAQS and exposure levels. The basis of the ruling in *Friant Ranch* was that the EIR did not provide a meaningful analysis of the adverse health effects that would be associated with the project's criteria pollutant emissions, which were identified as being far above the relevant thresholds. The discussion of the adverse health effects in the EIR was general in nature and did not connect the levels of the pollutants that would be emitted by the project to adverse health effects.

The process of correlating project-related criteria pollutant emissions to health-based consequences is called a health impact assessment (HIA). An HIA involves two steps: 1) running a regional photochemical grid model (PGM) to estimate the small increases in concentrations of ozone and particulate matter (PM) in the region as a result of a project's emissions of criteria and precursor pollutants; and 2) running the U.S. EPA Benefits Mapping and Analysis Program (BenMAP) to estimate the resulting health impacts from these increases in concentrations of ozone and PM.

Limitations of Regional-Scale Dispersion Models

It is technically feasible to conduct regional-scale criteria pollutant modeling for a development project. Particulate matter (PM) can be divided into two categories: directly emitted PM and secondary PM. Secondary PM, is formed via complex chemical reactions in the atmosphere between precursor chemicals such as sulfur oxides (SO_x) and NO_x. Ozone (O₃) is a secondary pollutant formed from the oxidation of reactive organic gases (ROGs) and nitrogen oxides (NO_x) in the presence of sunlight. Rates of ozone formation are a function of a variety of complex physical factors, including the presence of sunlight and precursor pollutants, natural topography, nearby structures that cause building downwash, atmospheric stability, and wind patterns. Secondary formation of PM and ozone can occur far from the original emissions source from regional transport due to wind and topography (e.g. low-level jet stream). As such, modeling concentrations of secondary PM and ozone require photochemical grid models (PGMs), such as CMAQ and CAMx. These models have a much larger "grid" system and much lower resolution than localized dispersion modeling (e.g., AERMOD). For example, common grid cells in PGMs are 4x4 kilometers, while AERMOD can identify concentrations at the meter-level.

Photochemical modeling also depends on all emission sources in the entire domain. Low resolution and spatial averaging produces “noise” and model uncertainty that can exceed a project’s specific emissions. Additionally, regional-scale models are highly contingent upon background concentrations. Factors such as meteorology and topography greatly affect the certainty levels of predicted concentrations at receptor points. As a result, there are statistical ranges of uncertainty through all the modeling steps. Due to these factors, it is difficult to predict ground-level secondary PM and ozone concentrations associated with relatively small emission sources with a high degree of certainty. While it is possible to use a regional-scale model to predict these regional concentrations, when a project’s emissions are less than the regional model’s resolution, the resultant ambient air quality concentrations will be within the margin of uncertainty. In CEQA terms, this would fit the definition of “speculative”. Only when the scale of emissions would result in changes in ambient air quality beyond the model margin of uncertainty would the results not be “speculative” as defined by CEQA.

Identifying Health Effects due to Ambient Air Quality Changes

BenMap is a model developed by the USEPA to understand the health effects from changes in ozone and PM concentrations. If there is an acceptable level of confidence that the results provided by the regional dispersion modeling are valid, then these concentrations can be translated into health outcomes using BenMap. The health outcomes in BenMap are based on changes in ambient air concentrations and the population exposed to these changes. Data provided by this analysis may indicate increased number of workdays lost to illness, hospital admissions (respiratory), emergency room visits (asthma), or mortality, among other health effects. These are called “health incidences.”

Translating the incremental increase in PM and ozone concentrations to specific health effects is also subject to uncertainty. For example, regional models assign the same toxicity to PM regardless of the source of PM (such as road dust as exhaust), and thus potentially overpredict adverse health effects of PM. BenMap also assumes that health effects can occur at any concentration, including small incremental concentrations, and assumes that impacts seen at large concentration differences can be linearly scaled down to small increases in concentration, with no consideration of potential thresholds below which health impacts may not occur. Additionally, BenMap is used for assessing impacts over large areas and populations and was not intended to be used for individual projects. For health incidences, the number of hospitalizations or increase in morbidity predicted by BenMap is greatly affected by the population characteristics.¹ Small increases in emissions in an area with a high population have a much greater affect than large increases in emissions over an area with a small population. As a result, the same amount of emissions generated in an urban area could result in greater health consequences than if the same emissions occurred on the urban periphery, where fewer people may be affected. This will also depend on other factors including meteorology and photochemistry, as discussed above. Emissions in areas with conditions that favor high air dispersion or unfavorable ozone formation will likely have relatively lower effects on ambient air quality and health outcomes.

While BenMap provides additional statistical information about health consequences requested by the Court in the Friant Ranch decision, this information is only meaningful when presented with the full health context of the region or locality at hand. For example, if the BenMap analysis says that the project would result in two additional hospital admissions, this result alone is not useful unless one identifies how many hospital admissions are caused by poor air quality now (without the project) and how many hospital admissions occur

¹ BenMap assigns prevalence rate for asthma and other health effects based on indicators such as gender, race, age, ethnicity, etc. The BenMap user manual specifically states that there are a wide range of variables that can be included in the health effect function. The health effect function was developed based on epidemiological studies, and specifically states that “there are a number of issues that arise when deriving and choosing between health effect functions that go well beyond this user manual. Hence, it is important to have a trained health researcher assist in developing the impact function data file.”

overall (due to air quality and other causes). Because health is not solely influenced by ambient air quality, and has many factors that are highly variable across geographies and populations, there is an added level of uncertainty in using a generalized identification of health effects due to air quality conditions overlaid onto a specific diverse set of health conditions and other factors. Regardless of the uncertainty levels, if regional health effects are identified for a project, then the CEQA analysis needs to provide a full health baseline for decision-makers and the public to be able to understand the marginal change due to project criteria pollutant emissions. Given the margin of uncertainty at each step in the process (regional scale modeling, existing ambient air quality effects on health, population health conditions vulnerability, and marginal health effects of air pollution), the identification of marginal health effects due to individual projects using regional air quality modelling and tools such as BenMap are likely to be within the level of uncertainty and thus defined as “speculative” per CEQA.

The Role of Air Districts

Regional, community, multiscale air quality modeling conducted by the air districts for each individual air basin or locality within the air basin would be the most appropriate indicator of health effects for projects. The AQMPs provide a forecast of regional emissions based on regional dispersion modeling for all sources within the air basin. Regional-scale models attempt to account for all emissions sources within an air basin.

The regional scale model requires inputs such as existing and future regional sources of pollutants and global meteorological data, which are generally not accessible by CEQA practitioners. Modeling of future years should consider future concentrations of air pollutants based on regional growth projections and existing programs, rules, and regulations adopted by Federal, State, and local air districts. In general, air pollution in California is decreasing as a result of Federal and State laws. Based on the air quality management plans (AQMPs) required for air districts in a nonattainment area, air quality in the air basins are anticipated to improve despite an increase in population and employment growth. Air districts are charged with assessing programs, rules, and regulations so that the increase in population and employment does not conflict with the mandate to achieve the AAQS. Because emissions forecasting and health outcomes based on the regional growth projections to achieve the AAQS is under the purview of the air districts, it should also fall on the air districts to identify the potential health outcomes associated with individual project’s criteria pollutant emissions.

The South Coast Air Quality Management District (South Coast AQMD) and the Sacramento Metropolitan Air Quality Management District (Sacramento Metropolitan AQMD) are exploring concepts for project-level analysis in light of Friant Ranch to assist local lead agencies.

- » South Coast AQMD is looking at the largest land use development project they have had in the air basin and doing a sensitivity analysis (using CAMx for photochemical grid modeling and BenMap for health outcomes) to see how locating a very large project in different parts of the air basin (Los Angeles, Inland Empire, v. Orange County) would affect the health incidence.
- » Sacramento Metropolitan AQMD is also looking at a screening process. Rather than looking at the upper end (i.e., largest project in the air basin), Sacramento Metropolitan AQMD is starting at the smallest project that exceeds the regional significance threshold and running CAMx and BenMap at different locations in the air basin to see how it affects regional health incidences.

Guidance from Air Districts would be the most effective way to incorporate meaningful information concerning regional health effects of project criteria pollutants in CEQA analyses, including guidance as to when modelling is and is not useful and meaningful, how modelling should be conducted, and how to best present additional information to inform decision-makers and the public about a project’s impacts.

So...until air districts do their part, what should we do?

PROJECTS WITH CRITERIA POLLUTANT EMISSIONS BELOW AIR DISTRICT THRESHOLDS

The Friant Ranch ruling was about providing disclosure of health effects of project emissions that were well over the significance thresholds. Since the air district thresholds are tied to a level the air districts find to not have a significant effect on ambient air quality, there should be no need to discuss the health effects of criteria pollutant emissions that are less than the significance thresholds.

PROJECTS WITH CRITERIA POLLUTANT EMISSIONS ABOVE AIR DISTRICT THRESHOLDS

Pursuant to Section 15125 of the CEQA Guidelines, the environmental setting will normally constitute the baseline physical conditions by which a lead agency determines whether an impact is significant. For CEQA, the health effects associated with buildout of a project would occur at the project's horizon year. Because CEQA requires an analysis of the change from existing conditions, the change in effects would be associated with changes in ambient air quality and associated health outcomes between existing conditions and the project's horizon year. Therefore, in order to show how a project affects health outcomes in an air basin, the CEQA documents will need to qualitatively or quantitatively address: (1) existing ambient criteria pollutant concentrations, health incidences due to existing air quality, and health incidences overall; 2) future (without project) ambient criteria pollutant concentrations and health incidences, and 3) future (with project) ambient criteria pollutant concentrations and health incidences.

Projects with significant criteria pollutant emissions could use regional modelling and BenMap to identify health effects of project emissions, but it is likely that many (or most) projects that are not regionally substantial in scale will be shown to have minimal regional changes in PM and ozone concentrations and therefore minimal changes in associated health effects. In addition, many projects may have emissions that are less than the uncertainty level of regional air quality models and BenMap health effects modeling; in these cases, quantitative results will not be meaningful. Thus, absent better direction from air districts, CEQA lead agencies will have to determine on a case by case basis whether a qualitative discussion of health effects will suffice, or whether regional modeling, despite its limitations, should be conducted for the project.

Where a project has substantial criteria pollutant emissions when considered on a regional scale, and there is reason to believe that the modeling of ambient air quality and regional health effects would produce non-speculative results when considering modeling uncertainties, then CEQA lead agencies should use regional modelling.

Conclusion

The purpose of CEQA is to inform the public as to the potential for a project to result in one or more significant adverse effects on the environment (including health effects). A CEQA document must provide an understandable and clear environmental analysis and provide an adequate basis for decision making and public disclosure. Regional dispersion modeling of criteria pollutants and secondary pollutants like PM and ozone can provide additional information, but that information may be within the margin of modelling uncertainty and/or may not be meaningful for the public and decision-makers unless a full health context is presented in the CEQA document. Simply providing health outcomes based on use of a regional-scale model and BenMap may not satisfy the goal to provide decision-makers and the public with information that would assist in weighting the environmental consequences of a project. A CEQA document must provide an analysis that is understandable for decision making and public disclosure. Regional scale modeling may provide a technical method for this type of analysis, but it does not necessarily provide a meaningful way to connect the magnitude of a project's criteria pollutant emissions to health effects without speculation.

In order to accurately connect the dots, we urge California air districts to provide more guidance on how to identify and describe the health effects of exceeding regional criteria pollutant thresholds. The air districts are the primary agency responsible for ensuring that the air basins attain the AAQS and ensure the health and welfare of its residents relative to air quality. Because emissions forecasting and health outcomes are based on the regional growth projections to achieve the AAQS is under the purview of the air districts, it should fall on the air districts to identify the potential health outcomes associated with exceeding the CEQA thresholds for projects. The air districts should provide lead agencies with a consistent, reliable, and meaningful analytical approach to correlate specific health effects that may result from a project's criteria pollutant emissions.

Glossary

AAQS – Ambient Air Quality Standards

BenMap – Benefits Mapping and Analysis Program

CAMx – Comprehensive Air Quality Model with extensions

CMAQ – Community Multiscale Air Quality

NOx – Nitrogen Oxides

PM – Particulate Matter

SOx – Sulfur Oxides

State – California

USEPA – United States Environmental Protection Agency

S219783

IN THE SUPREME COURT OF CALIFORNIA

SIERRA CLUB, REVIVE THE SAN JOAQUIN, and
LEAGUE OF WOMEN VOTERS OF FRESNO,

Plaintiffs and Appellants,

v.

COUNTY OF FRESNO,

Defendant and Respondent,

and,

FRIANT RANCH, L.P.,

Real Party in Interest and Respondent.

SUPREME COURT
FILED

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Frank A. McGuire Clerk
Deputy

After a Published Decision by the Court of Appeal, filed May 27, 2014
Fifth Appellate District Case No. F066798

Appeal from the Superior Court of California, County of Fresno
Case No. 11CECG00726
Honorable Rosendo A. Pena, Jr.

**APPLICATION OF THE SOUTH COAST AIR QUALITY
MANAGEMENT DISTRICT FOR LEAVE TO FILE
BRIEF OF *AMICUS CURIAE* IN SUPPORT OF NEITHER PARTY
AND [*PROPOSED*] BRIEF OF *AMICUS CURIAE***

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**TO THE HONORABLE CHIEF JUSTICE AND JUSTICES OF THE
SUPREME COURT:**

APPLICATION FOR LEAVE TO FILE *AMICUS CURIAE* BRIEF

Pursuant to Rule 8.520(f) of the California Rules of Court, the South Coast Air Quality Management District (SCAQMD) respectfully requests leave to file the attached *amicus curiae* brief. Because SCAQMD's position differs from that of either party, we request leave to submit this *amicus* brief in support of neither party.

HOW THIS BRIEF WILL ASSIST THE COURT

SCAQMD's proposed *amicus* brief takes a position on two of the issues in this case. In both instances, its position differs from that of either party. The issues are:

- 1) Does the California Environmental Quality Act (CEQA) require an environmental impact report (EIR) to correlate a project's air pollution emissions with specific levels of health impacts?
- 2) What is the proper standard of review for determining whether an EIR provides sufficient information on the health impacts caused by a project's emission of air pollutants?

This brief will assist the Court by discussing the practical realities of correlating identified air quality impacts with specific health outcomes. In short, CEQA requires agencies to provide detailed information about a project's air quality impacts that is sufficient for the public and decisionmakers to adequately evaluate the project and meaningfully understand its impacts. However, the level of analysis is governed by a rule of reason; CEQA only requires agencies to conduct analysis if it is reasonably feasible to do so.

With regard to health-related air quality impacts, an analysis that correlates a project's air pollution emissions with specific levels of health impacts will be feasible in some cases but not others. Whether it is feasible depends on a variety of factors, including the nature of the project and the nature of the analysis under consideration. The feasibility of analysis may also change over time as air districts and others develop new tools for measuring projects' air quality related health impacts. Because SCAQMD has among the most sophisticated air quality modeling and health impact evaluation capability of any of the air districts in the State, it is uniquely situated to express an opinion on the extent to which the Court should hold that CEQA requires lead agencies to correlate air quality impacts with specific health outcomes.

SCAQMD can also offer a unique perspective on the question of the appropriate standard of review. SCAQMD submits that the proper standard of review for determining whether an EIR is sufficient as an informational document is more nuanced than argued by either party. In our view, this is a mixed question of fact and law. It includes determining whether additional analysis is feasible, which is primarily a factual question that should be reviewed under the substantial evidence standard. However, it also involves determining whether the omission of a particular analysis renders an EIR insufficient to serve CEQA's purpose as a meaningful, informational document. If a lead agency has not determined that a requested analysis is infeasible, it is the court's role to determine whether the EIR nevertheless meets CEQA's purposes, and courts should not defer to the lead agency's conclusions regarding the legal sufficiency of an EIR's analysis. The ultimate question of whether an EIR's analysis is "sufficient" to serve CEQA's informational purposes is predominately a question of law that courts should review *de novo*.

This brief will explain the rationale for these arguments and may assist the Court in reaching a conclusion that accords proper respect to a lead agency's factual conclusions while maintaining judicial authority over the ultimate question of what level of analysis CEQA requires.

STATEMENT OF INTEREST OF *AMICUS CURIAE*

The SCAQMD is the regional agency primarily responsible for air pollution control in the South Coast Air Basin, which consists of all of Orange County and the non-desert portions of the Los Angeles, Riverside, and San Bernardino Counties. (Health & Saf. Code § 40410; Cal. Code Regs., tit. 17, § 60104.) The SCAQMD participates in the CEQA process in several ways. Sometimes it acts as a lead agency that prepares CEQA documents for projects. Other times it acts as a responsible agency when it has permit authority over some part of a project that is undergoing CEQA review by a different lead agency. Finally, SCAQMD also acts as a commenting agency for CEQA documents that it receives because it is a public agency with jurisdiction by law over natural resources affected by the project.

In all of these capacities, SCAQMD will be affected by the decision in this case. SCAQMD sometimes submits comments requesting that a lead agency perform an additional type of air quality or health impacts analysis. On the other hand, SCAQMD sometimes determines that a particular type of health impact analysis is not feasible or would not produce reliable and informative results. Thus, SCAQMD will be affected by the Court's resolution of the extent to which CEQA requires EIRs to correlate emissions and health impacts, and its resolution of the proper standard of review.

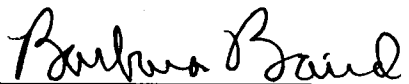
CERTIFICATION REGARDING AUTHORSHIP AND FUNDING

No party or counsel in the pending case authored the proposed amicus curiae brief in whole or in part, or made any monetary contribution intended to fund the preparation or submission of the brief. No person or entity other than the proposed *Amicus Curiae* made any monetary contribution intended to fund the preparation or submission of the brief.

Respectfully submitted,

DATED: April 3, 2015

SOUTH COAST AIR QUALITY
MANAGEMENT DISTRICT
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SOUTH COAST AIR QUALITY
MANAGEMENT DISTRICT

BRIEF OF AMICUS CURIAE

SUMMARY OF ARGUMENT

The South Coast Air Quality Management District (SCAQMD) submits that this Court should not try to establish a hard-and-fast rule concerning whether lead agencies are required to correlate emissions of air pollutants with specific health consequences in their environmental impact reports (EIR). The level of detail required in EIRs is governed by a few, core CEQA (California Environmental Quality Act) principles. As this Court has stated, “[a]n EIR must include detail sufficient to enable those who did not participate in its preparation to understand and to consider meaningfully the issues raised by the proposed project.” (*Laurel Heights Improvement Assn. v. Regents of the Univ of Cal.* (1988) 47 Cal.3d 376, 405 [*“Laurel Heights I”*]) Accordingly, “an agency must use its best efforts to find out and disclose all that it reasonably can.” (*Vineyard Area Citizens for Responsible Growth, Inc. v. City of Rancho Cordova* (2007) 40 Cal.4th 412, 428 (quoting CEQA Guidelines § 15144)¹). However, “[a]nalysis of environmental effects need not be exhaustive, but will be judged in light of what is reasonably feasible.” (*Association of Irrigated Residents v. County of Madera* (2003) 107 Cal.App.4th 1383, 1390; CEQA Guidelines §§ 15151, 15204(a).)

With regard to analysis of air quality related health impacts, EIRs must generally quantify a project’s pollutant emissions, but in some cases it is not feasible to correlate these emissions to specific, quantifiable health impacts (e.g., premature mortality; hospital admissions). In such cases, a general description of the adverse health impacts resulting from the pollutants at issue may be sufficient. In other cases, due to the magnitude

¹ The CEQA Guidelines are found at Cal. Code Regs., tit. 14 §§ 15000, *et seq.*

or nature of the pollution emissions, as well as the specificity of the project involved, it may be feasible to quantify health impacts. Or there may be a less exacting, but still meaningful analysis of health impacts that can feasibly be performed. In these instances, agencies should disclose those impacts.

SCAQMD also submits that whether or not an EIR complies with CEQA's informational mandates by providing sufficient, feasible analysis is a mixed question of fact and law. Pertinent here, the question of whether an EIR's discussion of health impacts from air pollution is sufficient to allow the public to understand and consider meaningfully the issues involves two inquiries: (1) Is it feasible to provide the information or analysis that a commenter is requesting or a petitioner is arguing should be required?; and (2) Even if it is feasible, is the agency relying on other policy or legal considerations to justify not preparing the requested analysis? The first question of whether an analysis is feasible is primarily a question of fact that should be judged by the substantial evidence standard. The second inquiry involves evaluating CEQA's information disclosure purposes against the asserted reasons to not perform the requested analysis. For example, an agency might believe that its EIR meets CEQA's informational disclosure standards even without a particular analysis, and therefore choose not to conduct that analysis. SCAQMD submits that this is more of a legal question, which should be reviewed de novo as a question of law.

ARGUMENT

I. RELEVANT FACTUAL AND LEGAL FRAMEWORK.

A. Air Quality Regulatory Background

The South Coast Air Quality Management District (SCAQMD) is one of the local and regional air pollution control districts and air quality

management districts in California. The SCAQMD is the regional air pollution agency for the South Coast Air Basin, which consists of all of Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino Counties. (Health & Saf. Code § 40410, 17 Cal. Code Reg. § 60104.) The SCAQMD also includes the Coachella Valley in Riverside County (Palm Springs area to the Salton Sea). (SCAQMD, *Final 2012 AQMP (Feb. 2013)*, <http://www.aqmd.gov/home/library/clean-air-plans/air-quality-mgt-plan/final-2012-air-quality-management-plan>; then follow “chapter 7” hyperlink; pp 7-1, 7-3 (last visited Apr. 1, 2015).) The SCAQMD's jurisdiction includes over 16 million residents and has the worst or nearly the worst air pollution levels in the country for ozone and fine particulate matter. (SCAQMD, *Final 2012 AQMP (Feb. 2013)*, <http://www.aqmd.gov/home/library/clean-air-plans/air-quality-mgt-plan/final-2012-air-quality-management-plan>; then follow “Executive Summary” hyperlink p. ES-1 (last visited Apr. 1, 2015).)

Under California law, the local and regional districts are primarily responsible for controlling air pollution from all sources except motor vehicles. (Health & Saf. Code § 40000.) The California Air Resources Board (CARB), part of the California Environmental Protection Agency, is primarily responsible for controlling pollution from motor vehicles. (*Id.*) The air districts must adopt rules to achieve and maintain the state and federal ambient air quality standards within their jurisdictions. (Health & Saf. Code § 40001.)

The federal Clean Air Act (CAA) requires the United States Environmental Protection Agency (EPA) to identify pollutants that are widely distributed and pose a threat to human health, developing a so-called “criteria” document. (42 U.S.C. § 7408; CAA § 108.) These pollutants are frequently called “criteria pollutants.” EPA must then establish “national ambient air quality standards” at levels “requisite to protect public health”,

allowing “an adequate margin of safety.” (42 U.S.C. § 7409; CAA § 109.) EPA has set standards for six identified pollutants: ozone, nitrogen dioxide, sulfur dioxide, carbon monoxide, particulate matter (PM), and lead. (U.S. EPA, National Ambient Air Quality Standards (NAAQS), <http://www.epa.gov/air/criteria.html> (last updated Oct. 21, 2014).)²

Under the Clean Air Act, EPA sets emission standards for motor vehicles and “nonroad engines” (mobile farm and construction equipment, marine vessels, locomotives, aircraft, etc.). (42 U.S.C. §§ 7521, 7547; CAA §§ 202, 213.) California is the only state allowed to establish emission standards for motor vehicles and most nonroad sources; however, it may only do so with EPA's approval. (42 U.S.C. §§ 7543(b), 7543(e); CAA §§ 209(b), 209(c).) Sources such as manufacturing facilities, power plants and refineries that are not mobile are often referred to as “stationary sources.” The Clean Air Act charges state and local agencies with the primary responsibility to attain the national ambient air quality standards. (42 U.S.C. § 7401(a)(3); CAA § 101(a)(3).) Each state must adopt and implement a plan including enforceable measures to achieve and maintain the national ambient air quality standards. (42 U.S.C. § 7410; CAA § 110.) The SCAQMD and CARB jointly prepare portion of the plan for the South Coast Air Basin and submit it for approval by EPA. (Health & Saf. Code §§ 40460, et seq.)

The Clean Air Act also requires state and local agencies to adopt a permit program requiring, among other things, that new or modified “major” stationary sources use technology to achieve the “lowest achievable emission rate,” and to control minor stationary sources as

² Particulate matter (PM) is further divided into two categories: fine particulate or PM_{2.5} (particles with a diameter of less than or equal to 2.5 microns) and coarse particulate (PM₁₀) (particles with a diameter of 10 microns or less). (U.S. EPA, Particulate Matter (PM), <http://www.epa.gov/airquality/particulatepollution/> (last visited Apr. 1, 2015).)

needed to help attain the standards. (42 U.S.C. §§ 7502(c)(5), 7503(a)(2), 7410(a)(2)(C); CAA §§ 172(c)(5), 173(a)(2), 110(a)(2)(C).) The air districts implement these permit programs in California. (Health & Saf. Code §§ 42300, et seq.)

The Clean Air Act also sets out a regulatory structure for over 100 so-called “hazardous air pollutants” calling for EPA to establish “maximum achievable control technology” (MACT) for sources of these pollutants. (42 U.S.C. § 7412(d)(2); CAA § 112(d)(2).) California refers to these pollutants as “toxic air contaminants” (TACs) which are subject to two state-required programs. The first program requires “air toxics control measures” for specific categories of sources. (Health & Saf. Code § 39666.) The other program requires larger stationary sources and sources identified by air districts to prepare “health risk assessments” for impacts of toxic air contaminants. (Health & Saf. Code §§ 44320(b), 44322, 44360.) If the health risk exceeds levels identified by the district as “significant,” the facility must implement a “risk reduction plan” to bring its risk levels below “significant” levels. Air districts may adopt additional more stringent requirements than those required by state law, including requirements for toxic air contaminants. (Health & Saf. Code § 41508; *Western Oil & Gas Assn. v. Monterey Bay Unified APCD* (1989) 49 Cal.3d 408, 414.) For example, SCAQMD has adopted a rule requiring new or modified sources to keep their risks below specified levels and use best available control technology (BACT) for toxics. (SCAQMD, *Rule 1401-New Source Review of Toxic Air Contaminants*, <http://www.aqmd.gov/home/regulations/rules/scaqmd-rule-book/regulation-xiv>; then follow “Rule 1401” hyperlink (last visited Apr. 1, 2015).)

B. The SCAQMD's Role Under CEQA

The California Environmental Quality Act (CEQA) requires public agencies to perform an environmental review and appropriate analysis for projects that they implement or approve. (Pub. Resources Code § 21080(a).) The agency with primary approval authority for a particular project is generally the “lead agency” that prepares the appropriate CEQA document. (CEQA Guidelines §§ 15050, 15051.) Other agencies having a subsequent approval authority over all or part of a project are called “responsible” agencies that must determine whether the CEQA document is adequate for their use. (CEQA Guidelines §§ 15096(c), 15381.) Lead agencies must also consult with and circulate their environmental impact reports to “trustee agencies” and agencies “with jurisdiction by law” including “authority over resources which may be affected by the project.” (Pub. Resources Code §§ 21104(a), 21153; CEQA Guidelines §§ 15086(a)(3), 15073(c).) The SCAQMD has a role in all these aspects of CEQA.

Fulfilling its responsibilities to implement its air quality plan and adopt rules to attain the national ambient air quality standards, SCAQMD adopts a dozen or more rules each year to require pollution reductions from a wide variety of sources. The SCAQMD staff evaluates each rule for any adverse environmental impact and prepares the appropriate CEQA document. Although most rules reduce air emissions, they may have secondary environmental impacts such as use of water or energy or disposal of waste—e.g., spent catalyst from control equipment.³

³ The SCAQMD's CEQA program for its rules is a “Certified Regulatory Program” under which it prepares a “functionally equivalent” document in lieu of a negative declaration or EIR. (Pub. Resources Code § 21080.5, CEQA Guidelines § 15251(l).)

The SCAQMD also approves a large number of permits every year to construct new, modified, or replacement facilities that emit regulated air pollutants. The majority of these air pollutant sources have already been included in an earlier CEQA evaluation for a larger project, are currently being evaluated by a local government as lead agency, or qualify for an exemption. However, the SCAQMD sometimes acts as lead agency for major projects where the local government does not have a discretionary approval. In such cases, SCAQMD prepares and certifies a negative declaration or environmental impact report (EIR) as appropriate.⁴ SCAQMD evaluates perhaps a dozen such permit projects under CEQA each year. SCAQMD is often also a “responsible agency” for many projects since it must issue a permit for part of the projects (e.g., a boiler used to provide heat in a commercial building). For permit projects evaluated by another lead agency under CEQA, SCAQMD has the right to determine that the CEQA document is inadequate for its purposes as a responsible agency, but it may not do so because its permit program already requires all permitted sources to use the best available air pollution control technology. (SCAQMD, *Rule 1303(a)(1) – Requirements*, <http://www.aqmd.gov/home/regulations/rules/scaqmd-rule-book/regulation-xiii>; then follow “Rule 1303” hyperlink (last visited Apr. 1, 2015).)

Finally, SCAQMD receives as many as 60 or more CEQA documents each month (around 500 per year) in its role as commenting agency or an agency with “jurisdiction by law” over air quality—a natural resource affected by the project. (Pub. Resources Code §§ 21104(a), 21153; CEQA Guidelines § 15366(a)(3).) The SCAQMD staff provides comments on as many as 25 or 30 such documents each month.

⁴ The SCAQMD's permit projects are not included in its Certified Regulatory Program, and are evaluated under the traditional local government CEQA analysis. (Pub. Resources Code §§ 21150-21154.)

(SCAQMD Governing Board Agenda, Apr. 3, 2015, Agenda Item 16, Attachment A, <http://www.aqmd.gov/home/library/meeting-agendas-minutes/agenda?title=governing-board-meeting-agenda-april-3-2015>; then follow “16. Lead Agency Projects and Environmental Documents Received by SCAQMD” hyperlink (last visited Apr. 1, 2015).) Of course, SCAQMD focuses its commenting efforts on the more significant projects.

Typically, SCAQMD comments on the adequacy of air quality analysis, appropriateness of assumptions and methodology, and completeness of the recommended air quality mitigation measures. Staff may comment on the need to prepare a health risk assessment detailing the projected cancer and noncancer risks from toxic air contaminants resulting from the project, particularly the impacts of diesel particulate matter, which CARB has identified as a toxic air contaminant based on its carcinogenic effects. (California Air Resources Board, Resolution 98-35, Aug. 27, 1998, <http://www.arb.ca.gov/regact/diesltac/diesltac.htm>; then follow Resolution 98-35 hyperlink (last visited Apr. 1, 2015).) Because SCAQMD already requires new or modified stationary sources of toxic air contaminants to use the best available control technology for toxics and to keep their risks below specified levels, (SCAQMD Rule 1401, *supra*, note 15), the greatest opportunity to further mitigate toxic impacts through the CEQA process is by reducing emissions—particularly diesel emissions—from vehicles.

II. THIS COURT SHOULD NOT SET A HARD-AND-FAST RULE CONCERNING THE EXTENT TO WHICH AN EIR MUST CORRELATE A PROJECT’S EMISSION OF POLLUTANTS WITH RESULTING HEALTH IMPACTS.

Numerous cases hold that courts do not review the correctness of an EIR’s conclusions but rather its sufficiency as an informative document. (*Laurel Heights 1*, *supra*, 47 Cal.3d at p. 392; *Citizens of Goleta Valley v.*

Bd. of Supervisors (1990) 52 Cal.3d 553, 569; *Bakersfield Citizens for Local Control v. City of Bakersfield* (2004) 124 Cal.App.4th 1184, 1197.)

As stated by the Court of Appeal in this case, where an EIR has addressed a topic, but the petitioner claims that the information provided about that topic is insufficient, courts must “draw[] a line that divides *sufficient* discussions from those that are *insufficient*.” (*Sierra Club v. County of Fresno* (2014) 226 Cal.App.4th 704 (superseded by grant of review) 172 Cal.Rptr.3d 271, 290.) The Court of Appeal readily admitted that “[t]he terms themselves – sufficient and insufficient – provide little, if any, guidance as to where the line should be drawn. They are simply labels applied once the court has completed its analysis.” (*Id.*)

The CEQA Guidelines, however, provide guidance regarding what constitutes a sufficient discussion of impacts. Section 15151 states that “the sufficiency of an EIR is to be reviewed in light of what is reasonably feasible.” Case law reflects this: “Analysis of environmental effects need not be exhaustive, but will be judged in light of what was reasonably feasible.” (*Association of Irrigated Residents v. County of Madera, supra*, 107 Cal.App.4th at p. 1390; see also CEQA Guidelines § 15204(a).)

Applying this test, this Court cannot realistically establish a hard-and-fast rule that an analysis correlating air pollution impacts of a project to quantified resulting health impacts is always required, or indeed that it is never required. Simply put, in some cases such an analysis will be “feasible”; in some cases it will not.

For example, air pollution control districts often require a proposed new source of toxic air contaminants to prepare a “health risk assessment” before issuing a permit to construct. District rules often limit the allowable cancer risk the new source may cause to the “maximally exposed individual” (worker and residence exposures). (*See, e.g.*, SCAQMD Rule 1401(c)(8); 1401(d)(1), *supra* note 15.) In order to perform this analysis, it

is necessary to have data regarding the sources and types of air toxic contaminants, location of emission points, velocity of emissions, the meteorology and topography of the area, and the location of receptors (worker and residence). (SCAQMD, *Supplemental Guidelines for Preparing Risk Assessments for the Air Toxics "Hot Spots" Information and Assessment Act (AB2588)*, pp. 11-16; (last visited Apr. 1, 2015) <http://www.aqmd.gov/home/library/documents-support-material>; "Guidelines" hyperlink; AB2588; then follow AB2588 Risk Assessment Guidelines hyperlink.)

Thus, it is feasible to determine the health risk posed by a new gas station locating at an intersection in a mixed use area, where receptor locations are known. On the other hand, it may not be feasible to perform a health risk assessment for airborne toxics that will be emitted by a generic industrial building that was built on "speculation" (i.e., without knowing the future tenant(s)). Even where a health risk assessment can be prepared, however, the resulting maximum health risk value is only a calculation of risk—it does not necessarily mean anyone will contract cancer as a result of the project.

In order to find the "cancer burden" or expected additional cases of cancer resulting from the project, it is also necessary to know the numbers and location of individuals living within the "zone of impact" of the project: i.e., those living in areas where the projected cancer risk from the project exceeds one in a million. (SCAQMD, Health Risk Assessment Summary form, <http://www.aqmd.gov/home/forms>; filter by "AB2588" category; then "Health Risk Assessment" hyperlink (last visited Apr. 1, 2015).) The affected population is divided into bands of those exposed to at least 1 in a million risk, those exposed to at least 10 in a million risk, etc. up to those exposed at the highest levels. (*Id.*) This data allows agencies to calculate an approximate number of additional cancer cases expected from

the project. However, it is not possible to predict which particular individuals will be affected.

For the so-called criteria pollutants⁵, such as ozone, it may be more difficult to quantify health impacts. Ozone is formed in the atmosphere from the chemical reaction of the nitrogen oxides (NO_x) and volatile organic compounds (VOC) in the presence of sunlight. (U.S. EPA, Ground Level Ozone, <http://www.epa.gov/airquality/ozonepollution/> (last updated Mar. 25, 2015).) It takes time and the influence of meteorological conditions for these reactions to occur, so ozone may be formed at a distance downwind from the sources. (U.S. EPA, *Guideline on Ozone Monitoring Site Selection* (Aug. 1998) EPA-454/R-98-002 § 5.1.2, <http://www.epa.gov/ttnamti1/archive/cpreldoc.html> (last visited Apr. 1, 2015).) NO_x and VOC are known as “precursors” of ozone.

Scientifically, health effects from ozone are correlated with increases in the ambient level of ozone in the air a person breathes. (U.S. EPA, *Health Effects of Ozone in the General Population*, Figure 9, <http://www.epa.gov/apti/ozonehealth/population.html#levels> (last visited Apr. 1, 2015).) However, it takes a large amount of additional precursor emissions to cause a modeled increase in ambient ozone levels over an entire region. For example, the SCAQMD's 2012 AQMP showed that reducing NO_x by 432 tons per day (157,680 tons/year) and reducing VOC by 187 tons per day (68,255 tons/year) would reduce ozone levels at the SCAQMD's monitor site with the highest levels by only 9 parts per billion. (South Coast Air Quality Management District, *Final 2012 AQMP (February 2013)*, <http://www.aqmd.gov/home/library/clean-air-plans/air-quality-mgt-plan/final-2012-air-quality-management-plan>; then follow “Appendix V: Modeling & Attainment Demonstrations” hyperlink,

⁵ See discussion of types of pollutants, *supra*, Part I.A.

pp. v-4-2, v-7-4, v-7-24.) SCAQMD staff does not currently know of a way to accurately quantify ozone-related health impacts caused by NO_x or VOC emissions from relatively small projects.

On the other hand, this type of analysis may be feasible for projects on a regional scale with very high emissions of NO_x and VOCs, where impacts are regional. For example, in 2011 the SCAQMD performed a health impact analysis in its CEQA document for proposed Rule 1315, which authorized various newly-permitted sources to use offsets from the districts “internal bank” of emission reductions. This CEQA analysis accounted for essentially *all* the increases in emissions due to new or modified sources in the District between 2010 and 2030.⁶ The SCAQMD was able to correlate this very large emissions increase (e.g., 6,620 pounds per day NO_x (1,208 tons per year), 89,180 pounds per day VOC (16,275 tons per year)) to expected health outcomes from ozone and particulate matter (e.g., 20 premature deaths per year and 89,947 school absences in the year 2030 due to ozone).⁷ (SCAQMD Governing Board Agenda, February 4, 2011, Agenda Item 26, *Assessment for: Re-adoption of Proposed Rule 1315 – Federal New Source Review Tracking System* (see hyperlink in fn 6) at p. 4.1-35, Table 4.1-29.)

⁶ (SCAQMD Governing Board Agenda, February 4, 2011, Agenda Item 26, Attachment G, *Assessment for: Re-adoption of Proposed Rule 1315 – Federal New Source Review Tracking System, Vol. 1, p.4.0-6*, <http://www.aqmd.gov/home/library/meeting-agendas-minutes/agenda?title=governing-board-meeting-agenda-february-4-2011>; the follow “26. Adopt Proposed Rule 1315 – Federal New Source Review Tracking System” (last visited April 1, 2015).)

⁷ The SCAQMD was able to establish the location of future NO_x and VOC emissions by assuming that new projects would be built in the same locations and proportions as existing stationary sources. This CEQA document was upheld by the Los Angeles County Superior Court in *Natural Res. Def. Council v SCAQMD*, Los Angeles Superior Court No. BS110792).

However, a project emitting only 10 tons per year of NO_x or VOC is small enough that its regional impact on ambient ozone levels may not be detected in the regional air quality models that are currently used to determine ozone levels. Thus, in this case it would not be feasible to directly correlate project emissions of VOC or NO_x with specific health impacts from ozone. This is in part because ozone formation is not linearly related to emissions. Ozone impacts vary depending on the location of the emissions, the location of other precursor emissions, meteorology and seasonal impacts, and because ozone is formed some time later and downwind from the actual emission. (EPA Guideline on Ozone Monitoring Site Selection (Aug. 1998) EPA-454/R-98-002, § 5.1.2; <https://www.epa.gov/ttnamti1/archive/cpreldoc.html>; then search “Guideline on Ozone Monitoring Site Selection” click on pdf) (last viewed Apr. 1, 2015).)

SCAQMD has set its CEQA “significance” threshold for NO_x and VOC at 10 tons per year (expressed as 55 lb/day). (SCAQMD, *Air Quality Analysis Handbook*, <http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook>; then follow “SCAQMD Air Quality Significance Thresholds” hyperlink (last visited Apr. 1, 2015).) This is because the federal Clean Air Act defines a “major” stationary source for “extreme” ozone nonattainment areas such as SCAQMD as one emitting 10 tons/year. (42 U.S.C. §§ 7511a(e), 7511a(f); CAA §§ 182(e), 182(f).) Under the Clean Air Act, such sources are subject to enhanced control requirements (42 U.S.C. §§ 7502(c)(5), 7503; CAA §§ 172(c)(5), 173), so SCAQMD decided this was an appropriate threshold for making a CEQA “significance” finding and requiring feasible mitigation. Essentially, SCAQMD takes the position that a source that emits 10 tons/year of NO_x or VOC would contribute cumulatively to ozone formation. Therefore, lead agencies that use SCAQMD’s thresholds of significance may determine

that many projects have “significant” air quality impacts and must apply all feasible mitigation measures, yet will not be able to precisely correlate the project to quantifiable health impacts, unless the emissions are sufficiently high to use a regional modeling program.

In the case of particulate matter (PM_{2.5})⁸, another “criteria” pollutant, SCAQMD staff is aware of two possible methods of analysis. SCAQMD used regional modeling to predict expected health impacts from its proposed Rule 1315, as mentioned above. Also, the California Air Resources Board (CARB) has developed a methodology that can predict expected mortality (premature deaths) from large amounts of PM_{2.5}. (California Air Resources Board, *Health Impacts Analysis: PM Premature Death Relationship*, http://www.arb.ca.gov/research/health/pm-mort/pm-mort_arch.htm (last reviewed Jan. 19, 2012).) SCAQMD used the CARB methodology to predict impacts from three very large power plants (e.g., 731-1837 lbs/day). (Final Environmental Assessment for Rule 1315, *supra*, pp 4.0-12, 4.1-13, 4.1-37 (e.g., 125 premature deaths in the entire SCAQMD in 2030), 4.1-39 (0.05 to 1.77 annual premature deaths from power plants.) Again, this project involved large amounts of additional PM_{2.5} in the District, up to 2.82 tons/day (5,650 lbs/day of PM_{2.5}, or, or 1029 tons/year. (*Id.* at table 4.1-4, p. 4.1-10.)

However, the primary author of the CARB methodology has reported that this PM_{2.5} health impact methodology is not suited for small projects and may yield unreliable results due to various uncertainties.⁹ (SCAQMD, *Final Subsequent Mitigated Negative Declaration for: Warren*

⁸ SCAQMD has not attained the latest annual or 24-hour national ambient air quality standards for “PM_{2.5}” or particulate matter less than 2.5 microns in diameter.

⁹ Among these uncertainties are the representativeness of the population used in the methodology, and the specific source of PM and the corresponding health impacts. (*Id.* at p. 2-24.)

E&P, Inc. WTU Central Facility, New Equipment Project (certified July 19, 2011), <http://www.aqmd.gov/home/library/documents-support-material/lead-agency-permit-projects/permit-project-documents---year-2011>; then follow “Final Subsequent Mitigated Negative Declaration for Warren E&P Inc. WTU Central Facility, New Equipment Project” hyperlink, pp. 2-22, 2-23 (last visited Apr. 1, 2015).) Therefore, when SCAQMD prepared a CEQA document for the expansion of an existing oil production facility, with very small PM_{2.5} increases (3.8 lb/day) and a very small affected population, staff elected not to use the CARB methodology for using estimated PM_{2.5} emissions to derive a projected premature mortality number and explained why it would be inappropriate to do so. (*Id.* at pp 2-22 to 2-24.) SCAQMD staff concluded that use of this methodology for such a small source could result in unreliable findings and would not provide meaningful information. (*Id.* at pp. 2-23, 2-25.) This CEQA document was not challenged in court.

In the above case, while it may have been technically possible to plug the data into the methodology, the results would not have been reliable or meaningful. SCAQMD believes that an agency should not be required to perform analyses that do not produce reliable or meaningful results. This Court has already held that an agency may decline to use even the “normal” “existing conditions” CEQA baseline where to do so would be misleading or without informational value. (*Neighbors for Smart Rail v. Exposition Metro Line* (2013) 57 Cal.4th 439, 448, 457.) The same should be true for a decision that a particular study or analysis would not provide reliable or meaningful results.¹⁰

¹⁰ Whether a particular study would result in “informational value” is a part of deciding whether it is “feasible.” CEQA defines “feasible” as “capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social, and

Therefore, it is not possible to set a hard-and-fast rule on whether a correlation of air quality impacts with specific quantifiable health impacts is required in all cases. Instead, the result turns on whether such an analysis is reasonably feasible in the particular case.¹¹ Moreover, what is reasonably feasible may change over time as scientists and regulatory agencies continually seek to improve their ability to predict health impacts. For example, CARB staff has been directed by its Governing Board to reassess and improve the methodology for estimating premature deaths. (California Air Resources Board, *Health Impacts Analysis: PM Mortality Relationship*, <http://www.arb.ca.gov/research/health/pm-mort/pm-mort.htm> (last reviewed Dec. 29, 2010).) This factor also counsels against setting any hard-and-fast rule in this case.

III. THE QUESTION OF WHETHER AN EIR CONTAINS SUFFICIENT ANALYSIS TO MEET CEQA'S REQUIREMENTS IS A MIXED QUESTION OF FACT AND LAW GOVERNED BY TWO DIFFERENT STANDARDS OF REVIEW.

A. Standard of Review for Feasibility Determination and Sufficiency as an Informative Document

A second issue in this case is whether courts should review an EIR's informational sufficiency under the "substantial evidence" test as argued by Friant Ranch or the "independent judgment" test as argued by Sierra Club.

technological factors." (Pub. Resources Code § 21061.1.) A study cannot be "accomplished in a *successful* manner" if it produces unreliable or misleading results.

¹¹ In this case, the lead agency did not have an opportunity to determine whether the requested analysis was feasible because the comment was non-specific. Therefore, SCAQMD suggests that this Court, after resolving the legal issues in the case, direct the Court of Appeal to remand the case to the lead agency for a determination of whether the requested analysis is feasible. Because Fresno County, the lead agency, did not seek review in this Court, it seems likely that the County has concluded that at least some level of correlation of air pollution with health impacts is feasible.

As this Court has explained, “a reviewing court must adjust its scrutiny to the nature of the alleged defect, depending on whether the claim is predominantly one of improper procedure or a dispute over the facts.” (*Vineyard Area Citizens v. City of Rancho Cordova, supra*, 40 Cal.4th at 435.) For questions regarding compliance with proper procedure or other legal questions, courts review an agency’s action de novo under the “independent judgment” test. (*Id.*) On the other hand, courts review factual disputes only for substantial evidence, thereby “accord[ing] greater deference to the agency’s substantive factual conclusions.” (*Id.*)

Here, Friant Ranch and Sierra Club agree that the case involves the question of whether an EIR includes sufficient information regarding a project’s impacts. However, they disagree on the proper standard of review for answering this question: Sierra Club contends that courts use the independent judgment standard to determine whether an EIR’s analysis is sufficient to meet CEQA’s informational purposes,¹² while Friant Ranch contends that the substantial evidence standard applies to this question.

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¹² Sierra Club acknowledges that courts use the substantial evidence standard when reviewing predicate factual issues, but argues that courts ultimately decide as a matter of law what CEQA requires. (Answering Brief, pp. 14, 23.)

SCAQMD submits that the issue is more nuanced than either party contends. We submit that, whether a CEQA document includes sufficient analysis to satisfy CEQA's informational mandates is a mixed question of fact and law,¹³ containing two levels of inquiry that should be judged by different standards.¹⁴

The state CEQA Guidelines set forth standards for the adequacy of environmental analysis. Guidelines Section 15151 states:

An EIR should be prepared with a sufficient degree of analysis to provide decision makers with information which enables them to make a decision which intelligently takes account of environmental consequences. An evaluation of the environmental effects of a proposed project need not be exhaustive, but the sufficiency of an EIR is to be reviewed in light of what is reasonably feasible. Disagreement among experts does not make an EIR inadequate, but the EIR should summarize the main points of disagreement among the experts. The courts have looked not for perfection, but for adequacy, completeness, and a good-faith effort at full disclosure.

In this case, the basic question is whether the underlying analysis of air quality impacts made the EIR "sufficient" as an informative document. However, whether the EIR's analysis was sufficient is judged in light of what was reasonably feasible. This represents a mixed question of fact and law that is governed by two different standards of review.

¹³ Friant Ranch actually states that the claim that an EIR lacks sufficient relevant information is, "most properly thought of as raising mixed questions of fact and law." (Opening Brief, p. 27.) However, the remainder of its argument claims that the court should apply the substantial evidence standard of review to all aspects of the issue.

¹⁴ Mixed questions of fact and law issues may implicate predominantly factual subordinate questions that are reviewed under the substantial evidence test even though the ultimate question may be reviewed by the independent judgment test. *Crocker National Bank v. City and County of San Francisco* (1989) 49 Cal.3d 881, 888-889.

SCAQMD submits that an EIR's sufficiency as an informational document is ultimately a legal question that courts should determine using their independent judgment. This Court's language in *Laurel Heights I* supports this position. As this Court explained: "The court does not pass upon the correctness of the EIR's environmental conclusions, but only upon its *sufficiency as an informative document*." (*Laurel Heights I, supra*, 47 Cal.3d at 392-393) (emphasis added.) As described above, the Court in *Vineyard Area Citizens v. City of Rancho Cordova, supra*, 40 Cal.4th at 431, also used its independent judgment to determine what level of analysis CEQA requires for water supply impacts. The Court did not defer to the lead agency's opinion regarding the law's requirements; rather, it determined for itself what level of analysis was necessary to meet "[t]he law's informational demands." (*Id.* at p. 432.) Further, existing case law also holds that where an agency fails to comply with CEQA's information disclosure requirements, the agency has "failed to proceed in the manner required by law." (*Save Our Peninsula Comm. v. Monterey County Bd. of Supervisors* (2001) 87 Cal.App.4th 99, 118.)

However, whether an EIR satisfies CEQA's requirements depends in part on whether it was reasonably feasible for an agency to conduct additional or more thorough analysis. EIRs must contain "a detailed statement" of a project's impacts (Pub. Res. Code § 21061), and an agency must "use its best efforts to find out and disclose all that it reasonably can." (CEQA Guidelines § 15144.) Nevertheless, "the sufficiency of an EIR is to be reviewed in light of what is reasonably feasible." (CEQA Guidelines § 15151.)

SCAQMD submits that the question of whether additional analysis or a particular study suggested by a commenter is "feasible" is generally a question of fact. Courts have already held that whether a particular alternative is "feasible" is reviewed by the substantial evidence test.

(*Uphold Our Heritage v. Town of Woodside* (2007) 147 Cal.App.4th 587, 598-99; *Center for Biological Diversity v. County of San Bernardino* (2010) 185 Cal.App.4th 866, 883.) Thus, if a lead agency determines that a particular study or analysis is infeasible, that decision should generally be judged by the substantial evidence standard. However, SCAQMD urges this Court to hold that lead agencies must explain the basis of any determination that a particular analysis is infeasible in the EIR itself. An EIR must discuss information, including issues related to the feasibility of particular analyses “in sufficient detail to enable meaningful participation and criticism by the public. ‘[W]hatever is required to be considered in an EIR must be in that formal report; what any official might have known from other writings or oral presentations cannot supply what is lacking in the report.’” (*Laurel Heights I, supra*, 47 Cal.3d at p. 405 (quoting *Santiago County Water District v. County of Orange* (1981) 118 Cal.App.3d 818, 831) (discussing analysis of alternatives).) The evidence on which the determination is based should also be summarized in the EIR itself, with appropriate citations to reference materials if necessary. Otherwise commenting agencies such as SCAQMD would be forced to guess where the lead agency's evidence might be located, thus thwarting effective public participation.

Moreover, if a lead agency determines that a particular study or analysis would not result in reliable or useful information and for that reason is not feasible, that determination should be judged by the substantial evidence test. (See *Neighbors for Smart Rail v. Exposition Metro Line Construction Authority, supra*, 57 Cal.4th 439, 448, 457:

whether “existing conditions” baseline would be misleading or uninformative judged by substantial evidence standard.¹⁵)

If the lead agency’s determination that a particular analysis or study is not feasible is supported by substantial evidence, then the agency has not violated CEQA’s information disclosure provisions, since it would be infeasible to provide additional information. This Court’s decisions provide precedent for such a result. For example, this Court determined that the issue of whether the EIR should have included a more detailed discussion of future herbicide use was resolved because substantial evidence supported the agency’s finding that “the precise parameters of future herbicide use could not be predicted.” *Ebbetts Pass Forest Watch v. California Dept. of Forestry & Fire Protection* (2008) 43 Cal.4th 936, 955.

Of course, SCAQMD expects that courts will continue to hold lead agencies to their obligations to consult with, and not to ignore or misrepresent, the views of sister agencies having special expertise in the area of air quality. (*Berkeley Keep Jets Over the Bay v. Board of Port Commissioners* (2007) 91 Cal.App.4th 1344, 1364 n.11.) In some cases, information provided by such expert agencies may establish that the purported evidence relied on by the lead agency is not in fact “substantial”. (*Id.* at pp. 1369-1371.)

In sum, courts retain ultimate responsibility to determine what CEQA requires. However, the law does not require exhaustive analysis, but only what is reasonably feasible. Agencies deserve deference for their factual determinations regarding what type of analysis is reasonably feasible. On the other hand, if a commenter requests more information, and the lead agency declines to provide it but does *not* determine that the

¹⁵ The substantial evidence standard recognizes that the courts "have neither the resources nor the scientific expertise" to weigh conflicting evidence on technical issues. (*Laurel Heights I, supra*, 47 Cal.3d 376, 393.)

requested study or analysis would be infeasible, misleading or uninformative, the question becomes whether the omission of that analysis renders the EIR inadequate to satisfy CEQA's informational purposes. (*Id.* at pp. 1370-71.) Again, this is predominantly a question of law and should be judged by the de novo or independent judgment standard of review. Of course, this Court has recognized that a "project opponent or reviewing court can always imagine some additional study or analysis that might provide helpful information. It is not for them to design the EIR. That further study...might be helpful does not make it necessary." (*Laurel Heights I, supra*, 47 Cal.3d 376, 415 – see also CEQA Guidelines § 15204(a) [CEQA "does not require a lead agency to conduct every test. . . recommended or demanded by commenters."].) Courts, then, must adjudicate whether an omission of particular information renders an EIR inadequate to serve CEQA's informational purposes.¹⁶

¹⁶ We recognize that there is case law stating that the substantial evidence standard applies to "challenges to the scope of an EIR's analysis of a topic" as well as the methodology used and the accuracy of the data relied on in the document "because these types of challenges involve factual questions." (*Bakersfield Citizens for Local Control v. City of Bakersfield, supra*, 124 Cal.App.4th 1184, 1198, and cases relied on therein.) However, we interpret this language to refer to situations where the question of the scope of the analysis really is factual—that is, where it involves whether further analysis is feasible, as discussed above. This interpretation is supported by the fact that the *Bakersfield* court expressly rejected an argument that a claimed "omission of information from the EIR should be treated as inquiries whether there is substantial evidence supporting the decision approving the project." *Bakersfield, supra*, 124 Cal.App.4th at p. 1208. And the *Bakersfield* court ultimately decided that the lead agency must analyze the connection between the identified air pollution impacts and resulting health impacts, even though the EIR already included some discussion of air-pollution-related respiratory illnesses. *Bakersfield, supra*, 124 Cal.App.4th at p. 1220. Therefore, the court must not have interpreted this question as one of the "scope of the analysis" to be judged by the substantial evidence standard.

B. Friant Ranch's Rationale for Rejecting the Independent Judgment Standard of Review is Unsupported by Case Law.

In its brief, Friant Ranch makes a distinction between cases where a required CEQA topic is not discussed at all (to be reviewed by independent judgment as a failure to proceed in the manner required by law) and cases where a topic is discussed, but the commenter claims the information provided is insufficient (to be judged by the substantial evidence test). (Opening Brief, pp. 13-17.) The Court of Appeal recognized these two types of cases, but concluded that both raised questions of law. (*Sierra Club v. County of Fresno* (2014) 226 Cal.App.4th 704 (superseded by grant of review) 172 Cal.Rptr.3d 271, 290.) We believe the distinction drawn by Friant Ranch is unduly narrow, and inconsistent with cases which have concluded that CEQA documents are insufficient. In many instances, CEQA's requirements are stated broadly, and the courts must interpret the law to determine what level of analysis satisfies CEQA's mandate for providing meaningful information, even though the EIR discusses the issue to some extent.

For example, the CEQA Guidelines require discussion of the existing environmental baseline. In *County of Amador v. El Dorado County Water Agency* (1999) 76 Cal.App.4th 931, 954-955, the lead agency had discussed the environmental baseline by describing historic month-end water levels in the affected lakes. However, the court held that this was not an adequate baseline discussion because it failed to discuss the timing and amounts of past actual water releases, to allow comparison with the proposed project. The court evidently applied the independent judgment test to its decision, even though the agency discussed the issue to some extent.

Likewise, in *Vineyard Area Citizens* (2007) 40 Cal.4th 412, this Court addressed the question of whether an EIR's analysis of water supply impacts complied with CEQA. The parties agreed that the EIR was required to analyze the effects of providing water to the development project, "and that in order to do so the EIR had, in some manner, to identify the planned sources of that water." (*Vineyard Area Citizens, supra*, at p. 428.) However, the parties disagreed as to the level of detail required for this analysis and "what level of uncertainty regarding the availability of water supplies can be tolerated in an EIR" (*Id.*) In other words, the EIR had analyzed water supply impacts for the project, but the petitioner claimed that the analysis was insufficient.

This Court noted that neither CEQA's statutory language or the CEQA Guidelines specifically addressed the question of how precisely an EIR must discuss water supply impacts. (*Id.*) However, it explained that CEQA "states that '[w]hile foreseeing the unforeseeable is not possible, an agency must use its best efforts to find out and disclose all that it reasonably can.'" (*Id.*, [Guidelines § 15144].) The Court used this general principle, along with prior precedent, to elucidate four "principles for analytical adequacy" that are necessary in order to satisfy "CEQA's informational purposes." (*Vineyard Area Citizens, supra*, at p. 430.) The Court did not defer to the agency's determination that the EIR's analysis of water supply impacts was sufficient. Rather, this Court used its independent judgment to determine for itself the level of analysis required to satisfy CEQA's fundamental purposes. (*Vineyard Area Citizens, supra*, at p. 441: an EIR does not serve its purposes where it neglects to explain likely sources of water and "... leaves long term water supply considerations to later stages of the project.")

Similarly, the CEQA Guidelines require an analysis of noise impacts of the project. (Appendix G, “Environmental Checklist Form.”¹⁷) In *Gray v. County of Madera* (2008) 167 Cal.App.4th 1099, 1123, the court held that the lead agency’s noise impact analysis was inadequate even though it had addressed the issue and concluded that the increase would not be noticeable. If the court had been using the substantial evidence standard, it likely would have upheld this discussion.

Therefore, we do not agree that the issue can be resolved on the basis suggested by Friant Ranch, which would apply the substantial evidence standard to *every* challenge to an analysis that addresses a required CEQA topic. This interpretation would subvert the courts’ proper role in interpreting CEQA and determining what the law requires.

Nor do we agree that the Court of Appeal in this case violated CEQA’s prohibition on courts interpreting its provisions “in a manner which imposes procedural or substantive requirements beyond those explicitly stated in this division or in the state guidelines.” (Pub. Resources Code § 21083.1.) CEQA requires an EIR to describe *all* significant impacts of the project on the environment. (Pub. Resources Code § 21100(b)(2); *Vineyard Area Citizens, supra*, at p. 428.) Human beings are part of the environment, so CEQA requires EIRs to discuss a project’s significant impacts on human health. However, except in certain particular circumstances,¹⁸ neither the CEQA statute nor Guidelines specify the precise level of analysis that agencies must undertake to satisfy the law’s requirements. (see, e.g., CEQA Guidelines § 15126.2(a) [EIRs must describe “health and safety problems caused by {a project’s} physical changes”].) Accordingly, courts must interpret CEQA as a whole to

¹⁷ Association of Environmental Professionals, 2015 CEQA Statute and Guidelines (2015) p.287.

¹⁸ E.g., Pub. Resources Code § 21151.8(C)(3)(B)(iii) (requiring specific type of health risk analysis for siting schools).

determine whether a particular EIR is sufficient as an informational document. A court determining whether an EIR's discussion of human health impacts is legally sufficient does not constitute imposing a new substantive requirement.¹⁹ Under Friant Ranch's theory, the above-referenced cases holding a CEQA analysis inadequate would have violated the law. This is not a reasonable interpretation.

IV. COURTS MUST SCRUPULOUSLY ENFORCE THE REQUIREMENTS THAT LEAD AGENCIES CONSULT WITH AND OBTAIN COMMENTS FROM AIR DISTRICTS

Courts must "scrupulously enforce" CEQA's legislatively mandated requirements. (*Vineyard Area Citizens, supra*, 40 Cal.4th 412, 435.) Case law has firmly established that lead agencies must consult with the relevant air pollution control district before conducting an initial study, and must provide the districts with notice of the intention to adopt a negative declaration (or EIR). (*Schenck v. County of Sonoma* (2011) 198 Cal.App.4th 949, 958.) As *Schenck* held, neither publishing the notice nor providing it to the State Clearinghouse was a sufficient substitute for sending notice directly to the air district. (*Id.*) Rather, courts "must be satisfied that [administrative] agencies have fully complied with the procedural requirements of CEQA, since only in this way can the important public purposes of CEQA be protected from subversion." *Schenck*, 198 Cal.App.4th at p. 959 (citations omitted).²⁰

¹⁹ We submit that Public Resources Code Section 21083.1 was intended to prevent courts from, for example, holding that an agency must analyze economic impacts of a project where there are no resulting environmental impacts (see CEQA Guidelines § 15131), or imposing new procedural requirements, such as imposing additional public notice requirements not set forth in CEQA or the Guidelines.

²⁰ Lead agencies must consult air districts, as public agencies with jurisdiction by law over resources affected by the project, *before* releasing an EIR. (Pub. Resources Code §§ 21104(a); 21153.) Moreover, air

Lead agencies should be aware, therefore, that failure to properly seek and consider input from the relevant air district constitutes legal error which may jeopardize their project approvals. For example, the court in *Fall River Wild Trout Foundation v. County of Shasta*, (1999) 70 Cal.App.4th 482, 492 held that the failure to give notice to a trustee agency (Department of Fish and Game) was prejudicial error requiring reversal. The court explained that the lack of notice prevented the Department from providing any response to the CEQA document. (*Id.* at p. 492.) It therefore prevented relevant information from being presented to the lead agency, which was prejudicial error because it precluded informed decision-making. (*Id.*)²¹

districts should be considered “state agencies” for purposes of the requirement to consult with “trustee agencies” as set forth in Public Resources Code § 20180.3(a). This Court has long ago held that the districts are not mere “local agencies” whose regulations are superseded by those of a state agency regarding matters of statewide concern, but rather have concurrent jurisdiction over such issues. (*Orange County Air Pollution Control District v. Public Util. Com.* (1971) 4 Cal.3d 945, 951, 954.) Since air pollution is a matter of statewide concern, *Id.* at 952, air districts should be entitled to trustee agency status in order to ensure that this vital concern is adequately protected during the CEQA process.

²¹ In *Schenck*, the court concluded that failure to give notice to the air district was not prejudicial, but this was partly because the trial court had already corrected the error before the case arrived at the Court of Appeal. The trial court issued a writ of mandate requiring the lead agency to give notice to the air district. The air district responded by concurring with the lead agency that air impacts were not significant. (*Schenck*, 198 Cal.App.4th 949, 960.) We disagree with the *Schenck* court that the failure to give notice to the air district would not have been prejudicial (even in the absence of the trial court writ) merely because the lead agency purported to follow the air district’s published CEQA guidelines for significance. (*Id.*, 198 Cal.App.4th at p. 960.) In the first place, absent notice to the air district, it is uncertain whether the lead agency properly followed those guidelines. Moreover, it is not realistic to expect that an air district’s published guidelines would necessarily fully address all possible air-quality related issues that can arise with a CEQA project, or that those

Similarly, lead agencies must obtain additional information requested by expert agencies, including those with jurisdiction by law, if that information is necessary to determine a project's impacts. (*Sierra Club v. State Bd. Of Forestry* (1994) 7 Cal.4th 1215, 1236-37.) Approving a project without obtaining that information constitutes a failure to proceed in the manner prescribed by CEQA. (*Id.* at p. 1236.)

Moreover, a lead agency can save significant time and money by consulting with the air district early in the process. For example, the lead agency can learn what the air district recommends as an appropriate analysis on the facts of its case, including what kinds of health impacts analysis may be available, and what models are appropriate for use. This saves the lead agency from the need to do its analysis all over again and possibly needing to recirculate the document after errors are corrected, if new significant impacts are identified. (CEQA Guidelines § 15088.5(a).) At the same time, the air district's expert input can help the lead agency properly determine whether another commenter's request for additional analysis or studies is reasonable or feasible. Finally, the air district can provide input on what mitigation measures would be feasible and effective.

Therefore, we suggest that this Court provide guidance to lead agencies reminding them of the importance of consulting with the relevant air districts regarding these issues. Otherwise, their feasibility decisions may be vulnerable to air district evidence that establishes that there is no substantial evidence to support the lead agency decision not to provide specific analysis. (*See Berkeley Keep Jets Over the Bay, supra*, 91 Cal.App.4th 1344, 1369-1371.)

guidelines would necessarily be continually modified to reflect new developments. Therefore we believe that, had the trial court not already ordered the lead agency to obtain the air district's views, the failure to give notice would have been prejudicial, as in *Fall River, supra*, 70 Cal.App.4th 482, 492.

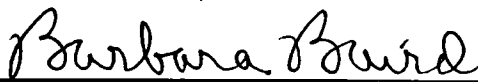
CONCLUSION

The SCAQMD respectfully requests this Court *not* to establish a hard-and-fast rule concerning whether CEQA requires a lead agency to correlate identified air quality impacts of a project with resulting health outcomes. Moreover, the question of whether an EIR is “sufficient as an informational document” is a mixed question of fact and law containing two levels of inquiry. Whether a particular proposed analysis is feasible is predominantly a question of fact to be judged by the substantial evidence standard of review. Where the requested analysis is feasible, but the lead agency relies on legal or policy reasons not to provide it, the question of whether the EIR is nevertheless sufficient as an informational document is predominantly a question of law to be judged by the independent judgment standard of review.

Respectfully submitted,

DATED: April 3, 2015

SOUTH COAST AIR QUALITY
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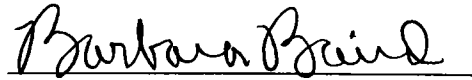
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CERTIFICATE OF WORD COUNT

Pursuant to Rule 8.520(c)(1) of the California Rules of Court, I hereby certify that this brief contains 8,476 words, including footnotes, but excluding the Application, Table of Contents, Table of Authorities, Certificate of Service, this Certificate of Word Count, and signature blocks. I have relied on the word count of the Microsoft Word Vista program used to prepare this Certificate.

DATED: April 3, 2015

Respectfully submitted,


Barbara Baird

PROOF OF SERVICE

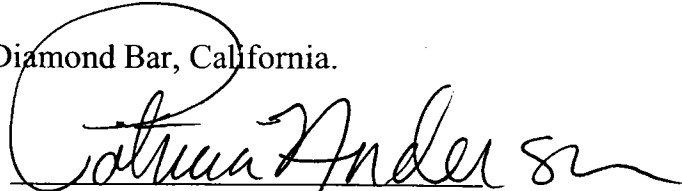
I am employed in the County of Los Angeles, California. I am over the age of 18 years and not a party to the within action. My business address is 21865 Copley Drive, Diamond Bar, California 91765.

On April 3, 2015 I served true copies of the following document(s) described as **APPLICATION OF THE SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT FOR LEAVE TO FILE BRIEF OF *AMICUS CURIAE* IN SUPPORT OF NEITHER PARTY AND [PROPOSED] BRIEF OF *AMICUS CURIAE*** by placing a true copy of the foregoing document(s) in a sealed envelope addressed as set forth on the attached service list as follows:

BY MAIL: I enclosed the document(s) in a sealed envelope or package addressed to the persons at the addresses listed in the Service List and placed the envelope for collection and mailing following our ordinary business practices. I am readily familiar with this District's practice for collection and processing of correspondence for mailing. Under that practice, the correspondence would be deposited with the United States Postal Service, with postage thereon fully prepaid at Diamond Bar, California, in the ordinary course of business. I am aware that on motion of the party served, service is presumed invalid if postal cancellation date or postage meter date is more than one day after date of deposit for mailing in affidavit.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct.

Executed on April 3, 2015 at Diamond Bar, California.


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SUPREME COURT COPY

CASE NO. S219783

IN THE SUPREME COURT OF CALIFORNIA

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LEAGUE OF WOMEN VOTERS OF FRESNO,
Plaintiffs and Appellants

v.

COUNTY OF FRESNO,
Defendant and Respondent

FRIANT RANCH, L.P.,
Real Party in Interest and Respondent

SUPREME COURT
FILED

APR 13 2015

Frank A. McGuire, Clerk
Deputy

After a Decision by the Court of Appeal, filed May 27, 2014
Fifth Appellate District Case No. F066798

Appeal from the Superior Court of California, County of Fresno
Case No. 11CECG00726

**APPLICATION FOR LEAVE TO FILE AMICUS CURIAE BRIEF OF
SAN JOAQUIN VALLEY UNIFIED AIR POLLUTION CONTROL DISTRICT IN
SUPPORT OF DEFENDANT AND RESPONDENT, COUNTY OF FRESNO AND
REAL PARTY IN INTEREST AND RESPONDENT, FRIANT RANCH, L.P.**

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APPLICATION

Pursuant to California Rules of Court 8.520(f)(1), proposed Amicus Curiae San Joaquin Valley Unified Air Pollution Control District hereby requests permission from the Chief Justice to file an amicus brief in support of Defendant and Respondent, County of Fresno, and Defendant and Real Parties in Interest Friant Ranch, L.P. Pursuant to Rule 8.520(f)(5) of the California Rules of Court, the proposed amicus curiae brief is combined with this Application. The brief addresses the following issue certified by this Court for review:

Is an EIR adequate when it identifies the health impacts of air pollution and quantifies a project's expected emissions, or does CEQA further require the EIR to *correlate* a project's air quality emissions to specific health impacts?

As of the date of this filing, the deadline for the final reply brief on the merits was March 5, 2015. Accordingly, under Rule 8.520(f)(2), this application and brief are timely.

1. Background and Interest of San Joaquin Valley Unified Air Pollution Control District

The San Joaquin Valley Unified Air Pollution Control District ("Air District") regulates air quality in the eight counties comprising the San Joaquin Valley ("Central Valley"): Kern, Tulare, Madera, Fresno, Merced, San Joaquin, Stanislaus, and Kings, and is primarily responsible for attaining air quality standards within its jurisdiction. After billions of dollars of investment by Central Valley businesses, pioneering air quality regulations, and consistent efforts by residents, the Central Valley air basin has made historic improvements in air quality.

The Central Valley's geographical, topographical and meteorological features create exceptionally challenging air quality

conditions. For example, it receives air pollution transported from the San Francisco Bay Area and northern Central Valley communities, and the southern portion of the Central Valley includes three mountain ranges (Sierra, Tehachapi, and Coastal) that, under some meteorological conditions, effectively trap air pollution. Central Valley air pollution is only a fraction of what the Bay Area and Los Angeles produce, but these natural conditions result in air quality conditions that are only marginally better than Los Angeles, even though about ten times more pollution is emitted in the Los Angeles region. Bay Area air quality is much better than the Central Valley's, even though the Bay Area produces about six times more pollution. The Central Valley also receives air pollution transported from the Bay Area and northern counties in the Central Valley, including Sacramento, and transboundary anthropogenic ozone from as far away as China.

Notwithstanding these challenges, the Central Valley has reduced emissions at the same or better rate than other areas in California and has achieved unparalleled milestones in protecting public health and the environment:

- In the last decade, the Central Valley became the first air basin classified by the federal government under the Clean Air Act as a “serious nonattainment” area to come into attainment of health-based National Ambient Air Quality Standard (“NAAQS”) for coarse particulate matter (PM10), an achievement made even more notable given the Valley’s extensive agricultural sector. Unhealthy levels of particulate matter can cause and exacerbate a range of chronic and acute illnesses.
- In 2013, the Central Valley became the first air basin in the country to improve from a federal designation of “extreme” nonattainment to

actually attain (and quality for an attainment designation) of the 1-hour ozone NAAQS; ozone creates “smog” and, like PM10, causes adverse health impacts.

- The Central Valley also is in full attainment of federal standards for lead, nitrogen dioxide, sulfur dioxide, and carbon monoxide.
- The Central Valley continues to make progress toward compliance with its last two attainment standards, with the number of exceedences for the 8-hour ozone NAAQS reduced by 74% (for the 1997 standard) and 38% (for the 2008 standard) since 1991, and for the small particulate matter (PM2.5) NAAQS reduced by 85% (for the 1997 standard) and 61% (for the 2006 standard).

Sustained improvement in Central Valley air quality requires a rigorous and comprehensive regulatory framework that includes prohibitions (e.g., on wood-burning fireplaces in new residences), mandates (e.g., requiring the installation of best available pollution reduction technologies on new and modified equipment and industrial operations), innovations (e.g., fees assessed against residential development to fund pollution reduction actions to “offset” vehicular emissions associated with new residences), incentive programs (e.g., funding replacements of older, more polluting heavy duty trucks and school buses)¹, ongoing planning for continued air quality improvements, and enforcement of Air District permits and regulations.

The Air District is also an expert air quality agency for the eight counties and cities in the San Joaquin Valley. In that capacity, the Air District has developed air quality emission guidelines for use by the Central

¹ San Joaquin’s incentive program has been so successful that through 2012, it has awarded over \$ 432 million in incentive funds and has achieved 93,349 tons of lifetime emissions reductions. See SAN JOAQUIN VALLEY AIR POLLUTION CONTROL DISTRICT, 2012 PM2.5 PLAN, 6-6 (2012) available at <http://www.valleyair.org/Workshops/postings/2012/12-20-12PM25/FinalVersion/06%20Chapter%206%20Incentives.pdf>.

Valley counties and cities that implement the California Environment Quality Act (CEQA).² In its guidance, the Air District has distinguished between toxic air contaminants and criteria air pollutants.³ Recognizing this distinction, the Air District's CEQA Guidance has adopted distinct thresholds of significance for *criteria* pollutants (i.e., ozone, PM2.5 and their respective precursor pollutants) based upon scientific and factual data which demonstrates the level that can be accommodated on a cumulative basis in the San Joaquin Valley without affecting the attainment of the applicable NAAQS.⁴ For *toxic air* pollutants, the District has adopted different thresholds of significance which scientific and factual data demonstrates has the potential to expose sensitive receptors (i.e., children, the elderly) to levels which may result in localized health impacts.⁵

The Air District's CEQA Guidance was followed by the County of Fresno in its environment review of the Friant Ranch project, for which the Air District also served as a commenting agency. The Court of Appeal's holding, however, requiring correlation between the project's criteria

² See, e.g., SAN JOAQUIN VALLEY AIR POLLUTION CONTROL DISTRICT, PLANNING DIVISION, GUIDE FOR ASSESSING AND MITIGATING AIR QUALITY IMPACTS (2015), available at http://www.valleyair.org/transportation/GAMAQI_3-19-15.pdf ("CEQA Guidance").

³ Toxic air contaminants, also known as hazardous air pollutants, are those pollutants that are known or suspected to cause cancer or other serious health effects, such as birth defects. There are currently 189 toxic air contaminants regulated by the United States Environmental Protection Agency ("EPA") and the states pursuant to the Clean Air Act. 42 U.S.C. § 7412. Common TACs include benzene, perchloroethylene and asbestos. *Id.* at 7412(b).

In contrast, there are only six (6) criteria air pollutants: ozone, particulate matter, carbon monoxide, nitrogen oxides, sulfur dioxide and lead. Although criteria air pollutants can also be harmful to human health, they are distinguishable from toxic air contaminants and are regulated separately. For instance, while criteria pollutants are regulated by numerous sections throughout Title I of the Clean Air Act, the regulation of toxic air contaminants occurs solely under section 112 of the Act. Compare 42 U.S.C. §§ 7407 – 7411 & 7501 – 7515 with 42 U.S.C. § 7411.

⁴ See, e.g., CEQA Guidance at http://www.valleyair.org/transportation/GAMAQI_3-19-15.pdf, pp. 64-66, 80.

⁵ See, e.g., CEQA Guidance at http://www.valleyair.org/transportation/GAMAQI_3-19-15.pdf, pp. 66, 99-101.

pollutants and local health impacts, departs from the Air District's Guidance and approved methodology for assessing criteria pollutants. A close reading of the administrative record that gave rise to this issue demonstrates that the Court's holding is based on a misunderstanding of the distinction between toxic air contaminants (for which a local health risk assessment is feasible and routinely performed) and criteria air pollutants (for which a local health risk assessment is not feasible and would result in speculative results).⁶ The Air District has a direct interest in ensuring the lawfulness and consistent application of its CEQA Guidance, and will explain how the Court of Appeal departed from the Air District's long-standing CEQA Guidance in addressing criteria pollutants and toxic air contaminants in this amicus brief.

2. How the Proposed Amicus Curiae Brief Will Assist the Court

As counsel for the proposed amicus curiae, we have reviewed the briefs filed in this action. In addition to serving as a "commentary agency" for CEQA purposes over the Friant Ranch project, the Air District has a strong interest in assuring that CEQA is used for its intended purpose, and believes that this Court would benefit from additional briefing explaining the distinction between criteria pollutants and toxic air contaminants and the different methodologies employed by local air pollution control agencies such as the Air District to analyze these two categories of air pollutants under CEQA. The Air District will also explain how the Court of Appeal's opinion is based upon a fundamental misunderstanding of these two different approaches by requiring the County of Fresno to correlate the project's *criteria* pollution emissions with *local* health impacts. In doing

⁶ CEQA does not require speculation. *See, e.g., Laurel Heights Improvement Ass'n v. Regents of Univ. of Cal.*, 6 Cal. 4th 1112, 1137 (1993) (upholding EIR that failed to evaluate cumulative toxic air emission increases given absence of any acceptable means for doing so).

so, the Air District will provide helpful analysis to support its position that at least insofar as criteria pollutants are concerned, CEQA does not require an EIR to correlate a project's air quality emissions to specific health impacts, because such an analysis is not reasonably feasible.

Rule 8.520 Disclosure

Pursuant to Cal. R. 8.520(f)(4), neither the Plaintiffs nor the Defendant or Real Party In Interest or their respective counsel authored this brief in whole or in part. Neither the Plaintiffs nor the Defendant or Real Party in Interest or their respective counsel made any monetary contribution towards or in support of the preparation of this brief.

CONCLUSION

On behalf of the San Joaquin Valley Unified Air Pollution Control District, we respectfully request that this Court accept the filing of the attached brief.

Dated: April 2, 2015



Annette A. Ballatore-Williamson
District Counsel
Attorney for Proposed Amicus Curiae

SAN JOAQUIN VALLEY UNIFIED
AIR POLLUTION CONTROL
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I. INTRODUCTION.

The San Joaquin Valley Unified Air Pollution Control District (“Air District”) respectfully submits that the Court of Appeal erred when it held that the air quality analysis contained in the Environmental Impact Report (“EIR”) for the Friant Ranch development project was inadequate under the California Environmental Quality Act (“CEQA”) because it did not include an analysis of the correlation between the project’s criteria air pollutants and the potential adverse human health impacts. A close reading of the portion of the administrative record that gave rise to this issue demonstrates that the Court’s holding is based on a misunderstanding of the distinction between toxic air contaminants and criteria air pollutants.

Toxic air contaminants, also known as hazardous air pollutants, are those pollutants that are known or suspected to cause cancer or other serious health effects, such as birth defects. There are currently 189 toxic air contaminants (hereinafter referred to as “TACs”) regulated by the United States Environmental Protection Agency (“EPA”) and the states pursuant to the Clean Air Act. 42 U.S.C. § 7412. Common TACs include benzene, perchloroethylene and asbestos. *Id.* at 7412(b).

In contrast, there are only six (6) criteria air pollutants: ozone, particulate matter, carbon monoxide, nitrogen oxides, sulfur dioxide and lead. Although criteria air pollutants can also be harmful to human health,

they are distinguishable from TACs and are regulated separately. For instance, while criteria pollutants are regulated by numerous sections throughout Title I of the Clean Air Act, the regulation of TACs occurs solely under section 112 of the Act. *Compare* 42 U.S.C. §§ 7407 – 7411 & 7501 – 7515 *with* 42 U.S.C. § 7411.

The most relevant difference between criteria pollutants and TACs for purposes of this case is the manner in which human health impacts are accounted for. While it is common practice to analyze the correlation between an individual facility's TAC emissions and the expected localized human health impacts, such is not the case for criteria pollutants. Instead, the human health impacts associated with criteria air pollutants are analyzed and taken into consideration when EPA sets the national ambient air quality standard ("NAAQS") for each criteria pollutant. 42 U.S.C. § 7409(b)(1). The health impact of a particular criteria pollutant is analyzed on a regional and not a facility level based on how close the area is to complying with (attaining) the NAAQS. Accordingly, while the type of individual facility / health impact analysis that the Court of Appeal has required is a customary practice for TACs, it is not feasible to conduct a similar analysis for criteria air pollutants because currently available computer modeling tools are not equipped for this task.

It is clear from a reading of both the administrative record and the Court of Appeal's decision that the Court did not have the expertise to fully

appreciate the difference between TACs and criteria air pollutants. As a result, the Court has ordered the County of Fresno to conduct an analysis that is not practicable and not likely yield valid information. The Air District respectfully requests that this portion of the Court of Appeal's decision be reversed.

II. THE COURT OF APPEAL ERRED IN FINDING THE FRIANT RANCH EIR INADEQUATE FOR FAILING TO ANALYZE THE SPECIFIC HUMAN HEALTH IMPACTS ASSOCIATED CRITERIA AIR POLLUTANTS.

Although the Air District does not take lightly the amount of air emissions at issue in this case, it submits that the Court of Appeal got it wrong when it required Fresno County to revise the Friant Ranch EIR to include an analysis correlating the criteria air pollutant emissions associated with the project with specific, localized health-impacts. The type of analysis the Court of Appeal has required will not yield reliable information because currently available modeling tools are not well suited for this task. Further, in reviewing this issue de novo, the Court of Appeal failed to appreciate that it lacked the scientific expertise to appreciate the significant differences between a health risk assessment commonly performed for toxic air contaminants and a similar type of analysis it felt should have been conducted for criteria air pollutants.

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A. Currently Available Modeling Tools are not Equipped to Provide a Meaningful Analysis of the Correlation between an Individual Development Project's Air Emissions and Specific Human Health Impacts.

In order to appreciate the problematic nature of the Court of Appeals' decision requiring a health risk type analysis for criteria air pollutants, it is important to understand how the relevant criteria pollutants (ozone and particulate matter) are formed, dispersed and regulated.

Ground level ozone (smog) is not directly emitted into the air, but is formed when precursor pollutants such as oxides of nitrogen (NO_x) and volatile organic compounds (VOCs) are emitted into the atmosphere and undergo complex chemical reactions in the process of sunlight.¹ Once formed, ozone can be transported long distances by wind.² Because of the complexity of ozone formation, a specific tonnage amount of NO_x or VOCs emitted in a particular area does not equate to a particular concentration of ozone in that area. In fact, even rural areas that have relatively low tonnages of emissions of NO_x or VOCs can have high levels of ozone concentration simply due to wind transport.³ Conversely, the San Francisco Bay Area has six times more NO_x and VOC emissions per square mile than the San Joaquin Valley, but experiences lower

¹ See United States Environmental Protection Agency, *Ground-level Ozone: Basic Information*, available at: <http://www.epa.gov/airquality/ozonepollution/basic.html> (visited March 10, 2015).

² *Id.*

³ *Id.*

concentrations of ozone (and better air quality) simply because sea breezes disperse the emissions.⁴

Particulate matter (“PM”) can be divided into two categories: directly emitted PM and secondary PM.⁵ While directly emitted PM can have a localized impact, the tonnage emitted does not always equate to the local PM concentration because it can be transported long distances by wind.⁶ Secondary PM, like ozone, is formed via complex chemical reactions in the atmosphere between precursor chemicals such as sulfur dioxides (SO_x) and NO_x.⁷ Because of the complexity of secondary PM formation, the tonnage of PM-forming precursor emissions in an area does not necessarily result in an equivalent concentration of secondary PM in that area.

The disconnect between the *tonnage* of precursor pollutants (NO_x, SO_x and VOCs) and the *concentration* of ozone or PM formed is important because it is not necessarily the tonnage of precursor pollutants that causes human health effects, but the concentration of resulting ozone or PM. Indeed, the national ambient air quality standards (“NAAQS”), which are statutorily required to be set by the United States Environmental Protection

⁴ *San Joaquin Valley Air Pollution Control District 2007 Ozone Plan*, Executive Summary p. ES-6, available at: http://www.valleyair.org/Air_Quality_Plans/docs/AQ_Ozone_2007_Adopted/03%20Executive%20Summary.pdf (visited March 10, 2015).

⁵ United States Environmental Protection Agency, *Particulate Matter: Basic Information*, available at: <http://www.epa.gov/airquality/particlepollution/basic.html> (visited March 10, 2015).

⁶ *Id.*

⁷ *Id.*

Agency (“EPA”) at levels that are “requisite to protect the public health,” 42 U.S.C. § 7409(b)(1), are established as concentrations of ozone or particulate matter and not as tonnages of their precursor pollutants.⁸

Attainment of a particular NAAQS occurs when the concentration of the relevant pollutant remains below a set threshold on a consistent basis throughout a particular region. For example, the San Joaquin Valley attained the 1-hour ozone NAAQS when ozone concentrations remained at or below 0.124 parts per million Valley-wide on 3 or fewer days over a 3-year period.⁹ Because the NAAQS are focused on achieving a particular concentration of pollution region-wide, the Air District’s tools and plans for attaining the NAAQS are regional in nature.

For instance, the computer models used to simulate and predict an attainment date for the ozone or particulate matter NAAQS in the San Joaquin Valley are based on regional inputs, such as regional inventories of precursor pollutants (NO_x, SO_x and VOCs) and the atmospheric chemistry and meteorology of the Valley.¹⁰ At a very basic level, the models simulate future ozone or PM levels based on predicted changes in precursor

⁸ See, e.g., United States Environmental Protection Agency, *Table of National Ambient Air Quality Standards*, available at: <http://www.epa.gov/air/criteria.html#3> (visited March 10, 2015).

⁹ *San Joaquin Valley Unified Air Pollution Control District 2013 Plan for the Revoked 1-Hour Ozone Standard*, Ch. 2 p. 2-16, available at: http://www.valleyair.org/Air_Quality_Plans/OzoneOneHourPlan2013/02Chapter2ScienceTrendsModeling.pdf (visited March 10, 2015).

¹⁰ *Id.* at Ch. 2 p. 2-19 (visited March 12, 2015); *San Joaquin Valley Unified Air Pollution Control District 2008 PM_{2.5} Plan*, Appendix F, pp. F-2 – F-5, available at: http://www.valleyair.org/Air_Quality_Plans/docs/AQ_Final_Adopted_PM2.5/20%20Appendix%20F.pdf (visited March 19, 2015).

emissions Valley wide.¹¹ Because the NAAQS are set levels necessary to protect human health, the closer a region is to attaining a particular NAAQS, the lower the human health impact is from that pollutant.

The goal of these modeling exercises is not to determine whether the emissions generated by a particular factory or development project will affect the date that the Valley attains the NAAQS. Rather, the Air District's modeling and planning strategy is regional in nature and based on the extent to which *all* of the emission-generating sources in the Valley (current and future) must be controlled in order to reach attainment.¹²

Accordingly, the Air District has based its thresholds of significance for CEQA purposes on the levels that scientific and factual data demonstrate that the Valley can accommodate without affecting the attainment date for the NAAQS.¹³ The Air District has tied its CEQA significance thresholds to the level at which stationary pollution sources permitted by the Air District must "offset" their emissions.¹⁴ This "offset"

¹¹ *Id.*

¹² Although the Air District does have a dispersion modeling tool used during its air permitting process that is used to predict whether a particular project's directly emitted PM will either cause an exceedance of the PM NAAQS or contribute to an existing exceedance, this model bases the prediction on a worst case scenario of emissions and meteorology and has no provision for predicting any associated human health impacts. Further, this analysis is only performed for stationary sources (factories, oil refineries, etc.) that are required to obtain a New Source Review permit from the Air District and not for development projects such as Friant Ranch over which the Air District has no preconstruction permitting authority. See San Joaquin Valley Unified Air Pollution Control District Rule 2201 §§ 2.0; 3.3.9; 4.14.1, available at: <http://www.valleyair.org/rules/currntrules/Rule22010411.pdf> (visited March 19, 2015).

¹³ *San Joaquin Valley Unified Air Pollution Control District Guide to Assessing and Mitigating Air Quality Impacts*, (March 19, 2015) p. 22, available at: <http://www.valleyair.org/transportation/CEQA%20Rules/GAMAQI%20Jan%202002%20Rev.pdf> (visited March 30, 2015).

¹⁴ *Id.* at pp. 22, 25.

level allows for growth while keeping the cumulative effects of all new sources at a level that will not impede attainment of the NAAQS.¹⁵ In the Valley, these thresholds are 15 tons per year of PM, and 10 tons of NOx or VOC per year. *Sierra Club, supra*, 172 Cal.Rptr.3d at 303; AR 4554. Thus, the CEQA air quality analysis for criteria pollutants is not really a localized, project-level impact analysis but one of regional, “cumulative impacts.”

Accordingly, the significance thresholds applied in the Friant Ranch EIR (15 tons per year of PM and 10 tons of NOx or VOCs) are not intended to be indicative of any localized human health impact that the project may have. While the health effects of air pollution are of primary concern to the Air District (indeed, the NAAQS are established to protect human health), the Air District is simply not equipped to analyze whether and to what extent the criteria pollutant emissions of an individual CEQA project directly impact human health in a particular area. This is true even for projects with relatively high levels of emissions of criteria pollutant precursor emissions.

For instance, according to the EIR, the Friant Ranch project is estimated to emit 109.52 tons per year of ROG (VOC), 102.19 tons per year of NOx, and 117.38 tons per year of PM. Although these levels well

¹⁵ ¹⁵ *San Joaquin Valley Unified Air Pollution Control District Environmental Review Guidelines* (Aug. 2000) p. 4-11, available at: http://www.valleyair.org/transportation/CEQA%20Rules/ERG%20Adopted%20_August%202000_.pdf (visited March 12, 2015).

exceed the Air District's CEQA significance thresholds, this does not mean that one can easily determine the concentration of ozone or PM that will be created at or near the Friant Ranch site on a particular day or month of the year, or what specific health impacts will occur. Meteorology, the presence of sunlight, and other complex chemical factors all combine to determine the ultimate concentration and location of ozone or PM. This is especially true for a project like Friant Ranch where most of the criteria pollutant emissions derive not from a single "point source," but from area wide sources (consumer products, paint, etc.) or mobile sources (cars and trucks) driving to, from and around the site.

In addition, it would be extremely difficult to model the impact on NAAQS attainment that the emissions from the Friant Ranch project may have. As discussed above, the currently available modeling tools are equipped to model the impact of *all* emission sources in the Valley on attainment. According to the most recent EPA-approved emission inventory, the NO_x inventory for the Valley is for the year 2014 is 458.2 tons per day, or 167,243 tons per year and the VOC (or ROG) inventory is 361.7 tons per day, or 132,020.5 tons per year.¹⁶ Running the photochemical grid model used for predicting ozone attainment with the

¹⁶ *San Joaquin Valley Unified Air Pollution Control District 2007 Ozone Plan*, Appendix B pp. B-6, B-9, available at: http://www.valleyair.org/Air_Quality_Plans/docs/AO_Ozone_2007_Adopted/19%20Appendix%20B%20April%202007.pdf (visited March 12, 2015).

emissions solely from the Friant Ranch project (which equate to less than one-tenth of one percent of the total NOx and VOC in the Valley) is not likely to yield valid information given the relative scale involved.

Finally, even once a model is developed to accurately ascertain local increases in concentrations of photochemical pollutants like ozone and some particulates, it remains impossible, using today's models, to correlate that increase in concentration to a specific health impact. The reason is the same: such models are designed to determine regional, population-wide health impacts, and simply are not accurate when applied at the local level.

For these reasons, it is not the norm for CEQA practitioners, including the Air District, to conduct an analysis of the localized health impacts associated with a project's criteria air pollutant emissions as part of the EIR process. When the accepted scientific method precludes a certain type of analysis, "the court cannot impose a legal standard to the contrary." *Kings County Farm Bureau v. City of Hanford* (1990) 221 Cal.App.3d 692, 717 n. 8. However, that is exactly what the Court of Appeal has done in this case. Its decision upends the way CEQA air quality analysis of criteria pollutants occurs and should be reversed.

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B. The Court of Appeal Improperly Extrapolated a Request for a Health Risk Assessment for Toxic Air Contaminants into a Requirement that the EIR contain an Analysis of Localized Health Impacts Associated with Criteria Air Pollutants.

The Court of Appeal's error in requiring the new health impact analysis for criteria air pollutants clearly stems from a misunderstanding of terms of art commonly used in the air pollution field. More specifically, the Court of Appeal (and Appellants Sierra Club et al.) appear to have confused the health risk analysis ("HRA") performed to determine the health impacts associated with a project's toxic air contaminants ("TACs"), with an analysis correlating a project's criteria air pollutants (ozone, PM and the like) with specific localized health impacts.

The first type of analysis, the HRA, is commonly performed during the Air District's stationary source permitting process for projects that emit TACs and is, thus, incorporated into the CEQA review process. An HRA is a comprehensive analysis to evaluate and predict the dispersion of TACs emitted by a project and the potential for exposure of human populations. It also assesses and quantifies both the individual and population-wide health risks associated with those levels of exposure. There is no similar analysis conducted for criteria air pollutants. Thus, the second type of analysis (required by the Court of Appeal), is not currently part of the Air District's process because, as outlined above, the health risks associated

with exposure to criteria pollutants are evaluated on a regional level based on the region's attainment of the NAAQS.

The root of this confusion between the types of analyses conducted for TACs versus criteria air pollutants appears to stem from a comment that was presented to Fresno County by the City of Fresno during the administrative process.

In its comments on the draft EIR, the City of Fresno (the only party to raise this issue) stated:

[t]he EIR must disclose the human health related effects of the Project's air pollution impacts. (CEQA Guidelines section 15126.2(a).) The EIR fails completely in this area. The EIR should be revised to disclose and determine the significance of TAC impacts, and of human health risks due to exposure to Project-related air emissions.

(AR 4602.)

In determining that the issue regarding the correlation between the Friant Ranch project's criteria air pollutants and adverse health impacts was adequately exhausted at the administrative level, the Court of Appeal improperly read the first two sentences of the City of Fresno's comment in isolation rather than in the context of the entire comment. *See Sierra Club v. County of Fresno* (2014) 172 Cal.Rptr.3d 271, 306. Although the comment first speaks generally in terms of "human health related effects" and "air pollution," it requests only that the EIR be revised to disclose "the significance of TACs" and the "human health risks due to exposure."

The language of this request in the third sentence of the comment is significant because, to an air pollution practitioner, the language would only have indicated only that a HRA for TACs was requested, and not a separate analysis of the health impacts associated with the project's criteria air pollutants. Fresno County clearly read the comment as a request to perform an HRA for TACs and limited its response accordingly. (AR 4602.)¹⁷ The Air District submits that it would have read the City's comment in the same manner as the County because the City's use of the terms "human health risks" and "TACs" signal that an HRA for TACs is being requested. Indeed, the Air District was also concerned that an HRA be conducted, but understood that it was not possible to conduct such an analysis until the project entered the phase where detailed site specific information, such as the types of emission sources and the proximity of the sources to sensitive receptors became available. (AR 4553.)¹⁸ The City of Fresno was apparently satisfied with the County's discussion of human health risks, as it did not raise the issue again when it commented on the final EIR. (AR 8944 – 8960.)

¹⁷ Appellants do not challenge the manner in which the County addressed TACs in the EIR. (Appellants' Answer Brief p. 28 fn. 7.)

¹⁸ Appellants rely on the testimony of Air District employee, Dan Barber, as support for their position that the County should have conducted an analysis correlating the project's criteria air pollutant emissions with localized health impacts. (Appellants Answer Brief pp. 10-11; 28.) However, Mr. Barber's testimony simply reinforces the Air District's concern that a risk assessment (HRA) be conducted once the actual details of the project become available. (AR 8863.) As to criteria air pollutants, Mr. Barber's comments are aimed at the Air District's concern about the amount of emissions and the fact that the emissions will make it "more difficult for Fresno County and the Valley to reach attainment which means that the health of Valley residents maybe [sic] adversely impacted." Mr. Barber says nothing about conducting a separate analysis of the localized health impacts the project's emissions may have.

The Court of Appeal's holding, which incorrectly extrapolates a request for an HRA for TACs into a new analysis of the localized health impacts of the project's criteria air pollutants, highlights two additional errors in the Court's decision.

First, the Court of Appeal's holding illustrates why the Court should have applied the deferential substantial evidence standard of review to the issue of whether the EIR's air quality analysis was sufficient. The regulation of air pollution is a technical and complex field and the Court of Appeal lacked the expertise to fully appreciate the difference between TACs and criteria air pollutants and tools available for analyzing each type of pollutant.

Second, it illustrates that the Court likely got it wrong when it held that the issue regarding the criteria pollutant / localized health impact analysis was properly exhausted during the administrative process. In order to preserve an issue for the court, '[t]he "exact issue" must have been presented to the administrative agency....' [Citation.] *Citizens for Responsible Equitable Environmental Development v. City of San Diego*, (2011) 196 Cal.App.4th 515, 527 129 Cal.Rptr.3d 512, 521; *Sierra Club v. City of Orange* (2008) 163 Cal.App.4th 523, 535, 78 Cal.Rptr.3d 1, 13. "[T]he objections must be sufficiently specific so that the agency has the

opportunity to evaluate and respond to them.’ [Citation.]” *Sierra Club v. City of Orange*, 163 Cal.App.4th at 536.¹⁹

As discussed above, the City’s comment, while specific enough to request a commonly performed HRA for TACs, provided the County with no notice that it should perform a new type of analysis correlating criteria pollutant tonnages to specific human health effects. Although the parties have not directly addressed the issue of failure to exhaust administrative remedies in their briefs, the Air District submits that the Court should consider how it affects the issues briefed by the parties since “[e]xhaustion of administrative remedies is a jurisdictional prerequisite to maintenance of a CEQA action.” *Bakersfield Citizens for Local Control v. City of Bakersfield* (2004) 124 Cal.App.4th 1184, 1199, 22 Cal.Rptr.3d 203.

III. CONCLUSION

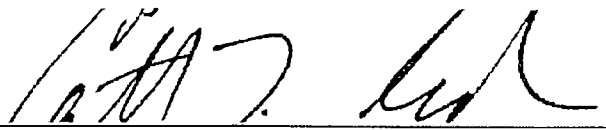
For all of the foregoing reasons, the Air District respectfully requests that the portion of the Court of Appeal’s decision requiring an analysis correlating the localized human health impacts associated with an individual project’s criteria air pollutant emissions be reversed.

¹⁹ *Sierra Club v. City of Orange*, is illustrative here. In that case, the plaintiffs challenged an EIR approved for a large planned community on the basis that the EIR improperly broke up the various environmental impacts by separate project components or “piecemealed” the analysis in violation of CEQA. In evaluating the defense that the plaintiffs had failed to adequately raise the issue at the administrative level, the Court held that comments such as “*the use of a single document for both a project-level and a program-level EIR [is] ‘confusing’*,” and “[t]he lead agency should identify any potential adverse air quality impacts that could occur from all phases of the project and all air pollutant sources related to the project,” were too vague to fairly raise the argument of piecemealing before the agency. *Sierra Club v. City of Orange*, 163 Cal.App.4th at 537.

correlating the localized human health impacts associated with an individual project's criteria air pollutant emissions be reversed.

Respectfully submitted,

Dated: April 2, 2015



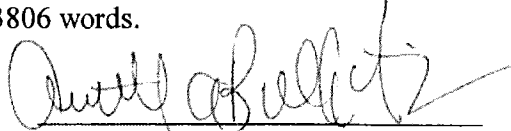
Catherine T. Redmond
Attorney for Proposed Amicus
Curiae

SAN JOAQUIN VALLEY
UNIFIED
AIR POLLUTION CONTROL
DISTRICT

CERTIFICATE OF WORD COUNT

Pursuant to Rule 8.204 of the California Rules of Court, I hereby certify that this document, based on the Word County feature of the Microsoft Word software program used to compose and print this document, contains, exclusive of caption, tables, certificate of word count, signature block and certificate of service, 3806 words.

Dated: April 2, 2015



Annette A. Ballatore-Williamson
District Counsel (SBN 192176)

Sierra Club et al, v. County of Fresno, et al
Supreme Court of California Case No.: S219783
Fifth District Court of Appeal Case No.: F066798
Fresno County Superior Court Case No.: 11CECG00726

PROOF OF SERVICE

I am over the age of 18 years and not a party to the above-captioned action; that my business address is San Joaquin Valley Unified Air Pollution Control District located at 1990 E. Gettysburg Avenue, Fresno, California 93726.

On April 2, 2015, I served the document described below:

**APPLICATION FOR LEAVE TO FILE AMICUS CURIAE BRIEF OF
SAN JOAQUIN VALLEY UNIFIED AIR POLLUTION CONTROL DISTRICT IN
SUPPORT OF DEFENDANT AND RESPONDENT, COUNTY OF FRESNO**

On all parties to this action at the following addresses and in the following manner:

PLEASE SEE ATTACHED SERVICE LIST

- (XX) **(BY MAIL)** I caused a true copy of each document(s) to be laced in a sealed envelope with first-class postage affixed and placed the envelope for collection. Mail is collected daily at my office and placed in a United State Postal Service collection box for pick-up and delivery that same day.
- () **(BY ELECTRONIC MAIL)** I caused a true and correct scanned image (.PDF file) copy to be transmitted via electronic mail transfer system in place at the San Joaquin Valley Unified Air Pollution Control District ("District"), originating from the undersigned at 1990 E. Gettysburg Avenue, Fresno, CA, to the address(es) indicated below.
- () **(BY OVERNIGHT MAIL)** I caused a true and correct copy to be delivered via Federal Express to the following person(s) or their representative at the address(es) listed below.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct and that I executed this document on April 2, 2015, at Fresno, California.



Esthela Soto

SERVICE LIST

Sierra Club et al, v. County of Fresno, et al

Supreme Court of California Case No.: S219783

Fifth District Court of Appeal Case No.: F066798

Fresno County Superior Court Case No.: 11CECG00726

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Appendix D Cultural Resources Records Search

Appendices

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South Central Coastal Information Center

California State University, Fullerton
Department of Anthropology MH-426
800 North State College Boulevard
Fullerton, CA 92834-6846
657.278.5395

California Historical Resources Information System

Los Angeles, Orange, Ventura and San Bernardino Counties
sccic@fullerton.edu

12/2/2021

SCCIC File #: 22922.9107

Nicole Vermilion
Placeworks
3 MacArthur Place, Suite #1100
Santa Ana, CA 92727

Re: Record Search Results for The Ontario Plan 2050

The South Central Coastal Information Center received your records search request for the project area referenced above, located on the Ontario and Guasti, CA USGS 7.5’ quadrangles. The following summary reflects the results of the records search for the project area. The search includes a review of all recorded archaeological and built-environment resources as well as a review of cultural resource reports on file. In addition, the California Points of Historical Interest (SPHI), the California Historical Landmarks (SHL), the California Register of Historical Resources (CAL REG), the National Register of Historic Places (NRHP), and the California State Built Environment Resources Directory (BERD) listings were reviewed for the above referenced project site. Due to the sensitive nature of cultural resources, archaeological site locations are not released.

RECORDS SEARCH RESULTS SUMMARY

Archaeological Resources* (*see Recommendations section)	Within project area: 17
Built-Environment Resources	Within project area: 735
Reports and Studies	Within project area: 165
OHP Built Environment Resources Directory (BERD) 2019	Within project area: 1351
California Points of Historical Interest (SPHI) 2019	Within project area: 1
California Historical Landmarks (SHL) 2019	Within project area: 0
California Register of Historical Resources (CAL REG) 2019	Within project area: 26
National Register of Historic Places (NRHP) 2019	Within project area: 19
Archaeological Determinations of Eligibility (ADOE): 2012	Within project area: 0 Within project radius: 0

HISTORIC MAP REVIEW - Cucamonga, CA (1897, 1900, 1903), Ontario, CA (1954), and Corona, CA (1942) 15' USGS historic maps indicate that in 1897 there were several roads and buildings within the project area. Also of note was the Southern Pacific R.R., South Cucamonga Sta. (Zucker), Southern Pacific R.R. (Chino Branch), Chino Valley Narrow Gauge R.R. and the Atchison Topeka and Santa Fe R.R. (Southern California Division). Historic place name of Santa Ana del Chino, Ontario. Two intermittent streams and several washes. Dense grid of streets and buildings next to the historic place name of Ontario. There were no visible changes in 1900 or 1903. In 1942 and 1954, there appeared to have been a significant increase in visible development within the project area. This included the expansion and addition of the Union Pacific rail line, Southern Pacific rail line, and several transmission lines. Major road names and highways included Riverside Drive, Chino Ave, Walnut Ave, Schaeffer Ave, Philadelphia Ave, W Desau St, Valley Blvd, Mission Blvd, Euclid Ave, San Bernardino Ave, Turner Ave, Milleken Ave, Rochester Ave, Wineville Road, Archibald Ave, San Antonio Ave, E Ely St, W Ely St, Edison Ave, Merrill Avenue, Eucalyptus Ave, Grove Avenue, Adams Avenue, and then San Bernardino (Under Construction) Freeway. Also of note were several wells, buildings, intermittent creeks, one reservoir, an Old RR Grade, a California Air National Guard Base, the Ontario International Airport, De Anza Park, John Galvin Park and Belleview Cemetery. Also located within the project area were Chaffey HS and Jr College, several additional unnamed schools, several churches, a Radio Tower, a City Hall near the historic place name of Ontario, Cucamonga Creek and the historic place names of Ballou Spur, Champagne, Guasti, Del Chino, and Ontario.

RECOMMENDATIONS

**When we report that no archaeological resources are recorded in your project area or within a specified radius around the project area; that does not necessarily mean that nothing is there. It may simply mean that the area has not been studied and/or that no information regarding the archaeological sensitivity of the property has been filed at this office. The reported records search result does not preclude the possibility that surface or buried artifacts might be found during a survey of the property or ground-disturbing activities.*

The results summary was intended to provide you with numerical counts of recorded resources and reports. Since there is no specific planned project, no specific recommendations can be made at this time. However, based on the results of the research, there is potential archaeological sensitivity and potential built-environment sensitivity throughout the project area.

For your convenience, you may find a professional consultant**at www.chrisinfo.org. Any resulting reports by the qualified consultant should be submitted to the South Central Coastal Information Center as soon as possible.

**The SCCIC does not endorse any particular consultant and makes no claims about the qualifications of any person listed. Each consultant on this list self-reports that they meet current professional standards.

If you have any questions regarding the results presented herein, please contact the office at 657.278.5395 Monday through Thursday 9:00 am to 3:30 pm. Should you require any additional information for the above referenced project, reference the SCCIC number listed above when making inquiries. Requests made after initial invoicing will result in the preparation of a separate invoice.

Thank you for using the [California Historical Resources Information System](#),

Stacy St. James
Isabela Kott
Assistant Coordinator, GIS Program Specialist

Digitally signed by Stacy St. James
Date: 2022.01.06 17:46:15 -08'00'

Due to processing delays and other factors, not all of the historical resource reports and resource records that have been submitted to the Office of Historic Preservation are available via this records search. Additional information may be available through the federal, state, and local agencies that produced or paid for historical resource management work in the search area. Additionally, Native American tribes have historical resource information not in the California Historical Resources Information System (CHRIS) Inventory, and you should contact the California Native American Heritage Commission for information on local/regional tribal contacts.

The California Office of Historic Preservation (OHP) contracts with the California Historical Resources Information System's (CHRIS) regional Information Centers (ICs) to maintain information in the CHRIS inventory and make it available to local, state, and federal agencies, cultural resource professionals, Native American tribes, researchers, and the public. Recommendations made by IC coordinators or their staff regarding the interpretation and application of this information are advisory only. Such recommendations do not necessarily represent the evaluation or opinion of the State Historic Preservation Officer in carrying out the OHP's regulatory authority under federal and state law.

Appendix E Energy Modeling

Appendices

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Operation-Related Annual Vehicle Fuel/Energy Usage Summary

Existing - Baseline Year 2021

Full VMT Scenario

Year	VMT	Gas		VMT	Diesel		VMT	CNG		VMT	Electricity	
		Gallons	Miles/Gal		Gallons	Miles/Gal		Gallons	Miles/Gal		kWh	Miles/kWh
Existing Baseline	1,938,556,682	81,600,029	23.76	166,855,240	21,679,763	7.70	11,139,203	1,833,612	6.08	34,872,818	12,357,174	2.82

Existing - Year 2050

Full VMT Scenario

Year	VMT	Gas		VMT	Diesel		VMT	CNG		VMT	Electricity	
		Gallons	Miles/Gal		Gallons	Miles/Gal		Gallons	Miles/Gal		kWh	Miles/kWh
Existing Year 2050	2,736,360,301	89,957,600	30.42	281,876,640	32,989,488	8.54	12,481,867	1,513,862	8.25	444,274,374	102,757,328	4.32

Proposed Project (TOP 2050 Update)

Full VMT Scenario

Year	VMT	Gas		VMT	Diesel		VMT	CNG		VMT	Electricity	
		Gallons	Miles/Gal		Gallons	Miles/Gal		Gallons	Miles/Gal		kWh	Miles/kWh
Proposed Project	2,767,681,221	90,987,273	30.42	285,103,056	33,367,092	8.54	12,624,737	1,531,190	8.25	449,359,626	103,933,509	4.32

Net Change

Full VMT Scenario

Year	VMT	Gas		VMT	Diesel		VMT	CNG		VMT	Electricity	
		Gallons	Miles/Gal		Gallons	Miles/Gal		Gallons	Miles/Gal		kWh	Miles/kWh
From Existing Baseline	829,124,539	9,387,244	6.66	118,247,816	11,687,329	0.85	1,485,534	-302,423	2.17	414,486,808	91,576,334	1.50
From Existing 2050	31,320,920	1,029,672	0.00	3,226,416	377,604	0.00	142,870	17,328	0.00	5,085,252	1,176,181	0.00

Notes

* VMT based on VMT data provided by Fehr and Peers.

inventory/517d3e0c599c7b26ab4e9feca9c2424afa4526d9

***VMT per year based on a conversion of VMT x 347 days per year to account for less travel on weekend, consistent with CARB statewide GHG emissions inventory methodology. California Air Resources Board. 2008, October. Climate Change Proposed Scoping Plan: A Framework for Change.

Existing Baseline Year 2021: Full VMT

Vehicle type	Fleet percent	VMT
LDA	53.21%	1,144,841,035
LDT1	3.73%	80,243,152
LDT2	18.02%	387,697,621
MDV	14.60%	314,111,098
LHD1	2.64%	56,810,847
LHD2	0.71%	15,364,234
MHD	1.80%	38,646,642
HHD	4.49%	96,502,073
OBUS	0.05%	975,976
UBUS	0.10%	2,182,042
MCY	0.31%	6,626,398
SBUS	0.08%	1,697,165
MH	0.12%	2,618,060
All Other Buses	0.03%	593,377
Motor Coach	0.02%	328,452
PTO	0.10%	2,185,771
	100%	2,151,423,943

Vehicle type	Gas percent	Diesel percent	CNG percent	Electricity percent
LDA	96.93%	0.22%	0.00%	2.85%
LDT1	99.93%	0.02%	0.00%	0.06%
LDT2	99.47%	0.24%	0.00%	0.29%
MDV	98.30%	1.36%	0.00%	0.34%
LHD1	59.67%	40.33%	0.00%	0.00%
LHD2	38.14%	61.86%	0.00%	0.00%
MHD	11.41%	87.50%	1.09%	0.00%
HHD	0.02%	91.52%	8.46%	0.00%
OBUS	51.43%	42.63%	5.94%	0.00%
UBUS	13.09%	1.14%	85.66%	0.11%
MCY	100.00%	0.00%	0.00%	0.00%
SBUS	42.64%	27.37%	29.99%	0.00%
MH	74.22%	25.78%	0.00%	0.00%
All Other Buses	0.00%	81.00%	19.00%	0.00%
Motor Coach	0.00%	100.00%	0.00%	0.00%
PTO	0.00%	100.00%	0.00%	0.00%

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<< OBUS (<https://www.arb.ca.gov/msei/downloads/emfac2014/emfac2014-vol3-technical-documentation-052015.pdf>)

Vehicle type	Gasoline			Diesel			CNG			Electricity		
	VMT	mpg	Gallons	VMT	mpg	Gallons	VMT	mpg	Gallons	VMT	m/kWh	kWh
LDA	1,109,691,800	28.27	39,258,261	2,510,569	42.15	59,557	0	0	0	32,638,667	2.81	11,620,343
LDT1	80,185,377	23.31	3,439,294	12,724	24.30	524	0	0	0	45,051	2.73	16,477
LDT2	385,630,890	22.37	17,236,965	940,947	31.05	30,306	0	0	0	1,125,784	3.06	368,273
MDV	308,783,580	18.38	16,796,186	4,266,565	22.79	187,185	0	0	0	1,060,953	3.01	352,081
LHD1	33,900,527	12.49	2,713,768	22,910,320	20.28	1,129,975	0	0	0	0	0.00	0
LHD2	5,859,482	11.41	513,452	9,504,752	16.79	566,056	0	0	0	0	0.00	0
MHD	4,409,477	5.04	875,390	33,814,310	8.93	3,785,863	422,855	0	0	0	0.00	0
HHD	14,868	3.38	4,403	88,319,662	5.82	15,165,783	8,167,543	5.90	1,383,734	0	0.00	0
OBUS	501,911	4.99	100,487	416,076	7.97	52,183	57,989	0	0	0	0.00	0
UBUS	285,721	12.17	23,475	24,872	10.45	2,379	1,869,085	4.28	437,057	2,363	0.51	0
MCY	6,626,398	41.30	160,459	0	0.00	0	0	0	0	0	0.00	0
SBUS	723,619	8.86	81,634	464,576	7.31	63,558	508,970	0	0	0	0.00	0
MH	1,943,033	4.90	396,255	675,027	10.25	65,857	0	0	0	0	0.00	0
All Other Buses	0	0	0	480,616	9.61	49,992	112,761	9	12,821	0	0.00	0
Motor Coach	0	0	0	328,452	5.57	58,936	0	0	0	0	0.00	0
PTO	0	0	0	2,185,771	4.74	461,609	0	0	0	0	0.00	0
	1,938,556,682		81,600,029	166,855,240		21,679,763	11,139,203		1,833,612	34,872,818		12,357,174

Existing Year 2050: Full VMT

Vehicle type	Fleet percent	VMT
LDA	47.51%	1,646,160,399
LDT1	2.62%	90,719,807
LDT2	22.27%	771,469,025
MDV	13.69%	474,170,513
LHD1	2.41%	83,329,267
LHD2	0.61%	21,089,976
MHD	2.72%	94,227,332
HHD	7.47%	258,909,217
OBUS	0.02%	805,043
UBUS	0.14%	4,699,720
MCY	0.25%	8,718,777
SBUS	0.05%	1,820,609
MH	0.05%	1,741,754
All Other Buses	0.03%	883,657
Motor Coach	0.01%	488,690
PTO	0.16%	5,385,979
	100%	3,464,619,765

Vehicle type	Gas percent	Diesel percent	CNG percent	Electricity percent
LDA	86.85%	0.05%	0.00%	13.10%
LDT1	95.58%	0.00%	0.00%	4.42%
LDT2	95.42%	0.36%	0.00%	4.22%
MDV	93.30%	1.00%	0.00%	5.70%
LHD1	30.28%	20.16%	0.00%	49.56%
LHD2	14.27%	37.84%	0.00%	47.89%
MHD	2.43%	44.91%	0.77%	51.89%
HHD	0.00%	77.86%	4.05%	22.08%
OBUS	19.84%	53.58%	9.44%	21.38%
UBUS	12.25%	0.00%	11.90%	75.85%
MCY	100.00%	0.00%	0.00%	0.00%
SBUS	17.44%	8.92%	22.98%	50.66%
MH	63.89%	36.11%	0.00%	0.00%
All Other Buses	0.00%	76.73%	23.27%	0.00%
Motor Coach	0.00%	100.00%	0.00%	0.00%
PTO	0.00%	46.24%	0.00%	53.76%

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 <<OBUS (<https://www.arb.ca.gov/msei/downloads/emfac2014/emfac2014-vol3-technical-documentation-052015.pdf>)

Vehicle type	VMT	Gasoline		VMT	Diesel		VMT	CNG		VMT	Electricity	
		mpg	Gallons		mpg	Gallons		mpg	Gallons		m/kWh	kWh
LDA	1,429,688,602	35.26	40,545,299	810,520	53.27	15,214	0	0	0	215,661,278	2.70	79,985,785
LDT1	86,709,620	30.69	2,825,771	1,028	28.44	36	0	0	0	4,009,159	2.78	1,440,994
LDT2	736,131,568	28.84	25,528,970	2,784,208	37.52	74,208	0	0	0	32,553,250	2.82	11,557,801
MDV	442,406,963	23.91	18,504,785	4,731,643	28.80	164,290	0	0	0	27,031,907	2.77	9,772,748
LHD1	25,231,560	17.27	1,460,892	16,796,810	21.88	767,837	0	0	0	41,300,897	1.79	0
LHD2	3,009,171	15.32	196,469	7,981,295	18.65	427,925	0	0	0	10,099,510	1.78	0
MHD	2,290,502	6.12	374,284	42,315,299	10.16	4,164,269	723,958	0	0	48,897,574	0.96	0
HHD	7,968	5.33	1,495	201,575,764	7.55	26,687,333	10,498,393	7.22	1,453,963	57,166,373	0.56	0
OBUS	159,687	5.94	26,866	431,369	8.92	48,355	76,027	0	0	172,097	0.00	0
UBUS	575,578	15.87	36,257	0	0.00	0	559,488	14.23	39,312	3,564,654	0.51	0
MCY	8,718,777	44.06	197,882	0	0.00	0	0	0	0	0	0.00	0
SBUS	317,522	10.24	31,004	162,313	8.42	19,272	418,373	0	0	922,400	0.86	0
MH	1,112,784	4.89	227,625	628,970	10.13	62,112	0	0	0	0	0.00	0
All Other Buses	0	0	0	678,028	10.65	63,638	205,629	10	20,587	0	0.00	0
Motor Coach	0	0	0	488,690	6.52	74,999	0	0	0	0	0.00	0
PTO	0	0	0	2,490,704	5.93	419,999	0	0	0	2,895,275	0.48	0
	2,736,360,301		89,957,600	281,876,640		32,989,488	12,481,867		1,513,862	444,274,374		102,757,328

Proposed Project Year 2050 (TOP 2050 Update): Full VMT

Vehicle type	Fleet percent	VMT
LDA	47.51%	1,665,002,676
LDT1	2.62%	91,758,204
LDT2	22.27%	780,299,412
MDV	13.69%	479,597,962
LHD1	2.41%	84,283,071
LHD2	0.61%	21,331,376
MHD	2.72%	95,305,877
HHD	7.47%	261,872,743
OBUS	0.02%	814,258
UBUS	0.14%	4,753,513
MCY	0.25%	8,818,574
SBUS	0.05%	1,841,448
MH	0.05%	1,761,690
All Other Buses	0.03%	893,772
Motor Coach	0.01%	494,283
PTO	0.16%	5,447,628
	100%	3,504,276,487

Vehicle type	Gas percent	Diesel percent	CNG percent	Electricity percent
LDA	86.85%	0.05%	0.00%	13.10%
LDT1	95.58%	0.00%	0.00%	4.42%
LDT2	95.42%	0.36%	0.00%	4.22%
MDV	93.30%	1.00%	0.00%	5.70%
LHD1	30.28%	20.16%	0.00%	49.56%
LHD2	14.27%	37.84%	0.00%	47.89%
MHD	2.43%	44.91%	0.77%	51.89%
HHD	0.00%	77.86%	4.05%	22.08%
OBUS	19.84%	53.58%	9.44%	21.38%
UBUS	12.25%	0.00%	11.90%	75.85%
MCY	100.00%	0.00%	0.00%	0.00%
SBUS	17.44%	8.92%	22.98%	50.66%
MH	63.89%	36.11%	0.00%	0.00%
All Other Buses	0.00%	76.73%	23.27%	0.00%
Motor Coach	0.00%	100.00%	0.00%	0.00%
PTO	0.00%	46.24%	0.00%	53.76%

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 << OBUS (<https://www.arb.ca.gov/msei/downloads/emfac2014/emfac2014-vol3-technical-documentation-052015.pdf>)

Vehicle type	VMT	Gasoline			Diesel			CNG			Electricity	
		mpg	Gallons	VMT	mpg	Gallons	VMT	mpg	Gallons	VMT	m/kWh	kWh
LDA	1,446,053,100	35.26	41,009,388	819,797	53.27	15,388	0	0	0	218,129,779	2.70	80,901,318
LDT1	87,702,116	30.69	2,858,116	1,040	28.44	37	0	0	0	4,055,049	2.78	1,457,488
LDT2	744,557,475	28.84	25,821,180	2,816,076	37.52	75,058	0	0	0	32,925,861	2.82	11,690,094
MDV	447,470,840	23.91	18,716,595	4,785,803	28.80	166,170	0	0	0	27,341,319	2.77	9,884,609
LHD1	25,520,366	17.27	1,477,614	16,989,069	21.88	776,625	0	0	0	41,773,636	1.79	0
LHD2	3,043,614	15.32	198,718	8,072,651	18.65	432,823	0	0	0	10,215,111	1.78	0
MHD	2,316,719	6.12	378,568	42,799,649	10.16	4,211,934	732,244	0	0	49,457,265	0.96	0
HHD	8,059	5.33	1,512	203,883,040	7.55	26,992,802	10,618,559	7.22	1,470,605	57,820,711	0.56	0
OBUS	161,515	5.94	27,173	436,306	8.92	48,908	76,897	0	0	174,067	0.00	0
UBUS	582,166	15.87	36,672	0	0.00	0	565,892	14.23	39,762	3,605,455	0.51	0
MCY	8,818,574	44.06	200,147	0	0.00	0	0	0	0	0	0.00	0
SBUS	321,157	10.24	31,359	164,171	8.42	19,493	423,162	0	0	932,958	0.86	0
MH	1,125,521	4.89	230,230	636,169	10.13	62,823	0	0	0	0	0.00	0
All Other Buses	0	0	0	685,789	10.65	64,367	207,983	10	20,822	0	0.00	0
Motor Coach	0	0	0	494,283	6.52	75,858	0	0	0	0	0.00	0
PTO	0	0	0	2,519,213	5.93	424,806	0	0	0	2,928,415	0.48	0
	2,767,681,221		90,987,273	285,103,056		33,367,092	12,624,737		1,531,190	449,359,626		103,933,509

EMFAC Fuel Usage: Year 2021

Vehicle type	GAS			DSL			NG			ELEC		
	VMT/day	Gallons/day	Miles/gallon	VMT/day	Gallons/day	Miles/gallon	VMT/day	Gallons/day	Miles/gallon	VMT/day	kWh/day	Miles/kWh
All other buses	0	0	0.00	8,784	914	9.61	2,061	234	8.79	0	0	0.00
LDA	20,281,488	717,511	28.27	45,885	1,088	42.15	0	0	0.00	596,527	212,381	2.81
LDT1	1,465,523	62,859	23.31	233	10	24.30	0	0	0.00	823	301	2.73
LDT2	7,048,054	315,035	22.37	17,197	554	31.05	0	0	0.00	20,576	6,731	3.06
LHD1	619,589	49,599	12.49	418,725	20,652	20.28	0	0	0.00	0	0	0.00
LHD2	107,092	9,384	11.41	173,715	10,346	16.79	0	0	0.00	0	0	0.00
MCY	121,109	2,933	41.30	0	0	0.00	0	0	0.00	0	0	0.00
MDV	5,643,540	306,979	18.38	77,979	3,421	22.79	0	0	0.00	19,391	6,435	3.01
MH	35,512	7,242	4.90	12,337	1,204	10.25	0	0	0.00	0	0	0.00
Motor coach	0	0	0.00	6,003	1,077	5.57	0	0	0.00	0	0	0.00
OBUS	17,838	3,571	4.99	0	0	0.00	0	0	0.00	0	0	0.00
PTO	0	0	0.00	39,949	8,437	4.74	0	0	0.00	0	0	0.00
SBUS	13,225	1,492	8.86	8,491	1,162	7.31	9,302	2,201	4.23	0	0	0.00
T6	80,591	15,999	5.04	618,014	69,193	8.93	7,728	906	8.53	0	0	0.00
T7	272	80	3.38	1,614,191	277,180	5.82	149,276	25,290	5.90	0	0	0.00
UBUS	5,222	429	12.17	455	43	10.45	34,161	7,988	4.28	43	84	0.51
Total	35,439,055	1,493,113	23.74	3,041,956	395,280	7.70	202,528	36,618	5.53	637,360	225,932	2.82

Source: EMFAC2021 (v1.0.1) Emissions Inventory

Region Type: Sub-Area

Region: San Bernardino (SC)

Calendar Year: 2021

Season: Annual

Vehicle Classification: EMFAC202x Categories

Units: miles/day for CVMT and EVMT, trips/day for Trips, kWh/day for Energy Consumption, tons/day for Emissions, 1000 gallons/day for Fuel Consumption

Region	Calendar Year	Vehicle Category	Model Year	Speed	Fuel	Population	Total VMT	CVMT	EVMT	Trips	Fuel Consumption	Energy Consumption
San Bernardino (S)	2021	All Other Buses	Aggregate	Aggregate	Diesel	165.2436991	8784.074773	8784.074773	0	1470.669	0.913695133	0
San Bernardino (S)	2021	All Other Buses	Aggregate	Aggregate	Natural Gas	35.08762492	2060.889655	2060.889655	0	312.2799	0.234330214	0
San Bernardino (S)	2021	LDA	Aggregate	Aggregate	Gasoline	466185.0187	20038949.32	20038949.32	0	2176511	709.4303758	0
San Bernardino (S)	2021	LDA	Aggregate	Aggregate	Diesel	1227.644684	45884.88124	45884.88124	0	5406.569	1.088499443	0
San Bernardino (S)	2021	LDA	Aggregate	Aggregate	Electricity	8991.999175	383241.9599	0	383242	45580.87	0	147963.0272
San Bernardino (S)	2021	LDA	Aggregate	Aggregate	Plug-in Hybrid	8871.21614	455823.0849	242538.4057	213284.7	36682.48	8.080508337	64418.33003
San Bernardino (S)	2021	LDT1	Aggregate	Aggregate	Gasoline	43925.12562	1465316.356	1465316.356	0	189737	62.85196659	0
San Bernardino (S)	2021	LDT1	Aggregate	Aggregate	Diesel	14.95439396	232.5457715	232.5457715	0	45.19297	0.009569442	0
San Bernardino (S)	2021	LDT1	Aggregate	Aggregate	Electricity	18.07973262	624.1440235	0	624.144	85.55728	0	240.9711065
San Bernardino (S)	2021	LDT1	Aggregate	Aggregate	Plug-in Hybrid	7.965497755	405.7894278	206.5466562	199.2428	32.93733	0.006920636	60.17725542
San Bernardino (S)	2021	LDT2	Aggregate	Aggregate	Gasoline	177965.9533	7032622.118	7032622.118	0	830463.7	314.5155105	0
San Bernardino (S)	2021	LDT2	Aggregate	Aggregate	Diesel	394.3936263	17197.39574	17197.39574	0	1914.105	0.553899785	0
San Bernardino (S)	2021	LDT2	Aggregate	Aggregate	Electricity	170.0132147	6143.269897	0	6143.27	878.88	0	2371.809212
San Bernardino (S)	2021	LDT2	Aggregate	Aggregate	Plug-in Hybrid	600.3323896	29864.60147	15432.2734	14432.33	2482.374	0.519075344	4358.993229
San Bernardino (S)	2021	LHD1	Aggregate	Aggregate	Gasoline	17762.14729	619589.2581	619589.2581	0	264629.5	49.59869231	0
San Bernardino (S)	2021	LHD1	Aggregate	Aggregate	Diesel	11195.88299	418724.7062	418724.7062	0	140830.1	20.65220022	0
San Bernardino (S)	2021	LHD2	Aggregate	Aggregate	Gasoline	3052.236328	107091.8999	107091.8999	0	45473.77	9.384202723	0
San Bernardino (S)	2021	LHD2	Aggregate	Aggregate	Diesel	4551.556404	173715.3638	173715.3638	0	57252.85	10.34563082	0
San Bernardino (S)	2021	MCY	Aggregate	Aggregate	Gasoline	20590.47039	121108.5925	121108.5925	0	41180.94	2.932651963	0
San Bernardino (S)	2021	MDV	Aggregate	Aggregate	Gasoline	147602.5491	5629313.107	5629313.107	0	675115.6	306.4954861	0
San Bernardino (S)	2021	MDV	Aggregate	Aggregate	Diesel	1903.208806	77978.66653	77978.66653	0	8954.406	3.421119747	0
San Bernardino (S)	2021	MDV	Aggregate	Aggregate	Electricity	190.5972629	6880.252463	0	6880.252	985.1343	0	2656.345309
San Bernardino (S)	2021	MDV	Aggregate	Aggregate	Plug-in Hybrid	534.7237291	26737.63038	14227.18203	12510.45	2211.083	0.483125329	3778.528274
San Bernardino (S)	2021	MH	Aggregate	Aggregate	Gasoline	4027.279009	35512.20776	35512.20776	0	402.889	7.242237008	0
San Bernardino (S)	2021	MH	Aggregate	Aggregate	Diesel	1346.586521	12337.25854	12337.25854	0	134.6587	1.203653682	0
San Bernardino (S)	2021	Motor Coach	Aggregate	Aggregate	Diesel	41.90635638	6003.021344	6003.021344	0	963.0081	1.077149479	0
San Bernardino (S)	2021	OBUS	Aggregate	Aggregate	Gasoline	413.4829131	17837.59906	17837.59906	0	8272.966	3.571232565	0
San Bernardino (S)	2021	PTO	Aggregate	Aggregate	Diesel	0	39948.64197	39948.64197	0	0	8.436674664	0
San Bernardino (S)	2021	SBUS	Aggregate	Aggregate	Gasoline	290.1542123	13225.34836	13225.34836	0	1160.617	1.491993314	0
San Bernardino (S)	2021	SBUS	Aggregate	Aggregate	Diesel	397.3984098	8490.914464	8490.914464	0	5754.329	1.16163244	0
San Bernardino (S)	2021	SBUS	Aggregate	Aggregate	Natural Gas	358.8004781	9302.290339	9302.290339	0	5195.431	2.200501389	0
San Bernardino (S)	2021	T6 CAIRP Class 4	Aggregate	Aggregate	Diesel	5.305606028	362.3444156	362.3444156	0	121.9228	0.040212835	0
San Bernardino (S)	2021	T6 CAIRP Class 5	Aggregate	Aggregate	Diesel	7.163926076	497.07138	497.07138	0	164.627	0.054910506	0
San Bernardino (S)	2021	T6 CAIRP Class 6	Aggregate	Aggregate	Diesel	20.76901995	1298.861737	1298.861737	0	477.2721	0.142576187	0
San Bernardino (S)	2021	T6 CAIRP Class 7	Aggregate	Aggregate	Diesel	38.16124449	8138.836378	8138.836378	0	876.9454	0.834456164	0
San Bernardino (S)	2021	T6 CAIRP Class 7	Aggregate	Aggregate	Natural Gas	0.038998804	8.280952492	8.280952492	0	0.896193	0.000823523	0
San Bernardino (S)	2021	T6 Instate Delivery Class 4	Aggregate	Aggregate	Diesel	584.0708486	20243.08236	20243.08236	0	8334.691	2.287732931	0
San Bernardino (S)	2021	T6 Instate Delivery Class 4	Aggregate	Aggregate	Natural Gas	2.35720661	80.08428542	80.08428542	0	33.63734	0.009731531	0
San Bernardino (S)	2021	T6 Instate Delivery Class 5	Aggregate	Aggregate	Diesel	680.6426865	24607.11103	24607.11103	0	9712.771	2.824989842	0
San Bernardino (S)	2021	T6 Instate Delivery Class 5	Aggregate	Aggregate	Natural Gas	2.000845674	68.44085094	68.44085094	0	28.55207	0.008240034	0
San Bernardino (S)	2021	T6 Instate Delivery Class 6	Aggregate	Aggregate	Diesel	2757.568068	97685.85643	97685.85643	0	39350.5	11.05158429	0
San Bernardino (S)	2021	T6 Instate Delivery Class 6	Aggregate	Aggregate	Natural Gas	10.68601396	355.8055689	355.8055689	0	152.4894	0.043043004	0
San Bernardino (S)	2021	T6 Instate Delivery Class 7	Aggregate	Aggregate	Diesel	514.3207115	28258.74414	28258.74414	0	7339.357	3.108562795	0
San Bernardino (S)	2021	T6 Instate Delivery Class 7	Aggregate	Aggregate	Natural Gas	12.11918842	675.3609781	675.3609781	0	172.9408	0.077125009	0
San Bernardino (S)	2021	T6 Instate Other Class 4	Aggregate	Aggregate	Diesel	1162.727281	46094.23473	46094.23473	0	13441.13	5.189685109	0
San Bernardino (S)	2021	T6 Instate Other Class 4	Aggregate	Aggregate	Natural Gas	4.189646599	177.8607782	177.8607782	0	48.43231	0.021239915	0
San Bernardino (S)	2021	T6 Instate Other Class 5	Aggregate	Aggregate	Diesel	2749.850991	123175.8078	123175.8078	0	31788.28	13.9799189	0
San Bernardino (S)	2021	T6 Instate Other Class 5	Aggregate	Aggregate	Natural Gas	8.06952391	352.7646108	352.7646108	0	93.2837	0.041635131	0
San Bernardino (S)	2021	T6 Instate Other Class 6	Aggregate	Aggregate	Diesel	2448.159763	105491.5987	105491.5987	0	28300.73	11.85756975	0
San Bernardino (S)	2021	T6 Instate Other Class 6	Aggregate	Aggregate	Natural Gas	7.518351818	321.0843942	321.0843942	0	86.91215	0.038038337	0
San Bernardino (S)	2021	T6 Instate Other Class 7	Aggregate	Aggregate	Diesel	1341.621023	68399.27169	68399.27169	0	15509.14	7.572992217	0
San Bernardino (S)	2021	T6 Instate Other Class 7	Aggregate	Aggregate	Natural Gas	33.33868648	1855.090556	1855.090556	0	385.3952	0.214786284	0
San Bernardino (S)	2021	T6 Instate Tractor Class 6	Aggregate	Aggregate	Diesel	22.7643897	1200.133951	1200.133951	0	263.1563	0.134436472	0
San Bernardino (S)	2021	T6 Instate Tractor Class 6	Aggregate	Aggregate	Natural Gas	0.05799376	3.273237563	3.273237563	0	0.670408	0.000376637	0
San Bernardino (S)	2021	T6 Instate Tractor Class 7	Aggregate	Aggregate	Diesel	767.0177591	47760.61763	47760.61763	0	8866.725	5.003264625	0
San Bernardino (S)	2021	T6 Instate Tractor Class 7	Aggregate	Aggregate	Natural Gas	13.161755	875.5317142	875.5317142	0	152.1499	0.098948744	0
San Bernardino (S)	2021	T6 OOS Class 4	Aggregate	Aggregate	Diesel	3.151872315	213.6983485	213.6983485	0	72.43003	0.023715769	0
San Bernardino (S)	2021	T6 OOS Class 5	Aggregate	Aggregate	Diesel	4.240648096	293.1557061	293.1557061	0	97.45009	0.032387597	0
San Bernardino (S)	2021	T6 OOS Class 6	Aggregate	Aggregate	Diesel	12.32886206	766.0242472	766.0242472	0	283.3173	0.084108023	0
San Bernardino (S)	2021	T6 OOS Class 7	Aggregate	Aggregate	Diesel	21.88766401	5569.94882	5569.94882	0	502.9785	0.569790016	0
San Bernardino (S)	2021	T6 Public Class 4	Aggregate	Aggregate	Diesel	98.69093143	3215.243458	3215.243458	0	506.2845	0.384112527	0
San Bernardino (S)	2021	T6 Public Class 4	Aggregate	Aggregate	Natural Gas	4.269122719	178.9496541	178.9496541	0	21.9006	0.021617768	0
San Bernardino (S)	2021	T6 Public Class 5	Aggregate	Aggregate	Diesel	165.3551382	6198.338122	6198.338122	0	848.2719	0.724893154	0
San Bernardino (S)	2021	T6 Public Class 5	Aggregate	Aggregate	Natural Gas	26.96979368	1131.809689	1131.809689	0	138.355	0.135415408	0
San Bernardino (S)	2021	T6 Public Class 6	Aggregate	Aggregate	Diesel	148.285353	4958.17784	4958.17784	0	760.7039	0.588609141	0
San Bernardino (S)	2021	T6 Public Class 6	Aggregate	Aggregate	Natural Gas	11.71852929	485.556255	485.556255	0	60.11606	0.059045765	0
San Bernardino (S)	2021	T6 Public Class 7										

San Bernardino (	2021 T6 Utility Class 7	Aggregate	Aggregate	Diesel	35.29734658	1725.456264	1725.456264	0	451.806	0.187218724	0
San Bernardino (	2021 T6 Utility Class 7	Aggregate	Aggregate	Natural Gas	0.528249001	24.68909714	24.68909714	0	6.761587	0.002709509	0
San Bernardino (	2021 T6TS	Aggregate	Aggregate	Gasoline	1588.399448	80590.61781	80590.61781	0	31780.7	15.99922046	0
San Bernardino (	2021 T7 CAIRP Class 8	Aggregate	Aggregate	Diesel	1535.233914	325442.8785	325442.8785	0	35279.68	54.17994811	0
San Bernardino (	2021 T7 CAIRP Class 8	Aggregate	Aggregate	Natural Gas	6.344932984	1356.393948	1356.393948	0	145.8066	0.242564014	0
San Bernardino (	2021 T7 NNOOS Class 8	Aggregate	Aggregate	Diesel	1404.199794	386996.4669	386996.4669	0	32268.51	64.7155829	0
San Bernardino (	2021 T7 NOOS Class 8	Aggregate	Aggregate	Diesel	577.0306832	140518.8148	140518.8148	0	13260.17	23.53838615	0
San Bernardino (	2021 T7 POLA Class 8	Aggregate	Aggregate	Diesel	1759.728345	230589.8005	230589.8005	0	28789.16	38.54062254	0
San Bernardino (	2021 T7 POLA Class 8	Aggregate	Aggregate	Natural Gas	77.50101596	10158.03685	10158.03685	0	1267.917	1.867460663	0
San Bernardino (	2021 T7 Public Class 8	Aggregate	Aggregate	Diesel	745.3696086	29696.42495	29696.42495	0	3823.746	5.199907874	0
San Bernardino (	2021 T7 Public Class 8	Aggregate	Aggregate	Natural Gas	164.0037646	8830.780016	8830.780016	0	841.3393	1.463707686	0
San Bernardino (	2021 T7 Single Concrete/Transit I	Aggregate	Aggregate	Diesel	388.2235011	26562.80069	26562.80069	0	3657.065	4.49836504	0
San Bernardino (	2021 T7 Single Concrete/Transit I	Aggregate	Aggregate	Natural Gas	31.55997648	2399.723893	2399.723893	0	297.295	0.396531991	0
San Bernardino (	2021 T7 Single Dump Class 8	Aggregate	Aggregate	Diesel	685.3888106	40663.24476	40663.24476	0	6456.363	6.827745256	0
San Bernardino (	2021 T7 Single Dump Class 8	Aggregate	Aggregate	Natural Gas	40.2193792	2678.805973	2678.805973	0	378.8666	0.472619054	0
San Bernardino (	2021 T7 Single Other Class 8	Aggregate	Aggregate	Diesel	1984.393853	120310.2745	120310.2745	0	18692.99	20.25437472	0
San Bernardino (	2021 T7 Single Other Class 8	Aggregate	Aggregate	Natural Gas	128.2702663	8574.496183	8574.496183	0	1208.306	1.480565323	0
San Bernardino (	2021 T7 SWCV Class 8	Aggregate	Aggregate	Diesel	609.5880911	39571.82558	39571.82558	0	2804.105	14.57237235	0
San Bernardino (	2021 T7 SWCV Class 8	Aggregate	Aggregate	Natural Gas	1661.716748	107473.9577	107473.9577	0	7643.897	17.98610145	0
San Bernardino (	2021 T7 Tractor Class 8	Aggregate	Aggregate	Diesel	3089.379116	268582.2864	268582.2864	0	44888.68	43.98977375	0
San Bernardino (	2021 T7 Tractor Class 8	Aggregate	Aggregate	Natural Gas	83.93649971	7803.420115	7803.420115	0	1219.597	1.380518736	0
San Bernardino (	2021 T7 Utility Class 8	Aggregate	Aggregate	Diesel	108.7435201	5255.837715	5255.837715	0	1391.917	0.863156282	0
San Bernardino (	2021 T7IS	Aggregate	Aggregate	Gasoline	10.78718918	271.742031	271.742031	0	215.8301	0.080478073	0
San Bernardino (	2021 UBUS	Aggregate	Aggregate	Gasoline	54.38877519	5222.03997	5222.03997	0	217.5551	0.429038914	0
San Bernardino (	2021 UBUS	Aggregate	Aggregate	Diesel	4.612012096	454.5787664	454.5787664	0	18.44805	0.043481563	0
San Bernardino (	2021 UBUS	Aggregate	Aggregate	Electricity	0.433973064	43.19537517	0	43.19538	1.735892	0	84.24563096
San Bernardino (	2021 UBUS	Aggregate	Aggregate	Natural Gas	248.6539504	34160.68397	34160.68397	0	994.6158	7.987958918	0

EMFAC Fuel Usage: Year 2050

Vehicle type	GAS			DSL			NG			ELEC		
	VMT/day	Gallons/day	Miles/gallon	VMT/day	Gallons/day	Miles/gallon	VMT/day	Gallons/day	Miles/gallon	VMT/day	kWh/day	Miles/kWh
All other buses	0	0	0.00	9,716	912	10.65	2,947	295	9.99	0	0	0.00
LDA	20,486,500	580,988	35.26	11,614	218	53.27	0	0	0.00	3,090,285	1,146,144	2.70
LDT1	1,242,492	40,491	30.69	15	1	28.44	0	0	0.00	57,449	20,648	2.78
LDT2	10,548,283	365,813	28.84	39,896	1,063	37.52	0	0	0.00	466,467	165,616	2.82
LHD1	361,552	20,934	17.27	240,687	11,003	21.88	0	0	0.00	591,815	331,308	1.79
LHD2	43,119	2,815	15.32	114,367	6,132	18.65	0	0	0.00	144,719	81,127	1.78
MCY	124,934	2,836	44.06	0	0	0.00	0	0	0.00	0	0	0.00
MDV	6,339,402	265,161	23.91	67,801	2,354	28.80	0	0	0.00	387,350	140,037	2.77
MH	15,945	3,262	4.89	9,013	890	10.13	0	0	0.00	0	0	0.00
Motor coach	0	0	0.00	7,003	1,075	6.52	0	0	0.00	0	0	0.00
OBUS	4,866	819	5.94	0	0	0.00	0	0	0.00	6,670	7,005	0.95
PTO	0	0	0.00	35,690	6,018	5.93	0	0	0.00	41,487	85,942	0.48
SBUS	4,550	444	10.24	2,326	276	8.42	5,995	1,253	4.78	13,217	15,283	0.86
T6	32,821	5,363	6.12	606,350	59,671	10.16	10,374	1,173	8.84	700,670	732,372	0.96
T7	114	21	5.33	2,888,449	382,412	7.55	150,435	20,834	7.22	671,002	1,198,063	0.56
UBUS	8,248	520	15.87	0	0	0.00	8,017	563	14.23	51,079	100,035	0.51
Total	39,212,827	1,289,467	30.41	4,032,926	472,025	8.54	177,768	24,119	7.37	6,222,209	4,023,580	1.55

Source: EMFAC2021 (v1.0.1) Emissions Inventory

Region Type: Sub-Area

Region: San Bernardino (SC)

Calendar Year: 2050

Season: Annual

Vehicle Classification: EMFAC202x Categories

Units: miles/day for CVMT and EVMT, trips/day for Trips, kWh/day for Energy Consumption, tons/day for Emissions, 1000 gallons/day for Fuel Consumption

Region	Calendar Year	Vehicle Category	Model Year	Speed	Fuel	Population Total	VMT	CVMT	EVMT	Trips	Fuel Consumption	Energy Consumption
San Bernardino (	2050	All Other Buses	Aggregate	Aggregate	Diesel	190.0039	9715.698348	9715.698348	0	1691.035	0.911897679	0
San Bernardino (	2050	All Other Buses	Aggregate	Aggregate	Natural Gas	56.24812	2946.530911	2946.530911	0	500.6083	0.294993421	0
San Bernardino (	2050	LDA	Aggregate	Aggregate	Gasoline	479562.5	20102501.8	20102501.8	0	2229938	567.9512965	0
San Bernardino (	2050	LDA	Aggregate	Aggregate	Diesel	293.319	11614.21395	11614.21395	0	1331.209	0.218007947	0
San Bernardino (	2050	LDA	Aggregate	Aggregate	Electricity	66442.77	2531574.81	0	2531575	311469.2	0	977396.8189
San Bernardino (	2050	LDA	Aggregate	Aggregate	Plug-in Hybrid	22585.57	942708.4567	383998.5458	558709.9	93391.32	13.03625236	168747.0453
San Bernardino (	2050	LDT1	Aggregate	Aggregate	Gasoline	33893.96	1229992.696	1229992.696	0	153117.6	40.0618467	0
San Bernardino (	2050	LDT1	Aggregate	Aggregate	Diesel	0.39371	14.72915349	14.72915349	0	1.808904	0.000517852	0
San Bernardino (	2050	LDT1	Aggregate	Aggregate	Electricity	1054.969	39228.96427	0	39228.96	4904.869	0	15145.61795
San Bernardino (	2050	LDT1	Aggregate	Aggregate	Plug-in Hybrid	804.708	30718.97531	12499.31709	18219.66	3327.467	0.429605354	5502.879816
San Bernardino (	2050	LDT2	Aggregate	Aggregate	Gasoline	274596.3	10429930.84	10429930.84	0	1268160	361.7275736	0
San Bernardino (	2050	LDT2	Aggregate	Aggregate	Diesel	1045.134	39895.86835	39895.86835	0	4841.544	1.063358154	0
San Bernardino (	2050	LDT2	Aggregate	Aggregate	Electricity	11208.95	294206.421	0	294206.4	52468.6	0	113587.9607
San Bernardino (	2050	LDT2	Aggregate	Aggregate	Plug-in Hybrid	7608.8	290612.2249	118351.9123	172260.3	31462.39	4.085834819	52027.74859
San Bernardino (	2050	LHD1	Aggregate	Aggregate	Gasoline	10357.62	361551.7155	361551.7155	0	154313.1	20.93362927	0
San Bernardino (	2050	LHD1	Aggregate	Aggregate	Diesel	7168.902	240687.2733	240687.2733	0	90175.77	11.00259414	0
San Bernardino (	2050	LHD1	Aggregate	Aggregate	Electricity	14749.43	591814.7824	0	591814.8	206465	0	331308.4384
San Bernardino (	2050	LHD2	Aggregate	Aggregate	Gasoline	1298.214	43119.44596	43119.44596	0	19341.45	2.815274393	0
San Bernardino (	2050	LHD2	Aggregate	Aggregate	Diesel	3614.287	114366.7292	114366.7292	0	45463.18	6.131889234	0
San Bernardino (	2050	LHD2	Aggregate	Aggregate	Electricity	3725.242	144719.3507	0	144719.4	49285.52	0	81126.95993
San Bernardino (	2050	MCY	Aggregate	Aggregate	Gasoline	22648.53	124934.3577	124934.3577	0	45297.06	2.835518159	0
San Bernardino (	2050	MDV	Aggregate	Aggregate	Gasoline	164730.9	6261626.299	6261626.299	0	754182.6	262.4391585	0
San Bernardino (	2050	MDV	Aggregate	Aggregate	Diesel	1807.283	67801.34532	67801.34532	0	8216.572	2.354165804	0
San Bernardino (	2050	MDV	Aggregate	Aggregate	Electricity	10611.78	274184.7286	0	274184.7	49394.82	0	105857.935
San Bernardino (	2050	MDV	Aggregate	Aggregate	Plug-in Hybrid	4996.657	190940.2031	77775.43006	113164.8	20661.18	2.722281547	34179.13432
San Bernardino (	2050	MH	Aggregate	Aggregate	Gasoline	1541.57	15945.46247	15945.46247	0	154.2187	3.261714912	0
San Bernardino (	2050	MH	Aggregate	Aggregate	Diesel	992.1822	9012.724826	9012.724826	0	99.21822	0.890023992	0
San Bernardino (	2050	Motor Coach	Aggregate	Aggregate	Diesel	55.59534	7002.604945	7002.604945	0	1277.581	1.074690931	0
San Bernardino (	2050	OBUS	Aggregate	Aggregate	Gasoline	148.5689	4865.875041	4865.875041	0	2972.567	0.818628069	0
San Bernardino (	2050	OBUS	Aggregate	Aggregate	Electricity	121.9019	6669.864428	0	6669.864	2439.013	0	7004.809233
San Bernardino (	2050	PTO	Aggregate	Aggregate	Diesel	0	35690.15288	35690.15288	0	0	6.01830781	0
San Bernardino (	2050	PTO	Aggregate	Aggregate	Electricity	0	41487.39594	0	41487.4	0	0	85941.91933
San Bernardino (	2050	SBUS	Aggregate	Aggregate	Gasoline	102.0918	4549.887697	4549.887697	0	408.3671	0.444272253	0
San Bernardino (	2050	SBUS	Aggregate	Aggregate	Diesel	112.4995	2325.837313	2325.837313	0	1628.992	0.276160007	0
San Bernardino (	2050	SBUS	Aggregate	Aggregate	Electricity	477.4128	13217.39438	0	13217.39	6032.28	0	15283.29087
San Bernardino (	2050	SBUS	Aggregate	Aggregate	Natural Gas	288.3957	5995.008005	5995.008005	0	4175.969	1.253323614	0
San Bernardino (	2050	T6 CAIRP Class 4	Aggregate	Aggregate	Diesel	4.039614	298.5842079	298.5842079	0	92.83034	0.029051996	0
San Bernardino (	2050	T6 CAIRP Class 4	Aggregate	Aggregate	Electricity	6.01986	460.3753212	0	460.3753	138.3364	0	483.6626294
San Bernardino (	2050	T6 CAIRP Class 5	Aggregate	Aggregate	Diesel	4.956095	409.8003971	409.8003971	0	113.8911	0.039847963	0
San Bernardino (	2050	T6 CAIRP Class 5	Aggregate	Aggregate	Electricity	7.377361	631.3555978	0	631.3556	169.5318	0	663.2916545
San Bernardino (	2050	T6 CAIRP Class 6	Aggregate	Aggregate	Diesel	22.62072	1069.703231	1069.703231	0	519.8241	0.104459128	0
San Bernardino (	2050	T6 CAIRP Class 6	Aggregate	Aggregate	Electricity	33.78295	1650.867172	0	1650.867	776.3321	0	1734.373499
San Bernardino (	2050	T6 CAIRP Class 7	Aggregate	Aggregate	Diesel	62.60824	12843.92367	12843.92367	0	1438.737	1.10034642	0
San Bernardino (	2050	T6 CAIRP Class 7	Aggregate	Aggregate	Electricity	19.90487	4212.431246	0	4212.431	457.4138	0	4425.509967
San Bernardino (	2050	T6 CAIRP Class 7	Aggregate	Aggregate	Natural Gas	0.041135	8.437769251	8.437769251	0	0.945289	0.000784213	0
San Bernardino (	2050	T6 Instate Delivery Class 4	Aggregate	Aggregate	Diesel	540.9415	18117.76082	18117.76082	0	7719.236	1.827609182	0
San Bernardino (	2050	T6 Instate Delivery Class 4	Aggregate	Aggregate	Electricity	696.9383	24309.36403	0	24309.36	9945.309	0	25396.2113
San Bernardino (	2050	T6 Instate Delivery Class 4	Aggregate	Aggregate	Natural Gas	4.210408	141.3826917	141.3826917	0	60.08253	0.016170846	0
San Bernardino (	2050	T6 Instate Delivery Class 5	Aggregate	Aggregate	Diesel	656.3669	21987.17001	21987.17001	0	9366.356	2.218923729	0
San Bernardino (	2050	T6 Instate Delivery Class 5	Aggregate	Aggregate	Electricity	846.6975	29527.15409	0	29527.15	12082.37	0	30847.28352
San Bernardino (	2050	T6 Instate Delivery Class 5	Aggregate	Aggregate	Natural Gas	5.074804	170.6044601	170.6044601	0	72.41746	0.019502582	0
San Bernardino (	2050	T6 Instate Delivery Class 6	Aggregate	Aggregate	Diesel	2610.445	87404.91138	87404.91138	0	37251.05	8.81718469	0
San Bernardino (	2050	T6 Instate Delivery Class 6	Aggregate	Aggregate	Electricity	3366.577	117271.8064	0	117271.8	48041.06	0	122514.9112
San Bernardino (	2050	T6 Instate Delivery Class 6	Aggregate	Aggregate	Natural Gas	20.2267	679.4307793	679.4307793	0	288.6351	0.077674881	0
San Bernardino (	2050	T6 Instate Delivery Class 7	Aggregate	Aggregate	Diesel	652.038	33255.42465	33255.42465	0	9304.582	3.329609994	0
San Bernardino (	2050	T6 Instate Delivery Class 7	Aggregate	Aggregate	Electricity	502.0864	26565.19055	0	26565.19	7164.773	0	27752.89356
San Bernardino (	2050	T6 Instate Delivery Class 7	Aggregate	Aggregate	Natural Gas	15.42658	784.195736	784.195736	0	220.1373	0.086364833	0
San Bernardino (	2050	T6 Instate Other Class 4	Aggregate	Aggregate	Diesel	1016.714	40516.27389	40516.27389	0	11753.21	4.063193376	0
San Bernardino (	2050	T6 Instate Other Class 4	Aggregate	Aggregate	Electricity	1308.025	56086.57128	0	56086.57	15120.77	0	58611.67628
San Bernardino (	2050	T6 Instate Other Class 4	Aggregate	Aggregate	Natural Gas	7.930237	317.7814611	317.7814611	0	91.67354	0.03565655	0
San Bernardino (	2050	T6 Instate Other Class 5	Aggregate	Aggregate	Diesel	2712.225	108125.9805	108125.9805	0	31353.32	10.84594971	0
San Bernardino (	2050	T6 Instate Other Class 5										

San Bernardino (	2050 T6 Instate Other Class 7	Aggregate	Aggregate	Natural Gas	44.58817	1795.965465	1795.965465	0	515.4393	0.20326738	0
San Bernardino (	2050 T6 Instate Tractor Class 6	Aggregate	Aggregate	Diesel	21.17818	1043.287371	1043.287371	0	244.8197	0.103754594	0
San Bernardino (	2050 T6 Instate Tractor Class 6	Aggregate	Aggregate	Electricity	27.15184	1469.172468	0	1469.172	313.8753	0	1535.316906
San Bernardino (	2050 T6 Instate Tractor Class 6	Aggregate	Aggregate	Natural Gas	0.164749	8.173331621	8.173331621	0	1.904503	0.0008939	0
San Bernardino (	2050 T6 Instate Tractor Class 7	Aggregate	Aggregate	Diesel	1338.08	78713.04802	78713.04802	0	15468.21	7.050985345	0
San Bernardino (	2050 T6 Instate Tractor Class 7	Aggregate	Aggregate	Electricity	318.1968	21332.38275	0	21332.38	3678.355	0	22292.79992
San Bernardino (	2050 T6 Instate Tractor Class 7	Aggregate	Aggregate	Natural Gas	31.28	1826.896828	1826.896828	0	361.5968	0.193265676	0
San Bernardino (	2050 T6 OOS Class 4	Aggregate	Aggregate	Diesel	6.028153	447.608383	447.608383	0	138.527	0.04092636	0
San Bernardino (	2050 T6 OOS Class 5	Aggregate	Aggregate	Diesel	7.400364	614.0382109	614.0382109	0	170.0604	0.056120747	0
San Bernardino (	2050 T6 OOS Class 6	Aggregate	Aggregate	Diesel	33.70661	1604.499413	1604.499413	0	774.5779	0.147151766	0
San Bernardino (	2050 T6 OOS Class 7	Aggregate	Aggregate	Diesel	41.50453	11666.70591	11666.70591	0	953.7742	0.955062379	0
San Bernardino (	2050 T6 Public Class 4	Aggregate	Aggregate	Diesel	45.73143	1584.922291	1584.922291	0	234.6022	0.166403428	0
San Bernardino (	2050 T6 Public Class 4	Aggregate	Aggregate	Electricity	54.34466	2073.531168	0	2073.531	278.7881	0	2175.187625
San Bernardino (	2050 T6 Public Class 4	Aggregate	Aggregate	Natural Gas	8.76545	304.4964998	304.4964998	0	44.96676	0.0366607	0
San Bernardino (	2050 T6 Public Class 5	Aggregate	Aggregate	Diesel	98.81907	3417.676143	3417.676143	0	506.9418	0.360145845	0
San Bernardino (	2050 T6 Public Class 5	Aggregate	Aggregate	Electricity	116.857	4452.329006	0	4452.329	599.4766	0	4670.607853
San Bernardino (	2050 T6 Public Class 5	Aggregate	Aggregate	Natural Gas	20.06658	688.438052	688.438052	0	102.9416	0.083173725	0
San Bernardino (	2050 T6 Public Class 6	Aggregate	Aggregate	Diesel	73.95512	2554.461108	2554.461108	0	379.3898	0.268353839	0
San Bernardino (	2050 T6 Public Class 6	Aggregate	Aggregate	Electricity	86.77743	3300.669221	0	3300.669	445.1682	0	3462.487063
San Bernardino (	2050 T6 Public Class 6	Aggregate	Aggregate	Natural Gas	14.53012	500.797308	500.797308	0	74.53951	0.06046823	0
San Bernardino (	2050 T6 Public Class 7	Aggregate	Aggregate	Diesel	190.4768	8032.805204	8032.805204	0	977.1458	0.822237753	0
San Bernardino (	2050 T6 Public Class 7	Aggregate	Aggregate	Electricity	172.1018	8020.543437	0	8020.543	882.8823	0	8413.756736
San Bernardino (	2050 T6 Public Class 7	Aggregate	Aggregate	Natural Gas	36.79894	1553.071147	1553.071147	0	188.7786	0.180608087	0
San Bernardino (	2050 T6 Utility Class 5	Aggregate	Aggregate	Diesel	75.47617	3029.302582	3029.302582	0	966.095	0.301268346	0
San Bernardino (	2050 T6 Utility Class 5	Aggregate	Aggregate	Electricity	115.8145	4724.877102	0	4724.877	1482.426	0	4956.517829
San Bernardino (	2050 T6 Utility Class 5	Aggregate	Aggregate	Natural Gas	0.433858	17.41326853	17.41326853	0	5.553381	0.001861801	0
San Bernardino (	2050 T6 Utility Class 6	Aggregate	Aggregate	Diesel	14.26334	572.4833334	572.4833334	0	182.5707	0.056934291	0
San Bernardino (	2050 T6 Utility Class 6	Aggregate	Aggregate	Electricity	21.88578	892.8996245	0	892.8996	280.138	0	936.6747139
San Bernardino (	2050 T6 Utility Class 6	Aggregate	Aggregate	Natural Gas	0.08199	3.290792432	3.290792432	0	1.049467	0.000351846	0
San Bernardino (	2050 T6 Utility Class 7	Aggregate	Aggregate	Diesel	15.86796	788.4130379	788.4130379	0	203.1099	0.077961999	0
San Bernardino (	2050 T6 Utility Class 7	Aggregate	Aggregate	Electricity	24.35151	1250.467992	0	1250.468	311.6993	0	1311.773145
San Bernardino (	2050 T6 Utility Class 7	Aggregate	Aggregate	Natural Gas	0.091213	4.532016055	4.532016055	0	1.167532	0.000474939	0
San Bernardino (	2050 T6TS	Aggregate	Aggregate	Gasoline	655.4784	32821.38627	32821.38627	0	13114.81	5.363241077	0
San Bernardino (	2050 T6TS	Aggregate	Aggregate	Electricity	707.3012	44653.64966	0	44653.65	14151.68	0	46745.00604
San Bernardino (	2050 T7 CAIRP Class 8	Aggregate	Aggregate	Diesel	2821.624	597223.1685	597223.1685	0	64840.93	79.92372171	0
San Bernardino (	2050 T7 CAIRP Class 8	Aggregate	Aggregate	Electricity	801.0528	175332.2117	0	175332.2	18408.19	0	313397.9545
San Bernardino (	2050 T7 CAIRP Class 8	Aggregate	Aggregate	Natural Gas	10.32255	2184.850741	2184.850741	0	237.2122	0.345030397	0
San Bernardino (	2050 T7 NNOOS Class 8	Aggregate	Aggregate	Diesel	3159.337	917449.2032	917449.2032	0	72601.57	116.7024067	0
San Bernardino (	2050 T7 NOOS Class 8	Aggregate	Aggregate	Diesel	1362.445	333126.7483	333126.7483	0	31308.98	42.8718602	0
San Bernardino (	2050 T7 POLA Class 8	Aggregate	Aggregate	Diesel	1830.973	336829.5667	336829.5667	0	29954.72	45.84615603	0
San Bernardino (	2050 T7 POLA Class 8	Aggregate	Aggregate	Electricity	369.4795	67315.76077	0	67315.76	6044.684	0	120167.7844
San Bernardino (	2050 T7 POLA Class 8	Aggregate	Aggregate	Natural Gas	73.76041	13568.16159	13568.16159	0	1206.72	1.909727315	0
San Bernardino (	2050 T7 Public Class 8	Aggregate	Aggregate	Diesel	224.8239	8634.126246	8634.126246	0	1153.347	1.328386277	0
San Bernardino (	2050 T7 Public Class 8	Aggregate	Aggregate	Electricity	453.6731	20630.06334	0	20630.06	2327.343	0	36826.54623
San Bernardino (	2050 T7 Public Class 8	Aggregate	Aggregate	Natural Gas	376.6786	15718.92725	15718.92725	0	1932.361	2.393411309	0
San Bernardino (	2050 T7 Single Concrete/Transit	Aggregate	Aggregate	Diesel	191.1199	12867.38079	12867.38079	0	1800.35	1.865753841	0
San Bernardino (	2050 T7 Single Concrete/Transit	Aggregate	Aggregate	Electricity	276.3689	19429.26074	0	19429.26	2603.395	0	34692.18233
San Bernardino (	2050 T7 Single Concrete/Transit	Aggregate	Aggregate	Natural Gas	14.92023	1004.365797	1004.365797	0	140.5486	0.15109977	0
San Bernardino (	2050 T7 Single Dump Class 8	Aggregate	Aggregate	Diesel	450.4512	22616.46203	22616.46203	0	4243.25	3.375686734	0
San Bernardino (	2050 T7 Single Dump Class 8	Aggregate	Aggregate	Electricity	424.8706	25459.40592	0	25459.41	4002.281	0	45459.39055
San Bernardino (	2050 T7 Single Dump Class 8	Aggregate	Aggregate	Natural Gas	34.96021	1758.667197	1758.667197	0	329.3251	0.27762583	0
San Bernardino (	2050 T7 Single Other Class 8	Aggregate	Aggregate	Diesel	3002.419	131251.5601	131251.5601	0	28282.78	19.57129349	0
San Bernardino (	2050 T7 Single Other Class 8	Aggregate	Aggregate	Electricity	3257.101	164050.152	0	164050.2	30681.89	0	292921.9933
San Bernardino (	2050 T7 Single Other Class 8	Aggregate	Aggregate	Natural Gas	234.3456	10244.30781	10244.30781	0	2207.536	1.640357325	0
San Bernardino (	2050 T7 SWCV Class 8	Aggregate	Aggregate	Diesel	14.37487	759.6393552	759.6393552	0	66.12441	0.258476769	0
San Bernardino (	2050 T7 SWCV Class 8	Aggregate	Aggregate	Electricity	1229.413	79465.79837	0	79465.8	5655.3	0	141656.8387
San Bernardino (	2050 T7 SWCV Class 8	Aggregate	Aggregate	Natural Gas	1408.635	91460.45686	91460.45686	0	6479.721	11.79298044	0
San Bernardino (	2050 T7 Tractor Class 8	Aggregate	Aggregate	Diesel	7902.086	524495.682	524495.682	0	114817.3	70.19790752	0
San Bernardino (	2050 T7 Tractor Class 8	Aggregate	Aggregate	Electricity	1621.538	116234.196	0	116234.2	23560.94	0	207434.1668
San Bernardino (	2050 T7 Tractor Class 8	Aggregate	Aggregate	Natural Gas	218.7458	14495.34451	14495.34451	0	3178.376	2.324099243	0
San Bernardino (	2050 T7 Utility Class 8	Aggregate	Aggregate	Diesel	77.39234	3195.010442	3195.010442	0	990.622	0.47033871	0
San Bernardino (	2050 T7 Utility Class 8	Aggregate	Aggregate	Electricity	64.12771	2941.535467	0	2941.535	820.8347	0	5250.909321
San Bernardino (	2050 T7IS	Aggregate	Aggregate	Gasoline	0.913769	114.1788283	114.1788283	0	18.28268	0.021427485	0
San Bernardino (	2050 T7IS	Aggregate	Aggregate	Electricity	0.961758	143.1514253	0	143.1514	19.24285	0	255.0766747
San Bernardino (	2050 UBUS	Aggregate	Aggregate	Gasoline	84.28773	8247.655866	8247.655866	0	337.1509	0.519540157	0
San Bernardino (	2050 UBUS	Aggregate	Aggregate	Electricity	333.5515	51079.15059	0	51079.15	1334.206	0	100034.6223
San Bernardino (2050 UBUS	Aggregate	Aggregate	Natural Gas	102.4124	8017.093903	8017.093903	0	409.6497	0.563320465	0

Appendix F GHG Modeling

Appendices

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44	Appendix AJ
45	Appendix AK
46	Appendix AL
47	Appendix AM
48	Appendix AN
49	Appendix AO
50	Appendix AP
51	Appendix AQ
52	Appendix AR
53	Appendix AS
54	Appendix AT
55	Appendix AU
56	Appendix AV
57	Appendix AW
58	Appendix AX
59	Appendix AY
60	Appendix AZ
61	Appendix BA
62	Appendix BB
63	Appendix BC
64	Appendix BD
65	Appendix BE
66	Appendix BF
67	Appendix BG
68	Appendix BH
69	Appendix BI
70	Appendix BJ
71	Appendix BK
72	Appendix BL
73	Appendix BM
74	Appendix BN
75	Appendix BO
76	Appendix BP
77	Appendix BQ
78	Appendix BR
79	Appendix BS
80	Appendix BT
81	Appendix BU
82	Appendix BV
83	Appendix BW
84	Appendix BX
85	Appendix BY
86	Appendix BZ
87	Appendix CA
88	Appendix CB
89	Appendix CC
90	Appendix CD
91	Appendix CE
92	Appendix CF
93	Appendix CG
94	Appendix CH
95	Appendix CI
96	Appendix CJ
97	Appendix CK
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103	Appendix CQ
104	Appendix CR
105	Appendix CS
106	Appendix CT
107	Appendix CU
108	Appendix CV
109	Appendix CW
110	Appendix CX
111	Appendix CY
112	Appendix CZ
113	Appendix DA
114	Appendix DB
115	Appendix DC
116	Appendix DD
117	Appendix DE
118	Appendix DF
119	Appendix DG
120	Appendix DH
121	Appendix DI
122	Appendix DJ
123	Appendix DK
124	Appendix DL
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127	Appendix DO
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129	Appendix DQ
130	Appendix DR
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237	Appendix HU
238	Appendix HV
239	Appendix HW
240	Appendix HX
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242	Appendix HZ
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244	Appendix IB
245	Appendix IC
246	Appendix ID
247	Appendix IE
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249	Appendix IG
250	Appendix IH
251	Appendix II
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253	Appendix IK
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255	Appendix IM
256	Appendix IN
257	Appendix IO
258	Appendix IP
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265	Appendix IW
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269	Appendix JA
270	Appendix JB
271	Appendix JC
272	Appendix JD
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306	Appendix KL
307	Appendix KM
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310	Appendix KP
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326	Appendix LF
327	Appendix LG
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329	Appendix LI
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332	Appendix LL
333	Appendix LM
334	Appendix LN
335	Appendix LO
336	Appendix LP
337	Appendix LQ
338	Appendix LR
339	Appendix LS
340	Appendix LT
341	Appendix LU
342	Appendix LV
343	Appendix LW
344	Appendix LX
345	Appendix LY
346	Appendix LZ
347	Appendix MA
348	Appendix MB
349	Appendix MC
350	Appendix MD
351	Appendix ME
352	Appendix MF
353	Appendix MG
354	Appendix MH
355	Appendix MI
356	Appendix MJ
357	Appendix MK
358	Appendix ML
359	Appendix MM
360	Appendix MN
361	Appendix MO
362	Appendix MP
363	Appendix MQ
364	Appendix MR
365	Appendix MS
366	Appendix MT
367	Appendix MU
368	Appendix MV
369	Appendix MW
370	Appendix MX
371	Appendix MY
372	Appendix MZ
373	Appendix NA
374	Appendix NB
375	Appendix NC
376	Appendix ND
377	Appendix NE
378	Appendix NF
379	Appendix NG
380	Appendix NH
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383	Appendix NK
384	Appendix NL
385	Appendix NM
386	Appendix NN
387	Appendix NO
388	Appendix NP
389	Appendix NQ
390	Appendix NR
391	Appendix NS
392	Appendix NT
393	Appendix NU
394	Appendix NV
395	Appendix NW
396	Appendix NX
397	Appendix NY
398	Appendix NZ
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414	Appendix OP
415	Appendix OQ
416	Appendix OR
417	Appendix OS
418	Appendix OT
419	Appendix OU
420	Appendix OV
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424	Appendix OZ
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426	Appendix PB
427	Appendix PC
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429	Appendix PE
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431	Appendix PG
432	Appendix PH
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435	Appendix PK
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460	Appendix QJ
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462	Appendix QL
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464	Appendix QN
465	Appendix QO
466	Appendix QP
467	Appendix QQ
468	Appendix QR
469	Appendix QS
470	Appendix QT
471	Appendix QU
472	Appendix QV
473	Appendix QW
474	Appendix QX
475	Appendix QY
476	Appendix QZ
477	Appendix RA
478	Appendix RB
479	Appendix RC
480	Appendix RD
481	Appendix RE
482	Appendix RF
483	Appendix RG
484	Appendix RH
485	Appendix RI
486	Appendix RJ
487	Appendix RK
488	Appendix RL
489	Appendix RM
490	Appendix RN
491	Appendix RO
492	Appendix RP
493	Appendix RQ
494	Appendix RR
495	Appendix RS
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497	Appendix RU
498	Appendix RV
499	Appendix RW
500	Appendix RX
501	Appendix RY
502	Appendix RZ
503	Appendix SA
504	Appendix SB
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506	Appendix SD
507	Appendix SE
508	Appendix SF
509	Appendix SG
510	Appendix SH
511	Appendix SI
512	Appendix SJ
513	Appendix SK
514	Appendix SL
515	Appendix SM
516	Appendix SN
517	Appendix SO
518	Appendix SP
519	Appendix SQ
520	Appendix SR
521	Appendix SS
522	Appendix ST
523	Appendix SU
524	Appendix SV
525	Appendix SW
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527	Appendix SY
528	Appendix SZ
529	Appendix TA
530	Appendix TB
531	Appendix TC
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533	Appendix TE
534	Appendix TF
535	Appendix TG
536	Appendix TH
537	Appendix TI
538	Appendix TJ
539	Appendix TK
540	Appendix TL
541	Appendix TM
542	Appendix TN
543	Appendix TO
544	Appendix TP
545	Appendix TQ
546	Appendix TR
547	Appendix TS
548	Appendix TT
549	Appendix TU
550	Appendix TV
551	Appendix TW
552	Appendix TX
553	Appendix TY
554	Appendix TZ
555	Appendix UA
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561	Appendix UG
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563	Appendix UI
564	Appendix UJ
565	Appendix UK
566	Appendix UL
567	Appendix UM
568	Appendix UN
569	Appendix UO
570	Appendix UP
571	Appendix UQ
572	Appendix UR
573	Appendix US
574	Appendix UT
575	Appendix UU
576	Appendix UV
577	Appendix UW
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582	Appendix VB
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584	Appendix VD
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590	Appendix VJ
591	Appendix VK
592	Appendix VL
593	Appendix VM
594	Appendix VN
595	Appendix VO
596	Appendix VP
597	Appendix VQ
598	Appendix VR
599	Appendix VS
600	Appendix VT
601	Appendix VU
602	Appendix VV
603	Appendix VW
604	Appendix VX
605	Appendix VY
606	Appendix VZ
607	Appendix WA
608	Appendix WB
609	Appendix WC
6	

1	Energy	Building electrification
Measure Language		
Promote and incentivize the phase-out of gas appliances in new and existing homes and businesses throughout the community to advance GHG reductions, increase energy efficiency, and protect public safety and environmental health.		
Implementation Actions		
<ul style="list-style-type: none"> Support education and outreach to raise awareness and increase participation in electric appliance rebate programs offered by SCE, SeCaREB, and other providers, with a focus on contractors and residents of older properties (constructed in or before 1975). Identify and remove any existing code, permitting, or other City requirements that provide barriers to all-electric conversions of existing homes and businesses and assess opportunities to provide incentives, such as permit streamlining or fee reductions, as feasible. Update the City's permit tracking system as appropriate to track energy efficiency improvements. Review City supported weatherization and energy efficiency programs and requirements, if applicable, to ensure they support all-electric, high efficiency appliances. Support education opportunities for contractors about the opportunities and benefits of converting homes to high efficiency, all-electric appliances. Audit existing City facilities on a regular basis to assess energy use and efficiency, identify energy efficiency improvements that optimize energy performance of buildings and operations, and prioritize energy efficiency improvements. 		

GHG Reductions		
	2030	2050
Residential kWh	-10,620	0
Residential Therms	-14,900	-58,830
Nonresidential kWh	-9,420	0
Nonresidential Therms	-14,400	-43,810
Total	19,330	194,640

Activity Reductions		
	2030	2050
Residential kWh	-89,208,980	-326,295,840
Residential Therms	-3,044,540	-11,159,130
Nonresidential kWh	-80,012,870	-243,510,780
Nonresidential natural gas	-2,730,540	-8,310,100

Assumptions		
	2030	2050
Penetration rate for electrification of existing homes	10%	25%
Penetration rate for electrification of existing non-residential buildings	5%	12%
Penetration rate for electrification of new homes	30%	60%
Penetration rate for electrification of new non-residential buildings	25%	45%

Performance Targets and Metrics		
	2030	2050
New all-electric homes	5,820	45,660
Existing homes retrofitted to be all-electric	4,830	12,070
New all-electric square footage for non-residential buildings	8,166,530	49,261,490
Existing nonresidential square footage retrofitted to be all-electric	9,158,850	21,981,230

Notes				
Energy-3: Building electrification	Author	Model Version	Last Updated	File Name
Residential Electrification	Author: Robert Bagnall	1.00	November 19, 2020	19-2020-01
Notes	<p>1. Calculate 2030, 2050, and 2050 residential and commercial electricity and natural gas consumption after other energy measures are implemented.</p> <p>2. Calculate number of buildings electrified based on penetration rates for non-residential buildings in 2030, 2050, and 2050.</p> <p>3. Calculate square footage of buildings electrified based on penetration rates for non-residential buildings in 2030, 2050, and 2050.</p> <p>4. Calculate emissions reductions.</p>			
Summary of Data Needs	<p>1. GHG emissions per natural gas unit.</p>			
Assumptions	<p>1. Building electrification results in 0 therm natural gas use.</p> <p>2. No increase in energy intensity from switching from natural gas to electricity (conversion therm and kilowatt hour to kilowatt hour increase in energy intensity).</p>			

New residential buildings were estimated by subtracting the number of homes in Year 2: number of homes in Year 1 (i.e. new homes in 2030) ÷ 2030 # of homes minus 2019 # of homes

New non-residential buildings were estimated using the area (square footage) of total nonresidential area, by subtracting square footages in Year 2: square footages in Year 1 (i.e. non-residential area in 2030 ÷ 2030 square footage - 2019 square footage)

New Residential		
	2030	2050
Target penetration rate for electrification of new homes	30%	60%
Number of new homes (built between 2019-2030, 2019-2050)	18,404	76,103
Target number of all-electric homes	5,521	45,660
Electricity use for new homes (kWh)	30,964,740	145,000,460
Average natural gas use for new homes (therms)	248.68	145.81
Energy savings from avoided natural gas use (Btu)	1,449,825	6,922,782
Energy savings from avoided natural gas use (therms)	134,950,339	692,112,745
Change in residential electricity use (MWh)	39,553,044	202,848,144
Change in GHG emissions from increased electricity use (MTCO2e)	-4,207	0

Existing Residential		
	2030	2050
Target penetration rate for electrification of existing homes	10%	25%
Number of existing homes	48,228	48,228
Target number of existing all-electric homes	4,830	12,070
Average natural gas use for existing homes (therms)	351.02	351.02
Energy savings from avoided natural gas use (Btu)	1,674,338	4,236,344
Energy savings from avoided natural gas use (therms)	166,413,005	427,533,915
Change in electricity use (MWh)	-49,655,038	-124,137,996
Change in GHG emissions from increased electricity use (MTCO2e)	-5,800	0

New Nonresidential		
	2030	2050
Target penetration rate for electrification of new nonresidential buildings	25%	45%
Increase in non-residential building square footage (built between 2019-2030, 2019-2050)	32,666,125	110,980,953
Target for all-electric non-residential building area	8,166,530	49,261,490
Electricity use for new non-residential buildings	171,690,190	183,453,250
Average natural gas use for new non-residential buildings (therms/square foot)	0.1741	0.1635
Energy savings from avoided natural gas use (therms)	1,422,128	5,169,700
Energy savings from avoided natural gas use (Btu)	142,128,761,143	516,848,388,524
Change in nonresidential electricity use (MWh)	-41,072,495	-181,494,123
Change in GHG emissions from increased electricity use (MTCO2e)	-4,639	0

Existing Nonresidential		
	2030	2050
Target penetration rate for electrification of existing nonresidential buildings	5%	12%
Existing non-residential building area (square footage)	183,126,931	183,126,931
Target for all-electric nonresidential building area	9,158,850	21,981,234
Average natural gas use for existing nonresidential buildings (therms/square foot)	0.1429	0.1429
Energy savings from avoided natural gas use (therms)	1,308,498	3,140,779
Energy savings from avoided natural gas use (Btu)	130,809,229,495	313,942,869,717
Change in electricity use (MWh)	-38,340,273	-97,016,655
Change in GHG emissions from increased electricity use (MTCO2e)	-4,562	0

Additional Notes		
	2030	2050
Existing Buildings		
Penetration rate for electrification of existing homes	0.1	0.25
Penetration rate for electrification of existing non-resider	0.05	0.12
New Construction		
Penetration rate for electrification of new homes	0.3	0.60
Penetration rate for electrification of new non-residential	0.25	0.45

2		Energy	Onsite solar energy for existing residential development												
<p>Physical Location</p> <p>Continue to support and facilitate installation of rooftop solar photovoltaic and onsite solar energy systems in existing residential development.</p> <p>Implementation Details</p> <p>• Conduct outreach to raise awareness about the benefits of solar energy for homes and increase installations of residential solar PV systems in Ontario. • Establish a solar permitting webpage on the City's website that summarizes requirements for installing solar PV systems to ensure the information is easily accessible to the general public. • Update City permit tracking in cooperation to track size and number of non-visible energy installations.</p>															
<p>2020 Performance</p> <table border="1"> <thead> <tr> <th>Performance Metric</th> <th>2020</th> <th>2021</th> <th>2022</th> </tr> </thead> <tbody> <tr> <td>Residential kWh</td> <td>3,099</td> <td>6</td> <td></td> </tr> <tr> <td>Total</td> <td>3,099</td> <td>6</td> <td></td> </tr> </tbody> </table>				Performance Metric	2020	2021	2022	Residential kWh	3,099	6		Total	3,099	6	
Performance Metric	2020	2021	2022												
Residential kWh	3,099	6													
Total	3,099	6													
<p>2021 Performance</p> <table border="1"> <thead> <tr> <th>Performance Metric</th> <th>2021</th> <th>2022</th> </tr> </thead> <tbody> <tr> <td>Residential kWh</td> <td>13,726,725</td> <td>88,821,295</td> </tr> <tr> <td>Total</td> <td>13,726,725</td> <td>88,821,295</td> </tr> </tbody> </table>				Performance Metric	2021	2022	Residential kWh	13,726,725	88,821,295	Total	13,726,725	88,821,295			
Performance Metric	2021	2022													
Residential kWh	13,726,725	88,821,295													
Total	13,726,725	88,821,295													

Notes		Additional Metrics	
<p>Energy & GHG or GHG Intensity Metrics</p> <p>1. Includes 2020, 2021, and 2022 residential electricity consumption after other energy resources are implemented. 2. Includes 2020, 2021, and 2022 residential electricity consumption after other energy resources are implemented. 3. Includes 2020, 2021, and 2022 residential electricity consumption after other energy resources are implemented. 4. Includes 2020, 2021, and 2022 residential electricity consumption after other energy resources are implemented. 5. Includes 2020, 2021, and 2022 residential electricity consumption after other energy resources are implemented. 6. Includes 2020, 2021, and 2022 residential electricity consumption after other energy resources are implemented.</p>		<p>2020 2021</p> <p>Number of rooftop solar PV systems installed: 49,221 49,374 Capacity of rooftop solar PV systems installed: 3,411 3,426 Number of rooftop solar PV systems installed: 3,203 3,204 Capacity of rooftop solar PV systems installed: 2,438 2,438 Number of rooftop solar PV systems installed: 2,438 2,438 Capacity of rooftop solar PV systems installed: 1,174,721 8,821,295</p>	
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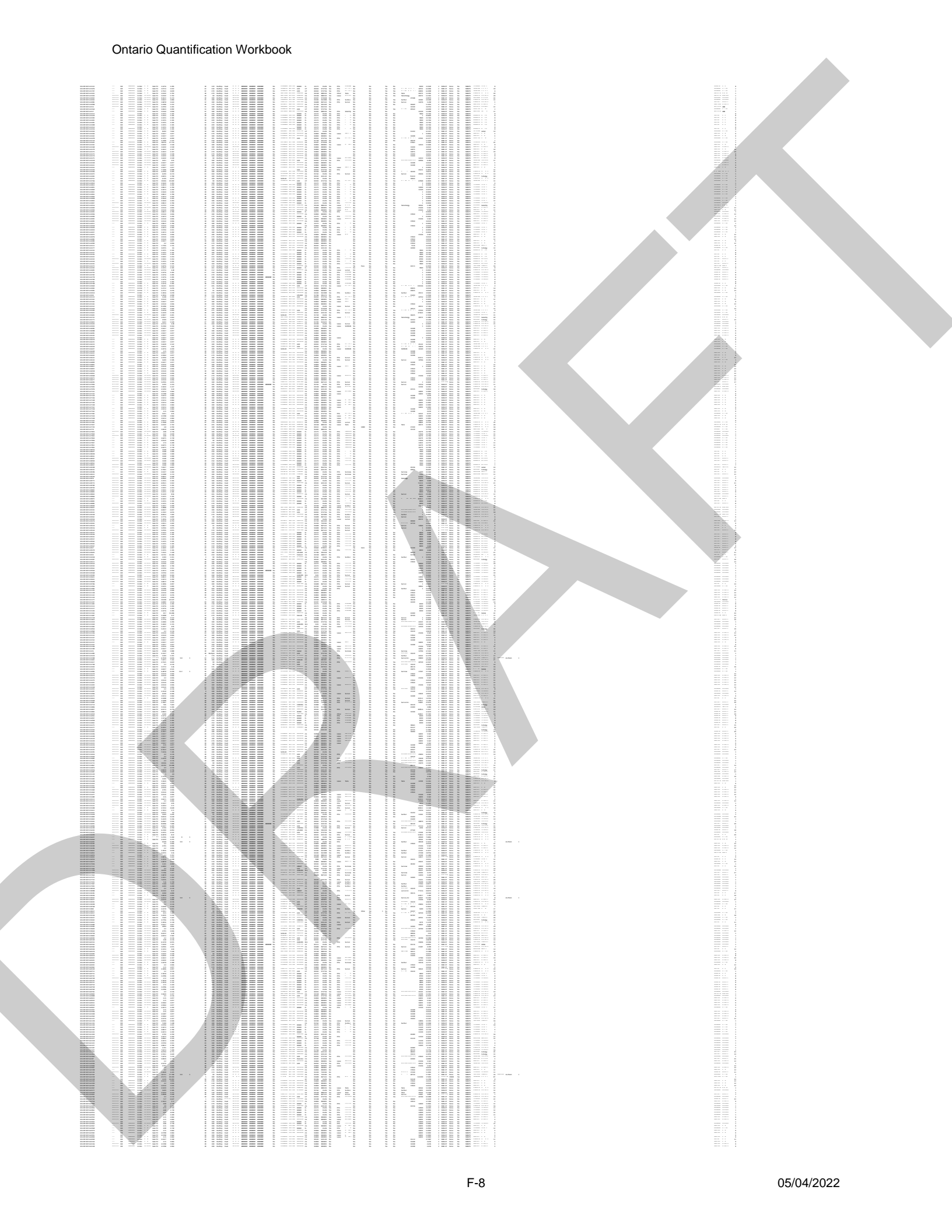
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2	50	kg	50	...
3	200	kg	200	...
4	150	kg	150	...
5	300	kg	300	...
6	100	kg	100	...
7	250	kg	250	...
8	180	kg	180	...
9	400	kg	400	...
10	120	kg	120	...
11	350	kg	350	...
12	220	kg	220	...
13	100	kg	100	...
14	280	kg	280	...
15	160	kg	160	...
16	450	kg	450	...
17	140	kg	140	...
18	320	kg	320	...
19	200	kg	200	...
20	100	kg	100	...
21	250	kg	250	...
22	180	kg	180	...
23	400	kg	400	...
24	120	kg	120	...
25	350	kg	350	...
26	220	kg	220	...
27	100	kg	100	...
28	280	kg	280	...
29	160	kg	160	...
30	450	kg	450	...
31	140	kg	140	...
32	320	kg	320	...
33	200	kg	200	...
34	100	kg	100	...
35	250	kg	250	...
36	180	kg	180	...
37	400	kg	400	...
38	120	kg	120	...
39	350	kg	350	...
40	220	kg	220	...
41	100	kg	100	...
42	280	kg	280	...
43	160	kg	160	...
44	450	kg	450	...
45	140	kg	140	...
46	320	kg	320	...
47	200	kg	200	...
48	100	kg	100	...
49	250	kg	250	...
50	180	kg	180	...
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66	120	kg	120	...
67	350	kg	350	...
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69	100	kg	100	...
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71	160	kg	160	...
72	450	kg	450	...
73	140	kg	140	...
74	320	kg	320	...
75	200	kg	200	...
76	100	kg	100	...
77	250	kg	250	...
78	180	kg	180	...
79	400	kg	400	...
80	120	kg	120	...
81	350	kg	350	...
82	220	kg	220	...
83	100	kg	100	...
84	280	kg	280	...
85	160	kg	160	...
86	450	kg	450	...
87	140	kg	140	...
88	320	kg	320	...
89	200	kg	200	...
90	100	kg	100	...
91	250	kg	250	...
92	180	kg	180	...
93	400	kg	400	...
94	120	kg	120	...
95	350	kg	350	...
96	220	kg	220	...
97	100	kg	100	...
98	280	kg	280	...
99	160	kg	160	...
100	450	kg	450	...



Item	Quantity	Unit	Value
1	1	kg	1.00
2	1	kg	1.00
3	1	kg	1.00
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6	1	kg	1.00
7	1	kg	1.00
8	1	kg	1.00
9	1	kg	1.00
10	1	kg	1.00
11	1	kg	1.00
12	1	kg	1.00
13	1	kg	1.00
14	1	kg	1.00
15	1	kg	1.00
16	1	kg	1.00
17	1	kg	1.00
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19	1	kg	1.00
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Item	Quantity	Unit	Value
1	1	kg	1.00
2	1	kg	1.00
3	1	kg	1.00
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Item	Quantity	Unit	Value	Notes
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100	1	kg	1.00	



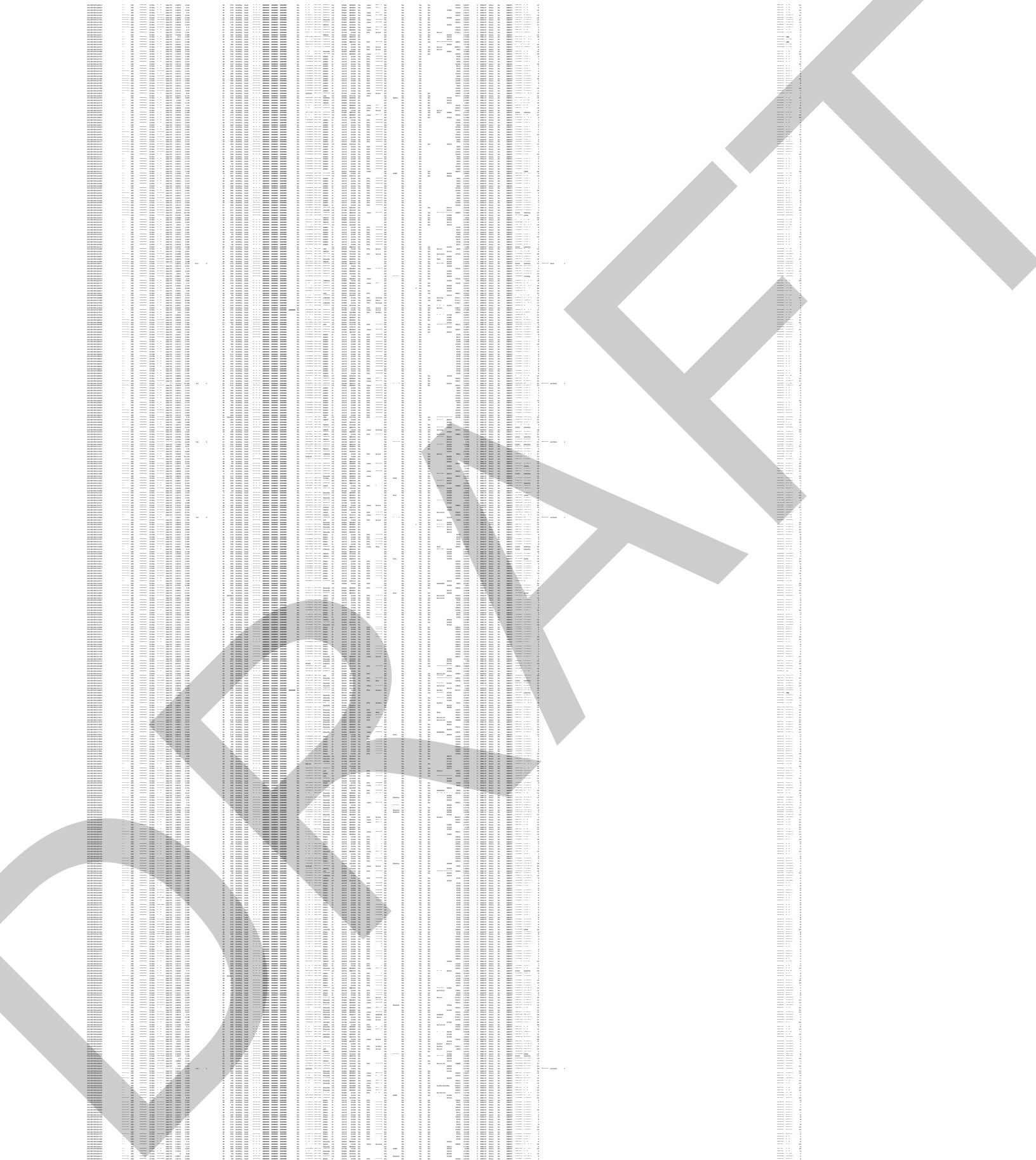
Item	Quantity	Unit	Value	Notes
1	1	kg	1.00	
2	1	kg	1.00	
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Item	Quantity	Unit	Value	Notes
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Item	Quantity	Unit	Value	Notes
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Item	Quantity	Unit	Value
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Ontario Quantification Workbook

Quantification Workbook		Ontario	
5 Energy			
Urban cooling			
Measure Information			
Maintain and expand the City's existing tree canopy, with a goal of planting 300 trees annually through 2030, and promote the use of pervious concrete and cool pavement for pavement projects.			
Implementation Actions			
<ul style="list-style-type: none"> Maintain and expand an urban forestry program to manage dry-ride tree planting, track dry-ride tree inventory and canopy cover, and monitor tree health to maintain and expand the City's existing tree canopy. Identify priority areas for tree planting, focusing on environmental justice communities, to mitigate the heat island effect in underserved neighborhoods. Share that on- and off-street hard landscape areas, such as parking lots, incorporate trees and other green infrastructure appropriate for current and future climate conditions. Update grant funding requirements for urban forestry, pervious concrete, and cool pavement. 			
GHG Reductions			
2019	2030	2050	
Reduction (tCO ₂ e)	1,000	10,000	
Non-sustainable Divest	0	0	
Total	1,000	10,000	
Assumptions			
2019	2030	2050	
Non-sustainable Divest	0	0	
Total	1,000	10,000	

Assumptions		2030	2050
Total number of trees planted with urban forestry programs		3,000	10,000
Performance targets and details		4,000	10,000
Number of trees planted		4,000	10,000

Notes		2030	2050
Assumptions:		28.57%	71.43%
All trees planted within 0-19 feet of buildings that were built pre-1980 with heat and A/C.			
25% of trees were planted N of buildings, 25% were planted E, 25% planted S, and 25% W.			
Four species were planted at the same rate (125 trees of each) for a total of 500 trees per year.			
Four species: Oak, Northern red (Quercus rubra), Sycamore, American (Platanus occidentalis), Tree, Chinese Elm (Ulmus parviflorus), Tree, Tulip (Liriodendron tulipifera).			
Trees are in excellent condition and planted in full sun.			
10% mortality rate during project period (2022-2030).			
Carbon sequestration rate is constant over time.			
(28.6% of carbon sequestered between 2022-2030, 71.4% of carbon sequestered between 2031-2050)			

Additional Notes		2030	2050
Target number of trees to plant per year		300	1000
Tree planting goal		2022	2030
Number of years		8	20
Number of trees to plant		4000	10000
Total number of trees planted with urban forestry program		4000	14000

Additional Notes		2030	2050
Target number of trees to plant per year		300	1000
Tree planting goal		2022	2030
Number of years		8	20
Number of trees to plant		4000	10000
Total number of trees planted with urban forestry program		4000	14000

Project Report - Tree Planting Calculator

Project Name: [Project Name]

Location: [Location]

Start Date: [Start Date]

End Date: [End Date]

Number of trees to plant: [Number of trees to plant]

Species: [Species]

Planting Method: [Planting Method]

Planting Density: [Planting Density]

Planting Area: [Planting Area]

Planting Cost: [Planting Cost]

Planting Time: [Planting Time]

Planting Labor: [Planting Labor]

Planting Materials: [Planting Materials]

Planting Water: [Planting Water]

Planting Fertilizer: [Planting Fertilizer]

Planting Pesticide: [Planting Pesticide]

Planting Herbicide: [Planting Herbicide]

Planting Mulch: [Planting Mulch]

Planting Stakes: [Planting Stakes]

Planting Signs: [Planting Signs]

Planting Other: [Planting Other]

Planting Total: [Planting Total]

Year	End year	Number of years of planting	CO2 Sequestered (tonnes)	Electricity Saved (MWh)	Fuel Saved (litres)	Fuel Saved (litres)
2022	2022	1	100	100	100	100
2023	2023	2	200	200	200	200
2024	2024	3	300	300	300	300
2025	2025	4	400	400	400	400
2026	2026	5	500	500	500	500
2027	2027	6	600	600	600	600
2028	2028	7	700	700	700	700
2029	2029	8	800	800	800	800
2030	2030	9	900	900	900	900
2031	2031	10	1000	1000	1000	1000
2032	2032	11	1100	1100	1100	1100
2033	2033	12	1200	1200	1200	1200
2034	2034	13	1300	1300	1300	1300
2035	2035	14	1400	1400	1400	1400
2036	2036	15	1500	1500	1500	1500
2037	2037	16	1600	1600	1600	1600
2038	2038	17	1700	1700	1700	1700
2039	2039	18	1800	1800	1800	1800
2040	2040	19	1900	1900	1900	1900
2041	2041	20	2000	2000	2000	2000
2042	2042	21	2100	2100	2100	2100
2043	2043	22	2200	2200	2200	2200
2044	2044	23	2300	2300	2300	2300
2045	2045	24	2400	2400	2400	2400
2046	2046	25	2500	2500	2500	2500
2047	2047	26	2600	2600	2600	2600
2048	2048	27	2700	2700	2700	2700
2049	2049	28	2800	2800	2800	2800
2050	2050	29	2900	2900	2900	2900

Quantification Workbook		Ontario	
6	Energy	Energy efficiency retrofits for low-income households	
Measure Language			
Promote and incentivize voluntary energy efficiency retrofits of homes to reduce natural gas and electricity usage, with the goal of retrofitting 9,000 low-income homes by 2050. Partner with community services agencies to fund energy efficiency projects, including heating, ventilation, air conditioning, indoor lighting, water heating equipment, insulation, and weatherization for low-income residents.			
Implementation Actions			
<ul style="list-style-type: none"> * Assist San Bernardino County staff and other partners with their targeted outreach campaign, including hosting workshops and promoting programs through City communication channels to increase awareness of the benefits of weatherization among low-income households. * Expand and better integrate funding and support for existing programs that support weatherization and increase energy efficiency in low-income households, including through partnerships with SoCalREN and San Bernardino County. * Engage with tenants and owners of multi-family homes and promote the SoCalREN multi-family program. 			
GHG Reductions			
	2030	2050	
Residential kWh	220	0	
Residential Therms	720	1,680	
Total	940	1,480	
Activity Reductions			
	2030	2050	
Residential kWh	1,885,000	3,770,000	
Residential Therms	136,340	272,680	

Quantification Calculations		Notes	
Assumption			
It is assumed that the low-income households are evenly distributed across different housing types (i.e. single family, townhomes, low-rise apartments, mid-rise apartments, and mobile home parks).			
2030 Energy Savings from Weatherization			
Percent Savings of Energy Used for Heating (kWh)	20%	US DDE (from CAPPA-Weatherization)	
Percent Savings of Energy Used for Heating (therms)	32%	US DDE (from CAPPA-Weatherization)	
SBCA Revised Workbook			
Percent of electricity use for HVAC	31.02%		
Percent of natural gas use for HVAC	26.12%		
Residential Appliances Demonstration Study			

Assumptions		2030	2050
Penetration rate for low-income residential energy efficiency retrofits		20%	40%
Anticipated savings in electricity energy efficiency from retrofit activities		20%	20%
Anticipated savings in natural gas energy efficiency from retrofit activities		32%	32%
Percent of existing households in Ontario that are low-income (2019)		27%	27%
Performance Targets and Metrics		2030	2050
Number of retrofitted low-income homes		4,630	9,270

	2030	2050
Electricity's share of existing residential energy GHG emissions	0.47	0.37
Natural gas's share of existing residential energy GHG emissions	0.58	0.73
Percent of existing households in Ontario that are low-income (2019)	32%	32%
Penetration rate for low-income residential energy efficiency retrofits	0.2	0.4
Target for exceeding 2019 Title 24 Standards (as a percent improvement)	0.2	0.2

HVAC electricity use in 2019 in low-income households by housing type (kWh)		
Single family housing	22,472,230	22,527,230
Apartment low rise	2,029,688	2,029,688
Apartment high rise	4,027,814	4,027,814
Condo/Townhouse	1,888,640	1,888,640
Mobile home park	1,120,191	1,120,191

HVAC electricity savings in low-income households with retrofits by housing type (kWh)		
Single family housing	1,251,234	2,703,268
Apartment low rise	123,159	246,319
Apartment high rise	241,673	483,350
Condo/Townhouse	101,318	202,637
Mobile home park	62,211	134,423

HVAC natural gas use in 2019 in low-income households by housing type (therms)		
Single family housing	1,460,977	1,460,977
Apartment low rise	80,333	80,333
Apartment high rise	164,491	164,491
Condo/Townhouse	83,248	83,248
Mobile home park	51,035	51,035

HVAC natural gas savings in low-income households with retrofits by housing type (therms)		
Single family housing	99,234	199,868
Apartment low rise	7,212	14,424
Apartment high rise	15,801	31,601
Condo/Townhouse	7,092	15,984
Mobile home park	4,829	9,729

Table 2-6 Household Income Distribution

Income Category	Owners	Percentage of Households	Eteners	Percentage of Households	Total of Households	Percentage of Total
Extremely Low	1,320	5%	3,160	17%	3,480	11%
Very Low	2,150	9%	5,550	19%	5,640	12%
Low	3,350	17%	8,280	30%	8,800	19%
Moderate or Above Moderate	11,580	73%	18,710	64%	25,300	59%
Total	18,350	100%	25,860	100%	44,210	100%

Source: Comprehensive Household Income Survey (CHIS) 2015/2017
Note: Numbers differ from the Region's "Healthy Income Assessment" (HIA) because the CHIS household income levels are defined based on total income, whereas the HIA distribution is based on household income.

Income Categories	Percent of households
Extremely Low	6%
Very Low	8%
Low	13%
Total	27%

Sources: Ontario Housing Element, March 2022
Q:\ONT-06\05_Policy\51_Hmg\5_Adopted_Final\Ontario Housing Element Update_Adopted_Final_March_2022_Clean

Additional Notes

GHG Reduction Formula
A = C - S

GHG Calculation Variables

ID	Variable	Value	Unit	Source
A	GHG emissions (kWh)			Calculated
B	Baseline GHG emissions (kWh)			Calculated
C	GHG emissions (kWh)	0-100		Input
S	GHG emissions (kWh)			Input

Figure B-1-3: California Energy Commission Electricity Demand Forecast Zones

Ontario's Electricity Demand Forecast Zone 10

Smart Growth and Infill																
1	Transportation															
<p>Encourage redistribution of employment through higher density, mixed use, infill development and creative reuse of under-utilized lots within the urban core.</p> <p>Identify opportunities to increase residential density to and around the urban core.</p> <p>Encourage the development of other projects and other zoning options to reduce or enhance regulations that increase costs for higher density development.</p> <p>Encourage density regulations provide incentives for support for mixed housing and business opportunities consistent with the related Housing Division.</p>																
<table border="1"> <thead> <tr> <th>Category</th> <th>2019</th> <th>2020</th> <th>2021</th> <th>2022</th> </tr> </thead> <tbody> <tr> <td>...</td> <td>...</td> <td>...</td> <td>...</td> <td>...</td> </tr> <tr> <td>Total</td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>		Category	2019	2020	2021	2022	Total				
Category	2019	2020	2021	2022												
...												
Total																

Additional Notes	
<p>The reasonable GHG reduction can be achieved through various measures:</p> <ul style="list-style-type: none"> Encourage redistribution of employment through higher density, mixed use, infill development and creative reuse of under-utilized lots within the urban core. Identify opportunities to increase residential density to and around the urban core. Encourage the development of other projects and other zoning options to reduce or enhance regulations that increase costs for higher density development. Encourage density regulations provide incentives for support for mixed housing and business opportunities consistent with the related Housing Division. 	<p>Not quantified. GHG reductions from increased housing and jobs densities under TOP 2050 are already factored into the projected change in VMT.</p>

Additional Notes	
<p>Target reduction in VMT: 5%</p> <p>Baseline of VMT with respect to residential density: 0.12</p> <p>Reasonable residential density required to achieve GHG reduction (kg/tonne): 0.1</p> <p>Reasonable job density required to achieve GHG reduction (kg/tonne/employee): 145</p>	<p>GHG Reduction Formula:</p> $GHG = \left(\frac{VMT}{1000} \right) \times \left(\frac{CO_2e}{kg} \right) \times \left(\frac{kg}{tonne} \right)$

Program / Sub-Program	Category	2020			
		Existing	Proposed	Change	Notes
...
Total					

Grand Total (Res + MO) 46,115

Existing residential density 9.38

Existing employment use area

©2017-2018 LandUseL2 CA Infrastructure/TPP 14 All Provisions. Bases 2021/2024. Final/Review Info Detail Address/Ann. 2021/2024 w/Provis. 21124AA

9	Transportation	Transit-Oriented Development
<p>Encourage development of compact, mixed-use, and transit-oriented development to improve the regional job-housing balance, especially in corridors served by high-density transit and by Rapid Transit (RT) and in transit stations.</p>		
<p>Encourage transit-oriented development within the TOD corridor and stations to improve the mobility and vitality along and across the corridor through higher-density residential and commercial development that allows for multi-modal mobility.</p>		
<p>Encourage development within the TOD corridor to provide and support an excellent transportation network, especially considering the safety, comfort, and effectiveness of all transportation modes.</p>		
<p>Establish and maintain land use patterns in the TOD corridor that will attract and accommodate public transit, such as higher density residential buildings near existing high-frequency transit stops.</p>		
<p>Establish land use and development standards in the TOD corridor to ensure any form of appropriate higher-density development.</p>		

Land Acquisition	2010	2015
Land for TOD within TOD area (km ²)	2.0	2.0
Land for TOD outside TOD area (km ²)	11.0	11.0
Land for TOD (km ²)	13.0	13.0

Population Targets and Metrics	2010	2015
Population in TOD	1,500	1,500
Population outside TOD	15,000	15,000
Population (km ²)	16,500	16,500

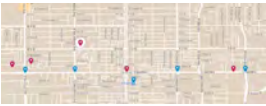
Notes

Assumptions that transit mode share does not change over time based on GIS analysis of transit ridership (Metrolinx.com/Transit/ModeShare/ModeShare.htm) for the year 2010.

TOD developments were calculated by identifying the total area of land parcels located in the TOD corridor based on the location and/or address of each parcel and/or other GIS data.

Based on the 2010 census (see table below), it was estimated that about 25% of the areas zoned as high density were in TOD areas, about 40% of areas zoned as medium density were in TOD areas, and 30% of areas zoned as low density were in TOD areas (see table below).

The number of parcels in the TOD areas was not calculated by identifying the number of parcels zoned as high density in 2010 and 2015 in the zoning by-law area. The population in each of the City's neighbourhoods outside the Area of the City's jurisdiction land in reference to the 2010 and 2015 census was affected by the increase in land use by multiplying the census change in GIS zoned areas from TOD by the 2010 census' share of overall VHC, the same as the GIS zoned areas reported in the TOD report.



10000
Red Line: TOD zoned use housing parcel
Blue Line: Transit (RT or Streetcar)
Green Map: NA

Additional Notes

AMHSI ANALYSIS OF TRANSPORTATION TO WORK - Community Estimates
2010 and 2015 Census Data
Source: Metrolinx, Toronto Transit Commission

Mode	2010	2015
Walk/Bike	25.0%	25.0%
Public Transit	10.0%	10.0%
Other Modes	65.0%	65.0%

Land Use: TOD area = 2.0 km², Outside TOD area = 11.0 km², Total = 13.0 km²

Population: TOD area = 1,500, Outside TOD area = 15,000, Total = 16,500

Programme	Land Use	Activity or Mileage	2010	2015	2020	2025
TOD	High Density	Walking	1,000	1,000	1,000	1,000
	Medium Density	Bicycling	1,000	1,000	1,000	1,000
Outside TOD	High Density	Walking	10,000	10,000	10,000	10,000
	Medium Density	Bicycling	10,000	10,000	10,000	10,000

Percentage of areas zoned high density in TOD areas: 25%
Percentage of areas zoned medium density in TOD areas: 40%
Percentage of areas zoned low density in TOD areas: 30%

GIS Reductions

Category	Value
Land Use	13.0 km ²
Population	16,500
Other Metrics	Various values

Source: GISDA patterns, 2011

Example GIS Reduction Quantification

The net reduction in TOD is based on the program's TOD location. Program also accounts for other factors such as the location of the program's TOD area, the location of the program's TOD area, the location of the program's TOD area, and the location of the program's TOD area.

Quantification Workbook Ontario

11	Transportation	Signal synchronization and roadway management
Measure Language		
Implement traffic and roadway management strategies to improve mobility and efficiency and reduce associated emissions.		
Implementation Actions		
<ul style="list-style-type: none"> • Work with the Traffic Management Center to develop an annual signal synchronization program for identified priority corridors to understand changing traffic conditions, including peak hour conditions and traffic congestion patterns, update signal timing to match the specific needs of study corridors, and report on progress in travel time, average speed, and delay to measure effectiveness of the signal synchronization project. • Work with the Traffic Management Center to ensure that signal timing is updated on a regular basis to comply with latest State requirements and accommodate pedestrian and bicycle crossing time for roadways with crosswalks and/or bicycle facilities. 		

GHG Reductions			
	2030	2050	
2030			
2050			
Total			

Activity Reductions			
	2030	2050	
2030			
2050			

Assumptions			2030	2050
[Assumption 1]				
[Assumption 2]				
[Assumption 3]				
[Assumption 4]				
[Assumption 5]				

Performance Targets and Metrics			2030	2050
[Metric 1]				
[Metric 2]				
[Metric 3]				
[Metric 4]				
[Metric 5]				

Quantification Calculations

Notes		2030	2050	Additional Notes
No method in CAI with Traffic Signal	Not quantified. Method and data needed for quantification not available.			

The screenshot displays the Ontario Quantification Workbook software interface. The interface is divided into several sections:

- Top Navigation Bar:** Contains the title "Ontario Quantification Workbook" and a search bar.
- Left Sidebar:** Features a tree view for navigating through the workbook's structure.
- Central Workspace:** The main area containing multiple data tables and charts. It includes:
 - Several data tables with columns for various metrics.
 - A bar chart showing data distribution.
 - A map of Ontario with a highlighted region.
- Bottom Status Bar:** Displays the date "05/04/2022" and the page number "F-27".



DRAFT

Ontario Quantification Workbook

14		Transportation	Vehicle idling																		
<p>Measure Location</p> <p>Limit idling of heavy duty trucks. Support the South Coast Air Quality Management District (SCAQMD) and ABB anti-idling requirements and provide signage in key areas where idling that is not consistent with SCAQMD or ABB requirements might occur.</p>																					
<p>Implementation Actions</p> <ul style="list-style-type: none"> Evaluate the feasibility of an idling ordinance that reduces the legally allowed idling time for heavy duty trucks (greater than 26,000 gross vehicle weight) to 3 minutes. California law currently limits idling time to 5 minutes. Ordinance must include a violation fee and enforcement mechanisms. Create a public awareness campaign to raise awareness about and increase compliance with idling ordinance. Install signage regarding new idling limit of 3 minutes in areas designated for industrial uses. 																					
<p>GHG Reductions</p> <table border="1"> <thead> <tr> <th></th> <th>2030</th> <th>2050</th> </tr> </thead> <tbody> <tr> <td>Heavy-duty_VMT</td> <td>1,950</td> <td>1,780</td> </tr> <tr> <td>Total</td> <td>1,950</td> <td>1,780</td> </tr> </tbody> </table>					2030	2050	Heavy-duty_VMT	1,950	1,780	Total	1,950	1,780									
	2030	2050																			
Heavy-duty_VMT	1,950	1,780																			
Total	1,950	1,780																			
<p>Activity Reductions</p> <table border="1"> <thead> <tr> <th></th> <th>2030</th> <th>2050</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> </tr> </tbody> </table>					2030	2050															
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	2030	2050																			
Compliance rate with idling ordinance	90%	90%																			
Reduction in idling time with ordinance	60%	60%																			
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Reduction in idling time with ordinance	60%	60%																			
<p>Performance Targets and Metrics</p> <table border="1"> <thead> <tr> <th></th> <th>2030</th> <th>2050</th> </tr> </thead> <tbody> <tr> <td>Metric 1:</td> <td></td> <td></td> </tr> <tr> <td>Metric 2:</td> <td></td> <td></td> </tr> <tr> <td>Metric 3:</td> <td></td> <td></td> </tr> <tr> <td>Metric 4:</td> <td></td> <td></td> </tr> <tr> <td>Metric 5:</td> <td></td> <td></td> </tr> </tbody> </table>					2030	2050	Metric 1:			Metric 2:			Metric 3:			Metric 4:			Metric 5:		
	2030	2050																			
Metric 1:																					
Metric 2:																					
Metric 3:																					
Metric 4:																					
Metric 5:																					

Quantification Calculations

Notes

Item	Value	Source
Fuel consumption for 1 hour at idle - average (diesel gallons)	0.90	2015 CAP Tool
Emission factor (MT/CO2e/gal diesel, CH4, and N2O)	0.0101	EPA 2018 Emission Factor Sheet
Percent idling time for average CA heavy-duty diesel truck	29.40%	2015 CAP Tool
Fuel consumption for 1 hour of operation (diesel gallons)	6.20	2015 CAP Tool
Equipment operating time (hours/day)	2.33	2015 CAP Tool
Idling time (hours/day)	2.12	2015 CAP Tool
Idling fuel consumption (diesel gallons/day)	18.48	2015 CAP Tool
Operating fuel consumption (diesel gallons/day)	14.28	2015 CAP Tool
Percent reduction in idling	5.83%	2015 CAP Tool
Current idling standard (minutes)	5	2015 CAP Tool

	2030	2050
EAU GHG emissions from heavy-duty vehicles with abatement (MTCO2e/year)	268,320	244,200
Emission factor for gasoline and diesel fueled heavy-duty vehicles (MTCO2e/gal)	0.001249	0.001146
GHG emissions from diesel engine heavy-duty vehicles	173,205	158,177
Percent of total fuel used when idling	5.67%	5.67%
Idling ordinance requirement (minutes)	3	3
Current idling standard (minutes)	5	5
Reduction in idling time with ordinance	0.4	0.4
Emission savings with ordinance (1,000% compliance)	1,023	1,781

Additional Notes

Item	Value	Source
Fuel consumption for 1 hour at idle - average (diesel gallons)	0.90	2015 CAP Tool
Emission factor (MT/CO2e/gal diesel) (CO2, CH4, and N2O)	0.0101	EPA 2018 Emission Factor Sheet
Percent idling time for average CA heavy-duty diesel truck	29.40%	2015 CAP Tool
Fuel consumption for 1 hour of operation (diesel gallons)	6.20	2015 CAP Tool
Equipment operating time (hours/day)	2.33	2015 CAP Tool
Idling time (hours/day)	2.12	2015 CAP Tool
Idling fuel consumption (diesel gallons/day)	18.48	2015 CAP Tool
Operating fuel consumption (diesel gallons/day)	14.28	2015 CAP Tool
Percent reduction in idling	5.83%	2015 CAP Tool
Current idling standard (minutes)	5	2015 CAP Tool

Source: SB GHG Reduction Tool

The screenshot displays the Ontario Quantification Workbook software interface. At the top, there is a navigation bar with tabs for 'Home', 'Data', 'Reports', and 'Settings'. The left sidebar contains a list of menu items including 'Project Information', 'Data Sources', 'Data Processing', 'Data Analysis', 'Data Reporting', and 'Data Management'. The main workspace is divided into several sections:

- Top Left:** A 'Project Information' panel with fields for 'Project Name', 'Location', and 'Start Date'.
- Top Right:** A 'Data Sources' panel with a table listing data sources and their status.
- Center:** A large data table with columns for 'Date', 'Location', 'Value', and 'Status'. The table is filled with numerical data.
- Bottom Left:** A 'Data Processing' panel with a table showing processed data.
- Bottom Right:** A 'Data Reporting' panel with a table showing reported data.

A large, semi-transparent 'DRAFT' watermark is overlaid diagonally across the entire page.

Ontario Quantification Workbook

17 **Offroad** **Idling ordinance for construction equipment**

Measure Language

Limit idling of heavy-duty off-road construction equipment to reduce air pollution and GHG emissions from construction activity.

Implementation Actions

- Evaluate the feasibility of an equipment idling ordinance that reduces the legally allowed idling time for heavy duty construction equipment to 3 minutes. Ordinance must include a violation fee and enforcement mechanisms.
- Conduct targeted outreach to local construction companies to raise awareness about and increase compliance with the equipment idling ordinance.

GHG Reductions		2030	2050
Off-road		40	100
Total		40	100

Activity Reductions		2030	2050
Off-road			

Assumptions		2030	2050
Reduction in idling time with ordinance		0.4	0.4
Compliance rate with idling ordinance		0.4	0.4

Performance Targets and Metrics		2030	2050

Quantification Calculations

- Notes**
- Assumptions:
 According to the SR Regional GHG Reduction Tool, the methodology for quantifying a construction equipment idling ordinance assumes the following:
 1) Current idling period for construction equipment is 5 minutes
 2) Diesel fuel savings from reduced idling period is calculated by dividing the fuel consumed in gallons by the percent of total fuel used when idling (with ordinance)
 3) Strategy assumes 100% compliance, which is unrealistic without enforcement, so an alternative scenario with 50% compliance was used instead
 4) The GHG emissions reductions only apply to diesel-powered construction equipment
 5) Heavy-duty emissions factor is estimated using EMFAC data on diesel-powered heavy duty vehicles for South Coast subarea in forecast years (2030 and 2050) (weighted average)

	2030	2050
County-wide GHG emissions from all construction equipment (MTCO ₂ /year)	28,849	51,408
Percent of construction equipment activity that uses diesel-powered equipment	66.1%	96.5%
Emission rates for diesel-powered construction equipment (MTCO ₂ /gall)	0.001849221	0.001744843
Diesel's share of county-wide service population	11.82%	17.36%
GHG emission from diesel-powered construction equipment	3276	8548
SR Regional Tool's method		
Emission factor of diesel-powered construction equipment (MTCO ₂ /gal diesel)	0.0017	0.0017
Percent of total fuel used when idling	5.63%	5.63%
Idling ordinance requirement (minutes)	3	3
Current idling standard (minutes)	5	5
Reduction in idling time with ordinance	0.4	0.4
Diesel fuel savings (gall) with ordinance (100% compliance)	122,837,336	220,049,707
Diesel fuel savings (gall) with ordinance (50% compliance)	61,418,668	110,024,854
GHG emissions reduced from 50% compliance with idling ordinance (MTCO ₂ s)	72,798	191,476
Included methodology (SR's method)		
Emissions savings (MTCO ₂ s) with ordinance (100% compliance)	73.8	194.8
Emissions savings (MTCO ₂ s) with ordinance (50% compliance)	36.9	97.4

Additional Notes

	2030	2050
Compliance rate with idling ordinance	0.5	0.5
Idling ordinance requirement (minutes)	3	3

Idling Ordinance

Fuel consumption for 1 hour at idle- average (diesel gallons)	0.90	2015 CAP Tool
Emission Factor (MTCO ₂ /gal diesel) (CO ₂ , CH ₄ , and N ₂ O)	0.0018	EPA 2018 Emission Factor Sheet
Percent idling time for average CA heavy-duty diesel truck	29.40%	2015 CAP Tool
Fuel consumption for 1 hour of operation (gallons)	6.28	2015 CAP Tool
Equipment Operating time (hours/day)	8	2015 CAP Tool
Idling time (hours/day)	2.35	2015 CAP Tool
Idling fuel consumption (diesel gallons/day)	2.12	
Operating fuel consumption (diesel gallons/day)	35.48	
Percent gallons due to idling	5.63%	
Current idling standard (minutes)	5	

Source: SR Regional GHG Reduction Tool

18		Waste	Methane capture at landfills																								
<p>Measures Selected</p> <p>Support efforts to reduce methane emissions from regional landfills.</p>																											
<p>Implementation Dates</p> <p>* Encourage efforts to coordinate with regional landfills to install methane capture technology and associated monitoring systems with goal of increasing the methane capture rate to the highest extent feasible. * Encourage the use of applied methane for generation of electricity to offset fossil fuel energy use and reduce GHG emissions.</p>																											
<p>GHG Reductions</p> <table border="1"> <thead> <tr> <th>2010</th> <th>2015</th> <th>2020</th> <th>2025</th> <th>2030</th> <th>2050</th> </tr> </thead> <tbody> <tr> <td>Solid Waste</td> <td>14,130</td> <td>37,208</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Unavoidable GHG</td> <td>4,905</td> <td>18</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Total</td> <td>9,225</td> <td>37,190</td> <td></td> <td></td> <td></td> </tr> </tbody> </table>				2010	2015	2020	2025	2030	2050	Solid Waste	14,130	37,208				Unavoidable GHG	4,905	18				Total	9,225	37,190			
2010	2015	2020	2025	2030	2050																						
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<p>Reference: Region and Province</p> <table border="1"> <thead> <tr> <th>2010</th> <th>2020</th> </tr> </thead> <tbody> <tr> <td>Per capita methane emissions rate</td> <td>0.70</td> <td>0.70</td> </tr> <tr> <td>Region: O</td> <td></td> <td></td> </tr> <tr> <td>Province: P</td> <td></td> <td></td> </tr> </tbody> </table>				2010	2020	Per capita methane emissions rate	0.70	0.70	Region: O			Province: P															
2010	2020																										
Per capita methane emissions rate	0.70	0.70																									
Region: O																											
Province: P																											

Notes

Assumptions:

1. Methane capture system: The methane capture system is assumed to be a combined anaerobic digestion and landfill gas-to-energy system.
2. Methane capture system: The methane capture system is assumed to be a combined anaerobic digestion and landfill gas-to-energy system.
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Additional Notes:

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3. Methane capture system: The methane capture system is assumed to be a combined anaerobic digestion and landfill gas-to-energy system.

	2010	2020
Estimated solid waste affected by methane capture	11,270	12,210
Estimated methane captured	1,220,000	1,220,000
Estimated methane captured as energy	1,220,000	1,220,000
Estimated methane captured as electricity	1,220,000	1,220,000
Estimated methane captured as heat	1,220,000	1,220,000
Estimated methane captured as gas	1,220,000	1,220,000
Estimated methane captured as liquid	1,220,000	1,220,000
Estimated methane captured as solid	1,220,000	1,220,000
Estimated methane captured as gas, liquid, and solid	1,220,000	1,220,000
Estimated methane captured as gas, liquid, and solid (total)	1,220,000	1,220,000
Estimated methane captured as gas, liquid, and solid (total) (total)	1,220,000	1,220,000

	2010	2020
Target for methane capture rate	0.90	0.90
Actual methane capture rate	0.70	0.70
Percentage of captured methane that will be combusted for cogeneration	0.70	0.70
CH4 conversion factor	0.8	0.8
Friction of CH4 in landfill gas	0.5	0.5
Source: GHG Emissions Reductions		
Collection rate	10%	0.1
Classified Organic Carbon (DOC)	19.8%	0.198
Fraction of DOC that is ultimately degraded	0.6	0.6
Stoichiometric ratio between CH4 and carbon	2.253	2.253
Heating value of LFG (MJ/kg wet)	0.00049	0.00049
CH4 emissions factor for LFG combustion	0.00151	0.00151
NO2 emissions factor for LFG combustion	0.00036	0.00036

Density of methane gas (kg/m³)

0.688 0.688

https://www.engineeringtoolbox.com/gas-density-d_158.html

GHG Reduction Formula

$$\Delta GHG = (E_{2010} - E_{2020}) \times (1 - \text{CH}_4 \text{ capture rate}) \times (1 - \text{CH}_4 \text{ conversion factor}) \times (1 - \text{CH}_4 \text{ friction}) \times (1 - \text{CH}_4 \text{ collection rate}) \times (1 - \text{CH}_4 \text{ degradation}) \times (1 - \text{CH}_4 \text{ heating value}) \times (1 - \text{CH}_4 \text{ emissions factor}) \times (1 - \text{CH}_4 \text{ NO}_2 \text{ emissions factor})$$

GHG Emissions Reductions

Category	2010	2020
1. Methane capture system	1,220,000	1,220,000
2. Methane capture system	1,220,000	1,220,000
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98. Methane capture system	1,220,000	1,220,000
99. Methane capture system	1,220,000	1,220,000
100. Methane capture system	1,220,000	1,220,000

19	Waste	Waste diversion
Measure Language		
Exceed waste diversion goals recommended by AB 939 and CALGREEN by adopting a citywide diversion target of at least 75 percent of waste.		
Implementation Actions		
<ul style="list-style-type: none"> Establish a source-reduction program that promotes options to rethink, refuse, reduce, reuse, regenerate, recycle, and recover materials by working with regional partners. Establish sharing, exchange, and reuse program(s), including fix-it clinics, swap events, second-hand markets, and shop local campaigns by working with community and regional partners. Promote awareness of life-cycle emissions of products through public outreach campaigns. Explore options to develop and adopt an ordinance to prohibit specific types of single-use or disposable plastics, particularly for use by restaurants, caterers, and other commercial kitchens. Engage with businesses using food packaging to determine barriers to switching to biodegradable or compostable food packaging and work to remove those barriers. Provide educational outreach programs to multi-family residents, multi-family property owners, single-family homeowners, and business owners to support composting programs. Increase the share of Ontario residents and business owners that have green compost carts or bins by working with waste haulers. Provide counter-top compost bins to residents of Ontario by working with regional partners and community based organizations. Work with food service facilities to understand barriers to composting and work to mitigate these concerns. Encourage local restaurants to partner with food rescue organizations to divert food that would otherwise be thrown away to non-profit organizations for distribution to those in need. Explore options to develop and adopt an ordinance requiring residences, businesses, and City facilities to practice Responsible Appliance Disposal for all decommissioned units, including refrigerators/freezers, window air-conditioning units, and dehumidifiers. 		

GHG Reductions			
	2030	2050	
Solid Waste	14,490	38,670	
Total	14,490	38,670	

Activity Reductions			
	2030	2050	
Solid Waste	61,788	164,905	

Assumptions		
	2030	2050
Waste diversion target (AB 939)	75%	85%
Waste diversion rate (BAU)	50%	50%

Performance Targets and Metrics		
	2030	2050
Estimated tons of solid waste diverted	287,010	539,100

Quantification Calculations

Notes	
Measure: Waste Diversion	Author: Meghan Kuchel/Rob Gier (Updated: 10/18/21)
Measure Description:	Exceed the waste diversion goals recommended by Assembly Bill 939 and CALGREEN by adopting City-wide waste diversion goals of at least 75 percent of waste (EJARCW 2030)
Summary of Methods:	<ol style="list-style-type: none"> Determine current diversion rate and tons of waste landfilled for each city (assume rate from CALRecycle) Determine new tons of waste diverted in 2030, 2050, 2045, and new tons landfilled Calculate avoided methane emissions
Summary of Data Needs:	
Assumptions:	<ol style="list-style-type: none"> The 2030 BAU diversion rate is the 2025 diversion rate (CALRecycle) The new diversion rate is 75% in 2030 for all cities (BAU), diversion goal rate for all cities is 75% The cities increase their diversion (strong) linearly from the 2025 rate to 85%
Source:	SB Regional GHG Reduction Tool
Assumption:	Waste diversion rate in 2016 is consistent through 2050 under BAU conditions

	2030	2050
Waste diversion rate (BAU)	50%	50%
Total undiverted solid waste without measure (BAU) (tons)	178,005.0	313,055.0
Total undiverted solid waste with measure (tons)	239,793.4	477,959.5
Increase in solid waste diversion with measure (tons)	61,788	164,905
CH ₄ emissions reduction from waste diversion measure (MTCO ₂ e)	1,4489.50	36668.19

Additional Notes



Quantification Workbook Ontario

20	Waste	Construction and Demolition Waste Recovery C
Measure Language		
Increase the amount of waste recycled during construction and demolition of buildings.		
Implementation Actions		
<ul style="list-style-type: none"> In compliance with A8 939 and CALGREEN, implement an ordinance requiring building projects to recycle or reuse at least 50% of unused or leftover building materials. Incentivize the recycling of construction debris by working with regional partners. Research and consider providing financial incentives to encourage the recycling of construction debris. Determine how certain construction materials may be donated and reused to help those in need by working with local community based organizations and construction companies. 		

GHG Reductions			
	2030	2050	
Total			

Activity Reductions			
	2030	2050	

Assumptions	2030	2050
[Assumption 1]		
[Assumption 2]		
[Assumption 3]		
[Assumption 4]		
[Assumption 5]		

Performance Targets and Metrics	2030	2050
[Metric 1]		
[Metric 2]		
[Metric 3]		
[Metric 4]		
[Metric 5]		

Quantification Calculations

Notes	2030	2050	Additional Notes
Could not find a method to quantify construction and demolition waste.			
Not quantified. Method and data needed for quantification not available.			

22		Water	Water efficient landscapes and water recycling
<p>Provide design and/or best management practices for water efficient landscapes, including, but not limited to:</p> <ul style="list-style-type: none"> Water efficient landscaping Water efficient irrigation Water efficient landscaping Water efficient irrigation Water efficient landscaping Water efficient irrigation 			
<p>Provide design and/or best management practices for water efficient landscapes, including, but not limited to:</p> <ul style="list-style-type: none"> Water efficient landscaping Water efficient irrigation Water efficient landscaping Water efficient irrigation Water efficient landscaping Water efficient irrigation 			
<p>Provide design and/or best management practices for water efficient landscapes, including, but not limited to:</p> <ul style="list-style-type: none"> Water efficient landscaping Water efficient irrigation Water efficient landscaping Water efficient irrigation Water efficient landscaping Water efficient irrigation 			

Year	2020	2021	2022	2023
Water	1000	1000	1000	1000
Water	1000	1000	1000	1000
Water	1000	1000	1000	1000

Year	2020	2021	2022	2023
Water	1000	1000	1000	1000
Water	1000	1000	1000	1000
Water	1000	1000	1000	1000

Additional Notes

2020 2021 2022 2023

1000 1000 1000 1000

1000 1000 1000 1000

1000 1000 1000 1000

1. Water efficient landscaping and irrigation.
2. Water efficient irrigation water conservation data from the 2015 inventory workbook based on an assumed 100% water conservation (assumed to be 100% for the water department).
3. Water efficient landscaping for the residential sector is calculated based on the percent increase in water use.
4. Water efficient landscaping is based on 2015 data for the Ontario Water Resources Commission (OWRC).
5. Water efficient landscaping is based on 2015 data for the Ontario Water Resources Commission (OWRC).
6. Water efficient landscaping is based on 2015 data for the Ontario Water Resources Commission (OWRC).
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9. Water efficient landscaping is based on 2015 data for the Ontario Water Resources Commission (OWRC).
10. Water efficient landscaping is based on 2015 data for the Ontario Water Resources Commission (OWRC).

Year	2020	2021	2022	2023
Water	1000	1000	1000	1000
Water	1000	1000	1000	1000
Water	1000	1000	1000	1000

Year	2020	2021	2022	2023
Water	1000	1000	1000	1000
Water	1000	1000	1000	1000
Water	1000	1000	1000	1000

Additional Notes

2020 2021 2022 2023

1000 1000 1000 1000

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Year	2020	2021	2022	2023
Water	1000	1000	1000	1000
Water	1000	1000	1000	1000
Water	1000	1000	1000	1000

Year	2020	2021	2022	2023
Water	1000	1000	1000	1000
Water	1000	1000	1000	1000
Water	1000	1000	1000	1000

Year	2020	2021	2022	2023
Water	1000	1000	1000	1000
Water	1000	1000	1000	1000
Water	1000	1000	1000	1000

Source: From Ontario Ministry of the Environment, Planning and Energy, 2015.

23	Water	Water system and wastewater operations efficiency
Measure Language		
Maximize efficiency at drinking water treatment, pumping, and distribution facilities, including development of off-peak demand schedules for heavy commercial and industrial users.		
Implementation Actions		
<ul style="list-style-type: none"> • Work with the Inland Empire Utilities Agency (IEUA), the local wastewater treatment provider, to upgrade and replace wastewater treatment and pumping equipment with more energy efficient equipment as feasible. • Assess and upgrade City-owned water pumping and treatment equipment, as needed, to increase energy efficiency and save energy costs. 		

GHG Reductions				
	2030	2050		
Indirect water kWh	150	0		
Total	150	0		

Activity Reductions				
	2030	2050		
Indirect water kWh	1,280,980	3,913,980		

Assumptions		
	2030	2050
Efficiency improvement in water treatment and distribution system	10%	25%

Performance Targets and Metrics		
	2030	2050
Electricity use of water treatment and distribution system (kWh)	56,533,450	66,745,850

Quantification Calculations

Notes	
Equipment Upgrades and Wastewater Treatment Plants	Author: Last Updated:
Measure Description	
Summary of Method	
Summary of Data Needs	
Assumptions	

Source: SB Regional GHG Reduction Tool

	2030	2050	Additional Notes
kWh/MG for indirect water use (baseline)	5,867	5,867	<< Including recycled water. From inventory workbook
kWh/MG for water treatment (baseline)	100	100	<< From inventory workbook
kWh/MG for water distribution (baseline)	1,200	1,200	<< From inventory workbook
kWh/MG for water treatment (improved)	90	75	
kWh/MG for water distribution (improved)	1,080	900	
kWh/MG for indirect water use (improved)	5,737	5,542	
Water use (million gallons, with water use reductions)	9,834	12,043	
Energy use without efficiency improvements	57,814,426	70,659,836	
Energy use with efficiency improvements	56,533,446	66,745,853	
Net indirect water kWh savings	1,280,980	3,913,981	

25	Wastewater	Methane capture for wastewater treatment
Measure Language		
Work with Inland Empire Utilities Agency (IEUA), the local wastewater treatment provider, to increase methane capture rate.		
Implementation Actions		
• Work with IEUA to explore the possibility of generating electricity from captured methane to power various facilities and reduce operating costs.		

GHG Reductions			
	2030	2050	
Manure management	3,160	0	
Total	3,160	0	

Activity Reductions			
	2030	2050	
Manure management			

Assumptions		
	2030	2050
Dairies using manure management systems with methane capture	50%	100%
Methane capture rate of installed systems	86%	86%

<< Note that no dairies are expected to be operational in 2050.

Performance Targets and Metrics		
	2030	2050
Heads of livestock on dairies with manure capture	3,520	0

Quantification Calculations

Notes

- Manure management emissions is 225.88 kg CH₄ per head (ARB, Ag Calc), which is equivalent to 6.32 MT CO₂e per head.
- This measure is only applicable to jurisdictions with number of cattle more than 1,000 (2008 AB 32 Scoping Plan Appendix 2, Page 164).
- Percent of cows at large dairies subject to methane capture is 73% (2008 AB 32 Scoping Plan Appendix 2, Page 164). Per SB 1383, this percentage may change after 2024.
- New methane capture rate of installed systems is 86% (2008 AB 32 Scoping Plan, Appendix 2, Page 1-64).

Methane Capture at Large Dairies
 Author: Last Updated:

Measure Description:
 This measure promotes installation of methane digesters at large dairies to capture methane emissions from decomposing manure. This is a

Summary of Methods:
 1. Based on number of cattle at dairies in 2016, calculate number of cattle at dairies for the year 2030 and 2045 using the growth factor

Summary of Data Needs:
 1. Percent of cows at large dairies subject to methane capture.
 2. Current methane capture rate.

Source: SB Regional GHG Reduction Tool

	2030	2050
Heads of livestock	7,030	0
Emissions from manure management (MTCO ₂ e)	7,350	0
MTCO ₂ e per head of livestock	1.05	0.00
Methane capture rate of installed systems	86%	86%
Heads of livestock subject to methane capture	3,515	0
Emissions from covered livestock without methane capture (MTCO ₂ e)	3,675	0
Emissions from covered livestock with methane capture (MTCO ₂ e)	.515	0
Net reduction in emissions from methane capture (MTCO ₂ e)	3,141	0

Additional Notes

<< SBCTA regional assumption (Agriculture-3)

Number of cattle at Dairies	
	Ontario
2016	30,448
2030	12,004
2045	4,428
2050	24,850
Growth Factor	93.57%

Source: SB Regional GHG Reduction Tool

26	Leadership	Climate change awareness and education
Measure Language		
Promote climate change awareness and GHG reduction community-wide, through a variety of mechanisms, including through support of climate change education in schools or community colleges.		
Implementation Actions		
<ul style="list-style-type: none"> * Promote educational resources to students and parents each year and encourage community educators to incorporate clean energy and climate change discussions into their curriculum, by partnering with CSU San Bernardino and school districts. * Use City newsletters to spotlight community members, including K-12 teachers and students, who are working on climate change or sustainability and who are making a difference in our community. * Increase energy educational resources in the Ontario School District and Ontario-Montclair School District by working with the San Bernardino County Office of Education. * Work with non-profits and community-based organizations to develop a list of green volunteer opportunities and skills trainings for high school students, such as community gardening, tree planting, bicycle advocacy, food recovery, and composting. * Promote and support opportunities for Ontario community members to test appliances and equipment that support increased energy and water conservation and transitions to all-electric appliances. 		

GHG Reductions			
	2030	2050	
Total			

Activity Reductions			
	2030	2050	

Assumptions		
	2030	2050

Performance Targets and Metrics		
	2030	2050

Notes

2030 2050

Additional Notes

Not quantified. Method and data needed for quantification not available.

27	Carbon sequestration	Carbon sequestration
Measure Language		
Establish a City-wide carbon sequestration project and sequestration goal of 5,000 MT CO2 per year.		
Implementation Actions		
<ul style="list-style-type: none"> Organize citywide tree planting volunteer days, prioritizing public schools and neighborhoods in environmental justice areas, as an extension of the City's urban forestry program. Conduct public workshops to educate community members about the ecological, social, and economic benefits of trees and provide basic training in tree planting and maintenance. Seek grants in partnership with community-based organizations to fund the carbon sequestration project. Publicize the carbon sequestration project to raise awareness about the project and recruit volunteers. Explore opportunities to establish a carbon offset program for development projects, ensuring that offset activities occur in California, and that they occur locally or regionally to the greatest extent possible. GHG reductions from carbon offsets shall be real, permanent, quantifiable, verifiable, and enforceable. 		

GHG Reductions			
	2030	2050	
Total			

Activity Reductions			
	2030	2050	

Assumptions		
	2030	2050

Performance Targets and Metrics		
	2030	2050

Not quantified. Method and data needed for quantification not available.

Quantification Workbook		Ontario	
28	Economic development	Green jobs	
Measure Language			
Support green job trainings and opportunities to create sustainable, living wage, quality employment opportunities.			
Implementation Actions			
<ul style="list-style-type: none"> Partner with community colleges, local non-profits, and community groups to provide green jobs training for residents. Provide information about green jobs, especially to people currently or recently working in polluting or extractive industries. Collaborate with community-based organizations and regional partners to amend the City's economic development strategy and attract businesses to Ontario that contribute to a sustainable economy. 			
GHG Reductions			
	2030	2050	
Total			
Assumptions			
	2030	2050	
Activity Reductions			
	2030	2050	
Performance Targets and Metrics			
	2030	2050	

Quantification Calculations

Notes

Additional Notes

Not quantified. Method and data needed for quantification not available.

Table 4.3.3 - 2019-2020 GHG Emissions Reductions			
Source	Account Code	Type	Total Reduction
1	10000	10000	10000
2	20000	20000	20000
3	30000	30000	30000
4	40000	40000	40000
5	50000	50000	50000
6	60000	60000	60000
7	70000	70000	70000
8	80000	80000	80000
9	90000	90000	90000
10	100000	100000	100000
11	110000	110000	110000
12	120000	120000	120000
13	130000	130000	130000
14	140000	140000	140000
15	150000	150000	150000
16	160000	160000	160000
17	170000	170000	170000
18	180000	180000	180000
19	190000	190000	190000
20	200000	200000	200000
21	210000	210000	210000
22	220000	220000	220000
23	230000	230000	230000
24	240000	240000	240000
25	250000	250000	250000
26	260000	260000	260000
27	270000	270000	270000
28	280000	280000	280000
29	290000	290000	290000
30	300000	300000	300000
31	310000	310000	310000
32	320000	320000	320000
33	330000	330000	330000
34	340000	340000	340000
35	350000	350000	350000
36	360000	360000	360000
37	370000	370000	370000
38	380000	380000	380000
39	390000	390000	390000
40	400000	400000	400000
41	410000	410000	410000
42	420000	420000	420000
43	430000	430000	430000
44	440000	440000	440000
45	450000	450000	450000
46	460000	460000	460000
47	470000	470000	470000
48	480000	480000	480000
49	490000	490000	490000
50	500000	500000	500000
51	510000	510000	510000
52	520000	520000	520000
53	530000	530000	530000
54	540000	540000	540000
55	550000	550000	550000
56	560000	560000	560000
57	570000	570000	570000
58	580000	580000	580000
59	590000	590000	590000
60	600000	600000	600000
61	610000	610000	610000
62	620000	620000	620000
63	630000	630000	630000
64	640000	640000	640000
65	650000	650000	650000
66	660000	660000	660000
67	670000	670000	670000
68	680000	680000	680000
69	690000	690000	690000
70	700000	700000	700000
71	710000	710000	710000
72	720000	720000	720000
73	730000	730000	730000
74	740000	740000	740000
75	750000	750000	750000
76	760000	760000	760000
77	770000	770000	770000
78	780000	780000	780000
79	790000	790000	790000
80	800000	800000	800000
81	810000	810000	810000
82	820000	820000	820000
83	830000	830000	830000
84	840000	840000	840000
85	850000	850000	850000
86	860000	860000	860000
87	870000	870000	870000
88	880000	880000	880000
89	890000	890000	890000
90	900000	900000	900000
91	910000	910000	910000
92	920000	920000	920000
93	930000	930000	930000
94	940000	940000	940000
95	950000	950000	950000
96	960000	960000	960000
97	970000	970000	970000
98	980000	980000	980000
99	990000	990000	990000
100	1000000	1000000	1000000

1 **New solar PV capacity**

GHG Reductions				
	2030	2050		
Residential Electricity	0	0		
Nonresidential Electricity	310	0		
Total	310	0		

Activity Reductions				
	2030	2050		
Residential Electricity	3,130	3,130		
Nonresidential Electricity	2,571,130	2,571,130		

Assumptions		
	2030	2050
Residential installations	35	35
Nonresidential installations	2	2

Performance Targets and Metrics		
	2030	2050
Total residential kWh	3,130	3,130
Total nonresidential kWh	2,571,130	2,571,130

Quantification Calculations

Notes

	2030	2050
Number of residential installations since 2019	35	35
Number of nonresidential installations since 2019	2	2
Installed residential kW since 2019	510	510
Installed nonresidential kW since 2019	-	-
kW to kWh	6.14	6.14
Total residential kWh	3131.4	3131.4
Total nonresidential kWh	2571125	2571125

Additional Notes

Reported installations since 2019		
	Number	kW
Residential installations		
Single Family	33	130
Multifamily	2	380
Nonresidential installations		
	Number	kWh
Ontario Convention Center	1	931,456
Police Station	1	1,639,669

Residential	Nonresidential
2022 Status update: 33 SF homes (130kW total) and 2 MFR projects (250 kW total)	2022 Status update: <ul style="list-style-type: none"> The Ontario Convention Center generates 931,456 kW/year (2019-2020) The Police Station generates 1,639,669 kW/year (2019-2020)

	Number	kW
Single Family homes	33	130
Multifamily homes	2	250
Total	35	380

Source: \\Pw003\projdata\ONT-06.0\2_TechStudies\28_CCAP\2_Measure development and quantification\Existing activities

Watts: Monthly PV Performance Data

Requested Location	ontario, california
Weather Data Source	Lat, Lon: 34.05, -117.66 1.1 mi
Latitude	34.05° N
Longitude	117.66° W
PV System Specifications (Residential)	
DC System Size	1 kW
Module Type	Standard
Array Type	Fixed (open rack)
Array Tilt	20°
Array Azimuth	180°
System Losses	14.08%
Inverter Efficiency	96%
DC to AC Size Ratio	1.2
Economics	
Average Retail Electricity Rate	0.160 \$/kWh
Performance Metrics	
Capacity Factor	18.80%

Month	Solar Radia	AC Energy	Value
	(kWh / m2	(kWh)	(\$)
January	4.51	108	17
February	4.93	107	17
March	5.89	138	22
April	6.64	147	24
May	6.95	156	25
June	7.48	161	26
July	7.77	171	27
August	7.68	170	27
September	6.85	146	23
October	5.74	132	21
November	4.95	112	18
December	4.24	102	16
Annual	6.14	1,650	\$263

<https://pwatts.nrel.gov/pwatts.php>



2 All electric and Zero Net Energy buildings

GHG Reductions			
	2030	2050	
Residential kWh	-20	0	
Residential therms	110	110	
Total	90	110	

Activity Reductions			
	2030	2050	
Residential kWh	-173,700	-173,700	
Residential therms	19,990	19,990	

Assumptions		
	2030	2050

Performance Targets and Metrics		
	2030	2050
Number of all-electric residential units	100	100

Quantification Calculations

Notes

All Electric Buildings	2030	2050
Number of multi-family units	101	101
Natural gas use per average multi-family unit (therms)	198	198
Total therms offset	19988.21435	19988.21435
<hr/>		
kWh needed to replace therms (average)	8.69	8.69
Increase in electricity use	173697.5827	173697.5827

Additional Notes

Vista Verde Apartments (all-electric multifamily development)
Number of units 101

The City of Ontario's \$35 million Transformative Climate Communities grant is focused on its historic downtown core and builds upon six years of planning and engagement work to revitalize this neighborhood. Vista Verde provides 101 high-quality affordable apartment homes for families who earn between 30 and 60 percent of the area median income in Ontario, CA. This transit-oriented community is funded in part by California's Transformative Climate Community program and is an integral part of the City's plan to demonstrate a sustainable community. Vista Verde is one of the first all-electric, zero net energy communities, designed and constructed using cost-efficient technologies and innovative approaches to prepare for a world of bike- and pedestrian-friendly communities that encourage healthier lifestyles and reduce pollution. This sustainable development has a low carbon footprint, improving the quality of life for the community as a whole.

PROJECT SPECIFICATIONS

<p>TOTAL UNITS (101 UNITS)</p> <ul style="list-style-type: none"> • 68 2-Bedroom • 33 3-Bedroom • 1 Manager's Unit 	<p>ROLE</p> <ul style="list-style-type: none"> • Owner • General Contractor • Developer 	<p>FINANCING SOURCES</p> <ul style="list-style-type: none"> • Affordable Housing and Sustainable Communities Loan 	<p>ONSITE AMENITIES</p> <ul style="list-style-type: none"> • Community Center/Computer Center • Laundry Facilities
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<https://nationalcore.org/communities/vista-verde/>

Table 62. Building electrification assumptions (\$3.9)

Year	Assumed heating efficiency		Electricity increase per unit		Replacement rates (residential & commercial)	
	Natural gas	Electricity	%	kWh/therm	New construction	Retrofits
2010	65%	200%	33%	8.69	0%	0%
2020	70%	215%	33%	8.69	50%	20%
2030	80%	246%	33%	8.69	90%	50%
2040	90%	277%	33%	8.69	100%	90%
2050	90%	277%	33%	8.69	100%	100%

kWh/therm 8.69

<https://eta.lbl.gov/publications/modeling-california-policy-impacts>



3 EV chargers

GHG Reductions				
	2030	2050		
Light Duty VMT	150	140		
Nonresidential kWh	-30	0		
Total	120	140		

Activity Reductions				
	2030	2050		
Light Duty VMT	540,630	540,630		
Nonresidential kWh	-177,300	-177,300		

Assumptions		
	2030	2050
Number of charging stations	30	30
[Assumption 2]		
[Assumption 3]		
[Assumption 4]		
[Assumption 5]		

Performance Targets and Metrics		
	2030	2050
Number of EV charging stations	30	30
[Metric 2]		
[Metric 3]		
[Metric 4]		
[Metric 5]		

Quantification Calculations

Notes

	2030	2050
Number of charging stations	30	30
kWh per charging station	5910	5910
Average kWh per mile	0.3279487	0.3279487
VMT offset per charging station	18,021	18,021
Total VMT offset	540,633	540,633
Increase in nonresidential kWh	177,300	177,300
Increase in nonresidential SCE GHGs	26	0
Reduction in VMT GHG	149,89931	136,51751

Additional Notes

B. EV charging stations (Public Services)			C. What is the average annual electricity supplied by each type (kWh/year per station)?
a. What type(s) of EV charging stations does the city have? List all Types	b. How many are there of each type?		
Dual port level 2 chargers	21	Average across all stations is 5910 kWh annually	
Single port level 2 chargers	9		

Level 3 Stations
 Number of charging stations: 30
 Average annual kWh per station (kWh/year/station): 5910
 Source: City of Ontario
[\Pw003\proidatqa\ONT-06.02_TechStudies\28_CCAP\2_Measure development and quantification\Existing activities\City responses\City Responses Municipal CAP Existing Data Facilities 20220330](#)

Model	Motor	Battery Type	Fuel Economy (comb/city/twy) MPGe	kWh/100 mi	Driving Range* (miles)	Charge Time (hrs @ 240)	Annual Fuel Cost	GHG Rating	Model	kWh/100 miles (combined)
SUBCOMPACT CARS										
BMW										
i3	125 kW AC Induction	Li-Ion	113/124/102	30/27/33	153	7	\$600	10	i3	30
i3s	135 kW AC Induction	Li-Ion	113/124/102	30/27/33	153	7	\$600	10	i3s	30
MINI										
Cooper SE Hardtop 2 door	135 kW DCPM	Li-Ion	108/115/100	31/29/34	110	4	\$600	10	Mini Cooper	31
COMPACT CARS										
VOLKSWAGEN										
e-Golf	100 kW AC PMSM	Li-Ion	113/122/104	30/28/32	123	5.3	\$600	10	e-Golf	30
MIDSIZE CARS										
HYUNDAI										
Ioniq Electric	100 kW AC PMSM	Li-Ion	133/145/121	25/23/28	170	5.8	\$500	10	Ioniq	25
NISSAN										
Leaf (40 kW-hr battery pack)	110 kW DCPM	Li-Ion	111/123/99	30/27/34	149	8	\$600	10	Leaf (40 kW)	30
Leaf (62 kW-hr battery pack)	160 kW DCPM	Li-Ion	108/118/97	31/29/35	226	11	\$600	10	Leaf (62 kW)	31
Leaf SV/SL (62 kW-hr battery pack)	160 kW DCPM	Li-Ion	104/114/94	32/29/36	215	11	\$650	10	Leaf SV/SL	32
TESLA										
Model 3 Long Range	211 kW AC 3-Phase	Li-Ion	130/136/123	26/25/27	330	8.5/10†	\$500	10	Model 3 LR	26
Model 3 Long Range AWD	147 and 188 kW AC 3-Phase	Li-Ion	121/124/116	28/27/29	322	8.5/10†	\$550	10	Model 3 LR AWD	28
Model 3 Long Range Performance AWD (18in)	147 and 211 kW AC 3-Phase	Li-Ion	121/124/116	28/27/29	322	8.5/10†	\$550	10	Model 3 LR P AWD (18)	28
Model 3 Long Range Performance AWD (19in)	147 and 211 kW AC 3-Phase	Li-Ion	116/119/112	29/28/30	304	8.5/10†	\$550	10	Model 3 LR P AWD (19)	29
Model 3 Long Range Performance AWD (20in)	147 and 211 kW AC 3-Phase	Li-Ion	113/118/107	30/29/31	299	8.5/10†	\$600	10	Model 3 LR P AWD (20)	30
Model 3 Mid Range	211 kW AC 3-Phase	Li-Ion	123/128/117	27/26/29	264	8.5/10†	\$550	10	Model 3 HR	27
Model 3 Standard Range	211 kW AC 3-Phase	Li-Ion	131/138/124	26/24/27	220	8.5	\$500	10	Model 3 SR	26
Model 3 Standard Range Plus	211 kW AC 3-Phase	Li-Ion	141/148/132	24/23/26	250	8.5	\$450	10	Model 3 SR+	24
LARGE CARS										
PORSCHE										
Taycan 4S Perf Battery Plus	120 kW ACPM	Li-Ion	69/68/71	49/50/48	203	10.5	\$950	10	Taycan 4S	49
Taycan Turbo	170 kW ACPM	Li-Ion	69/68/71	49/50/47	201	10	\$950	10	Taycan Turbo	49
Taycan Turbo S	120 and 170 kW ACPM	Li-Ion	68/67/68	50/50/49	192	10.5	\$950	10	Taycan Turbo S	50
TESLA										
Model S Long Range	193 and 205 kW AC 3-Phase	Li-Ion	111/115/107	30/29/31	373	8/12†	\$600	10	Model S LR	30
Model S Long Range Plus	193 and 375 kW AC 3-Phase	Li-Ion	117/121/112	29/28/30	402	15.3†	\$550	10	Model S LR+	29
Model S Performance (19in Wheels)	193 and 205 kW AC 3-Phase	Li-Ion	104/104/104	32/32/33	346	8/12†	\$550	10	Model S P (19in)	32
Model S Performance (21in Wheels)	193 and 205 kW AC 3-Phase	Li-Ion	97/98/96	35/34/35	326	8/12†	\$700	10	Model S P (20in)	35
Model S Standard Range	193 and 205 kW AC 3-Phase	Li-Ion	109/113/105	31/30/32	287	6.2/9.2†	\$600	10	Model S SR	31

Average kWh per 100 miles	32.7949
Average kWh per mile	0.327949

4 G Street Crosstown Bicycle Route				
GHG Reductions				
	2030	2050		
Light Duty VMT	30	30		
Total	30	30		
Activity Reductions				
	2030	2050		
Light Duty VMT	74,080	98,680		

Assumptions		
	2030	2050
Percent of community-wide light-duty VMT on G St roadway segment	4%	4%
Performance Targets and Metrics		
	2030	2050
Miles of bike lanes on G Street	18	18

Quantification Calculations

Notes

The light duty VMT emissions factor is used for the GHG reduction calculations because it is assumed that passenger VMT activity is most likely to be offset by active transportation improvements

	2030	2050
Community-wide light-duty VMT	2,380,798,400	3,171,565,080
Existing Citywide road mileage (2018)	471	471
Length of G St bike facility	17.81	17.81
Average VMT per mile of roadway	5051341.764	6729112.026
Citywide VMT on G St roadway segment	89964396.81	119845485.2
Percent of community-wide light-duty VMT on G St roadway segment	4%	4%
Bike Facility Default Days of Use	333	333
Days per year	365	365
Percent of annual bike facility use in days per year	91%	91%
Active Transportation Adjustment factor	0.0038	0.0038
Key destination credit	0.001	0.001
Growth factor adjustment	1	1
Average one-way bike trip length	2.2	2.2
Average one-way vehicle trip length	11.7	11.7
Percent reduction in VMT from displaced vehicle trips	-3.11155E-05	-3.11155E-05
VMT offset by bike facility use	74079.85	98684.99

Additional Notes

G Street Crosstown Bike Route and San Antonio Avenue Bike Corridor

Summary

SCH Number	2015068332
Public Agency	City of Ontario
Document Title	G Street Crosstown Bike Route and San Antonio Avenue Bike Corridor
Document Type	NOI - Notice of Exemption
Received	6/17/2015
Posted	6/17/2015
Document Description	Construction of Class II and Class III bike facility on existing right of way.

Length of G Street bicycle facility 17.81

COUNTY JURISDICTION	MAINTAINED MILES		TOTAL
	RURAL	URBANIZED	
SAN BERNARDINO			
Cities:	4.41	291.27	295.68
ADELANTO	0.25	449.23	449.48
APPLE VALLEY TOWN	0.69	141.77	142.46
BARSTOW		86.58	86.58
BIG BEAR LAKE		240.53	240.53
CHINO		172.31	172.31
CHINO HILLS		142.40	142.40
COLTON	0.12	485.37	485.49
FONTANA		39.24	39.24
GRAND TERRACE		497.79	503.54
HESPERIA	5.76	169.35	169.35
HIGHLAND		78.14	78.14
LOMA LINDA		79.89	79.89
MONTCLAIR		66.20	66.20
NEEDLES		471.32	471.32
ONTARIO			

Source: <https://dot.ca.gov/-/media/dot-media/programs/research-innovation-system-information/documents/california-public-road-data/prd-2018-011y.pdf>

Citywide road mileage 471.32

Average Daily Traffic on G Street

10 th Street	East of Benson Avenue	4,726	2019
10 th Street	East of Euclid Avenue	6,843	2019
10 th Street	East of Grove Avenue	5,912	2019

<https://www.ontarioca.gov/TrafficEngineering>

Table T-18.1. Active Transportation Adjustment Factors

Average Daily Traffic (vehicles per day)	One-way Facility Length ¹	Adjustment Factor for a Population > 250,000 or a Non-university Towns with Population < 250,000	Adjustment Factor for a University Towns with Population < 250,000
1 to 12,000	≤ 1 1.02 to 2 > 2	0.0019 0.0022 0.0038	0.0104 0.0155 0.0207
12,001 to 24,000	≤ 1 1.02 to 2 > 2	0.0014 0.0020 0.0027	0.0073 0.0109 0.0145
24,001 to 30,000	≤ 1 1.02 to 2 > 2	0.0010 0.0014 0.0019	0.0052 0.0078 0.0104

Source: California Air Resources Board. 2020. Quantification Methodology for the Strategic Growth Council's Affordable Housing and Sustainable Communities Program. September. Available: https://aht2.arb.ca.gov/sites/default/files/2020/09/quantification-methodology-traffic_adjustment_091820.pdf. Accessed: January 2021.

1 = less than; > = greater than; ≤ = less than or equal to

Measurements of bike facilities should not include the length of crosswalks.

Active Transportation Adjustment factor 0.0038

Table T-18.2. Key Destination Credits^{1,2}

Number of Key Destinations ³	Credit within 1/2 Mile of Facility	Credit Within 1/4 Mile of Facility
0 to 2	0.0000	0.0000
3	0.0005	0.001
4 to 6	0.0010	0.002
≥ 7	0.0015	0.003

Source: California Air Resources Board. 2020. Quantification Methodology for the California Natural Resource Agency's Urban Growth Control Program. March. Available: https://aht2.arb.ca.gov/sites/default/files/2020/03/quantification-methodology-traffic_adjustment_032221.pdf. Accessed: January 2021.

1 = greater than or equal to

2 The largest value from either credit column that matches the project attributes should be used. For example, if there are 2 activity centers within 1/2 mile of the facility and 7 activity centers within 1/4 mile of the facility, the correct value to use is 0.0015.

3 These credits should be evaluated for the project location site and surrounding area which can extend a distance not to exceed 1/2 mile. If a shopping center has multiple activity centers, each of those activity centers would count individually. For example, if a bank, grocery store, and post office are all located in a shopping center, they would be input as three activity centers for the purposes of this quantification methodology.

4 Key destination examples: banks, post offices, grocery stores, medical centers, pharmacies, office parks, places of worship, public libraries, schools, universities, colleges, and light rail stations (park & ride).

Key destination credit 0.001

Table T-18.3. Growth Factor Adjustment

Facility Type	Growth Factor Adjustment
New Class I bike path ¹ or Class IV bikeway ²	1.54
New Class II bike lane ³	1.0
Conversion from Class II to IV	0.54

Source: California Air Resources Board. 2020. Quantification Methodology for the Strategic Growth Council's Affordable Housing and Sustainable Communities Program. September. Available: https://aht2.arb.ca.gov/sites/default/files/2020/09/quantification-methodology-traffic_adjustment_091820.pdf. Accessed: March 2021.

1 Class I bike paths are physically separated from motor vehicle traffic.

2 Class IV bikeways are protected on-street bikeways, also called cycle tracks.

3 Class II bike lanes are striped bicycle lanes that provide exclusive use to bicycles on a roadway.

Growth factor adjustment 1

T-18-A. Construct or Improve Bike Facility TRANSPORTATION | 130

GHG Reduction Formula

$$A = -B \times \frac{F}{H} \times (C + D) \times E \times G$$

GHG Calculation Variables

ID	Variable	Value	Unit	Source
Output				
A	Percent reduction in GHG emissions from displaced vehicles on roadway parallel to bicycle facility	0-0.8	%	calculated
User Inputs				
B	Percent of plan/community VMT on parallel roadway	0-100	%	user input
C	Active transportation adjustment factor	Table T-18.1	unitless	CARB 2020
D	Credits for key destinations near project	Table T-18.2	unitless	CARB 2020
E	Growth factor adjustment for facility type	Table T-18.3	unitless	CARB 2020
Constants, Assumptions, and Available Defaults				
F	Annual days of use of new facility	Table T-18.4	days per year	NOAA 2017
G	Existing regional average one-way bicycle trip length	Table T-9.1	miles per trip	FHWA 2017
H	Existing regional average one-way vehicle trip length	Table T-9.1	miles per trip	FHWA 2017
I	Days per year	365	days per year	standard

Further explanation of key variables:

- (B) – The percent of total plan/community VMT within the roadway parallel to the bike facility should represent the expected total VMT generated by all land use in that area, including office, residences, retail, schools, and other uses. The most appropriate source for this data is from a local travel demand forecasting model. An alternate method uses VMT per worker or VMT per resident as calculated for SB 743 compliance and screening purposes multiplied by the population in the area.
- (C, D, and E) – The active transportation adjustment factor, key destination credit, and growth factor adjustment should be looked up by the user in Tables T-18.1 through T-18.3 in Appendix C. The active transport adjustment factor is based on the existing annual average daily traffic (AADT) of the facility, length of the proposed bike facility, and the city population. The key destination credit is based on the number of key destinations within 0.5-mile of the facility. The growth factor is based on the type of proposed bicycle facility.
- (F) – The annual days of use for the new facility should be looked up by users in Table T-18.4 based on the county their project is located in. The days of use is based on the number of days per year where there is no rainfall (i.e., <=0.1 inches) (NOAA 2017).

Table T-18.4. Bike Facility Default Days of Use per Year by County

County	Days	County	Days	County	Days	County	Days
Alameda	302	Kern	333	Placer	291	San Joaquin	314
Alpine	291	Kings	328	Plumas	292	San Luis Obispo	321
Amador	302	Lake	298	Riverside	337	San Mateo	295
Butte	294	Los Angeles	332	Sacramento	307	Solano	309
Calaveras	304	Lassen	309	San Benito	315	Stanislaus	319
Calaveras	304	Lassen	309	San Benito	315	Stanislaus	319
Colusa	309	Mariposa	314	San Bernardino	323	Sutter	304
Colusa	309	Mariposa	314	San Bernardino	323	Tahama	297
Del Norte	252	Merced	307	Santa Clara	307	Trinity	277
El Dorado	295	Mendocino	279	Santa Cruz	304	Tulare	314
Fresno	320	Merced	316	San Diego	323	Tuolumne	299
Glenn	304	Modoc	287	San Francisco	301	Ventura	334

Bike Facility Default Days of Use 333

Table T-9.1. Average One-Way Bicycle and Vehicle Trip Length by California Core-Based Statistical Areas

Core-Based Statistical Area	Trip Length (miles)	
	Bicycle	Vehicle
Los Angeles-Long Beach-Anaheim	1.7	9.7
San Francisco-Oakland-Hayward	2.2	11.7
Sacramento-Roseville-Arden-Arcade	2.9	10.9
San Diego-Carlsbad	2.0	19.1
San Francisco-Oakland-Hayward	2.1	12.4
San Jose-Sunnyvale-Santa Clara	2.8	11.5

Source: Federal Highway Administration. 2017. National Household Travel Survey. 2017 Table Designer. Travel Day PT by TRIPWAYS by FPL, CBSA. Available: <https://data.and.gsa.gov/>. Accessed: January 2021.

Average one-way bicycle trip length 2.2

Average one-way vehicle trip length 11.7

5 Outdoor lighting

GHG Reductions				
	2030	2050		
Nonresidential kWh	300	0		
Total	300	0		

Activity Reductions				
	2030	2050		
Nonresidential kWh	2,491,130	2,491,130		

Assumptions		
	2030	2050
Percentage of streetlights retrofitted since 2019	65%	65%

Performance Targets and Metrics		
	2030	2050
Number of retrofitted street lights	8,130	8,130

Quantification Calculations

	Notes
Traffic signals per capita	0.032 Ontario Municipal Inventory
Incandescent Wattage	150 CAPCOA - DOE 2004
Hours of Operation per day	24
Number of bulbs per traffic light	3

Source: San Bernardino Regional GHG Reduction Plan

	2030	2050
Number of Citywide streetlights	12500	12500
Percentage of streetlights retrofitted since 2019	0.65	0.65
Number of existing lighting heads replaced since 2019	8125	8125
Average power rating of existing street lamp (W)	150	150
Average power rating of proposed street lamp (W)	80	80
Hours of operation per day	12	12
Number of days of operation per year	365	365
Annual electricity use from replaced incandescent streetlights (Wh)	5338125000	5.338E+09
Annual electricity use from replaced incandescent streetlights (kWh)	5338125	5338125
Annual electricity use from replaced incandescent streetlights (Wh)	2847000000	2.847E+09
Annual electricity use from proposed LED streetlights (kWh)	2847000	2847000
Electricity savings from LED streetlights (kWh)	2491125	2491125

Additional Notes

2. Has Ontario converted any streetlights to LED bulbs? If so, how many? **Every streetlight in the City has been converted to LED. Approximately 12,500 lights total.**

Number of streetlights	12,500	Percent retrofitted since 2019	0.65
Average power rating of existing streetlight (W)	150		
Average power rating of proposed streetlight (W)	80		
Hours of operation per day	12		
Number of days of operation per year	365		

E-6. Require Higher Efficacy Public Street and Area Lighting

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GHG Reduction Formula

$$A = \frac{B_1 \times C_1 - B_2 \times C_2}{B_1 \times C_1}$$

GHG Calculation Variables

ID	Variable	Value	Unit	Source
Output				
A	Percent reduction in GHG emissions from outdoor street and area lighting	[-]	%	calculated
User Inputs				
B ₁	Number of existing lighting heads to be replaced	[-]	lighting heads	user input
B ₂	Number of proposed new lighting heads	[-]	lighting heads	user input
C ₁	Average power rating of existing lamp type	[-]	watts	user input
C ₂	Average power rating of proposed lamp type	[-]	watts	user input
Constants, Assumptions, and Available Defaults				
None				

Further explanation of key variables:


- (B₁ and B₂) – The number of existing and proposed lighting heads are required in the GHG reduction formula in case the new type of lamp results in less heads needing to be installed.
- (C₁ and C₂) – Lumens are the measure of the amount of light perceived by the human eye. Luminous efficacy is the amount of visible light emitted for a given amount of power. This measure assumes that the replacement lighting would provide the same number of lumens per area as the existing lighting and that only the power rating would change. See Table E-6.1 in Appendix C for a range of typical power ratings and efficacies of various outdoor lamp types (CLTC 2015). These values are for reference only for providing the user a list of existing and replacement lighting options. The user should input project-specific values in the GHG reduction formula, if available.

E-6. Require Higher Efficacy Public Street and Area Lighting

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$$A = \frac{100 \text{ heads} \times 120 \text{ watts} - 100 \text{ heads} \times 80 \text{ watts}}{100 \text{ heads} \times 120 \text{ watts}} = -33.3\%$$

Quantified Co-Benefits

 Energy and Fuel Savings

The percent reduction in electricity achieved by the measure is the same as the percent reduction in GHG emissions (A).

Sources

- California Lighting Technology Center (CLTC). 2012. *The State of Street Lighting in California*. 2012. University of California, Davis. February. Available: <https://cltc.ucdavis.edu/publication/state-street-lighting-california-2012>. Accessed: January 2021.
- California Lighting Technology Center (CLTC). 2015. 2013 Title 24, Part 6 Outdoor Lighting Guide. University of California, Davis. March. Available: <https://cltc.ucdavis.edu/sites/default/files/files/publication/2013-title-24-outdoor-lighting-guide-mar15.pdf>. Accessed: January 2021.

6 Energy efficiency retrofits of municipal buildings

GHG Reductions				
	2030	2050		
Nonresidential kWh	660	0		
Total	660	0		

Activity Reductions				
	2030	2050		
Nonresidential kWh	5,571,640	5,571,640		

Assumptions	2030	2050

Performance Targets and Metrics	2030	2050
Estimated annual energy savings from retrofits in 2020 (kWh)	5,571,640	5,571,640

Quantification Calculations

Notes

	2030	2050
Estimated annual energy savings from retrofits in 2020 (kWh)	5571638	5571638

Additional Notes

D. City Buildings (Public Services)	1. Retrofits	
	a. What is the energy savings from energy efficiency retrofits (provide available)	2021 Energy Usage Reduction (kWh) = 5,571,638
	b. How many building are included in the	26

Estimated annual energy savings from retrofits in 2020 (kWh) 5571638

Source: City of Ontario
\\Pw003\projdata\ONT-06.0\2_TechStudies\28_CCAP\2_Measure development and quantification\Existing activities\City responses\City Responses Municipal CAP Existing Data Facilities 20220330



7 Tree planting

GHG Reductions					
	2030	2050	[Scenario 2]	[Scenario 3]	[Scenario 4]
Sequestration	1,150	2,300			
Nonresidential kWh	110	0			
Nonresidential therms	220	450			
Total	1,480	1,480			

Activity Reductions				
	2030	2050		
Nonresidential kWh	928,800	1,857,600		
Nonresidential therms	42300	84600		
[Metric]				

Assumptions		
	2030	2050
Number of trees planted since 2019	1,000	1,000

Performance Targets and Metrics		
	2030	2050
Number of trees planted since 2019	1,000	1,000

Quantification Calculations

Notes

Assumptions:
 All trees planted within 0-19 feet and of buildings that were built post-1980 with heat and A/C.
 25% of trees were planted N of buildings, 25% were planted S, 25% planted E, and 25% W
 Four species were planted at the same rate (250 trees of each) for a total of 1,000 trees
 Four species: Oak, Northern red (Quercus rubra), Sycamore, American (Platanus occidentalis),
 Tree, Chinese flame (Koelreuteria bipinnata), Tree, Tulip (Liriodendron tulipifera)
 Trees are in excellent condition and planted in full sun.
 10% mortality rate during project period (2020-3050)
 Carbon sequestration rate is constant over time
 (33% of carbon sequestered between 2020-2030, 66% of carbon sequestered between 2030-2050)

	2030	2050
Percent of project period for C sequestration	0.333333333	0.666666667
Project starting year	2020	2020
Number of trees planted since 2019	1,000	1,000
Total carbon sequestration from planting 1,000 trees (lbs)	2,540,220	5,080,441
Total carbon sequestration from planting 1,000 trees (MTCO2)	1,152	2,304
Electricity saved from tree canopy (kWh)	928,798	1,857,595
GHG reduction from reduced electricity use (MTCO2e)	111	0
Fuel use saved from tree canopy (therms)	42,299	84,599
GHG reduction from reduced fuel use (MTCO2e)	223	446

Additional Notes

2022 Status update: Since 2019, 1,000 trees have been planted (Liriodendron tulipifera, Fraxinoxyloperis impatiens, Platanus x hispanica, Quercus muehlenbergii, Koelreuteria bipinnata)

Number of trees planted 1000

Project Report - i-Tree Planting Calculator v2.1.3

Location: Ontario, California 91761
 Electricity Emissions Factor: 208.00 kilograms CO2 equivalent/MWh
 Fuel Emissions Factor: 52.00 kilograms CO2 equivalent/MMBtu
 Lifetime: 30 years
 Tree Mortality: 10%

All amounts in the tables are for the full lifetime of the project.

Units: English (pounds & tons, kWh & MMBtu, gallons) Metric (kilograms & metric tons, kWh & MMBtu, cubic meters)

Location	Group Identifier	Tree Group Characteristics	CO ₂ Benefits			Energy Benefits				
			CO ₂ Avoided (pounds)	CO ₂ Avoided (\$)	CO ₂ Sequestered (pounds)	CO ₂ Sec (\$)	Electricity Saved (kWh)	Electricity Saved (\$)	Fuel Saved (MMBtu)	Fuel Saved (\$)
1		• (250.0) Oak, Northern red (Quercus rubra) at 1.0 inch DBH • Planted 0-19 feet and north (0°) of buildings that were built post-1980 with heat and A/C. • Trees are in excellent condition and planted in full sun.	377,637.9	\$8,782.89	1,838,574.6	\$42	432,898.7	\$68,614.37	1,394.0	\$18,037.49
2		• (250.0) Sycamore, American (Platanus occidentalis) at 1.9 inch DBH • Planted 0-19 feet and south (180°) of buildings that were built post-1980 with heat and A/C. • Trees are in excellent condition and planted in full sun.	-161,022.6	-\$3,744.89	1,830,007.2	\$42	813,643.6	\$166,882.83	-4,975.9	-\$64,386.90
3		• (250.0) Tree, Chinese flame (Koelreuteria bipinnata) at 1.0 inch DBH • Planted 0-19 feet and east (90°) of buildings that were built post-1980 with heat and A/C. • Trees are in excellent condition and planted in full sun.	-215,913.2	-\$5,021.48	1,216,883.2	\$26	530,743.3	\$108,643.16	-4,213.0	-\$54,514.78
4		• (250.0) Tree, Tulip (Liriodendron tulipifera) at 1.0 inch DBH • Planted 0-19 feet and west (270°) of buildings that were built post-1980 with heat and A/C. • Trees are in excellent condition and planted in full sun.	266,880.9	\$6,199.85	2,735,196.3	\$63	1,009,107.1	\$206,564.23	-2,103.9	-\$27,224.25

Powered by engine v0.7.1 (APIv2) and database v12.0.4.

Tree species	Carbon sequestered (pounds)	Electricity saved (kWh)	Fuel saved (MMBtu)	Fuel Saved (therms)
Oak, Northern red (Quercus rubra),	1838574.6	432898.7	1394	13943.3456
Sycamore, American (Platanus occidentalis),	1830007.2	813643.6	4975.9	49770.94216
Chinese flame (Koelreuteria bipinnata),	1216883.2	530743.30	4213	42140.1112
Tree, Tulip (Liriodendron tulipifera)	2735196.3	1009107.1	2103.9	21044.04936

<https://planting.itreetools.org/app/report/>



8 Installation of efficient industrial water boilers

GHG Reductions					
	2030	2050	[Scenario 2]	[Scenario 3]	[Scenario 4]
Nonresidential therms	180	180			
Total	180	180			

Activity Reductions					
	2030	2050	0	0	Total
Nonresidential therms	33,990	33,990			

Assumptions		
	2030	2050
Number of industrial boilers replaced since 2019	6	6

Performance Targets and Metrics		
	2030	2050
Number of replaced industrial boilers	6	6
[Metric 2]		
[Metric 3]		
[Metric 4]		
[Metric 5]		

Quantification Calculations

Notes

	2030	2050
Number of industrial boilers replaced since 2019	6	6
Energy efficiency of old boilers	0.81	0.81
Energy efficiency of new boilers	0.92	0.92
Percent average annual fuel savings with water boiler replacement	-9.4%	-9.4%
BAU average annual fuel use (old boiler) (therms)	60,102	60,102
Improved average annual fuel use (new boiler) (therms)	54,438	54,438
Fuel savings with water boiler replacement (therms)	33,986	33,986

Additional Notes

2. Industrial boiler efficiency	
a. Were there any industrial boilers replaced since 2019? If so, how many and what type of boilers were they (gas fired water boiler, gas fired steam boiler, or oil-fired boiler)? If possible, please provide any other relevant details about	Yes
b. If so, how many and what type of boilers were they (gas fired water boiler, gas fired steam	6 gas fired water boilers
c. If possible, please provide any other relevant details about the boilers (i.e. thermal or	Old boilers had 80-82% efficiency and new boilers have 88-96% efficiency
Number of industrial boilers replaced since 2019	6
Energy efficiency of old boilers	0.81
Energy efficiency of new boilers	0.92

E-3-B. Require Energy Efficient Commercial Packaged Boilers

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GHG Reduction Formula

A = D

GHG Calculation Variables

ID	Variable	Value	Unit	Source
Output				
A	Percent reduction in GHG emissions from boiler fuel consumption	1.1-16.0	%	calculated
User Inputs				
B	Boiler type	[]	text	user input
C	Thermal or combustion efficiency of boiler with measure	83-99	%	user input
Constants, Assumptions, and Available Defaults				
D	Boiler fuel savings with measure compared to minimum requirement	Table E-3-B.1 Table E-3-B.2	%	U.S. DOE 2016

Table E-3-B.1. Average Annual Fuel Use and Savings for Boilers Installed Before January 10, 2023 for Commercial and Industrial Boilers

CE or TE by Boiler Type ^{1,2}	Annual Fuel Use		
	Total (MMBtu/yr) ³	Savings (MMBtu/yr)	Change (%)
<i>Gas-fired Hot Water Boiler (≥300,000 Btu/hr and ≤2,500,000 Btu/hr)</i>			
80% TE (Standard)	907.7	—	—
81% TE	896.3	11.4	-1.3%
82% TE	885.2	22.6	-2.5%
84% TE	863.7	44	-4.8%
85% TE	853.4	54.4	-6.0%
93% TE	815.7	92	-10.1%
95% TE	797.3	110.4	-12.2%
99% TE (Max Tech)	762.9	144.8	-16.0%
<i>Gas-fired Hot Water Boiler (≥2,500,000 Btu/hr and ≤10,000,000 Btu/hr)</i>			
82% CE (Standard)	6,008.8	—	—
83% CE	5,929.9	78.9	-1.3%
84% CE	5,853.1	155.7	-2.6%
85% CE	5,778.3	230.5	-3.8%
94% CE	5,442.5	566.3	-9.4%
97% CE (Max Tech)	5,252.2	756.6	-12.6%

Percent average annual fuel savings with water boiler replacement	-9.4%
Fuel use for 82% CE water boiler (MMBtu/yr)	6008.8
Fuel use for 94% CE water boiler (MMBtu/yr)	5442.5

9 Increased supply of electricity from renewable sources

GHG Reductions				
	2030	2050		
Total GHG savings	56,140	0		
Total	56,140	0		

Activity Reductions				
	2030	2050		

Assumptions	2030	2050

Performance Targets and Metrics	2030	2050
SCE GHG emissions factor (MTCO _{2e} /kWh)	0.000119	0.000000

Quantification Calculations

Notes

GHG emissions savings for each existing activity involving electricity are calculated by subtracting the emissions produced with the new electricity emission factor from the emissions produced with the existing emission factor.

	2030	2050
Emission factor with RPS (MTCO _{2e} /kWh)	0.000149	0.000000
Emission factor with SCE-revised projections (MTCO _{2e} /kWh)	0.000119	0.000000
Residential electricity emissions with RPS	51,797	0
Nonresidential electricity emissions with RPS	212,571	0
Indirect water electricity emissions with RPS	11,970	0
Indirect wastewater electricity emissions with RPS	1,496	0
Residential electricity emissions with revised emissions factor	41,332	0
Nonresidential electricity emissions with revised emissions factor	169,620	0
Indirect water electricity emissions with revised emissions factor	9,551	0
Indirect wastewater electricity emissions with revised emissions factor	1,194	0
Net decrease in residential electricity emissions	10,466	0
Net decrease in nonresidential electricity emissions	42,951	0
Net decrease in indirect water electricity emissions	2,419	0
Net decrease in indirect wastewater electricity emissions	302	0

Additional Notes

SCE Customers	2020	2022	2026	2030
SCE Emissions on behalf of Bundled Customers (Million Metric Tons)	10.4	8.4	8.4	6.5
SCE Bundled Customers' Managed Load Forecast* (GWh)	58158.2	52831.4	53403.9	54393.1
SCE Emission Factor (Metric Tons of CO ₂ per Megawatt Hour - MT/MWh)	0.178	0.159	0.158	0.119

Source: Bo White, PE, LEED AP BD+C/NegoWatt Consulting, Inc.
 2030 SCE Electricity (MTCO_{2e}/MWh) 0.119
 2030 SCE Electricity (MTCO_{2e}/kWh) 0.000119
\\Pw003\projdata\ONT-06.0\2_TechStudies\28_CCAP\2_Measure development and quantification\FW_SCE GHG Emission Forecast



Instructions

Paste emission factors from the inventory into the columns for the baseline year (and interim year, if using)
The tool will calculate default factors, but these should be replaced with more accurate numbers as available.

Emission Factors (without state or local existing actions)

Activity Type	Units	2008	2016	2019	2030	2050
Electricity (SCE)	MTCO _{2e} /kWh	0.000288	0.000219	0.000208	0.000208	0.000208
Natural gas	MTCO _{2e} /therms	0.053816	0.007341	0.005272	0.005272	0.005272
Transportation (light duty vehicles)	MTCO _{2e} /VMT	0.000421	0.000363	0.000348	0.000348	0.000348
Transportation (heavy duty vehicles)	MTCO _{2e} /VMT	0.000979	0.001248	0.001256	0.001256	0.001256
Solid waste (MSW)	MTCO _{2e} /ton	0.260320	0.286064	0.286062	0.286060	0.286057
Solid waste (ADC)	MTCO _{2e} /ton	#DIV/0!	#DIV/0!	0.247191	0.246418	0.247557

Emission Factors (with state actions)

Activity Type	Units	2008	2016	2019	2030	2050
Electricity (SCE)	MTCO _{2e} /kWh	0.000288	0.000219	0.000208	0.000149	0.000000
Natural gas	MTCO _{2e} /therms	0.053816	0.007341	0.005272	0.005272	0.005272
Transportation (light duty vehicles)	MTCO _{2e} /VMT	0.000421	0.000363	0.000348	0.000277	0.000253
Transportation (heavy duty vehicles)	MTCO _{2e} /VMT	0.000979	0.001248	0.001256	0.001070	0.000734
Solid waste (MSW)	MTCO _{2e} /ton	0.473978	0.532831	0.286062	0.234502	0.234488
Solid waste (ADC)	MTCO _{2e} /ton			0.247191	0.246418	0.247557

Emission Factors (with state and local actions)

Activity Type	Units	2008	2016	2019	2030	2050
Electricity (SCE)	MTCO _{2e} /kWh	0.000288	0.000219	0.000208	0.000119	0.000000
Natural gas	MTCO _{2e} /therms	0.053816	0.007341	0.005272	0.005272	0.005272
Transportation (light duty vehicles)	MTCO _{2e} /VMT	0.000421	0.000363	0.000348	0.000277	0.000253
Transportation (heavy duty vehicles)	MTCO _{2e} /VMT	0.000979	0.001248	0.001256	0.001070	0.000734
Solid waste (MSW)	MTCO _{2e} /ton	0.260320	0.286064	0.286062	0.234502	0.234488
Solid waste (ADC)	MTCO _{2e} /ton			0.247191	0.246418	0.247557

SCE Customers	2020	2022	2026	2030
SCE Emissions on behalf of Bundled Customers (Million Metric Tons)	10.4	8.4	8.4	6.5
SCE Bundled Customers' Managed Load Forecast* (GWh)	58158.2	52831.4	53403.9	54393.1
SCE Emission Factor (Metric Tons of CO ₂ per Megawatt Hour - MT/MWh)	0.178	0.159	0.158	0.119

Source: Bo White, PE, LEED AP BD+C
NegaWatt Consulting, Inc.
[\\Pw003\projdata\ONT-06.0\2_TechStudies\28_CCAP\2_Measure development and quantification\FW_SCE GHG Emission Forecast](#)

2030 SCE Electricity (MTCO₂/MWh) 0.119
2030 SCE Electricity (MTCO₂/kWh) 0.000119

Demographic Forecast

Metric	2008	2016	2019	2021	2030	2050
Population	163,951	172,249	178,606	179,597	232,121	410,492
Households	44,673	46,001	48,275	50,367	66,679	124,380
Jobs	104,233	113,859	128,637	131,999	169,596	296,002
Service population	268,184	286,108	307,243	311,596	401,717	706,494

US Census, Table B25024
2019 5-Year Estimates

Units in Structure	Estimate
Total	52,927
1, detached	31,328
1, attached	3,627
2	740
3 or 4	4,020
5 to 9	3,352
10 to 19	1,931
20 to 49	2,371
50 or more	3209
Mobile Home	2,268
Boat, RV, van, etc.	36

Unadjusted (raw Census numbers)

Single family	31,328	59%
Townhome	3,627	7%
2-4 units	4760	9%
5+ units	10,863	21%
Mobile homes	2,268	4%

Adjusted to City population

Single family	28,618.23	59%
Townhome	3,313.28	7%
2-4 units	4,348.28	9%
5+ units	9,923.39	21%
Mobile homes	2,071.83	4%

UNITS IN STRUCTURE		
Survey/Program: American Community Survey		Product: 2019: ACS 5-Year E
TableID: B25024		Universe: Housing units
Ontario city, California		
Label	Estimate	Margin of Error
▼ Total:	52,927	±714
1, detached	31,328	±759
1, attached	3,672	±404
2	740	±145
3 or 4	4,020	±399
5 to 9	3,352	±444
10 to 19	1,931	±340
20 to 49	2,371	±325
50 or more	3,209	±366
Mobile home	2,268	±241
Boat, RV, van, etc.	36	±37

Quantification Workbook

Instructions

Modify state reduction calculations as needed based on forecast conditions

Summary of state reductions		
	2030	2050
Renewables Portfolio Standard (RPS)	127,800	797,860
Pavley	214,030	475,320
Title 24	68,860	198,210
Low Carbon Fuel Standards (offroad only)	3,460	4,210
SB 1383	25,360	44,610
Total	439,510	1,520,210
Total (per-capita)	1.09	2.15

Activity Data

Sector	Subsector	2008	2016	2019	2030	2050
Residential Energy	Residential electricity	317,534,340	313,059,680	316,529,750	347,323,930	471,362,640
	Residential natural gas	1,783,940	14,595,200	16,945,380	21,464,790	28,503,340
Nonresidential Energy	Nonresidential electricity	1,273,004,280	1,540,464,030	1,242,306,720	1,425,382,310	1,438,074,870
	Nonresidential natural gas	6,895,270	21,861,030	26,168,160	31,932,960	37,775,460
Transportation	Light-duty vehicles	1,767,683,550	1,843,389,270	1,945,876,580	2,380,798,400	3,171,565,080
	Heavy-duty vehicles	202,102,900	152,010,400	205,547,010	250,670,370	332,711,410
Off-Road Equipment	Agricultural Equipment	-	-	-	-	-
	Airport Ground Support	-	-	-	-	-
	Construction and Mining	-	-	-	-	-
	Industrial	-	-	-	-	-
	Lawn and Garden	-	-	-	-	-
	Light Commercial	-	-	-	-	-
	Pleasure Craft	-	-	-	-	-
	Portable Equipment	-	-	-	-	-
	Recreational	-	-	-	-	-
	Transportation Refrigeration Units	-	-	-	-	-
Solid Waste	Municipal solid waste	291,680	220,370	287,980	351,170	617,600
	Alternative daily cover	0	0	2,670	3,490	6,140
	Transform waste	0	0	1,030	1,350	2,370
Waste and Wastewater	Indirect water energy	139,120,870	63,020,780	61,387,950	80,264,120	141,159,360
	Indirect wastewater energy	9,735,890	6,806,890	7,672,160	10,031,270	17,641,850
	Direct wastewater plant emissions	0	0	0	0	0
Sequestration	Development activities	3,520	0	1,700	950	2,070
	Street tree sequestration	740	0	760	800	870
Agriculture	Enteric fermentation	53,240	126,350	10,890	7,030	0
	Fertilizer application	3,070	1,150	200	130	0
	Manure management	53,240	42,270	10,890	7,030	0

Emissions Data

Sector	Subsector	2008	2016	2019	2030	2050
Residential Energy	Residential electricity	93,670	79,180	65,690	51,800	0
	Residential natural gas	98,620	79,220	89,340	113,170	150,270
Nonresidential Energy	Nonresidential electricity	375,540	326,030	257,820	212,570	0
	Nonresidential natural gas	368,460	188,410	137,960	168,350	199,160
Transportation	Light-duty vehicles	744,250	668,870	676,420	660,110	800,860
	Heavy-duty vehicles	197,770	189,690	258,170	268,320	244,200
Off-Road Equipment	Agricultural Equipment	10	970	60	90	0
	Airport Ground Support	8,500	0	9,650	11,350	13,250
	Construction and Mining	13,180	10,230	23,060	28,850	51,610
	Industrial	6,920	870	7,990	10,210	17,180
	Lawn and Garden	200	580	210	270	440
	Light Commercial	2,020	930	2,340	2,860	4,610
	Pleasure Craft	160	6,160	240	320	630
	Portable Equipment	14,260	0	18,090	24,310	52,160
	Recreational	1,060	420	1,200	1,490	2,770
	Transportation Refrigeration Units	190	1,730	2,640	2,680	3,680
Solid Waste	Municipal solid waste	75,930	63,040	82,380	82,350	144,820
	Alternative daily cover	0	0	660	860	1,520
	Transform waste	0	0	360	470	830
Waste and Wastewater	Indirect water energy	29,040	13,880	13,410	11,970	0
	Indirect wastewater energy	6,590	5,400	1,960	1,500	0
	Direct wastewater plant emissions	4,220	4,340	4,530	5,920	10,420
Sequestration	Development activities	3,250	1,390	1,390	870	2,120
	Street tree sequestration	-710	-730	-730	-770	-830
Agriculture	Enteric fermentation	126,350	44,850	36,290	23,430	0
	Fertilizer application	1,150	890	850	540	0
	Manure management	42,270	14,680	11,400	7,350	0
Total		2,212,900	1,701,030	1,703,380	1,691,240	1,699,700
Change from 2008 levels		0.0%	-23.1%	-23.0%	-23.6%	-23.2%
Change from 2018 levels				-0.7%	-0.2%	

	2008	2016	2019	2030	2050
Residential Energy	192,290	158,400	155,030	164,970	150,270
Nonresidential Energy	744,000	514,440	395,780	380,920	199,160
Transportation	942,020	858,560	934,590	928,430	1,045,060
Off-Road Equipment	46,500	21,890	65,480	82,430	146,330
Solid Waste	75,930	63,040	83,400	83,680	147,170
Waste and Wastewater	39,850	23,620	19,900	19,390	10,420
Agriculture	169,770	60,420	48,540	31,320	0
Sequestration	2,540	660	660	100	1,290
Total	2,212,900	1,701,030	1,703,380	1,691,240	1,699,700

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Emission savings from LCFS	2030	2050
Agricultural Equipment	-50	0
Airport Ground Support	1,270	8,940
Construction and Mining	1,300	1,420
Industrial	320	1,210
Lawn and Garden	20	100
Light Commercial	230	770
Pleasure Craft	-10	-80
Portable Equipment	-460	-10,530
Recreational	70	-10
Transportation Refrigeration Units	770	2,390
Total	3,460	4,210

Emissions without LCFS	2030	2050
Agricultural Equipment	40	0
Airport Ground Support	12,620	22,190
Construction and Mining	30,150	53,030
Industrial	10,530	18,390
Lawn and Garden	290	540
Light Commercial	3,090	5,380
Pleasure Craft	310	550
Portable Equipment	23,850	41,630
Recreational	1,560	2,760
Transportation Refrigeration Units	3,450	6,070
Total	85,890	150,540

Emissions with LCFS	2030	2050
Agricultural Equipment	90	0
Airport Ground Support	11,350	13,250
Construction and Mining	28,850	51,610
Industrial	10,210	17,180
Lawn and Garden	270	440
Light Commercial	2,860	4,610
Pleasure Craft	320	630
Portable Equipment	24,310	52,160
Recreational	1,490	2,770
Transportation Refrigeration Units	2,680	3,680
Total	82,430	146,330

CY	Season	AvgDays	Code	Equipment	Fuel	MaxHP	Class	C/R	Pre	Hand	Port	County	Air Basin	Air Dist.	Population	Activity	Consumpt	ROG	Exhaust	CO Exhaust	NOX Exhaust	CO2 Exhaust	SO2 Exhaust	PM Exhaust	N2O Exhaust	CH4 Exhaust	Total emissions (t/d)
2019	Annual	Mon-Sun	2.27E+09	2-Wheel T	G4	5	Agricultural Eq U		P	NHH	NP	Total	Total	Total	3.97E+00	1.74E+00	3.55E-01	4.85E-05	7.64E-04	2.22E-05	2.04E-03	7.06E-08	6.67E-07	3.03E-06	2.80E-06	2.92E-03	
2019	Annual	Mon-Sun	2.27E+09	2-Wheel T	G4	15	Agricultural Eq U		P	NHH	NP	Total	Total	Total	4.62E+00	4.21E+00	2.01E+00	1.50E-04	5.68E-03	1.13E-04	9.87E-03	2.82E-07	8.28E-05	1.09E-05	8.66E-06	9.87E-03	
2019	Annual	Mon-Sun	2.27E+09	2-Wheel T	G4	25	Agricultural Eq U		P	NHH	NP	Total	Total	Total	1.24E-01	1.13E-01	1.11E-01	8.49E-06	3.23E-04	5.62E-06	5.30E-04	1.34E-08	4.44E-06	4.06E-07	4.91E-07	5.30E-04	
2019	Annual	Mon-Sun	2.27E+09	Agricultur	G4	120	Agricultural Eq U		P	NHH	NP	Total	Total	Total	1.48E+00	2.23E+00	1.10E+01	1.74E-04	5.34E-03	4.31E-04	9.68E-02	9.35E-07	7.50E-06	1.44E-05	1.01E-05	9.68E-02	
2019	Annual	Mon-Sun	2.27E+09	Agricultur	G4	175	Agricultural Eq U		P	NHH	NP	Total	Total	Total	2.02E-01	3.06E-01	2.16E+00	2.18E-05	7.18E-04	1.01E-04	1.97E-02	1.95E-07	1.57E-06	2.61E-06	1.26E-06	1.97E-02	
2019	Annual	Mon-Sun	2.27E+09	Combines	G4	120	Agricultural Eq U		P	NHH	NP	Total	Total	Total	3.70E-01	1.27E-01	8.82E-01	3.71E-06	1.51E-04	9.21E-06	8.26E-03	7.98E-08	6.40E-07	5.45E-07	2.15E-07	8.26E-03	
2019	Annual	Mon-Sun	2.27E+09	Combines	G4	175	Agricultural Eq U		P	NHH	NP	Total	Total	Total	2.06E-01	7.05E-02	7.74E-01	2.34E-06	2.22E-04	8.80E-06	7.11E-03	7.06E-08	5.66E-07	4.04E-07	1.35E-07	7.11E-03	
2019	Annual	Mon-Sun	2.27E+09	Combines	G4	250	Agricultural Eq U		N	NHH	NP	Total	Total	Total	3.80E-02	1.30E-02	1.64E-01	4.27E-07	4.84E-05	4.58E-06	1.51E-03	1.54E-08	1.24E-07	1.33E-07	2.47E-08	1.51E-03	
2019	Annual	Mon-Sun	2.27E+09	Balers	G4	50	Agricultural Eq U		P	NHH	NP	Total	Total	Total	5.39E+00	1.01E+00	1.95E+00	2.96E-05	1.29E-03	5.34E-05	1.67E-02	2.03E-07	1.28E-06	3.45E-06	1.71E-06	1.67E-02	
2019	Annual	Mon-Sun	2.27E+09	Balers	G4	120	Agricultural Eq U		P	NHH	NP	Total	Total	Total	2.76E+00	5.15E-01	1.67E+00	1.46E-05	3.65E-04	5.40E-05	1.55E-02	1.49E-07	1.20E-06	2.26E-06	8.42E-07	1.55E-02	
2019	Annual	Mon-Sun	2.27E+09	Agricultur	G4	15	Agricultural Eq U		P	NHH	NP	Total	Total	Total	4.12E+00	2.04E+00	7.52E-01	5.60E-05	2.13E-03	4.23E-05	3.70E-03	1.05E-07	3.10E-05	4.60E-06	3.24E-06	3.70E-03	
2019	Annual	Mon-Sun	2.27E+09	Agricultur	G4	25	Agricultural Eq U		P	NHH	NP	Total	Total	Total	3.37E+00	1.66E+00	1.42E+00	1.09E-04	4.15E-03	7.20E-05	6.81E-03	1.73E-07	5.71E-05	5.56E-06	6.29E-06	6.81E-03	
2019	Annual	Mon-Sun	2.27E+09	Sprayers	G4	5	Agricultural Eq U		P	NHH	NP	Total	Total	Total	1.56E+01	4.20E+00	6.97E-01	9.30E-05	1.52E-03	4.27E-05	3.98E-03	1.37E-07	1.30E-06	6.47E-06	5.38E-06	3.98E-03	
2019	Annual	Mon-Sun	2.27E+09	Sprayers	G4	15	Agricultural Eq U		P	NHH	NP	Total	Total	Total	4.86E+00	1.31E+00	4.49E-01	3.61E-05	1.29E-03	2.36E-05	2.17E-03	6.18E-08	1.81E-05	2.73E-06	2.09E-06	2.17E-03	
2019	Annual	Mon-Sun	2.27E+09	Sprayers	G4	25	Agricultural Eq U		P	NHH	NP	Total	Total	Total	1.26E+01	3.38E+00	2.88E+00	2.31E-04	8.49E-03	1.36E-04	1.36E-02	3.45E-07	1.14E-04	1.08E-05	1.34E-05	1.36E-02	
2019	Annual	Mon-Sun	2.27E+09	Sprayers	G4	50	Agricultural Eq U		P	NHH	NP	Total	Total	Total	1.02E+00	2.23E-01	3.72E-01	5.74E-06	2.52E-04	1.02E-05	3.18E-03	3.86E-08	2.43E-07	7.08E-07	3.32E-07	3.18E-03	
2019	Annual	Mon-Sun	2.27E+09	Sprayers	G4	120	Agricultural Eq U		P	NHH	NP	Total	Total	Total	1.71E+00	3.76E-01	1.18E+00	1.05E-05	2.66E-04	3.84E-05	1.09E-02	1.05E-07	8.45E-07	1.63E-06	6.07E-07	1.09E-02	
2019	Annual	Mon-Sun	2.27E+09	Sprayers	G4	175	Agricultural Eq U		P	NHH	NP	Total	Total	Total	3.86E-01	8.47E-02	5.36E-01	2.97E-06	1.54E-04	1.96E-05	4.92E-03	4.89E-08	3.92E-07	5.68E-07	1.72E-07	4.92E-03	
2019	Annual	Mon-Sun	2.27E+09	Tillers	G4	15	Agricultural Eq U		N	NHH	NP	Total	Total	Total	5.32E+02	1.04E+02	4.98E+01	2.99E-03	1.43E-01	1.94E-03	2.44E-01	6.95E-06	1.23E-04	2.20E-04	1.73E-04	2.44E-01	
2019	Annual	Mon-Sun	2.27E+09	Swathers	G4	120	Agricultural Eq U		P	NHH	NP	Total	Total	Total	5.53E+00	1.44E+00	6.09E+00	5.57E-05	1.43E-03	2.00E-04	5.63E-02	5.44E-07	4.36E-06	7.39E-06	3.22E-06	5.63E-02	
2019	Annual	Mon-Sun	2.27E+09	Swathers	G4	175	Agricultural Eq U		P	NHH	NP	Total	Total	Total	4.24E+00	1.11E+00	6.71E+00	3.81E-05	1.93E-03	2.47E-04	6.16E-02	6.11E-07	4.90E-06	7.30E-06	2.21E-06	6.16E-02	
2019	Annual	Mon-Sun	2.27E+09	Hydro Pow	G4	5	Agricultural Eq U		P	NHH	NP	Total	Total	Total	9.42E-01	4.52E-01	1.04E-01	1.44E-05	2.20E-04	6.59E-06	6.00E-04	2.07E-08	1.95E-07	8.45E-07	8.31E-07	6.00E-04	
2019	Annual	Mon-Sun	2.27E+09	Hydro Pow	G4	15	Agricultural Eq U		P	NHH	NP	Total	Total	Total	1.88E+00	2.39E+00	1.03E+00	7.94E-05	2.92E-03	6.00E-05	5.08E-03	1.45E-07	4.26E-05	5.97E-06	4.58E-06	5.08E-03	
2019	Annual	Mon-Sun	2.27E+09	Hydro Pow	G4	25	Agricultural Eq U		P	NHH	NP	Total	Total	Total	7.17E-01	9.13E-01	8.62E-01	6.79E-05	2.51E-03	4.49E-05	4.11E-03	1.04E-07	3.45E-05	3.26E-06	3.92E-06	4.11E-03	
2019	Annual	Mon-Sun	2.27E+09	Hydro Pow	G4	50	Agricultural Eq U		P	NHH	NP	Total	Total	Total	5.06E-02	6.25E-02	1.37E-01	1.51E-06	1.08E-04	2.16E-06	1.15E-03	1.40E-08	8.80E-08	1.85E-07	8.69E-08	1.15E-03	
2019	Annual	Mon-Sun	2.27E+09	Hydro Pow	G4	120	Agricultural Eq U		P	NHH	NP	Total	Total	Total	6.33E-03	7.81E-03	2.64E-02	1.14E-07	5.06E-06	2.66E-07	2.47E-04	2.38E-09	1.91E-08	2.29E-08	6.58E-09	2.47E-04	
2019	Annual	Mon-Sun	2.27E+09	Other Agri	G4	5	Agricultural Eq U		P	NHH	NP	Total	Total	Total	6.57E-01	2.61E-01	4.78E-02	6.34E-06	1.05E-04	2.91E-06	2.72E-04	9.40E-09	8.87E-08	4.22E-07	3.66E-07	2.72E-04	
2019	Annual	Mon-Sun	2.27E+09	Other Agri	G4	15	Agricultural Eq U		P	NHH	NP	Total	Total	Total	5.74E-01	2.28E-01	1.21E-01	8.93E-06	3.42E-04	6.73E-06	5.95E-04	1.70E-08	4.99E-06	6.21E-07	5.16E-07	5.95E-04	
2019	Annual	Mon-Sun	2.27E+09	Other Agri	G4	25	Agricultural Eq U		P	NHH	NP	Total	Total	Total	1.46E-01	5.82E-02	7.93E-02	6.00E-06	2.31E-04	3.97E-06	3.79E-04	9.61E-09	3.18E-06	2.48E-07	3.47E-07	3.79E-04	
2019	Annual	Mon-Sun	2.27E+09	Other Agri	G4	50	Agricultural Eq U		P	NHH	NP	Total	Total	Total	1.68E-01	5.71E-02	9.24E-02	1.28E-06	6.44E-05	2.08E-06	7.86E-04	9.55E-09	6.02E-08	1.63E-07	7.37E-08	7.86E-04	
2019	Annual	Mon-Sun	2.27E+09	Other Agri	G4	120	Agricultural Eq U		P	NHH	NP	Total	Total	Total	9.71E-01	3.30E-01	1.12E+00	8.33E-06	2.46E-04	2.58E-05	1.04E-02	1.00E-07	8.05E-07	1.26E-06	4.82E-07	1.04E-02	
2019	Annual	Mon-Sun	2.27E+09	Other Agri	G4	175	Agricultural Eq U		P	NHH	NP	Total	Total	Total	1.11E-01	3.77E-02	2.55E-01	1.22E-06	7.37E-05	6.55E-06	2.34E-03	2.32E-08	1.86E-07	2.19E-07	7.03E-08	2.34E-03	
2019	Annual	Mon-Sun	2.27E+09	Other Agri	G4	250	Agricultural Eq U		N	NHH	NP	Total	Total	Total	4.11E-02	1.40E-02	1.67E-01	6.67E-07	4.95E-05	6.18E-06	1.53E-03	1.56E-08	1.25E-07	1.54E-07	3.86E-08	1.53E-03	
2019	Annual	Mon-Sun	2.27E+09	Agricultur	D	15	Agricultural Eq U		P	NHH	NP	Total	Total	Total	4.21E+01	6.14E+01	2.95E+01	3.76E-04	1.97E-03	2.36E-03	3.23E-01	5.03E-06	9.21E-05	0.00E+00	3.40E-05	3.23E-01	
2019	Annual	Mon-Sun	2.27E+09	Agricultur	D	25	Agricultural Eq U		P	NHH	NP	Total	Total	Total	5.19E+01	7.58E+01	6.96E+01	9.22E-04	3.15E-03	5.83E-03	7.64E-01	9.70E-06	2.17E-04	0.00E+00	8.32E-05	7.64E-01	
2019	Annual	Mon-Sun	2.27E+09	Agricultur	D	50	Agricultural Eq U		P	NHH	NP	Total	Total	Total	1.21E+02	1.58E+02	2.48E+02	4.67E-03	2.19E-02	2.10E-02	2.70E+00	3.49E-05	1.25E-03	0.00E+00	4.22E-04	2.70E+00	
2019	Annual	Mon-Sun	2.27E+09	Agricultur	D	120	Agricultural Eq U		P	NHH	NP	Total	Total	Total	1.40E+02	1.82E+02	6.06E+02	5.54E-03	4.12E-02	4.32E-02	6.64E+00	7.79E-05	2.80E-03	0.00E+00	5.00E-04	6.64E+00	
2019	Annual	Mon-Sun	2.27E+09	Agricultur	D	175	Agricultural Eq U		P	NHH	NP	Total	Total	Total	7.88E+01	1.03E+02	5.82E+02	3.88E-03	3.42E-02	3.26E-02	6.40E+00	7.20E-05	1.55E-03	0.00E+00	3.50E-04	6.40E+00	
2019	Annual	Mon-Sun	2.27E+09	Agricultur	D	250	Agricultural Eq U		N	NHH	NP	Total	Total	Total	5.09E+01	6.64E+01	5.35E+02	2.64E-03	1.13E-02	2.58E-02	5.91E+00	6.65E-05	7.78E-04	0.00E+00	2.39E-04	5.91E+00	
2019	Annual	Mon-Sun	2.27E+09	Agricultur	D	500	Agricultural Eq U		N	NHH	NP	Total	Total	Total	1.01E+01	1.32E+01	1.74E+02	8.16E-04	3.56E-03	7.51E-03	1.92E+00	1.88E-05	2.42E-04	0.00E+00	7.36E-05	1.92E+00	
2019	Annual	Mon-Sun	2.27E+09	Combines	D	120	Agricultural Eq U		P	NHH	NP	Total	Total	Total	2.95E+00	1.22E+00	5.25E+00	3.58E-05	3.30E-04	3.47E-04	5.76E-02	6.76E-07	1.85E-05	0.00E+00	3.23E-06	5.76E-02	
2019	Annual	Mon-Sun	2.27E+09	Combines	D	175	Agricultural Eq U		P	NHH	NP	Total	Total	Total	4.39E+00	1.81E+00	1.02E+01	4.89E-05	5.55E-04	5.28E-04	1.12E-01	1.26E-06	2.06E-05	0.00E+00	4.41E-06	1.12E-01	
2019	Annual	Mon-Sun	2.27E+09	Combines	D	250	Agricultural Eq U		N	NHH	NP	Total	Total	Total	4.69E+00	1.93E+00	1.53E+01	5.25E-05	2.98E-04	6.79E-04	1.69E-01	1.90E-06	1.79E-05	0.00E+00	4.74E-06	1.69E-01	
2019	Annual	Mon-Sun	2.27E+09	Combines	D	500	Agricultural Eq U		N	NHH	NP	Total	Total	Total	1.87E-01	7.71E-02	8.40E-01	2.70E-06	1.62E-05	3.40E-05	9.30E-03	9.12E-08	9.53E-07	0.00E+00	2.43E-07	9.30E-03	
2019	Annual	Mon-Sun	2.27E+09	Balers	D	50	Agricultural Eq U		P	NHH	NP	Total	Total	Total	5.59E-03	1.46E-03	2.42E-03	2.54E-08	1.56E-07	1.90E-07	2.65E-05	3.42E-10	8.64E-09	0.00E+00	2.29E-09	2.65E-05	
2019	Annual	Mon-Sun	2.27E+09	Balers	D	120	Agricultural Eq U		P	NHH	NP	Total	Total	Total	3.94E+00	1.03E+00	2.55E+00	1.64E-05	1.58E-04	1.66E-04	2.80E-02	3.28E-07	8.51E-06	0.00E+00	1.48E-06	2.80E-02	

2019 Annual	Mon-Sun	2.27E+09	Swathers D	D	175	Agricultural Eq U	P	NHH	NP	Total	Total	Total	1.90E-01	5.74E-02	2.69E-01	1.23E-06	1.45E-05	1.38E-05	2.96E-03	3.34E-08	5.23E-07	0.00E+00	1.11E-07	2.96E-03
2019 Annual	Mon-Sun	2.27E+09	Hydro PowD	D	15	Agricultural Eq U	P	NHH	NP	Total	Total	Total	1.62E-01	3.62E-01	9.95E-02	1.27E-06	6.65E-06	7.94E-06	1.09E-03	1.69E-08	3.10E-07	0.00E+00	1.14E-07	1.09E-03
2019 Annual	Mon-Sun	2.27E+09	Hydro PowD	D	25	Agricultural Eq U	P	NHH	NP	Total	Total	Total	4.89E-01	1.09E+00	5.69E-01	7.53E-06	2.57E-05	4.76E-05	6.24E-03	7.92E-08	1.78E-06	0.00E+00	6.79E-07	6.24E-03
2019 Annual	Mon-Sun	2.27E+09	Hydro PowD	D	50	Agricultural Eq U	P	NHH	NP	Total	Total	Total	5.48E-01	1.19E+00	1.15E+00	2.60E-05	1.18E-04	1.02E-04	1.25E-02	1.62E-07	6.66E-06	0.00E+00	2.35E-06	1.25E-02
2019 Annual	Mon-Sun	2.27E+09	Hydro PowD	D	120	Agricultural Eq U	P	NHH	NP	Total	Total	Total	5.03E-02	1.09E-01	2.10E-01	2.24E-06	1.51E-05	1.55E-05	2.30E-03	2.69E-08	1.09E-06	0.00E+00	2.02E-07	2.30E-03
2019 Annual	Mon-Sun	2.27E+09	Other Agri D	D	15	Agricultural Eq U	P	NHH	NP	Total	Total	Total	5.93E-01	7.25E-01	2.54E-01	3.24E-06	1.70E-05	2.03E-05	2.78E-03	4.33E-08	7.92E-07	0.00E+00	2.92E-07	2.78E-03
2019 Annual	Mon-Sun	2.27E+09	Other Agri D	D	25	Agricultural Eq U	P	NHH	NP	Total	Total	Total	1.65E+00	2.02E+00	1.29E+00	1.73E-05	5.86E-05	1.09E-04	1.42E-02	1.80E-07	4.38E-06	0.00E+00	1.56E-06	1.42E-02
2019 Annual	Mon-Sun	2.27E+09	Other Agri D	D	50	Agricultural Eq U	P	NHH	NP	Total	Total	Total	1.44E+00	1.51E+00	1.77E+00	2.99E-05	1.46E-04	1.47E-04	1.93E-02	2.49E-07	8.32E-06	0.00E+00	2.69E-06	1.93E-02
2019 Annual	Mon-Sun	2.27E+09	Other Agri D	D	120	Agricultural Eq U	P	NHH	NP	Total	Total	Total	4.87E+00	5.09E+00	1.19E+01	1.01E-04	7.90E-04	8.29E-04	1.30E-01	1.53E-06	5.13E-05	0.00E+00	9.09E-06	1.30E-01
2019 Annual	Mon-Sun	2.27E+09	Other Agri D	D	175	Agricultural Eq U	P	NHH	NP	Total	Total	Total	4.05E-01	4.24E-01	1.79E+00	1.10E-05	1.03E-04	9.78E-05	1.96E-02	2.21E-07	4.43E-06	0.00E+00	9.88E-07	1.96E-02
2019 Annual	Mon-Sun	2.27E+09	Other Agri D	D	250	Agricultural Eq U	N	NHH	NP	Total	Total	Total	4.05E-01	4.24E-01	2.57E+00	1.16E-05	5.31E-05	1.21E-04	2.84E-02	3.20E-07	3.54E-06	0.00E+00	1.05E-06	2.84E-02
2019 Annual	Mon-Sun	2.27E+09	Other Agri D	D	500	Agricultural Eq U	N	NHH	NP	Total	Total	Total	9.78E-02	1.02E-01	8.93E-01	3.82E-06	1.80E-05	3.79E-05	9.87E-03	9.69E-08	1.18E-06	0.00E+00	3.44E-07	9.87E-03
2019 Annual	Mon-Sun	2.27E+09	Cargo Trac G4	G4	120	Airport Grounc U	N	NHH	NP	Total	Total	Total	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2019 Annual	Mon-Sun	2.27E+09	A/C Tug N: G4	G4	175	Airport Grounc U	N	NHH	NP	Total	Total	Total	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2019 Annual	Mon-Sun	2.27E+09	A/C Tug W G4	G4	500	Airport Grounc U	N	NHH	NP	Total	Total	Total	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2019 Annual	Mon-Sun	2.27E+09	Air Condit G4	G4	175	Airport Grounc U	N	NHH	P	Total	Total	Total	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2019 Annual	Mon-Sun	2.27E+09	Air Start U G4	G4	175	Airport Grounc U	N	NHH	P	Total	Total	Total	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2019 Annual	Mon-Sun	2.27E+09	Baggage Ti G4	G4	120	Airport Grounc U	N	NHH	NP	Total	Total	Total	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2019 Annual	Mon-Sun	2.27E+09	Belt Loade G4	G4	120	Airport Grounc U	N	NHH	NP	Total	Total	Total	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2019 Annual	Mon-Sun	2.27E+09	Bobtail G4	G4	120	Airport Grounc U	N	NHH	NP	Total	Total	Total	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2019 Annual	Mon-Sun	2.27E+09	Cargo Loar G4	G4	120	Airport Grounc U	N	NHH	NP	Total	Total	Total	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2019 Annual	Mon-Sun	2.27E+09	Cart G4	G4	15	Airport Grounc U	N	NHH	NP	Total	Total	Total	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2019 Annual	Mon-Sun	2.27E+09	Deicer G4	G4	120	Airport Grounc U	N	NHH	NP	Total	Total	Total	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2019 Annual	Mon-Sun	2.27E+09	Forklift G4	G4	50	Airport Grounc U	N	NHH	NP	Total	Total	Total	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2019 Annual	Mon-Sun	2.27E+09	Fuel Truck G4	G4	175	Airport Grounc U	N	NHH	NP	Total	Total	Total	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2019 Annual	Mon-Sun	2.27E+09	Ground Po G4	G4	175	Airport Grounc U	N	NHH	P	Total	Total	Total	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2019 Annual	Mon-Sun	2.27E+09	Lav Cart G4	G4	15	Airport Grounc U	N	NHH	NP	Total	Total	Total	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2019 Annual	Mon-Sun	2.27E+09	Lav Truck G4	G4	175	Airport Grounc U	N	NHH	NP	Total	Total	Total	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2019 Annual	Mon-Sun	2.27E+09	Lift G4	G4	120	Airport Grounc U	N	NHH	NP	Total	Total	Total	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2019 Annual	Mon-Sun	2.27E+09	Maint. Tru G4	G4	175	Airport Grounc U	N	NHH	NP	Total	Total	Total	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2019 Annual	Mon-Sun	2.27E+09	Other GSE G4	G4	50	Airport Grounc U	N	NHH	NP	Total	Total	Total	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2019 Annual	Mon-Sun	2.27E+09	Passenger G4	G4	175	Airport Grounc U	N	NHH	NP	Total	Total	Total	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2019 Annual	Mon-Sun	2.27E+09	Sweeper G4	G4	120	Airport Grounc U	N	NHH	NP	Total	Total	Total	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2019 Annual	Mon-Sun	2.27E+09	Generator G4	G4	120	Airport Grounc U	N	NHH	NP	Total	Total	Total	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2019 Annual	Mon-Sun	2.27E+09	Service Tr G4	G4	250	Airport Grounc U	N	NHH	NP	Total	Total	Total	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2019 Annual	Mon-Sun	2.27E+09	Catering Ti G4	G4	250	Airport Grounc U	N	NHH	NP	Total	Total	Total	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2019 Annual	Mon-Sun	2.27E+09	Water Tru G4	G4	175	Airport Grounc U	N	NHH	NP	Total	Total	Total	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2019 Annual	Mon-Sun	2.27E+09	Hydrant tr G4	G4	175	Airport Grounc U	N	NHH	NP	Total	Total	Total	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2019 Annual	Mon-Sun	2.27E+09	Cargo Trac C4	C4	175	Airport Grounc U	N	NHH	NP	Total	Total	Total	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2019 Annual	Mon-Sun	2.27E+09	Air Condit C4	C4	175	Airport Grounc U	N	NHH	P	Total	Total	Total	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2019 Annual	Mon-Sun	2.27E+09	Baggage Ti C4	C4	120	Airport Grounc U	N	NHH	NP	Total	Total	Total	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2019 Annual	Mon-Sun	2.27E+09	Belt Loade C4	C4	120	Airport Grounc U	N	NHH	NP	Total	Total	Total	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Construction a U	P	NHH	NP	Total	Total	Total	2.98E+00	1.68E+00	3.39E-01	2.13E-05	9.17E-04	1.67E-05	1.75E-03	7.22E-08	1.47E-05	2.62E-06	1.33E-06	1.75E-03
Construction a U	P	NHH	NP	Total	Total	Total	7.57E-01	8.22E-01	4.70E-01	3.53E-05	1.33E-03	2.66E-05	2.31E-03	6.59E-08	1.94E-05	2.35E-06	2.04E-06	2.31E-03
Construction a U	P	NHH	NP	Total	Total	Total	1.30E+00	1.41E+00	2.02E+00	1.56E-04	5.90E-03	1.03E-04	9.67E-03	2.45E-07	8.10E-05	6.22E-06	8.99E-06	9.67E-03
Construction a U	P	NHH	NP	Total	Total	Total	7.12E-01	7.65E-01	1.76E+00	3.34E-05	1.85E-03	4.65E-05	1.40E-02	1.70E-07	1.07E-06	2.87E-06	1.93E-06	1.40E-02
Construction a U	P	NHH	NP	Total	Total	Total	3.91E-01	4.20E-01	1.60E+00	1.82E-05	5.83E-04	4.76E-05	1.44E-02	1.40E-07	1.12E-06	2.02E-06	1.05E-06	1.44E-02
Construction a U	P	NHH	NP	Total	Total	Total	1.60E+00	8.00E-01	3.81E-01	2.82E-05	1.08E-03	2.13E-05	1.87E-03	5.34E-08	1.57E-05	2.06E-06	1.63E-06	1.87E-03
Construction a U	P	NHH	NP	Total	Total	Total	5.88E+01	2.90E+01	5.21E+00	7.27E-04	1.10E-02	3.34E-04	3.02E-02	1.04E-06	9.86E-06	4.78E-05	4.21E-05	3.02E-02
Construction a U	P	NHH	NP	Total	Total	Total	6.24E+01	3.52E+01	1.49E+01	1.11E-03	4.22E-02	8.37E-04	7.34E-02	2.09E-06	6.15E-04	8.54E-05	6.40E-05	7.34E-02
Construction a U	P	NHH	NP	Total	Total	Total	6.55E+00	1.49E+00	3.98E-01	4.74E-05	9.39E-04	2.17E-05	2.19E-03	7.56E-08	7.13E-07	2.78E-06	2.74E-06	2.19E-03
Construction a U	P	NHH	NP	Total	Total	Total	1.06E+01	9.01E+00	4.84E+00	3.59E-04	1.37E-02	2.72E-04	2.38E-02	6.79E-07	2.00E-04	2.48E-05	2.08E-05	2.38E-02
Construction a U	P	NHH	NP	Total	Total	Total	7.16E+00	6.08E+00	7.10E+00	5.41E-04	2.07E-02	3.58E-04	3.39E-02	8.60E-07	2.84E-04	2.39E-05	3.13E-05	3.39E-02
Construction a U	P	NHH	NP	Total	Total	Total	5.01E-01	8.54E-01	2.29E+00	5.84E-05	3.19E-03	7.83E-05	1.69E-02	2.06E-07	1.30E-06	3.97E-06	3.37E-06	1.69E-02
Construction a U	P	NHH	NP	Total	Total	Total	9.43E-01	1.61E+00	7.27E+00	1.23E-04	3.82E-03	2.92E-04	6.37E-02	6.16E-07	4.94E-06	1.01E-05	7.08E-06	6.37E-02
Construction a U	P	NHH	NP	Total	Total	Total	8.23E+01	3.84E+01	7.42E+00	1.02E-03	1.58E-02	4.69E-04	4.29E-02	1.48E-06	1.40E-05	6.53E-05	5.92E-05	4.29E-02
Construction a U	P	NHH	NP	Total	Total	Total	1.39E+02	7.64E+01	4.33E+01	3.21E-03	1.23E-01	2.43E-03	2.13E-01	6.08E-06	1.79E-03	2.16E-04	1.86E-04	2.13E-01
Construction a U	P	NHH	NP	Total	Total	Total	3.10E+00	1.70E+00	2.18E+00	1.66E-04	6.36E-03	1.10E-04	1.04E-02	2.64E-07	8.74E-05	7.02E-06	9.58E-06	1.04E-02
Construction a U	P	NHH	NP	Total	Total	Total	1.95E+00	9.34E-01	2.08E+00	2.52E-05	1.52E-03	3.89E-05	1.76E-02	2.14E-07	1.35E-06	2.95E-06	1.46E-06	1.76E-02
Construction a U	P	NHH	NP	Total	Total	Total	5.01E-01	2.41E-01	8.61E-01	5.05E-06	1.88E-04	1.38E-05	8.00E-03	7.73E-08	6.20E-07	8.38E-07	2.92E-07	8.00E-03
Construction a U	P	NHH	NP	Total	Total	Total	1.51E+01	8.29E+00	1.64E+00	2.35E-04	3.41E-03	1.08E-04	9.61E-03	3.32E-07	3.13E-06	1.46E-05	1.36E-05	9.61E-03
Construction a U	P	NHH	NP	Total	Total	Total	4.49E+01	6.19E+01	2.34E+01	1.82E-03	6.62E-02	1.38E-03	1.15E-01	3.28E-06	9.64E-04	1.45E-04	1.05E-04	1.15E-01
Construction a U	P	NHH	NP	Total	Total	Total	6.15E-01	8.48E-01	7.84E-01	6.25E-05	2.28E-03	4.14E-05	3.74E-03	9.47E-08	3.13E-05	3.02E-06	3.61E-06	3.74E-03
Construction a U	P	NHH	NP	Total	Total	Total	1.87E-01	6.65E-02	2.13E-02	2.70E-06	4.83E-05	1.24E-06	1.20E-04	4.13E-09	3.90E-08	1.42E-07	1.56E-07	1.20E-04
Construction a U	P	NHH	NP	Total	Total	Total	1.33E+00	1.03E+00	6.05E-01	4.46E-05	1.71E-03	3.37E-05	2.98E-03	8.49E-08	2.50E-05	2.97E-06	2.58E-06	2.98E-03
Construction a U	P	NHH	NP	Total	Total	Total	1.23E+01	1.46E+01	9.29E+00	7.06E-04	2.63E-02	5.34E-04	4.57E-02	1.30E-06	3.83E-04	4.46E-05	4.08E-05	4.57E-02
Construction a U	P	NHH	NP	Total	Total	Total	9.52E+00	1.13E+01	1.56E+01	1.21E-03	4.54E-02	8.03E-04	7.43E-02	1.88E-06	6.23E-04	4.92E-05	7.01E-05	7.43E-02
Construction a U	P	NHH	NP	Total	Total	Total	4.56E+00	5.03E+00	1.10E+01	2.39E-04	1.24E-02	3.49E-04	8.60E-02	1.05E-06	6.59E-06	2.01E-05	1.38E-05	8.60E-02
Construction a U	P	NHH	NP	Total	Total	Total	1.51E+00	1.67E+00	6.93E+00	9.53E-05	2.82E-03	2.58E-04	6.21E-02	6.00E-07	4.81E-06	9.46E-06	5.50E-06	6.21E-02
Construction a U	P	NHH	P	Total	Total	Total	3.51E-01	1.19E-01	9.06E-02	6.50E-06	2.57E-04	4.92E-06	4.47E-04	1.27E-08	3.74E-06	3.88E-07	3.76E-07	4.47E-04
Construction a U	P	NHH	P	Total	Total	Total	1.75E+00	5.93E-01	8.35E-01	6.14E-05	2.44E-03	4.06E-05	3.99E-03	1.01E-07	3.35E-05	2.53E-06	3.55E-06	3.99E-03
Construction a U	P	NHH	P	Total	Total	Total	2.21E-01	6.47E-02	1.67E-01	2.67E-06	1.20E-04	4.65E-06	1.41E-03	1.72E-08	1.08E-07	2.62E-07	1.54E-07	1.41E-03
Construction a U	P	NHH	P	Total	Total	Total	1.01E+00	2.97E-01	1.91E+00	1.78E-05	4.61E-04	6.30E-05	1.76E-02	1.70E-07	1.37E-06	1.91E-06	1.03E-06	1.76E-02
Construction a U	P	NHH	P	Total	Total	Total	2.51E-01	7.36E-02	6.63E-01	3.85E-06	1.91E-04	2.46E-05	6.08E-03	6.04E-08	4.84E-07	6.03E-07	2.22E-07	6.08E-03
Construction a U	P	NHH	NP	Total	Total	Total	6.44E+00	2.30E+00	6.05E-01	7.66E-05	1.37E-03	3.51E-05	3.39E-03	1.17E-07	1.11E-06	4.40E-06	4.43E-06	3.39E-03
Construction a U	P	NHH	NP	Total	Total	Total	2.90E+01	2.46E+01	1.66E+01	1.24E-03	4.70E-02	9.34E-04	8.19E-02	2.33E-06	6.86E-04	7.66E-05	7.14E-05	8.19E-02
Construction a U	P	NHH	NP	Total	Total	Total	9.07E+00	7.71E+00	1.01E+01	7.71E-04	2.95E-02	5.10E-04	4.84E-02	1.23E-06	4.06E-04	3.23E-05	4.46E-05	4.84E-02
Construction a U	P	NHH	NP	Total	Total	Total	8.22E-01	1.38E+00	3.80E+00	3.91E-05	2.62E-03	5.85E-05	3.24E-02	3.94E-07	2.48E-06	4.55E-06	2.25E-06	3.24E-02
Construction a U	P	NHH	NP	Total	Total	Total	4.71E-01	7.88E-01	3.71E+00	1.61E-05	7.14E-04	3.74E-05	3.46E-02	3.35E-07	2.68E-06	2.76E-06	9.26E-07	3.46E-02
Construction a U	P	NHH	NP	Total	Total	Total	1.17E+02	2.95E+01	7.41E+00	9.15E-04	1.71E-02	4.20E-04	4.12E-02	1.42E-06	1.34E-05	5.44E-05	5.29E-05	4.12E-02
Construction a U	P	NHH	NP	Total	Total	Total	1.98E+02	5.00E+01	2.30E+01	1.81E-03	6.59E-02	1.22E-03	1.12E-01	3.19E-06	9.35E-04	1.23E-04	1.05E-04	1.12E-01
Construction a U	P	NHH	NP	Total	Total	Total	8.34E-01	2.10E-01	3.10E-01	2.45E-05	9.11E-04	1.48E-05	1.47E-03	3.72E-08	1.23E-05	9.08E-07	1.42E-06	1.47E-03
Construction a U	P	NHH	P	Total	Total	Total	2.51E-01	2.85E-01	5.51E-01	1.21E-05	6.29E-04	1.75E-05	4.28E-03	5.21E-08	3.28E-07	1.07E-06	6.99E-07	4.28E-03
Construction a U	P	NHH	P	Total	Total	Total	5.01E-01	5.71E-01	1.89E+00	2.64E-05	7.85E-04	7.08E-05	1.69E-02	1.64E-07	1.31E-06	2.88E-06	1.52E-06	1.69E-02
Construction a U	P	NHH	P	Total	Total	Total	2.01E-02	2.28E-02	1.22E-01	1.07E-06	3.89E-05	5.37E-06	1.11E-03	1.11E-08	8.87E-08	1.60E-07	6.20E-08	1.11E-03
Construction a U	P	NHH	P	Total	Total	Total	3.18E-01	2.52E-01	1.86E-01	1.37E-05	5.25E-04	1.04E-05	9.13E-04	2.60E-08	7.66E-06	8.19E-07	7.93E-07	9.13E-04
Construction a U	P	NHH	P	Total	Total	Total	2.09E-01	1.65E-01	2.23E-01	1.69E-05	6.49E-04	1.12E-05	1.06E-03	2.70E-08	8.92E-06	7.00E-07	9.75E-07	1.06E-03
Construction a U	P	NHH	P	Total	Total	Total	2.91E-01	1.92E-01	1.47E+00	1.67E-05	4.67E-04	5.13E-05	1.34E-02	1.29E-07	1.04E-06	1.43E-06	9.66E-07	1.34E-02
Construction a U	P	NHH	NP	Total	Total	Total	1.00E-01	1.14E-01	3.73E-01	8.18E-06	4.25E-04	1.19E-05	2.90E-03	3.53E-08	2.22E-07	5.66E-07	4.72E-07	2.90E-03

Construction a U	P	NHH	NP	Total	Total	Total	1.42E+00	1.61E+00	8.24E+00	1.15E-04	3.41E-03	3.08E-04	7.37E-02	7.12E-07	5.71E-06	1.02E-05	6.62E-06	7.37E-02
Construction a U	P	NHH	NP	Total	Total	Total	5.01E-02	5.68E-02	4.63E-01	4.06E-06	1.47E-04	2.03E-05	4.22E-03	4.19E-08	3.36E-07	4.99E-07	2.34E-07	4.22E-03
Construction a U	P	NHH	NP	Total	Total	Total	2.51E-01	3.52E-01	8.58E-01	1.88E-05	1.05E-03	2.56E-05	6.56E-03	7.98E-08	5.03E-07	1.45E-06	1.08E-06	6.56E-03
Construction a U	P	NHH	NP	Total	Total	Total	1.66E+00	2.34E+00	8.71E+00	1.20E-04	3.85E-03	3.00E-04	7.76E-02	7.49E-07	6.01E-06	1.21E-05	6.94E-06	7.76E-02
Construction a U	P	NHH	NP	Total	Total	Total	8.82E-01	2.11E+00	6.15E+00	5.49E-05	3.04E-03	1.30E-04	5.44E-02	5.25E-07	4.21E-06	8.09E-06	3.16E-06	5.44E-02
Construction a U	P	NHH	NP	Total	Total	Total	6.26E-01	5.47E-01	4.28E-01	3.22E-05	1.21E-03	2.43E-05	2.10E-03	6.00E-08	1.76E-05	1.85E-06	1.86E-06	2.10E-03
Construction a U	P	NHH	NP	Total	Total	Total	4.18E+01	3.66E+01	4.00E+01	3.08E-03	1.16E-01	2.04E-03	1.91E-01	4.84E-06	1.60E-03	1.40E-04	1.78E-04	1.91E-01

DRAFT

Class	C/R	Pre	Hand	Port	County	Air Basin	Air Dist.	Populatio	Activity	Consumpti	ROG	Exhal	CO	Exhaus	NOX	Exhal	CO2	Exhau	SO2	Exhau	PM	Exhaus	N2O	Exhal	CH4	Exhaust	Total emis:
Construction a	U	P	NHH	NP	Total	Total	Total	6.84E+00	5.81E+00	1.11E+01	1.20E-04	8.47E-03	1.74E-04	9.32E-02	1.13E-06	7.14E-06	1.59E-05	6.92E-06									9.32E-02
Construction a	U	P	NHH	NP	Total	Total	Total	4.09E+00	3.48E+00	1.48E+01	6.88E-05	3.26E-03	1.61E-04	1.38E-01	1.33E-06	1.07E-05	1.20E-05	3.98E-06									1.38E-01
Construction a	U	P	NHH	NP	Total	Total	Total	5.97E+00	2.44E+00	3.24E-01	4.61E-05	6.75E-04	2.11E-05	1.89E-03	6.54E-08	6.17E-07	3.45E-06	2.67E-06									1.89E-03
Construction a	U	P	NHH	NP	Total	Total	Total	1.27E+01	5.20E+00	1.87E+00	1.48E-04	5.32E-03	1.03E-04	9.09E-03	2.59E-07	7.62E-05	1.14E-05	8.56E-06									9.09E-03
Construction a	U	P	NHH	NP	Total	Total	Total	2.36E+00	9.64E-01	7.50E-01	5.99E-05	2.20E-03	3.71E-05	3.56E-03	9.01E-08	2.98E-05	3.02E-06	3.47E-06									3.56E-03
Construction a	U	P	NHH	NP	Total	Total	Total	1.81E-01	6.29E-02	1.58E-01	1.52E-06	3.99E-05	5.24E-06	1.45E-03	1.40E-08	1.13E-07	2.47E-07	8.78E-08									1.45E-03
Construction a	U	P	NHH	NP	Total	Total	Total	7.02E-01	7.14E-01	3.91E+00	1.50E-05	1.15E-03	4.59E-05	3.59E-02	3.56E-07	2.86E-06	2.94E-06	8.65E-07									3.59E-02
Construction a	U	P	NHH	NP	Total	Total	Total	2.06E-01	4.64E-01	3.94E-01	5.23E-06	1.78E-05	3.32E-05	4.33E-03	5.49E-08	1.29E-06	0.00E+00	4.72E-07									4.33E-03
Construction a	U	P	NHH	NP	Total	Total	Total	1.20E+01	2.73E+01	3.55E+01	1.23E-03	4.26E-03	3.37E-03	3.82E-01	4.94E-06	2.73E-04	0.00E+00	1.11E-04									3.82E-01
Construction a	U	P	NHH	NP	Total	Total	Total	1.41E+01	3.22E+01	1.02E+02	1.56E-03	7.77E-03	9.37E-03	1.11E+00	1.31E-05	7.49E-04	0.00E+00	1.40E-04									1.11E+00
Construction a	U	P	NHH	NP	Total	Total	Total	8.78E+00	2.00E+01	1.17E+02	1.29E-03	7.62E-03	8.89E-03	1.28E+00	1.44E-05	4.98E-04	0.00E+00	1.16E-04									1.28E+00
Construction a	U	N	NHH	NP	Total	Total	Total	1.06E+00	2.41E+00	2.12E+01	1.80E-04	5.84E-04	1.46E-03	2.34E-01	2.64E-06	5.39E-05	0.00E+00	1.62E-05									2.34E-01
Construction a	U	N	NHH	NP	Total	Total	Total	1.09E+00	2.48E+00	2.62E+01	2.07E-04	8.13E-04	1.61E-03	2.88E-01	2.83E-06	6.09E-05	0.00E+00	1.87E-05									2.88E-01
Construction a	U	P	NHH	NP	Total	Total	Total	4.43E+00	7.28E+00	1.43E+00	1.83E-05	9.58E-05	1.14E-04	1.57E-02	2.44E-07	4.47E-06	0.00E+00	1.65E-06									1.57E-02
Construction a	U	P	NHH	NP	Total	Total	Total	8.32E+00	1.58E+01	4.57E+00	5.82E-05	3.06E-04	3.65E-04	5.00E-02	7.79E-07	1.43E-05	0.00E+00	5.26E-06									5.00E-02
Construction a	U	P	NHH	NP	Total	Total	Total	3.48E+00	6.63E+00	4.02E+00	5.33E-05	1.82E-04	3.37E-04	4.42E-02	5.60E-07	1.26E-05	0.00E+00	4.81E-06									4.42E-02
Construction a	U	P	NHH	NP	Total	Total	Total	1.08E+01	2.08E+01	2.49E+01	6.23E-04	2.58E-03	2.18E-03	2.70E-01	3.49E-06	1.48E-04	0.00E+00	5.62E-05									2.70E-01
Construction a	U	P	NHH	NP	Total	Total	Total	5.81E+01	1.12E+02	3.00E+02	3.49E-03	2.17E-02	2.28E-02	3.29E+00	3.86E-05	1.70E-03	0.00E+00	3.15E-04									3.29E+00
Construction a	U	P	NHH	NP	Total	Total	Total	2.34E+01	4.49E+01	2.21E+02	1.87E-03	1.37E-02	1.33E-02	2.42E+00	2.73E-05	7.16E-04	0.00E+00	1.68E-04									2.42E+00
Construction a	U	N	NHH	NP	Total	Total	Total	3.31E+00	6.36E+00	4.41E+01	2.82E-04	1.03E-03	2.33E-03	4.87E-01	5.47E-06	7.87E-05	0.00E+00	2.54E-05									4.87E-01
Construction a	U	N	NHH	NP	Total	Total	Total	2.32E+00	4.46E+00	4.42E+01	2.69E-04	1.06E-03	2.07E-03	4.88E-01	4.79E-06	7.37E-05	0.00E+00	2.42E-05									4.88E-01
Construction a	U	P	NHH	NP	Total	Total	Total	5.36E-01	1.63E+00	7.00E+00	1.06E-04	5.41E-04	6.23E-04	7.64E-02	8.97E-07	4.92E-05	0.00E+00	9.52E-06									7.64E-02
Construction a	U	P	NHH	NP	Total	Total	Total	4.91E+00	1.49E+01	1.01E+02	1.11E-03	6.66E-03	7.33E-03	1.10E+00	1.24E-05	4.11E-04	0.00E+00	1.00E-04									1.10E+00
Construction a	U	N	NHH	NP	Total	Total	Total	4.78E+00	1.45E+01	1.38E+02	1.17E-03	3.76E-03	9.01E-03	1.52E+00	1.71E-05	3.30E-04	0.00E+00	1.05E-04									1.52E+00
Construction a	U	N	NHH	NP	Total	Total	Total	1.32E+01	4.00E+01	5.83E+02	4.66E-03	1.76E-02	3.42E-02	6.43E+00	6.31E-05	1.28E-03	0.00E+00	4.20E-04									6.43E+00
Construction a	U	N	NHH	NP	Total	Total	Total	6.57E+00	2.00E+01	5.03E+02	4.03E-03	1.52E-02	3.01E-02	5.54E+00	5.57E-05	1.12E-03	0.00E+00	3.64E-04									5.54E+00
Construction a	U	P	NHH	NP	Total	Total	Total	3.57E-01	8.12E-01	4.67E-01	6.18E-06	2.11E-05	3.91E-05	5.12E-03	6.50E-08	1.46E-06	0.00E+00	5.58E-07									5.12E-03
Construction a	U	P	NHH	NP	Total	Total	Total	3.02E-01	6.93E-01	7.68E-01	2.63E-05	9.11E-05	7.27E-05	8.28E-03	1.07E-07	5.90E-06	0.00E+00	2.37E-06									8.28E-03
Construction a	U	P	NHH	NP	Total	Total	Total	4.36E+00	9.98E+00	2.49E+01	3.76E-04	1.89E-03	2.28E-03	2.72E-01	3.19E-06	1.83E-04	0.00E+00	3.40E-05									2.72E-01
Construction a	U	P	NHH	NP	Total	Total	Total	2.05E+00	4.69E+00	2.16E+01	2.35E-04	1.40E-03	1.63E-03	2.37E-01	2.66E-06	9.16E-05	0.00E+00	2.12E-05									2.37E-01
Construction a	U	N	NHH	NP	Total	Total	Total	5.77E-01	1.32E+00	7.32E+00	6.01E-05	1.96E-04	4.99E-04	8.08E-02	9.09E-07	1.80E-05	0.00E+00	5.43E-06									8.08E-02
Construction a	U	P	NHH	NP	Total	Total	Total	2.75E-01	3.41E-01	2.21E-01	4.93E-06	2.07E-05	1.88E-05	2.40E-03	3.10E-08	1.19E-06	0.00E+00	4.45E-07									2.40E-03
Construction a	U	P	NHH	NP	Total	Total	Total	5.50E-02	6.81E-02	1.98E-01	2.10E-06	1.38E-05	1.47E-05	2.17E-03	2.55E-08	1.03E-06	0.00E+00	1.89E-07									2.17E-03
Construction a	U	P	NHH	NP	Total	Total	Total	4.12E-02	5.11E-02	1.99E-01	1.51E-06	1.19E-05	1.18E-05	2.19E-03	2.46E-08	5.94E-07	0.00E+00	1.36E-07									2.19E-03
Construction a	U	N	NHH	NP	Total	Total	Total	8.25E-02	1.02E-01	6.23E-01	3.52E-06	1.43E-05	3.23E-05	6.88E-03	7.74E-08	1.06E-06	0.00E+00	3.18E-07									6.88E-03
Construction a	U	N	NHH	NP	Total	Total	Total	6.87E-01	8.51E-01	8.52E+00	4.51E-05	2.07E-04	3.96E-04	9.41E-02	9.23E-07	1.35E-05	0.00E+00	4.07E-06									9.41E-02
Construction a	U	N	NHH	NP	Total	Total	Total	1.26E+00	1.56E+00	2.44E+01	1.31E-04	5.95E-04	1.17E-03	2.70E-01	2.71E-06	3.93E-05	0.00E+00	1.18E-05									2.70E-01
Construction a	U	P	NHH	NP	Total	Total	Total	3.87E+01	7.96E+01	2.24E+01	2.85E-04	1.50E-03	1.79E-03	2.45E-01	3.82E-06	6.99E-05	0.00E+00	2.58E-05									2.45E-01
Construction a	U	P	NHH	NP	Total	Total	Total	1.92E-01	2.82E-01	4.68E-01	7.97E-06	4.08E-05	3.84E-05	5.10E-03	6.60E-08	2.12E-06	0.00E+00	7.19E-07									5.10E-03
Construction a	U	P	NHH	NP	Total	Total	Total	3.15E+00	4.62E+00	1.69E+01	1.42E-04	1.15E-03	1.11E-03	1.85E-01	2.17E-06	7.04E-05	0.00E+00	1.28E-05									1.85E-01
Construction a	U	P	NHH	NP	Total	Total	Total	1.95E+00	2.86E+00	2.01E+01	1.25E-04	1.18E-03	1.01E-03	2.21E-01	2.49E-06	4.86E-05	0.00E+00	1.13E-05									2.21E-01
Construction a	U	N	NHH	NP	Total	Total	Total	4.12E-01	6.05E-01	6.98E+00	3.27E-05	1.45E-04	3.01E-04	7.71E-02	8.68E-07	9.06E-06	0.00E+00	2.95E-06									7.71E-02
Construction a	U	P	NHH	NP	Total	Total	Total	1.03E+00	1.75E+00	6.75E-01	8.60E-06	4.51E-05	5.38E-05	7.39E-03	1.15E-07	2.10E-06	0.00E+00	7.76E-07									7.39E-03
Construction a	U	P	NHH	NP	Total	Total	Total	1.09E+00	1.84E+00	2.76E+00	3.65E-05	1.25E-04	2.31E-04	3.03E-02	3.84E-07	8.62E-06	0.00E+00	3.29E-06									3.03E-02
Construction a	U	P	NHH	NP	Total	Total	Total	4.13E+01	7.12E+01	1.09E+02	3.78E-03	1.27E-02	1.02E-02	1.17E+00	1.51E-05	8.39E-04	0.00E+00	3.41E-04									1.17E+00
Construction a	U	P	NHH	NP	Total	Total	Total	5.60E+01	9.65E+01	2.86E+02	4.35E-03	2.15E-02	2.67E-02	3.13E+00	3.67E-05	2.13E-03	0.00E+00	3.92E-04									3.13E+00

Construction a U	P	NHH	NP	Total	Total	Total	6.13E+00	1.06E+01	6.92E+01	7.50E-04	4.44E-03	5.37E-03	7.59E-01	8.54E-06	2.97E-04	0.00E+00	6.77E-05	7.59E-01
Construction a U	N	NHH	NP	Total	Total	Total	5.50E-01	9.47E-01	9.56E+00	7.98E-05	2.67E-04	6.73E-04	1.05E-01	1.19E-06	2.52E-05	0.00E+00	7.20E-06	1.05E-01
Construction a U	N	NHH	NP	Total	Total	Total	7.01E-01	1.21E+00	1.70E+01	1.33E-04	5.49E-04	1.08E-03	1.88E-01	1.84E-06	4.10E-05	0.00E+00	1.20E-05	1.88E-01
Construction a U	N	NHH	NP	Total	Total	Total	2.51E-01	4.33E-01	1.15E+01	8.99E-05	3.71E-04	7.45E-04	1.27E-01	1.28E-06	2.80E-05	0.00E+00	8.11E-06	1.27E-01
Construction a U	P	NHH	P	Total	Total	Total	1.37E-01	3.06E-01	1.44E-01	1.84E-06	9.65E-06	1.15E-05	1.58E-03	2.46E-08	4.50E-07	0.00E+00	1.66E-07	1.58E-03
Construction a U	P	NHH	P	Total	Total	Total	4.12E-01	9.17E-01	6.67E-01	8.84E-06	3.02E-05	5.58E-05	7.32E-03	9.29E-08	2.08E-06	0.00E+00	7.97E-07	7.32E-03
Construction a U	P	NHH	P	Total	Total	Total	1.80E+00	4.15E+00	5.87E+00	4.13E-05	4.57E-04	3.77E-04	6.43E-02	8.31E-07	5.40E-06	0.00E+00	3.73E-06	6.43E-02
Construction a U	P	NHH	P	Total	Total	Total	5.53E+00	1.27E+01	4.46E+01	1.86E-04	2.96E-03	1.59E-03	4.90E-01	5.75E-06	3.42E-05	0.00E+00	1.68E-05	4.90E-01
Construction a U	P	NHH	P	Total	Total	Total	1.28E+00	2.94E+00	1.89E+01	6.41E-05	1.11E-03	3.43E-04	2.07E-01	2.33E-06	1.00E-05	0.00E+00	5.78E-06	2.07E-01
Construction a U	N	NHH	P	Total	Total	Total	1.10E+00	2.53E+00	2.15E+01	6.35E-05	4.33E-04	2.53E-04	2.38E-01	2.68E-06	6.77E-06	0.00E+00	5.73E-06	2.38E-01
Construction a U	N	NHH	P	Total	Total	Total	2.45E+00	5.63E+00	7.92E+01	2.33E-04	1.55E-03	9.11E-04	8.76E-01	8.60E-06	2.48E-05	0.00E+00	2.11E-05	8.76E-01
Construction a U	N	NHH	P	Total	Total	Total	3.89E+00	8.97E+00	2.49E+02	7.34E-04	4.88E-03	2.88E-03	2.76E+00	2.77E-05	7.80E-05	0.00E+00	6.62E-05	2.76E+00
Construction a U	N	NHH	P	Total	Total	Total	6.53E+00	1.50E+01	6.30E+02	1.95E-03	1.23E-02	3.06E-02	6.97E+00	7.01E-05	4.61E-04	0.00E+00	1.76E-04	6.97E+00
Construction a U	P	NHH	NP	Total	Total	Total	5.09E-01	1.95E+00	1.46E+00	1.93E-05	6.58E-05	1.22E-04	1.60E-02	2.03E-07	4.55E-06	0.00E+00	1.74E-06	1.60E-02
Construction a U	P	NHH	NP	Total	Total	Total	1.91E+01	7.43E+01	8.55E+01	1.57E-03	9.21E-03	7.16E-03	9.29E-01	1.20E-05	3.51E-04	0.00E+00	1.41E-04	9.29E-01
Construction a U	P	NHH	NP	Total	Total	Total	5.20E+01	2.02E+02	6.78E+02	6.38E-03	5.04E-02	4.08E-02	7.42E+00	8.71E-05	2.46E-03	0.00E+00	5.76E-04	7.42E+00
Construction a U	P	NHH	NP	Total	Total	Total	1.00E+02	3.89E+02	1.99E+03	1.48E-02	1.29E-01	8.61E-02	2.18E+01	2.46E-04	4.41E-03	0.00E+00	1.33E-03	2.18E+01
Construction a U	N	NHH	NP	Total	Total	Total	4.08E+01	1.58E+02	1.14E+03	6.94E-03	2.61E-02	4.10E-02	1.25E+01	1.41E-04	1.39E-03	0.00E+00	6.27E-04	1.25E+01
Construction a U	N	NHH	NP	Total	Total	Total	2.94E+01	1.14E+02	1.21E+03	7.22E-03	2.64E-02	3.94E-02	1.33E+01	1.31E-04	1.43E-03	0.00E+00	6.52E-04	1.33E+01
Construction a U	N	NHH	NP	Total	Total	Total	1.97E+00	7.64E+00	1.34E+02	8.02E-04	2.93E-03	4.45E-03	1.48E+00	1.49E-05	1.59E-04	0.00E+00	7.24E-05	1.48E+00
Construction a U	P	NHH	NP	Total	Total	Total	5.50E-02	8.92E-02	6.69E-02	8.86E-07	3.02E-06	5.60E-06	7.35E-04	9.32E-09	2.09E-07	0.00E+00	8.00E-08	7.35E-04
Construction a U	P	NHH	NP	Total	Total	Total	4.81E-01	7.65E-01	1.06E+00	1.83E-05	9.44E-05	8.81E-05	1.15E-02	1.49E-07	4.93E-06	0.00E+00	1.65E-06	1.15E-02
Construction a U	P	NHH	NP	Total	Total	Total	8.38E-01	1.33E+00	4.51E+00	3.85E-05	3.09E-04	2.99E-04	4.94E-02	5.79E-07	1.92E-05	0.00E+00	3.48E-06	4.94E-02
Construction a U	P	NHH	NP	Total	Total	Total	2.75E-02	4.37E-02	3.18E-01	2.03E-06	1.89E-05	1.61E-05	3.50E-03	3.94E-08	7.93E-07	0.00E+00	1.83E-07	3.50E-03
Construction a U	P	NHH	NP	Total	Total	Total	7.02E+00	5.78E+00	1.67E+00	2.12E-05	1.11E-04	1.33E-04	1.82E-02	2.84E-07	5.21E-06	0.00E+00	1.92E-06	1.82E-02
Construction a U	P	NHH	NP	Total	Total	Total	6.32E-01	5.20E-01	4.16E-01	5.90E-06	1.94E-05	3.59E-05	4.56E-03	5.79E-08	1.58E-06	0.00E+00	5.33E-07	4.56E-03
Construction a U	P	NHH	P	Total	Total	Total	4.67E-01	1.64E+00	1.76E+00	4.80E-05	2.02E-04	1.60E-04	1.90E-02	2.45E-07	1.11E-05	0.00E+00	4.33E-06	1.90E-02
Construction a U	P	NHH	P	Total	Total	Total	5.13E+00	1.80E+01	4.12E+01	5.29E-04	3.11E-03	3.21E-03	4.51E-01	5.28E-06	2.45E-04	0.00E+00	4.77E-05	4.51E-01
Construction a U	P	NHH	P	Total	Total	Total	5.13E+00	1.80E+01	6.58E+01	6.28E-04	4.28E-03	4.07E-03	7.22E-01	8.12E-06	2.26E-04	0.00E+00	5.66E-05	7.22E-01
Construction a U	N	NHH	P	Total	Total	Total	9.94E+00	3.49E+01	1.77E+02	1.30E-03	4.31E-03	9.64E-03	1.95E+00	2.20E-05	3.31E-04	0.00E+00	1.17E-04	1.95E+00
Construction a U	N	NHH	P	Total	Total	Total	3.64E+00	1.28E+01	1.04E+02	7.30E-04	2.52E-03	5.02E-03	1.15E+00	1.13E-05	1.82E-04	0.00E+00	6.58E-05	1.15E+00
Construction a U	N	NHH	P	Total	Total	Total	8.16E+00	2.86E+01	3.93E+02	2.77E-03	9.51E-03	1.95E-02	4.34E+00	4.36E-05	6.99E-04	0.00E+00	2.49E-04	4.34E+00
Construction a U	N	NHH	P	Total	Total	Total	1.03E+01	3.59E+01	1.58E+03	1.27E-02	4.10E-02	1.33E-01	1.74E+01	1.75E-04	3.52E-03	0.00E+00	1.14E-03	1.74E+01
Construction a U	P	NHH	NP	Total	Total	Total	1.92E-01	5.00E-01	6.35E-01	1.54E-05	7.02E-05	5.57E-05	6.88E-03	8.90E-08	3.50E-06	0.00E+00	1.39E-06	6.88E-03
Construction a U	P	NHH	NP	Total	Total	Total	1.28E+01	3.34E+01	1.14E+02	1.33E-03	8.52E-03	8.21E-03	1.25E+00	1.47E-05	5.88E-04	0.00E+00	1.20E-04	1.25E+00
Construction a U	P	NHH	NP	Total	Total	Total	4.39E+01	1.14E+02	6.44E+02	5.62E-03	4.15E-02	3.58E-02	7.06E+00	7.94E-05	1.95E-03	0.00E+00	5.07E-04	7.06E+00
Construction a U	N	NHH	NP	Total	Total	Total	2.72E+01	7.07E+01	5.51E+02	3.73E-03	1.32E-02	2.66E-02	6.08E+00	6.84E-05	9.08E-04	0.00E+00	3.36E-04	6.08E+00
Construction a U	N	NHH	NP	Total	Total	Total	7.70E-01	2.00E+00	2.08E+01	1.35E-04	5.07E-04	8.93E-04	2.29E-01	2.25E-06	3.22E-05	0.00E+00	1.22E-05	2.29E-01
Construction a U	N	NHH	NP	Total	Total	Total	1.26E-01	3.27E-01	7.18E+00	4.68E-05	1.75E-04	3.17E-04	7.92E-02	7.97E-07	1.13E-05	0.00E+00	4.22E-06	7.92E-02
Construction a U	P	NHH	NP	Total	Total	Total	8.93E-01	4.85E+00	2.76E+01	2.19E-04	1.83E-03	1.26E-03	3.03E-01	3.41E-06	6.56E-05	0.00E+00	1.98E-05	3.03E-01
Construction a U	N	NHH	NP	Total	Total	Total	6.60E+00	3.58E+01	2.70E+02	1.76E-03	6.34E-03	1.04E-02	2.98E+00	3.35E-05	3.54E-04	0.00E+00	1.59E-04	2.98E+00
Construction a U	N	NHH	NP	Total	Total	Total	9.29E+00	5.05E+01	6.22E+02	3.95E-03	1.39E-02	2.15E-02	6.86E+00	6.74E-05	7.82E-04	0.00E+00	3.57E-04	6.86E+00
Construction a U	N	NHH	NP	Total	Total	Total	2.63E+01	1.43E+02	2.86E+03	1.82E-02	6.38E-02	1.01E-01	3.16E+01	3.17E-04	3.63E-03	0.00E+00	1.64E-03	3.16E+01
Construction a U	N	NHH	NP	Total	Total	Total	1.24E+01	6.70E+01	1.89E+03	1.28E-02	4.39E-02	1.37E-01	2.09E+01	2.10E-04	3.36E-03	0.00E+00	1.16E-03	2.09E+01
Construction a U	P	NHH	P	Total	Total	Total	2.20E+00	5.76E+00	1.17E+01	2.37E-04	1.18E-03	1.00E-03	1.27E-01	1.64E-06	6.00E-05	0.00E+00	2.14E-05	1.27E-01
Construction a U	P	NHH	P	Total	Total	Total	6.20E+00	1.62E+01	6.16E+01	6.16E-04	4.44E-03	4.20E-03	6.74E-01	7.91E-06	2.86E-04	0.00E+00	5.56E-05	6.74E-01
Construction a U	P	NHH	P	Total	Total	Total	2.63E+00	6.87E+00	5.23E+01	3.99E-04	3.27E-03	2.73E-03	5.74E-01	6.46E-06	1.43E-04	0.00E+00	3.60E-05	5.74E-01

Construction a U	N	NHH	P	Total	Total	Total	2.61E-01	6.84E-01	7.56E+00	4.48E-05	1.67E-04	3.38E-04	8.35E-02	9.40E-07	1.09E-05	0.00E+00	4.04E-06	8.35E-02
Construction a U	N	NHH	P	Total	Total	Total	1.47E+00	3.85E+00	6.51E+01	3.74E-04	1.38E-03	2.59E-03	7.19E-01	7.06E-06	9.01E-05	0.00E+00	3.37E-05	7.19E-01
Construction a U	N	NHH	P	Total	Total	Total	2.09E-01	5.48E-01	1.46E+01	8.36E-05	3.08E-04	5.92E-04	1.61E-01	1.62E-06	2.02E-05	0.00E+00	7.54E-06	1.61E-01
Construction a U	N	NHH	P	Total	Total	Total	2.09E-01	5.48E-01	3.24E+01	2.18E-04	7.40E-04	2.48E-03	3.58E-01	3.60E-06	6.18E-05	0.00E+00	1.97E-05	3.58E-01
Construction a U	P	NHH	NP	Total	Total	Total	1.53E+00	4.73E+00	7.36E+00	1.36E-04	7.61E-04	6.25E-04	8.00E-02	1.03E-06	3.37E-05	0.00E+00	1.23E-05	8.00E-02
Construction a U	P	NHH	NP	Total	Total	Total	7.31E+01	2.26E+02	6.45E+02	6.09E-03	4.70E-02	4.10E-02	7.06E+00	8.29E-05	2.61E-03	0.00E+00	5.50E-04	7.06E+00
Construction a U	P	NHH	NP	Total	Total	Total	9.36E+00	2.90E+01	1.65E+02	1.22E-03	1.05E-02	7.75E-03	1.81E+00	2.04E-05	4.07E-04	0.00E+00	1.10E-04	1.81E+00

DRAFT

Class	C/R	Pre	Hand	Port	County	Air Basin	Air Dist.	Populatio	Activity	Consumpti	ROG Exhal	CO Exhaus	NOX Exhal	CO2 Exhau	SO2 Exhau	PM Exhaus	N2O Exhal	CH4 Exhaust	Total emis:
Construction a	U	N	NHH	NP	Total	Total	Total	5.22E-01	1.62E+00	1.25E+01	7.54E-05	2.81E-04	4.99E-04	1.38E-01	1.55E-06	1.69E-05	0.00E+00	6.81E-06	1.38E-01
Construction a	U	N	NHH	NP	Total	Total	Total	3.44E-01	1.06E+00	1.24E+01	7.28E-05	2.65E-04	4.43E-04	1.36E-01	1.34E-06	1.61E-05	0.00E+00	6.57E-06	1.36E-01
Construction a	U	P	NHH	NP	Total	Total	Total	1.92E-01	5.05E-01	3.89E-01	5.15E-06	1.76E-05	3.26E-05	4.27E-03	5.42E-08	1.22E-06	0.00E+00	4.65E-07	4.27E-03
Construction a	U	P	NHH	NP	Total	Total	Total	3.74E+00	9.97E+00	1.43E+01	3.36E-04	1.56E-03	1.25E-03	1.55E-01	2.01E-06	7.71E-05	0.00E+00	3.03E-05	1.55E-01
Construction a	U	P	NHH	NP	Total	Total	Total	1.02E+02	2.71E+02	7.29E+02	8.24E-03	5.41E-02	5.16E-02	7.98E+00	9.36E-05	3.66E-03	0.00E+00	7.44E-04	7.98E+00
Construction a	U	P	NHH	NP	Total	Total	Total	5.73E+01	1.53E+02	7.40E+02	6.30E-03	4.75E-02	4.03E-02	8.11E+00	9.13E-05	2.19E-03	0.00E+00	5.68E-04	8.11E+00
Construction a	U	N	NHH	NP	Total	Total	Total	5.70E+01	1.52E+02	1.02E+03	6.79E-03	2.42E-02	4.83E-02	1.13E+01	1.27E-04	1.65E-03	0.00E+00	6.13E-04	1.13E+01
Construction a	U	N	NHH	NP	Total	Total	Total	2.37E+01	6.32E+01	6.78E+02	4.32E-03	1.62E-02	2.85E-02	7.48E+00	7.35E-05	1.03E-03	0.00E+00	3.90E-04	7.48E+00
Construction a	U	N	NHH	NP	Total	Total	Total	5.07E+00	1.35E+01	2.97E+02	1.90E-03	7.09E-03	1.28E-02	3.28E+00	3.29E-05	4.57E-04	0.00E+00	1.71E-04	3.28E+00
Construction a	U	N	NHH	NP	Total	Total	Total	5.44E-01	1.45E+00	3.90E+01	2.67E-04	9.87E-04	3.05E-03	4.30E-01	4.32E-06	7.82E-05	0.00E+00	2.41E-05	4.30E-01
Construction a	U	P	NHH	NP	Total	Total	Total	1.37E-01	6.10E-01	3.61E+00	4.85E-05	2.49E-04	3.25E-04	3.95E-02	4.44E-07	1.83E-05	0.00E+00	4.37E-06	3.95E-02
Construction a	U	N	NHH	NP	Total	Total	Total	3.37E+00	1.49E+01	1.24E+02	1.34E-03	4.07E-03	1.03E-02	1.37E+00	1.54E-05	4.17E-04	0.00E+00	1.21E-04	1.37E+00
Construction a	U	N	NHH	NP	Total	Total	Total	5.18E+00	2.30E+01	2.77E+02	2.77E-03	1.12E-02	2.08E-02	3.04E+00	2.99E-05	8.37E-04	0.00E+00	2.50E-04	3.04E+00
Construction a	U	N	NHH	NP	Total	Total	Total	5.57E+00	2.47E+01	4.48E+02	4.49E-03	1.82E-02	3.43E-02	4.92E+00	4.95E-05	1.37E-03	0.00E+00	4.05E-04	4.92E+00
Construction a	U	N	NHH	NP	Total	Total	Total	3.77E-01	1.67E+00	4.49E+01	4.76E-04	1.99E-03	4.80E-03	4.94E-01	4.97E-06	1.49E-04	0.00E+00	4.30E-05	4.94E-01
Construction a	U	P	NHH	NP	Total	Total	Total	3.88E+00	1.00E+01	7.23E+00	9.57E-05	3.27E-04	6.05E-04	7.93E-02	1.01E-06	2.30E-05	0.00E+00	8.64E-06	7.93E-02
Construction a	U	P	NHH	NP	Total	Total	Total	2.32E+01	6.10E+01	8.50E+01	1.36E-03	8.52E-03	6.88E-03	9.25E-01	1.20E-05	3.14E-04	0.00E+00	1.23E-04	9.25E-01
Construction a	U	P	NHH	NP	Total	Total	Total	3.10E+02	8.16E+02	1.92E+03	1.62E-02	1.39E-01	1.10E-01	2.11E+01	2.47E-04	6.29E-03	0.00E+00	1.46E-03	2.11E+01
Construction a	U	P	NHH	NP	Total	Total	Total	2.31E+01	6.09E+01	2.81E+02	1.88E-03	1.78E-02	1.13E-02	3.08E+00	3.47E-05	5.67E-04	0.00E+00	1.69E-04	3.08E+00
Construction a	U	N	NHH	NP	Total	Total	Total	7.48E+00	1.97E+01	1.53E+02	8.48E-04	3.41E-03	5.06E-03	1.69E+00	1.90E-05	1.71E-04	0.00E+00	7.65E-05	1.69E+00
Construction a	U	N	NHH	NP	Total	Total	Total	1.21E+01	3.18E+01	4.96E+02	2.69E-03	1.06E-02	1.48E-02	5.48E+00	6.16E-05	5.35E-04	0.00E+00	2.43E-04	5.48E+00
Construction a	U	N	NHH	NP	Total	Total	Total	2.53E+01	6.67E+01	1.56E+03	8.49E-03	3.35E-02	4.77E-02	1.72E+01	1.94E-04	1.70E-03	0.00E+00	7.66E-04	1.72E+01
Construction a	U	P	NHH	NP	Total	Total	Total	1.92E-01	5.48E-01	6.32E-01	2.06E-05	7.73E-05	5.95E-05	6.81E-03	8.81E-08	4.52E-06	0.00E+00	1.86E-06	6.81E-03
Construction a	U	P	NHH	NP	Total	Total	Total	1.09E+02	3.11E+02	9.36E+02	1.38E-02	7.23E-02	8.12E-02	1.02E+01	1.20E-04	6.33E-03	0.00E+00	1.24E-03	1.02E+01
Construction a	U	P	NHH	NP	Total	Total	Total	3.69E+01	1.05E+02	5.81E+02	6.28E-03	3.84E-02	4.11E-02	6.37E+00	7.17E-05	2.30E-03	0.00E+00	5.66E-04	6.37E+00
Construction a	U	N	NHH	NP	Total	Total	Total	3.17E+01	9.04E+01	6.81E+02	5.68E-03	1.84E-02	4.30E-02	7.51E+00	8.44E-05	1.58E-03	0.00E+00	5.13E-04	7.51E+00
Construction a	U	N	NHH	NP	Total	Total	Total	2.18E+01	6.20E+01	7.28E+02	5.75E-03	2.14E-02	4.13E-02	8.03E+00	7.88E-05	1.55E-03	0.00E+00	5.18E-04	8.03E+00
Construction a	U	N	NHH	NP	Total	Total	Total	3.35E+00	9.54E+00	2.01E+02	1.59E-03	5.91E-03	1.17E-02	2.21E+00	2.23E-05	4.34E-04	0.00E+00	1.44E-04	2.21E+00
Construction a	U	N	NHH	NP	Total	Total	Total	3.35E+00	9.53E+00	2.84E+02	2.43E-03	9.19E-03	2.60E-02	3.13E+00	3.15E-05	7.32E-04	0.00E+00	2.19E-04	3.13E+00
Construction a	U	P	NHH	NP	Total	Total	Total	2.64E+01	6.04E+01	3.79E+01	5.22E-04	1.74E-03	3.24E-03	4.16E-01	5.28E-06	1.37E-04	0.00E+00	4.71E-05	4.16E-01
Construction a	U	P	NHH	NP	Total	Total	Total	2.39E+02	5.58E+02	6.51E+02	6.83E-03	5.63E-02	4.79E-02	7.11E+00	9.19E-05	1.49E-03	0.00E+00	6.16E-04	7.11E+00
Construction a	U	P	NHH	NP	Total	Total	Total	1.25E+02	2.92E+02	5.69E+02	3.38E-03	3.91E-02	2.62E-02	6.24E+00	7.32E-05	1.15E-03	0.00E+00	3.05E-04	6.24E+00
Construction a	U	P	NHH	NP	Total	Total	Total	1.37E-02	4.18E-02	1.80E-01	3.21E-06	1.43E-05	1.86E-05	1.96E-03	2.30E-08	1.52E-06	0.00E+00	2.90E-07	1.96E-03
Construction a	U	P	NHH	NP	Total	Total	Total	1.68E+01	5.12E+01	3.05E+02	3.92E-03	2.06E-02	2.67E-02	3.33E+00	3.75E-05	1.50E-03	0.00E+00	3.53E-04	3.33E+00
Construction a	U	N	NHH	NP	Total	Total	Total	1.59E+01	4.84E+01	2.86E+02	2.92E-03	9.02E-03	2.30E-02	3.15E+00	3.55E-05	9.15E-04	0.00E+00	2.64E-04	3.15E+00
Construction a	U	N	NHH	NP	Total	Total	Total	2.10E+01	6.40E+01	1.65E+03	1.57E-02	6.35E-02	1.22E-01	1.82E+01	1.83E-04	4.82E-03	0.00E+00	1.42E-03	1.82E+01
Construction a	U	N	NHH	NP	Total	Total	Total	2.22E+00	6.75E+00	2.50E+02	2.52E-03	1.05E-02	2.61E-02	2.75E+00	2.76E-05	7.97E-04	0.00E+00	2.28E-04	2.75E+00
Construction a	U	P	NHH	NP	Total	Total	Total	3.30E-01	5.99E-01	2.08E-01	2.75E-06	9.39E-06	1.74E-05	2.28E-03	2.89E-08	6.71E-07	0.00E+00	2.49E-07	2.28E-03
Construction a	U	P	NHH	NP	Total	Total	Total	4.55E+00	8.61E+00	3.97E+00	5.06E-05	2.65E-04	3.17E-04	4.35E-02	6.76E-07	1.24E-05	0.00E+00	4.56E-06	4.35E-02
Construction a	U	P	NHH	NP	Total	Total	Total	7.70E-01	1.46E+00	8.76E-01	1.16E-05	3.96E-05	7.33E-05	9.62E-03	1.22E-07	2.74E-06	0.00E+00	1.05E-06	9.62E-03
Construction a	U	P	NHH	NP	Total	Total	Total	1.18E+00	2.27E+00	2.90E+00	4.11E-05	2.60E-04	2.29E-04	3.17E-02	4.10E-07	1.04E-05	0.00E+00	3.71E-06	3.17E-02
Construction a	U	P	NHH	NP	Total	Total	Total	1.95E+00	3.74E+00	1.38E+01	1.02E-04	9.52E-04	7.81E-04	1.51E-01	1.77E-06	4.39E-05	0.00E+00	9.19E-06	1.51E-01
Construction a	U	P	NHH	NP	Total	Total	Total	2.69E+00	5.16E+00	2.50E+01	1.45E-04	1.51E-03	1.01E-03	2.75E-01	3.09E-06	4.87E-05	0.00E+00	1.31E-05	2.75E-01
Construction a	U	N	NHH	NP	Total	Total	Total	6.25E+00	1.20E+01	1.38E+02	6.39E-04	2.82E-03	4.18E-03	1.52E+00	1.49E-05	1.45E-04	0.00E+00	5.76E-05	1.52E+00
Dredging	U	P	NHH	P	Total	Total	Total	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Dredging	U	P	NHH	P	Total	Total	Total	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Industrial Equip U	N	NHH	NP	Total	Total	Total	2.72E-02	6.72E-02	4.57E-02	2.42E-06	1.35E-04	1.89E-06	2.19E-04	5.56E-09	1.23E-07	1.78E-07	1.39E-07	2.19E-04
Industrial Equip U	N	NHH	NP	Total	Total	Total	4.73E+00	2.34E+01	3.71E+01	6.44E-04	6.87E-02	1.40E-03	2.48E-01	3.02E-06	1.90E-05	9.03E-05	3.64E-05	2.48E-01
Industrial Equip U	N	NHH	NP	Total	Total	Total	1.66E+01	8.20E+01	1.72E+02	1.36E-03	1.17E-01	6.30E-03	1.47E+00	1.42E-05	1.14E-04	3.67E-04	7.70E-05	1.47E+00
Industrial Equip U	N	NHH	NP	Total	Total	Total	6.07E-01	3.00E+00	1.20E+01	7.13E-05	4.48E-03	3.90E-04	1.09E-01	1.08E-06	8.68E-06	1.79E-05	4.04E-06	1.09E-01
Industrial Equip U	N	NHH	NP	Total	Total	Total	7.89E-01	5.84E-01	3.16E-01	1.60E-05	9.03E-04	1.17E-05	1.57E-03	4.48E-08	7.98E-07	1.29E-06	9.26E-07	1.57E-03
Industrial Equip U	N	NHH	NP	Total	Total	Total	7.70E-01	5.70E-01	7.14E-01	3.56E-05	2.10E-03	2.75E-05	3.45E-03	8.74E-08	1.81E-06	2.01E-06	2.06E-06	3.45E-03
Industrial Equip U	N	NHH	NP	Total	Total	Total	1.32E+00	1.87E+00	4.88E+00	5.52E-05	4.33E-03	1.12E-04	4.01E-02	4.87E-07	3.07E-06	7.40E-06	3.19E-06	4.01E-02

DRAFT

Class	C/R	Pre	Hand	Port	County	Air Basin	Air Dist.	Populatio	Activity	Consumpti	ROG	Exhal	CO	Exhaus	NOX	Exhal	CO2	Exhau	SO2	Exhau	PM	Exhaus	N2O	Exhal	CH4	Exhaust	Total emis:
Industrial Equip U		N	NHH	NP	Total	Total	Total	1.10E+00	1.56E+00	6.97E+00	3.22E-05	1.85E-03	1.91E-04	6.42E-02	6.21E-07	4.98E-06	9.06E-06	1.86E-06									6.42E-02
Industrial Equip U		N	NHH	NP	Total	Total	Total	6.40E-03	9.06E-03	8.16E-02	2.50E-07	2.46E-05	2.26E-06	7.48E-04	7.43E-09	5.96E-08	7.70E-08	1.44E-08									7.48E-04
Industrial Equip U		N	NHH	NP	Total	Total	Total	1.56E+00	1.61E+00	6.63E-01	3.52E-05	1.89E-03	2.57E-05	3.29E-03	9.38E-08	1.75E-06	3.16E-06	2.03E-06									3.29E-03
Industrial Equip U		N	NHH	NP	Total	Total	Total	5.12E-01	6.04E-01	5.77E-01	2.99E-05	1.70E-03	2.34E-05	2.78E-03	7.05E-08	1.52E-06	1.90E-06	1.73E-06									2.78E-03
Industrial Equip U		N	NHH	NP	Total	Total	Total	4.53E-01	8.86E-01	1.57E+00	1.99E-05	1.73E-03	4.14E-05	1.24E-02	1.51E-07	9.49E-07	3.06E-06	1.15E-06									1.24E-02
Industrial Equip U		N	NHH	NP	Total	Total	Total	1.49E-01	2.91E-01	1.17E+00	6.17E-06	4.06E-04	3.42E-05	1.06E-02	1.02E-07	8.21E-07	1.65E-06	3.55E-07									1.06E-02
Industrial Equip U		N	NHH	NP	Total	Total	Total	1.44E-02	2.82E-02	2.40E-01	8.68E-07	7.54E-05	6.88E-06	2.20E-03	2.18E-08	1.75E-07	2.37E-07	5.00E-08									2.20E-03
Industrial Equip U		N	NHH	NP	Total	Total	Total	6.40E-03	6.78E-03	1.63E-02	3.17E-07	1.86E-05	5.68E-07	1.27E-04	1.55E-09	9.74E-09	3.10E-08	1.83E-08									1.27E-04
Industrial Equip U		N	NHH	NP	Total	Total	Total	2.83E-01	3.00E-01	8.16E-01	9.46E-06	3.25E-04	3.55E-05	7.33E-03	7.08E-08	5.68E-07	1.62E-06	5.46E-07									7.33E-03
Industrial Equip U		P	NHH	NP	Total	Total	Total	3.04E-02	3.13E-02	2.51E-02	5.82E-08	2.25E-05	6.14E-07	1.39E-04	0.00E+00	6.38E-08	0.00E+00	4.88E-07									1.39E-04
Industrial Equip U		P	NHH	NP	Total	Total	Total	1.31E+00	1.34E+00	1.60E+00	5.63E-06	1.48E-03	4.09E-05	8.72E-03	0.00E+00	4.50E-06	0.00E+00	4.72E-05									8.72E-03
Industrial Equip U		N	NHH	NP	Total	Total	Total	1.28E-02	4.39E-02	4.31E-02	2.74E-07	4.32E-05	1.21E-06	2.25E-04	0.00E+00	1.48E-07	0.00E+00	2.29E-06									2.25E-04
Industrial Equip U		N	NHH	NP	Total	Total	Total	8.68E+00	4.28E+01	5.72E+01	3.83E-05	6.31E-03	1.65E-03	3.92E-01	0.00E+00	3.48E-05	0.00E+00	3.21E-04									3.92E-01
Industrial Equip U		N	NHH	NP	Total	Total	Total	3.05E+01	1.50E+02	3.58E+02	2.27E-04	1.06E-01	1.07E-02	2.35E+00	0.00E+00	2.09E-04	0.00E+00	1.90E-03									2.35E+00
Industrial Equip U		N	NHH	NP	Total	Total	Total	1.11E+00	5.50E+00	2.69E+01	1.04E-05	6.23E-03	5.32E-04	1.79E-01	0.00E+00	1.59E-05	0.00E+00	8.76E-05									1.79E-01
Industrial Equip U		P	NHH	NP	Total	Total	Total	6.67E-01	7.29E-01	2.88E-01	3.67E-06	1.93E-05	2.30E-05	3.15E-03	4.91E-08	8.97E-07	0.00E+00	3.31E-07									3.15E-03
Industrial Equip U		P	NHH	NP	Total	Total	Total	1.09E+00	1.19E+00	5.94E-01	8.33E-06	2.76E-05	5.11E-05	6.52E-03	8.27E-08	2.19E-06	0.00E+00	7.52E-07									6.52E-03
Industrial Equip U		P	NHH	NP	Total	Total	Total	3.98E+00	4.19E+00	3.76E+00	6.15E-05	3.07E-04	3.07E-04	4.10E-02	5.30E-07	1.69E-05	0.00E+00	5.55E-06									4.10E-02
Industrial Equip U		P	NHH	NP	Total	Total	Total	3.52E+00	3.71E+00	6.44E+00	5.36E-05	4.27E-04	4.36E-04	7.06E-02	8.28E-07	2.71E-05	0.00E+00	4.83E-06									7.06E-02
Industrial Equip U		N	NHH	NP	Total	Total	Total	4.52E-01	4.76E-01	4.58E+00	1.88E-05	9.13E-05	1.86E-04	5.06E-02	4.97E-07	5.70E-06	0.00E+00	1.69E-06									5.06E-02
Industrial Equip U		N	NHH	NP	Total	Total	Total	3.63E-02	3.83E-02	6.65E-01	2.77E-06	1.33E-05	2.78E-05	7.35E-03	7.39E-08	8.38E-07	0.00E+00	2.50E-07									7.35E-03
Industrial Equip U		P	NHH	NP	Total	Total	Total	1.21E+00	5.95E+00	4.01E+00	6.16E-05	4.21E-04	3.35E-04	4.36E-02	5.64E-07	1.39E-05	0.00E+00	5.56E-06									4.36E-02
Industrial Equip U		P	NHH	NP	Total	Total	Total	1.89E+00	9.33E+00	1.33E+01	1.13E-04	9.83E-04	7.31E-04	1.46E-01	1.71E-06	4.14E-05	0.00E+00	1.02E-05									1.46E-01
Industrial Equip U		P	NHH	NP	Total	Total	Total	1.90E+00	9.38E+00	2.39E+01	1.70E-04	1.56E-03	9.52E-04	2.63E-01	2.96E-06	4.89E-05	0.00E+00	1.54E-05									2.63E-01
Industrial Equip U		N	NHH	NP	Total	Total	Total	1.89E+00	9.31E+00	3.25E+01	1.91E-04	7.23E-04	1.03E-03	3.59E-01	4.04E-06	3.45E-05	0.00E+00	1.72E-05									3.59E-01
Industrial Equip U		N	NHH	NP	Total	Total	Total	8.07E-01	3.98E+00	2.00E+01	1.16E-04	4.23E-04	5.86E-04	2.21E-01	2.17E-06	2.08E-05	0.00E+00	1.05E-05									2.21E-01
Industrial Equip U		N	NHH	NP	Total	Total	Total	8.85E-02	1.58E-01	8.59E-02	9.75E-07	5.74E-06	6.86E-06	9.40E-04	1.46E-08	2.68E-07	0.00E+00	8.80E-08									9.40E-04
Industrial Equip U		N	NHH	NP	Total	Total	Total	8.85E-02	1.58E-01	1.41E-01	1.86E-06	6.36E-06	1.18E-05	1.55E-03	1.96E-08	4.40E-07	0.00E+00	1.68E-07									1.55E-03
Industrial Equip U		N	NHH	NP	Total	Total	Total	1.72E+00	5.77E+00	8.36E+00	1.36E-04	8.44E-04	7.04E-04	9.09E-02	1.17E-06	3.35E-05	0.00E+00	1.23E-05									9.09E-02
Industrial Equip U		N	NHH	NP	Total	Total	Total	2.85E+00	9.54E+00	3.26E+01	2.85E-04	2.37E-03	1.93E-03	3.58E-01	4.20E-06	1.18E-04	0.00E+00	2.57E-05									3.58E-01
Industrial Equip U		N	NHH	NP	Total	Total	Total	1.31E+00	4.39E+00	2.78E+01	1.97E-04	1.76E-03	1.20E-03	3.05E-01	3.43E-06	6.39E-05	0.00E+00	1.78E-05									3.05E-01
Industrial Equip U		N	NHH	NP	Total	Total	Total	2.10E-01	7.03E-01	5.15E+00	2.96E-05	1.12E-04	1.82E-04	5.69E-02	6.40E-07	6.13E-06	0.00E+00	2.67E-06									5.69E-02
Industrial Equip U		N	NHH	NP	Total	Total	Total	2.32E-01	9.08E-01	2.65E-01	3.01E-06	1.77E-05	2.11E-05	2.90E-03	4.51E-08	8.26E-07	0.00E+00	2.71E-07									2.90E-03
Industrial Equip U		N	NHH	NP	Total	Total	Total	3.11E-01	1.22E+00	8.49E-01	1.13E-05	3.84E-05	7.11E-05	9.33E-03	1.18E-07	2.66E-06	0.00E+00	1.02E-06									9.33E-03
Industrial Equip U		N	NHH	NP	Total	Total	Total	3.86E-01	1.51E+00	1.51E+00	3.63E-05	1.69E-04	1.35E-04	1.64E-02	2.12E-07	8.75E-06	0.00E+00	3.27E-06									1.64E-02
Industrial Equip U		N	NHH	NP	Total	Total	Total	1.54E+00	6.03E+00	1.71E+01	1.98E-04	1.28E-03	1.25E-03	1.87E-01	2.19E-06	8.96E-05	0.00E+00	1.79E-05									1.87E-01
Industrial Equip U		N	NHH	NP	Total	Total	Total	1.55E+00	6.04E+00	2.64E+01	2.32E-04	1.71E-03	1.50E-03	2.90E-01	3.26E-06	8.07E-05	0.00E+00	2.10E-05									2.90E-01
Industrial Equip U		N	NHH	NP	Total	Total	Total	1.54E+00	6.02E+00	3.69E+01	2.50E-04	8.50E-04	1.81E-03	4.08E-01	4.59E-06	5.82E-05	0.00E+00	2.25E-05									4.08E-01
Industrial Equip U		N	NHH	NP	Total	Total	Total	1.54E+00	6.01E+00	7.21E+01	4.72E-04	1.58E-03	3.14E-03	7.96E-01	7.82E-06	1.09E-04	0.00E+00	4.26E-05									7.96E-01
Industrial Equip U		N	NHH	NP	Total	Total	Total	3.84E-01	1.50E+00	2.97E+01	1.95E-04	6.50E-04	1.33E-03	3.28E-01	3.30E-06	4.54E-05	0.00E+00	1.76E-05									3.28E-01
Industrial Equip U		N	NHH	NP	Total	Total	Total	2.34E-01	9.13E-01	2.31E+01	1.66E-04	5.50E-04	1.87E-03	2.55E-01	2.57E-06	4.84E-05	0.00E+00	1.50E-05									2.55E-01
Industrial Equip U		N	NHH	NP	Total	Total	Total	1.11E-02	4.00E-02	5.59E-02	1.33E-06	6.20E-06	4.99E-06	6.06E-04	7.83E-09	3.23E-07	0.00E+00	1.20E-07									6.06E-04
Industrial Equip U		N	NHH	NP	Total	Total	Total	6.64E-02	2.40E-01	6.64E-01	7.64E-06	4.95E-05	4.85E-05	7.27E-03	8.53E-08	3.48E-06	0.00E+00	6.89E-07									7.27E-03
Industrial Equip U		N	NHH	NP	Total	Total	Total	7.11E-02	2.57E-01	1.43E+00	1.24E-05	9.20E-05	8.12E-05	1.57E-02	1.76E-07	4.36E-06	0.00E+00	1.12E-06									1.57E-02
Industrial Equip U		N	NHH	NP	Total	Total	Total	1.69E-01	6.11E-01	4.01E+00	2.68E-05	9.18E-05	1.97E-04	4.43E-02	4.98E-07	6.31E-06	0.00E+00	2.41E-06									4.43E-02
Industrial Equip U		N	NHH	NP	Total	Total	Total	3.16E-02	1.14E-01	9.90E-01	6.39E-06	2.16E-05	4.31E-05	1.09E-02	1.07E-07	1.49E-06	0.00E+00	5.77E-07									1.09E-02

Industrial Equip U	N	NHH	NP	Total	Total	Total	9.48E-03	3.43E-02	1.15E+00	8.77E-06	2.73E-05	9.28E-05	1.27E-02	1.25E-07	2.40E-06	0.00E+00	7.91E-07	1.27E-02
Lawn and Gard C	N	NHH	NP	Total	Total	Total	4.92E+02	3.08E+02	3.48E+01	3.94E-03	7.08E-02	1.06E-03	2.10E-01	8.65E-06	6.62E-04	2.72E-04	2.45E-04	2.10E-01
Lawn and Gard R	N	NHH	NP	Total	Total	Total	3.69E+03	1.57E+02	1.99E+01	2.35E-03	4.82E-02	5.12E-04	1.07E-01	4.40E-06	2.94E-04	1.30E-04	1.46E-04	1.07E-01
Lawn and Gard C	N	HH	NP	Total	Total	Total	8.81E+02	6.98E+02	4.16E+01	3.48E-02	6.30E-02	5.54E-04	1.70E-01	7.01E-06	9.91E-05	2.82E-04	2.16E-03	1.70E-01
Lawn and Gard R	N	HH	NP	Total	Total	Total	9.91E+03	1.33E+02	6.37E+00	2.37E-03	1.28E-02	1.08E-04	3.24E-02	1.34E-06	3.09E-05	5.44E-05	1.47E-04	3.24E-02
Lawn and Gard C	N	HH	NP	Total	Total	Total	6.21E+02	4.92E+02	7.09E+01	5.93E-02	1.07E-01	9.44E-04	2.90E-01	1.19E-05	1.69E-04	3.18E-04	3.68E-03	2.90E-01
Lawn and Gard R	N	HH	NP	Total	Total	Total	6.98E+03	9.37E+01	1.07E+01	3.89E-03	2.14E-02	1.84E-04	5.52E-02	2.27E-06	5.57E-05	6.12E-05	2.42E-04	5.52E-02
Lawn and Gard C	P	HH	NP	Total	Total	Total	7.72E+02	6.12E+02	8.82E+01	7.38E-02	1.33E-01	1.17E-03	3.61E-01	1.49E-05	2.10E-04	3.96E-04	4.59E-03	3.61E-01
Lawn and Gard R	P	HH	NP	Total	Total	Total	8.69E+03	1.17E+02	1.40E+01	5.50E-03	2.88E-02	2.15E-04	6.87E-02	2.83E-06	5.31E-05	7.38E-05	3.42E-04	6.87E-02
Lawn and Gard C	N	HH	NP	Total	Total	Total	2.87E+03	9.55E+02	4.24E+01	2.29E-02	7.53E-02	6.62E-04	2.03E-01	8.38E-06	1.18E-04	3.59E-04	1.42E-03	2.03E-01
Lawn and Gard R	N	HH	NP	Total	Total	Total	3.20E+04	1.89E+03	7.99E+01	3.57E-02	1.49E-01	1.31E-03	4.02E-01	1.65E-05	2.34E-04	7.09E-04	2.22E-03	4.02E-01
Lawn and Gard C	N	HH	P	Total	Total	Total	4.29E+03	2.31E+03	1.23E+02	8.50E-02	2.02E-01	1.78E-03	5.46E-01	2.25E-05	3.18E-04	9.18E-04	5.28E-03	5.46E-01
Lawn and Gard R	N	HH	P	Total	Total	Total	1.11E+04	1.45E+02	6.76E+00	2.49E-03	1.36E-02	1.15E-04	3.44E-02	1.42E-06	3.28E-05	5.85E-05	1.55E-04	3.44E-02
Lawn and Gard C	N	HH	P	Total	Total	Total	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Lawn and Gard R	N	HH	P	Total	Total	Total	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Lawn and Gard C	N	HH	P	Total	Total	Total	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Lawn and Gard R	N	HH	P	Total	Total	Total	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Lawn and Gard C	P	NHH	NP	Total	Total	Total	2.17E+01	8.06E+00	3.54E+00	1.99E-04	9.58E-03	1.56E-04	1.83E-02	7.54E-07	1.53E-04	1.79E-05	1.24E-05	1.83E-02
Lawn and Gard R	P	NHH	NP	Total	Total	Total	7.72E+02	1.90E+00	8.62E-01	8.55E-05	2.34E-03	3.07E-05	4.32E-03	1.78E-07	3.63E-05	3.81E-06	5.31E-06	4.32E-03
Lawn and Gard C	N	NHH	NP	Total	Total	Total	1.15E+01	2.52E+01	1.03E+01	4.65E-04	2.81E-02	3.54E-04	5.37E-02	2.21E-06	2.50E-05	4.71E-05	2.89E-05	5.37E-02
Lawn and Gard C	N	NHH	NP	Total	Total	Total	5.67E+00	1.24E+01	1.10E+01	4.81E-04	3.10E-02	3.73E-04	5.59E-02	2.30E-06	2.60E-05	3.48E-05	2.99E-05	5.59E-02
Lawn and Gard C	N	HH	NP	Total	Total	Total	4.86E+00	9.13E-01	5.09E-02	2.50E-05	9.27E-05	8.16E-07	2.51E-04	1.03E-08	1.46E-07	3.93E-07	1.55E-06	2.51E-04
Lawn and Gard R	N	HH	NP	Total	Total	Total	1.49E+02	1.75E+00	9.41E-02	3.38E-05	1.90E-04	1.61E-06	4.81E-04	1.98E-08	4.59E-07	7.64E-07	2.10E-06	4.81E-04
Lawn and Gard C	N	HH	NP	Total	Total	Total	2.11E+00	3.97E-01	1.11E-01	5.44E-05	2.02E-04	1.78E-06	5.45E-04	2.25E-08	3.17E-07	4.03E-07	3.38E-06	5.45E-04
Lawn and Gard R	N	HH	NP	Total	Total	Total	6.48E+01	7.63E-01	2.03E-01	7.08E-05	4.06E-04	3.49E-06	1.05E-03	4.32E-08	1.06E-06	7.82E-07	4.40E-06	1.05E-03
Lawn and Gard C	N	NHH	NP	Total	Total	Total	2.91E+03	1.82E+03	2.14E+02	2.52E-02	4.63E-01	6.53E-03	1.24E+00	4.29E-05	3.92E-03	1.61E-03	1.45E-03	1.24E+00
Lawn and Gard R	N	NHH	NP	Total	Total	Total	4.62E+04	1.96E+03	2.56E+02	2.01E-02	6.73E-01	5.43E-03	1.34E+00	4.61E-05	3.18E-03	1.47E-03	1.16E-03	1.34E+00
Lawn and Gard C	N	NHH	NP	Total	Total	Total	3.02E+02	4.63E+01	6.45E+00	5.68E-04	1.59E-02	1.45E-04	3.51E-02	1.21E-06	9.24E-05	3.79E-05	3.29E-05	3.51E-02
Lawn and Gard R	N	NHH	NP	Total	Total	Total	1.17E+03	5.79E+01	8.31E+00	7.01E-04	2.14E-02	1.86E-04	4.38E-02	1.51E-06	1.09E-04	4.73E-05	4.05E-05	4.38E-02
Lawn and Gard C	P	NHH	NP	Total	Total	Total	5.32E+02	1.98E+02	5.97E+00	7.69E-04	1.34E-02	3.53E-04	3.37E-02	1.16E-06	1.10E-05	1.20E-04	4.45E-05	3.37E-02
Lawn and Gard R	P	NHH	NP	Total	Total	Total	2.48E+03	1.46E+02	4.68E+00	5.53E-04	1.16E-02	2.35E-04	2.49E-02	8.58E-07	1.38E-05	8.41E-05	3.20E-05	2.49E-02
Lawn and Gard C	N	NHH	P	Total	Total	Total	1.35E+02	2.30E+01	1.50E+00	1.10E-04	3.94E-03	2.78E-05	7.86E-03	2.71E-07	1.84E-05	1.14E-05	6.36E-06	7.86E-03
Lawn and Gard R	N	NHH	P	Total	Total	Total	1.16E+02	1.53E+00	1.07E-01	7.35E-06	3.05E-04	1.97E-06	5.22E-04	1.80E-08	1.04E-06	7.59E-07	4.25E-07	5.22E-04
Lawn and Gard C	N	NHH	P	Total	Total	Total	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Lawn and Gard R	N	NHH	P	Total	Total	Total	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Lawn and Gard C	N	NHH	P	Total	Total	Total	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Lawn and Gard R	N	NHH	P	Total	Total	Total	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Lawn and Gard C	N	NHH	P	Total	Total	Total	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Lawn and Gard R	N	NHH	P	Total	Total	Total	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Lawn and Gard C	N	NHH	NP	Total	Total	Total	1.59E+03	1.19E+03	3.86E+02	1.78E-02	1.10E+00	1.31E-02	1.92E+00	5.47E-05	8.90E-04	1.91E-03	1.03E-03	1.92E+00
Lawn and Gard R	N	NHH	NP	Total	Total	Total	1.40E+03	1.08E+02	3.51E+01	1.41E-03	1.01E-01	1.05E-03	1.75E-01	4.99E-06	6.96E-05	1.62E-04	8.15E-05	1.75E-01
Lawn and Gard C	N	NHH	NP	Total	Total	Total	7.29E+00	5.42E+00	3.43E+00	1.53E-04	1.01E-02	1.14E-04	1.66E-02	4.20E-07	7.69E-06	1.23E-05	8.83E-06	1.66E-02
Lawn and Gard R	N	NHH	NP	Total	Total	Total	6.29E+00	4.86E-01	3.06E-01	1.22E-05	9.07E-04	8.63E-06	1.49E-03	3.77E-08	5.92E-07	1.01E-06	7.07E-07	1.49E-03
Lawn and Gard C	N	NHH	NP	Total	Total	Total	7.31E+01	5.43E+01	2.82E+01	1.30E-03	8.08E-02	9.58E-04	1.40E-01	4.00E-06	6.52E-05	1.12E-04	7.53E-05	1.40E-01
Lawn and Gard R	N	NHH	NP	Total	Total	Total	2.36E+03	1.83E+02	9.46E+01	3.80E-03	2.71E-01	2.83E-03	4.72E-01	1.35E-05	1.88E-04	3.52E-04	2.20E-04	4.72E-01
Lawn and Gard C	N	NHH	NP	Total	Total	Total	5.73E+01	4.26E+01	2.97E+01	1.33E-03	8.78E-02	9.91E-04	1.44E-01	3.65E-06	6.67E-05	1.02E-04	7.66E-05	1.44E-01
Lawn and Gard R	N	NHH	NP	Total	Total	Total	1.85E+03	1.43E+02	9.97E+01	3.98E-03	2.95E-01	2.81E-03	4.83E-01	1.22E-05	1.92E-04	3.12E-04	2.30E-04	4.83E-01

Lawn and GardC	P	NHH	NP	Total	Total	Total	5.74E+01	2.13E+01	5.73E+00	7.38E-04	1.28E-02	3.38E-04	3.23E-02	1.12E-06	1.05E-05	4.17E-05	4.27E-05	3.23E-02
Lawn and GardR	P	NHH	NP	Total	Total	Total	2.13E+03	5.26E+00	1.68E+00	1.35E-04	4.92E-03	5.58E-05	7.97E-03	2.75E-07	5.83E-06	8.30E-06	7.80E-06	7.97E-03
Lawn and GardC	N	NHH	NP	Total	Total	Total	2.92E+02	1.03E+02	6.45E+01	2.50E-03	1.85E-01	1.86E-03	3.22E-01	9.18E-06	1.26E-04	2.16E-04	1.44E-04	3.22E-01
Lawn and GardR	N	NHH	NP	Total	Total	Total	1.90E+03	7.60E+01	4.75E+01	1.73E-03	1.36E-01	1.30E-03	2.37E-01	6.77E-06	8.62E-05	1.54E-04	1.00E-04	2.37E-01
Lawn and GardC	N	NHH	NP	Total	Total	Total	1.15E+02	4.06E+01	4.04E+01	1.55E-03	1.20E-01	1.10E-03	1.96E-01	4.97E-06	7.69E-05	1.06E-04	8.96E-05	1.96E-01
Lawn and GardR	N	NHH	NP	Total	Total	Total	7.49E+02	3.00E+01	2.98E+01	1.09E-03	8.82E-02	7.50E-04	1.45E-01	3.67E-06	5.26E-05	7.46E-05	6.32E-05	1.45E-01
Lawn and GardU	N	NHH	NP	Total	Total	Total	1.67E+00	4.75E-01	7.20E-01	8.64E-06	4.84E-04	1.70E-05	6.16E-03	7.48E-08	4.72E-07	1.39E-06	5.00E-07	6.16E-03

DRAFT

Class	C/R	Pre	Hand	Port	County	Air Basin	Air Dist.	Populatio	Activity	Consumpti	ROG Exhal	CO Exhaus	NOX Exhal	CO2 Exhau	SO2 Exhau	PM Exhaus	N2O Exhal	CH4 Exhaust	Total emis:
Lawn and Gard C	N	NHH	NP	Total	Total	Total	9.82E+01	3.46E+01	1.00E+01	1.05E-03	2.29E-02	2.70E-04	5.65E-02	1.95E-06	1.66E-04	4.62E-05	6.04E-05	5.65E-02	
Lawn and Gard R	N	NHH	NP	Total	Total	Total	2.45E+03	7.40E+00	2.51E+00	1.45E-04	7.39E-03	4.03E-05	1.21E-02	4.17E-07	2.15E-05	7.92E-06	8.37E-06	1.21E-02	
Lawn and Gard C	P	NHH	P	Total	Total	Total	1.38E+00	4.79E+00	4.00E+00	3.13E-04	1.14E-02	2.35E-04	1.94E-02	5.54E-07	1.63E-04	1.70E-05	1.78E-05	1.94E-02	
Lawn and Gard R	P	NHH	P	Total	Total	Total	2.47E+00	1.12E-01	9.32E-02	5.91E-06	2.69E-04	3.90E-06	4.54E-04	1.29E-08	3.71E-06	3.33E-07	3.42E-07	4.54E-04	
Lawn and Gard C	P	NHH	P	Total	Total	Total	7.86E+00	2.72E+01	3.83E+01	3.07E-03	1.13E-01	2.02E-03	1.81E-01	4.58E-06	1.51E-03	1.20E-04	1.74E-04	1.81E-01	
Lawn and Gard R	P	NHH	P	Total	Total	Total	1.40E+01	6.32E-01	8.85E-01	5.59E-05	2.62E-03	3.33E-05	4.20E-03	1.07E-07	3.44E-05	2.34E-06	3.23E-06	4.20E-03	
Lawn and Gard C	N	NHH	NP	Total	Total	Total	1.04E+02	2.27E+02	1.20E+02	6.71E-03	3.43E-01	4.87E-03	5.91E-01	1.68E-05	3.30E-04	5.20E-04	3.85E-04	5.91E-01	
Lawn and Gard C	N	NHH	NP	Total	Total	Total	5.10E+01	1.12E+02	1.05E+02	5.54E-03	3.10E-01	4.34E-03	5.02E-01	1.27E-05	2.81E-04	3.51E-04	3.18E-04	5.02E-01	
Lawn and Gard U	N	NHH	NP	Total	Total	Total	2.06E+01	4.13E+01	6.85E+01	1.24E-03	9.98E-02	2.38E-03	4.99E-01	6.07E-06	3.82E-05	1.56E-04	7.12E-05	4.99E-01	
Lawn and Gard U	N	NHH	NP	Total	Total	Total	1.36E-01	2.73E-01	6.67E-01	2.93E-06	1.58E-04	1.78E-05	6.18E-03	5.97E-08	4.78E-07	1.13E-06	1.69E-07	6.18E-03	
Lawn and Gard C	N	NHH	NP	Total	Total	Total	9.09E+01	1.71E+01	3.46E+00	3.03E-04	8.55E-03	7.75E-05	1.88E-02	6.48E-07	4.93E-05	1.70E-05	1.75E-05	1.88E-02	
Lawn and Gard R	N	NHH	NP	Total	Total	Total	2.79E+03	3.28E+01	7.38E+00	4.98E-04	2.12E-02	1.34E-04	3.60E-02	1.24E-06	7.07E-05	3.01E-05	2.88E-05	3.60E-02	
Lawn and Gard C	N	NHH	NP	Total	Total	Total	4.04E+01	7.59E+00	3.34E+00	1.31E-04	9.58E-03	9.72E-05	1.67E-02	4.75E-07	6.61E-06	1.32E-05	7.56E-06	1.67E-02	
Lawn and Gard R	N	NHH	NP	Total	Total	Total	1.24E+03	1.46E+01	6.47E+00	2.62E-04	1.87E-02	1.85E-04	3.20E-02	9.13E-07	1.10E-05	2.52E-05	1.51E-05	3.20E-02	
Lawn and Gard C	N	NHH	NP	Total	Total	Total	8.53E-01	1.60E-01	1.54E-01	5.97E-06	4.56E-04	4.25E-06	7.48E-04	1.90E-08	2.97E-07	4.12E-07	3.45E-07	7.48E-04	
Lawn and Gard R	N	NHH	NP	Total	Total	Total	2.63E+01	3.10E-01	3.00E-01	1.22E-05	8.94E-04	7.71E-06	1.45E-03	3.66E-08	4.98E-07	7.67E-07	7.04E-07	1.45E-03	
Lawn and Gard U	N	NHH	NP	Total	Total	Total	6.18E-02	1.03E-02	2.16E-02	2.71E-07	1.35E-05	5.40E-07	1.86E-04	2.26E-09	1.43E-08	3.64E-08	1.57E-08	1.86E-04	
Lawn and Gard U	N	NHH	NP	Total	Total	Total	1.48E-01	2.48E-02	1.34E-01	8.72E-07	2.62E-05	4.74E-06	1.25E-03	1.21E-08	9.70E-08	1.73E-07	5.04E-08	1.25E-03	
Lawn and Gard U	N	NHH	P	Total	Total	Total	9.89E-02	3.25E-02	4.46E-03	5.07E-08	2.98E-07	3.56E-07	4.89E-05	7.60E-10	1.39E-08	0.00E+00	4.57E-09	4.89E-05	
Lawn and Gard U	N	NHH	P	Total	Total	Total	8.65E-02	2.84E-02	6.29E-02	3.54E-07	3.89E-06	3.79E-06	6.91E-04	8.11E-09	1.88E-07	0.00E+00	3.20E-08	6.91E-04	
Lawn and Gard U	N	NHH	P	Total	Total	Total	2.47E-02	8.13E-03	3.68E-02	1.10E-07	7.04E-07	1.44E-06	4.07E-04	4.58E-09	3.85E-08	0.00E+00	9.94E-09	4.07E-04	
Lawn and Gard U	P	NHH	P	Total	Total	Total	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Lawn and Gard U	N	NHH	P	Total	Total	Total	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Lawn and Gard U	N	NHH	P	Total	Total	Total	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Lawn and Gard U	N	NHH	NP	Total	Total	Total	2.39E+02	3.56E+02	1.51E+02	1.71E-03	1.01E-02	1.20E-02	1.65E+00	2.57E-05	4.72E-04	0.00E+00	1.54E-04	1.65E+00	
Lawn and Gard U	N	NHH	NP	Total	Total	Total	1.87E+02	2.78E+02	1.81E+02	2.40E-03	8.18E-03	1.51E-02	1.99E+00	2.52E-05	5.68E-04	0.00E+00	2.16E-04	1.99E+00	
Lawn and Gard U	P	NHH	P	Total	Total	Total	1.11E-01	1.42E-01	1.30E-01	1.72E-06	5.87E-06	1.09E-05	1.43E-03	1.81E-08	4.06E-07	0.00E+00	1.55E-07	1.43E-03	
Lawn and Gard U	P	NHH	P	Total	Total	Total	3.07E+00	3.90E+00	1.35E+01	1.05E-04	9.04E-04	8.75E-04	1.48E-01	1.74E-06	5.32E-05	0.00E+00	9.51E-06	1.48E-01	
Lawn and Gard U	P	NHH	P	Total	Total	Total	2.10E-01	2.68E-01	1.60E+00	9.29E-06	9.31E-05	7.91E-05	1.76E-02	1.98E-07	3.71E-06	0.00E+00	8.38E-07	1.76E-02	
Lawn and Gard U	N	NHH	P	Total	Total	Total	4.94E-02	6.30E-02	6.33E-01	2.84E-06	1.31E-05	2.70E-05	7.00E-03	7.87E-08	8.30E-07	0.00E+00	2.56E-07	7.00E-03	
Lawn and Gard U	N	NHH	P	Total	Total	Total	4.57E-01	5.82E-01	6.51E+00	2.79E-05	1.31E-04	2.48E-04	7.19E-02	7.06E-07	8.19E-06	0.00E+00	2.52E-06	7.19E-02	
Lawn and Gard U	N	NHH	P	Total	Total	Total	5.19E-01	6.61E-01	1.78E+01	7.70E-05	3.59E-04	6.93E-04	1.97E-01	1.98E-06	2.26E-05	0.00E+00	6.94E-06	1.97E-01	
Lawn and Gard U	N	NHH	P	Total	Total	Total	9.89E-01	1.26E+00	4.82E+01	2.37E-04	1.03E-03	3.52E-03	5.32E-01	5.35E-06	8.05E-05	0.00E+00	2.13E-05	5.32E-01	
Lawn and Gard U	N	NHH	NP	Total	Total	Total	6.01E+00	1.76E+01	7.74E+00	8.79E-05	5.18E-04	6.18E-04	8.48E-02	1.32E-06	2.41E-05	0.00E+00	7.93E-06	8.48E-02	
Lawn and Gard U	N	NHH	NP	Total	Total	Total	1.13E+02	3.30E+02	2.18E+02	2.88E-03	9.84E-03	1.82E-02	2.39E+00	3.03E-05	6.81E-04	0.00E+00	2.60E-04	2.39E+00	
Lawn and Gard U	N	NHH	NP	Total	Total	Total	8.65E-02	1.03E-01	5.72E-02	6.50E-07	3.83E-06	4.57E-06	6.27E-04	9.75E-09	1.78E-07	0.00E+00	5.86E-08	6.27E-04	
Lawn and Gard U	N	NHH	NP	Total	Total	Total	1.24E-02	1.47E-02	1.09E-02	1.44E-07	4.92E-07	9.10E-07	1.19E-04	1.51E-09	3.40E-08	0.00E+00	1.30E-08	1.19E-04	
Light Commerc C	N	NHH	P	Total	Total	Total	1.57E+01	5.76E+00	3.07E-01	4.60E-05	5.91E-04	1.19E-05	1.86E-03	7.64E-08	6.49E-06	3.84E-06	2.86E-06	1.86E-03	
Light Commerc R	N	NHH	P	Total	Total	Total	1.23E+01	3.05E+00	1.69E-01	2.96E-05	3.40E-04	6.58E-06	9.81E-04	4.04E-08	3.50E-06	2.07E-06	1.84E-06	9.81E-04	
Light Commerc C	N	NHH	P	Total	Total	Total	1.58E-01	5.81E-02	3.24E-02	1.48E-06	8.82E-05	1.13E-06	1.68E-04	6.94E-09	7.69E-08	1.29E-07	9.21E-08	1.68E-04	
Light Commerc R	N	NHH	P	Total	Total	Total	1.20E-01	2.98E-02	1.69E-02	1.12E-06	4.63E-05	6.06E-07	8.63E-05	3.55E-09	4.89E-08	6.75E-08	6.94E-08	8.63E-05	
Light Commerc C	N	NHH	P	Total	Total	Total	6.23E+01	4.40E+01	2.28E+00	3.07E-04	4.08E-03	8.56E-05	1.44E-02	5.92E-07	5.05E-05	2.86E-05	1.91E-05	1.44E-02	
Light Commerc R	N	NHH	P	Total	Total	Total	4.89E+01	2.32E+01	1.23E+00	1.75E-04	2.32E-03	4.76E-05	7.59E-03	3.13E-07	2.65E-05	1.55E-05	1.09E-05	7.59E-03	
Light Commerc C	P	NHH	P	Total	Total	Total	1.68E+01	1.19E+01	6.01E+00	3.86E-04	1.62E-02	3.02E-04	3.10E-02	1.28E-06	2.60E-04	3.05E-05	2.40E-05	3.10E-02	
Light Commerc R	P	NHH	P	Total	Total	Total	1.32E+01	6.27E+00	3.18E+00	2.04E-04	8.59E-03	1.58E-04	1.64E-02	6.75E-07	1.37E-04	1.60E-05	1.27E-05	1.64E-02	
Light Commerc C	P	NHH	P	Total	Total	Total	2.03E-01	1.44E-01	1.59E-01	1.05E-05	4.43E-04	7.17E-06	7.97E-04	3.28E-08	6.68E-06	5.28E-07	6.50E-07	7.97E-04	

Light Commerc R	P	NHH	P	Total	Total	Total	1.58E-01	7.51E-02	8.31E-02	5.43E-06	2.32E-04	3.72E-06	4.17E-04	1.72E-08	3.50E-06	2.75E-07	3.38E-07	4.17E-04
Light Commerc C	N	NHH	P	Total	Total	Total	2.06E+02	7.57E+01	1.66E+01	2.46E-03	3.41E-02	6.49E-04	9.74E-02	3.36E-06	3.37E-04	1.06E-04	1.42E-04	9.74E-02
Light Commerc R	N	NHH	P	Total	Total	Total	1.62E+02	4.00E+01	9.04E+00	1.38E-03	1.94E-02	3.60E-04	5.15E-02	1.78E-06	1.75E-04	5.70E-05	7.96E-05	5.15E-02
Light Commerc C	N	NHH	P	Total	Total	Total	5.65E+02	2.08E+02	1.21E+02	6.62E-03	3.47E-01	4.81E-03	6.02E-01	1.72E-05	3.17E-04	4.96E-04	3.83E-04	6.02E-01
Light Commerc R	N	NHH	P	Total	Total	Total	4.44E+02	1.10E+02	6.53E+01	4.25E-03	1.88E-01	2.65E-03	3.18E-01	9.07E-06	1.66E-04	2.67E-04	2.46E-04	3.18E-01
Light Commerc C	N	NHH	P	Total	Total	Total	3.04E+02	1.12E+02	1.42E+02	7.39E-03	4.17E-01	5.58E-03	6.83E-01	1.73E-05	3.60E-04	4.02E-04	4.27E-04	6.83E-01
Light Commerc R	N	NHH	P	Total	Total	Total	2.39E+02	5.90E+01	7.58E+01	4.68E-03	2.24E-01	2.97E-03	3.61E-01	9.15E-06	1.89E-04	2.12E-04	2.71E-04	3.61E-01
Light Commerc U	N	NHH	P	Total	Total	Total	1.01E+02	3.18E+01	7.08E+01	1.03E-03	5.18E-02	2.01E-03	5.98E-01	7.27E-06	4.58E-05	1.24E-04	5.97E-05	5.98E-01
Light Commerc U	N	NHH	P	Total	Total	Total	1.95E+01	6.14E+00	3.20E+01	2.59E-04	7.72E-03	1.26E-03	2.96E-01	2.86E-06	2.29E-05	4.42E-05	1.50E-05	2.96E-01
Light Commerc U	N	NHH	P	Total	Total	Total	1.84E+00	5.80E-01	5.21E+00	2.54E-05	1.50E-03	2.23E-04	4.78E-02	4.75E-07	3.81E-06	5.82E-06	1.47E-06	4.78E-02
Light Commerc C	P	NHH	P	Total	Total	Total	7.30E+01	5.16E+01	8.32E+00	1.31E-03	1.58E-02	6.02E-04	5.05E-02	1.74E-06	1.65E-05	8.57E-05	7.59E-05	5.05E-02
Light Commerc R	P	NHH	P	Total	Total	Total	5.73E+01	2.72E+01	4.53E+00	7.39E-04	9.07E-03	3.11E-04	2.67E-02	9.22E-07	1.74E-05	4.47E-05	4.27E-05	2.67E-02
Light Commerc C	P	NHH	P	Total	Total	Total	7.91E+01	5.59E+01	2.97E+01	2.25E-03	8.39E-02	1.70E-03	1.46E-01	4.16E-06	1.22E-03	1.55E-04	1.30E-04	1.46E-01
Light Commerc R	P	NHH	P	Total	Total	Total	6.21E+01	2.95E+01	1.57E+01	1.19E-03	4.45E-02	8.87E-04	7.71E-02	2.20E-06	6.47E-04	8.11E-05	6.87E-05	7.71E-02
Light Commerc C	P	NHH	P	Total	Total	Total	2.03E+01	1.43E+01	1.66E+01	1.28E-03	4.85E-02	8.47E-04	7.95E-02	2.01E-06	6.66E-04	5.65E-05	7.40E-05	7.95E-02
Light Commerc R	P	NHH	P	Total	Total	Total	1.59E+01	7.56E+00	8.78E+00	6.70E-04	2.56E-02	4.43E-04	4.20E-02	1.06E-06	3.52E-04	2.97E-05	3.88E-05	4.20E-02
Light Commerc U	P	NHH	P	Total	Total	Total	8.08E+00	4.88E+00	1.09E+01	1.59E-04	8.99E-03	2.39E-04	9.02E-02	1.10E-06	6.91E-06	1.65E-05	9.16E-06	9.02E-02
Light Commerc U	P	NHH	P	Total	Total	Total	1.02E+01	6.19E+00	3.68E+01	2.89E-04	9.74E-03	8.18E-04	3.39E-01	3.28E-06	2.63E-05	3.23E-05	1.67E-05	3.39E-01
Light Commerc U	P	NHH	P	Total	Total	Total	3.09E-01	1.87E-01	1.68E+00	8.94E-06	4.98E-04	4.16E-05	1.54E-02	1.53E-07	1.23E-06	1.28E-06	5.17E-07	1.54E-02
Light Commerc C	P	NHH	P	Total	Total	Total	2.64E+01	4.08E+01	8.88E+00	1.42E-03	1.67E-02	6.49E-04	5.41E-02	1.87E-06	1.76E-05	7.99E-05	8.17E-05	5.41E-02
Light Commerc R	P	NHH	P	Total	Total	Total	2.07E+01	2.16E+01	4.69E+00	7.48E-04	8.80E-03	3.43E-04	2.86E-02	9.87E-07	9.32E-06	4.22E-05	4.32E-05	2.86E-02
Light Commerc C	P	NHH	P	Total	Total	Total	1.33E+01	2.07E+01	7.81E+00	6.08E-04	2.21E-02	4.59E-04	3.83E-02	1.09E-06	3.21E-04	4.83E-05	3.51E-05	3.83E-02
Light Commerc R	P	NHH	P	Total	Total	Total	1.05E+01	1.09E+01	4.12E+00	3.14E-04	1.17E-02	2.37E-04	2.02E-02	5.77E-07	1.70E-04	2.52E-05	1.81E-05	2.02E-02
Light Commerc C	P	NHH	P	Total	Total	Total	1.80E+00	2.78E+00	2.63E+00	2.10E-04	7.68E-03	1.39E-04	1.25E-02	3.18E-07	1.05E-04	1.00E-05	1.21E-05	1.25E-02
Light Commerc R	P	NHH	P	Total	Total	Total	1.42E+00	1.47E+00	1.39E+00	1.09E-04	4.05E-03	7.21E-05	6.64E-03	1.68E-07	5.56E-05	5.25E-06	6.30E-06	6.64E-03
Light Commerc U	P	NHH	P	Total	Total	Total	3.07E+00	4.07E+00	9.00E+00	2.06E-04	1.10E-02	2.78E-04	6.88E-02	8.37E-07	5.27E-06	1.62E-05	1.19E-05	6.88E-02
Light Commerc U	P	NHH	P	Total	Total	Total	9.96E+00	1.32E+01	4.96E+01	7.30E-04	2.22E-02	1.82E-03	4.41E-01	4.26E-06	3.42E-05	7.10E-05	4.21E-05	4.41E-01
Light Commerc U	P	NHH	P	Total	Total	Total	6.70E-01	8.87E-01	6.07E+00	5.61E-05	1.97E-03	2.63E-04	5.53E-02	5.49E-07	4.40E-06	7.08E-06	3.24E-06	5.53E-02
Light Commerc C	P	NHH	P	Total	Total	Total	5.16E+01	2.93E+01	1.59E+01	1.24E-03	4.52E-02	9.01E-04	7.79E-02	2.22E-06	6.53E-04	8.16E-05	7.14E-05	7.79E-02
Light Commerc C	P	NHH	P	Total	Total	Total	1.86E+02	1.06E+02	9.12E+01	7.06E-03	2.66E-01	4.66E-03	4.35E-01	1.10E-05	3.65E-03	3.57E-04	4.08E-04	4.35E-01
Light Commerc U	P	NHH	P	Total	Total	Total	1.60E+01	9.13E+00	2.20E+01	3.91E-04	1.88E-02	6.18E-04	1.81E-01	2.20E-06	1.39E-05	3.60E-05	2.26E-05	1.81E-01
Light Commerc U	P	NHH	P	Total	Total	Total	1.64E+01	9.32E+00	3.11E+01	3.31E-04	9.15E-03	1.02E-03	2.84E-01	2.75E-06	2.20E-05	4.29E-05	1.91E-05	2.84E-01
Light Commerc U	P	NHH	P	Total	Total	Total	1.13E+00	6.43E-01	3.86E+00	2.56E-05	1.15E-03	1.45E-04	3.54E-02	3.51E-07	2.82E-06	4.31E-06	1.48E-06	3.54E-02
Light Commerc C	N	NHH	P	Total	Total	Total	5.53E+01	2.03E+01	6.79E+00	9.19E-04	1.34E-02	2.49E-04	4.09E-02	1.41E-06	1.40E-04	3.45E-05	5.31E-05	4.09E-02
Light Commerc R	N	NHH	P	Total	Total	Total	4.34E+01	1.07E+01	3.76E+00	5.55E-04	7.98E-03	1.46E-04	2.16E-02	7.46E-07	7.33E-05	1.91E-05	3.21E-05	2.16E-02
Light Commerc C	N	NHH	P	Total	Total	Total	4.93E+01	1.81E+01	1.03E+01	5.61E-04	2.94E-02	4.08E-04	5.11E-02	1.46E-06	2.69E-05	4.26E-05	3.25E-05	5.11E-02
Light Commerc R	N	NHH	P	Total	Total	Total	3.87E+01	9.58E+00	5.54E+00	3.61E-04	1.60E-02	2.25E-04	2.70E-02	7.70E-07	1.41E-05	2.29E-05	2.08E-05	2.70E-02
Light Commerc C	N	NHH	P	Total	Total	Total	9.26E+00	3.41E+00	5.11E+00	2.61E-04	1.50E-02	1.99E-04	2.47E-02	6.25E-07	1.29E-05	1.33E-05	1.51E-05	2.47E-02
Light Commerc R	N	NHH	P	Total	Total	Total	7.27E+00	1.80E+00	2.73E+00	1.62E-04	8.07E-03	1.06E-04	1.30E-02	3.30E-07	6.79E-06	7.05E-06	9.34E-06	1.30E-02
Light Commerc U	P	NHH	P	Total	Total	Total	9.03E-01	2.84E-01	7.09E-01	9.23E-06	4.83E-04	1.51E-05	6.05E-03	7.36E-08	4.63E-07	9.99E-07	5.33E-07	6.05E-03
Light Commerc U	N	NHH	P	Total	Total	Total	1.45E+00	4.57E-01	2.86E+00	1.11E-06	6.03E-04	7.87E-05	1.92E-02	0.00E+00	1.71E-06	0.00E+00	9.33E-06	1.92E-02
Light Commerc U	N	NHH	P	Total	Total	Total	1.20E+00	3.79E-01	4.14E+00	1.26E-06	7.22E-04	1.10E-04	2.80E-02	0.00E+00	2.49E-06	0.00E+00	1.06E-05	2.80E-02
Light Commerc U	P	NHH	P	Total	Total	Total	2.26E-01	5.26E+00	1.80E+01	1.02E-05	1.81E-03	3.72E-04	1.23E-01	0.00E+00	9.46E-06	0.00E+00	8.58E-05	1.23E-01
Light Commerc U	P	NHH	P	Total	Total	Total	4.67E-01	1.09E+01	1.05E+02	5.58E-05	2.90E-02	2.20E-03	6.94E-01	0.00E+00	5.38E-05	0.00E+00	4.68E-04	6.94E-01
Light Commerc U	P	NHH	P	Total	Total	Total	7.53E-02	1.75E+00	2.70E+01	1.56E-05	5.90E-03	5.88E-04	1.81E-01	0.00E+00	1.44E-05	0.00E+00	1.30E-04	1.81E-01
Light Commerc U	N	NHH	P	Total	Total	Total	6.02E-02	1.40E+00	2.80E+01	1.20E-05	6.79E-03	5.69E-04	1.86E-01	0.00E+00	1.66E-05	0.00E+00	1.00E-04	1.86E-01
Light Commerc U	N	NHH	P	Total	Total	Total	5.27E-02	1.23E+00	3.94E+01	1.69E-05	9.56E-03	8.02E-04	2.62E-01	0.00E+00	2.33E-05	0.00E+00	1.41E-04	2.62E-01

Light Commerc U	N	NHH	P	Total	Total	Total	3.78E+01	3.49E+01	1.63E+01	2.09E-04	1.12E-03	1.45E-03	1.78E-01	2.77E-06	7.10E-05	0.00E+00	1.88E-05	1.78E-01
Light Commerc U	N	NHH	P	Total	Total	Total	2.76E+01	2.56E+01	2.05E+01	2.91E-04	9.94E-04	1.83E-03	2.25E-01	2.86E-06	8.55E-05	0.00E+00	2.62E-05	2.25E-01
Light Commerc U	N	NHH	P	Total	Total	Total	3.37E+01	3.12E+01	4.37E+01	6.72E-04	3.44E-03	3.54E-03	4.77E-01	6.17E-06	1.89E-04	0.00E+00	6.06E-05	4.77E-01
Light Commerc U	N	NHH	P	Total	Total	Total	5.13E+01	4.74E+01	1.68E+02	1.35E-03	1.10E-02	1.13E-02	1.85E+00	2.17E-05	6.82E-04	0.00E+00	1.21E-04	1.85E+00
Light Commerc U	N	NHH	P	Total	Total	Total	3.03E+00	2.80E+00	1.81E+01	1.03E-04	1.03E-03	9.42E-04	1.99E-01	2.24E-06	4.18E-05	0.00E+00	9.30E-06	1.99E-01
Light Commerc U	N	NHH	P	Total	Total	Total	1.69E+00	1.57E+00	1.50E+01	6.23E-05	3.04E-04	6.75E-04	1.66E-01	1.87E-06	1.90E-05	0.00E+00	5.62E-06	1.66E-01
Light Commerc U	N	NHH	P	Total	Total	Total	3.77E+00	3.48E+00	5.30E+01	2.07E-04	1.05E-03	2.14E-03	5.86E-01	5.75E-06	6.44E-05	0.00E+00	1.87E-05	5.86E-01

DRAFT

Class	C/R	Pre	Hand	Port	County	Air Basin	Air Dist.	Population	Activity	Consumption	ROG	Exhal	CO	Exhaus	NOX	Exhal	CO2	Exhaus	SO2	Exhaus	PM	Exhaus	N2O	Exhal	CH4	Exhaust	Total emis:
Light Commercial	U	N	NHH	P	Total	Total	Total	2.34E+00	2.16E+00	5.32E+01	2.11E-04	1.05E-03	2.20E-03	5.88E-01	5.91E-06	6.53E-05	0.00E+00	1.90E-05									5.88E-01
Light Commercial	U	N	NHH	P	Total	Total	Total	6.09E-01	5.63E-01	2.67E+01	1.37E-04	5.76E-04	2.00E-03	2.95E-01	2.97E-06	4.56E-05	0.00E+00	1.23E-05									2.95E-01
Light Commercial	U	P	NHH	P	Total	Total	Total	2.84E+01	3.13E+01	1.06E+01	1.54E-04	7.28E-04	9.54E-04	1.16E-01	1.81E-06	4.99E-05	0.00E+00	1.39E-05									1.16E-01
Light Commercial	U	P	NHH	P	Total	Total	Total	8.48E+00	9.35E+00	8.30E+00	1.27E-04	4.02E-04	7.38E-04	9.10E-02	1.15E-06	3.58E-05	0.00E+00	1.14E-05									9.10E-02
Light Commercial	U	P	NHH	P	Total	Total	Total	1.48E+01	1.63E+01	2.56E+01	4.29E-04	2.12E-03	2.10E-03	2.79E-01	3.61E-06	1.17E-04	0.00E+00	3.87E-05									2.79E-01
Light Commercial	U	P	NHH	P	Total	Total	Total	2.90E+01	3.19E+01	1.13E+02	9.58E-04	7.56E-03	7.71E-03	1.24E+00	1.46E-05	4.84E-04	0.00E+00	8.64E-05									1.24E+00
Light Commercial	U	P	NHH	P	Total	Total	Total	3.13E+00	3.46E+00	2.20E+01	1.33E-04	1.27E-03	1.16E-03	2.42E-01	2.72E-06	5.35E-05	0.00E+00	1.20E-05									2.42E-01
Light Commercial	U	N	NHH	P	Total	Total	Total	2.26E+00	2.49E+00	2.27E+01	1.00E-04	4.65E-04	1.03E-03	2.50E-01	2.82E-06	2.99E-05	0.00E+00	9.06E-06									2.50E-01
Light Commercial	U	N	NHH	P	Total	Total	Total	4.46E-02	4.91E-02	7.67E-01	3.21E-06	1.54E-05	3.14E-05	8.48E-03	8.32E-08	9.69E-07	0.00E+00	2.90E-07									8.48E-03
Light Commercial	U	N	NHH	P	Total	Total	Total	7.43E-03	8.19E-03	2.11E-01	8.97E-07	4.23E-06	8.86E-06	2.34E-03	2.35E-08	2.70E-07	0.00E+00	8.09E-08									2.34E-03
Light Commercial	U	N	NHH	P	Total	Total	Total	1.63E-01	1.80E-01	1.10E+01	5.92E-05	2.41E-04	8.36E-04	1.22E-01	1.23E-06	1.94E-05	0.00E+00	5.34E-06									1.22E-01
Light Commercial	U	P	NHH	P	Total	Total	Total	3.86E-01	8.61E-01	2.84E-01	4.12E-06	1.95E-05	2.55E-05	3.11E-03	4.84E-08	1.34E-06	0.00E+00	3.71E-07									3.11E-03
Light Commercial	U	P	NHH	P	Total	Total	Total	7.65E-01	1.71E+00	1.12E+00	1.72E-05	5.44E-05	9.99E-05	1.23E-02	1.56E-07	4.85E-06	0.00E+00	1.55E-06									1.23E-02
Light Commercial	U	P	NHH	P	Total	Total	Total	6.95E+00	1.55E+01	1.59E+01	3.51E-04	1.61E-03	1.38E-03	1.72E-01	2.23E-06	8.84E-05	0.00E+00	3.16E-05									1.72E-01
Light Commercial	U	P	NHH	P	Total	Total	Total	4.63E+01	1.03E+02	2.21E+02	2.33E-03	1.59E-02	1.59E-02	2.42E+00	2.84E-05	1.13E-03	0.00E+00	2.10E-04									2.42E+00
Light Commercial	U	P	NHH	P	Total	Total	Total	1.75E+00	3.91E+00	1.57E+01	1.23E-04	9.74E-04	8.82E-04	1.73E-01	1.94E-06	4.62E-05	0.00E+00	1.11E-05									1.73E-01
Light Commercial	U	N	NHH	P	Total	Total	Total	2.47E+00	5.50E+00	3.26E+01	1.93E-04	7.19E-04	1.58E-03	3.60E-01	4.06E-06	4.99E-05	0.00E+00	1.75E-05									3.60E-01
Light Commercial	U	N	NHH	P	Total	Total	Total	3.22E+00	7.17E+00	7.52E+01	4.29E-04	1.59E-03	3.23E-03	8.30E-01	8.15E-06	1.10E-04	0.00E+00	3.87E-05									8.30E-01
Light Commercial	U	N	NHH	P	Total	Total	Total	1.20E+00	2.68E+00	4.35E+01	2.49E-04	9.20E-04	1.92E-03	4.80E-01	4.83E-06	6.44E-05	0.00E+00	2.25E-05									4.80E-01
Light Commercial	U	N	NHH	P	Total	Total	Total	2.97E-02	6.63E-02	1.46E+00	9.22E-06	3.37E-05	1.16E-04	1.61E-02	1.62E-07	2.92E-06	0.00E+00	8.32E-07									1.61E-02
Light Commercial	U	P	NHH	P	Total	Total	Total	1.28E+01	2.26E+01	6.40E+00	9.27E-05	4.39E-04	5.75E-04	7.00E-02	1.09E-06	3.01E-05	0.00E+00	8.36E-06									7.00E-02
Light Commercial	U	P	NHH	P	Total	Total	Total	1.13E+01	1.99E+01	1.02E+01	1.56E-04	4.94E-04	9.08E-04	1.12E-01	1.42E-06	4.41E-05	0.00E+00	1.41E-05									1.12E-01
Light Commercial	U	P	NHH	P	Total	Total	Total	3.47E+01	6.11E+01	7.29E+01	1.51E-03	6.94E-03	6.20E-03	7.93E-01	1.02E-05	3.86E-04	0.00E+00	1.36E-04									7.93E-01
Light Commercial	U	P	NHH	P	Total	Total	Total	2.70E+01	4.75E+01	8.55E+01	8.44E-04	5.98E-03	6.06E-03	9.37E-01	1.10E-05	4.19E-04	0.00E+00	7.62E-05									9.37E-01
Light Commercial	U	P	NHH	P	Total	Total	Total	1.34E-01	2.35E-01	1.05E+00	7.60E-06	6.34E-05	5.80E-05	1.15E-02	1.30E-07	2.94E-06	0.00E+00	6.86E-07									1.15E-02
Light Commercial	U	N	NHH	P	Total	Total	Total	2.97E-02	5.23E-02	2.81E-01	1.52E-06	6.05E-06	1.34E-05	3.11E-03	3.50E-08	4.13E-07	0.00E+00	1.37E-07									3.11E-03
Light Commercial	U	N	NHH	P	Total	Total	Total	7.43E-02	1.31E-01	9.90E-01	5.11E-06	2.06E-05	4.20E-05	1.09E-02	1.07E-07	1.39E-06	0.00E+00	4.61E-07									1.09E-02
Light Commercial	U	N	NHH	P	Total	Total	Total	1.75E+00	6.96E-01	1.55E-01	1.99E-06	1.07E-05	1.39E-05	1.70E-03	2.64E-08	6.77E-07	0.00E+00	1.80E-07									1.70E-03
Light Commercial	U	N	NHH	P	Total	Total	Total	4.09E-01	1.62E-01	5.28E-02	7.47E-07	2.56E-06	4.69E-06	5.79E-04	7.34E-09	2.20E-07	0.00E+00	6.74E-08									5.79E-04
Light Commercial	U	P	NHH	P	Total	Total	Total	8.10E-01	3.21E-01	2.09E-01	2.36E-06	1.40E-05	1.64E-05	2.29E-03	2.97E-08	7.55E-07	0.00E+00	2.13E-07									2.29E-03
Light Commercial	U	P	NHH	P	Total	Total	Total	3.34E-01	1.33E-01	1.45E-01	9.67E-07	9.10E-06	9.30E-06	1.60E-03	1.87E-08	4.96E-07	0.00E+00	8.73E-08									1.60E-03
Logging Equipment	U	P	HH	NP	Total	Total	Total	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Logging Equipment	U	P	NHH	NP	Total	Total	Total	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Logging Equipment	U	P	NHH	NP	Total	Total	Total	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Logging Equipment	U	P	NHH	NP	Total	Total	Total	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Logging Equipment	U	N	NHH	NP	Total	Total	Total	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Logging Equipment	U	N	NHH	NP	Total	Total	Total	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Logging Equipment	U	P	NHH	NP	Total	Total	Total	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Logging Equipment	U	P	NHH	NP	Total	Total	Total	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Logging Equipment	U	N	NHH	NP	Total	Total	Total	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Logging Equipment	U	N	NHH	NP	Total	Total	Total	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Military Tactical	U	P	NHH	P	Total	Total	Total	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Military Tactical	U	N	NHH	P	Total	Total	Total	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Military Tactical	U	N	NHH	P	Total	Total	Total	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Oil Drilling	U	N	NHH	P	Total	Total	Total	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Oil Drilling	U	N	NHH	P	Total	Total	Total	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Oil Drilling	U	P	NHH	P	Total	Total	Total	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Oil Drilling	U	P	NHH	P	Total	Total	Total	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Oil Drilling	U	N	NHH	P	Total	Total	Total	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Oil Drilling	U	N	NHH	P	Total	Total	Total	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Oil Drilling	U	N	NHH	P	Total	Total	Total	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

DRAFT

Oil Drilling	U	P	NHH	NP	Total	Total	Total	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Oil Drilling	U	P	NHH	NP	Total	Total	Total	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Oil Drilling	U	N	NHH	NP	Total	Total	Total	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Oil Drilling	U	N	NHH	NP	Total	Total	Total	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Oil Drilling	U	N	NHH	NP	Total	Total	Total	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Oil Drilling	U	N	NHH	NP	Total	Total	Total	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Oil Drilling	U	N	NHH	NP	Total	Total	Total	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Oil Drilling	U	N	NHH	P	Total	Total	Total	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Other Portable U	P	P	NHH	P	Total	Total	Total	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Other Portable U	P	P	NHH	P	Total	Total	Total	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Other Portable U	N	P	NHH	P	Total	Total	Total	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Other Portable U	N	P	NHH	P	Total	Total	Total	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Other Portable U	N	P	NHH	P	Total	Total	Total	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Other Portable U	N	P	NHH	P	Total	Total	Total	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Pleasure Craft U	U	N	NHH	NP	Total	Total	Total	2.03E+02	2.67E+01	1.52E+00	1.13E-03	1.45E-03	5.69E-06	8.08E-03	2.30E-07	1.34E-04	5.02E-06	7.01E-05	8.08E-03	8.08E-03	8.08E-03
Pleasure Craft U	U	N	NHH	NP	Total	Total	Total	1.13E+04	1.48E+03	2.47E+02	1.66E-01	2.57E-01	7.72E-03	1.34E+00	3.83E-05	2.22E-02	1.59E-03	1.03E-02	1.34E+00	1.34E+00	1.34E+00
Pleasure Craft U	U	N	NHH	NP	Total	Total	Total	3.06E+03	4.01E+02	1.99E+02	1.00E-01	2.06E-01	8.58E-03	1.22E+00	3.46E-05	2.01E-02	9.06E-04	6.24E-03	1.22E+00	1.22E+00	1.22E+00
Pleasure Craft U	U	N	NHH	NP	Total	Total	Total	2.99E+03	3.92E+02	5.18E+02	1.54E-01	2.61E-01	2.49E-02	4.00E+00	6.26E-05	3.63E-02	1.58E-03	9.56E-03	4.00E+00	4.00E+00	4.00E+00
Pleasure Craft U	U	N	NHH	NP	Total	Total	Total	2.63E+03	3.44E+02	9.56E+02	2.65E-01	5.03E-01	4.67E-02	7.43E+00	1.17E-04	6.81E-02	2.09E-03	1.64E-02	7.43E+00	7.43E+00	7.43E+00
Pleasure Craft U	U	N	NHH	NP	Total	Total	Total	1.21E+03	1.59E+02	7.99E+02	2.18E-01	4.79E-01	3.79E-02	6.13E+00	9.96E-05	5.77E-02	1.29E-03	1.36E-02	6.13E+00	6.13E+00	6.13E+00
Pleasure Craft U	U	N	NHH	NP	Total	Total	Total	3.48E+02	4.57E+01	2.95E+02	7.78E-02	1.50E-01	2.11E-02	2.31E+00	3.86E-05	2.24E-02	5.27E-04	4.84E-03	2.31E+00	2.31E+00	2.31E+00
Pleasure Craft U	U	N	NHH	NP	Total	Total	Total	7.03E+01	9.22E+00	8.63E+01	2.70E-02	4.99E-02	5.21E-04	6.52E-01	1.09E-05	6.32E-03	3.43E-05	1.68E-03	6.52E-01	6.52E-01	6.52E-01
Pleasure Craft U	U	N	NHH	NP	Total	Total	Total	1.20E+02	3.28E+00	5.76E-01	3.68E-04	5.74E-04	2.03E-05	3.26E-03	9.29E-08	5.39E-05	3.86E-06	2.29E-05	3.26E-03	3.26E-03	3.26E-03
Pleasure Craft U	U	N	NHH	NP	Total	Total	Total	6.45E+01	1.76E+00	6.96E-01	3.31E-04	6.85E-04	3.19E-05	4.38E-03	1.25E-07	7.24E-05	3.66E-06	2.06E-05	4.38E-03	4.38E-03	4.38E-03
Pleasure Craft U	U	N	NHH	NP	Total	Total	Total	5.98E+01	1.63E+00	1.88E+00	5.14E-04	8.80E-04	9.90E-05	1.48E-02	2.32E-07	1.34E-04	6.47E-06	3.19E-05	1.48E-02	1.48E-02	1.48E-02
Pleasure Craft U	U	N	NHH	NP	Total	Total	Total	2.81E+04	1.93E+03	7.22E+03	9.94E-01	1.78E+00	3.20E-01	6.31E+01	1.02E-03	5.78E-01	1.33E-02	6.18E-02	6.31E+01	6.31E+01	6.31E+01
Pleasure Craft U	U	N	NHH	NP	Total	Total	Total	5.06E+03	1.29E+03	6.99E+03	2.20E-01	7.72E+00	2.92E-01	5.45E+01	6.28E-04	5.21E-03	1.01E-02	1.27E-02	5.45E+01	5.45E+01	5.45E+01
Pleasure Craft U	U	N	NHH	NP	Total	Total	Total	7.49E+02	9.83E+01	1.32E+02	7.91E-03	2.09E-01	6.43E-03	9.14E-01	1.05E-05	8.74E-05	4.09E-04	4.57E-04	9.14E-01	9.14E-01	9.14E-01
Pleasure Craft U	U	N	NHH	NP	Total	Total	Total	1.20E+04	2.39E+03	9.58E+03	2.97E-01	1.05E+01	3.95E-01	7.48E+01	8.62E-04	7.15E-03	1.57E-02	1.72E-02	7.48E+01	7.48E+01	7.48E+01
Pleasure Craft U	U	N	NHH	NP	Total	Total	Total	1.31E+02	3.59E+00	1.47E+00	8.78E-05	2.36E-03	7.14E-05	1.01E-02	1.70E-07	9.70E-07	7.93E-06	5.08E-06	1.01E-02	1.01E-02	1.01E-02
Pleasure Craft U	U	N	NHH	NP	Total	Total	Total	1.26E+03	2.51E+02	1.62E+03	5.22E-02	1.80E+00	7.15E-02	1.26E+01	1.46E-04	1.21E-03	2.21E-03	3.02E-03	1.26E+01	1.26E+01	1.26E+01
Pleasure Craft U	U	N	NHH	NP	Total	Total	Total	5.38E+02	1.37E+02	6.83E+02	4.03E-02	6.05E-02	1.38E-01	7.32E+00	8.23E-05	3.60E-03	0.00E+00	3.63E-03	7.32E+00	7.32E+00	7.32E+00
Pleasure Craft U	U	N	NHH	NP	Total	Total	Total	2.66E+02	7.26E+00	4.01E+00	2.36E-04	3.55E-04	8.09E-04	4.30E-02	5.55E-07	2.08E-05	0.00E+00	2.13E-05	4.30E-02	4.30E-02	4.30E-02
Railyard Opera U	U	P	NHH	P	Total	Total	Total	1.38E-02	3.07E-02	4.55E-02	4.73E-07	3.27E-06	3.28E-06	4.98E-04	5.84E-09	2.31E-07	0.00E+00	4.27E-08	4.98E-04	4.98E-04	4.98E-04
Railyard Opera U	U	P	NHH	P	Total	Total	Total	6.88E-03	1.53E-02	3.77E-02	3.93E-07	2.71E-06	2.72E-06	4.13E-04	4.85E-09	1.92E-07	0.00E+00	3.54E-08	4.13E-04	4.13E-04	4.13E-04
Railyard Opera U	U	P	NHH	P	Total	Total	Total	2.06E-02	1.91E-02	5.94E-02	3.36E-07	3.37E-06	3.10E-06	6.53E-04	7.35E-09	1.39E-07	0.00E+00	3.03E-08	6.53E-04	6.53E-04	6.53E-04
Railyard Opera U	U	P	NHH	P	Total	Total	Total	6.88E-03	1.53E-02	4.14E-02	4.31E-07	2.97E-06	2.99E-06	4.54E-04	5.10E-09	2.10E-07	0.00E+00	3.89E-08	4.54E-04	4.54E-04	4.54E-04
Railyard Opera U	U	P	NHH	P	Total	Total	Total	6.88E-03	6.36E-03	4.03E-02	2.27E-07	2.28E-06	2.10E-06	4.42E-04	4.98E-09	9.41E-08	0.00E+00	2.05E-08	4.42E-04	4.42E-04	4.42E-04
Railyard Opera U	U	N	NHH	P	Total	Total	Total	6.88E-03	6.36E-03	2.53E-01	1.30E-06	5.45E-06	1.90E-05	2.79E-03	2.81E-08	4.36E-07	0.00E+00	1.17E-07	2.79E-03	2.79E-03	2.79E-03
Recreational EcU	U	N	NHH	NP	Total	Total	Total	1.66E+02	6.13E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Recreational EcU	U	N	NHH	NP	Total	Total	Total	1.42E+02	5.27E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Recreational EcU	U	N	NHH	NP	Total	Total	Total	1.16E+03	4.29E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Recreational EcU	U	N	NHH	NP	Total	Total	Total	5.55E+02	2.05E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Recreational EcU	U	N	NHH	P	Total	Total	Total	7.49E-01	1.18E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Recreational EcU	U	N	NHH	P	Total	Total	Total	3.53E+00	5.56E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Recreational EcU	U	N	NHH	P	Total	Total	Total	6.42E+00	1.01E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Recreational EcU	U	N	NHH	NP	Total	Total	Total	2.42E+02	8.96E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Recreational EcU	N	NHH	NP	Total	Total	Total	1.58E+02	5.83E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Recreational EcU	N	NHH	NP	Total	Total	Total	2.07E+02	7.68E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Recreational EcU	N	NHH	NP	Total	Total	Total	3.23E+02	1.20E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Recreational EcU	N	NHH	NP	Total	Total	Total	5.21E+02	1.93E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Recreational EcU	N	NHH	NP	Total	Total	Total	5.43E+02	2.01E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Recreational EcU	N	NHH	NP	Total	Total	Total	1.97E+02	7.31E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Recreational EcU	N	NHH	NP	Total	Total	Total	2.75E+03	1.02E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

DRAFT

Class	C/R	Pre	Hand	Port	County	Air Basin	Air Dist.	Population	Activity	Consumpti	ROG Exhal	CO Exhaus	NOX Exhal	CO2 Exhau	SO2 Exhau	PM Exhaus	N2O Exhal	CH4 Exhaust	Total emis:
Recreational EcU	N	NHH	NP	Total	Total	Total	1.24E+02	4.59E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Recreational EcU	N	NHH	NP	Total	Total	Total	4.13E+02	1.53E+03	5.80E+01	5.84E-02	9.13E-02	1.80E-05	1.94E-01	1.57E-04	7.08E-04	6.55E-05	3.63E-03		1.94E-01
Recreational EcU	N	NHH	NP	Total	Total	Total	3.56E+02	1.32E+03	4.99E+01	5.02E-02	7.85E-02	1.55E-05	1.67E-01	2.52E-04	6.10E-04	5.63E-05	3.12E-03		1.67E-01
Recreational EcU	N	NHH	NP	Total	Total	Total	2.90E+03	1.07E+04	4.06E+02	4.09E-01	6.39E-01	1.26E-04	1.36E+00	3.25E-03	4.96E-03	4.59E-04	2.54E-02		1.36E+00
Recreational EcU	N	NHH	NP	Total	Total	Total	1.38E+03	5.13E+03	1.94E+02	1.96E-01	3.06E-01	6.04E-05	6.49E-01	2.29E-03	2.37E-03	2.19E-04	1.22E-02		6.49E-01
Recreational EcU	N	NHH	P	Total	Total	Total	2.15E+00	3.39E-01	2.56E-01	1.49E-04	5.19E-04	1.23E-05	1.09E-03	1.90E-08	4.86E-06	1.05E-06	9.27E-06		1.09E-03
Recreational EcU	N	NHH	P	Total	Total	Total	1.01E+01	1.60E+00	2.30E+00	1.34E-03	4.65E-03	1.11E-04	9.77E-03	1.70E-07	4.35E-05	6.97E-06	8.30E-05		9.77E-03
Recreational EcU	N	NHH	P	Total	Total	Total	1.84E+01	2.91E+00	7.10E+00	4.09E-03	1.43E-02	3.45E-04	3.04E-02	5.30E-07	1.35E-04	1.69E-05	2.54E-04		3.04E-02
Recreational EcU	N	NHH	NP	Total	Total	Total	7.97E+02	2.95E+03	1.12E+02	1.13E-01	1.76E-01	3.48E-05	3.74E-01	3.73E-04	1.37E-03	1.26E-04	7.00E-03		3.74E-01
Recreational EcU	N	NHH	NP	Total	Total	Total	5.19E+02	1.92E+03	7.28E+01	7.33E-02	1.15E-01	2.26E-05	2.43E-01	3.32E-04	8.90E-04	8.22E-05	4.56E-03		2.43E-01
Recreational EcU	N	NHH	NP	Total	Total	Total	6.83E+02	2.53E+03	9.59E+01	9.65E-02	1.51E-01	2.98E-05	3.20E-01	5.74E-04	1.17E-03	1.08E-04	6.00E-03		3.20E-01
Recreational EcU	N	NHH	NP	Total	Total	Total	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Recreational EcU	N	NHH	NP	Total	Total	Total	4.22E+02	7.67E+01	2.82E+01	1.02E-03	7.71E-02	7.85E-04	1.47E-01	6.07E-06	5.54E-05	1.21E-04	6.32E-05		1.47E-01
Recreational EcU	N	NHH	NP	Total	Total	Total	8.06E+02	2.98E+03	5.53E+01	3.94E-03	8.96E-02	1.80E-03	3.78E-01	3.06E-04	1.97E-04	1.02E-03	2.25E-04		3.78E-01
Recreational EcU	N	NHH	NP	Total	Total	Total	1.30E+03	4.81E+03	8.92E+01	6.35E-03	1.44E-01	2.90E-03	6.10E-01	9.22E-04	3.18E-04	1.64E-03	3.63E-04		6.10E-01
Recreational EcU	N	NHH	NP	Total	Total	Total	1.35E+03	5.02E+03	9.29E+01	6.62E-03	1.51E-01	3.02E-03	6.35E-01	1.52E-03	3.32E-04	1.71E-03	3.78E-04		6.35E-01
Recreational EcU	N	NHH	NP	Total	Total	Total	6.51E+02	2.41E+03	4.50E+01	3.34E-03	7.41E-02	1.90E-03	3.05E-01	3.04E-04	1.59E-04	9.47E-04	1.91E-04		3.05E-01
Recreational EcU	N	NHH	NP	Total	Total	Total	9.05E+03	3.35E+04	6.26E+02	4.65E-02	1.03E+00	2.64E-02	4.24E+00	5.79E-03	2.22E-03	1.32E-02	2.66E-03		4.24E+00
Recreational EcU	N	NHH	NP	Total	Total	Total	4.09E+02	1.51E+03	2.83E+01	2.10E-03	4.66E-02	1.19E-03	1.92E-01	3.43E-04	1.00E-04	5.95E-04	1.20E-04		1.92E-01
Recreational EcU	N	NHH	NP	Total	Total	Total	2.10E+02	7.94E+01	1.77E+01	1.16E-02	7.41E-02	2.92E-04	1.01E-02	3.22E-06	3.17E-04	7.12E-05	6.72E-04		1.01E-02
Recreational EcU	N	NHH	NP	Total	Total	Total	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Recreational EcU	N	NHH	NP	Total	Total	Total	1.31E+01	2.37E+00	6.20E-01	4.64E-05	1.62E-03	1.17E-05	3.26E-03	1.13E-07	7.74E-06	2.48E-06	2.68E-06		3.26E-03
Recreational EcU	N	NHH	NP	Total	Total	Total	1.77E+02	3.22E+01	1.24E+01	4.59E-04	3.56E-02	3.42E-04	6.19E-02	1.76E-06	2.33E-05	5.09E-05	2.65E-05		6.19E-02
Recreational EcU	N	NHH	NP	Total	Total	Total	9.72E+01	1.77E+01	1.90E+01	7.02E-04	5.63E-02	4.90E-04	9.23E-02	2.34E-06	3.47E-05	4.66E-05	4.06E-05		9.23E-02
Transport Refri U	N	NHH	NP	Total	Total	Total	5.53E+01	1.14E+02	6.53E+01	3.66E-03	1.87E-01	2.66E-03	3.23E-01	9.21E-06	1.81E-04	2.73E-04	2.11E-04		3.23E-01
Transport Refri U	N	NHH	NP	Total	Total	Total	1.07E+02	3.06E+02	1.12E+02	1.27E-03	7.49E-03	8.94E-03	1.23E+00	1.56E-05	3.50E-04	0.00E+00	1.15E-04		1.23E+00
Transport Refri U	N	NHH	NP	Total	Total	Total	3.41E+01	9.72E+01	6.03E+01	7.99E-04	2.73E-03	5.05E-03	6.62E-01	8.41E-06	1.89E-04	0.00E+00	7.21E-05		6.62E-01
Transport Refri U	N	NHH	NP	Total	Total	Total	8.31E+02	3.34E+03	3.96E+03	3.27E-02	3.41E-01	2.67E-01	4.33E+01	5.59E-04	4.40E-03	0.00E+00	2.95E-03		4.33E+01

Region	Calendar Yr	Vehicle Category	Model Year	Horsepower	Fuel	HC_tpd	ROG_tpd	TOG_tpd	CO_tpd	NOx_tpd	CO2_tpd	PM10_tpd	PM2.5_tpd	SOx_tpd	NH3_tpd	Fuel Consu	Total_Activ	Total_Popu	Horsepower	
San Bernar	2030	Agricultura	Agricultura	Aggregate	Aggregate	Gasoline	1.1E-05	1.3E-05	1.6E-05	0.00019	1.1E-05	0.00274	4E-07	3.7E-07	2.5E-08	2.2E-08	88.7489	793.802	0.42187	2368.47
San Bernar	2030	Agricultura	Agricultura	Aggregate	Aggregate	Diesel	0.03765	0.04555	0.05421	0.28687	0.24995	54.5052	0.01514	0.01393	0.0005	0.00044	1766458	98388	828.445	6.7E+07
San Bernar	2030	Agricultura	Agricultura	Aggregate	Aggregate	Gasoline	0.00716	0.00866	0.01031	0.11275	0.00508	1.57883	0.00041	0.00038	1.4E-05	1.3E-05	51168.3	5144.05	138.382	1638653
San Bernar	2030	Agricultura	Agricultura	Aggregate	Aggregate	Diesel	0.0004	0.00049	0.00058	0.00484	0.00413	0.75652	0.00011	0.0001	6.9E-06	6.2E-06	24518	8056.62	52.7795	1052333
San Bernar	2030	Agricultura	Agricultura	Aggregate	Aggregate	Electric	0	0	0	0	0	0	0	0	0	0	0	474.36	11.7055	68220
San Bernar	2030	Agricultura	Agricultura	Aggregate	Aggregate	Diesel	3.5E-05	4.2E-05	5E-05	0.00036	0.00032	0.06457	1.6E-05	1.5E-05	5.9E-07	5.3E-07	2092.51	2062.97	0.59308	79823.1
San Bernar	2030	Agricultura	Agricultura	Aggregate	Aggregate	Diesel	1.1E-06	1.4E-06	1.6E-06	9.6E-06	1.1E-05	0.00159	4.6E-07	4.2E-07	1.4E-08	1.3E-08	51.4953	56.1307	0.0295	1767
San Bernar	2030	Agricultura	Agricultura	Aggregate	Aggregate	Diesel	0.00062	0.00075	0.00089	0.00455	0.0054	1.56892	0.00024	0.00022	1.4E-05	1.3E-05	50847.2	5447.98	6.81874	2185648
San Bernar	2030	Agricultura	Agricultura	Aggregate	Aggregate	Diesel	0.00039	0.00047	0.00056	0.0047	0.0036	0.8785	0.00018	0.00017	8E-06	7.2E-06	28471.3	7226.24	16.7213	1333041
San Bernar	2030	Agricultura	Agricultura	Aggregate	Aggregate	Diesel	5.5E-06	6.7E-06	8E-06	3.9E-05	5.5E-05	0.01515	2.1E-06	2E-06	1.4E-07	1.2E-07	490.863	395.27	0.06706	21099.6
San Bernar	2030	Agricultura	Agricultura	Aggregate	Aggregate	Diesel	0.0005	0.00061	0.00072	0.00432	0.00442	1.24583	0.0002	0.00018	1.1E-05	1E-05	40376.2	2936.97	3.21152	1735555
San Bernar	2030	Agricultura	Agricultura	Aggregate	Aggregate	Diesel	0.0006	0.00073	0.00087	0.00512	0.00475	0.8119	0.00024	0.00022	7.4E-06	6.6E-06	26313	19283.2	20.7434	1136201
San Bernar	2030	Agricultura	Agricultura	Aggregate	Aggregate	Diesel	0.00012	0.00015	0.00018	0.00136	0.00107	0.27056	5.2E-05	4.8E-05	2.5E-06	2.2E-06	8768.44	3279.23	3.4861	398086
San Bernar	2030	Agricultura	Agricultura	Aggregate	Aggregate	Diesel	0.00106	0.00128	0.00153	0.00859	0.00762	1.4195	0.00047	0.00043	1.3E-05	1.2E-05	46004.5	19489.2	29.4176	1852780
San Bernar	2030	Agricultura	Agricultura	Aggregate	Aggregate	Diesel	0.0005	0.00061	0.00072	0.00443	0.00426	0.98564	0.00023	0.00021	9E-06	8E-06	31943.5	12386.9	10.5674	1336190
San Bernar	2030	Agricultura	Agricultura	Aggregate	Aggregate	Diesel	0.00149	0.00181	0.00215	0.01172	0.01304	2.19617	0.00068	0.00063	2E-05	1.8E-05	71175.5	14255	42.4666	3050328
San Bernar	2030	Agricultura	Agricultura	Aggregate	Aggregate	Diesel	0.00038	0.00046	0.00055	0.00297	0.00294	0.7501	0.00017	0.00016	6.8E-06	6.1E-06	24310	7114.71	7.22657	930786
San Bernar	2030	Airport Grc	Airport Grc	Aggregate	Aggregate	Diesel	0.00019	0.00023	0.00028	0.00368	0.00212	0.74805	9.3E-05	8.5E-05	6.9E-06	6.1E-06	24269.7	6596.57	19.3681	874802
San Bernar	2030	Airport Grc	Airport Grc	Aggregate	Aggregate	Diesel	0.00016	0.00019	0.00023	0.00197	0.00155	0.78218	6.1E-05	5.6E-05	7.2E-06	6.4E-06	25376.8	3747.12	9.15966	914457
San Bernar	2030	Airport Grc	Airport Grc	Aggregate	Aggregate	Diesel	0.00018	0.00022	0.00026	0.00332	0.00188	0.46048	4.7E-05	4.3E-05	4.3E-06	3.8E-06	14939.8	10450.5	13.7745	778094
San Bernar	2030	Airport Grc	Airport Grc	Aggregate	Aggregate	Diesel	0.00015	0.00018	0.00021	0.00179	0.00139	0.24954	9.1E-05	8.3E-05	2.3E-06	2E-06	8095.93	6304.07	11.8866	463167
San Bernar	2030	Airport Grc	Airport Grc	Aggregate	Aggregate	Diesel	2.3E-05	2.8E-05	3.4E-05	0.00032	0.00021	0.09548	1.1E-05	1E-05	8.8E-07	7.8E-07	3097.82	1114.78	2.44724	161575
San Bernar	2030	Airport Grc	Airport Grc	Aggregate	Aggregate	Diesel	0.00017	0.00021	0.00025	0.00444	0.00185	0.79925	5.2E-05	4.8E-05	7.4E-06	6.5E-06	25930.9	12765.6	26.1505	1495301
San Bernar	2030	Airport Grc	Airport Grc	Aggregate	Aggregate	Diesel	0.00024	0.00029	0.00035	0.00349	0.00224	0.65214	8.7E-05	8E-05	6E-06	5.3E-06	21158.1	11994.3	17.3404	1128295
San Bernar	2030	Airport Grc	Airport Grc	Aggregate	Aggregate	Diesel	0.00011	0.00013	0.00016	0.00143	0.00117	0.25808	6.5E-05	5.9E-05	2.4E-06	2.1E-06	8373.25	7419.04	18.9486	800580
San Bernar	2030	Airport Grc	Airport Grc	Aggregate	Aggregate	Diesel	5E-05	6E-05	7.1E-05	0.00135	0.00066	0.24818	1.3E-05	1.2E-05	2.3E-06	2E-06	8052.07	4861.82	11.3272	460163
San Bernar	2030	Airport Grc	Airport Grc	Aggregate	Aggregate	Gasoline	0.0004	0.00037	0.00044	0.02803	0.00259	0.72976	5.2E-05	4E-05	7.2E-06	1E-05	29324.1	3076.95	4.23	400004
San Bernar	2030	Airport Grc	Airport Grc	Aggregate	Aggregate	Gasoline	0.00021	0.00019	0.00023	0.0217	0.002	0.63667	4.7E-05	3.5E-05	6.5E-06	8.9E-06	25404	719.05	1.39	359525
San Bernar	2030	Airport Grc	Airport Grc	Aggregate	Aggregate	Gasoline	1.5E-07	1.4E-07	1.6E-07	2E-05	1.9E-06	0.00065	4.7E-08	3.5E-08	6.5E-09	1.3E-09	3.65	0	0.14	0
San Bernar	2030	Airport Grc	Airport Grc	Aggregate	Aggregate	Nat Gas	0	0	7.2E-08	8.7E-05	8.5E-06	0.00351	0	0	0	0	178.85	0	0.79	0
San Bernar	2030	Airport Grc	Airport Grc	Aggregate	Aggregate	Gasoline	1.6E-05	1.4E-05	1.7E-05	0.00193	0.00018	0.06184	4.4E-06	3.3E-06	6.1E-07	8.6E-07	2441.85	233.6	3.07	30368
San Bernar	2030	Airport Grc	Airport Grc	Aggregate	Aggregate	Gasoline	0.00348	0.00321	0.00383	0.2577	0.02103	6.44297	0.00045	0.00034	6.2E-05	9.1E-05	259559	50081.6	57.06	5008165
San Bernar	2030	Airport Grc	Airport Grc	Aggregate	Aggregate	Nat Gas	0	0	0.0001	0.04693	0.00481	1.05832	0	0	0	0	58812.5	9438.9	11.37	943890
San Bernar	2030	Airport Grc	Airport Grc	Aggregate	Aggregate	Gasoline	0.00085	0.00078	0.00093	0.06351	0.00507	1.53634	0.00011	8.1E-05	1.5E-05	2.2E-05	62013.5	21896.4	26.99	1313781
San Bernar	2030	Airport Grc	Airport Grc	Aggregate	Aggregate	Nat Gas	0	0	7.3E-06	0.00401	0.00039	0.10202	0	0	0	0	5624.65	1660.75	3	99645
San Bernar	2030	Airport Grc	Airport Grc	Aggregate	Aggregate	Gasoline	0.00056	0.00052	0.00062	0.04142	0.00338	1.03549	7.2E-05	5.5E-05	1E-05	1.5E-05	41719.5	8048.25	9.15	804825
San Bernar	2030	Airport Grc	Airport Grc	Aggregate	Aggregate	Nat Gas	0	0	1.4E-06	0.00092	8.4E-05	0.02553	0	0	0	0	1397.95	226.3	0.25	22630
San Bernar	2030	Airport Grc	Airport Grc	Aggregate	Aggregate	Gasoline	0.00023	0.00021	0.00026	0.01747	0.0014	0.42386	3E-05	2.2E-05	4.1E-06	6E-06	17103.9	5172.05	7.22	362044
San Bernar	2030	Airport Grc	Airport Grc	Aggregate	Aggregate	Nat Gas	0	0	1E-05	0.00432	0.00046	0.08997	0	0	0	0	5029.7	1266.55	1.23	88658.5
San Bernar	2030	Airport Grc	Airport Grc	Aggregate	Aggregate	Gasoline	0.00641	0.00589	0.00705	0.62094	0.03208	7.20155	0.0005	0.00038	5.9E-05	0.00011	310301	60024.2	44.42	5702304
San Bernar	2030	Airport Grc	Airport Grc	Aggregate	Aggregate	Nat Gas	0	0	3.5E-06	0.00337	0.00032	0.12849	0	0	0	0	6938.65	748.25	4.82	116428
San Bernar	2030	Airport Grc	Airport Grc	Aggregate	Aggregate	Gasoline	0.00081	0.00074	0.00089	0.04986	0.00456	1.15965	8.6E-05	6.5E-05	1E-05	1.6E-05	46939	4945.75	4.88	1008438
San Bernar	2030	Airport Grc	Airport Grc	Aggregate	Aggregate	Nat Gas	0	0	3.6E-06	0.00264	0.00024	0.08881	0	0	0	0	4814.35	397.85	0.9	81559.3
San Bernar	2030	Airport Grc	Airport Grc	Aggregate	Aggregate	Gasoline	5.7E-06	5.2E-06	6.2E-06	0.00023	4.2E-05	0.01586	1.1E-06	8.4E-07	1.5E-07	2.2E-07	620.5	62.05	3.51	5770.65
San Bernar	2030	Airport Grc	Airport Grc	Aggregate	Aggregate	Gasoline	0.00024	0.00022	0.00027	0.02267	0.00056	0.17536	1.2E-05	9.1E-06	2.1E-06	2.8E-06	8019.05	4942.1	6.79	247105

San Bernar	2030	Airport Grc	Airport Grc	Aggregate	Aggregate	Nat Gas	0	0	1.6E-05	0.00438	0.00118	0.35344	0	0	0	0	18691.6	11566.9	15.89	578343
San Bernar	2030	Airport Grc	Airport Grc	Aggregate	Aggregate	Gasoline	1.6E-06	1.4E-06	1.7E-06	0.00021	2E-05	0.00684	4.9E-07	3.7E-07	6.8E-08	9.6E-08	273.75	91.25	4.23	11862.5
San Bernar	2030	Airport Grc	Airport Grc	Aggregate	Aggregate	Nat Gas	0	0	9.9E-07	0.00067	6.1E-05	0.0215	0	0	0	0	1164.35	295.65	0.5	41391
San Bernar	2030	Airport Grc	Airport Grc	Aggregate	Aggregate	Gasoline	5.5E-05	5E-05	6E-05	0.00479	0.00027	0.06047	4.2E-06	3.2E-06	5E-07	9E-07	2580.55	306.6	0.29	32806.2
San Bernar	2030	Airport Grc	Airport Grc	Aggregate	Aggregate	Gasoline	0.00036	0.00033	0.0004	0.03677	0.00336	1.09124	7.8E-05	5.9E-05	1.1E-05	1.5E-05	43511.7	4266.85	5.35	640028
San Bernar	2030	Airport Grc	Airport Grc	Aggregate	Aggregate	Gasoline	0.00111	0.00102	0.00122	0.0578	0.00518	1.20667	8.7E-05	6.5E-05	1E-05	1.7E-05	49249.5	6230.55	4.07	757012
San Bernar	2030	Airport Grc	Airport Grc	Aggregate	Aggregate	Gasoline	0.0003	0.00028	0.00033	0.02273	0.00201	0.58699	4.2E-05	3.2E-05	5.8E-06	8.3E-06	23597.2	7942.4	6.54	1032512
San Bernar	2030	Airport Grc	Airport Grc	Aggregate	Aggregate	Nat Gas	0	0	4.6E-07	0.00035	3.3E-05	0.01226	0	0	0	0	660.65	178.85	0.49	23250.5
San Bernar	2030	Airport Grc	Airport Grc	Aggregate	Aggregate	Gasoline	0.0003	0.00028	0.00033	0.02115	0.00175	0.52531	3.7E-05	2.8E-05	5.1E-06	7.4E-06	21184.6	4489.5	11.9	448950
San Bernar	2030	Airport Grc	Airport Grc	Aggregate	Aggregate	Nat Gas	0	0	8.2E-07	0.00055	5.1E-05	0.01555	0	0	0	0	854.1	153.3	0.46	15330
San Bernar	2030	Airport Grc	Airport Grc	Aggregate	Aggregate	Gasoline	0.00021	0.00019	0.00023	0.01923	0.00175	0.55702	4E-05	3E-05	5.5E-06	7.8E-06	22235.8	3759.5	8.4	488735
San Bernar	2030	Airport Grc	Airport Grc	Aggregate	Aggregate	Gasoline	0.00016	0.00015	0.00018	0.01323	0.00036	0.13409	9.2E-06	7E-06	1.6E-06	2.1E-06	5887.45	2263	12.37	113150
San Bernar	2030	Airport Grc	Airport Grc	Aggregate	Aggregate	Nat Gas	0	0	1.4E-05	0.00206	0.00056	0.12125	0	0	0	0	6471.45	2372.5	2.34	118625
San Bernar	2030	Airport Grc	Airport Grc	Aggregate	Aggregate	Gasoline	5.4E-05	5E-05	6E-05	0.00583	0.00055	0.17986	1.3E-05	9.7E-06	1.6E-06	2.5E-06	7157.65	1069.45	5.69	133788
San Bernar	2030	Airport Grc	Airport Grc	Aggregate	Aggregate	Nat Gas	0	0	9.9E-09	1.2E-05	1.2E-06	0.00049	0	0	0	0	3.65	0	0.17	0
San Bernar	2030	Airport Grc	Airport Grc	Aggregate	Aggregate	Gasoline	0.00099	0.00091	0.00109	0.0661	0.00609	1.616	0.00012	9E-05	1.7E-05	2.3E-05	65200	20305	24.13	3654891
San Bernar	2030	Airport Grc	Airport Grc	Aggregate	Aggregate	Nat Gas	0	0	1.4E-05	0.00802	0.00068	0.22563	0	0	0	0	12369.8	3087.9	2.36	555822
San Bernar	2030	Airport Grc	Airport Grc	Aggregate	Aggregate	Gasoline	7.2E-06	6.6E-06	7.9E-06	0.0005	4.2E-05	0.01266	8.8E-07	6.7E-07	1E-07	1.8E-07	514.65	186.15	0.53	9921.8
San Bernar	2030	Airport Grc	Airport Grc	Aggregate	Aggregate	Nat Gas	0	0	1.1E-07	3.2E-05	8.8E-06	0.00268	0	0	0	0	142.35	54.75	0.16	2463.75
San Bernar	2030	Airport Grc	Airport Grc	Aggregate	Aggregate	Gasoline	1.6E-05	1.5E-05	1.8E-05	0.00152	0.00014	0.04492	3.2E-06	2.4E-06	4.5E-07	6.3E-07	1795.8	660.65	2.13	99097.5
San Bernar	2030	Airport Grc	Airport Grc	Aggregate	Aggregate	Diesel	0.00051	0.00062	0.00074	0.00817	0.00519	1.77679	0.00018	0.00017	1.6E-05	1.5E-05	57646.1	30335.6	61.4606	3276411
San Bernar	2030	Airport Grc	Airport Grc	Aggregate	Aggregate	Diesel	2.6E-06	3.2E-06	3.8E-06	4.1E-05	4.1E-05	0.00858	1.6E-06	1.4E-06	7.9E-08	7E-08	278.311	191.37	3.84566	13307.9
San Bernar	2030	Cargo Hanc	Cargo Hanc	Aggregate	Aggregate	Diesel	0.00014	0.00017	0.0002	0.00342	0.00144	0.69095	2.4E-05	2.3E-05	6.4E-06	5.6E-06	22417.1	4365.74	10.9479	734397
San Bernar	2030	Cargo Hanc	Cargo Hanc	Aggregate	Aggregate	Diesel	0.00035	0.00043	0.00051	0.00994	0.00091	1.5412	3.7E-05	3.4E-05	1.4E-05	1.3E-05	50002.7	19525	5.55903	3221621
San Bernar	2030	Cargo Hanc	Cargo Hanc	Aggregate	Aggregate	Diesel	0.0021	0.00254	0.00302	0.01718	0.00899	8.1304	0.0002	0.00018	7.5E-05	6.6E-05	263782	80243.7	20.1029	2.5E+07
San Bernar	2030	Cargo Hanc	Cargo Hanc	Aggregate	Aggregate	Diesel	0.00491	0.00594	0.00707	0.27826	0.01861	46.0088	0.0008	0.00074	0.00043	0.00038	1492704	438375	95.4112	7.4E+07
San Bernar	2030	Commerci	Commerci	Aggregate	Aggregate	Diesel	0.00036	0.00043	0.00051	0.00125	0.00325	0.20802	0.00017	0.00017	0	0	6748.15	1578.7	1.58345	130433
San Bernar	2030	Constructic	Constructic	Aggregate	Aggregate	Diesel	0.0014	0.00169	0.00201	0.02276	0.01636	7.79681	0.00052	0.00048	7.2E-05	6.4E-05	252959	44078.7	117.192	9746182
San Bernar	2030	Constructic	Constructic	Aggregate	Aggregate	Diesel	0.00624	0.00756	0.00899	0.06851	0.06518	18.4372	0.00294	0.0027	0.00017	0.00015	598173	173696	352.563	4E+07
San Bernar	2030	Constructic	Constructic	Aggregate	Aggregate	Diesel	0.01444	0.01747	0.02079	0.17145	0.14331	45.5337	0.00665	0.00612	0.00042	0.00037	1477290	313745	649.416	6.7E+07
San Bernar	2030	Constructic	Constructic	Aggregate	Aggregate	Diesel	0.017	0.02057	0.02448	0.2832	0.13791	82.0391	0.00442	0.00407	0.00076	0.00067	2661667	849714	1262.22	1.3E+08
San Bernar	2030	Constructic	Constructic	Aggregate	Aggregate	Diesel	0.01039	0.01257	0.01496	0.11143	0.09646	30.8198	0.00407	0.00374	0.00028	0.00025	999913	251019	408.054	4.7E+07
San Bernar	2030	Constructic	Constructic	Aggregate	Aggregate	Gasoline	0.00024	0.00022	0.00026	0.0159	0.00034	0.1495	4.1E-05	3.1E-05	1.7E-06	2.3E-06	6624.92	2244.75	6.50351	94589.7
San Bernar	2030	Constructic	Constructic	Aggregate	Aggregate	Gasoline	8.3E-05	7.8E-05	9.1E-05	0.00428	0.0002	0.13226	1.7E-05	1.3E-05	1.3E-06	1.8E-06	5235.43	777.45	8.25142	67882.7
San Bernar	2030	Constructic	Constructic	Aggregate	Aggregate	Diesel	6.3E-06	7.6E-06	9.1E-06	2.8E-05	4.8E-05	1.1E-07	1.6E-06	1.2E-06	6.9E-10	5.9E-10	2.35713	0	0.38499	0
San Bernar	2030	Constructic	Constructic	Aggregate	Aggregate	Gasoline	0.00103	0.00104	0.00114	0.03158	0.00068	1.2E-06	0.0003	0.00023	5.1E-07	7.1E-07	1985.64	0	109.364	0
San Bernar	2030	Constructic	Constructic	Aggregate	Aggregate	Diesel	7.6E-06	9.2E-06	1.1E-05	4.5E-05	5.7E-05	1.4E-07	2E-06	1.5E-06	9.9E-10	8.5E-10	3.40085	0	2.62966	0
San Bernar	2030	Constructic	Constructic	Aggregate	Aggregate	Gasoline	0.00111	0.0011	0.00123	0.04501	0.0011	0.353	0.00036	0.00027	4.3E-06	5.7E-06	16151.7	4161	22.1091	192592
San Bernar	2030	Constructic	Constructic	Aggregate	Aggregate	Diesel	3.6E-05	4.3E-05	5.3E-05	0.00053	0.00041	0.0707	5.5E-06	5E-06	9.1E-07	5.9E-07	2358.28	1711.85	3.00909	56491
San Bernar	2030	Constructic	Constructic	Aggregate	Aggregate	Gasoline	0.00011	0.0001	0.00013	0.00796	0.00025	0.11758	8.2E-06	6.2E-06	1.2E-06	1.7E-06	4920.2	1664.4	3.92	104956
San Bernar	2030	Constructic	Constructic	Aggregate	Aggregate	Gasoline	5.7E-06	5.7E-06	6.3E-06	0.0002	4E-06	7.6E-09	2.5E-06	1.9E-06	3.1E-09	4.3E-09	12.3438	0	0.08759	0
San Bernar	2030	Constructic	Constructic	Aggregate	Aggregate	Gasoline	0.00156	0.00145	0.00172	0.05639	0.00116	0.10353	0.00067	0.0005	2.9E-06	2.6E-06	7482.85	20801.4	147.126	186208
San Bernar	2030	Constructic	Constructic	Aggregate	Aggregate	Diesel	7.7E-07	9.2E-07	1.1E-06	3.2E-06	5.8E-06	1.3E-08	2E-07	1.5E-07	8E-11	6.9E-11	0.27473	0	0.11104	0
San Bernar	2030	Constructic	Constructic	Aggregate	Aggregate	Diesel	5.5E-06	6.6E-06	7.9E-06	2.2E-05	4.2E-05	9.6E-08	1.4E-06	1.1E-06	5.7E-10	4.9E-10	1.95744	0	0.174	0
San Bernar	2030	Constructic	Constructic	Aggregate	Aggregate	Gasoline	7.2E-05	6.6E-05	7.9E-05	0.00606	0.00024	0.18874	1.4E-05	1E-05	1.9E-06	2.6E-06	7508.05	1368.75	3.84541	172462
San Bernar	2030	Constructic	Constructic	Aggregate	Aggregate	Diesel	0.00028	0.00033	0.0004	0.00196	0.00251	0.325	9.7E-05	8.8E-05	4.9E-06	2.7E-06	10844.2	22484	34.2844	305301
San Bernar	2030	Constructic	Constructic	Aggregate	Aggregate	Diesel	1.5E-06	1.7E-06	2.1E-06	6E-06	1.1E-05	2.5E-08	3.7E-07	2.8E-07	1.5E-10	1.3E-10	0.5184	0	0.06903	0
San Bernar	2030	Constructic	Constructic	Aggregate	Aggregate	Gasoline	0.00197	0.00197	0.00216	0.06316	0.00148	0.13471	0.0006	0.00045	2.4E-06	3.2E-06	9057.73	2259.35	90.5133	96827.2

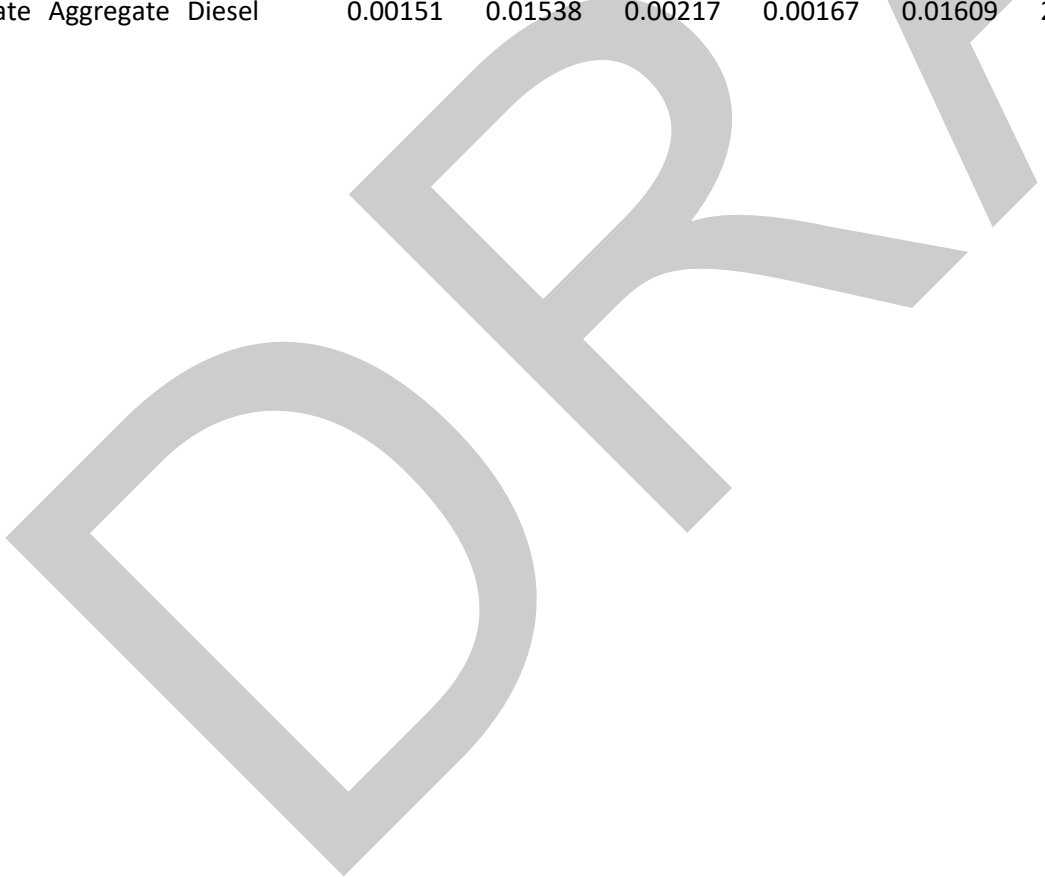
San Bernar	2030	Constructic	Constructic	Aggregate	Aggregate	Diesel	2.4E-06	2.9E-06	3.5E-06	1E-05	1.9E-05	4.3E-08	6.2E-07	4.7E-07	2.5E-10	2.2E-10	0.87367	0	0.17026	0
San Bernar	2030	Constructic	Constructic	Aggregate	Aggregate	Gasoline	0.01188	0.011	0.01307	0.37864	0.00831	0.69531	0.004	0.00302	2.2E-05	1.8E-05	50651.4	158826	862.291	974740
San Bernar	2030	Constructic	Constructic	Aggregate	Aggregate	Diesel	8.3E-05	9.9E-05	0.00012	0.00062	0.00074	0.09608	2.9E-05	2.6E-05	1.5E-06	8.1E-07	3214.45	16271.7	28.6213	130174
San Bernar	2030	Constructic	Constructic	Aggregate	Aggregate	Gasoline	0.00089	0.00085	0.00097	0.05179	0.00135	0.42439	0.00017	0.00013	4.5E-06	6.8E-06	19279.5	4734.05	15.4325	292361
San Bernar	2030	Constructic	Constructic	Aggregate	Aggregate	Diesel	3.6E-05	4.3E-05	5.2E-05	0.00019	0.00027	6.5E-07	9.4E-06	7.1E-06	4.4E-09	3.8E-09	15.0239	0	4.60173	0
San Bernar	2030	Constructic	Constructic	Aggregate	Aggregate	Gasoline	0.00069	0.00063	0.00076	0.04195	0.00175	0.85103	5.9E-05	4.5E-05	8.3E-06	1.2E-05	34704.2	6752.5	16.4	564531
San Bernar	2030	Constructic	Constructic	Aggregate	Aggregate	Gasoline	0.00038	0.00035	0.00042	0.02667	0.00092	0.44284	3.1E-05	2.3E-05	4.4E-06	6.4E-06	18396	5172.05	10.0411	350663

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Region	Calendar Year	Vehicle Category	Model Year	Horsepower	Fuel	HC_tpd	ROG_tpd	TOG_tpd	CO_tpd	NOx_tpd	CO2_tpd	PM10_tpd	PM2.5_tpd	SOx_tpd	NH3_tpd	Fuel Consu	Total_Activ	Total_Popu	Horsepower	
San Bernar	2030	Constructic	Constructic	Aggregate	Aggregate	Diesel	9.9E-07	1.2E-06	1.4E-06	4E-06	7.5E-06	1.7E-08	2.5E-07	1.9E-07	1E-10	8.9E-11	0.3525	0	0.04439	0
San Bernar	2030	Constructic	Constructic	Aggregate	Aggregate	Gasoline	0.0003	0.00028	0.00033	0.01222	0.00024	0.02042	0.00016	0.00012	6E-07	5.4E-07	1546.01	2653.55	10.4971	20746.6
San Bernar	2030	Constructic	Constructic	Aggregate	Aggregate	Diesel	0.00131	0.00156	0.00189	0.00991	0.01174	1.5329	0.00045	0.00041	2.4E-05	1.3E-05	51141.9	178463	251.353	1090354
San Bernar	2030	Constructic	Constructic	Aggregate	Aggregate	Gasoline	0.00143	0.00137	0.00158	0.07774	0.00211	1.21546	0.00028	0.00021	1.3E-05	1.8E-05	50779.7	17833.9	63.2434	890775
San Bernar	2030	Constructic	Constructic	Aggregate	Aggregate	Diesel	0.00028	0.00034	0.0004	0.00114	0.00212	4.9E-06	7.1E-05	5.4E-05	2.9E-08	2.5E-08	99.6678	0	17.6745	0
San Bernar	2030	Constructic	Constructic	Aggregate	Aggregate	Gasoline	0.001	0.00101	0.0011	0.02599	0.00072	1E-06	0.00031	0.00023	4.2E-07	5.8E-07	1653.09	0	20.9561	0
San Bernar	2030	Constructic	Constructic	Aggregate	Aggregate	Gasoline	0.00158	0.00146	0.00174	0.07303	0.00135	0.13142	0.00104	0.00079	5.3E-06	3.3E-06	9547.55	43646.7	252.237	184186
San Bernar	2030	Constructic	Constructic	Aggregate	Aggregate	Gasoline	0.00023	0.00021	0.00025	0.01607	0.0006	0.28606	2E-05	1.5E-05	2.8E-06	4.1E-06	11807.8	4047.85	4.70931	255015
San Bernar	2030	Constructic	Constructic	Aggregate	Aggregate	Diesel	2.6E-05	3.2E-05	3.8E-05	0.00011	0.0002	4.6E-07	6.7E-06	5.1E-06	2.7E-09	2.4E-09	9.39689	0	1.2829	0
San Bernar	2030	Constructic	Constructic	Aggregate	Aggregate	Gasoline	0.00169	0.00161	0.00186	0.10731	0.00223	0.77927	0.00031	0.00024	9E-06	1.3E-05	36086.1	12862.6	38.241	501116
San Bernar	2030	Constructic	Constructic	Aggregate	Aggregate	Diesel	3.3E-05	3.9E-05	4.7E-05	0.00015	0.00025	5.8E-07	8.4E-06	6.4E-06	3.7E-09	3.1E-09	12.5296	0	1.97421	0
San Bernar	2030	Constructic	Constructic	Aggregate	Aggregate	Diesel	0.0048	0.00581	0.00691	0.07212	0.03945	17.3626	0.00129	0.00119	0.00016	0.00014	563310	199193	287.341	2.5E+07
San Bernar	2030	Constructic	Constructic	Aggregate	Aggregate	Diesel	0.0284	0.03437	0.0409	0.25832	0.26994	104.368	0.00683	0.00629	0.00096	0.00085	3386117	423974	300.74	1.7E+08
San Bernar	2030	Constructic	Constructic	Aggregate	Aggregate	Diesel	0.0067	0.00811	0.00965	0.08471	0.06695	23.2582	0.00286	0.00263	0.00021	0.00019	754585	202561	434.864	3.5E+07
San Bernar	2030	Constructic	Constructic	Aggregate	Aggregate	Diesel	0.00143	0.00173	0.00206	0.02563	0.01387	5.46871	0.00065	0.0006	5.1E-05	4.5E-05	177426	63646.5	154.341	8239103
San Bernar	2030	Constructic	Constructic	Aggregate	Aggregate	Diesel	0.0008	0.00097	0.00116	0.01415	0.00806	3.18266	0.00031	0.00028	2.9E-05	2.6E-05	103258	42481.5	87.4483	5588977
San Bernar	2030	Constructic	Constructic	Aggregate	Aggregate	Diesel	0.00477	0.00577	0.00686	0.0839	0.04893	14.1862	0.0019	0.00175	0.00013	0.00012	460257	288682	804.569	2.3E+07
San Bernar	2030	Constructic	Constructic	Aggregate	Aggregate	Diesel	0.00276	0.00334	0.00397	0.09078	0.0427	15.4041	0.00103	0.00095	0.00014	0.00013	499769	238644	810.543	2.4E+07
San Bernar	2030	Constructic	Constructic	Aggregate	Aggregate	Diesel	0.00469	0.00567	0.00675	0.04769	0.04812	9.07228	0.00222	0.00204	8.4E-05	7.4E-05	294340	57568.7	71.6622	1.4E+07
San Bernar	2030	Constructic	Constructic	Aggregate	Aggregate	Diesel	0.03574	0.04324	0.05146	0.43749	0.25634	125.317	0.01	0.0092	0.00116	0.00102	4065779	1075166	1050.51	2.2E+08
San Bernar	2030	Constructic	Constructic	Aggregate	Aggregate	Diesel	0.02408	0.02914	0.03468	0.24983	0.22569	81.563	0.0095	0.00874	0.00075	0.00067	2646221	288468	590.229	1.1E+08
San Bernar	2030	Constructic	Constructic	Aggregate	Aggregate	Diesel	0.00332	0.00402	0.00478	0.09075	0.0518	14.9368	0.00114	0.00105	0.00014	0.00012	484608	381790	1051.08	2.5E+07
San Bernar	2030	Constructic	Constructic	Aggregate	Aggregate	Diesel	0.0003	0.00036	0.00043	0.0046	0.00359	1.71445	0.00012	0.00011	1.6E-05	1.4E-05	55623.4	13541.8	48.2669	3564511
San Bernar	2030	Constructic	Constructic	Aggregate	Aggregate	Diesel	0.03145	0.03805	0.04528	0.65657	0.33994	114.482	0.00997	0.00918	0.00106	0.00093	3714258	1978891	3170.3	1.9E+08
San Bernar	2030	Constructic	Constructic	Aggregate	Aggregate	Diesel	0.00223	0.0027	0.00321	0.02578	0.0239	4.71144	0.00104	0.00096	4.3E-05	3.8E-05	152857	72055.9	190.456	5665368
San Bernar	2030	Industrial -	Industrial	Aggregate	Aggregate	Diesel	0.00067	0.00081	0.00096	0.02244	0.01356	3.94463	0.00015	0.00014	3.6E-05	3.2E-05	127979	123182	388.594	7746279
San Bernar	2030	Industrial -	Industrial	Aggregate	Aggregate	Diesel	0.00552	0.00668	0.00795	0.10714	0.05567	16.6085	0.00202	0.00186	0.00015	0.00014	538844	576492	728.978	5.2E+07
San Bernar	2030	Industrial -	Industrial	Aggregate	Aggregate	Gasoline	0.0012	0.00112	0.00132	0.07509	0.00213	1.34524	0.00016	0.00012	1.4E-05	1.9E-05	55531.6	24900.3	71.0131	1245015
San Bernar	2030	Industrial -	Industrial	Aggregate	Aggregate	Diesel	1.1E-05	1.4E-05	1.6E-05	5.5E-05	8.6E-05	2E-07	2.9E-06	2.2E-06	1.3E-09	1.1E-09	4.48734	0	2.09248	0
San Bernar	2030	Industrial -	Industrial	Aggregate	Aggregate	Electric	3.7E-05	3.3E-06	3.6E-05	0.00093	2.6E-05	8.2E-08	2.5E-06	1.9E-06	2E-09	1.8E-08	51.1333	0	0.83458	0
San Bernar	2030	Industrial -	Industrial	Aggregate	Aggregate	Nat Gas	0	0	0.00016	0.04284	0.00118	0.25226	0	0	0	0	16859.4	14267.9	38.03	269140
San Bernar	2030	Industrial -	Industrial	Aggregate	Aggregate	Gasoline	0.04542	0.04178	0.04998	4.57204	0.19521	44.3807	0.00309	0.00234	0.00044	0.00069	1957498	960651	533.245	6.3E+07
San Bernar	2030	Industrial -	Industrial	Aggregate	Aggregate	Electric	6.6E-06	6E-07	6.5E-06	9.5E-05	2.7E-06	7.3E-09	2.9E-07	2.2E-07	2.1E-10	1.9E-09	5.5093	0	0.02824	0
San Bernar	2030	Industrial -	Industrial	Aggregate	Aggregate	Nat Gas	0	0	0.0077	3.35953	0.36245	83.0863	0	0	0	0	4590258	2064458	1146.03	1.4E+08
San Bernar	2030	Industrial -	Industrial	Aggregate	Aggregate	Gasoline	0.00067	0.00062	0.00074	0.059	0.00204	0.61223	4.3E-05	3.2E-05	6.8E-06	9.4E-06	26746.7	10676.3	17.6937	481424
San Bernar	2030	Industrial -	Industrial	Aggregate	Aggregate	Diesel	8.9E-06	1.1E-05	1.3E-05	4.3E-05	7E-05	1.6E-07	2.4E-06	1.8E-06	1E-09	8.9E-10	3.52521	0	0.43274	0
San Bernar	2030	Industrial -	Industrial	Aggregate	Aggregate	Gasoline	0.00022	0.0002	0.00024	0.01582	0.00123	0.36242	2.5E-05	1.9E-05	3.5E-06	5.1E-06	14629.2	5460.4	14.1	293343
San Bernar	2030	Industrial -	Industrial	Aggregate	Aggregate	Gasoline	0.00198	0.00183	0.00218	0.15406	0.00743	2.55284	0.00018	0.00013	2.7E-05	3.7E-05	105989	30462.9	60.781	1530372
San Bernar	2030	Industrial -	Industrial	Aggregate	Aggregate	Diesel	2.2E-06	2.7E-06	3.2E-06	1.2E-05	1.8E-05	4.1E-08	6E-07	4.5E-07	2.7E-10	2.3E-10	0.92525	0	0.17319	0
San Bernar	2030	Industrial -	Industrial	Aggregate	Aggregate	Diesel	0.00253	0.00306	0.00364	0.03863	0.02369	8.02141	0.00065	0.00059	7.4E-05	6.5E-05	260246	162622	185.581	1.4E+07
San Bernar	2030	Industrial -	Industrial	Aggregate	Aggregate	Diesel	0.00121	0.00146	0.00174	0.01816	0.01051	4.70298	0.00036	0.00033	4.3E-05	3.8E-05	152583	44449.3	55.8225	7445109
San Bernar	2030	Lawn and C	Lawn and C	Aggregate	Aggregate	Gasoline	0.04159	0.04576	0.042	0.12479	0.0014	0.66815	0.00053	0.0004	9.6E-06	1.3E-05	37646.3	0	8099.17	0
San Bernar	2030	Lawn and C	Lawn and C	Aggregate	Aggregate	Electric	0	0	0	0	0	0	0	0	0	0	0	0	5131.65	0
San Bernar	2030	Lawn and C	Lawn and C	Aggregate	Aggregate	Gasoline	0.03855	0.04243	0.03894	0.06719	0.00138	0.35977	0.00029	0.00022	5.7E-06	7.9E-06	22374.1	0	4361.09	0
San Bernar	2030	Lawn and C	Lawn and C	Aggregate	Aggregate	Electric	0	0	0	0	0	0	0	0	0	0	0	0	2763.19	0
San Bernar	2030	Lawn and C	Lawn and C	Aggregate	Aggregate	Gasoline	6.3E-05	7E-05	6.4E-05	0.0029	2.2E-05	0.00665	1.1E-07	8E-08	1.1E-07	1.5E-07	426.424	0	61.4487	0

San Bernar	2030	Lawn and C	Lawn and C	Aggregate	Aggregate	Diesel	7.4E-07	1.1E-06	8.9E-07	3E-06	5.6E-06	0.00073	1.9E-07	1.4E-07	7E-09	6E-09	24.0414	0	0.05729	0
San Bernar	2030	Lawn and C	Lawn and C	Aggregate	Aggregate	Electric	0	0	0	0	0	0	0	0	0	0	0	0	22.9339	0
San Bernar	2030	Lawn and C	Lawn and C	Aggregate	Aggregate	Gasoline	0.01089	0.01199	0.011	0.5491	0.00681	1.51018	4.2E-05	3.2E-05	2.4E-05	3.3E-05	89927	0	18976.6	0
San Bernar	2030	Lawn and C	Lawn and C	Aggregate	Aggregate	Electric	0	0	0	0	0	0	0	0	0	0	0	0	8998.04	0
San Bernar	2030	Lawn and C	Lawn and C	Aggregate	Aggregate	Gasoline	0.06769	0.07449	0.06836	0.33919	0.00238	1.74007	0.001	0.00076	2.4E-05	3.3E-05	93589.4	0	7658.62	0
San Bernar	2030	Lawn and C	Lawn and C	Aggregate	Aggregate	Electric	0	0	0	0	0	0	0	0	0	0	0	0	19338.6	0
San Bernar	2030	Lawn and C	Lawn and C	Aggregate	Aggregate	Gasoline	0.00023	0.00026	0.00024	0.01356	9.5E-05	0.03316	5.3E-07	4E-07	5.3E-07	7.4E-07	2061.65	0	296.294	0
San Bernar	2030	Lawn and C	Lawn and C	Aggregate	Aggregate	Diesel	3.3E-07	4.7E-07	3.9E-07	2.2E-06	2.7E-06	0.00037	9.5E-08	7.2E-08	3.5E-09	3.1E-09	12.1385	0	0.04936	0
San Bernar	2030	Lawn and C	Lawn and C	Aggregate	Aggregate	Gasoline	0.01782	0.01961	0.018	1.10879	0.00934	2.33921	4.1E-05	3.1E-05	3.9E-05	5.4E-05	154553	0	1729.88	0
San Bernar	2030	Lawn and C	Lawn and C	Aggregate	Aggregate	Diesel	0.00028	0.00041	0.00034	0.00138	0.00222	0.29452	7.6E-05	5.7E-05	2.8E-06	2.4E-06	9658.21	0	289.457	0
San Bernar	2030	Lawn and C	Lawn and C	Aggregate	Aggregate	Electric	0	0	0	0	0	0	0	0	0	0	0	0	102.033	0
San Bernar	2030	Lawn and C	Lawn and C	Aggregate	Aggregate	Gasoline	0.00123	0.00135	0.00124	0.08442	0.00057	0.15929	2.6E-06	2E-06	3E-06	4.1E-06	11049.2	0	3462.82	0
San Bernar	2030	Lawn and C	Lawn and C	Aggregate	Aggregate	Electric	0	0	0	0	0	0	0	0	0	0	0	0	358.147	0
San Bernar	2030	Lawn and C	Lawn and C	Aggregate	Aggregate	Gasoline	0.00061	0.00067	0.00061	0.01102	9.2E-05	0.03165	1.1E-06	8.1E-07	5.1E-07	7E-07	1905.19	0	512.743	0
San Bernar	2030	Lawn and C	Lawn and C	Aggregate	Aggregate	Electric	0	0	0	0	0	0	0	0	0	0	0	0	71.9375	0
San Bernar	2030	Lawn and C	Lawn and C	Aggregate	Aggregate	Gasoline	0.04318	0.04752	0.04361	0.25882	0.00265	1.313	0.00038	0.00029	1.8E-05	2.5E-05	69760.7	0	13983.5	0
San Bernar	2030	Lawn and C	Lawn and C	Aggregate	Aggregate	Electric	0	0	0	0	0	0	0	0	0	0	0	0	21462	0
San Bernar	2030	Lawn and C	Lawn and C	Aggregate	Aggregate	Gasoline	0.00207	0.00228	0.0021	0.11112	0.00105	0.28494	6.1E-06	4.6E-06	4.5E-06	6.2E-06	17410.1	0	634.609	0
San Bernar	2030	Light Comn	Light Comn	Aggregate	Aggregate	Gasoline	0.02	0.0199	0.02201	1.26037	0.01725	5.72329	0.00028	0.00023	7.2E-05	0.0001	292130	42628.4	1636.57	2782899
San Bernar	2030	Light Comn	Light Comn	Aggregate	Aggregate	Diesel	0.0007	0.00084	0.00101	0.00935	0.00665	1.13282	9E-05	8.4E-05	1.5E-05	9.5E-06	37848.2	36806.6	46.0321	1361844
San Bernar	2030	Light Comn	Light Comn	Aggregate	Aggregate	Electric	0	0	0	0	0	0	0	0	0	0	0	0	18971.8	0
San Bernar	2030	Light Comn	Light Comn	Aggregate	Aggregate	Nat Gas	0	0	0.00071	0.34142	0.02915	9.31021	0	0	0	0	511219	48180	5.68	4909279
San Bernar	2030	Light Comn	Light Comn	Aggregate	Aggregate	Gasoline	0.06153	0.06168	0.06771	1.96914	0.035	9.79309	0.00049	0.00041	0.00013	0.00017	492324	90530.9	11046.5	3789207
San Bernar	2030	Light Comn	Light Comn	Aggregate	Aggregate	Diesel	0.00147	0.00175	0.00211	0.02132	0.0191	3.3989	0.00026	0.00026	4.3E-05	2.8E-05	112948	74058.5	267.175	2443931
San Bernar	2030	Light Comn	Light Comn	Aggregate	Aggregate	Electric	0	0	0	0	0	0	0	0	0	0	0	0	1790.41	0
San Bernar	2030	Light Comn	Light Comn	Aggregate	Aggregate	Nat Gas	0	0	8.6E-06	0.00852	0.00079	0.30367	0	0	0	0	16454.2	1941.8	17.13	216817
San Bernar	2030	Light Comn	Light Comn	Aggregate	Aggregate	Gasoline	0.01309	0.01322	0.01441	0.76459	0.00586	1.66861	2.3E-05	2.9E-05	2.8E-05	3.8E-05	108768	660.65	5362.43	19158.9
San Bernar	2030	Light Comn	Light Comn	Aggregate	Aggregate	Diesel	5.4E-06	6.4E-06	7.8E-06	9.1E-05	9E-05	0.01657	1.1E-06	1.1E-06	2.1E-07	1.3E-07	532.45	759.2	6.79038	28849.6
San Bernar	2030	Light Comn	Light Comn	Aggregate	Aggregate	Electric	0	0	0	0	0	0	0	0	0	0	0	0	10187	0
San Bernar	2030	Light Comn	Light Comn	Aggregate	Aggregate	Gasoline	0.00509	0.00498	0.0056	0.27125	0.0052	3.22243	0.0002	0.00016	3.5E-05	4.9E-05	138400	26411.4	986.851	1766261
San Bernar	2030	Light Comn	Light Comn	Aggregate	Aggregate	Diesel	0.00092	0.00109	0.00132	0.01296	0.01114	1.96815	0.00015	0.00015	2.5E-05	1.6E-05	65467.9	38668.1	122.968	1430720
San Bernar	2030	Light Comn	Light Comn	Aggregate	Aggregate	Electric	0	0	0	0	0	0	0	0	0	0	0	0	9974.07	0
San Bernar	2030	Light Comn	Light Comn	Aggregate	Aggregate	Gasoline	0.00989	0.00975	0.01088	0.61757	0.00862	4.00241	0.00023	0.00018	4.8E-05	6.6E-05	188669	44818.3	1365.82	2691072
San Bernar	2030	Light Comn	Light Comn	Aggregate	Aggregate	Diesel	0.00295	0.00351	0.00424	0.04036	0.03054	5.28779	0.00042	0.0004	6.8E-05	4.4E-05	176399	145098	243.545	6674529
San Bernar	2030	Light Comn	Light Comn	Aggregate	Aggregate	Electric	0	0	0	0	0	0	0	0	0	0	0	0	4945.38	0
San Bernar	2030	Locomotiv	Railyard O	Aggregate	Aggregate	Diesel	1.02014	1.235	1.469	7.486	30.208	0	0.662	0.61	0.029	0.023	0	0	0	0
San Bernar	2030	Locomotiv	Railyard O	Aggregate	Aggregate	Diesel	0.01324	1.9E-05	2.3E-05	0.07501	0.33776	32.4352	0.00588	0.00541	0.00026	0.00026	0	0	0	0
San Bernar	2030	Locomotiv	Railyard O	Aggregate	Aggregate	Diesel	0.01917	5.4E-06	6.4E-06	0.05113	0.51926	26.8197	0.00881	0.0081	0.00025	0.00022	0	0	0	0
San Bernar	2030	Locomotiv	Railyard O	Aggregate	Aggregate	Diesel	0.07613	0.00011	0.00013	0.21334	1.1757	78.2783	0.02497	0.02297	0.00072	0.00064	0	0	0	0
San Bernar	2030	Oil Drilling	Oil Drilling	Aggregate	Aggregate	Diesel	0.00057	0.00068	0.00081	0.00595	0.00425	1.83575	0.00015	0.00013	1.7E-05	1.5E-05	59558.9	9135.86	7.18267	2285438
San Bernar	2030	Oil Drilling	Oil Drilling	Aggregate	Aggregate	Diesel	4.2E-06	5E-06	6.1E-06	2.1E-05	3.9E-05	0.00504	1.5E-06	1.4E-06	6.4E-08	3.1E-08	124.1	240.9	0.32	5781.6
San Bernar	2030	Oil Drilling	Oil Drilling	Aggregate	Aggregate	Diesel	2.4E-06	2.8E-06	3.4E-06	3E-05	2E-05	0.00327	3E-07	2.7E-07	4.2E-08	2.9E-08	116.8	116.8	0	3854.4
San Bernar	2030	Oil Drilling	Oil Drilling	Aggregate	Aggregate	Diesel	0.00261	0.00316	0.00376	0.02164	0.01219	10.4115	0.00049	0.00045	9.6E-05	8.5E-05	337790	33354.3	24.9458	1.3E+07
San Bernar	2030	Pleasure Cr	Pleasure Cr	Aggregate	Aggregate	Gasoline	0.0722	0.07292	0.07945	0.55579	0.01628	2.68302	0.00283	0.00213	3.6E-05	5E-05	142042	0	588.672	0
San Bernar	2030	Pleasure Cr	Pleasure Cr	Aggregate	Aggregate	Diesel	0	0	0	0	0	0	0	0	0	0	0	0	0	0
San Bernar	2030	Pleasure Cr	Pleasure Cr	Aggregate	Aggregate	Gasoline	0.00099	0.001	0.00109	0.00771	0.00064	0.07064	5.4E-05	4E-05	8.3E-07	1.1E-06	3215.68	0	8.88866	0
San Bernar	2030	Pleasure Cr	Pleasure Cr	Aggregate	Aggregate	Diesel	0	0	0	0	0	0	0	0	0	0	0	0	0	0
San Bernar	2030	Pleasure Cr	Pleasure Cr	Aggregate	Aggregate	Gasoline	0.01212	0.01224	0.01333	0.1409	0.0052	1.68219	0.00017	0.00013	1.9E-05	2.6E-05	72576.5	0	274.13	0

San Bernar	2030	Pleasure Cr	Pleasure Cr	Aggregate	Aggregate	Diesel	0	0	0	0	0	0	0	0	0	0	0	0	0	
San Bernar	2030	Pleasure Cr	Pleasure Cr	Aggregate	Aggregate	Gasoline	0.00551	0.00556	0.00606	0.0334	0.00111	0.18704	0.00032	0.00024	2.5E-06	3.4E-06	9651.01	0	82.0051	0
San Bernar	2030	Pleasure Cr	Pleasure Cr	Aggregate	Aggregate	Diesel	0	0	0	0	0	0	0	0	0	0	0	0	0	0
San Bernar	2030	Pleasure Cr	Pleasure Cr	Aggregate	Aggregate	Gasoline	0.09578	0.09674	0.1054	0.52813	0.02101	2.62004	0.0113	0.00853	3.7E-05	5.1E-05	141140	0	968.621	0
San Bernar	2030	Pleasure Cr	Pleasure Cr	Aggregate	Aggregate	Diesel	0	0	0	0	0	0	0	0	0	0	0	0	0	0
San Bernar	2030	Pleasure Cr	Pleasure Cr	Aggregate	Aggregate	Gasoline	0.01987	0.02006	0.02186	0.18586	0.01457	2.79495	0.00029	0.00022	3.1E-05	4.2E-05	117724	0	765.29	0
San Bernar	2030	Pleasure Cr	Pleasure Cr	Aggregate	Aggregate	Diesel	0	0	0	0	0	0	0	0	0	0	0	0	0	0
San Bernar	2030	Portable Ec	Portable Ec	Aggregate	Aggregate	Diesel	0.00115	0.0014	0.00166	0.02953	0.00841	7.57124	0.00039	0.00035	7E-05	6.2E-05	245640	94237	214.748	1.5E+07
San Bernar	2030	Portable Ec	Portable Ec	Aggregate	Aggregate	Diesel	0.02598	0.03143	0.0374	0.30455	0.23861	102.608	0.00659	0.00606	0.00095	0.00084	3328992	669530	457.317	2E+08
San Bernar	2030	Portable Ec	Portable Ec	Aggregate	Aggregate	Diesel	0.00353	0.00427	0.00508	0.07004	0.04849	21.8794	0.00115	0.00105	0.0002	0.00018	709854	168474	492.862	4.2E+07
San Bernar	2030	Portable Ec	Portable Ec	Aggregate	Aggregate	Diesel	0.00093	0.00112	0.00133	0.0233	0.00771	7.16209	0.0003	0.00028	6.6E-05	5.8E-05	232366	73600.3	214.854	1.4E+07
San Bernar	2030	Portable Ec	Portable Ec	Aggregate	Aggregate	Diesel	0.00302	0.00366	0.00435	0.05269	0.01117	22.9109	0.00055	0.00051	0.00021	0.00019	743318	119891	208.495	4.4E+07
San Bernar	2030	Portable Ec	Portable Ec	Aggregate	Aggregate	Diesel	0.04603	0.0557	0.06629	0.55149	0.41485	205.527	0.00926	0.00852	0.0019	0.00168	6668109	1133418	722.823	4E+08
San Bernar	2030	Portable Ec	Portable Ec	Aggregate	Aggregate	Diesel	0.00524	0.00634	0.00755	0.07655	0.05152	22.3363	0.00159	0.00146	0.00021	0.00018	724675	182647	134.68	4.3E+07
San Bernar	2030	Portable Ec	Portable Ec	Aggregate	Aggregate	Diesel	0.00212	0.00257	0.00306	0.03813	0.01035	10.8795	0.00047	0.00043	0.0001	8.9E-05	352974	116764	110.366	2.1E+07
San Bernar	2030	Recreation	Recreation	Aggregate	Aggregate	Gasoline	0.02768	0.02796	0.03046	0.56557	0.01286	9.89023	0.00126	0.00095	0.00012	0.00014	405634	0	15441.1	0
San Bernar	2030	Recreation	Recreation	Aggregate	Aggregate	Gasoline	0.00262	0.00264	0.00288	0.07533	0.00214	0.90752	0.0002	0.00015	7.7E-06	1.4E-05	38604.3	0	946.023	0
San Bernar	2030	Recreation	Recreation	Aggregate	Aggregate	Gasoline	0	0	0	0	0	0	0	0	0	0	0	0	0	0
San Bernar	2030	Recreation	Recreation	Aggregate	Aggregate	Gasoline	1.15028	1.16179	1.26582	5.10098	0.03619	35.1705	0.01747	0.0132	0.00066	0.00063	1760450	0	63123	0
San Bernar	2030	Recreation	Recreation	Aggregate	Aggregate	Gasoline	0.00873	0.00882	0.00961	0.03275	0.00048	0.11543	0.00029	0.00022	5E-08	2.7E-06	7361.18	0	113.857	0
San Bernar	2030	Transporta	Transporta	Aggregate	Aggregate	Diesel	0.00263	0.0268	0.00378	0.00292	0.03335	5.34957	0.00046	0.00042	8808.95	1.3E-07	182521	378975	484.92	0
San Bernar	2030	Transporta	Transporta	Aggregate	Aggregate	Diesel	0.07455	0.63954	0.10737	0.08285	0.5067	122.657	0.00714	0.00657	192574	2.8E-06	3989991	5689730	3152.22	0
San Bernar	2030	Transporta	Transporta	Aggregate	Aggregate	Diesel	0	0	0	0	0	0	0	0	0	0	0	0	683.52	0
San Bernar	2030	Transporta	Transporta	Aggregate	Aggregate	Diesel	0.00205	0.02095	0.00296	0.00228	0.02688	4.21669	0.0004	0.00037	7030.35	1E-07	145671	303747	2449.25	0
San Bernar	2030	Transporta	Transporta	Aggregate	Aggregate	Diesel	0.04287	0.37336	0.06171	0.04761	0.32793	68.0304	0.00451	0.00415	107103	1.5E-06	2219100	3283260	12070.4	0
San Bernar	2030	Transporta	Transporta	Aggregate	Aggregate	Diesel	0.00151	0.01538	0.00217	0.00167	0.01609	2.46449	0.0002	0.00018	4199.15	6E-08	87009	129687	395.98	0



Sector	CO2 tons/year	Diesel fuel use (gallons)	Gasoline fuel use (gallons)	CH4* (g)	CH4 (tons)	N2O* (g)	N2O (tons)	TCO2e	MTCO2e/year	Allocation	Proportion of Ontario	MTCO2e
Agricultura	24,474	2,121,820	51,257	1,111,805	1.23	1046612	1.15	24,814	22,511	Acres of ag land	0.40%	90
Airport Ground Support	12,326	197,219	1,046,638	2,733,852	3.01	358297	0.39	12,515	11,354	Passenger boardings	100.00%	11,354
Construction and Mining	265,612	23,416,116	293,430	5,684,966	6.27	11513510	12.69	269,151	244,172	Service population	11.82%	28,849
Industry	60,542	1,079,660	2,160,395	22,521,991	24.83	788292	0.87	61,468	55,763	Jobs	18.31%	10,213
Lawn and Garden	3,191	9,694	500,703	5,363,230	5.91	64641	0.07	3,375	3,062	Household:	8.88%	272
Light Commercial	16,727	393,195	1,220,291	12,671,635	13.97	343440	0.38	17,219	15,621	Jobs	18.31%	2,861
Pleasure Craft	3,664	0	486,349	3,506,577	3.87	70521	0.08	3,793	3,441	Population	9.38%	323
Portable Equipment	146,319	13,005,930	0	0	0.00	0	0.00	146,319	132,740	Jobs	18.31%	24,311
Recreational	16,821	0	2,212,049	17,983,960	19.82	243325	0.27	17,447	15,828	Population	9.38%	1,485
Transportation Refrigeration Units	73,992	6,624,292	0	0	0.00	0	0.00	73,992	67,125	Share of road mile:	3.99%	2,681
Total									571,616			82,440

Allocation Calculation 203

	Ontario	San Bernardino County
Acres of ag land (2030)	7,520	1,873,410
Service Population (2030)	401,717	3,400,000
Population (2030)*	232,121	2,474,000
Households (2030)	66,679	751,000
Jobs (2030)*	169,596	926,000
Maintained road miles	471	11,798

*Interpolated using 2035 SCAG dat

Sector	Gasoline CH4 Factor	Gasoline N2O Factor	Diesel CH4 Factor	Diesel N2O Factor
Agricultura	10.1	0.135	0.28	0.49
Airport Ground Support	2.58	0.25	0.17	0.49
Construction and Mining	9	0.135	0.13	0.49
Industry	10.31	0.13	0.23	0.47
Lawn and Garden	10.705	0.12	0.33	0.47
Light Commercial	10.31	0.13	0.23	0.47
Pleasure Craft	7.21	0.145	0.31	0.5
Portable				
Recreational	8.13	0.11	0.41	0.41
Transportation Refrigeration Units				

*Includes yard trucks, gantry cranes, container handlers, forklifts (used at railyards and ports)
<https://www.epa.gov/sites/production/files/2020-04/ghg-emission-factors-hub.xls>

Vehicle Type	Fuel Type	CH4 Factor (g/gallon)	N2O Factor (g/gallon)
Ships and Boats	Average Gasoline	7.21	0.15
	Gasoline (2 stroke)	9.54	0.06
	Gasoline (4 stroke)	4.88	0.23
	Diesel	0.31	0.50
Locomotives	Diesel	0.80	0.26
	Average Gasoline	10.10	0.14
Agricultural Equipment	Gasoline (2 stroke)	12.96	0.06
	Gasoline (4 stroke)	7.24	0.21
	Diesel	0.28	0.49
	LPG	2.19	0.39
Agricultural Offroad	Gasoline	7.24	0.21
	Diesel	0.13	0.49
Construction/Mining	Average Gasoline	9.00	0.14
	Gasoline (2 stroke)	12.42	0.07
	Gasoline (4 stroke)	5.58	0.20
	Diesel	0.20	0.47
Construction/Mining	LPG	1.05	0.41
	Gasoline	5.58	0.20
Construction/Mining	Diesel	0.13	0.49
	Average Gasoline	10.71	0.12
	Gasoline (2 stroke)	15.57	0.06
	Gasoline (4 stroke)	5.84	0.18
Lawn and Garden	Diesel	0.33	0.47
	LPG	0.35	0.41
	Gasoline	2.58	0.25
	Diesel	0.17	0.49
Airport Equipment	LPG	0.33	0.41
	Average Gasoline	10.31	0.13
	Gasoline (2 stroke)	15.14	0.06
	Gasoline (4 stroke)	5.48	0.20
Industrial/Commercial	Diesel	0.23	0.47
	LPG	0.44	0.41
	Average Gasoline	9.37	0.13
	Gasoline (2 stroke)	12.03	0.08
Logging Equipment	Gasoline (4 stroke)	6.71	0.18
	Diesel	0.10	0.49
	Gasoline	5.78	0.19
Railroad Equipment	Diesel	0.44	0.42
	LPG	1.20	0.41
Recreational Equipment	Average Gasoline	8.13	0.11
	Gasoline (2 stroke)	7.81	0.03
	Gasoline (4 stroke)	8.45	0.19
	Diesel	0.41	0.41
	LPG	2.98	0.38

Source: EPA (2020) Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2018. All values are calculated from Tables A-113 through A-117

Region	Calendar Y	Vehicle Ca	Sector	Model Yea	Horsepow	Fuel	HC_tpd	ROG_tpd	TOG_tpd	CO_tpd	NOx_tpd	CO2_tpd	PM10_tpd	PM2.5_tpd	SOx_tpd	NH3_tpd	Fuel Consu	Total_Acti	Total_Pop	Horsepow
San Bernar	2050	Agricultur	Agricultur	Aggregate	Aggregate	Gasoline	5.06E-06	6.12E-06	7.29E-06	0.000118	5E-06	0.0022	3.16E-07	2.91E-07	1.99E-08	1.79E-08	71.29538	1172.057	0.352542	1902.683
San Bernar	2050	Agricultur	Agricultur	Aggregate	Aggregate	Diesel	0.016386	0.019826	0.023595	0.217189	0.089346	45.31209	0.003895	0.003583	0.000412	0.000369	1468519	102996	704.6334	55639534
San Bernar	2050	Agricultur	Agricultur	Aggregate	Aggregate	Gasoline	0.005509	0.006666	0.007933	0.099791	0.003844	1.432661	0.000345	0.000318	1.29E-05	1.17E-05	46431.08	5036.07	121.4304	1486946
San Bernar	2050	Agricultur	Agricultur	Aggregate	Aggregate	Diesel	0.000265	0.000321	0.000381	0.004365	0.003553	0.706391	5.15E-05	4.74E-05	6.43E-06	5.76E-06	22893.41	8187.166	49.32462	982529.8
San Bernar	2050	Agricultur	Agricultur	Aggregate	Aggregate	Electric	0	0	0	0	0	0	0	0	0	0	0	464.2127	9.624921	56163.77
San Bernar	2050	Agricultur	Agricultur	Aggregate	Aggregate	Diesel	1.15E-05	1.39E-05	1.66E-05	0.000244	4.71E-05	0.04558	2.62E-06	2.41E-06	4.15E-07	3.72E-07	1477.188	2094.36	0.418288	56350.48
San Bernar	2050	Agricultur	Agricultur	Aggregate	Aggregate	Diesel	3.76E-07	4.55E-07	5.42E-07	6.24E-06	5.14E-06	0.001079	5.64E-08	5.19E-08	9.83E-09	8.8E-09	34.98284	56.21417	0.020043	1200.391
San Bernar	2050	Agricultur	Agricultur	Aggregate	Aggregate	Diesel	0.000265	0.00032	0.000381	0.002383	0.000911	1.168799	4.74E-05	4.36E-05	1.06E-05	9.53E-06	37879.57	5576.032	5.060013	1628238
San Bernar	2050	Agricultur	Agricultur	Aggregate	Aggregate	Diesel	0.000148	0.000179	0.000213	0.00342	0.000526	0.691977	2.99E-05	2.76E-05	6.3E-06	5.64E-06	22426.27	7403.586	12.84102	1049985
San Bernar	2050	Agricultur	Agricultur	Aggregate	Aggregate	Diesel	2.28E-06	2.76E-06	3.28E-06	2.16E-05	7.08E-06	0.011456	3.77E-07	3.47E-07	1.04E-07	9.34E-08	371.2791	399.2323	0.050775	15959.29
San Bernar	2050	Agricultur	Agricultur	Aggregate	Aggregate	Diesel	0.000249	0.000302	0.000359	0.002045	0.001019	1.028441	4.65E-05	4.28E-05	9.37E-06	8.38E-06	33330.72	3142.574	2.651141	1432708
San Bernar	2050	Agricultur	Agricultur	Aggregate	Aggregate	Diesel	0.000212	0.000256	0.000305	0.003792	0.002282	0.637402	3.87E-05	3.56E-05	5.8E-06	5.2E-06	20657.55	19874.49	16.39283	892202.7
San Bernar	2050	Agricultur	Agricultur	Aggregate	Aggregate	Diesel	5.31E-05	6.42E-05	7.64E-05	0.001051	0.000195	0.214703	1.1E-05	1.01E-05	1.96E-06	1.75E-06	6958.306	3409.364	2.802543	315902.5
San Bernar	2050	Agricultur	Agricultur	Aggregate	Aggregate	Diesel	0.000409	0.000495	0.000589	0.00748	0.002611	1.317157	0.000122	0.000112	1.2E-05	1.07E-05	42687.7	20040.46	28.33797	1719282
San Bernar	2050	Agricultur	Agricultur	Aggregate	Aggregate	Diesel	0.000186	0.000225	0.000267	0.003308	0.000893	0.777479	4.24E-05	3.9E-05	7.08E-06	6.34E-06	25197.31	12593.65	8.554101	1050721
San Bernar	2050	Agricultur	Agricultur	Aggregate	Aggregate	Diesel	0.000666	0.000806	0.000959	0.00841	0.005733	1.780794	0.000147	0.000135	1.62E-05	1.45E-05	57713.73	14709.15	34.7792	2471962
San Bernar	2050	Agricultur	Agricultur	Aggregate	Aggregate	Diesel	0.000145	0.000176	0.000209	0.002048	0.000601	0.59148	3.32E-05	3.06E-05	5.39E-06	4.82E-06	19169.25	7475.652	5.558247	735503.9
San Bernar	2050	Airport Gr	Airport Gr	Aggregate	Aggregate	Diesel	0.000158	0.000192	0.000228	0.004521	0.001231	0.929892	2.68E-05	2.47E-05	8.59E-06	7.59E-06	30169.33	8200.097	22.22985	1087454
San Bernar	2050	Airport Gr	Airport Gr	Aggregate	Aggregate	Diesel	0.000139	0.000169	0.000201	0.002235	0.000649	0.972311	2.04E-05	1.88E-05	8.99E-06	7.94E-06	31545.55	4657.994	10.51303	1136748
San Bernar	2050	Airport Gr	Airport Gr	Aggregate	Aggregate	Diesel	0.000191	0.000231	0.000274	0.004123	0.001686	0.572418	1.83E-05	1.69E-05	5.29E-06	4.67E-06	18571.47	12990.88	15.80967	967237
San Bernar	2050	Airport Gr	Airport Gr	Aggregate	Aggregate	Diesel	8.92E-05	0.000108	0.000128	0.002064	0.000927	0.310195	1.42E-05	1.31E-05	2.87E-06	2.53E-06	10063.93	7836.504	13.64287	575756.7
San Bernar	2050	Airport Gr	Airport Gr	Aggregate	Aggregate	Diesel	1.79E-05	2.17E-05	2.58E-05	0.000378	0.000135	0.118693	2.35E-06	2.16E-06	1.1E-06	9.69E-07	3850.86	1385.761	2.808825	200851.2
San Bernar	2050	Airport Gr	Airport Gr	Aggregate	Aggregate	Diesel	0.000176	0.000213	0.000253	0.0055	0.001641	0.993542	2.77E-05	2.55E-05	9.18E-06	8.11E-06	32234.38	15868.7	30.0143	1858787
San Bernar	2050	Airport Gr	Airport Gr	Aggregate	Aggregate	Diesel	0.000215	0.00026	0.000309	0.00429	0.001549	0.810671	2.66E-05	2.44E-05	7.49E-06	6.62E-06	26301.32	14909.94	19.90253	1402568
San Bernar	2050	Airport Gr	Airport Gr	Aggregate	Aggregate	Diesel	6.94E-05	8.4E-05	9.99E-05	0.001713	0.000672	0.32082	1.48E-05	1.36E-05	2.96E-06	2.62E-06	10408.66	9222.5	21.74833	995189.3
San Bernar	2050	Airport Gr	Airport Gr	Aggregate	Aggregate	Diesel	5.25E-05	6.35E-05	7.56E-05	0.001597	0.000688	0.308514	7.68E-06	7.07E-06	2.85E-06	2.52E-06	10009.41	6043.657	13.00085	572022
San Bernar	2050	Airport Gr	Airport Gr	Aggregate	Aggregate	Gasoline	0.000431	0.000396	0.000474	0.032205	0.002862	0.839731	6.02E-05	4.55E-05	8.34E-06	1.18E-05	33740.6	3555.1	4.88	462163
San Bernar	2050	Airport Gr	Airport Gr	Aggregate	Aggregate	Gasoline	0.000237	0.000218	0.000261	0.024973	0.002296	0.732612	5.4E-05	4.08E-05	7.49E-06	1.02E-05	29229.2	824.9	1.61	412450
San Bernar	2050	Airport Gr	Airport Gr	Aggregate	Aggregate	Gasoline	1.65E-07	1.52E-07	1.81E-07	2.3E-05	2.16E-06	0.000752	5.39E-08	4.07E-08	7.47E-09	7.67E-09	21.9	0	0.16	0
San Bernar	2050	Airport Gr	Airport Gr	Aggregate	Aggregate	Nat Gas	0	0	7.98E-08	9.97E-05	9.53E-06	0.004043	0	0	0	0	208.05	0	0.91	0
San Bernar	2050	Airport Gr	Airport Gr	Aggregate	Aggregate	Gasoline	1.72E-05	1.58E-05	1.89E-05	0.002217	0.000207	0.071156	5.1E-06	3.85E-06	7.07E-07	9.91E-07	2828.75	262.8	3.56	34164
San Bernar	2050	Airport Gr	Airport Gr	Aggregate	Aggregate	Gasoline	0.004003	0.003682	0.004405	0.295584	0.02417	7.413872	0.000517	0.000391	7.16E-05	0.000105	298610.2	57629.85	65.68	5762985
San Bernar	2050	Airport Gr	Airport Gr	Aggregate	Aggregate	Nat Gas	0	0	0.000111	0.053869	0.005361	1.217803	0	0	0	0	67652.75	10855.1	13.06	1085510
San Bernar	2050	Airport Gr	Airport Gr	Aggregate	Aggregate	Gasoline	0.000975	0.000897	0.001073	0.073206	0.005833	1.767857	0.000123	9.31E-05	1.71E-05	2.5E-05	71368.45	25199.6	31.05	1511976
San Bernar	2050	Airport Gr	Airport Gr	Aggregate	Aggregate	Nat Gas	0	0	7.97E-06	0.004602	0.000436	0.117399	0	0	0	0	6456.85	1912.6	3.49	114756
San Bernar	2050	Airport Gr	Airport Gr	Aggregate	Aggregate	Gasoline	0.000643	0.000592	0.000708	0.047505	0.003884	1.191526	8.31E-05	6.28E-05	1.15E-05	1.68E-05	47997.5	9263.7	10.55	926370
San Bernar	2050	Airport Gr	Airport Gr	Aggregate	Aggregate	Nat Gas	0	0	1.55E-06	0.001056	9.6E-05	0.029375	0	0	0	0	1616.95	255.5	0.29	25550
San Bernar	2050	Airport Gr	Airport Gr	Aggregate	Aggregate	Gasoline	0.000268	0.000247	0.000295	0.020139	0.001607	0.487732	3.4E-05	2.57E-05	4.71E-06	6.9E-06	19688.1	5956.8	8.27	416976
San Bernar	2050	Airport Gr	Airport Gr	Aggregate	Aggregate	Nat Gas	0	0	1.12E-05	0.004958	0.000508	0.103523	0	0	0	0	5788.9	1456.35	1.4	101944.5
San Bernar	2050	Airport Gr	Airport Gr	Aggregate	Aggregate	Gasoline	0.007298	0.006712	0.008031	0.704685	0.036662	8.28676	0.000578	0.000437	6.84E-05	0.000125	356451.7	69065.3	51.12	6561204
San Bernar	2050	Airport Gr	Airport Gr	Aggregate	Aggregate	Nat Gas	0	0	3.79E-06	0.003877	0.000362	0.147847	0	0	0	0	7982.55	861.4	5.52	134033.8
San Bernar	2050	Airport Gr	Airport Gr	Aggregate	Aggregate	Gasoline	0.000872	0.000802	0.00096	0.057238	0.00499	1.334395	9.84E-05	7.44E-05	1.17E-05	1.89E-05	54005.4	5683.05	5.62	1158774
San Bernar	2050	Airport Gr	Airport Gr	Aggregate	Aggregate	Nat Gas	0	0	3.95E-06	0.003032	0.000271	0.102191	0	0	0	0	5537.05	470.85	1.02	96524.25

San Bernai	2050	Airport	Gr	Airport	Gr	Aggregate	Aggregate	Gasoline	6.28E-06	5.78E-06	6.91E-06	0.000256	4.72E-05	0.018249	1.27E-06	9.61E-07	1.76E-07	2.44E-07	697.15	80.3	4	7467.9
San Bernai	2050	Airport	Gr	Airport	Gr	Aggregate	Aggregate	Gasoline	0.00028	0.000258	0.000309	0.02602	0.000637	0.201789	1.39E-05	1.05E-05	2.45E-06	3.23E-06	9223.55	5686.7	7.8	284335
San Bernai	2050	Airport	Gr	Airport	Gr	Aggregate	Aggregate	Nat Gas	0	0	1.87E-05	0.005036	0.001362	0.406696	0	0	0	0	21505.8	13311.55	18.3	665577.5
San Bernai	2050	Airport	Gr	Airport	Gr	Aggregate	Aggregate	Gasoline	1.73E-06	1.59E-06	1.9E-06	0.000241	2.26E-05	0.007875	5.65E-07	4.27E-07	7.82E-08	1.09E-07	310.25	98.55	4.81	12811.5
San Bernai	2050	Airport	Gr	Airport	Gr	Aggregate	Aggregate	Nat Gas	0	0	1.08E-06	0.000766	6.76E-05	0.024741	0	0	0	0	1343.2	346.75	0.59	48545
San Bernai	2050	Airport	Gr	Airport	Gr	Aggregate	Aggregate	Gasoline	5.79E-05	5.33E-05	6.37E-05	0.005474	0.000296	0.069581	4.85E-06	3.67E-06	5.74E-07	1.04E-06	2974.75	354.05	0.38	37883.35
San Bernai	2050	Airport	Gr	Airport	Gr	Aggregate	Aggregate	Gasoline	0.000417	0.000384	0.000459	0.042277	0.003869	1.255679	9E-05	6.8E-05	1.25E-05	1.75E-05	50067.05	4909.25	6.17	736387.5
San Bernai	2050	Airport	Gr	Airport	Gr	Aggregate	Aggregate	Gasoline	0.001188	0.001093	0.001307	0.066309	0.005611	1.388504	9.95E-05	7.52E-05	1.18E-05	1.98E-05	56648	7179.55	4.68	872315.3
San Bernai	2050	Airport	Gr	Airport	Gr	Aggregate	Aggregate	Gasoline	0.00035	0.000322	0.000385	0.026154	0.002313	0.675445	4.84E-05	3.66E-05	6.71E-06	9.51E-06	27152.35	9135.95	7.5	1187674
San Bernai	2050	Airport	Gr	Airport	Gr	Aggregate	Aggregate	Nat Gas	0	0	5.05E-07	0.000408	3.68E-05	0.014109	0	0	0	0	773.8	204.4	0.54	26572
San Bernai	2050	Airport	Gr	Airport	Gr	Aggregate	Aggregate	Gasoline	0.000326	0.0003	0.000359	0.024108	0.001969	0.604473	4.21E-05	3.18E-05	5.84E-06	8.53E-06	24356.45	5164.75	13.7	516475
San Bernai	2050	Airport	Gr	Airport	Gr	Aggregate	Aggregate	Nat Gas	0	0	8.98E-07	0.000633	5.7E-05	0.017892	0	0	0	0	967.25	167.9	0.5	16790
San Bernai	2050	Airport	Gr	Airport	Gr	Aggregate	Aggregate	Gasoline	0.000235	0.000216	0.000258	0.022081	0.002012	0.640956	4.59E-05	3.47E-05	6.37E-06	8.96E-06	25590.15	4332.55	9.63	563231.5
San Bernai	2050	Airport	Gr	Airport	Gr	Aggregate	Aggregate	Gasoline	0.000183	0.000168	0.000201	0.01512	0.000407	0.154301	1.06E-05	8.04E-06	1.88E-06	2.37E-06	6770.75	2613.4	14.21	130670
San Bernai	2050	Airport	Gr	Airport	Gr	Aggregate	Aggregate	Nat Gas	0	0	1.52E-05	0.002362	0.000614	0.139523	0	0	0	0	7449.65	2730.2	2.66	136510
San Bernai	2050	Airport	Gr	Airport	Gr	Aggregate	Aggregate	Gasoline	5.96E-05	5.48E-05	6.55E-05	0.006699	0.00062	0.206969	1.48E-05	1.12E-05	1.83E-06	2.88E-06	8234.4	1230.05	6.58	153879.3
San Bernai	2050	Airport	Gr	Airport	Gr	Aggregate	Aggregate	Nat Gas	0	0	1.09E-08	1.39E-05	1.33E-06	0.000566	0	0	0	0	21.9	0	0.21	0
San Bernai	2050	Airport	Gr	Airport	Gr	Aggregate	Aggregate	Gasoline	0.001074	0.000988	0.001182	0.075929	0.006693	1.859516	0.000137	0.000104	1.9E-05	2.63E-05	75011.15	23360	27.75	4204800
San Bernai	2050	Airport	Gr	Airport	Gr	Aggregate	Aggregate	Nat Gas	0	0	1.56E-05	0.009182	0.000777	0.259627	0	0	0	0	14213.1	3533.2	2.71	635976
San Bernai	2050	Airport	Gr	Airport	Gr	Aggregate	Aggregate	Gasoline	7.74E-06	7.12E-06	8.52E-06	0.000566	4.71E-05	0.014573	1.02E-06	7.68E-07	1.2E-07	2.06E-07	587.65	215.35	0.6	11478.16
San Bernai	2050	Airport	Gr	Airport	Gr	Aggregate	Aggregate	Nat Gas	0	0	1.25E-07	3.7E-05	1.01E-05	0.003089	0	0	0	0	156.95	51.1	0.21	2299.5
San Bernai	2050	Airport	Gr	Airport	Gr	Aggregate	Aggregate	Gasoline	1.75E-05	1.61E-05	1.93E-05	0.001742	0.00016	0.051693	3.71E-06	2.8E-06	5.14E-07	7.21E-07	2058.6	759.2	2.44	113880
San Bernai	2050	Airport	Gr	Airport	Gr	Aggregate	Aggregate	Diesel	0.000452	0.000547	0.000651	0.009784	0.00373	2.208708	6.22E-05	5.72E-05	2.04E-05	1.8E-05	71659.09	37709.78	70.54164	4072859
San Bernai	2050	Airport	Gr	Airport	Gr	Aggregate	Aggregate	Diesel	1.18E-06	1.43E-06	1.7E-06	4.88E-05	2.85E-05	0.010663	1.74E-07	1.6E-07	9.86E-08	8.7E-08	345.9641	237.8896	4.413868	16542.88
San Bernai	2050	Cargo	Han	Cargo	Han	Aggregate	Aggregate	Diesel	0.000118	0.000143	0.00017	0.00524	0.000551	1.089739	9.14E-06	8.41E-06	1.01E-05	8.89E-06	35355.39	6873.023	17.93216	1158260
San Bernai	2050	Cargo	Han	Cargo	Han	Aggregate	Aggregate	Diesel	0.000464	0.000562	0.000668	0.013981	0.0012	2.215333	2E-05	1.84E-05	2.05E-05	1.81E-05	71874.03	28065.28	7.925301	4630772
San Bernai	2050	Cargo	Han	Cargo	Han	Aggregate	Aggregate	Diesel	0.003178	0.003845	0.004576	0.028901	0.007755	13.82374	9.09E-05	8.36E-05	0.000128	0.000113	448496.1	136434.6	31.44185	43344227
San Bernai	2050	Cargo	Han	Cargo	Han	Aggregate	Aggregate	Diesel	0.000385	0.000466	0.000554	0.028229	0.00169	81.36792	7.52E-05	6.92E-05	0.000752	0.000664	2639892	775279.5	146.0472	1.31E+08
San Bernai	2050	Commerci	Commerci	Commerci	Commerci	Aggregate	Aggregate	Diesel	0.000172	0.000208	0.000247	0.000633	0.002172	0.207672	8.08E-05	7.72E-05	0	0	6736.939	1578.697	1.583454	130432.9
San Bernai	2050	Constructi	Constructi	Constructi	Constructi	Aggregate	Aggregate	Diesel	0.001253	0.001516	0.001805	0.027349	0.011728	9.510578	0.000219	0.000201	8.79E-05	7.76E-05	308560.2	53767.35	132.7119	11888430
San Bernai	2050	Constructi	Constructi	Constructi	Constructi	Aggregate	Aggregate	Diesel	0.004771	0.005773	0.00687	0.066255	0.03428	22.48972	0.001323	0.001217	0.000208	0.000184	729654.2	211874.6	399.2522	48966619
San Bernai	2050	Constructi	Constructi	Constructi	Constructi	Aggregate	Aggregate	Diesel	0.011417	0.013814	0.01644	0.179685	0.079152	55.54215	0.002638	0.002427	0.000513	0.000453	1802004	382707.9	735.4169	81181376
San Bernai	2050	Constructi	Constructi	Constructi	Constructi	Aggregate	Aggregate	Diesel	0.017308	0.020943	0.024923	0.339087	0.111895	100.0716	0.002322	0.002136	0.000925	0.000817	3246711	1036484	1429.376	1.63E+08
San Bernai	2050	Constructi	Constructi	Constructi	Constructi	Aggregate	Aggregate	Diesel	0.008236	0.009966	0.01186	0.13033	0.037584	37.59407	0.001561	0.001436	0.000347	0.000307	1219698	306194	462.092	57599014
San Bernai	2050	Constructi	Constructi	Constructi	Constructi	Aggregate	Aggregate	Gasoline	0.000244	0.000232	0.000268	0.016321	0.000339	0.149503	4.4E-05	3.32E-05	1.67E-06	2.33E-06	6649.443	2295.85	6.483911	97071.75
San Bernai	2050	Constructi	Constructi	Constructi	Constructi	Aggregate	Aggregate	Gasoline	7.76E-05	7.32E-05	8.54E-05	0.004249	0.000165	0.132263	1.81E-05	1.37E-05	1.32E-06	1.84E-06	5253.289	773.8	8.251427	66597.9
San Bernai	2050	Constructi	Constructi	Constructi	Constructi	Aggregate	Aggregate	Diesel	6.97E-06	8.38E-06	1E-05	3.07E-05	5.29E-05	1.23E-07	1.79E-06	1.35E-06	7.58E-10	6.53E-10	2.599539	0	0.424648	0
San Bernai	2050	Constructi	Constructi	Constructi	Constructi	Aggregate	Aggregate	Gasoline	0.001139	0.00115	0.001253	0.034456	0.000746	1.35E-06	0.000326	0.000247	5.6E-07	7.73E-07	2167.754	0	119.2929	0
San Bernai	2050	Constructi	Constructi	Constructi	Constructi	Aggregate	Aggregate	Diesel	8.56E-06	1.03E-05	1.23E-05	5.01E-05	6.46E-05	1.54E-07	2.25E-06	1.7E-06	1.12E-09	9.61E-10	3.822136	0	2.954936	0
San Bernai	2050	Constructi	Constructi	Constructi	Constructi	Aggregate	Aggregate	Gasoline	0.001192	0.00118	0.001312	0.047499	0.001158	0.353005	0.000393	0.000297	4.31E-06	5.72E-06	16308.09	4161	23.49719	192592.3
San Bernai	2050	Constructi	Constructi	Constructi	Constructi	Aggregate	Aggregate	Diesel	3.74E-05	4.45E-05	5.38E-05	0.000588	0.000436	0.079377	2.37E-06	2.13E-06	1.03E-06	6.63E-07	2635.697	1905.3	3.363132	62874.9
San Bernai	2050	Constructi	Constructi	Constructi	Constructi	Aggregate	Aggregate	Gasoline	0.000102	9.39E-05	0.000112	0.007776	0.00022	0.117575	8.19E-06	6.19E-06	1.19E-06	1.72E-06	4920.2	1679	4.01	106036.2
San Bernai	2050	Constructi	Constructi	Constructi	Constructi	Aggregate	Aggregate	Gasoline	6.37E-06	6.43E-06	7.01E-06	0.000221	4.43E-06	8.53E-09	2.76E-06	2.09E-06	3.51E-09	4.84E-09	13.78334	0	0.097764	0
San Bernai	2050	Constructi	Constructi	Constructi	Constructi	Aggregate	Aggregate	Gasoline	0.001715	0.001589	0.001888	0.061923	0.001275	0.113018	0.000732	0.000553	3.13E-06	2.87E-06	8200.916	22892.8	161.637	204918.3
San Bernai	2050	Constructi	Constructi	Constructi	Constructi	Aggregate	Aggregate	Diesel	8.65E-07	1.04E-06	1.24E-06	3.55E-06	6.57E-06	1.52E-08	2.21E-07	1.67E-07	9.02E-11	7.77E-11	0.309128	0	0.124948	0
San Bernai	2050	Constructi	Constructi	Constructi	Constructi	Aggregate	Aggregate	Diesel	6.17E-06	7.42E-06	8.87E-06	2.53E-05	4.69E-05	1.08E-07	1.58E-06	1.19E-06	6.43E-10	5.54E-10	2.204418	0	0.195955	0
San Bernai	2050	Constructi	Constructi	Constructi	Constructi	Aggregate	Aggregate	Gasoline	7.16E-05	6.59E-05	7.88E-05	0.00606	0.000242	0.188743	1.35E-05	1.02E-05	1.87E-06	2.63E-06	7508.05	1372.4	3.83971	172922.4

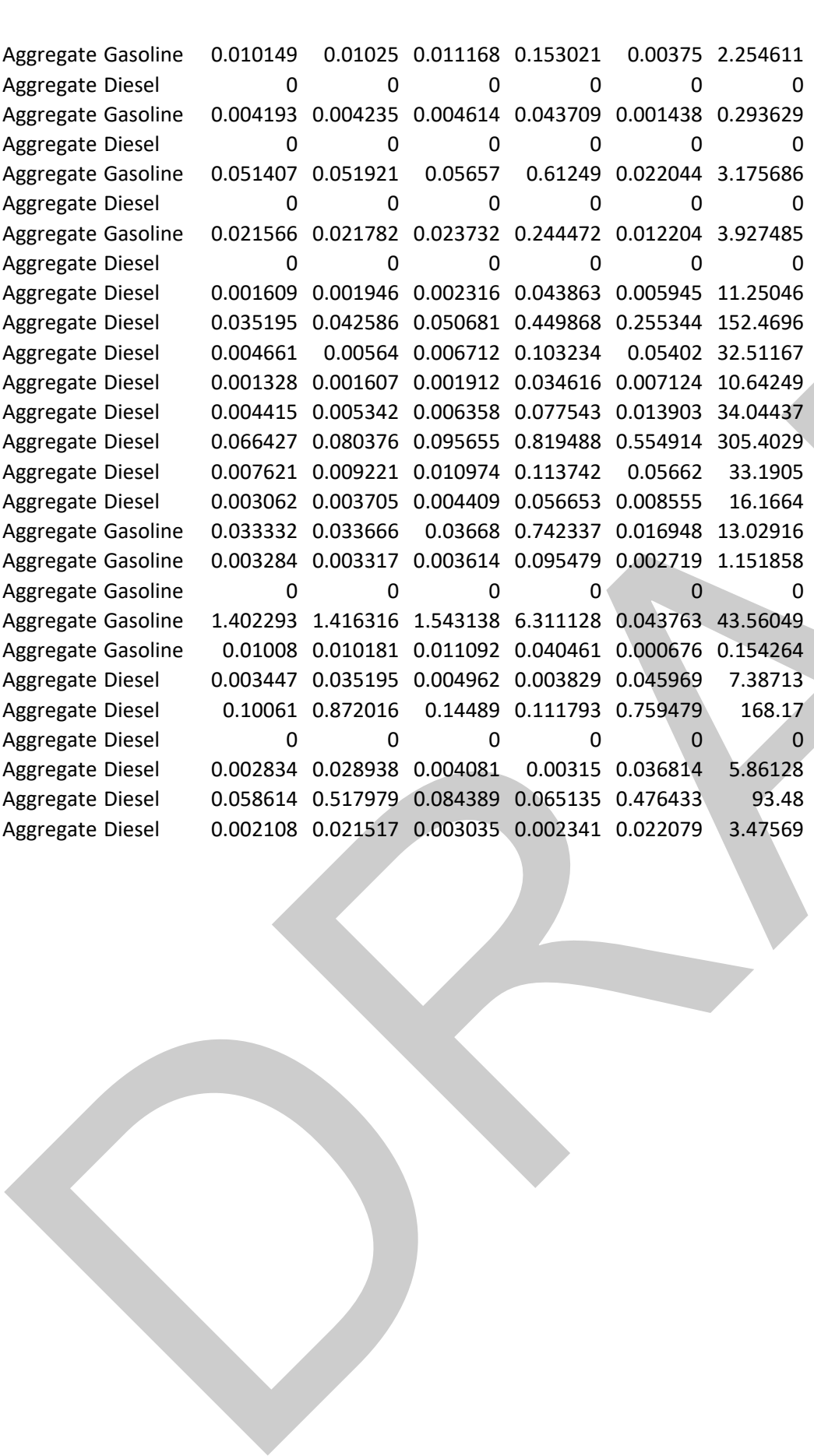
San Bernai	2050 Constructi	Constructi	Aggregate	Aggregate	Diesel	0.000315	0.000376	0.000454	0.002206	0.002821	0.364901	0.000109	9.93E-05	5.49E-06	3.06E-06	12155.5	25254.35	38.44706	342906.6
San Bernai	2050 Constructi	Constructi	Aggregate	Aggregate	Diesel	1.64E-06	1.97E-06	2.35E-06	6.72E-06	1.25E-05	2.87E-08	4.19E-07	3.16E-07	1.71E-10	1.47E-10	0.585458	0	0.077965	0
San Bernai	2050 Constructi	Constructi	Aggregate	Aggregate	Gasoline	0.002138	0.002148	0.002353	0.068078	0.001594	0.134714	0.000649	0.000491	2.49E-06	3.3E-06	9376.854	2252.05	97.56059	96557.1
San Bernai	2050 Constructi	Constructi	Aggregate	Aggregate	Diesel	2.65E-06	3.19E-06	3.81E-06	1.09E-05	2.01E-05	4.65E-08	6.77E-07	5.11E-07	2.76E-10	2.38E-10	0.946488	0	0.184452	0
San Bernai	2050 Constructi	Constructi	Aggregate	Aggregate	Gasoline	0.013053	0.012082	0.014364	0.415937	0.009136	0.764126	0.004392	0.003319	2.37E-05	1.95E-05	55640.96	174539.3	947.2926	1071202
San Bernai	2050 Constructi	Constructi	Aggregate	Aggregate	Diesel	9.31E-05	0.000111	0.000134	0.000696	0.00083	0.107876	3.23E-05	2.94E-05	1.68E-06	9.06E-07	3601.65	18268.25	32.12943	146146
San Bernai	2050 Constructi	Constructi	Aggregate	Aggregate	Gasoline	0.000863	0.00083	0.00095	0.052051	0.001247	0.424393	0.000184	0.000139	4.53E-06	6.75E-06	19260.34	4719.45	16.19351	291682.4
San Bernai	2050 Constructi	Constructi	Aggregate	Aggregate	Diesel	3.98E-05	4.79E-05	5.72E-05	0.000209	0.000301	7.12E-07	1.04E-05	7.84E-06	4.83E-09	4.16E-09	16.57022	0	5.077453	0
San Bernai	2050 Constructi	Constructi	Aggregate	Aggregate	Gasoline	0.000606	0.000557	0.000667	0.040799	0.00152	0.851026	5.94E-05	4.49E-05	8.31E-06	1.22E-05	34718.8	6781.7	16.42	567567.7

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San Bernai	2050 Constructi	Constructi	Aggregate	Aggregate	Gasoline	0.000366	0.000337	0.000403	0.026775	0.000875	0.442845	3.08E-05	2.33E-05	4.36E-06	6.44E-06	18377.75	5124.6	10.11431	348180.8
San Bernai	2050 Constructi	Constructi	Aggregate	Aggregate	Diesel	1.1E-06	1.32E-06	1.58E-06	4.5E-06	8.33E-06	1.92E-08	2.8E-07	2.12E-07	1.14E-10	9.85E-11	0.391852	0	0.049343	0
San Bernai	2050 Constructi	Constructi	Aggregate	Aggregate	Gasoline	0.000332	0.000307	0.000365	0.013427	0.000268	0.022446	0.000171	0.00013	6.56E-07	5.94E-07	1695.541	2916.35	11.52414	22794.25
San Bernai	2050 Constructi	Constructi	Aggregate	Aggregate	Diesel	0.00147	0.00175	0.002116	0.011124	0.013168	1.721119	0.000505	0.000461	2.67E-05	1.44E-05	57424.65	200363.1	282.2293	1223790
San Bernai	2050 Constructi	Constructi	Aggregate	Aggregate	Gasoline	0.001481	0.001414	0.00163	0.079092	0.002141	1.215464	0.000296	0.000224	1.32E-05	1.78E-05	50876.07	17837.55	63.72483	891242.4
San Bernai	2050 Constructi	Constructi	Aggregate	Aggregate	Diesel	0.000306	0.000368	0.00044	0.001256	0.002325	5.37E-06	7.82E-05	5.91E-05	3.19E-08	2.75E-08	109.3194	0	19.38608	0
San Bernai	2050 Constructi	Constructi	Aggregate	Aggregate	Gasoline	0.00109	0.001101	0.001199	0.028359	0.000782	1.12E-06	0.000338	0.000255	4.62E-07	6.38E-07	1804.032	0	22.86229	0
San Bernai	2050 Constructi	Constructi	Aggregate	Aggregate	Gasoline	0.001737	0.001607	0.001911	0.080227	0.001482	0.144427	0.001146	0.000866	5.84E-06	3.68E-06	10502.46	47971.95	277.0895	202454.6
San Bernai	2050 Constructi	Constructi	Aggregate	Aggregate	Gasoline	0.000231	0.000212	0.000254	0.016105	0.000603	0.286058	1.99E-05	1.51E-05	2.76E-06	4.14E-06	11829.65	4047.85	4.713493	255014.6
San Bernai	2050 Constructi	Constructi	Aggregate	Aggregate	Diesel	2.96E-05	3.56E-05	4.26E-05	0.000122	0.000225	5.19E-07	7.57E-06	5.72E-06	3.09E-09	2.66E-09	10.57985	0	1.444406	0
San Bernai	2050 Constructi	Constructi	Aggregate	Aggregate	Gasoline	0.001678	0.001608	0.001847	0.108232	0.002081	0.779273	0.000342	0.000258	9.03E-06	1.27E-05	36135.65	12851.65	38.88621	500393.1
San Bernai	2050 Constructi	Constructi	Aggregate	Aggregate	Diesel	3.26E-05	3.92E-05	4.68E-05	0.00015	0.000247	5.76E-07	8.39E-06	6.34E-06	3.63E-09	3.13E-09	12.45504	0	1.959012	0
San Bernai	2050 Constructi	Constructi	Aggregate	Aggregate	Diesel	0.00474	0.005735	0.006825	0.086287	0.035698	21.17895	0.000616	0.000567	0.000196	0.000173	687127.6	242975.9	325.393	30123567
San Bernai	2050 Constructi	Constructi	Aggregate	Aggregate	Diesel	0.02922	0.035356	0.042077	0.29739	0.221436	127.309	0.004081	0.003754	0.001176	0.001039	4130399	517165.5	340.5664	2.1E+08
San Bernai	2050 Constructi	Constructi	Aggregate	Aggregate	Diesel	0.005446	0.00659	0.007842	0.094884	0.043621	28.37038	0.001111	0.001022	0.000262	0.000232	920445.8	247085.3	492.4523	42551507
San Bernai	2050 Constructi	Constructi	Aggregate	Aggregate	Diesel	0.001098	0.001328	0.001581	0.03074	0.008814	6.67075	0.000207	0.000191	6.16E-05	5.44E-05	216425.1	77636.26	174.7796	10050090
San Bernai	2050 Constructi	Constructi	Aggregate	Aggregate	Diesel	0.000681	0.000824	0.00098	0.016897	0.006099	3.882221	0.00012	0.00011	3.59E-05	3.17E-05	125954.4	51819.06	99.0289	6817456
San Bernai	2050 Constructi	Constructi	Aggregate	Aggregate	Diesel	0.003593	0.004347	0.005173	0.098314	0.042483	17.30442	0.000759	0.000699	0.00016	0.000141	561422.9	352135.5	911.117	28287504
San Bernai	2050 Constructi	Constructi	Aggregate	Aggregate	Diesel	0.00254	0.003073	0.003657	0.110079	0.043031	18.78999	0.000442	0.000407	0.000174	0.000153	609620.7	291098.8	917.8821	29251846
San Bernai	2050 Constructi	Constructi	Aggregate	Aggregate	Diesel	0.003374	0.004083	0.004859	0.032488	0.022036	11.0664	0.0008	0.000736	0.000102	9.03E-05	359037.1	70222.51	81.15225	17408943
San Bernai	2050 Constructi	Constructi	Aggregate	Aggregate	Diesel	0.034425	0.041654	0.049572	0.51469	0.145532	152.8624	0.004318	0.003973	0.001412	0.001248	4959453	1311491	1189.633	2.66E+08
San Bernai	2050 Constructi	Constructi	Aggregate	Aggregate	Diesel	0.019769	0.02392	0.028467	0.227783	0.11633	99.49083	0.004276	0.003934	0.000919	0.000812	3227870	351874.9	668.3925	1.29E+08
San Bernai	2050 Constructi	Constructi	Aggregate	Aggregate	Diesel	0.002987	0.003614	0.004301	0.109578	0.053752	18.21998	0.000411	0.000378	0.000168	0.000149	591127.1	465708.7	1190.276	30463085
San Bernai	2050 Constructi	Constructi	Aggregate	Aggregate	Diesel	0.000251	0.000303	0.000361	0.005219	0.002443	2.091289	5.64E-05	5.19E-05	1.93E-05	1.71E-05	67849.58	16518.33	54.65881	4348004
San Bernai	2050 Constructi	Constructi	Aggregate	Aggregate	Diesel	0.030804	0.037273	0.044358	0.788731	0.329481	139.6462	0.004674	0.0043	0.00129	0.00114	4530666	2413859	3590.135	2.37E+08
San Bernai	2050 Constructi	Constructi	Aggregate	Aggregate	Diesel	0.001524	0.001843	0.002194	0.027787	0.019014	5.747029	0.000407	0.000374	5.31E-05	4.69E-05	186456	87894.07	215.6772	6910638
San Bernai	2050 Industrial - Industrial	Industrial	Aggregate	Aggregate	Diesel	0.000703	0.000851	0.001013	0.027242	0.015751	4.811671	9.26E-05	8.52E-05	4.45E-05	3.93E-05	156109.4	150258.1	440.055	9448941
San Bernai	2050 Industrial - Industrial	Industrial	Aggregate	Aggregate	Diesel	0.005009	0.006061	0.007214	0.129021	0.048605	20.25908	0.000712	0.000655	0.000187	0.000165	657283.4	703206.6	825.5151	62939856
San Bernai	2050 Industrial - Industrial	Industrial	Aggregate	Aggregate	Gasoline	0.00133	0.001243	0.001464	0.083365	0.002363	1.491307	0.000176	0.000133	1.57E-05	2.16E-05	61561.36	27608.6	78.75794	1380430
San Bernai	2050 Industrial - Industrial	Industrial	Aggregate	Aggregate	Diesel	1.23E-05	1.47E-05	1.76E-05	5.98E-05	9.29E-05	2.18E-07	3.17E-06	2.4E-06	1.42E-09	1.22E-09	4.865914	0	2.269023	0
San Bernai	2050 Industrial - Industrial	Industrial	Aggregate	Aggregate	Electric	3.91E-05	3.54E-06	3.87E-05	0.000992	2.73E-05	8.72E-08	2.67E-06	2.02E-06	2.12E-09	1.91E-08	54.49866	0	0.888891	0
San Bernai	2050 Industrial - Industrial	Industrial	Aggregate	Aggregate	Nat Gas	0	0	0.000188	0.050437	0.001388	0.296995	0	0	0	0	19845.05	16793.65	44.76	316801.7
San Bernai	2050 Industrial - Industrial	Industrial	Aggregate	Aggregate	Gasoline	0.050364	0.046325	0.055423	5.070499	0.216455	49.19969	0.003431	0.002592	0.000493	0.00076	2170158	1064946	591.1867	70125107
San Bernai	2050 Industrial - Industrial	Industrial	Aggregate	Aggregate	Electric	6.82E-06	6.17E-07	6.75E-06	9.77E-05	2.73E-06	7.55E-09	3.02E-07	2.28E-07	2.21E-10	1.99E-09	5.671313	0	0.029028	0
San Bernai	2050 Industrial - Industrial	Industrial	Aggregate	Aggregate	Nat Gas	0	0	0.009067	3.956502	0.426895	97.82163	0	0	0	0	5404460	2430575	1349.27	1.6E+08
San Bernai	2050 Industrial - Industrial	Industrial	Aggregate	Aggregate	Gasoline	0.000741	0.000689	0.000815	0.065339	0.002257	0.678711	4.75E-05	3.59E-05	7.5E-06	1.04E-05	29661.83	11829.65	19.59258	532593.4
San Bernai	2050 Industrial - Industrial	Industrial	Aggregate	Aggregate	Diesel	9.81E-06	1.18E-05	1.41E-05	4.77E-05	7.67E-05	1.79E-07	2.61E-06	1.97E-06	1.13E-09	9.77E-10	3.886818	0	0.476682	0
San Bernai	2050 Industrial - Industrial	Industrial	Aggregate	Aggregate	Gasoline	0.000228	0.00021	0.000251	0.01735	0.001325	0.401768	2.8E-05	2.12E-05	3.9E-06	5.69E-06	16235.2	6007.9	15.64	322908.2
San Bernai	2050 Industrial - Industrial	Industrial	Aggregate	Aggregate	Gasoline	0.002198	0.002027	0.002419	0.170957	0.008242	2.830034	0.000197	0.000149	3.01E-05	4.12E-05	117526.4	33769.8	67.369	1696790
San Bernai	2050 Industrial - Industrial	Industrial	Aggregate	Aggregate	Diesel	2.51E-06	3.02E-06	3.61E-06	1.34E-05	1.99E-05	4.7E-08	6.84E-07	5.17E-07	3.07E-10	2.64E-10	1.05231	0	0.196905	0
San Bernai	2050 Industrial - Industrial	Industrial	Aggregate	Aggregate	Diesel	0.002507	0.003033	0.00361	0.046082	0.02254	9.784553	0.000281	0.000259	9.04E-05	7.99E-05	317449	198366.8	210.1567	17494660
San Bernai	2050 Industrial - Industrial	Industrial	Aggregate	Aggregate	Diesel	0.001136	0.001375	0.001636	0.021512	0.007751	5.736707	0.000162	0.000149	5.3E-05	4.68E-05	186121.2	54219.45	63.21502	9081573
San Bernai	2050 Lawn and	Lawn and	Aggregate	Aggregate	Gasoline	0.042669	0.046955	0.043096	0.127651	0.001437	0.683542	0.000543	0.00041	9.87E-06	1.36E-05	38529.19	0	8411.031	0
San Bernai	2050 Lawn and	Lawn and	Aggregate	Aggregate	Electric	0	0	0	0	0	0	0	0	0	0	0	0	6828.517	0
San Bernai	2050 Lawn and	Lawn and	Aggregate	Aggregate	Gasoline	0.039698	0.043685	0.040095	0.068735	0.001421	0.368061	0.000292	0.000221	5.86E-06	8.1E-06	22922.69	0	4529.016	0
San Bernai	2050 Lawn and	Lawn and	Aggregate	Aggregate	Electric	0	0	0	0	0	0	0	0	0	0	0	0	3676.894	0
San Bernai	2050 Lawn and	Lawn and	Aggregate	Aggregate	Gasoline	6.39E-05	7.03E-05	6.45E-05	0.002927	2.22E-05	0.006716	1.07E-07	8.07E-08	1.12E-07	1.54E-07	430.3862	0	62.01753	0

San Bernai	2050 Lawn and	Lawn and	Aggregate	Aggregate	Diesel	8.47E-07	1.22E-06	1.02E-06	3.48E-06	6.44E-06	0.000844	2.16E-07	1.64E-07	8.07E-09	6.96E-09	27.67209	0	0.065943	0
San Bernai	2050 Lawn and	Lawn and	Aggregate	Aggregate	Electric	0	0	0	0	0	0	0	0	0	0	0	0	23.23838	0
San Bernai	2050 Lawn and	Lawn and	Aggregate	Aggregate	Gasoline	0.010993	0.012097	0.011103	0.556045	0.00689	1.526879	3.39E-05	2.56E-05	2.45E-05	3.38E-05	90969.93	0	19268.41	0
San Bernai	2050 Lawn and	Lawn and	Aggregate	Aggregate	Electric	0	0	0	0	0	0	0	0	0	0	0	0	13098.62	0
San Bernai	2050 Lawn and	Lawn and	Aggregate	Aggregate	Gasoline	0.067729	0.074532	0.068406	0.339382	0.00238	1.741058	0.001002	0.000757	2.39E-05	3.29E-05	93643.1	0	7662.866	0
San Bernai	2050 Lawn and	Lawn and	Aggregate	Aggregate	Electric	0	0	0	0	0	0	0	0	0	0	0	0	23049.97	0
San Bernai	2050 Lawn and	Lawn and	Aggregate	Aggregate	Gasoline	0.000238	0.000262	0.000241	0.013858	9.66E-05	0.033881	5.09E-07	3.85E-07	5.44E-07	7.51E-07	2106.938	0	305.9837	0
San Bernai	2050 Lawn and	Lawn and	Aggregate	Aggregate	Diesel	3.77E-07	5.41E-07	4.53E-07	2.5E-06	3.14E-06	0.000428	1.1E-07	8.28E-08	4.1E-09	3.53E-09	14.03925	0	0.057111	0
San Bernai	2050 Lawn and	Lawn and	Aggregate	Aggregate	Gasoline	0.021623	0.023795	0.021839	1.361473	0.011255	2.867235	4.11E-05	3.11E-05	4.83E-05	6.66E-05	189552.3	0	2120.608	0
San Bernai	2050 Lawn and	Lawn and	Aggregate	Aggregate	Diesel	0.000325	0.000467	0.000391	0.001575	0.00254	0.337227	8.65E-05	6.53E-05	3.23E-06	2.78E-06	11058.55	0	331.3455	0
San Bernai	2050 Lawn and	Lawn and	Aggregate	Aggregate	Electric	0	0	0	0	0	0	0	0	0	0	0	0	102.6489	0
San Bernai	2050 Lawn and	Lawn and	Aggregate	Aggregate	Gasoline	0.001256	0.001382	0.001269	0.086091	0.000586	0.162442	2.68E-06	2.03E-06	3.06E-06	4.23E-06	11268.03	0	3532.803	0
San Bernai	2050 Lawn and	Lawn and	Aggregate	Aggregate	Electric	0	0	0	0	0	0	0	0	0	0	0	0	378.6786	0
San Bernai	2050 Lawn and	Lawn and	Aggregate	Aggregate	Gasoline	0.000618	0.00068	0.000624	0.011208	9.33E-05	0.032171	1.09E-06	8.24E-07	5.17E-07	7.13E-07	1937.222	0	521.4234	0
San Bernai	2050 Lawn and	Lawn and	Aggregate	Aggregate	Electric	0	0	0	0	0	0	0	0	0	0	0	0	73.09417	0
San Bernai	2050 Lawn and	Lawn and	Aggregate	Aggregate	Gasoline	0.043129	0.04746	0.04356	0.258581	0.002646	1.311764	0.00038	0.000287	1.78E-05	2.46E-05	69694.15	0	13956.62	0
San Bernai	2050 Lawn and	Lawn and	Aggregate	Aggregate	Electric	0	0	0	0	0	0	0	0	0	0	0	0	25979.34	0
San Bernai	2050 Lawn and	Lawn and	Aggregate	Aggregate	Gasoline	0.002188	0.002407	0.00221	0.11979	0.001087	0.307071	4.78E-06	3.61E-06	4.82E-06	6.65E-06	18758.71	0	684.0531	0
San Bernai	2050 Light Com	Light Com	Aggregate	Aggregate	Gasoline	0.022332	0.022247	0.024575	1.421281	0.018633	6.362724	0.000309	0.00025	8.07E-05	0.000115	325933.3	46833.15	1853.688	3056678
San Bernai	2050 Light Com	Light Com	Aggregate	Aggregate	Diesel	0.000698	0.000831	0.001005	0.01012	0.006927	1.243209	3.84E-05	3.62E-05	1.6E-05	1.04E-05	41513.66	40394.55	50.53386	1494598
San Bernai	2050 Light Com	Light Com	Aggregate	Aggregate	Electric	0	0	0	0	0	0	0	0	0	0	0	0	21547.99	0
San Bernai	2050 Light Com	Light Com	Aggregate	Aggregate	Nat Gas	0	0	0.000781	0.375116	0.032029	10.22865	0	0	0	0	561658.3	52932.3	6.23	5393255
San Bernai	2050 Light Com	Light Com	Aggregate	Aggregate	Gasoline	0.077518	0.077797	0.085304	2.445448	0.041447	11.42486	0.000553	0.00047	0.000154	0.000206	583513.9	99433.3	13962.25	4160828
San Bernai	2050 Light Com	Light Com	Aggregate	Aggregate	Diesel	0.001429	0.001704	0.002057	0.023111	0.019958	3.720633	0.000137	0.00015	4.7E-05	3.11E-05	123615.8	81318.35	291.5423	2683506
San Bernai	2050 Light Com	Light Com	Aggregate	Aggregate	Electric	0	0	0	0	0	0	0	0	0	0	0	0	1795.129	0
San Bernai	2050 Light Com	Light Com	Aggregate	Aggregate	Nat Gas	0	0	9.01E-06	0.009361	0.000837	0.333628	0	0	0	0	18031	2138.9	18.79	237775.6
San Bernai	2050 Light Com	Light Com	Aggregate	Aggregate	Gasoline	0.014785	0.014929	0.01627	0.863184	0.006618	1.882764	2.56E-05	3.22E-05	3.14E-05	4.32E-05	122764.2	726.35	6053.266	21064.15
San Bernai	2050 Light Com	Light Com	Aggregate	Aggregate	Diesel	5.29E-06	6.32E-06	7.61E-06	9.9E-05	9.46E-05	0.018132	6.46E-07	7.31E-07	2.29E-07	1.45E-07	575.9559	821.25	7.447316	31207.5
San Bernai	2050 Light Com	Light Com	Aggregate	Aggregate	Electric	0	0	0	0	0	0	0	0	0	0	0	0	11504.8	0
San Bernai	2050 Light Com	Light Com	Aggregate	Aggregate	Gasoline	0.005728	0.005607	0.006304	0.304596	0.005765	3.554905	0.000224	0.000172	3.87E-05	5.37E-05	152995.5	29050.35	1121.696	1944282
San Bernai	2050 Light Com	Light Com	Aggregate	Aggregate	Diesel	0.000893	0.001065	0.001286	0.014041	0.011629	2.155157	7.8E-05	8.43E-05	2.73E-05	1.8E-05	71664.31	42431.25	134.0129	1569956
San Bernai	2050 Light Com	Light Com	Aggregate	Aggregate	Electric	0	0	0	0	0	0	0	0	0	0	0	0	11402.87	0
San Bernai	2050 Light Com	Light Com	Aggregate	Aggregate	Gasoline	0.010927	0.010789	0.012025	0.684335	0.009013	4.407178	0.000257	0.0002	5.32E-05	7.3E-05	208007.1	49282.3	1513.769	2958745
San Bernai	2050 Light Com	Light Com	Aggregate	Aggregate	Diesel	0.002903	0.003457	0.004181	0.043735	0.031817	5.800104	0.000181	0.000178	7.45E-05	4.87E-05	193409.1	159297	266.7268	7327660
San Bernai	2050 Light Com	Light Com	Aggregate	Aggregate	Electric	0	0	0	0	0	0	0	0	0	0	0	0	5693.545	0
San Bernai	2050 Locomotiv Railyard O		Aggregate	Aggregate	Diesel	0.471496	0.57	0.679	11.544	13.515	0	0.216	0.199	0.045	0.036	0	0	0	0
San Bernai	2050 Locomotiv Railyard O		Aggregate	Aggregate	Diesel	0.011302	1.86E-05	2.22E-05	0.075012	0.302896	32.4352	0.005063	0.004658	0.000251	0.000265	0	0	0	0
San Bernai	2050 Locomotiv Railyard O		Aggregate	Aggregate	Diesel	0.019173	5.37E-06	6.39E-06	0.051127	0.51926	26.8197	0.008808	0.008104	0.000248	0.000219	0	0	0	0
San Bernai	2050 Locomotiv Railyard O		Aggregate	Aggregate	Diesel	0.117416	0.000255	0.000303	0.32904	1.813284	120.7284	0.03851	0.035429	0.001107	0.000985	0	0	0	0
San Bernai	2050 Oil Drilling Oil Drilling		Aggregate	Aggregate	Diesel	0.000448	0.000542	0.000646	0.005865	0.001906	1.835751	4.93E-05	4.53E-05	1.7E-05	1.5E-05	59558.93	9135.864	7.18267	2285438
San Bernai	2050 Oil Drilling Oil Drilling		Aggregate	Aggregate	Diesel	4.23E-06	5.03E-06	6.09E-06	2.08E-05	3.85E-05	0.005045	1.44E-06	1.32E-06	6.4E-08	3.12E-08	124.1	240.9	0.32	5781.6
San Bernai	2050 Oil Drilling Oil Drilling		Aggregate	Aggregate	Diesel	2.18E-06	2.59E-06	3.14E-06	2.97E-05	1.88E-05	0.003271	1.08E-07	9.98E-08	4.23E-08	2.94E-08	116.8	116.8	0	3854.4
San Bernai	2050 Oil Drilling Oil Drilling		Aggregate	Aggregate	Diesel	0.002292	0.002773	0.0033	0.021626	0.005737	10.41153	0.000229	0.00021	9.62E-05	8.5E-05	337790.5	33354.33	24.9458	12998244
San Bernai	2050 Pleasure C Pleasure C		Aggregate	Aggregate	Gasoline	0.050247	0.050749	0.05294	0.696664	0.019004	3.6463	0.000361	0.000273	4.67E-05	6.44E-05	183369.8	0	722.7583	0
San Bernai	2050 Pleasure C Pleasure C		Aggregate	Aggregate	Diesel	0	0	0	0	0	0	0	0	0	0	0	0	0	0
San Bernai	2050 Pleasure C Pleasure C		Aggregate	Aggregate	Gasoline	0.000457	0.000461	0.000503	0.004203	0.00027	0.033195	2.03E-05	1.53E-05	3.95E-07	5.45E-07	1543.865	0	3.933371	0
San Bernai	2050 Pleasure C Pleasure C		Aggregate	Aggregate	Diesel	0	0	0	0	0	0	0	0	0	0	0	0	0	0

San Bernai	2050 Pleasure C Pleasure C Aggregate	Aggregate Gasoline	0.010149	0.01025	0.011168	0.153021	0.00375	2.254611	0.000235	0.000178	2.42E-05	3.35E-05	94381.27	0	333.6652	0
San Bernai	2050 Pleasure C Pleasure C Aggregate	Aggregate Diesel	0	0	0	0	0	0	0	0	0	0	0	0	0	0
San Bernai	2050 Pleasure C Pleasure C Aggregate	Aggregate Gasoline	0.004193	0.004235	0.004614	0.043709	0.001438	0.293629	0.000132	1E-04	3.6E-06	4.97E-06	14059.19	0	114.5179	0
San Bernai	2050 Pleasure C Pleasure C Aggregate	Aggregate Diesel	0	0	0	0	0	0	0	0	0	0	0	0	0	0
San Bernai	2050 Pleasure C Pleasure C Aggregate	Aggregate Gasoline	0.051407	0.051921	0.05657	0.61249	0.022044	3.175686	0.00966	0.007299	4.16E-05	5.74E-05	161034.4	0	1035.954	0
San Bernai	2050 Pleasure C Pleasure C Aggregate	Aggregate Diesel	0	0	0	0	0	0	0	0	0	0	0	0	0	0
San Bernai	2050 Pleasure C Pleasure C Aggregate	Aggregate Gasoline	0.021566	0.021782	0.023732	0.244472	0.012204	3.927485	0.000406	0.000307	4.22E-05	5.82E-05	163621.6	0	892.8125	0
San Bernai	2050 Pleasure C Pleasure C Aggregate	Aggregate Diesel	0	0	0	0	0	0	0	0	0	0	0	0	0	0
San Bernai	2050 Portable E Portable E Aggregate	Aggregate Diesel	0.001609	0.001946	0.002316	0.043863	0.005945	11.25046	0.000208	0.000192	0.000104	9.18E-05	365008.8	140031.2	256.893	17400703
San Bernai	2050 Portable E Portable E Aggregate	Aggregate Diesel	0.035195	0.042586	0.050681	0.449868	0.255344	152.4696	0.004776	0.004394	0.001409	0.001244	4946707	994885.8	547.0674	2.36E+08
San Bernai	2050 Portable E Portable E Aggregate	Aggregate Diesel	0.004661	0.00564	0.006712	0.103234	0.05402	32.51167	0.000868	0.000798	0.0003	0.000265	1054805	250344.2	589.5879	50297386
San Bernai	2050 Portable E Portable E Aggregate	Aggregate Diesel	0.001328	0.001607	0.001912	0.034616	0.007124	10.64249	0.000206	0.00019	9.84E-05	8.69E-05	345283.8	109366.1	257.0197	16465194
San Bernai	2050 Portable E Portable E Aggregate	Aggregate Diesel	0.004415	0.005342	0.006358	0.077543	0.013903	34.04437	0.000625	0.000575	0.000315	0.000278	1104532	178151.6	249.4133	52668219
San Bernai	2050 Portable E Portable E Aggregate	Aggregate Diesel	0.066427	0.080376	0.095655	0.819488	0.554914	305.4029	0.00954	0.008777	0.002822	0.002493	9908460	1684200	864.6797	4.73E+08
San Bernai	2050 Portable E Portable E Aggregate	Aggregate Diesel	0.007621	0.009221	0.010974	0.113742	0.05662	33.1905	0.001024	0.000942	0.000307	0.000271	1076829	271404.3	161.1119	51345587
San Bernai	2050 Portable E Portable E Aggregate	Aggregate Diesel	0.003062	0.003705	0.004409	0.056653	0.008555	16.1664	0.00032	0.000295	0.000149	0.000132	524500.9	173505.4	132.0261	25011744
San Bernai	2050 Recreator Recreator Aggregate	Aggregate Gasoline	0.033332	0.033666	0.03668	0.742337	0.016948	13.02916	0.00163	0.001232	0.00016	0.000187	533805.1	0	20271.9	0
San Bernai	2050 Recreator Recreator Aggregate	Aggregate Gasoline	0.003284	0.003317	0.003614	0.095479	0.002719	1.151858	0.000258	0.000195	9.64E-06	1.72E-05	48985.15	0	1196.477	0
San Bernai	2050 Recreator Recreator Aggregate	Aggregate Gasoline	0	0	0	0	0	0	0	0	0	0	0	0	0	0
San Bernai	2050 Recreator Recreator Aggregate	Aggregate Gasoline	1.402293	1.416316	1.543138	6.311128	0.043763	43.56049	0.021604	0.016323	0.000731	0.000774	2177100	0	75832.18	0
San Bernai	2050 Recreator Recreator Aggregate	Aggregate Gasoline	0.01008	0.010181	0.011092	0.040461	0.000676	0.154264	0.000321	0.000242	6.63E-08	3.46E-06	9436.947	0	157.8532	0
San Bernai	2050 Transport Transport Aggregate	Aggregate Diesel	0.003447	0.035195	0.004962	0.003829	0.045969	7.38713	0.000252	0.000232	12022.24	1.72E-07	249098.5	520576.2	666.2	0
San Bernai	2050 Transport Transport Aggregate	Aggregate Diesel	0.10061	0.872016	0.14489	0.111793	0.759479	168.17	0.005978	0.005503	263753.1	3.77E-06	5464775	7815663	4366.08	0
San Bernai	2050 Transport Transport Aggregate	Aggregate Diesel	0	0	0	0	0	0	0	0	0	0	0	0	938.97	0
San Bernai	2050 Transport Transport Aggregate	Aggregate Diesel	0.002834	0.028938	0.004081	0.00315	0.036814	5.86128	0.000203	0.000187	9641.82	1.38E-07	199778.2	417239.7	3364.48	0
San Bernai	2050 Transport Transport Aggregate	Aggregate Diesel	0.058614	0.517979	0.084389	0.065135	0.476433	93.48	0.003093	0.002845	146961.5	2.1E-06	3044943	4510030	16580.61	0
San Bernai	2050 Transport Transport Aggregate	Aggregate Diesel	0.002108	0.021517	0.003035	0.002341	0.022079	3.47569	0.000124	0.000114	5774.25	8.25E-08	119643.6	178143.7	544.1	0



Sector	CO2 tons/year	Diesel fuel use (gal)	Gasoline fuel use (gal)	CH4* (g)	CH4 (tons)	N2O* (g)	N2O (tons)	TCO2e	MTCO2e/year	Allocation Approach	Proportion	MTCO2e
Agricultural	20,338	1,759,316	46,502	962,282	1.06	868343	0.96	20,621	18,707	Acres of ag land	0.00%	0
Airport Ground Support	14,389	245,160	1,203,624	3,147,027	3.47	421034	0.46	14,609	13,253	Passenger boardings (a)	100.00%	13,253
Construction and Mining	323,474	28,556,459	301,240	6,423,496	7.08	1403332	15.47	327,772	297,352	Service population	17.36%	51,608
Industrial	70,559	1,316,973	2,395,143	24,996,828	27.55	930346	1.03	71,602	64,957	Jobs	26.44%	17,177
Lawn and Garden	3,423	11,100	539,813	5,782,357	6.37	69995	0.08	3,622	3,286	Households	13.43%	441
Light Commercial	18,663	430,779	1,393,214	14,463,115	15.94	383584	0.42	19,222	17,438	Jobs	26.44%	4,611
Pleasure Craft	4,866	0	618,010	4,455,853	4.91	89611	0.10	5,029	4,563	Population	13.91%	635
Portable Equipment	217,423	19,326,127	0	0	0.00	0	0.00	217,423	197,244	Jobs	26.44%	52,158
Recreational	21,132	0	2,769,327	22,514,632	24.82	304626	0.34	21,916	19,882	Population	13.91%	2,765
Transportation Refrigeration Units	101,607	9,078,238	0	0	0.00	0	0.00	101,607	92,177	Share of road miles	3.99%	3,682
Total								728,860	728,860			146,330

Sector	Gasoline CH4 factor	Gasoline N2O Factor	Diesel CH4 Factor	Diesel N2O Factor
Agricultural	10.1	0.135	0.28	0.49
Airport Ground Support	2.58	0.25	0.17	0.49
Construction and Mining	9	0.135	0.13	0.49
Industrial	10.31	0.13	0.23	0.47
Lawn and Garden	10.705	0.12	0.33	0.47
Light Commercial	10.31	0.13	0.23	0.47
Pleasure Craft	7.21	0.145	0.31	0.5
Portable				
Recreational	8.13	0.11	0.41	0.41
Transportation Refrigeration Units				

*Includes yard trucks, gantry cranes, container handlers, forklifts (used at railyards and ports) <https://www.epa.gov/sites/production/files/2020-04/ghg-emission-factors-hub.xlsx>

Allocation Calculation 2050

	Ontario	San Bernardino County
Acres of ag land (2050)	0	1,873,409
Service Population (2050)**	706,494	4,070,669
Population (2050)**	410,492	2,951,283
Households (2050)**	124,380	925,913
Jobs (2050)**	296,002	1,119,386
Maintained road miles	471	11,798

**Extrapolated using 2016-2045 SCAG data

City	House holds 2016	House holds 2020	House holds 2030	House holds 2045	2016-2020	2021-2029	2030-2045	2020-2045	Populat ion 2016	Populati on 2019 (DOF)	Populati on 2045 (DOF)
Ontario city	46,001	51,841	60,602	74,521	5,840	7,228	13,919	22,680	172,249	178,268	269,050
San Bernardino County	749286		873511	2814941							

Source: <https://scag.ca.gov/sites/main/files/file-attachments/scag-final-rhna-data-appendix-030520.pdf?1602189406>

County	City	Population			Households			Employment		
		2008	2020	2035	2008	2020	2035	2008	2020	2035
San Bernardino	Apple Valley	69,000	82,900	109,000	23,500	28,500	37,100	15,500	17,000	22,500
San Bernardino	Barstow	22,500	27,300	36,200	8,000	9,900	13,000	13,300	14,900	19,100
San Bernardino	Big Bear Lake	5,000	5,600	7,000	2,200	2,400	3,000	6,200	6,400	7,400
San Bernardino	Chino	75,600	88,800	107,200	20,100	24,600	29,200	48,500	53,500	67,700
San Bernardino	Chino Hills	74,600	76,600	78,400	22,900	24,000	25,600	9,300	10,500	12,900
San Bernardino	Colton	52,100	60,700	71,700	15,000	17,800	21,100	24,000	25,500	29,600
San Bernardino	Fontana	193,900	222,700	259,100	48,600	57,500	66,700	47,600	53,700	69,000
San Bernardino	Grand Terrace	11,800	11,600	13,000	4,300	4,600	5,400	3,000	3,200	4,000
San Bernardino	Hesperia	89,600	98,200	132,500	26,300	28,900	39,300	15,500	20,400	28,700
San Bernardino	Highland	53,000	58,600	67,300	15,400	17,700	20,300	6,000	7,800	9,100
San Bernardino	Loma Linda	23,000	26,700	31,700	8,700	10,500	12,600	17,600	23,300	32,600
San Bernardino	Montclair	36,000	39,700	43,900	9,300	10,400	11,600	16,500	17,000	18,400
San Bernardino	Needles	4,800	6,000	8,000	1,900	2,400	3,100	3,300	3,800	4,700
San Bernardino	Ontario	162,900	203,800	307,600	44,600	57,700	87,300	114,300	142,900	214,400

SCAG RTP 2035 Population and Employment Projections

	Population 2035	Employment 2035
Ontario	307600	214400
San Bernardino County	2750000	1059000

Source: https://scag.ca.gov/sites/main/files/file-attachments/2012frtp_transportationfinance.pdf?1606006683

COUNTY JURISDICTION	MAINTAINED MILES		
	RURAL	URBANIZED	TOTAL
SAN BERNARDINO			
Cities:			
ADELANTO	4.41	291.27	295.68
APPLE VALLEY TOWN	0.25	449.23	449.48
BARSTOW	0.69	141.77	142.46
BIG BEAR LAKE		98.58	98.58
CHINO		240.53	240.53
CHINO HILLS		172.31	172.31
COLTON		142.40	142.40
FONTANA	0.12	485.37	485.49
GRAND TERRACE		39.24	39.24
HESPERIA	5.76	497.79	503.54
HIGHLAND		169.35	169.35
LOMA LINDA		78.14	78.14
MONTCLAIR		79.89	79.89
NEEDLES	66.20		66.20
ONTARIO		471.32	471.32

COUNTY JURISDICTION	MAINTAINED MILES		
	RURAL	URBANIZED	TOTAL
SAN BERNARDINO (Continued)			
Other:			
BUREAU OF INDIAN AFFAIRS	34.25	4.59	38.84
NATIONAL PARK SERVICE	268.91	11.10	280.02
SAN BERNARDINO COUNTY	1,815.58	1,028.67	2,844.25
STATE HIGHWAYS	817.88	351.94	1,169.82
STATE PARK SERVICE	172.97	23.38	196.36
U.S. ARMY	142.50	50.06	192.56
U.S. BUREAU OF LAND MANAGEMENT	131.06		131.06
U.S. FISH AND WILDLIFE	2.61		2.61
U.S. FOREST SERVICE	170.49	30.91	201.40
U.S. NAVY/MARINES	279.41	124.62	404.03
SAN BERNARDINO TOTAL	3,917.64	7,880.80	11,798.44

Ontario Maintained Miles 471.32
SB County Maintained Miles 11798

Vehicle Type	Fuel Type	CH ₄ Factor (g / gallon)	N ₂ O Factor (g / gallon)
Ships and Boats	Average Gasolin	7.21	0.15
	Gasoline (2 strc	9.54	0.06
	Gasoline (4 strc	4.88	0.23
Locomotives	Diesel	0.31	0.50
	Diesel	0.80	0.26
Agricultural Equipment ^A	Average Gasolin	10.10	0.14
	Gasoline (2 strc	12.96	0.06
	Gasoline (4 strc	7.24	0.21
	Diesel	0.28	0.49
Agricultural Offroad Truck	LPG	2.19	0.39
	Gasoline	7.24	0.21
	Diesel	0.13	0.49
Construction/Mining Equip	Average Gasolin	9.00	0.14
	Gasoline (2 strc	12.42	0.07
	Gasoline (4 strc	5.58	0.20
Construction/Mining Offr	Diesel	0.20	0.47
	Diesel	0.13	0.49
Lawn and Garden Equipr	Gasoline	5.58	0.20
	Average Gasolin	10.71	0.12
	Gasoline (2 strc	15.57	0.06
	Gasoline (4 strc	5.84	0.18
Airport Equipment	Diesel	0.33	0.47
	Diesel	0.35	0.41
	LPG	0.33	0.41
Industrial/Commercial Eq	Gasoline	2.58	0.25
	Average Gasolin	10.31	0.13
	Gasoline (2 strc	15.14	0.06
Logging Equipment	Gasoline (4 strc	5.48	0.20
	Diesel	0.23	0.47
	LPG	0.44	0.41
Railroad Equipment	Average Gasolin	9.37	0.13
	Gasoline (2 strc	12.03	0.08
	Gasoline (4 strc	6.71	0.18
Recreational Equipment	Diesel	0.10	0.49
	Gasoline	5.78	0.19
	Diesel	0.44	0.42
Transportation Refrigeration Units	LPG	1.20	0.41
	Average Gasolin	8.13	0.11
	Gasoline (2 strc	7.81	0.03
	Gasoline (4 strc	8.45	0.19
Recreational Equipment	Diesel	0.41	0.41
	LPG	2.98	0.38
	LPG	2.98	0.38

Source: EPA (2020) Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2018. All values are calculated from Tables A-113 through A-114.

Allocation Calculation 2030			Allocation Calculation 2050		
	Ontario	San Bernardino County		Ontario	San Bernardino County
Acres of ag land (2030)	7,520	1,873,410	Acres of ag land (2030)	0	1,873,409
Service Population (2030)	401,717	3,400,000	Service Population (2050)*	706,494	4,070,669
Population (2030)	232,121	2,474,000	Population (2050)*	410,492	2,951,283
Households (2030)	66,679	751,000	Households (2050)*	124,380	925,913
Jobs (2030)	169,596	926,000	Jobs (2050)*	296,002	1,119,386
Maintained road miles (2018)	471	11,798	Maintained road miles (2018)	471	11,798

*County demographics extrapolated using 2016-2045 SCAG data

Ontario Agricultural Land Inventory, 2030

FMMP Data	2030	
Row Labels	Sum of Calc_Acres	
D	24487.50805	Developed
G	546.6195891	Pasture
L	18.94415445	Crops
P	1305.017544	Crops
S	25.83983285	Crops
U	172.6355404	Crops
X	5446.42479	Other
Grand Total	32002.98951	

FMMP: Acres of Agricultural Land in SB County (assumed for 2030 and 2050)

2019 Crop Report	
Crop Type	Acreage
Field Crops	1371057
Fruit and Nut Crops	3907
Vegetable Crops	1910
Greenhouse acreage	1603
Pasture*	494931.807
TOTAL	1873408.81

FMMP Data from Ontario Combined Workbook, Land Use Change tab:

\\Pw003\projdataq\ONT-06.0\2_TechStudies\28_CCAP\1_Inventory and forecast\Ontario combined workbook.xlsx

*Estimate based on Ontario 2016 share of pasture relative to other ag lands

https://cms.sbcounty.gov/Portals/13/46255%20AWM%20CROP%20REPORT%202019_V

2030 Population and Household Data

		2000	2016	2020	2030	2035	2045
POPULATION	Imperial	143,000	187,000	223,000	249,000	260,000	281,000
	Los Angeles	9,544,000	10,110,000	10,407,000	10,900,000	11,174,000	11,674,000
	Orange	2,854,000	3,180,000	3,268,000	3,441,000	3,499,000	3,535,000
	Riverside	1,557,000	2,364,000	2,493,000	2,853,000	2,996,000	3,252,000
	San Bernardino	1,719,000	2,141,000	2,250,000	2,474,000	2,595,000	2,815,000
	Ventura	757,000	850,000	877,000	906,000	920,000	947,000
	SCAG Region	16,574,000	18,832,000	19,518,000	20,821,000	21,443,000	22,504,000
EMPLOYMENT	Imperial	57,000	67,000	79,000	102,000	110,000	130,000
	Los Angeles	4,448,000	4,743,000	4,838,000	5,060,000	5,172,000	5,382,000
	Orange	1,505,000	1,710,000	1,774,000	1,886,000	1,928,000	1,980,000
	Riverside	509,000	743,000	823,000	961,000	1,009,000	1,103,000
	San Bernardino	600,000	791,000	834,000	926,000	972,000	1,064,000
	Ventura	301,000	335,000	348,000	369,000	376,000	389,000
	SCAG Region	7,419,000	8,389,000	8,695,000	9,304,000	9,566,000	10,049,000
HOUSEHOLDS	Imperial	39,000	50,000	66,000	78,000	83,000	92,000
	Los Angeles	3,134,000	3,319,000	3,472,000	3,749,000	3,885,000	4,119,000
	Orange	935,000	1,025,000	1,065,000	1,104,000	1,125,000	1,154,000
	Riverside	506,000	716,000	785,000	930,000	988,000	1,086,000
	San Bernardino	529,000	630,000	668,000	751,000	793,000	875,000
	Ventura	243,000	271,000	278,000	291,000	296,000	306,000
	SCAG Region	5,386,000	6,012,000	6,333,000	6,903,000	7,170,000	7,633,000

https://scag.ca.gov/sites/main/files/file-attachments/0903connectsocial_demographics-and-growth-forecast.pdf

SCAG RTP 2030 Demographic Projections

	Population	Employment	Households
San Bernardino County	2,474,000	926,000	751,000

Emissions

Source: EMFAC2021 (v1.0.1) Emissions Inventory

Region Type: Sub-Area

Region: San Bernardino (SC)

Calendar Year: 2030

Season: Annual

Vehicle Classification: EMFAC202x Categories

Units: miles/day for CVMT and EVMT, trips/day for Trips, kWh/day for Energy Consumption, tons/day for Emissions, 1000 gallons/day for Fuel Consumption

Trips	Region	Calendar Year	Vehicle Category	Model Year	Speed	Fuel	Population	Total VMT	CVMT	EVMT	Energy Consumption	NOx_RUNEX	NOx_IDLEX	NOx_STREX	NOx_TOTEX	PM2.5_RUNEX	PM2.5_IDLEX	PM2.5_STREX	PM2.5_TOTEX
1598.635	San Bernardino (SC)	2030	All Other Buses	Aggregate	Aggregate	Diesel	179.6219597	9235.243194	9235.243	0	0	0.015658725	0.000636736	0.002194324	0.01848979	0.000333168	2.22336E-06	0	0.000335391
373.0488	San Bernardino (SC)	2030	All Other Buses	Aggregate	Aggregate	Natural Gas	41.91559326	2379.287553	2379.288	0	0	0.000243389	7.00677E-05	0	0.00031346	2.61467E-06	2.03225E-07	0	2.8179E-06
2101254	San Bernardino (SC)	2030	LDA	Aggregate	Aggregate	Gasoline	453464.552	19584196.39	19584196	0	0	0.568197314	0	0.456852968	1.02505028	0.01940208	0	0.003570809	0.02297289
2744.074	San Bernardino (SC)	2030	LDA	Aggregate	Aggregate	Diesel	630.1586205	22339.62612	22339.63	0	0	0.001709383	0	0	0.00170938	0.000139849	0	0	0.000139849
186060.2	San Bernardino (SC)	2030	LDA	Aggregate	Aggregate	Electricity	37981.85919	1715593.061	0	1715593	662360.5171	0	0	0	0	0	0	0	0
72766.7	San Bernardino (SC)	2030	LDA	Aggregate	Aggregate	Plug-in Hybrid	17597.75046	830643.2017	370325.4	460317.8	139029.7091	0.002486542	0	0.008917482	0.01140402	0.000360804	0	0.000120277	0.000481081
159229.3	San Bernardino (SC)	2030	LDT1	Aggregate	Aggregate	Gasoline	36547.00969	1287740.232	1287740	0	0	0.131556699	0	0.056558555	0.18811525	0.001858252	0	0.000384096	0.002242347
1.585047	San Bernardino (SC)	2030	LDT1	Aggregate	Aggregate	Diesel	0.431507234	11.92061732	11.92062	0	0	4.89229E-06	0	0	4.8923E-06	7.37116E-07	0	0	7.37116E-07
1417.55	San Bernardino (SC)	2030	LDT1	Aggregate	Aggregate	Electricity	283.4152987	13687.84366	0	13687.84	5284.637371	0	0	0	0	0	0	0	0
982.1864	San Bernardino (SC)	2030	LDT1	Aggregate	Aggregate	Plug-in Hybrid	237.5299518	11378.38861	4703.914	6674.475	2015.890323	3.15843E-05	0	0.000120366	0.00015195	2.98872E-06	0	1.0557E-06	4.04442E-06
1039631	San Bernardino (SC)	2030	LDT2	Aggregate	Aggregate	Gasoline	222464.2695	9055227.436	9055227	0	0	0.412488241	0	0.279119482	0.69160772	0.008903218	0	0.001709991	0.010613209
3489.059	San Bernardino (SC)	2030	LDT2	Aggregate	Aggregate	Diesel	728.9548391	31178.90161	31178.9	0	0	0.001043304	0	0	0.0010433	0.000129649	0	0	0.000129649
20673.02	San Bernardino (SC)	2030	LDT2	Aggregate	Aggregate	Electricity	4148.571904	136790.3978	0	136790.4	52812.38349	0	0	0	0	0	0	0	0
15059.07	San Bernardino (SC)	2030	LDT2	Aggregate	Aggregate	Plug-in Hybrid	3641.856025	165766.9015	70672.25	95094.65	28721.41972	0.000474527	0	0.001845474	0.00232	5.40845E-05	0	1.93987E-05	7.34832E-05
238981.6	San Bernardino (SC)	2030	LHD1	Aggregate	Aggregate	Gasoline	16040.64045	597709.8988	597709.9	0	0	0.056777672	0.000558052	0.138516704	0.19585243	0.000691087	0	5.62411E-05	0.000747328
139456.2	San Bernardino (SC)	2030	LHD1	Aggregate	Aggregate	Diesel	11086.65806	407515.4453	407515.4	0	0	0.427873058	0.020150184	0	0.44802324	0.008213368	0.000318621	0	0.008531989
21569.72	San Bernardino (SC)	2030	LHD1	Aggregate	Aggregate	Electricity	1540.16209	90983.86079	0	90983.86	50967.68831	0	0	0	0	0	0	0	0
37286.49	San Bernardino (SC)	2030	LHD2	Aggregate	Aggregate	Gasoline	2502.699009	85837.67559	85837.68	0	0	0.007904985	8.95535E-05	0.023137581	0.03113212	8.65562E-05	0	6.47976E-06	9.3036E-05
62833.62	San Bernardino (SC)	2030	LHD2	Aggregate	Aggregate	Diesel	4995.22327	181969.3788	181969.4	0	0	0.165066284	0.008905142	0	0.17397143	0.00368462	0.000146013	0	0.003830633
5176.775	San Bernardino (SC)	2030	LHD2	Aggregate	Aggregate	Electricity	390.3627689	22042.68813	0	22042.69	12359.87457	0	0	0	0	0	0	0	0
42246.28	San Bernardino (SC)	2030	MCY	Aggregate	Aggregate	Gasoline	21123.14226	122133.6529	122133.7	0	0	0.069251848	0	0.004978133	0.07422998	0.000247972	0	0.000142436	0.000390408
681867.7	San Bernardino (SC)	2030	MDV	Aggregate	Aggregate	Gasoline	149011.9555	5894944.46	5894944	0	0	0.3777214	0	0.230159266	0.60788067	0.006025917	0	0.001200675	0.007226593
8403.383	San Bernardino (SC)	2030	MDV	Aggregate	Aggregate	Diesel	1838.792085	71305.47459	71305.47	0	0	0.005216793	0	0	0.00521679	0.000318603	0	0	0.000318603
21124.21	San Bernardino (SC)	2030	MDV	Aggregate	Aggregate	Electricity	4249.324563	139043.7203	0	139043.7	53682.35193	0	0	0	0	0	0	0	0
9723.179	San Bernardino (SC)	2030	MDV	Aggregate	Aggregate	Plug-in Hybrid	2351.433889	109736.1868	47000.4	62735.79	18948.07804	0.000315583	0	0.001191565	0.00150715	3.92384E-05	0	1.38413E-05	5.30797E-05
251.9807	San Bernardino (SC)	2030	MH	Aggregate	Aggregate	Gasoline	2518.799033	22456.84263	22456.84	0	0	0.005249392	0	0.000134796	0.00538419	2.26393E-05	0	8.15534E-08	2.27209E-05
127.1491	San Bernardino (SC)	2030	MH	Aggregate	Aggregate	Diesel	1271.490688	10971.57897	10971.58	0	0	0.039844111	0	0	0.03984411	0.001152481	0	0	0.001152481
1218.746	San Bernardino (SC)	2030	Motor Coach	Aggregate	Aggregate	Diesel	53.03505275	6278.788263	6278.788	0	0	0.009886432	0.002165639	0.002449104	0.01450117	0.000117446	9.50938E-07	0	0.000118397
6095.713	San Bernardino (SC)	2030	OBUS	Aggregate	Aggregate	Gasoline	304.6637887	11608.32546	11608.33	0	0	0.003757054	1.94769E-05	0.002516829	0.00629336	1.19301E-05	0	2.0122E-06	1.39423E-05
350.2315	San Bernardino (SC)	2030	OBUS	Aggregate	Aggregate	Electricity	17.50457452	1301.262352	0	1301.262	1366.608668	0	0	0	0	0	0	0	0
0	San Bernardino (SC)	2030	PTO	Aggregate	Aggregate	Diesel	0	41490.49218	41490.49	0	0	0.123743432	0	0	0.12374343	0.00018681	0	0	0.00018681
0	San Bernardino (SC)	2030	PTO	Aggregate	Aggregate	Electricity	0	4860.584647	0	4860.585	10068.79232	0	0	0	0	0	0	0	0
1227.361	San Bernardino (SC)	2030	SBUS	Aggregate	Aggregate	Gasoline	306.8403636	14299.60962	14299.61	0	0	0.006178834	0.000297428	0.001033515	0.00750978	1.63255E-05	0	7.04057E-07	1.70295E-05
4292.245	San Bernardino (SC)	2030	SBUS	Aggregate	Aggregate	Diesel	296.4257338	6041.369059	6041.369	0	0	0.038019738	0.00891868	0.001747811	0.04868623	0.000219708	8.29003E-06	0	0.000227998
530.1949	San Bernardino (SC)	2030	SBUS	Aggregate	Aggregate	Electricity	42.78665693	1254.386472	0	1254.386	1450.448761	0	0	0	0	0	0	0	0
6743.183	San Bernardino (SC)	2030	SBUS	Aggregate	Aggregate	Natural Gas	465.6894655	10894.79941	10894.8	0	0	0.007023463	0.002639477	0	0.00966294	4.9501E-05	7.41047E-06	0	5.69115E-05
127.1478	San Bernardino (SC)	2030	T6 CAIRP Class 4	Aggregate	Aggregate	Diesel	5.532978371	372.8891311	372.8891	0	0	0.000105473	1.75667E-05	7.03811E-05	0.00019342	2.02391E-06	5.96294E-09	0	2.02987E-06
16.23263	San Bernardino (SC)	2030	T6 CAIRP Class 4	Aggregate	Aggregate	Electricity	0.706380669	58.96703482	0	58.96703	61.93158802	0	0	0	0	0	0	0	0
163.5703	San Bernardino (SC)	2030	T6 CAIRP Class 5	Aggregate	Aggregate	Diesel	7.117941186	515.307921	515.3079	0	0	0.000144937	2.24807E-05	9.19525E-05	0.00025937	2.66765E-06	5.8584E-09	0	2.67351E-06
19.42485	San Bernardino (SC)	2030	T6 CAIRP Class 5	Aggregate	Aggregate	Electricity	0.845293939	77.12108073	0	77.12108	80.99832413	0	0	0	0	0	0	0	0
636.0138	San Bernardino (SC)	2030	T6 CAIRP Class 6	Aggregate	Aggregate	Diesel	27.67684151	1313.762542	1313.763	0	0	0.000325333	8.7574E-05	0.00034199	0.0007549	6.64286E-06	2.73135E-08	0	6.67018E-06
96.14235	San Bernardino (SC)	2030	T6 CAIRP Class 6	Aggregate	Aggregate	Electricity	4.183740331	234.2713889	0	234.2714	246.0493254	0	0	0	0	0	0	0	0
1031.738	San Bernardino (SC)	2030	T6 CAIRP Class 7	Aggregate	Aggregate	Diesel	44.89719967	8923.326576	8923.327	0	0	0.002631511	0.000141444	0.000557899	0.00333085	4.71325E-05	3.37487E-08	0	4.71662E-05

PM2.5_PMTW	PM2.5_PMBW	PM2.5_TOTAL	PM10_RUNEX	PM10_IDLEX	PM10_STREX	PM10_TOTEX	PM10_PMTW	PM10_PMBW	PM10_TOTAL	CO2_RUNEX	CO2_IDLEX	CO2_STREX	CO2_TOTEX	CH4_RUNEX	CH4_IDLEX	CH4_STREX		
3.05403E-05	0.000155959	0.000521891	0.000348232	2.32389E-06	0	0.00035056	0.000122161	0.0004456	0.000918316	10.24289062	0.118781448	0	10.36167207	3.33232E-05	7.2108E-07	0		
7.86815E-06	4.018E-05	5.08661E-05	2.8437E-06	2.21026E-07	0	3.0647E-06	3.14726E-05	0.0001148	0.000149337	2.148164306	0.055822008	0	2.203986314	0.00152551	0.00018382	0		
0.043175762	0.056375438	0.12252409	0.021101533	0	0.003883581	0.02498511	0.17270305	0.1610727	0.358760844	5582.384978	0	145.6889927	5728.073971	0.032972328	0	0.116822442		
4.92504E-05	6.57909E-05	0.00025489	0.000146172	0	0	0.00014617	0.000197002	0.000188	0.000531148	5.446939577	0	0	5.446939577	1.39709E-05	0	0		
0.003782235	0.00289854	0.006680775	0	0	0	0	0.015128941	0.0082815	0.023410483	0	0	0	0	0	0	0		
0.001831255	0.001263836	0.003576172	0.000392407	0	0.000130812	0.00052322	0.007325019	0.003611	0.0114592	112.6579736	0	0	4.952880394	117.610854	0.00034802	0	0.003201917	
0.002838981	0.004404619	0.009485947	0.002021018	0	0.000417739	0.00243876	0.011355925	0.0125846	0.026379308	440.6901951	0	0	13.91457809	454.6047732	0.006662524	0	0.014728644	
2.62805E-08	3.99709E-08	8.03367E-07	7.70445E-07	0	0	7.7044E-07	1.05122E-07	1.142E-07	9.89769E-07	0.004924381	0	0	0.004924381	5.76325E-08	0	0	0	
3.01765E-05	2.30739E-05	5.32505E-05	0	0	0	0	0.000120706	6.593E-05	0.000186632	0	0	0	0	0	0	0	0	
2.50851E-05	1.74053E-05	4.65348E-05	3.25051E-06	0	1.14817E-06	4.3987E-06	0.00010034	4.973E-05	0.000154468	1.430994092	0	0.073029306	1.504023399	4.38697E-06	0	4.29054E-05		
0.019963359	0.029851253	0.060427821	0.009683061	0	0.001859771	0.01154283	0.079853437	0.0852893	0.176685565	3159.967391	0	89.43540481	3249.402796	0.020007678	0	0.067368251		
6.87377E-05	0.000101312	0.000299699	0.000135511	0	0	0.00013551	0.000274951	0.0002895	0.000699925	9.913057849	0	0	9.913057849	1.79997E-05	0	0	0	
0.000301571	0.000230795	0.000532366	0	0	0	0	0.001206285	0.0006594	0.001865698	0	0	0	0	0	0	0	0	
0.000365453	0.000253155	0.000692091	5.88218E-05	0	2.10979E-05	7.992E-05	0.001461814	0.0007233	0.002265032	21.49945202	0	0	1.225791334	22.72524335	6.57441E-05	0	0.000656211	
0.001317725	0.017986943	0.020051996	0.00075162	0	6.11673E-05	0.00081279	0.005270899	0.0513913	0.057474952	362.1626881	2.021451044	6.636366138	370.8205052	0.001513058	0.0018213	0.007066612	0	
0.001347627	0.012263403	0.022143018	0.00858474	0.000333028	0	0.00891777	0.005390507	0.0350383	0.049346567	215.9248415	1.544772313	0	217.4696139	0.001556183	6.2304E-05	0	0	
0.000200585	0.001368993	0.001569578	0	0	0	0	0.00080234	0.0039114	0.004713749	0	0	0	0	0	0	0	0	
0.00018924	0.003013642	0.003295918	9.41378E-05	0	7.04733E-06	0.00010119	0.000756959	0.0086104	0.009468549	60.36504481	0.370370951	1.013347185	61.74876295	0.000139518	0.0002883	0.001123114	0	
0.000601761	0.006388693	0.010821087	0.003851222	0.000152615	0	0.00400384	0.002407043	0.0182534	0.024664289	113.6717148	1.115792081	0	114.7875069	0.000680296	2.8072E-05	0	0	
4.85958E-05	0.000386944	0.00043554	0	0	0	0	0.000194383	0.0011056	0.001299938	0	0	0	0	0	0	0	0	
0.000134629	0.000565443	0.00109048	0.000265667	0	0.000152201	0.00041787	0.000538517	0.0016156	0.002571937	25.01298569	0	2.015712025	27.02869772	0.020027142	0	0.007185258		
0.012996128	0.019913684	0.040136405	0.006553735	0	0.001305844	0.00785958	0.051984512	0.0568962	0.116740331	2522.679508	0	73.09672032	2595.776229	0.016773562	0	0.05436839		
0.000157202	0.000244695	0.0007205	0.000333009	0	0	0.00033301	0.000628807	0.0006991	0.001660945	31.03027763	0	0	31.03027763	3.40088E-05	0	0	0	
0.000306539	0.000234775	0.000541314	0	0	0	0	0.001226156	0.0006708	0.00189694	0	0	0	0	0	0	0	0	
0.000241927	0.000167604	0.00046261	4.26753E-05	0	1.50537E-05	5.7729E-05	0.000967708	0.0004789	0.001504304	14.29815571	0	0.969875549	15.26803125	4.3888E-05	0	0.000425189		
7.42633E-05	0.000368864	0.000465848	2.46223E-05	0	8.86968E-08	2.4711E-05	0.000297053	0.0010539	0.001375661	43.57983196	0	0.008473494	43.58830545	0.000134041	0	9.90985E-06		
4.83764E-05	0.00017968	0.001380538	0.001204591	0	0	0.00120459	0.000193506	0.0005134	0.001911468	12.05869402	0	0	12.05869402	3.45108E-05	0	0	0	
2.07635E-05	0.000217469	0.00035663	0.000122757	9.93935E-07	0	0.00012375	8.30542E-05	0.0006213	0.000828146	11.2589618	0.565929555	0	11.82489135	3.94728E-06	1.0847E-05	0	0	
3.8388E-05	0.000196035	0.000248365	1.29751E-05	0	2.18846E-06	1.5164E-05	0.000153552	0.0005601	0.000728814	20.12387576	0.123261961	0.200497462	20.44763519	8.38728E-05	6.5283E-05	0.000218834	0	
4.30319E-06	1.09875E-05	1.52907E-05	0	0	0	0	1.72128E-05	3.139E-05	4.86056E-05	0	0	0	0	0	0	0	0	
0	0	0.00018681	0.000195257	0	0	0.00019526	0	0	0.000195257	87.02461585	0	0	87.02461585	3.71168E-05	0	0	0	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3.15252E-05	0.00025844	0.000306995	1.77554E-05	0	7.65726E-07	1.8521E-05	0.000126101	0.0007384	0.000883022	13.9662963	0.871603726	0.074424582	14.91232461	0.000141516	0.00083014	9.78888E-05	0	
1.99784E-05	0.000109187	0.000357164	0.000229642	8.66487E-06	0	0.00023831	7.99136E-05	0.000312	0.000630184	8.263227675	0.733078683	0	8.996306358	3.48503E-05	2.3556E-06	0	0	
3.71017E-06	1.13354E-05	1.50456E-05	0	0	0	0	1.48407E-05	3.239E-05	4.72275E-05	0	0	0	0	0	0	0	0	0
3.60284E-05	0.000196904	0.000289844	5.38369E-05	8.05956E-06	0	6.1896E-05	0.000144114	0.0005626	0.000768593	19.39860134	2.19170076	0	21.5903021	0.048386664	0.00701372	0	0	
1.23312E-06	6.09093E-06	9.35392E-06	2.11542E-06	6.23255E-09	0	2.1217E-06	4.93248E-06	1.74E-05	2.44568E-05	0.431018663	0.003395157	0	0.434413819	1.10774E-07	1.419E-08	0	0	
1.95E-07	4.81596E-07	6.76596E-07	0	0	0	0	7.8E-07	1.376E-06	2.15599E-06	0	0	0	0	0	0	0	0	0
1.70409E-06	8.41726E-06	1.27949E-05	2.78827E-06	6.12329E-09	0	2.7944E-06	6.81636E-06	2.405E-05	3.366E-05	0.597584569	0.004395728	0	0.601980297	1.38541E-07	1.8047E-08	0	0	
2.55034E-07	6.29864E-07	8.84898E-07	0	0	0	0	1.02014E-06	1.8E-06	2.81975E-06	0	0	0	0	0	0	0	0	0
4.34453E-06	2.14595E-05	3.24743E-05	6.94323E-06	2.85485E-08	0	6.9718E-06	1.73781E-05	6.131E-05	8.56629E-05	1.499511555	0.016663715	0	1.51617527	3.53217E-07	7.0695E-08	0	0	
7.7472E-07	1.91334E-06	2.68806E-06	0	0	0	0	3.09888E-06	5.467E-06	8.56558E-06	0	0	0	0	0	0	0	0	0
2.95089E-05	0.000145757	0.000222432	4.92636E-05	3.52746E-08	0	4.9299E-05	0.000118035	0.0004164	0.000583784	9.221063304	0.02675998	0	9.247823284	2.40043E-06	1.1345E-07	0	0	

CH4_TOTEX	N2O_RUNEX	N2O_IDLEX	N2O_STREX	N2O_TOTEX	ROG_RUNEX	ROG_IDLEX	ROG_STREX	ROG_TOTEX	ROG_DIURN	ROG_HOTSOK	ROG_RUNLO	ROG_TOTAL	TOG_RUNEX	TOG_IDLEX	TOG_STREX	TOG_TOTEX	TOG_DIURN	TOG_HOTS	TOG_RUNL	TOG_TOTA	CO_RUNEX
3.40442E-05	0.00161377	1.87141E-05	0	0.001632486	0.0007174	1.55247E-05	0	0.000732963	0	0	0	0.00073296	0.000816749	1.7674E-05	0	0.000834423	0	0	0	0.000834	0.002389091
0.001709331	0.00043792	1.13797E-05	0	0.000449297	2.18E-05	2.62645E-06	0	2.4423E-05	0	0	0	2.4423E-05	0.001556894	0.0001876	0	0.001744498	0	0	0	0.001744	0.00614553
0.14979477	0.07984202	0	0.06691082	0.146752836	0.1111374	0	0.491974516	0.6031119	0.689173279	0.168953728	0.47931172	1.94055063	0.16217141	0	0.538650169	0.700821579	0.6891733	0.168954	0.479312	2.03826	12.86766634
1.39709E-05	0.00085817	0	0	0.000858168	0.0003008	0	0	0.000300785	0	0	0	0.00030078	0.000342423	0	0	0.000342423	0	0	0	0.000342	0.005496262
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.003549937	0.00044978	0	0.00161079	0.002060566	0.0011009	0	0.013022674	0.014123613	0.01137596	0.003346628	0.00408945	0.03293565	0.001606488	0	0.014258189	0.015864677	0.011376	0.003347	0.004089	0.034677	0.182548464
0.021391168	0.01069723	0	0.00612707	0.016824303	0.0285654	0	0.073493755	0.102059192	0.122123158	0.028693292	0.08428164	0.33715729	0.041682618	0	0.080466411	0.12214903	0.1221232	0.028693	0.084282	0.357247	1.676229492
5.76325E-08	7.7584E-07	0	0	7.75838E-07	1.241E-06	0	0	1.24079E-06	0	0	0	1.2408E-06	1.41256E-06	0	0	1.41256E-06	0	0	0	1.41E-06	9.48642E-06
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4.72924E-05	5.6291E-06	0	2.1437E-05	2.70661E-05	1.398E-05	0	0.000175777	0.000189761	8.08637E-05	2.54392E-05	2.1877E-05	0.00031794	2.04058E-05	0	0.000192453	0.000212859	8.086E-05	2.54E-05	2.19E-05	0.000341	0.002318751
0.087375929	0.04456426	0	0.03660279	0.081167054	0.071592	0	0.291337101	0.362929129	0.317184224	0.074590591	0.21798164	0.97268558	0.104466919	0	0.318977455	0.423444374	0.3171842	0.074591	0.217982	1.033201	6.883513048
1.79997E-05	0.00156181	0	0	0.001561806	0.0003875	0	0	0.000387522	0	0	0	0.00038752	0.000441168	0	0	0.000441168	0	0	0	0.000441	0.003888762
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.000721955	8.4156E-05	0	0.0003271	0.000411251	0.0002101	0	0.002695044	0.002905145	0.001423366	0.00044122	0.00041929	0.00518902	0.000306579	0	0.002950733	0.003257313	0.0014234	0.000441	0.000419	0.005541	0.034837232
0.010400968	0.003453	5.00749E-05	0.01196717	0.015470244	0.0069748	0.00639864	0.033337573	0.046711001	0.043290193	0.009689745	0.05716559	0.15685653	0.010177595	0.00933688	0.036500446	0.056014921	0.0432902	0.00969	0.057166	0.16616	0.496271715
0.001618486	0.03401905	0.00024338	0	0.034262426	0.0335037	0.001341367	0	0.034845061	0	0	0	0.03484506	0.038141727	0.00152706	0	0.039668785	0	0	0	0.039669	0.092013124
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.001550927	0.00054853	7.62126E-06	0.00188563	0.002441787	0.000583	0.001027903	0.005307336	0.006918266	0.007422936	0.001569265	0.00912036	0.02503083	0.000850752	0.00149991	0.005810865	0.00816153	0.0074229	0.001569	0.00912	0.026274	0.057540325
0.000708368	0.01790902	0.000175793	0	0.018084818	0.0146464	0.000604369	0	0.015250743	0	0	0	0.01525074	0.016673923	0.00068803	0	0.017361956	0	0	0	0.017362	0.036546024
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.027212399	0.00499368	0	0.00030459	0.005298268	0.1257756	0	0.05192392	0.177699547	0.112038766	0.167178329	0.17868586	0.6356025	0.153636683	0	0.056482465	0.210119148	0.1120388	0.167178	0.178686	0.668022	1.525339867
0.071141952	0.03528054	0	0.02641226	0.061692792	0.0643502	0	0.252595054	0.316945235	0.292044489	0.065326427	0.20306106	0.87737722	0.093899634	0	0.27655979	0.370459423	0.2920445	0.065326	0.203061	0.930891	5.107281055
3.40088E-05	0.00488883	0	0	0.004888833	0.0007322	0	0	0.000732189	0	0	0	0.00073219	0.000833549	0	0	0.000833549	0	0	0	0.000834	0.015032102
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.000469077	5.6381E-05	0	0.00021265	0.00026903	0.0001397	0	0.001740106	0.001879834	0.00102541	0.000315203	0.00031749	0.00353794	0.00020389	0	0.001905197	0.002109087	0.0010254	0.000315	0.000317	0.003767	0.023168412
0.00014395	0.00042014	0	1.5264E-05	0.000435399	0.0004619	0	3.72455E-05	0.000499185	0.011218427	0.002445365	5.8945E-05	0.01422192	0.000674061	0	4.07791E-05	0.00071484	0.0112184	0.002445	5.89E-05	0.014438	0.009874902
3.45108E-05	0.00189985	0	0	0.001899852	0.000743	0	0	0.000742997	0	0	0	0.000743	0.000845853	0	0	0.000845853	0	0	0	0.000846	0.003211964
1.47941E-05	0.00177385	8.91624E-05	0	0.001863016	8.498E-05	0.000233528	0	0.000318512	0	0	0	0.00031851	9.67476E-05	0.00026585	0	0.000362602	0	0	0	0.000363	0.000615351
0.00036799	0.00018756	1.59126E-06	0.00018848	0.000377629	0.0003956	0.000249737	0.001154539	0.001799919	0.001331235	0.000260202	0.0013971	0.00478846	0.000577321	0.00036442	0.001264075	0.002205812	0.0013312	0.00026	0.001397	0.005194	0.010243071
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3.71168E-05	0.01371076	0	0	0.013710764	0.0007991	0	0	0.000799115	0	0	0	0.00079912	0.000909732	0	0	0.000909732	0	0	0	0.00091	0.009390372
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.00106954	0.00037137	2.68825E-05	9.1977E-05	0.000490231	0.0006914	0.003599318	0.000555543	0.004846301	0.001190411	0.000215077	0.00072346	0.00697525	0.001008947	0.00525212	0.00060825	0.006869314	0.0011904	0.000215	0.000723	0.008998	0.014170537
3.72059E-05	0.00130187	0.000115497	0	0.001417372	0.0007503	5.07148E-05	0	0.000801032	0	0	0	0.00080103	0.00085418	5.7735E-05	0	0.000911914	0	0	0	0.000912	0.001891967
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.055400384	0.00395453	0.000446793	0	0.004401324	0.0006913	0.000100212	0	0.000791562	0	0	0	0.00079156	0.04938214	0.00715802	0	0.056540156	0	0	0	0.05654	0.15602209
1.24964E-07	6.7907E-05	5.34908E-07	0	6.84421E-05	2.385E-06	3.05506E-07	0	2.69044E-06	0	0	0	2.6904E-06	2.71506E-06	3.478E-07	0	3.06286E-06	0	0	0	3.06E-06	1.35287E-05
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1.56588E-07	9.415E-05	6.92549E-07	0	9.48422E-05	2.983E-06	3.88537E-07	0	3.37129E-06	0	0	0	3.3713E-06	3.39564E-06	4.4232E-07	0	3.83796E-06	0	0	0	3.84E-06	1.79198E-05
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4.23912E-07	0.00023625	2.62538E-06	0	0.000238874	7.605E-06	1.52204E-06	0	9.1267E-06	0	0	0	9.1267E-06	8.65732E-06	1.7327E-06	0	1.03901E-05	0	0	0	1.04E-05	4.46647E-05
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2.51388E-06	0.00145278	4.21605E-06	0	0.001456998	5.168E-05	2.44262E-06	0	5.41232E-05	0	0	0	5.4123E-05	5.88344E-05	2.7807E-06	0	6.16152E-05	0	0	0	6.16E-05	0.000322359

CO_IDLEX	CO_STREX	CO_TOTEX	SOx_RUNE	SOx_IDLEX	SOx_STREX	SOx_TOTEX	NH3_RUNE	Fuel Consumption	Weighing factors		
									CO2	CH4	N2O
0.000422	0	0.002811	9.7E-05	1.12E-06	0	9.81E-05	0.002111	0.925604	94595.6	0.30775	14.9036
0.000392	0	0.006537	0	0	0	0	0.00278	0.254747	5111.1	3.62963	1.04193
0	5.166613	18.03428	0.055188	0	0.00144	0.056628	0.842901	604.0182	1.1E+11	645737	1563642
0	0	0.005496	5.16E-05	0	0	5.16E-05	7.63E-05	0.486573	121683	0.3121	19.1711
0	0	0	0	0	0	0	0	0	0	0	0
0	0.099118	0.281666	0.001114	0	4.9E-05	0.001163	0.016666	12.40192	9.4E+07	289.081	373.607
0	0.709433	2.385662	0.004357	0	0.000138	0.004494	0.055503	47.93751	5.7E+08	8579.6	13775.3
0	0	9.49E-06	4.67E-08	0	0	4.67E-08	4.07E-08	0.00044	0.0587	6.9E-07	9.2E-06
0	0	0	0	0	0	0	0	0	0	0	0
0	0.001338	0.003657	1.41E-05	0	7.22E-07	1.49E-05	0.000218	0.158597	16282.4	0.04992	0.06405
0	2.985741	9.869254	0.031239	0	0.000884	0.032124	0.398938	342.6455	2.9E+10	181174	403540
0	0	0.003889	9.39E-05	0	0	9.39E-05	0.000107	0.88553	309078	0.56121	48.6954
0	0	0	0	0	0	0	0	0	0	0	0
0	0.020512	0.05535	0.000213	0	1.21E-05	0.000225	0.003271	2.396349	3563898	10.8982	13.9504
0.066587	0.824952	1.38781	0.00358	2E-05	6.56E-05	0.003666	0.029649	39.10256	2.2E+08	904.37	2063.89
0.011118	0	0.103131	0.002046	1.46E-05	0	0.002061	0.086019	19.42647	8.8E+07	634.168	13863.3
0	0	0	0	0	0	0	0	0	0	0	0
0.010415	0.122396	0.190351	0.000597	3.66E-06	1E-05	0.00061	0.004258	6.51133	5181595	11.9759	47.0848
0.005009	0	0.041555	0.001077	1.06E-05	0	0.001088	0.039364	10.25392	2.1E+07	123.793	3258.89
0	0	0	0	0	0	0	0	0	0	0	0
0	0.349585	1.874925	0.000247	0	1.99E-05	0.000267	0.001208	2.850142	3054927	2445.99	609.897
0	2.188188	7.295469	0.024939	0	0.000723	0.025662	0.254507	273.7214	1.5E+10	98879.2	207977
0	0	0.015032	0.000294	0	0	0.000294	0.000244	2.771922	2212629	2.42501	348.601
0	0	0	0	0	0	0	0	0	0	0	0
0	0.013244	0.036413	0.000141	0	9.59E-06	0.000151	0.002176	1.609995	1569025	4.8161	6.18701
0	0.000786	0.010661	0.000431	0	8.38E-08	0.000431	0.001114	4.596332	978665	3.01013	9.43491
0	0	0.003212	0.000114	0	0	0.000114	0.001893	1.077198	132303	0.37864	20.8444
0.00344	0	0.004055	0.000107	5.36E-06	0	0.000112	0.001523	1.056313	70692.6	0.02478	11.1377
0.001934	0.023147	0.035324	0.000199	1.22E-06	1.98E-06	0.000202	0.000576	2.156178	233604	0.97362	2.17728
0	0	0	0	0	0	0	0	0	0	0	0
0	0	0.00939	0.000824	0	0	0.000824	0.01006	7.773874	3610694	1.54	568.866
0	0	0	0	0	0	0	0	0	0	0	0
0.027817	0.011579	0.053566	0.000138	8.62E-06	7.36E-07	0.000147	0.000709	1.572486	199713	2.02362	5.31046
0.001307	0	0.003199	7.82E-05	6.94E-06	0	8.52E-05	0.000878	0.803636	49921.2	0.21054	7.86511
0	0	0	0	0	0	0	0	0	0	0	0
0.014213	0	0.170235	0	0	0	0	0.01273	2.49551	211344	527.163	43.0838
1.27E-05	0	2.63E-05	4.08E-06	3.22E-08	0	4.11E-06	9.03E-05	0.038806	160.722	4.1E-05	0.02532
0	0	0	0	0	0	0	0	0	0	0	0
1.64E-05	0	3.43E-05	5.66E-06	4.16E-08	0	5.7E-06	0.000125	0.053775	307.94	7.1E-05	0.04852
0	0	0	0	0	0	0	0	0	0	0	0
6.38E-05	0	0.000108	1.42E-05	1.58E-07	0	1.44E-05	0.000318	0.135439	1970	0.00046	0.31037
0	0	0	0	0	0	0	0	0	0	0	0
0.000103	0	0.000426	8.73E-05	2.53E-07	0	8.76E-05	0.002164	0.826104	82282.6	0.02142	12.9637

ROG_STREX	ROG_HOTSQAOK	ROG_RUNLOSSROG_DIURN	TOG_RUNLOSSROG_DIURN	TOG_IDLEX	TOG_STREX	TOG_HOTSQAOK	TOG_RUNLOSSROG_DIURN	NH3_RUNEX	CO_RUNEX	CO_IDLEX	CO_STREX	SOx_RUNEX	SOx_IDLEX	SOx_STREX
0	0	0	0	0.96603418	0.96323559	0	0	0.071315201	2.325722019	4.390344209	0	0.010744009	0.00613568	0
0.411910705	0.102965897	0.242796407	1.696189415	0.02282963	0.450984757	0.102965897	0.242796407	1.696189415	0.030263703	1.04147146	0	3.878572355	0.00299705	0.00075026
0	0	0	0	0.48848818	4.724032995	0	0	0	1.06	2.455514045	5.64597645	0	0	0
0	0	0	0	0.03703876	0	0	0	0	0.0031	0.347647965	0	0	0.00230336	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.16235414	0.039916938	0.036281899	0.594643549	0.00213169	0.177757347	0.039916938	0.036281899	0.594643549	0.018780787	0.241497957	1.235701423	0.00147433	0.000678459	0
0.944262412	0.288267393	0.865380712	4.845263284	0.10134562	0.103821808	0.288267393	0.865380712	4.845263284	0.038318056	3.059607895	9.032287947	0.00359766	0.00098708	0
0	0	0	0	0.34945744	0	0	0	0	0.0031	1.938860563	0	0	0.00396132	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.16235414	0.033092095	0.034111346	0.548905296	0.00214031	0.177757347	0.033092095	0.034111346	0.548905296	0.022758609	0.242474372	1.235701423	0.00148029	0.000776711	0
0.544037853	0.10708523	0.264042563	1.803338211	0.03354607	0.10708523	0.10708523	0.264042563	1.803338211	0.032183997	1.405656876	4.91029963	0.0038382	0.000977706	0
0	0	0	0	0.02210223	0	0	0	0	0.0031	0.151978029	0	0	0.00318424	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.16235414	0.030687883	0.030428014	0.471031471	0.0020991	0.177757347	0.030687883	0.030428014	0.471031471	0.022043227	0.237805936	1.235701423	0.00145179	0.000815851	0
0.208702561	0.063813773	0.315364045	3.522520571	0.06952395	0.685697918	0.228458717	0.063813773	0.315364045	0.044772257	1.561511259	3.736100951	2.890377263	0.00695841	0.001224146
0.191091209	0.051924802	0.256514787	3.00057841	0.04079219	0.683998828	0.209220821	0.051924802	0.256514787	0.044969596	1.044528482	3.749948034	2.962125063	0.0075104	0.001408882
1.492698574	3.59035721	3.691643344	5.009839832	1.56048133	0	1.622022256	3.59035721	3.691643344	5.009839832	0.0085204	15.48931119	7.890876445	0.00189088	0.000535027
0.797759514	0.127740267	0.319454099	2.075207582	0.054319	0	0.873371477	0.127740267	0.319454099	2.075207582	0.032172648	1.799865167	5.595048357	0.00462467	0.001190086
0.16235414	0.031235424	0.03221629	0.496409084	0.00213337	0.177757347	0.031235424	0.03221629	0.496409084	0.022684739	0.241687352	1.235701423	0.00147549	0.001015796	0
0.189749466	14.90819836	0.307249229	5.350569265	0.1325633	0.20753061	14.90819836	0.307249229	5.350569265	0.04448708	3.113881794	3.777553634	0.01735746	0.000325539	0
0	0	0	0	0.08464517	0	0	0	0	0.110874388	0.342566873	0	0	0.009938187	0
0.196782389	0.042473109	0.166238778	3.202369389	0.12284955	1.07526318	0.21539966	0.042473109	0.166238778	3.202369389	0.044784683	2.237057076	5.686259838	0.01657319	0.105075642
0.470243635	0.179684618	0.438531173	2.63488466	0.3569314	15.31907799	0.514696094	0.179684618	0.438531173	2.63488466	0.044305158	4.97087289	81.38446364	10.97350473	0.00908361
0	0	0	0	0.17673143	0.216262517	0	0	0	0.076038719	0.360055724	2.83659494	0	0.01218429	0.002175374
0	0	0	0	4.555889	14.68885777	0	0	0	1.06	15.1295212	24.50994689	0	0	0
0	0	0	0	0.10041368	0.125593809	0	0	0	0.172910086	0.319119869	2.124383542	0.01058513	0.006231524	0
0	0	0	0	0.06918975	0.097497672	0	0	0	0.185266055	0.231459562	2.048893334	0.01050224	0.006175259	0
0	0	0	0	0.09828755	0.119257452	0	0	0	0.174235498	0.322693936	2.130757275	0.0104063	0.006204399	0
0	0	0	0	0.09773224	0.129468838	0	0	0	0.176473881	0.30044486	2.097618338	0.00983056	0.00617713	0
0	0	0	0	0.38204637	4.87113407	0	0	0	1.06	2.409237461	5.018144538	0	0	0
0	0	0	0	0.27393882	0.694264348	0	0	0	0.111596869	0.843294826	0.899102027	0.01038708	0.021821302	0
0	0	0	0	0.41025386	16.49455343	0	0	0	1.06	2.481727762	16.65416007	0	0	0
0	0	0	0	0.10969295	0.399522713	0	0	0	0.171632697	0.352387293	7.247650431	0.01053371	0.020776662	0
0	0	0	0	0.4115539	16.41194412	0	0	0	1.06	2.475078962	17.00673913	0	0	0
0	0	0	0	0.15191176	0.472868314	0	0	0	0.154884918	0.482597704	7.423429805	0.01034207	0.021148248	0
0	0	0	0	0.4170895	16.08199991	0	0	0	1.06	2.446768274	18.41495114	0	0	0
0	0	0	0	0.11299035	0.552636922	0	0	0	0.173756874	0.315372751	7.362282055	0.01036388	0.020483607	0
0	0	0	0	0.46078254	15.17093195	0	0	0	1.06	2.48287363	22.26917291	0	0	0
0	0	0	0	0.35646023	0.948654019	0	0	0	0.068648296	1.097414488	9.031665915	0.01040373	0.024205889	0
0	0	0	0	0.4097833	17.4477607	0	0	0	1.06	2.451255653	19.10965067	0	0	0
0	0	0	0	0.12061412	0.461638487	0	0	0	0.164848466	0.399031352	7.788566247	0.01043769	0.022660513	0
0	0	0	0	0.40556113	17.75721347	0	0	0	1.06	2.473651873	17.78889676	0	0	0
0	0	0	0	0.20180588	0.679699265	0	0	0	0.137947834	0.635344366	8.57527562	0.01032969	0.022997046	0
0	0	0	0	0.41614981	17.00106801	0	0	0	1.06	2.417484859	21.01614879	0	0	0
0	0	0	0	0.15392594	0.948521772	0	0	0	0.155996047	0.434467939	8.546933775	0.01041649	0.022588391	0
0	0	0	0	0.48664257	15.6001291	0	0	0	1.06	2.068298858	26.99539904	0	0	0
0	0	0	0	0.18608953	1.097259649	0	0	0	0.141626427	0.570669745	9.525993621	0.01022755	0.023002927	0
0	0	0	0	0.40536668	17.77247038	0	0	0	1.06	2.474683317	17.72377981	0	0	0
0	0	0	0	0.11127775	0.44485957	0	0	0	0.145390738	0.325001167	6.410818551	0.009982709	0.023586077	0
0	0	0	0	0.41643683	17.39876589	0	0	0	1.06	2.418123193	19.31876203	0	0	0
0	0	0	0	0.10041368	0.125593809	0	0	0	0.172910086	0.319119869	2.124383542	0.01058513	0.006231524	0
0	0	0	0	0.06918975	0.097497672	0	0	0	0.185266055	0.231459562	2.048893334	0.01050224	0.006175259	0
0	0	0	0	0.09828755	0.119257452	0	0	0	0.174235498	0.322693936	2.130757275	0.0104063	0.006204399	0
0	0	0	0	0.10787351	0.131191063	0	0	0	0.173996022	0.331168748	2.14893205	0.00983125	0.006175766	0
0	0	0	0	0.05516692	0.333356101	0	0	0	0.061177757	0.151358434	3.692938332	0.01048974	0.034367188	0
0	0	0	0	0.3901281	25.60359411	0	0	0	1.06	2.440773708	25.53344889	0	0	0
0	0	0	0	0.02562669	0.293540841	0	0	0	0.146487953	0.08355764	7.022809538	0.01038174	0.033474401	0
0	0	0	0	0.43366689	25.2643245	0	0	0	1.06	2.237762198	26.98146197	0	0	0
0	0	0	0	0.07648961	0.653272707	0	0	0	0.074708394	0.193070594	4.998332382	0.01054112	0.032530323	0
0	0	0	0	0.43337962	25.19548213	0	0	0	1.06	2.236793029	27.27528334	0	0	0
0	0	0	0	0.10956667	1.06040474	0	0	0	0.055842088	0.265849527	5.463215883	0.01088491	0.030674141	0
0	0	0	0	0.44622993	23.90208865	0	0	0	1.06	2.135528383	32.79552636	0	0	0
0	0	0	0	0.01644947	0.164623305	0	0	0	0.198438538	0.052979785	5.075351651	0.00999663	0.017077495	0
0	0	0	0	0.3901281	13.47117207	0	0	0	1.06	2.440773708	13.4342656	0	0	0
0	0	0	0	0.02305885	0.164734885	0	0	0	0.168976183	0.073071134	4.369621225	0.01013601	0.01764219	0
0	0	0	0	0.3901281	13.47117207	0	0	0	1.06	2.440773708	13.4342656	0	0	0
0	0	0	0	0.01765793	0.154118239	0	0	0	0.17512564	0.064004029	4.391511207	0.01020213	0.017421544	0
0.353676895	0.06155155	0.404290961	4.44392562	0.20814186	1.436370891	0.386631733	0.06155155	0.404290961	4.44392562	0.044593372	4.059721794	14.15471305	6.54555365	0.01685846
0	0	0	0	0.09385875	11.98967247	0	0	0	0.18891835	0.314683377	130.5786603	0.01497421	0.246418708	0.00051
0	0	0	0	0.89298431	193.6518411	0	0	0	1.06	7.634465016	289.4874043	0	0	0
0	0	0	0	0.15338078	15.53020683	0	0	0	0.187210004	0.555751842	159.2952112	0.01507438	0.281250821	0
0	0	0	0	0.1094095	15.00106632	0	0	0	0.187710949	0.364908007	162.3564121	0.01497452	0.305754693	0
0	0	0	0	0.09226852	3.923751168	0	0	0	0.133526583	0.247173797	33.44497574	0.01547078		

Vehicle type	VMT	Percent VMT	g CO ₂ /VMT	g CH ₄ /VMT	g N ₂ O/VMT	MTCO ₂ e/VMT		Percent savings	Vehicle class
						2019	2030		
						All other buses	10,655			0.03%	1,102.59	0.0940	0.1786	0.001153	0.001153	0%	Heavy
LDA	20,892,203	53.78%	297.94	0.0038	0.0062	0.000300	0.000300	0%	Light
LDT1	1,545,844	3.98%	363.47	0.0150	0.0193	0.000369	0.000369	0%	Light
LDT2	6,685,300	17.21%	387.38	0.0054	0.0102	0.000390	0.000390	0%	Light
LHD1	1,050,647	2.70%	621.76	0.0083	0.0414	0.000633	0.000633	0%	Heavy
LHD2	281,493	0.72%	665.96	0.0058	0.0628	0.000683	0.000683	0%	Heavy
MCY	125,999	0.32%	191.08	0.1934	0.0431	0.000208	0.000208	0%	Light
MDV	5,722,799	14.73%	465.98	0.0081	0.0146	0.000470	0.000470	0%	Light
MH	52,888	0.14%	1,569.91	0.0155	0.0608	0.001586	0.001586	0%	Heavy
Motor coach	5,955	0.02%	1,751.76	0.0092	0.2757	0.001825	0.001825	0%	Heavy
OBUS	19,592	0.05%	1,715.78	0.0167	0.0292	0.001724	0.001724	0%	Heavy
PTO	38,425	0.10%	2,198.97	0.0177	0.3461	0.002291	0.002291	0%	Heavy
SBUS	31,197	0.08%	1,248.34	1.3023	0.1735	0.001331	0.001331	0%	Heavy
T6	678,871	1.75%	1,167.50	0.0126	0.1554	0.001209	0.001209	0%	Heavy
T7	1,666,163	4.29%	1,634.10	0.1979	0.2618	0.001709	0.001709	0%	Heavy
UBUS	39,608	0.10%	1,668.30	2.1663	0.3199	0.001814	0.001814	0%	Heavy
Total (light)	34,972,144	90.02%	345.05	0.0060	0.0091	0.000348	0.000348	0%	
Total (heavy)	3,875,495	9.98%	1,208.99	0.1234	0.1655	0.001256	0.001256	0%	
Total	38,847,639	100.00%	431.21	0.0177	0.0247	0.000438	0.000438	0%	

Vehicle type	Fuel use (gallons)	
	Fuel use (gallons)	Percent VMT
All other buses	0	0.00%
LDA	92,983	57.78%
LDT1	4,526,700	4.39%
LDT2	57,888	18.93%
LHD1	874,667	1.79%
LHD2	7,090,663	0.32%
MCY	2,376,635	0.36%
MDV	3,742,682	15.97%
MH	99,908,296	0.11%
Motor coach	0	0.00%
OBUS	587,648	0.06%
PTO	0	0.00%
SBUS	393,177	0.04%
T6	2,010,027	0.24%
T7	0	0.00%
UBUS	1,354	0.01%
Total (light)	10,796,888	97.42%
Total (heavy)	110,865,833	2.58%
Total	121,662,721	100.00%

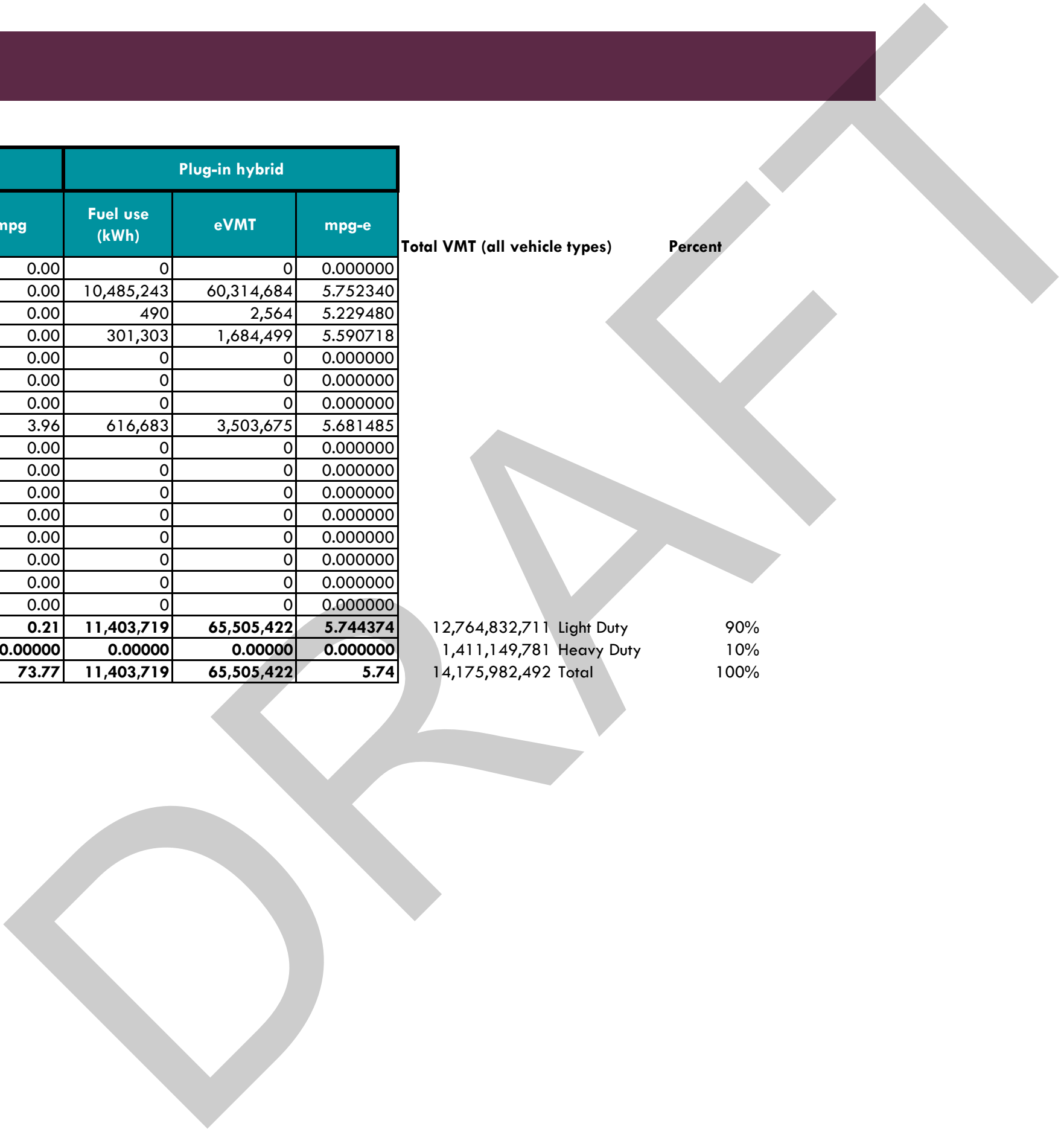
Gasoline														
Vehicle class	VMT	mpg	g CO ₂ /VMT	g CH ₄ /VMT	g N ₂ O/VMT	MTCO _{2e} /VMT	MTCO _{2e}	MTCO _{2e} / gallon gasoline	Miles Traveled	Fuel use (gallons)	Percent VMT	Vehicle class	VMT	mpg
Heavy	0	0.00	0.0000	0.0000	0.0000	0.000000	0	0.000000	0	0	0.00%	Heavy	0	0.00
Light	7,421,945,190	79,820.69	302.8663	0.0038	0.0063	0.000305	2,261,014	24.316499	7,421,945,190	220,466,659	1.78%	Light	18,959,305	0.09
Light	563,966,042	124.59	363.5608	0.0150	0.0193	0.000369	208,158	0.045984	563,966,042	17,497,189	0.01%	Light	109,870	0.01
Light	2,431,235,098	41,998.91	387.8690	0.0054	0.0102	0.000391	949,916	16.409542	2,431,235,098	125,065,595	0.48%	Light	5,150,373	0.04
Heavy	230,416,219	263.43	703.1812	0.0095	0.0166	0.000708	163,102	0.186473	230,416,219	14,272,434	14.34%	Heavy	153,070,110	10.72
Heavy	40,878,561	5.77	758.9631	0.0059	0.0138	0.000763	31,181	0.004397	40,878,561	0	5.80%	Heavy	61,866,334	0.00
Light	45,989,604	19.35	191.0824	0.1934	0.0431	0.000208	9,562	0.004023	45,989,604	0	0.00%	Light	0	0.00
Light	2,052,041,079	548.28	467.3457	0.0082	0.0138	0.000471	966,992	0.258369	2,052,041,079	0	2.73%	Light	29,161,841	0.00
Heavy	14,645,469	0.15	1,754.0570	0.0194	0.0305	0.001763	25,815	0.000258	14,645,469	1,011,752	0.44%	Heavy	4,658,809	4.60
Heavy	0	0.00	0.0000	0.0000	0.0000	0.000000	0	0.000000	0	0	0.20%	Heavy	2,173,475	0.00
Heavy	7,150,953	12.17	1,715.7811	0.0167	0.0292	0.001724	12,328	0.020979	7,150,953	0	0.00%	Heavy	0	0.00
Heavy	0	0.00	0.0000	0.0000	0.0000	0.000000	0	0.000000	0	1,677,661	1.31%	Heavy	14,025,091	8.36
Heavy	4,892,409	12.44	917.9430	0.0432	0.0381	0.000929	4,546	0.011563	4,892,409	385,554	0.30%	Heavy	3,225,231	8.37
Heavy	31,072,318	15.46	1,703.6305	0.0274	0.0398	0.001715	53,287	0.026511	31,072,318	16,507,523	20.11%	Heavy	214,705,277	13.01
Heavy	140,050	0.00	2,634.9990	0.7095	0.4068	0.002763	387	0.000000	0	645,682	52.48%	Heavy	560,134,067	867.51
Heavy	1,893,028	1,398.46	773.8828	0.0015	0.0078	0.000776	1,469	1.085200	1,893,028	43,606	0.02%	Heavy	178,725	4.10
LIGHT	12,515,177,013	55,590.92	348.6722	0.0061	0.0090	0.000351	4,395,643	41.034418	12,515,177,013	363,029,443	5.00%	LIGHT	53,381,389	0.03
HEAVY	331,089,006	193.94	876.7094	0.0121	0.0198	0.000882	292,116	1.335381	330,948,956	34,544,212	95.00%	HEAVY	1,014,037,118	483.73
TOTAL	12,846,266,019	105.59	362.28	0.0062	0.0093	0.000365	4,687,759	42.369799	12,846,125,969	397,573,655	100.00%	TOTAL	1,067,418,508	2.68

Diesel							Natural gas			Electricity				
g CO ₂ /VMT	g CH ₄ /VMT	g N ₂ O / VMT	MTCO _{2e} / VMT	MTCO _{2e}	MTCO _{2e} / gallon diesel	Miles Traveled	Fuel use (gallons)	VMT	mpg	Fuel use (kWh)	Percent VMT	Vehicle class	eVMT	mpg-e (kWh/VMT)
0.0000	0.000000	0.000000	0.000000	0.0000	0.0000000	0	337,845	483,226	1.43	0	0.00%	Heavy	0	0.00
243.3042	0.001511	0.038298	0.000253	4,806.1000	0.0000218	18,959,305	0	0	0.00	8,088,696	99.40%	Light	53,718,990	0.15
418.4351	0.014258	0.065865	0.000436	47.9348	0.0000027	109,870	0	0	0.00	26,793	0.28%	Light	151,657	0.18
336.3520	0.000902	0.052945	0.000350	1,804.7302	0.0000144	5,150,373	0	0	0.00	22,893	0.28%	Light	154,009	0.15
499.1861	0.006612	0.078576	0.000520	79,626.1498	0.0055790	153,070,110	0	0	0.00	0	0.00%	Heavy	0	0.00
604.4998	0.005818	0.095154	0.000630	38,968.2648	0.0000000	0	0	0	0.00	0	0.00%	Heavy	0	0.00
0.0000	0.000000	0.000000	0.000000	0.0000	0.0000000	0	0	0	0.00	0	0.00%	Light	0	0.00
452.9490	0.000959	0.071298	0.000472	13,760.5948	0.0000000	0	0	0	0.00	0	0.00%	Light	0	0.00
991.0088	0.003454	0.155993	0.001032	4,809.9579	0.0047541	4,658,809	0	0	0.00	0	0.00%	Heavy	0	0.00
1,751.7584	0.009173	0.275742	0.001825	3,966.7807	0.0000000	0	0	0	0.00	0	0.00%	Heavy	0	0.00
0.0000	0.000000	0.000000	0.000000	0.0000	0.0000000	0	0	0	0.00	0	0.00%	Heavy	0	0.00
2,198.9677	0.017655	0.346137	0.002291	32,134.1235	0.0191541	14,025,091	0	0	0.00	0	0.00%	Heavy	0	0.00
1,287.8596	0.007211	0.202720	0.001342	4,327.5583	0.0112243	3,225,231	787,005	3,269,289	4.15	0	0.00%	Heavy	0	0.00
1,093.2082	0.006526	0.172081	0.001139	244,547.6524	0.0148143	214,705,277	10,921,709	2,010,369	0.18	0	0.00%	Heavy	0	0.00
1,666.7282	0.004900	0.262358	0.001736	972,611.2730	1.5063313	560,134,067	1,168,242	47,875,554	40.98	0	0.00%	Heavy	0	0.00
983.8344	0.002039	0.154864	0.001025	183.1809	0.0042008	178,725	325	12,369,336	38,007.76	638	0.03%	Heavy	15,883	0.04
367.1695	0.0012	0.0578	0.000383	20,419.3598	0.0000390	24,219,548	0.00000	0.0000	0.00	8,138,382	99.97%	LIGHT	54,024,656	0.15
1,307.3604	0.0057	0.2058	0.001362	1,381,174.9412	1.5660580	949,997,309	13,215,128	66,007,774	7,152.30	638	0.03%	HEAVY	15,883	0.04
1,260.3417	0.0055	0.1984	0.001313	1,401,594.3010	1.5660969	974,216,857	13,215,128	66,007,774	4.99	8,139,021	100%	TOTAL	54,040,539	0.15



				Plug-in hybrid		
Miles Traveled	Fuel use (gallons)	ICE VMT	mpg	Fuel use (kWh)	eVMT	mpg-e
0	0	0	0.00	0	0	0.000000
1,217,949	0	70,715,772	0.00	10,485,243	60,314,684	5.752340
4,734	0	3,033	0.00	490	2,564	5.229480
3,403	0	1,910,547	0.00	301,303	1,684,499	5.590718
0	0	0	0.00	0	0	0.000000
0	0	0	0.00	0	0	0.000000
0	0	0	0.00	0	0	0.000000
0	1,040,302	4,114,878	3.96	616,683	3,503,675	5.681485
0	0	0	0.00	0	0	0.000000
0	0	0	0.00	0	0	0.000000
0	0	0	0.00	0	0	0.000000
0	0	0	0.00	0	0	0.000000
0	0	0	0.00	0	0	0.000000
0	0	0	0.00	0	0	0.000000
0	0	0	0.00	0	0	0.000000
0	0	0	0.00	0	0	0.000000
26	0	0	0.00	0	0	0.000000
1,226,086	1,040,302	76,744,230	0.21	11,403,719	65,505,422	5.744374
26	0.00000	0.00000	0.00000	0.00000	0.00000	0.000000
1,226,111	1,040,302	76,744,230	73.77	11,403,719	65,505,422	5.74

Total VMT (all vehicle types)	Percent
12,764,832,711 Light Duty	90%
1,411,149,781 Heavy Duty	10%
14,175,982,492 Total	100%



Vehicle type	VMT	Percent VMT	g CO ₂ /VMT	g CH ₄ /VMT	g N ₂ O/VMT	MTCO ₂ e/VMT		Percent savings	Vehicle class
						2019	2030		
						All other buses	11,615			0.03%	967.84	0.1218	0.1603	0.001153	0.001014	-12%	Heavy
LDA	22,152,772	50.64%	233.44	0.0014	0.0033	0.000300	0.000234	-22%	Light
LDT1	1,312,818	3.00%	305.52	0.0046	0.0074	0.000369	0.000308	-17%	Light
LDT2	9,388,964	21.46%	308.36	0.0019	0.0045	0.000390	0.000310	-21%	Light
LHD1	1,096,209	2.51%	478.41	0.0025	0.0310	0.000633	0.000487	-23%	Heavy
LHD2	289,850	0.66%	544.71	0.0026	0.0578	0.000683	0.000560	-18%	Heavy
MCY	122,134	0.28%	185.79	0.1488	0.0371	0.000208	0.000200	-4%	Light
MDV	6,215,030	14.21%	374.84	0.0025	0.0059	0.000470	0.000376	-20%	Light
MH	33,428	0.08%	1,509.93	0.0046	0.0630	0.001586	0.001527	-4%	Heavy
Motor coach	6,279	0.01%	1,626.74	0.0006	0.2563	0.001825	0.001695	-7%	Heavy
OBUS	12,910	0.03%	1,414.15	0.0059	0.0132	0.001724	0.001418	-18%	Heavy
PTO	46,351	0.11%	1,703.25	0.0007	0.2683	0.002291	0.001774	-23%	Heavy
SBUS	32,490	0.07%	1,162.33	1.3560	0.1571	0.001331	0.001242	-7%	Heavy
T6	815,878	1.87%	990.25	0.0074	0.1377	0.001209	0.001027	-15%	Heavy
T7	2,165,311	4.95%	1,356.51	0.1013	0.2177	0.001709	0.001417	-17%	Heavy
UBUS	44,474	0.10%	1,187.89	2.3336	0.2269	0.001814	0.001313	-28%	Heavy
Total (light)	39,191,718	89.59%	276.08	0.0022	0.0042	0.000350	0.000277	-21%	
Total (heavy)	4,554,794	10.41%	1,029.23	0.0830	0.1466	0.001297	0.001070	-17%	
Total	43,746,512	100.00%	354.48	0.0107	0.0191	0.000449	0.000360	-20%	

Vehicle type	Fuel use (gallons)	
	Fuel use (gallons)	Percent VMT
All other buses	0	0.00%
LDA	220,466,659	53.29%
LDT1	17,497,189	3.50%
LDT2	125,065,595	24.64%
LHD1	14,272,434	1.63%
LHD2	2,376,635	0.23%
MCY	1,040,302	0.33%
MDV	99,908,296	16.04%
MH	1,677,661	0.06%
Motor coach	0	0.00%
OBUS	787,005	0.03%
PTO	0	0.00%
SBUS	573,957	0.04%
T6	4,418,400	0.18%
T7	12,364	0.00%
UBUS	143,100	0.01%
Total (light)	463,978,041	97.81%
Total (heavy)	24,261,558	2.19%
Total	488,239,599	100.00%

Emission Rates

Gasoline															
Vehicle class	VMT	mpg	g CO ₂ /VMT	g CH ₄ /VMT	g N ₂ O/VMT	MTCO ₂ e/VMT	MTCO ₂ e	MTCO ₂ e / gallon gasoline	Miles Traveled	Fuel use (gallons)	Percent VMT	Vehicle class	VMT	mpg	g CO ₂ /VMT
Heavy	0	0.00	0.0000	0.0000	0.0000	0.000000	0	0.000000	0	337,845	0.28%	Heavy	3,370,864	9.98	1,006.1670
Light	7,148,231,682	32.42	258.5889	0.0015	0.0037	0.000260	1,855,765	0.008417	7,148,231,682	177,599	0.67%	Light	8,153,964	45.91	221.1936
Light	470,025,185	26.86	310.4567	0.0047	0.0075	0.000313	146,923	0.008397	470,025,185	161	0.00%	Light	4,351	27.10	374.7562
Light	3,305,158,014	26.43	316.5768	0.0020	0.0045	0.000318	1,050,432	0.008399	3,305,158,014	323,218	0.93%	Light	11,380,299	35.21	288.4315
Heavy	218,164,113	15.29	549.6790	0.0023	0.0052	0.000551	120,237	0.008424	218,164,113	7,090,663	12.18%	Heavy	148,743,138	20.98	480.6782
Heavy	31,330,752	13.18	637.9747	0.0015	0.0058	0.000640	20,038	0.008431	31,330,752	3,742,682	5.44%	Heavy	66,418,823	17.75	566.6958
Light	44,578,783	42.85	185.7916	0.1488	0.0371	0.000200	8,906	0.008561	44,578,783	0	0.00%	Light	0	0.00	0.0000
Light	2,151,654,728	21.54	388.2203	0.0026	0.0054	0.000390	838,567	0.008393	2,151,654,728	1,011,752	2.13%	Light	26,026,498	25.72	394.7832
Heavy	8,196,748	4.89	1,760.4866	0.0054	0.0170	0.001765	14,468	0.008624	8,196,748	393,177	0.33%	Heavy	4,004,626	10.19	997.0731
Heavy	0	0.00	0.0000	0.0000	0.0000	0.000000	0	0.000000	0	385,554	0.19%	Heavy	2,291,758	5.94	1,626.7408
Heavy	4,237,039	5.38	1,572.6711	0.0066	0.0147	0.001577	6,681	0.008489	4,237,039	0	0.00%	Heavy	0	0.00	0.0000
Heavy	0	0.00	0.0000	0.0000	0.0000	0.000000	0	0.000000	0	2,837,464	1.24%	Heavy	15,144,030	5.34	1,902.7836
Heavy	5,219,358	9.09	886.0392	0.0090	0.0236	0.000893	4,658	0.008116	5,219,358	293,327	0.18%	Heavy	2,205,100	7.52	1,240.8241
Heavy	24,453,435	5.53	1,528.8987	0.0048	0.0116	0.001532	37,465	0.008479	24,453,435	26,274,768	19.81%	Heavy	241,880,209	9.21	1,051.4668
Heavy	59,277	4.79	1,785.0918	0.0737	0.1254	0.001820	108	0.008727	59,277	105,124,269	56.62%	Heavy	691,381,776	6.58	1,451.1727
Heavy	1,910,667	13.35	642.6568	0.0008	0.0044	0.000644	1,230	0.008596	1,910,667	12,568	0.01%	Heavy	125,861	10.01	1,014.0568
LIGHT	13,119,648,392	28.96	296.0682	0.0024	0.0044	0.000297	3,900,594	0.042168	13,119,648,392	1,512,730	3.73%	LIGHT	45,565,112	31.71	337.1548
HEAVY	293,571,389	13.69	696.0736	0.0027	0.0066	0.000698	204,886	0.067888	293,571,389	146,492,319	96.27%	HEAVY	1,175,566,184	9.58	1,199.0583
TOTAL	13,413,219,781	27.47	304.82	0.0024	0.0045	0.000306	4,105,480	0.110056	13,413,219,781	148,005,048	100.00%	TOTAL	1,221,131,295	8.25	1,166.8974

Diesel						Natural gas			Electricity						
g CH ₄ /VMT	g N ₂ O / VMT	MTCO _{2e} / VMT	MTCO _{2e}	MTCO _{2e} / gallon diesel	Miles Traveled	Fuel use (gallons)	VMT	mpg	Fuel use (kWh)	Percent VMT	Vehicle class	eVMT	mpg-e (kWh/VMT)	Miles Traveled	Fuel use (gallons)
0.003273	0.158522	0.001048	3,533.5651	0.0104591	3,370,864	92,983	868,440	9.34	0	0.00%	Heavy	0	0.00	0	0
0.000567	0.034849	0.000230	1,879.0359	0.0105802	8,153,964	0	0	0.00	241,761,589	74.50%	Light	626,191,467	0.39	93,339,927	4,526,700
0.004386	0.059043	0.000391	1.6992	0.0105828	4,351	0	0	0.00	1,928,893	0.59%	Light	4,996,063	0.39	744,712	57,888
0.000524	0.045443	0.000300	3,419.6482	0.0105800	11,380,299	0	0	0.00	19,276,520	5.94%	Light	49,928,495	0.39	7,442,328	874,667
0.003464	0.075731	0.000501	74,497.0920	0.0105064	148,743,138	0	0	0.00	18,603,206	3.95%	Heavy	33,209,109	0.56	10,421,215	0
0.003392	0.089283	0.000590	39,217.0442	0.0104783	66,418,823	0	0	0.00	4,511,354	0.96%	Heavy	8,045,581	0.56	2,529,627	0
0.000000	0.000000	0.000000	0.0000	0.0000000	0	0	0	0.00	0	0.00%	Light	0	0.00	0	0
0.000433	0.062198	0.000411	10,704.1219	0.0105798	26,026,498	0	0	0.00	19,594,058	6.04%	Light	50,750,958	0.39	7,564,924	587,648
0.002854	0.157089	0.001039	4,159.9324	0.0105803	4,004,626	0	0	0.00	0	0.00%	Heavy	0	0.00	0	0
0.000570	0.256294	0.001695	3,883.7837	0.0100732	2,291,758	0	0	0.00	0	0.00%	Heavy	0	0.00	0	0
0.000000	0.000000	0.000000	0.0000	0.0000000	0	0	0	0.00	498,812	0.06%	Heavy	474,961	1.05	523,861	0
0.000812	0.299784	0.001982	30,019.2395	0.0105796	15,144,030	0	0	0.00	3,675,109	0.21%	Heavy	1,774,113	2.07	7,613,058	0
0.005233	0.195492	0.001293	2,850.7002	0.0097185	2,205,100	910,861	3,976,602	4.37	529,414	0.05%	Heavy	457,851	1.16	612,162	0
0.000373	0.165659	0.001095	264,950.0009	0.0100838	241,880,209	467,664	4,032,373	8.62	28,698,556	3.26%	Heavy	27,429,548	1.05	30,026,274	0
0.000528	0.228633	0.001512	1,045,213.7982	0.0099426	691,381,776	9,741,491	64,955,001	6.67	60,608,185	4.04%	Heavy	33,942,479	1.79	#####	0
0.002174	0.159765	0.001056	132.9669	0.0105801	125,861	2,055,447	9,513,262	4.63	6,409,197	0.39%	Heavy	3,272,630	1.96	12,551,924	0
0.0005	0.0531	0.000351	16,004.5052	0.0423228	45,565,112	0.00000	0.0000	0.00	282,561,060	87.08%	LIGHT	731,866,983	0.39	#####	6,046,903
0.0011	0.1889	0.001249	1,468,458.1230	0.1030020	1,175,566,184	13,268,446	83,345,678	6.45	123,533,833	12.92%	HEAVY	108,606,273	1.14	#####	0.00000
0.0010	0.1838	0.001216	1,484,462.6282	0.1453248	1,221,131,295	13,268,446	83,345,678	6.28	406,094,893	100%	TOTAL	840,473,256	2.07	#####	6,046,903

Emission Rates



Source: EMFAC2021 (v1.0.1) Emission Rates

Region Type: Sub-Area

Region: San Bernardino (SC)

Calendar Year: 2030

Season: Annual

Vehicle Classification: EMFAC202x Categories

Units: miles/day for CVMT and EVMT, trips/day for Trips, kWh/day for Energy Consumption, g/mile for RUNEX, PMBW and PMTW, g/trip for STREX, HOTSOAK and RUNLOSS, g/vehicle/day for IDLEX and DIURN

Trips	Region	Calendar Year	Vehicle Category	Model Year	Speed	Fuel	Population	Total VMT	CVMT	EVMT	Energy Consumption	NOx_RUNEX	NOx_IDLEX	NOx_STREX	PM2.5_RUNEX	PM2.5_IDLEX	PM2.5_STREX
1598.635	San Bernardino (SC)	2030	All Other Buses	Aggregate	Aggregate	Diesel	179.6219597	9235.243194	9235.243	0	0	1.538168576	3.21585098	1.245223122	0.0327273	0.011229153	0
373.0488	San Bernardino (SC)	2030	All Other Buses	Aggregate	Aggregate	Natural Gas	41.91559326	2379.287553	2379.288	0	0	0.092800407	1.516483965	0	0.00099693	0.004398432	0
2101254	San Bernardino (SC)	2030	LDA	Aggregate	Aggregate	Gasoline	453464.552	19584196.39	19584196	0	0	0.026320206	0	0.197239474	0.00089875	0	0.001541644
2744.074	San Bernardino (SC)	2030	LDA	Aggregate	Aggregate	Diesel	630.1586205	22339.62612	22339.63	0	0	0.069415956	0	0	0.0056791	0	0
186060.2	San Bernardino (SC)	2030	LDA	Aggregate	Aggregate	Electricity	37981.85919	1715593.061	0	1715593	662360.5171	0	0	0	0	0	0
72766.7	San Bernardino (SC)	2030	LDA	Aggregate	Aggregate	Plug-in Hybrid	17597.75046	830643.2017	370325.4	460317.8	139029.7091	0.002715671	0	0.111174561	0.00039405	0	0.001499494
159229.3	San Bernardino (SC)	2030	LDT1	Aggregate	Aggregate	Gasoline	36547.00969	1287740.232	1287740	0	0	0.092678835	0	0.3222339	0.0013091	0	0.002188327
1.585047	San Bernardino (SC)	2030	LDT1	Aggregate	Aggregate	Diesel	0.431507234	11.92061732	11.92062	0	0	0.372313583	0	0	0.0560961	0	0
1417.55	San Bernardino (SC)	2030	LDT1	Aggregate	Aggregate	Electricity	283.4152987	13687.84366	0	13687.84	5284.637371	0	0	0	0	0	0
982.1864	San Bernardino (SC)	2030	LDT1	Aggregate	Aggregate	Plug-in Hybrid	237.5299518	11378.38861	4703.914	6674.475	2015.890323	0.00251818	0	0.111174561	0.00023829	0	0.000975087
1039631	San Bernardino (SC)	2030	LDT2	Aggregate	Aggregate	Gasoline	222464.2695	9055227.436	9055227	0	0	0.041324544	0	0.243560393	0.00089196	0	0.001492143
3489.059	San Bernardino (SC)	2030	LDT2	Aggregate	Aggregate	Diesel	728.9548391	31178.90161	31178.9	0	0	0.03035609	0	0	0.00377228	0	0
20673.02	San Bernardino (SC)	2030	LDT2	Aggregate	Aggregate	Electricity	4148.571904	136790.3978	0	136790.4	52812.38349	0	0	0	0	0	0
15059.07	San Bernardino (SC)	2030	LDT2	Aggregate	Aggregate	Plug-in Hybrid	3641.856025	165766.9015	70672.25	95094.65	28721.41972	0.002596925	0	0.111174561	0.00029599	0	0.001168614
238981.6	San Bernardino (SC)	2030	LHD1	Aggregate	Aggregate	Gasoline	16040.64045	597709.8988	597709.9	0	0	0.086175338	0.031560839	0.525815603	0.00104891	0	0.000213494
139456.2	San Bernardino (SC)	2030	LHD1	Aggregate	Aggregate	Diesel	11086.65806	407515.4453	407515.4	0	0	0.952503825	1.648823745	0	0.01828408	0.026071717	0
21569.72	San Bernardino (SC)	2030	LHD1	Aggregate	Aggregate	Electricity	1540.16209	90983.86079	0	90983.86	50967.68831	0	0	0	0	0	0
37286.49	San Bernardino (SC)	2030	LHD2	Aggregate	Aggregate	Gasoline	2502.699009	85837.67559	85837.68	0	0	0.083544716	0.032461586	0.562940326	0.00091478	0	0.000157653
62833.62	San Bernardino (SC)	2030	LHD2	Aggregate	Aggregate	Diesel	4995.22327	181969.3788	181969.4	0	0	0.822916789	1.617267372	0	0.0183692	0.026517546	0
5176.775	San Bernardino (SC)	2030	LHD2	Aggregate	Aggregate	Electricity	390.3627689	22042.68813	0	22042.69	12359.87457	0	0	0	0	0	0
42246.28	San Bernardino (SC)	2030	MCY	Aggregate	Aggregate	Gasoline	21123.14226	122133.6529	122133.7	0	0	0.514389249	0	0.106899047	0.00184189	0	0.003058627
681867.7	San Bernardino (SC)	2030	MDV	Aggregate	Aggregate	Gasoline	149011.9555	5894944.46	5894944	0	0	0.058128315	0	0.306213419	0.00092734	0	0.001597428
8403.383	San Bernardino (SC)	2030	MDV	Aggregate	Aggregate	Diesel	1838.792085	71305.47459	71305.47	0	0	0.066370732	0	0	0.00405343	0	0
21124.21	San Bernardino (SC)	2030	MDV	Aggregate	Aggregate	Electricity	4249.324563	139043.7203	0	139043.7	53682.35193	0	0	0	0	0	0
9723.179	San Bernardino (SC)	2030	MDV	Aggregate	Aggregate	Plug-in Hybrid	2351.433889	109736.1868	47000.4	62735.79	18948.07804	0.002608915	0	0.111174561	0.00032438	0	0.001291409
251.9807	San Bernardino (SC)	2030	MH	Aggregate	Aggregate	Gasoline	2518.799033	22456.84263	22456.84	0	0	0.212058755	0	0.485296241	0.00091456	0	0.00029361
127.1491	San Bernardino (SC)	2030	MH	Aggregate	Aggregate	Diesel	1271.490688	10971.57897	10971.58	0	0	3.29451026	0	0	0.09529291	0	0
1218.746	San Bernardino (SC)	2030	Motor Coach	Aggregate	Aggregate	Diesel	53.03505275	6278.788263	6278.788	0	0	1.428432056	37.04409631	1.823013971	0.01696913	0.01626616	0
6095.713	San Bernardino (SC)	2030	OBUS	Aggregate	Aggregate	Gasoline	304.6637887	11608.32546	11608.33	0	0	0.293611974	0.057995454	0.37456308	0.00093233	0	0.000299463
350.2315	San Bernardino (SC)	2030	OBUS	Aggregate	Aggregate	Electricity	17.50457452	1301.262352	0	1301.262	1366.608668	0	0	0	0	0	0
0	San Bernardino (SC)	2030	PTO	Aggregate	Aggregate	Diesel	0	41490.49218	41490.49	0	0	2.70563638	0	0	0.00408458	0	0
0	San Bernardino (SC)	2030	PTO	Aggregate	Aggregate	Electricity	0	4860.584647	0	4860.585	10068.79232	0	0	0	0	0	0
1227.361	San Bernardino (SC)	2030	SBUS	Aggregate	Aggregate	Gasoline	306.8403636	14299.60962	14299.61	0	0	0.391992909	0.879356303	0.763906188	0.00103571	0	0.000520393
4292.245	San Bernardino (SC)	2030	SBUS	Aggregate	Aggregate	Diesel	296.4257338	6041.369059	6041.369	0	0	5.709125833	27.29483858	0.369407536	0.03299185	0.025370915	0
530.1949	San Bernardino (SC)	2030	SBUS	Aggregate	Aggregate	Electricity	42.78665693	1254.386472	0	1254.386	1450.448761	0	0	0	0	0	0
6743.183	San Bernardino (SC)	2030	SBUS	Aggregate	Aggregate	Natural Gas	465.6894655	10894.79941	10894.8	0	0	0.584827721	5.141824518	0	0.00412184	0.014435941	0
127.1478	San Bernardino (SC)	2030	T6 CAIRP Class 4	Aggregate	Aggregate	Diesel	5.532978371	372.8891311	372.8891	0	0	0.256599852	2.880233076	0.502160612	0.00492388	0.000977681	0
16.23263	San Bernardino (SC)	2030	T6 CAIRP Class 4	Aggregate	Aggregate	Electricity	0.706380669	58.96703482	0	58.96703	61.93158802	0	0	0	0	0	0

PM2.5_PMTW	PM2.5_PMBW	PM10_RUNEX	PM10_IDLEX	PM10_STREX	PM10_PMTW	PM10_PMBW	CO2_RUNEX	CO2_IDLEX	CO2_STREX	CH4_RUNEX	CH4_IDLEX	CH4_STREX	N2O_RUNEX	N2O_IDLEX	N2O_STREX
0.003000001	0.015320015	0.034207083	0.011736885	0	0.012000003	0.043771473	1006.166977	599.908542	0	0.0032734	0.003641836	0	0.158522017	0.094515835	0
0.003000001	0.015320015	0.001084257	0.004783696	0	0.012000003	0.043771473	819.0613333	1208.16347	0	0.5816529	3.978479086	0	0.166971011	0.246292027	0
0.002000001	0.00261144	0.000977472	0	0.001676678	0.008000002	0.007461257	258.5889058	0	62.89905573	0.0015274	0	0.050436352	0.003698466	0	0.028887751
0.002000001	0.00267169	0.00593588	0	0	0.008000002	0.0076334	221.1935801	0	0	0.0005673	0	0	0.034849139	0	0
0.002000001	0.001532713	0	0	0	0.008000002	0.00437918	0	0	0	0	0	0	0	0	0
0.002000001	0.001380296	0.000428567	0	0.001630836	0.008000002	0.003943703	123.0391383	0	61.7477351	0.0003801	0	0.039918414	0.000491226	0	0.020081727
0.002000001	0.003102958	0.001423763	0	0.002380005	0.008000002	0.008865595	310.4566624	0	79.27622511	0.0046936	0	0.083914243	0.007535967	0	0.034908073
0.002000001	0.003041874	0.058632517	0	0	0.008000002	0.00869107	374.7561606	0	0	0.004386	0	0	0.059042986	0	0
0.002000001	0.001529264	0	0	0	0.008000002	0.004369325	0	0	0	0	0	0	0	0	0
0.002000001	0.001387702	0.000259159	0	0.001060497	0.008000002	0.003964863	114.0914079	0	67.45266933	0.0003498	0	0.039629107	0.000448802	0	0.01980002
0.002000001	0.002990605	0.000970084	0	0.001622841	0.008000002	0.008544586	316.5768103	0	78.04156905	0.0020044	0	0.058785712	0.004464607	0	0.03193969
0.002000001	0.002947788	0.003942842	0	0	0.008000002	0.008422252	288.4315008	0	0	0.0005237	0	0	0.0454425	0	0
0.002000001	0.001530614	0	0	0	0.008000002	0.004373184	0	0	0	0	0	0	0	0	0
0.002000001	0.001385427	0.000321911	0	0.001270974	0.008000002	0.003958364	117.6590755	0	73.84381422	0.0003598	0	0.039531303	0.000460559	0	0.019704775
0.002000001	0.027300008	0.001140785	0	0.000232194	0.008000002	0.078000022	549.6789644	114.323993	25.19194262	0.0022965	0.10300426	0.026825175	0.005240858	0.002832005	0.045427896
0.003000001	0.027300008	0.019110803	0.027250565	0	0.012000003	0.078000022	480.6781672	126.40367	0	0.0034643	0.005098128	0	0.075731041	0.01991495	0
0.002000001	0.013650004	0	0	0	0.008000002	0.039000011	0	0	0	0	0	0	0	0	0
0.002000001	0.031850009	0.000994906	0	0.000171462	0.008000002	0.091000026	637.9746749	134.253049	24.6548672	0.0014745	0.104502166	0.027325496	0.00579723	0.002762574	0.045877689
0.003000001	0.031850009	0.019199774	0.027716551	0	0.012000003	0.091000026	566.6957556	202.639559	0	0.0033915	0.005098128	0	0.089283147	0.031925945	0
0.002000001	0.015925005	0	0	0	0.008000002	0.045500013	0	0	0	0	0	0	0	0	0
0.001	0.004200001	0.001973324	0	0.00326832	0.004000001	0.012000003	185.7915888	0	43.28484112	0.1487577	0	0.154294228	0.037092094	0	0.006540597
0.002000001	0.003064557	0.001008568	0	0.001737349	0.008000002	0.008755878	388.2202835	0	97.25090407	0.0025813	0	0.072333958	0.005429394	0	0.035139958
0.002000001	0.00311314	0.004236711	0	0	0.008000002	0.008894684	394.7831857	0	0	0.0004327	0	0	0.062198252	0	0
0.002000001	0.001531777	0	0	0	0.008000002	0.004376506	0	0	0	0	0	0	0	0	0
0.002000001	0.001385574	0.000352795	0	0.001404525	0.008000002	0.003958783	118.2023247	0	90.4906243	0.0003628	0	0.039670653	0.000466098	0	0.019840467
0.003000001	0.014900923	0.000994663	0	0.000319328	0.012000003	0.042574066	1760.48657	0	30.50641458	0.0054148	0	0.03567762	0.016972119	0	0.054953598
0.004000001	0.01485684	0.099601631	0	0	0.016000005	0.042448114	997.0731073	0	0	0.0028535	0	0	0.157089274	0	0
0.003000001	0.031420859	0.017736396	0.017001643	0	0.012000003	0.089773882	1626.740834	9680.44296	0	0.0005703	0.185538395	0	0.256293681	1.52515773	0
0.003000001	0.015320015	0.001013994	0	0.000325694	0.012000003	0.043771473	1572.671123	367.032138	29.83872233	0.0065546	0.194390676	0.032567631	0.014657841	0.004738242	0.028049716
0.003000001	0.007660008	0	0	0	0.012000003	0.021885736	0	0	0	0	0	0	0	0	0
0	0	0.004269266	0	0	0	0	1902.783553	0	0	0.0008116	0	0	0.299784324	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.002000001	0.016395759	0.001126428	0	0.000565974	0.008000002	0.046845025	886.0391891	2576.92898	55.00976434	0.008978	2.454326911	0.072352986	0.023560239	0.079479031	0.067983671
0.003000001	0.016395759	0.034483595	0.026518075	0	0.012000003	0.046845025	1240.824079	2243.52311	0	0.0052332	0.007209014	0	0.195492339	0.35346798	0
0.002683232	0.008197879	0	0	0	0.010732929	0.023422513	0	0	0	0	0	0	0	0	0
0.003000001	0.016395759	0.004482874	0.015700403	0	0.012000003	0.046845025	1615.277115	4269.53625	0	4.0290467	13.66305745	0	0.329284807	0.870372895	0
0.003000001	0.014818341	0.005146511	0.001021887	0	0.012000003	0.042338118	1048.605692	556.668583	0	0.0002695	0.002326581	0	0.165208254	0.087703362	0
0.003000001	0.007409171	0	0	0	0.012000003	0.021169059	0	0	0	0	0	0	0	0	0

ROG_RUNEX	ROG_IDLEX	ROG_STREX	ROG_HOTSOAK	ROG_RUNLOS	ROG_DIURN	TOG_RUNEX	TOG_IDLEX	TOG_STREX	TOG_HOTSOAK	TOG_RUNLOSS	TOG_DIURN	NH3_RUNEX	CO_RUNEX	CO_IDLEX	CO_STREX	SOx_RUNEX	SOx_IDLEX	SOx_STREX
0.070474514	0.07840774	0	0	0	0	0.08022987	0.089261243	0	0	0	0	0.207332975	0.234682245	2.13281594	0	0.0095278	0.00568078	0
0.008310672	0.05684462	0	0	0	0	0.59361942	4.060329718	0	0	0	0	1.06	2.34319427	8.4786824	0	0	0	0
0.005148139	0	0.21240268	0.072943259	0.20693571	1.378735467	0.00751215	0	0.2325542	0.072943259	0.206935705	1.378735467	0.039045102	0.596059887	0	2.23060837	0.002556415	0	0.000621821
0.0122145	0	0	0	0	0	0.0139054	0	0	0	0	0	0.0031	0.223196508	0	0	0.002095922	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.001202388	0	0.16235414	0.041722531	0.05098328	0.586444298	0.00175452	0	0.1777573	0.041722531	0.050983282	0.586444298	0.018201261	0.199369872	0	1.23570142	0.001216367	0	0.000610439
0.020123729	0	0.418719666	0.163475735	0.48018205	3.031391576	0.0293645	0	0.4584453	0.163475735	0.480182045	3.031391576	0.039100879	1.180867238	0	4.04188573	0.00306918	0	0.000783726
0.094427165	0	0	0	0	0	0.10749905	0	0	0	0	0	0.0031	0.721937068	0	0	0.003551005	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.001114947	0	0.16235414	0.02349665	0.02020682	0.308838297	0.00162693	0	0.1777573	0.02349665	0.020206822	0.308838297	0.017363125	0.184871169	0	1.23570142	0.00112791	0	0.000666838
0.007172345	0	0.25422152	0.065087946	0.19021135	1.293442633	0.01046587	0	0.2783406	0.065087946	0.190211348	1.293442633	0.039967067	0.689614902	0	2.6053657	0.003129684	0	0.00077152
0.011275388	0	0	0	0	0	0.01283628	0	0	0	0	0	0.0031	0.113147892	0	0	0.002733035	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.001149812	0	0.16235414	0.026579877	0.02525898	0.354559943	0.0016778	0	0.1777573	0.026579877	0.025258984	0.354559943	0.017899139	0.190652138	0	1.23570142	0.00116318	0	0.000730021
0.010586111	0.3618777	0.126550917	0.036782704	0.21700314	2.448294601	0.01544723	0.528051087	0.1385573	0.036782704	0.21700314	2.448294601	0.045	0.753225364	3.76583964	3.13155339	0.005434136	0.00113021	0.000249048
0.074583794	0.1097597	0	0	0	0	0.08490869	0.124954127	0	0	0	0	0.191490661	0.204833772	0.90974508	0	0.00455467	0.00119774	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.006161788	0.37259709	0.129128158	0.038180415	0.22189953	2.690685578	0.00899127	0.5436928	0.1413791	0.038180415	0.221899533	2.690685578	0.045	0.608121313	3.77516737	2.97790837	0.006307029	0.00132723	0.000243738
0.073017618	0.1097597	0	0	0	0	0.0831257	0.124954127	0	0	0	0	0.196245883	0.182195518	0.90974508	0	0.00536973	0.00192011	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.934236872	0	1.114999865	3.589941079	3.83705069	4.811778774	1.14118338	0	1.2128888	3.589941079	3.837050694	4.811778774	0.008974071	11.32992762	0	7.50689712	0.001836739	0	0.000427915
0.00990298	0	0.336062921	0.086912984	0.27016085	1.777967271	0.01445041	0	0.3679466	0.086912984	0.270160849	1.777967271	0.039166563	0.785969876	0	2.91125653	0.003837953	0	0.000961424
0.009315286	0	0	0	0	0	0.01060483	0	0	0	0	0	0.0031	0.19124615	0	0	0.003740771	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.001155121	0	0.16235414	0.029408817	0.02962262	0.395603813	0.00168555	0	0.1777573	0.029408817	0.029622615	0.395603813	0.017988749	0.191532407	0	1.23570142	0.00116855	0	0.000894592
0.018660879	0	0.134091784	8.80384358	0.21221315	4.040492439	0.02722991	0	0.1468136	8.80384358	0.212213154	4.040492439	0.045	0.398914613	0	2.82914431	0.017404202	0	0.000301587
0.061434705	0	0	0	0	0	0.06993933	0	0	0	0	0	0.156528463	0.265581258	0	0	0.009447774	0	0
0.012278804	3.99459077	0	0	0	0	0.01397848	4.547537522	0	0	0	0	0.22	0.088908394	58.8341101	0	0.015404263	0.09166801	0
0.030919295	0.74363099	0.171822519	0.038724101	0.20792188	3.96396391	0.04511736	1.085104598	0.188124	0.038724101	0.207921879	3.96396391	0.045	0.800491009	5.75862396	3.44487075	0.015547455	0.00362849	0.000294986
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.017472566	0	0	0	0	0	0.01989119	0	0	0	0	0	0.219953557	0.205319434	0	0	0.018018222	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.043865799	10.6415181	0.410621272	0.158970889	0.53473599	3.51949339	0.06400887	15.5280783	0.4495786	0.158970889	0.534735987	3.51949339	0.045	0.898996464	82.2408776	8.55834457	0.008759399	0.02547557	0.000543828
0.112669315	0.15520808	0	0	0	0	0.12826544	0.176692589	0	0	0	0	0.13180382	0.284101779	3.99969068	0	0.011749862	0.02124482	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.057567128	0.19521813	0	0	0	0	4.11193769	13.94415228	0	0	0	0	1.06	12.99160218	27.6883685	0	0	0	0
0.005802187	0.05009064	0	0	0	0	0.00660535	0.057024381	0	0	0	0	0.219632531	0.032913258	2.0904189	0	0.009929669	0.00527132	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0



Weighing factors

CO2	CH4	N2O
9292196.7	30.2303	1463.99
1948782.4	1383.92	397.272
5.064E+09	29912	72431.5
4941381.9	12.6742	778.517
0	0	0
102201624	315.719	408.034
399787535	6044.14	9704.37
4467.3248	0.05228	0.70383
0	0	0
1298176.4	3.9798	5.10665
2.867E+09	18150.7	40428
8992977.4	16.329	1416.85
0	0	0
19503980	59.642	76.3455
328548558	1372.62	3132.51
195883777	1411.75	30861.6
0	0	0
54762263	126.569	497.621
103121275	617.154	16246.8
0	0	0
22691405	18168.3	4530.19
2.289E+09	15216.7	32006
28150202	30.8523	4435.08
0	0	0
12971072	39.8145	51.1478
39534970	121.6	381.14
10939466	31.3077	1723.52
10213961	3.58091	1609.21
18256078	76.0881	170.153
0	0	0
78947426	33.6718	12438.2
0	0	0
12670015	128.381	336.902
7496276.2	31.6157	1181.04
0	0	0
17598120	43895.7	3587.49
391013.67	0.10049	61.6044
0	0	0

DRAFT

Ontario Quantification Workbook

Quantification Workbook		Ontario																													
Emission Rates																															
Source: EMFAC2021 (v1.0.1) Emission Rates																															
Region Type: Sub-Area																															
Region: San Bernardino (SC)																															
Calendar Year: 2030																															
Season: Annual																															
Vehicle Classification: EMFAC202x Categories																															
Units: miles/day for CVMT and EVMT, trips/day for Trips, kWh/day for Energy Consumption, g/mile for RUNEX, PMWB and PMTW, g/trip for STREX, HOTOAK and RUNLOSS, g/vehicle/day for IDLEX and DIUR																															
163.5703 San Bernardino (SC)	2030 T6 CAIRP Class 5 Aggregate	Aggregate	Diesel	7.117941186	515.307921	515.3079	0	0.25515663	2.865177962	0.509982396	0.00469632	0.000746656	0	0.003000001	0.014818341	0.004908663	0.000780416	0	0.012000003	0.042338118	1052.030709	560.237676	0	0.0002439	0.002300041	0	0.165747867	0.088265674	0	0.005251056	0.049519124
19.42485 San Bernardino (SC)	2030 T6 CAIRP Class 5 Aggregate	Aggregate	Electricity	0.845293939	77.12108073	77.12108	0	0.000000000	0.000000000	0.000000000	0.000000000	0.000000000	0	0.003000001	0.007409171	0.000000000	0.000000000	0	0.012000003	0.021169059	0.000000000	0.000000000	0	0.000000000	0.000000000	0	0.000000000	0.000000000	0	0.000000000	0.000000000
636.0138 San Bernardino (SC)	2030 T6 CAIRP Class 6 Aggregate	Aggregate	Diesel	27.67684151	1313.762542	1313.763	0	0.224650495	2.870479911	0.487801318	0.00458706	0.000895276	0	0.003000001	0.014818341	0.004794466	0.000935756	0	0.012000003	0.042338118	1035.449213	546.19933	0	0.0002439	0.002317224	0	0.163135445	0.086053927	0	0.0052512	0.04988919
96.14235 San Bernardino (SC)	2030 T6 CAIRP Class 6 Aggregate	Aggregate	Electricity	4.183740331	234.713889	234.714	0	0.267531073	0	0	0	0	0	0.003000001	0.014818341	0.000000000	0.000000000	0	0.012000003	0.021169059	0.000000000	0.000000000	0	0.000000000	0.000000000	0	0.163135445	0.086053927	0	0.0052512	0.04988919
1031.738 San Bernardino (SC)	2030 T6 CAIRP Class 7 Aggregate	Aggregate	Diesel	48.89719967	8923.326576	8923.327	0	0.267531073	2.857990632	0.490548786	0.00479169	0.00068192	0	0.003000001	0.014818341	0.005008354	0.000712753	0	0.012000003	0.042338118	937.542377	540.707495	0	0.000244	0.002292418	0	0.147696297	0.085188866	0	0.00525408	0.04935513
82.159724 San Bernardino (SC)	2030 T6 CAIRP Class 7 Aggregate	Aggregate	Electricity	3.575270481	780.302877	780.3029	0	0.267531073	0	0	0	0	0	0.003000001	0.007409171	0.000000000	0.000000000	0	0.012000003	0.021169059	0.000000000	0.000000000	0	0.000000000	0.000000000	0	0.147696297	0.085188866	0	0.00525408	0.04935513
0.759284 San Bernardino (SC)	2030 T6 CAIRP Class 7 Aggregate	Aggregate	Natural Gas	0.030410785	6.421180645	6.421811	0	0.070828869	0.50042455	0.004880708	0.0008781492	0.000000000	0.000000000	0.003000001	0.014818341	0.000921281	0.000520038	0.000000000	0.012000003	0.042338118	743.2621539	1222.03758	0	0.0002439	0.002317224	0	0.151518852	0.249120355	0	0.00525408	0.04935513
9393.952 San Bernardino (SC)	2030 T6 Instate Delive Aggregate	Aggregate	Diesel	658.3007491	21763.64803	21763.65	0	0.474254255	10.03488008	1.411899604	0.0072662	0.007901593	0	0.003000001	0.014934846	0.00759475	0.008258868	0.000000000	0.012000003	0.042670989	1057.165822	1952.92125	0	0.0005018	0.00839358	0	0.166556906	0.307683538	0	0.010803293	0.18071148
835.4862 San Bernardino (SC)	2030 T6 Instate Delive Aggregate	Aggregate	Electricity	58.54843881	2343.089891	0	2343.09	0.066823724	5.033321417	0.00095216	0.016789769	0	0.003000001	0.014934846	0.000000000	0.000000000	0.000000000	0.000000000	0.012000003	0.021335495	0.000000000	0.000000000	0	0.000000000	0.000000000	0	0.166556906	0.307683538	0	0.010803293	0.18071148
46.84789 San Bernardino (SC)	2030 T6 Instate Delive Aggregate	Aggregate	Natural Gas	3.282963526	115.2024513	115.2025	0	0.066823724	5.033321417	0.00095216	0.016789769	0	0.003000001	0.014934846	0.000000000	0.000000000	0.000000000	0.000000000	0.012000003	0.042670989	787.9912986	4263.22546	0	0.00522891	0.1240854419	0	0.160637181	0.869086398	0	0.000740624	0.17729361
11480.05 San Bernardino (SC)	2030 T6 Instate Delive Aggregate	Aggregate	Diesel	804.4881254	26534.18336	26534.18	0	0.329786362	9.75845005	1.434583268	0.00510542	0.0003929874	0	0.003000001	0.014934846	0.005332627	0.004107566	0.000000000	0.012000003	0.042670989	1068.73004	1945.89326	0	0.0003106	0.007922745	0	0.168378853	0.306576276	0	0.000687771	0.17057452
982.8595 San Bernardino (SC)	2030 T6 Instate Delive Aggregate	Aggregate	Electricity	68.87592532	2752.115224	2752.115	0	0.329786362	9.75845005	1.434583268	0.00510542	0.0003929874	0	0.003000001	0.007467423	0.000000000	0.000000000	0.000000000	0.012000003	0.021335495	0.000000000	0.000000000	0	0.000000000	0.000000000	0	0.160637181	0.869086398	0	0.000740624	0.17729361
49.29201 San Bernardino (SC)	2030 T6 Instate Delive Aggregate	Aggregate	Natural Gas	3.45420678	122.9837657	122.9838	0	0.06301	5.019739681	0.00097469	0.017113729	0.000000000	0.000000000	0.003000001	0.014934846	0.001060069	0.018612742	0.000000000	0.012000003	0.042670989	781.6073377	4244.16213	0	0.5271702	12.240855	0	0.159335769	0.865200214	0	0.007532222	0.17489767
45540.04 San Bernardino (SC)	2030 T6 Instate Delive Aggregate	Aggregate	Diesel	3191.313432	105301.0026	105301	0	0.39128204	9.805850895	1.430635353	0.00560659	0.004747999	0	0.003000001	0.014934846	0.005860098	0.004962683	0.000000000	0.012000003	0.042670989	1059.316534	1948.79853	0	0.000351	0.008024656	0	0.16895751	0.307034002	0	0.007557317	0.17276864
3966.182 San Bernardino (SC)	2030 T6 Instate Delive Aggregate	Aggregate	Electricity	277.9384794	11033.13562	0	11033.14	0.067988189	5.038052688	0.00094528	0.016676916	0	0.003000001	0.007467423	0.000000000	0.000000000	0.000000000	0.000000000	0.012000003	0.021335495	0.000000000	0.000000000	0	0.000000000	0.000000000	0	0.16895751	0.307034002	0	0.007557317	0.17276864
208.7138 San Bernardino (SC)	2030 T6 Instate Delive Aggregate	Aggregate	Natural Gas	14.62605739	515.7273088	515.7273	0	0.067988189	5.038052688	0.00094528	0.016676916	0	0.003000001	0.014934846	0.001028076	0.018137668	0.000000000	0.000000000	0.012000003	0.042670989	782.6716944	4224.38274	0	0.5215427	12.46695963	0	0.159552745	0.861168056	0	0.007451816	0.17812825
9084.521 San Bernardino (SC)	2030 T6 Instate Delive Aggregate	Aggregate	Diesel	636.6237499	7443.108248	7443.03	0	0.587462246	9.709786522	1.493050628	0.00605538	0.002971125	0	0.003000001	0.014934846	0.006329179	0.003105466	0.000000000	0.012000003	0.042670989	1047.382584	2027.59083	0	0.0003371	0.007834697	0	0.161866561	0.319447761	0	0.007258061	0.16867887
399.2261 San Bernardino (SC)	2030 T6 Instate Delive Aggregate	Aggregate	Electricity	27.57604442	1425.302176	0	1425.302	0.067988189	5.038052688	0.00094528	0.016676916	0	0.003000001	0.007467423	0.000000000	0.000000000	0.000000000	0.000000000	0.012000003	0.021335495	0.000000000	0.000000000	0	0.000000000	0.000000000	0	0.161866561	0.319447761	0	0.007258061	0.16867887
236.556 San Bernardino (SC)	2030 T6 Instate Delive Aggregate	Aggregate	Natural Gas	15.67578515	843.4070723	843.4071	0	0.114612949	5.204591598	0.00060929	0.012704525	0.000000000	0.000000000	0.003000001	0.014934846	0.000075075	0.01381733	0.000000000	0.012000003	0.042670989	813.6223275	4107.41152	0	0.4722531	14.52316019	0	0.165623224	0.837322709	0	0.006745764	0.2075073
14147.13 San Bernardino (SC)	2030 T6 Instate Other Aggregate	Aggregate	Diesel	1223.800415	48915.02192	48915.02	0	0.489458334	11.08808765	1.57620998	0.00798263	0.013660948	0	0.003000001	0.014934846	0.000343572	0.014278635	0.000000000	0.012000003	0.042670989	1060.871895	2113.5477	0	0.0005551	0.009653188	0	0.167140739	0.332990301	0	0.006745764	0.2075073
1439.592 San Bernardino (SC)	2030 T6 Instate Other Aggregate	Aggregate	Electricity	124.5321852	5968.453333	0	5968.453	0.064964628	5.416350096	0.000949	0.017908936	0.000000000	0.003000001	0.00745458	0.000000000	0.000000000	0.000000000	0.000000000	0.012000003	0.0212988	0.000000000	0.000000000	0	0.000000000	0.000000000	0	0.167140739	0.332990301	0	0.006745764	0.2075073
71.6896 San Bernardino (SC)	2030 T6 Instate Other Aggregate	Aggregate	Natural Gas	6.156484439	265.4076736	265.4077	0	0.064964628	5.416350096	0.000949	0.017908936	0.000000000	0.003000001	0.014934846	0.001032124	0.019477602	0.000000000	0.000000000	0.012000003	0.042670989	788.5148317	4610.45934	0	0.5188703	13.41042658	0	0.16043907	0.939872298	0	0.007436633	0.19160854
37539.58 San Bernardino (SC)	2030 T6 Instate Other Aggregate	Aggregate	Diesel	3247.368567	131609.9361	131609.9	0	0.319447404	10.48138543	1.627924631	0.00475204	0.003909545	0	0.003000001	0.014934846	0.004966905	0.004086318	0.000000000	0.012000003	0.042670989	1066.714199	2097.80979	0	0.0002742	0.008484084	0	0.168061256	0.330510787	0	0.005902744	0.18266001
3597.017 San Bernardino (SC)	2030 T6 Instate Other Aggregate	Aggregate	Electricity	311.1606252	14977.80366	0	14977.8	0.064964628	5.416350096	0.000949	0.017908936	0.000000000	0.003000001	0.00745458	0.000000000	0.000000000	0.000000000	0.000000000	0.012000003	0.0212988	0.000000000	0.000000000	0	0.000000000	0.000000000	0	0.168061256	0.330510787	0	0.005902744	0.18266001
168.2078 San Bernardino (SC)	2030 T6 Instate Other Aggregate	Aggregate	Natural Gas	14.55084407	638.4168718	638.4169	0	0.062828599	5.406549947	0.00096165	0.018142695	0.000000000	0.003000001	0.014934846	0.001045887	0.019713836	0.000000000	0.000000000	0.012000003	0.042670989	779.566947	4567.44468	0	0.5211351	13.2894274	0	0.158919222	0.931103478	0	0.007448565	0.1898797
32230.7 San Bernardino (SC)	2030 T6 Instate Other Aggregate	Aggregate	Diesel	2788.122619	112561.1209	112561.1	0	0.391478747	9.805850895	1.430635353	0.00560659	0.004747999	0	0.003000001	0.014934846	0.00634442															

Ontario Quantification Workbook

Emissions		Ontario																																	
Trips	Region	Calendar Year	Vehicle Category/Model Year	Speed	Fuel	Population	Total VMT	CVMT	EVMT	Energy Consumption	NOx_RUNEX	NOx_IDLEX	NOx_STREX	NOx_TOTEX	PM2.5_RUNEX	PM2.5_IDLEX	PM2.5_STREX	PM2.5_TOTEX	PM2.5_PMTW	PM2.5_PMBW	PM2.5_TOTAL	PM10_RUNEX	PM10_IDLEX	PM10_STREX	PM10_TOTEX	PM10_PMTW	PM10_PMBW	PM10_TOTAL	CO2_RUNEX	CO2_IDLEX	CO2_STREX	CO2_TOTEX			
82.15972	San Bernardino (SC)	2030	T6 CAIRP Class 7 Aggregate	Aggregate	Electricity	3.575270481	780.3028877	0	780.3029	819.5324238	0	0	0	0	0	0	0	0	2.580411E-06	8.3729E-06	8.95331E-06	0	0	0	0	0	0	1.03216E-05	1.821E-05	2.85299E-05	0	0	0	0	
0.759284	San Bernardino (SC)	2030	T6 CAIRP Class 7 Aggregate	Aggregate	Natural Gas	0.030340172	6.421810643	6.421811	0	0	5.01386E-07	5.46478E-08	0	0	5.603E-07	5.99636E-09	1.74149E-10	0	6.17051E-09	2.12365E-08	1.04897E-07	1.32304E-07	6.52159E-09	1.89403E-10	0	0	6.711E-09	8.4946E-08	2.997E-07	3.91361E-07	0.005261428	4.45085E-05	0	0.005305937	
9393.952	San Bernardino (SC)	2030	T6 Instate Delive Aggregate	Aggregate	Diesel	658.3007491	21763.64040	21763.65	0	0	0.011377506	0.007281832	0.014620196	0.03217953	0.000174318	5.73381E-06	0	0	0.000180052	7.19709E-05	0.000358292	0.000610315	0.0001822	5.99307E-06	0	0.000018819	0.000287884	0.0010237	0.001499767	25.36173422	1.417141511	0	26.77887573		
835.4862	San Bernardino (SC)	2030	T6 Instate Delive Aggregate	Aggregate	Electricity	58.54843881	2343.089891	0	2343.09	2450.151007	0	0	0	0	0	0	0	0	0	7.74844E-06	1.9287E-05	2.70354E-05	0	0	0	0	0	0	3.09938E-05	5.511E-05	8.60994E-05	0	0	0	0
46.84789	San Bernardino (SC)	2030	T6 Instate Delive Aggregate	Aggregate	Natural Gas	3.282963526	115.2024513	115.2025	0	0	8.48587E-06	1.82148E-05	0.023710E-05	0.06701E-05	0.000149328	3.485E-06	0	0	0.000152813	3.80967E-07	1.89656E-06	2.4592E-06	1.31505E-07	6.60816E-08	0	0	1.9759E-07	1.52387E-06	5.419E-06	7.1402E-06	0.00066171	0.01542796	0	0.015494131	
11480.05	San Bernardino (SC)	2030	T6 Instate Delive Aggregate	Aggregate	Diesel	804.4881254	26534.18336	26534.18	0	0	0.009645896	0.008653756	0.018154049	0.0364537	0.000149328	3.485E-06	0	0	0.000152813	7.74844E-06	0.00036828	0.00067388	0.00015608	3.6427E-06	0	0.000015972	0.000030987	0.0012481	0.000175879	31.25920164	1.72561057	0	32.98481221		
982.8595	San Bernardino (SC)	2030	T6 Instate Delive Aggregate	Aggregate	Electricity	68.87592532	2752.115224	0	2752.115	2877.865639	0	0	0	0	0	0	0	0	0	9.10106E-06	2.26338E-05	3.1549E-05	0	0	0	0	0	0	3.64043E-05	6.473E-05	0.00011129	0	0	0	0
49.29201	San Bernardino (SC)	2030	T6 Instate Delive Aggregate	Aggregate	Natural Gas	3.454204678	122.9837657	122.9838	0	0	8.54204E-06	1.91134E-05	0.027655E-05	1.32136E-07	6.5163E-08	0	0	0	1.97299E-07	4.06699E-07	2.02466E-06	2.62866E-06	1.4371E-07	7.08708E-08	0	0	2.1458E-07	1.6268E-06	5.785E-06	7.62613E-06	0.105959659	0.016160273	0	0.122119933	
45540.04	San Bernardino (SC)	2030	T6 Instate Delive Aggregate	Aggregate	Diesel	3191.313432	105301.0026	105301	0	0	0.045417849	0.034695217	0.07186879	0.15127994	0.000650782	1.67026E-05	0	0	0	0.000435225	0.000348223	0.001733554	0.002749262	0.000680208	1.74578E-05	0	0.000096767	0.001392894	0.004953	0.000743571	122.9595873	8.65522217	0	129.8151095	
396.182	San Bernardino (SC)	2030	T6 Instate Delive Aggregate	Aggregate	Electricity	27.9384794	11033.13562	0	11033.14	11537.26473	0	0	0	0	0	0	0	0	0	3.64859E-05	9.08184E-05	0.000127304	0	0	0	0	0	0.000145943	0.0002595	0.000405425	0	0	0	0	0
208.7138	San Bernardino (SC)	2030	T6 Instate Delive Aggregate	Aggregate	Natural Gas	14.62605739	515.7273088	515.7273	0	0	3.86507E-05	8.12258E-05	0.000011988	5.37383E-07	2.68873E-07	0	0	0	0.06256E-07	1.70548E-06	8.49034E-06	1.10021E-05	5.84453E-07	2.92424E-07	0	0	8.7688E-07	6.8219E-06	2.426E-05	3.19569E-05	0.444942505	0.068107458	0	0.513049963	
9084.621	San Bernardino (SC)	2030	T6 Instate Delive Aggregate	Aggregate	Diesel	636.6237499	32216.08248	32216.08	0	0	0.020862043	0.006813914	0.014951525	0.04262748	0.00021504	2.08501E-06	0	0	0.000217125	0.000106536	0.000530368	0.000854029	0.000224763	2.17928E-06	0	0	0.00022694	0.000426146	0.0015153	0.002168426	37.9050418	1.422876785	0	39.32791859	
399.2261	San Bernardino (SC)	2030	T6 Instate Delive Aggregate	Aggregate	Electricity	27.97660442	1425.302176	0	1425.302	1490.42748	0	0	0	0	0	0	0	0	0	4.71338E-06	1.17323E-05	1.64456E-05	0	0	0	0	0	0	1.88535E-05	3.352E-05	5.23743E-05	0	0	0	0
236.566	San Bernardino (SC)	2030	T6 Instate Delive Aggregate	Aggregate	Natural Gas	16.5778615	843.4070723	843.4071	0	0	0.000106137	9.51085E-05	0.000020125	6.41758E-07	2.32162E-07	0	0	0	0.7392E-07	0.000161759	1.38849E-05	0.00141503	6.9797E-07	2.52497E-07	0	0	9.5047E-07	1.11564E-05	3.967E-05	5.17779E-05	0.756422147	0.075058646	0	0.831480792	
14147.13	San Bernardino (SC)	2030	T6 Instate Other Aggregate	Aggregate	Diesel	1223.800415	48915.02192	48915.02	0	0	0.026391381	0.014957926	0.02458027	0.06592958	0.00043042	1.84287E-05	0	0	0.000448849	0.000616759	0.000803895	0.001414503	0.000449882	1.9262E-05	0	0.000046914	0.000647035	0.0022968	0.003413023	57.20175269	2.851194138	0	60.05294683		
1439.592	San Bernardino (SC)	2030	T6 Instate Other Aggregate	Aggregate	Electricity	124.5321852	5968.453333	0	5968.453	6242.453693	0	0	0	0	0	0	0	0	0	1.97373E-05	4.90444E-05	6.87816E-05	0	0	0	0	0	7.8491E-05	0.0001401	0.000219076	0	0	0	0	0
71.16896	San Bernardino (SC)	2030	T6 Instate Other Aggregate	Aggregate	Natural Gas	6.156484439	265.4076736	265.4077	0	0	1.90062E-05	3.67573E-05	0.05763E-05	2.77641E-07	1.21536E-07	0	0	0	3.99178E-07	0.000345225	0.000126248	0.00031507	0.000720574	1.46274E-05	0	0.00007352	0.000174091	0.0006199	0.000655993	154.7536473	7.50934106	0	162.2629884		
3597.017	San Bernardino (SC)	2030	T6 Instate Other Aggregate	Aggregate	Electricity	311.1606252	14977.80366	0	14977.8	15665.40618	0	0	0	0	0	0	0	0	0	4.95306E-05	0.000123077	0.000176057	0	0	0	0	0	0.000198122	0.0003516	0.000659593	0	0	0	0	0
168.2078	San Bernardino (SC)	2030	T6 Instate Other Aggregate	Aggregate	Natural Gas	14.55084407	638.4168718	638.4169	0	0	4.42146E-05	8.67187E-05	0.000013093	6.76749E-07	2.91001E-07	0	0	0	0.67749E-07	2.1112E-06	1.04921E-05	1.5371E-05	7.36026E-07	3.1649E-07	0	0	0.000198122	0.0003516	0.000659593	0.00054977	0.00054977	0.00054977	0.00054977	0.00054977	0.00054977
32330.7	San Bernardino (SC)	2030	T6 Instate Other Aggregate	Aggregate	Diesel	2788.122619	112561.1209	112561.12	0	0	0.04857365	0.032932776	0.057225633	0.13873206	0.000375894	2.44482E-05	0	0	0.000782343	0.00037232	0.001849889	0.003004464	0.000792163	2.55537E-05	0	0.000081772	0.000489829	0.0052854	0.007592043	131.6142076	6.457910969	0	138.0721186		
3154.884	San Bernardino (SC)	2030	T6 Instate Other Aggregate	Aggregate	Electricity	272.9138824	13003.21165	0	13003.21	13600.16441	0	0	0	0	0	0	0	0	0	4.30008E-05	0.000166851	0.000149852	0	0	0	0	0.000172003	0.0003053	0.000477291	0.000477291	0.000477291	0.000477291	0.000477291	0.000477291	0.000477291
145.0135	San Bernardino (SC)	2030	T6 Instate Other Aggregate	Aggregate	Natural Gas	12.54443006	547.338178	547.3382	0	0	3.91324E-05	7.48951E-05	0.000011403	5.72941E-07	2.47677E-07	0	0	0	8.20618E-07	1.81001E-06	8.9525E-06	1.16259E-05	6.23125E-07	2.69372E-07	0	0	7.24004E-06	2.57E-05	3.38332E-05	0.470020504	0.062946665	0	0.532967169		
20987.46	San Bernardino (SC)	2030	T6 Instate Other Aggregate	Aggregate	Diesel	1815.53917	74433.03033	74433.03	0	0	0.043737848	0.021782229	0.03996705	0.10497684	0.000494704	1.12992E-05	0	0	0.000560603	0.000246145	0.001232372	0.001917542	0.000517072	1.181E-05	0	0.000052888	0.00098458	0.0034951	0.00050826	86.13185474	4.344152149	0	90.47600689		
1234.662	San Bernardino (SC)	2030	T6 Instate Other Aggregate	Aggregate	Electricity	106.8046526	7233.279677	0	7233.28	7565.345813	0	0	0	0	0	0	0	0	0	2.392E-05	5.94378E-05	8.33578E-05	0	0	0	0	0	9.56799E-05	0.0001698	0.000265502	0	0	0	0	0
595.6889	San Bernardino (SC)	2030	T6 Instate Other Aggregate	Aggregate	Natural Gas	15.5318564	2065.571088	2065.571	0	0	0.000217479	0.000316319	0.00005338	8.1076E-07	0.029581E-06	0	0	0	0.00016137	6.83071E-06	3.39467E-05	4.33716E-05	1.93963E-06	8.81776E-07	0	0	2.8214E-06	2.52464E-05	9.699E-05	0.000127135	1.836351518	0.25426469	0	2.090612707	
298.5523	San Bernardino (SC)	2030	T6 Instate Tracto Aggregate	Aggregate	Diesel	25.8263624	1258.683472	1258.684	0	0	0.000517763	0.000303343	0.000536013	0.00135912	8.36516E-06	2.84963E-07	0	0	8.65013E-06	4.16238E-06	2.06859E-05	3.34984E-05	8.7434E-06	2.97847E-07	0	0	9.0412E-06	1.66495E-05	5.91E-05	8.49393E-05	0.006119142	0.000642466	0	0.006761608	
28.98079	San Bernardino (SC)	2030	T6 Instate Tracto Aggregate	Aggregate	Electricity	25.06988739	168.4644043	0	168.4644	176.1982852	0	0	0	0	0	0	0	0	0	5.57101E-07	1.38432E-06	1.94124E-06	0	0	0	0	0	2.2284E-06	3.955E-06	6.18359E-06	0	0	0	0	0
1.463978	San Bernardino (SC)	2030	T6 Instate Tracto Aggregate	Aggregate	Natural Gas	0.126641668	7.119341201	7.																											

Ontario Quantification Workbook

Quantification Workbook Ontario

Emissions

Source: EMFAC2021 (v1.0.1) Emissions Inventory

Region Type: Sub-Area

Region: San Bernardino (SC)

Calendar Year: 2050

Season: Annual

Vehicle Classification: EMFAC202x Categories

Units: miles/day for CVMT and EVMT, trips/day for Trips, kWh/day for Energy Consumption, tons/day for Emissions, 1000 gallons/day for Fuel Consumption

Trips	Region	Calendar Year	Vehicle Category	Model Year	Speed	Fuel	Population	Total VMT	CVMT	EVMT	Trips	Energy Consumption	NOx_RUNEX	NOx_IDLEX	NOx_STREX	NOx_TOTEX	PM2.5_RUNEX	PM2.5_IDLEX	PM2.5_STREX	PM2.5_TOTEX	PM2.5_PMTW	PM2.5_PMBW	PM2.5_TOTAL	PM10_RUNEX	PM10_IDLEX	PM10_STREX	PM10_TOTEX	PM10_PMTW	PM10_PMBW	PM10_TOTAL	CO2_RUNEX	CO2_IDLEX	CO2_STREX	CO2_TOTEX	CH4_RUNEX		
82.15972	San Bernardino (SC)	2050	T6 CAIRP Class 7 Aggregate	2050	Aggregate	Electricity	19.90486537	4212.431246	0	4212.431	457.4138061	4425.509967	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.759284	San Bernardino (SC)	2050	T6 CAIRP Class 7 Aggregate	2050	Aggregate	Natural Gas	0.041135273	8.437769251	8.437769	0	0.94528857	0	4.07248E-07	6.65626E-08	0	4.73811E-07	9.37741E-09	2.51933E-10	0	9.62934E-09	2.79031E-08	1.37775E-07	1.75308E-07	1.01988E-08	2.74E-10	0	1.04728E-08	1.11631E-07	9.396E-07	5.15729E-07	0.00672812	5.58323E-05	0	0.00678474	4.77105E-05		
9393.952	San Bernardino (SC)	2050	T6 Instate Delive Aggregate	2050	Aggregate	Diesel	540.9415446	18117.76082	18117.76	0	7719.235842	0	0.003784249	0.005743427	0.00847393	0.018001605	7.39366E-05	0	1.37156E-06	0	7.53082E-05	5.99142E-05	0.000298042	0.000332625	7.72797E-05	1.43358E-06	0	8.71133E-05	0.000293657	0.0008515	0.00116992	19.42629236	1.032873501	0	20.45916847	4.34962E-06	
835.4862	San Bernardino (SC)	2050	T6 Instate Delive Aggregate	2050	Aggregate	Electricity	696.9382923	24309.36403	0	24309.36	9945.309342	25396.2113	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
46.84789	San Bernardino (SC)	2050	T6 Instate Delive Aggregate	2050	Aggregate	Natural Gas	4.210408319	141.3826917	141.3827	0	60.08252671	0	7.09097E-06	2.2985E-05	0	3.00759E-05	1.67912E-07	8.68828E-08	0	2.54795E-07	4.67543E-07	2.32579E-06	3.0412E-06	1.82619E-07	9.44929E-08	0	2.77112E-07	1.87017E-06	6.645E-06	8.79239E-06	0.120084959	0.019819712	0	0.139904671	8.51928E-05		
11480.05	San Bernardino (SC)	2050	T6 Instate Delive Aggregate	2050	Aggregate	Diesel	656.3668944	21987.17001	21987.17	0	9366.355583	0	0.004558799	0.006968912	0.01029056	0.021818268	8.9575E-05	1.66422E-06	0	9.12392E-05	7.27101E-05	0.000361695	0.000525545	9.36252E-05	1.73947E-06	0	9.53646E-05	0.00029084	0.0010334	0.00141962	23.58627425	1.253461214	0	24.83973546	5.27325E-06		
982.8595	San Bernardino (SC)	2050	T6 Instate Delive Aggregate	2050	Aggregate	Electricity	846.697478	29527.15409	0	29527.15	12082.37301	30847.28352	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
49.29201	San Bernardino (SC)	2050	T6 Instate Delive Aggregate	2050	Aggregate	Natural Gas	5.074804471	170.604601	170.6045	0	72.4174598	0	8.53559E-06	2.77015E-05	0	3.62371E-05	2.02741E-07	1.07477E-07	0	3.07515E-07	5.64178E-07	2.80496E-06	3.67819E-06	2.20499E-07	1.13951E-07	0	3.34451E-07	2.25671E-06	8.019E-06	1.06097E-05	0.144848515	0.023881201	0	0.168729716	0.00102825		
45540.04	San Bernardino (SC)	2050	T6 Instate Delive Aggregate	2050	Aggregate	Diesel	2610.445049	87404.91138	87404.91	0	37251.05085	0	0.018467256	0.027716387	0.04009033	0.087086938	0.00358801	0.161794E-06	0	0.00036542	0.000299042	0.001437836	0.002092299	0.000375025	6.91807E-06	0	0.0001943	0.001156169	0.0041081	0.005646216	93.3984483	2.08692958	0	45.48548066	2.09875E-06		
396.182	San Bernardino (SC)	2050	T6 Instate Delive Aggregate	2050	Aggregate	Electricity	3366.5771178	117271.8064	0	117271.8	48041.05634	122514.9112	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
208.7138	San Bernardino (SC)	2050	T6 Instate Delive Aggregate	2050	Aggregate	Natural Gas	20.226070396	679.4307793	679.4308	0	288.6350653	0	3.40739E-05	0.000110419	0	0.000144493	8.06935E-07	4.1739E-07	0	1.22433E-06	2.24683E-06	1.11768E-05	1.4648E-05	8.77616E-07	4.5395E-07	0	1.33157E-06	8.98733E-06	3.00275E-05	4.22527E-05	0.576848073	0.095168624	0	0.672016697	0.000490407		
9084.621	San Bernardino (SC)	2050	T6 Instate Delive Aggregate	2050	Aggregate	Diesel	652.0380008	33255.42465	33255.42	0	9304.582272	0	0.010466332	0.006927825	0.01262337	0.030017528	0.000163906	1.65325E-06	0	0.000165559	0.000109973	0.000547061	0.000022594	0.00017317	1.728E-06	0	0.000173045	0.000439894	0.001563	0.002175971	35.99772035	1.275589393	0	37.2730974	9.60637E-06		
399.2261	San Bernardino (SC)	2050	T6 Instate Delive Aggregate	2050	Aggregate	Electricity	502.0864196	26565.19055	0	26565.19	7164.773208	27752.89356	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
236.566	San Bernardino (SC)	2050	T6 Instate Delive Aggregate	2050	Aggregate	Natural Gas	15.42657844	784.195376	784.1957	0	220.1372748	0	5.27582E-05	8.52599E-05	0	0.000138018	8.65395E-07	2.93407E-07	0	1.1498E-06	2.59328E-06	1.29002E-05	1.66433E-05	9.31408E-07	3.19107E-07	0	1.25051E-06	1.03731E-05	3.686E-05	4.84815E-05	0.675217164	0.071982055	0	0.747199219	0.00045806		
14147.13	San Bernardino (SC)	2050	T6 Instate Other Aggregate	2050	Aggregate	Diesel	1016.713807	40516.27389	40516.27	0	11753.21161	0	0.008304131	0.01160411	0.01460871	0.034516956	0.000167565	2.77304E-06	0	0.000170338	0.000133985	0.000665349	0.000969671	0.000175141	8.19074E-06	0	0.000178004	0.000539399	0.001901	0.002614975	43.39848483	2.086922022	0	45.48548066	9.69155E-06		
1439.592	San Bernardino (SC)	2050	T6 Instate Other Aggregate	2050	Aggregate	Electricity	1308.025498	56086.57128	0	56086.57	15120.77476	58611.67628	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
71.16896	San Bernardino (SC)	2050	T6 Instate Other Aggregate	2050	Aggregate	Natural Gas	7.930236857	317.7814611	317.7815	0	91.67353807	0	1.58215E-05	4.65368E-05	0	6.23583E-05	3.72926E-07	1.75889E-07	0	5.48815E-07	1.05088E-06	5.21853E-06	6.81823E-06	4.05591E-07	1.91296E-07	0	5.96887E-07	4.20353E-06	1.491E-05	1.97105E-05	0.268346501	0.040141864	0	0.308488365	0.00018947		
37539.58	San Bernardino (SC)	2050	T6 Instate Other Aggregate	2050	Aggregate	Diesel	2712.22508	108125.9805	108126	0	31353.32192	0	0.022072731	0.030956008	0.0390852	0.092113939	0.000446842	7.39513E-06	0	0.000454237	0.000357565	0.00175619	0.002587422	0.000467046	7.7295E-06	0	0.000474775	0.001430262	0.00050732	0.006978236	115.8476753	5.567278321	0	121.4149536	2.58687E-05		
3597.017	San Bernardino (SC)	2050	T6 Instate Other Aggregate	2050	Aggregate	Electricity	3489.740346	149769.7878	0	149769.8	40341.3984	156512.6574	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
168.2078	San Bernardino (SC)	2050	T6 Instate Other Aggregate	2050	Aggregate	Natural Gas	21.02559343	844.7646177	844.7647	0	245.05586	0	4.20018E-05	0.000123377	0	0.000165378	9.19649E-07	4.66516E-07	0	1.45821E-06	2.79588E-06	1.38725E-05	1.81243E-05	1.07856E-06	5.07379E-07	0	1.58954E-06	1.11743E-05	3.964E-05	5.23961E-05	0.173044341	0.106368693	0	0.819413033	0.000507336		
32320.7	San Bernardino (SC)	2050	T6 Instate Other Aggregate	2050	Aggregate	Diesel	2326.894012	92695.3254	92695.33	0	26898.89477	0	0.019244791	0.026558272	0.03352329	0.07933545	0.000386057	6.34509E-06	0	0.000392402	0.000306537	0.001252221	0.00222116	0.000403513	6.63198E-06	0	0.000410145	0.000122649	0.00043492	0.005985497	99.29223737	4.73589698	0	104.0681344	2.21975E-06		
3154.884	San Bernardino (SC)	2050	T6 Instate Other Aggregate	2050	Aggregate	Electricity	2992.053991	128213.6877	0	128213.7	34588.14413	133986.0681	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
145.0135	San Bernardino (SC)	2050	T6 Instate Other Aggregate	2050	Aggregate	Natural Gas	18.03746593	726.1642501	724.1643	0	2085.131461	0	3.60289E-05	0.000105846	0	0.000141874	8.49979E-07	4.00142E-07	0	1.25012E-06	2.39476E-06	1.18921E-05	1.55369E-05	9.2443E-07	4.35191E-07	0	1.35962E-06	9.57905E-06	3.308E-05	4.491E-05	0.611214623	0.091239036	0	0.702453699	0.000431795		
20987.46	San Bernardino (SC)	2050	T6 Instate Other Aggregate	2050	Aggregate	Diesel	1832.04073	7556.38812	7556.39	0	21178.39053	0	0.021803673	0.020945216	0.03283714	0.07586139	0.000365218	5.00815E-06	0	0.000370226	0.00024986	0.001240769	0.001860855	0.000381731	5.2346E-06	0	0.000386966	0.00099944	0.0035451	0.004931461	81.3082471	3.850985175	0	84.8180898	2.12087E-07		
1234.662	San Bernardino (SC)	2050	T6 Instate Other Aggregate	2050	Aggregate	Electricity	1370.447316	69801.06012	0	69801.06	15842.37097	72943.61281	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
595.6889	San Bernardino (SC)	2050	T6 Instate Other Aggregate	2050	Aggregate	Natural Gas	4.458817215	1795.954625	1795.965	0	515.4392701	0	0.000109975	0.00026474	0	0.00034715	1.93222E-06	9.15374E-07	0	2.9086E-06	5.93914E-06	2.94962E-05	3.83407E-05	1.67818E-06													

Vehicle type	VMT	Percent VMT	g CO ₂ /VMT	g CH ₄ /VMT	g N ₂ O/VMT	MTCO ₂ e/VMT		Percent savings	Vehicle class
						2019	2050		
						All other buses	12,662			0.03%	901.12	0.1413	0.0000	0.001153	0.000905	-21%	Heavy
LDA	23,588,399	47.48%	206.50	0.0009	0.0221	0.000300	0.000212	-29%	Light
LDT1	1,299,955	2.62%	260.21	0.0010	0.0254	0.000369	0.000267	-28%	Light
LDT2	11,054,645	22.25%	277.47	0.0013	0.0286	0.000390	0.000285	-27%	Light
LHD1	1,194,054	2.40%	239.79	0.0005	0.0112	0.000633	0.000243	-62%	Heavy
LHD2	302,206	0.61%	281.96	0.0009	0.0046	0.000683	0.000283	-59%	Heavy
MCY	124,934	0.25%	183.05	0.1277	0.0038	0.000208	0.000188	-10%	Light
MDV	6,794,553	13.68%	329.58	0.0013	0.0289	0.000470	0.000337	-28%	Light
MH	24,958	0.05%	1,486.28	0.0019	0.0257	0.001586	0.001493	-6%	Heavy
Motor coach	7,003	0.01%	1,492.86	0.0004	0.0000	0.001825	0.001493	-18%	Heavy
OBUS	11,536	0.02%	599.57	0.0006	0.0095	0.001724	0.000602	-65%	Heavy
PTO	77,178	0.16%	791.92	0.0003	0.0000	0.002291	0.000792	-65%	Heavy
SBUS	26,088	0.05%	565.48	0.7197	0.0096	0.001331	0.000588	-56%	Heavy
T6	1,350,216	2.72%	468.72	0.0042	0.0009	0.001209	0.000469	-61%	Heavy
T7	3,709,999	7.47%	1,020.31	0.0234	0.0000	0.001709	0.001021	-40%	Heavy
UBUS	97,272	0.20%	596.22	1.0671	0.1070	0.001814	0.000654	-64%	Heavy
Total (light)	42,862,487	86.28%	245.88	0.0014	0.0249	0.000352	0.000253	-28%	
Total (heavy)	6,813,171	13.72%	732.02	0.0318	0.0040	0.001381	0.000734	-47%	
Total	49,675,658	100.00%	312.60	0.0056	0.0220	0.000493	0.000319	-35%	

Vehicle type	Gasoline	
	Fuel use (gallons)	Percent VMT
All other buses	0	0.00%
LDA	220,466,659	52.05%
LDT1	17,497,189	3.18%
LDT2	125,065,595	27.01%
LHD1	14,272,434	0.94%
LHD2	2,376,635	0.11%
MCY	1,040,302	0.32%
MDV	99,908,296	16.21%
MH	1,677,661	0.04%
Motor coach	0	0.00%
OBUS	787,005	0.01%
PTO	0	0.00%
SBUS	573,957	0.01%
T6	4,418,400	0.08%
T7	12,364	0.00%
UBUS	143,100	0.02%
Total (light)	463,978,041	98.78%
Total (heavy)	24,261,558	1.22%
Total	488,239,599	100.00%

Vehicle class	VMT	mpg	g CO ₂ /VMT	g CH ₄ /VMT	g N ₂ O/VMT	MTCO _{2e} /VMT	MTCO _{2e}	MTCO _{2e} / gallon gasoline	Miles Traveled	Fuel use (gallons)	Percent VMT	Vehicle class	VMT	mpg
Heavy	0	0.00	0.0000	0.0000	0.0000	0.000000	0.00	0.000000	0	337,845	0.24%	Heavy	3,546,230	10.50
Light	7,337,413,158	33.28	236.8923	0.0010	0.0251	0.000244	1,787,088.97	0.008106	7,337,413,158	177,599	0.29%	Light	4,239,188	23.87
Light	448,947,334	25.66	272.1787	0.0011	0.0263	0.000279	125,341.05	0.007163	448,947,334	161	0.00%	Light	5,376	33.48
Light	3,806,924,756	30.44	289.9027	0.0013	0.0297	0.000298	1,133,789.89	0.009066	3,806,924,756	323,218	0.99%	Light	14,561,992	45.05
Heavy	131,966,376	9.25	485.1417	0.0004	0.0370	0.000495	65,317.59	0.004576	131,966,376	7,090,663	5.97%	Heavy	87,850,855	12.39
Heavy	15,738,598	6.62	547.6896	0.0004	0.0323	0.000556	8,754.92	0.003684	15,738,598	3,742,682	2.84%	Heavy	41,743,856	11.15
Light	45,601,041	43.83	183.0465	0.1277	0.0038	0.000188	8,555.68	0.008224	45,601,041	0	0.00%	Light	0	0.00
Light	2,285,493,599	22.88	350.3627	0.0014	0.0308	0.000359	819,496.58	0.008202	2,285,493,599	1,011,752	1.68%	Light	24,747,491	24.46
Heavy	5,820,094	3.47	1,759.5181	0.0021	0.0402	0.001770	10,302.97	0.006141	5,820,094	393,177	0.22%	Heavy	3,289,645	8.37
Heavy	0	0.00	0.0000	0.0000	0.0000	0.000000	0.00	0.000000	0	385,554	0.17%	Heavy	2,555,951	6.63
Heavy	1,776,044	2.26	1,421.4178	0.0014	0.0225	0.001427	2,535.16	0.003221	1,776,044	0	0.00%	Heavy	0	0.00
Heavy	0	0.00	0.0000	0.0000	0.0000	0.000000	0.00	0.000000	0	2,837,464	0.88%	Heavy	13,026,906	4.59
Heavy	1,660,709	2.89	784.0277	0.0024	0.0550	0.000799	1,326.36	0.002311	1,660,709	293,327	0.06%	Heavy	848,931	2.89
Heavy	11,979,806	2.71	1,382.2295	0.0021	0.0370	0.001392	16,676.87	0.003774	11,979,806	26,274,768	15.04%	Heavy	221,317,931	8.42
Heavy	41,675	3.37	1,607.7469	0.0648	0.0965	0.001635	68.14	0.005511	41,675	105,124,269	71.62%	Heavy	1,054,283,720	10.03
Heavy	3,010,394	21.04	540.5423	0.0005	0.0478	0.000553	1,665.42	0.011638	3,010,394	0	0.00%	Heavy	0	0.00
LIGHT	13,924,379,888	30.59	270.9713	0.0016	0.0273	0.000278	3,874,272.16	0.040762	13,924,379,888	1,512,730	2.96%	LIGHT	43,554,047	31.29
HEAVY	171,993,697	8.43	610.2692	0.0007	0.0369	0.000620	106,647.43	0.040858	171,993,697	146,479,751	97.04%	HEAVY	1,428,464,024	9.90
TOTAL	14,096,373,585	28.87	275.11	0.0015	0.0274	0.000282	3,980,919.59	0.081619	14,096,373,585	147,992,481	100.00%	TOTAL	1,472,018,071	9.95

Diesel							Natural gas			Electricity				
g CO ₂ /VMT	g CH ₄ /VMT	g N ₂ O / VMT	MTCO _{2e} / VMT	MTCO _{2e}	MTCO _{2e} / gallon diesel	Miles Traveled	Fuel use (gallons)	VMT	mpg	Fuel use (kWh)	Percent VMT	Vehicle class	eVMT	mpg-e (kWh/VMT)
942.8057	0.0005	0.0000	0.0009	3,343.4556	0.0098964	3,546,230	92,983	1,075,484	11.57	0	0.00%	Heavy	0	0.00
190.6264	0.0002	0.0000	0.0002	808.1214	0.0045503	4,239,188	0	0	0.00	113,686,249	47.23%	Light	924,024,806	0.12
357.0494	0.0005	0.0000	0.0004	1.9196	0.0119558	5,376	0	0	0.00	1,790,277	0.73%	Light	14,318,572	0.13
270.6775	0.0005	0.0000	0.0003	3,941.8218	0.0121955	14,561,992	0	0	0.00	19,151,038	5.49%	Light	107,385,344	0.18
460.8319	0.0018	0.0000	0.0005	40,488.8810	0.0057102	87,850,855	0	0	0.00	75,359,742	11.04%	Heavy	216,012,396	0.35
538.5659	0.0023	0.0000	0.0005	22,484.4798	0.0060076	41,743,856	0	0	0.00	17,989,213	2.70%	Heavy	52,822,563	0.34
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000000	0	0	0	0.00	0	0.00%	Light	0	0.00
352.6137	0.0002	0.0000	0.0004	8,726.4360	0.0086251	24,747,491	0	0	0.00	18,029,109	5.12%	Light	100,077,426	0.18
1,002.8733	0.0015	0.0000	0.0010	3,299.2304	0.0083912	3,289,645	0	0	0.00	0	0.00%	Heavy	0	0.00
1,492.8579	0.0004	0.0000	0.0015	3,815.7025	0.0098967	2,555,951	0	0	0.00	0	0.00%	Heavy	0	0.00
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000000	0	0	0	0.00	890,240	0.12%	Heavy	2,434,501	0.37
1,712.4837	0.0006	0.0000	0.0017	22,308.5934	0.0078622	13,026,906	0	0	0.00	0	0.77%	Heavy	15,142,900	0.00
1,117.4840	0.0005	0.0000	0.0011	948.6771	0.0032342	848,931	910,861	2,188,178	2.40	2,201,782	0.25%	Heavy	4,824,349	0.46
955.8416	0.0002	0.0000	0.0010	211,546.3038	0.0080513	221,317,931	467,664	3,786,450	8.10	75,588,691	13.07%	Heavy	255,744,613	0.30
1,260.3295	0.0005	0.0000	0.0013	1,328,759.0055	0.0126399	1,054,283,720	9,741,491	54,908,805	5.64	34,355,301	12.52%	Heavy	244,915,561	0.14
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000000	0	2,055,447	12,439,502	6.05	486,985	0.95%	Heavy	18,643,890	0.03
309.4529	0.0003	0.0000	0.000309	13,478.2988	0.0373266	43,554,047	0.00000	0.0000	0.00	152,656,674	58.57%	LIGHT	1,145,806,147	0.13
1,145.9661	0.0006	0.0000	0.001146	1,636,994.3292	0.0716896	1,428,464,024	13,268,446	74,398,419	5.82	206,871,954	41.43%	HEAVY	810,540,771	0.26
1,121.2153	0.0006	0.0000	0.001121	1,650,472.6280	0.1090162	1,472,018,071	13,268,446	74,398,419	5.61	359,528,628	100%	TOTAL	1,956,346,919	0.18

				Plug-in hybrid		
Miles Traveled	Fuel use (gallons)	ICE VMT	mpg	Fuel use (kWh)	eVMT	mpg-e
0	0	0	0.00	0	0	0.000000
13,987,247	4,526,700	140,159,469	30.96	34,087,832	203,929,117	5.982461
223,842	57,888	4,562,251	78.81	1,214,526	6,650,175	5.475533
3,415,385	874,667	43,198,448	49.39	11,483,771	62,875,014	5.475119
26,290,578	0	0	0.00	0	0	0.000000
6,126,393	0	0	0.00	0	0	0.000000
0	0	0	0.00	0	0	0.000000
3,247,973	587,648	28,388,032	48.31	7,541,329	41,305,142	5.477170
0	0	0	0.00	0	0	0.000000
0	0	0	0.00	0	0	0.000000
325,540	0	0	0.00	0	0	0.000000
0	0	0	0.00	0	0	0.000000
1,004,870	0	0	0.00	0	0	0.000000
22,341,234	0	0	0.00	0	0	0.000000
4,819,158	0	0	0.00	0	0	0.000000
12,720	0	0	0.00	0	0	0.000000
20,874,447	6,046,903	216,308,200	37.93	54,327,458	314,759,449	5.804098
60,920,493	0.00000	0.00000	0.00000	0.00000	0.00000	0.000000
81,794,939	6,046,903	216,308,200	35.77	13,268,446	314,759,449	23.72

Total VMT (all vehicle types)	Percent	Total Heavy Duty Vehicle fuel use	Percent
15,644,807,731 Light Duty	86%		
2,485,396,911 Heavy Duty	14%	390,881,709.201798	38%
18,130,204,642 Total	100%	1,028,344,504	

Ontario Quantification Workbook

Emission Rates

Source: EMFAC2021 (v1.0.1) Emission Rates

Region Type: Sub-Area

Region: San Bernardino (SC)

Calendar Year: 2050

Season: Annual

Vehicle Classification: EMFAC202x Categories

Units: miles/day for CVMT and EVMT, trips/day for Trips, kWh/day for Energy Consumption, g/mile for RUNEX, PMBW and PMTW, g/trip for STREX, HOTSOAK and RUNLOSS, g/vehicle/day for IDLEX and DIURN

Trips	Region	Calendar Year	Vehicle Category	Model Year	Speed	Fuel	Population	Total VMT	CVMT	EVMT	Trips	Energy Consumption	NOx_RUNEX	NOx_IDLEX	NOx_STREX	PM2.5_RUNEX	PM2.5_IDLEX	PM2.5_STREX	PM2.5_PMTW	PM2.5_PMBW	PM10_RUNEX	PM10_IDLEX	PM10_STREX	PM10_PMTW	PM10_PMBW	CO2_RUNEX	CO2_IDLEX	CO2_STREX	CH4_RUNEX	CH4_IDLEX	CH4_STREX
1598.635	San Bernardino (SC)	2050	All Other Buses	Aggregate	Aggregate	Diesel	190.0039446	9715.698348	9715.698	0	1691.035107	0	0.533386451	1.675615442	0.86643861	0.005691247	0.00087439	0	0.003000001	0.015320015	0.00594858	0.000913926	0	0.012000003	0.043771473	942.8057375	530.2123519	0	0.0005003	0.002326568	0
373.0488	San Bernardino (SC)	2050	All Other Buses	Aggregate	Aggregate	Natural Gas	56.2481208	2946.530911	2946.531	0	500.6082751	0	0.066680437	1.486655807	0	0.001140758	0.005109912	0	0.003000001	0.015320015	0.001240679	0.005557496	0	0.012000003	0.043771473	763.6770837	1157.442071	0	0.6056928	3.610200735	0
2101254	San Bernardino (SC)	2050	LDA	Aggregate	Aggregate	Gasoline	479562.4591	20102501.8	20102502	0	2229938.185	0	0.018809347	0.154200091	0.000439999	0.000478539	0	0.000721971	0.002000001	0.002669289	0.000478539	0	0.000785209	0.000800002	0.007626541	236.892263	0	0.00099	0	0.303229776	0
2744.074	San Bernardino (SC)	2050	LDA	Aggregate	Aggregate	Diesel	293.3189727	11614.21395	11614.21	0	1331.209427	0	0.00880998	0	0	0.000771199	0	0	0.002000001	0.002672441	0.000806069	0	0	0.000800002	0.007635545	190.6263598	0	0	0.0001722	0	0
186060.2	San Bernardino (SC)	2050	LDA	Aggregate	Aggregate	Electricity	66442.77135	2531574.81	0	2531575	311469.1765	977396.8189	0	0	0	0	0	0	0.002000001	0.001537564	0	0	0	0.008000002	0.004393039	0	0	0	0	0	0
72766.7	San Bernardino (SC)	2050	LDA	Aggregate	Aggregate	Plug-in Hybrid	22585.56718	942708.4567	383998.5	558709.9	93391.3203	168747.0453	0.002503099	0.11117456	0.000179537	0	0.00075363	0.002000001	0.001407019	0.000195263	0	0.000819642	0.000800002	0.004020056	113.238749	0	0	0	0	0.388725268	0
159229.3	San Bernardino (SC)	2050	LDT1	Aggregate	Aggregate	Gasoline	33893.96457	1229992.696	1229993	0	153117.6026	0	0.020232294	0.16828161	0.000468459	0	0.000776418	0.002000001	0.003133695	0.000509492	0	0.000844426	0.008000002	0.008953415	272.1787306	0	0	0.0010537	0.031649818	0	
1.585047	San Bernardino (SC)	2050	LDT1	Aggregate	Aggregate	Diesel	0.393709711	14.72915349	14.72915	0	1.808904372	0	0.026740952	0	0.003987409	0	0	0.002000001	0.003120186	0.004167702	0	0	0.008000002	0.008914816	357.0493989	0	0	0.00054	0	0	
1417.55	San Bernardino (SC)	2050	LDT1	Aggregate	Aggregate	Electricity	1054.969063	39228.96427	0	39228.96	4904.868972	15145.61795	0	0	0	0	0	0	0.002000001	0.001539266	0	0	0	0.008000002	0.004397903	0	0	0	0	0	0
982.1864	San Bernardino (SC)	2050	LDT1	Aggregate	Aggregate	Plug-in Hybrid	804.707976	30718.97531	12499.32	18219.66	3327.467481	5502.879816	0.002503077	0.11117456	0.000178071	0	0.000733788	0.002000001	0.001409255	0.000193668	0	0.000798062	0.008000002	0.004026444	113.1155853	0	0	0	0.388352296	0	
1039631	San Bernardino (SC)	2050	LDT2	Aggregate	Aggregate	Gasoline	274596.2535	10429930.84	10429931	0	1268159.566	0	0.021305344	0.19373406	0.000450062	0	0.000735604	0.002000001	0.003096546	0.000489484	0	0.000800036	0.008000002	0.008847275	289.9027192	0	0	0.001314	0.038686252	0	
3489.059	San Bernardino (SC)	2050	LDT2	Aggregate	Aggregate	Diesel	1045.134092	39895.86835	39895.87	0	4841.544077	0	0.026875449	0	0.003917627	0	0	0	0.002000001	0.003094248	0.004094765	0	0	0.008000002	0.008840709	270.6774624	0	0	0.0005366	0	0
20673.02	San Bernardino (SC)	2050	LDT2	Aggregate	Aggregate	Electricity	11208.95187	294206.421	0	294206.4	52468.5981	113587.9607	0	0	0	0	0	0	0.002000001	0.0015386	0	0	0	0.008000002	0.004396	0	0	0	0	0	0
15059.07	San Bernardino (SC)	2050	LDT2	Aggregate	Aggregate	Plug-in Hybrid	7608.799559	29612.2249	118351.9	172260.3	31462.38618	52027.74859	0.002502576	0.11117456	0.000179339	0	0.000741021	0.002000001	0.001408524	0.000195047	0	0.000805928	0.008000002	0.004024353	113.2150822	0	0	0.003401	0.388365636	0	
238981.6	San Bernardino (SC)	2050	LHD1	Aggregate	Aggregate	Gasoline	10357.61967	361551.7155	361551.7	0	154313.1002	0	0.015466131	0.023484945	0.36834819	0.001018119	0.894063E-05	0.002000001	0.027300008	0.001107297	0	0.92375E-05	0.008000002	0.078000022	485.1417396	106.2947783	23.2583073	0.0004495	0.081431643	0.018209656	
139456.2	San Bernardino (SC)	2050	LHD1	Aggregate	Aggregate	Diesel	7168.902015	240687.2733	240687.3	0	90175.76887	0	0.15672471	0.893029355	0	0.010245188	0.026402205	0	0.003000001	0.027300008	0.01070843	0.027595996	0	0.012000003	0.078000022	460.8319087	114.417592	0	0.0017903	0.005098128	0
21569.72	San Bernardino (SC)	2050	LHD1	Aggregate	Aggregate	Electricity	14749.42958	591814.7824	0	591814.8	206465.0454	331308.4384	0	0	0	0	0	0	0.002000001	0.027300008	0.013650004	0	0	0.008000002	0.039000011	0	0	0	0	0	0
37286.49	San Bernardino (SC)	2050	LHD2	Aggregate	Aggregate	Gasoline	1298.21399	43119.44596	43119.45	0	19341.45411	0	0.021492665	0.020435827	0.31880972	0.001016741	0.890808E-05	0.002000001	0.031850009	0.001105798	0	0.68835E-05	0.008000002	0.091000026	547.6895888	122.7812185	22.98630795	0.0004161	0.071343624	0.016148172	
62833.62	San Bernardino (SC)	2050	LHD2	Aggregate	Aggregate	Diesel	3614.286708	114366.7292	114366.7	0	45463.18002	0	0.235237254	1.006815094	0	0.013301158	0.026330703	0	0.003000001	0.031850009	0.013902578	0	0.027521261	0.012000003	0.091000026	538.5658759	187.6609355	0.0022787	0.005098128	0	
516.775	San Bernardino (SC)	2050	LHD2	Aggregate	Aggregate	Electricity	3725.242292	144719.3507	0	144719.4	49285.51607	81126.95993	0	0	0	0	0	0	0.002000001	0.015925005	0	0	0	0.008000002	0.045500013	0	0	0	0	0	0
42246.28	San Bernardino (SC)	2050	MCY	Aggregate	Aggregate	Gasoline	22648.52804	124934.3577	124934.4	0	45297.05608	0	0.445227	0.05279058	0.002007255	0.003392609	0.001	0.004200001	0.002153245	0	0.00363951	0.004000002	0.012000003	0.095243995	183.0464993	0	0	0.3367588903	0.1276531	0.11750326	
681867.7	San Bernardino (SC)	2050	MDV	Aggregate	Aggregate	Gasoline	164730.8581	6261626.299	6261626	0	754182.5674	0	0.021971967	0.20421982	0.000452642	0.000743377	0.002000001	0.00313918	0.000492289	0	0.000808049	0.008000002	0.008969085	350.3627274	0	0	0	0.0013501	0.039660703	0	
8403.383	San Bernardino (SC)	2050	MDV	Aggregate	Aggregate	Diesel	1807.282702	67801.34532	67801.35	0	8216.571653	0	0.011238447	0	0.000872186	0	0	0.002000001	0.00314374	0.000911622	0	0	0.008000002	0.008982114	352.6137053	0	0	0.0001897	0	0	
21124.21	San Bernardino (SC)	2050	MDV	Aggregate	Aggregate	Electricity	10611.78069	274184.7286	0	274184.7	49394.81968	105857.935	0	0	0	0	0	0	0.002000001	0.001540593	0	0	0	0.008000002	0.004401695	0	0	0	0	0	
9723.179	San Bernardino (SC)	2050	MDV	Aggregate	Aggregate	Plug-in Hybrid	4996.656844	190940.2031	77775.43	113164.8	20661.17605	34179.13432	0.002503058	0.11117456	0.000180564	0.000750443	0.002000001	0.001409911	0.000196379	0	0.000816175	0.008000002	0.004028317	113.2368884	0	0	0.870500458	0.0003407	0.388324266	0	
251.9807	San Bernardino (SC)	2050	MH	Aggregate	Aggregate	Gasoline	1541.570404	15945.46247	15945.46	0	154.2187033	0	0.199905832	0.3444708	0.000982268	0.000344389	0.000300001	0.014892326	0.001068306	0	0.000374555	0.012000003	0.042549504	1759.51807	0	0	29.14553934	0.0021402	0.033102207		
127.1491	San Bernardino (SC)	2050	MH	Aggregate	Aggregate	Diesel	992.1821755	9012.724826	9012.725	0	99.21821755	0	1.756925657	0	0.01681799	0	0	0.004000001	0.014851131	0.017578425	0	0	0.016000005	0.042431802	1002.873268	0	0	0.0014523	0	0	
1218.746	San Bernardino (SC)	2050	Motor Coach	Aggregate	Aggregate	Diesel	55.59534343	7002.604945	7002.605	0	1277.580992	0	0.938505827	17.62080909	0.96098036	0.01363562	0.01626616	0.003000001	0.033335398	0.014252162	0.017001643	0	0	0.012000003	0.095243995	1492.857918	8276.015889	0.0004345	0.185553298	0	
6095.713	San Bernardino (SC)	2050	OBUS	Aggregate	Aggregate	Gasoline	148.5689442	4865.875041	4865.875	0	2972.567436	0	0.244991879	0.046251844	0.30910084	0.001006601	0.000280885	0.003000001	0.015320015	0.00109477	0	0.000305488	0.012000003	0.043771473	1421.417761	336.4784574	25.66764189	0.0014247	0.195774878	0.027018172	
350.2315	San Bernardino (SC)	2050	OBUS	Aggregate	Aggregate	Electricity	121.9019108	6669.864428	0	6669.864	2439.013431	7004.80																			

																				Weighing factors							
																				CO2	CH4	N2O					
N2O_RUNEX	N2O_IDLEX	N2O_STREX	ROG_RUNEX	ROG_IDLEX	ROG_STREX	ROG_HOTSOAK	ROG_RUNLOSS	ROG_DIURN	TOG_RUNEX	TOG_IDLEX	TOG_STREX	TOG_HOTSOAK	TOG_RUNLOSS	TOG_DIURN	NH3_RUNEX	CO_RUNEX	CO_IDLEX	CO_STREX	SOx_RUNEX	SOx_IDLEX	SOx_STREX	SOx_IDLEX	SOx_STREX	CO2	CH4	N2O	
0.148539428	0.083535172	0	0.010771834	0.050090376	0	0	0	0	0.01226291	0.057024081	0	0	0	0	0.218587446	0.064976126	2.065810263	0	0.00892781	0.005020794	0	0.00568078	0	9160016.1	4.86099	0	
0.155680569	0.235952138	0	0.008654155	0.051582645	0	0	0	0	0.61815394	3.684474649	0	0	0	0	1.06	2.265510334	10.08284336	0	0	0	0	0	0	2250198.1	1784.69	0	
0.00315403	0	0.025050812	0.002816427	0	0.111532935	0.03633204	0.149179908	0.950611969	0.00410972	0	0.122114525	0.036332036	0.149179908	0.950611969	0.041934658	0.494886298	0	1.511779607	0.00234192	0	0.000549769	0	0.000621821	4.762E+09	19901.9	503584	
0.030033261	0	0	0.003706369	0	0	0	0	0	0.00421945	0	0	0	0	0	0.0031	0.11981843	0	0	0.00180628	0	0	0	0	2213975.3	1.99943	0	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.000433119	0	0.018923135	0.001115072	0	0.16235414	0.03941267	0.082120057	0.915353042	0.00162711	0	0.177757347	0.039412666	0.082120057	0.915353042	0.017099334	0.18420378	0	1.235701423	0.00111948	0	0.000571718	0	0.000610439	106751126	324.834	17839	
0.003248401	0	0.026341604	0.003069482	0	0.119415097	0.0491266	0.226652655	1.415335835	0.00447898	0	0.1307445	0.049126601	0.226652655	1.415335835	0.041732546	0.529471433	0	1.579240024	0.00269076	0	0.000637758	0	0.000783726	334777851	1296.1	32400	
0.056253278	0	0	0.011625636	0	0	0	0	0	0.01323501	0	0	0	0	0	0.0031	0.124974473	0	0	0.00338322	0	0	0	0	0	5259.0354	0.00795	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.000421851	0	0.01855911	0.001113859	0	0.16235414	0.04073682	0.088602094	1.003009018	0.00162534	0	0.177757347	0.040736822	0.088602094	1.003009018	0.01708948	0.184003431	0	1.235701423	0.00111826	0	0.000657009	0	0.000666838	3474794.9	10.4398	570.117	
0.003331572	0	0.029749152	0.003935335	0	0.149544242	0.03876846	0.167983521	1.061324291	0.00574243	0	0.163732121	0.038768461	0.167983521	1.061324291	0.041893814	0.583267683	0	1.943642096	0.00286598	0	0.00068842	0	0.00077152	3.024E+09	13704.9	310282	
0.042645344	0	0	0.011551839	0	0	0	0	0	0.013151	0	0	0	0	0	0	0	0	0	0.00256481	0	0	0	0	0	10798912	21.4066	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.000422204	0	0.018571857	0.001114839	0	0.16235414	0.03888549	0.08079545	0.915471039	0.00162677	0	0.177757347	0.038885494	0.08079545	0.915471039	0.017104311	0.184165282	0	1.235701423	0.00111925	0	0.00070671	0	0.000730021	32901687	98.8494	5397.21	
0.001577323	0.002404794	0.036988706	0.001454715	0.269732611	0.077875248	0.01845387	0.192292097	2.128481909	0.00212272	0.393593194	0.085263594	0.018453869	0.192292097	2.128481909	0.045	0.575825268	3.781397237	3.259823485	0.00479612	0.001050859	0.000229932	0.00113021	0.000249048	175403828	162.506	13373.3	
0.072604255	0.018026538	0	0.038544976	0.109759705	0	0	0	0	0.04388089	0.124954127	0	0	0	0	0.219136203	0.07246644	0.909745076	0	0.00436662	0.001084165	0	0.00119774	0	110916376	430.912	0	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.002294213	0.002099837	0.032336783	0.00132841	0.234712455	0.068631549	0.02064852	0.216969411	2.418296354	0.00193841	0.342491864	0.075142907	0.020648519	0.216969411	2.418296354	0.045	0.583230485	3.781397237	3.276251408	0.00541447	0.001213817	0.000227243	0.00132723	0.000243738	23616072	17.9438	1394.34	
0.084851273	0.029566057	0	0.049058495	0.109759705	0	0	0	0	0.05584984	0.124954127	0	0	0	0	0.215640451	0.094059614	0.909745076	0	0.00510319	0.001778183	0	0.00192011	0	0	61594018	260.604	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.034253116	0	0.003771432	0.747813243	0	0.797035625	3.56478217	3.810627216	3.818805716	0.93815326	0	0.868335254	3.564782172	3.810627216	3.818805716	0.009193706	9.339624371	0	7.168307932	0.0018096	0	0.00033292	0	0.000427915	22868797	15948.3	471.181	
0.003400148	0	0.030806944	0.004055713	0	0.154210966	0.0428768	0.190301099	1.201522984	0.00591809	0	0.168841597	0.042876795	0.190301099	1.201522984	0.041829262	0.599302354	0	1.980653148	0.00346369	0	0.000838234	0	0.000961424	2.194E+09	8454.12	192902	
0.055554433	0	0	0.004084392	0	0	0	0	0	0.00464981	0	0	0	0	0	0.0031	0.131439226	0	0	0.00334119	0	0	0	0	0	23907684	12.8627	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.00042342	0	0.018533448	0.001115054	0	0.16235414	0.04090744	0.089585079	1.000760483	0.00162708	0	0.177757347	0.040907442	0.089585079	1.000760483	0.017107807	0.184200753	0	1.235701423	0.00111946	0	0.000860578	0	0.000894592	21621474	65.0448	3538.78	
0.016852755	0	0.040238061	0.005799737	0	0.109393355	2.82552211	0.112543282	2.017315875	0.00846296	0	0.119771955	2.825522111	0.112543282	2.017315875	0.045	0.131489269	0	2.02362703	0.01739463	0	0.000288132	0	0.000301587	28056329	34.1264	641.614	
0.158003092	0	0	0.031267436	0	0	0	0	0	0.03559599	0	0	0	0	0	0.216954423	0.092554737	0	0	0.00950273	0	0	0	0	0	9038620.8	13.0893	0
0.235200373	1.303889674	0	0.00935359	3.994911632	0	0	0	0	0.01064835	4.547902796	0	0	0	0	0.22	0.063112737	59.02781966	0	0.01413647	0.078368921	0	0.09166801	0	0	10453894	3.04228	0
0.014323853	0.004668463	0.02248609	0.005230602	0.750514416	0.137469054	0.02484312	0.192796911	3.467986135	0.00763248	1.095148875	0.150511311	0.024843121	0.192796911	3.467986135	0.045	0.156031451	5.800202883	2.184723248	0.01405216	0.003326432	0.000253751	0.00362849	0.000294986	6916441.2	6.9322	109.415	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.269802501	0	0	0.013567249	0	0	0	0	0	0.01544528	0	0	0	0	0	0.219999323	0.169390515	0	0	0.0162162	0	0	0	0	0	61118804	22.4906	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.009983224	0.065051185	0.055017379	0.010237461	10.64151815	0.371102453	0.11484882	0.728453623	4.072280385	0.01493848	15.5280783	0.406310475	0.11484882	0.728453623	4.072280385	0.045	0.198687097	82.24087757	7.26958305	0.00775091	0.022772034	0.000477193	0.02547557	0.000543828	3567238	10.7554	250.323	
0.176060064	0.287725321	0	0.009722674	0.166686784	0	0	0	0	0.01106852	0.189760215	0	0	0	0	0.219997516	0.064704235	7.058177936	0	0.01058191	0.017293429	0	0.02124482	0	0	2599086.1	1.05033	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.291963082	0.884190687	0	0.044721034	0.164563819	0	0	0	0	3.19435959	11.75455853	0	0	0	0	1.06	8.607102887	37.03362182	0	0	0	0	0	0	0	8586042.9	18764.2	0
0.15459042	0.080437469	0	0.00458411	0.049332274	0	0	0	0	0.00521866	0.056161039	0	0	0	0	0.22	0.028679722	2.088933403	0	0.0092915	0.00483461	0	0.00527132	0	0	292974.54	0.06357	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.15460697	0.080454974	0	0.004586667	0.049332487	0	0	0	0	0.00522157	0.056161281	0	0	0	0	0.22	0.028691873	2.088919439	0	0.00929249	0.004835662	0	0.00530512	0	0	402144.3	0.0873	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.15454366	0.080402064	0	0.004582001	0.049332063	0	0	0	0	0.00521626	0.056160799	0	0	0	0	0.22	0.028670337	2.088947249	0	0.00928868	0.004832482	0	0.00517218	0	0	1049288.6	0.22766	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.136688487	0.078867852	0	0.004977241	0.049332072	0	0	0	0	0.00566621	0.056160808	0	0	0	0	0.22	0.031142962	2.088946703	0	0.00821552	0.00474027	0	0.00512018	0	0	11143205	2.9692	

Emission Rates

Source: EMFAC2021 (v1.0.1) Emission Rates

Region Type: Sub-Area

Region: San Bernardino (SC)

Calendar Year: 2050

Season: Annual

Vehicle Classification: EMFAC202x Categories

Units: miles/day for CVMT and EVMT, trips/day for Trips, kWh/day for Energy Consumption, g/mile for RUNEX, PMBW and PMTW, g/trip for STREX, HOTSOAK and RUNLOSS, g/vehicle/day for IDLEX and DIURN

Trips	Region	Calendar Year	Vehicle Category	Model Year	Speed	Fuel	Population	Total VMT	CVMT	EVMT	Trips	Energy Consumption	Nox_RUNEX	Nox_IDLEX	Nox_STREX	PM2.5_RUNEX	PM2.5_IDLEX	PM2.5_STREX	PM2.5_PMTW	PM2.5_PMBW	PM10_RUNEX	PM10_IDLEX	PM10_STREX	PM10_PMTW	PM10_PMBW
584.7324	San Bernardino (S	2050	T6 OOS Class 7 Aggregate	Aggregate	Aggregate	Diesel	41.50453306	11666.70591	11666.71	0	953.7741697	0	0.225038823	2.85550585	0.60121079	0.004483744	0.00068192	0	0.003000001	0.014812885	0.004686479	0.000712753	0	0.012000003	0.042322528
420.257	San Bernardino (S	2050	T6 Public Class 4 Aggregate	Aggregate	Aggregate	Diesel	45.73142881	1584.922291	1584.922	0	234.6022298	0	0.202187078	15.25658562	1.26540322	0.003995707	0.003803365	0	0.003000001	0.014851131	0.004176375	0.003975337	0	0.012000003	0.042431802
37.02091	San Bernardino (S	2050	T6 Public Class 4 Aggregate	Aggregate	Aggregate	Electricity	54.3446567	2073.531168	0	2073.531	278.7880889	2175.187625	0	0	0	0	0	0	0.003000001	0.007425565	0	0	0	0.012000003	0.021215901
52.03519	San Bernardino (S	2050	T6 Public Class 4 Aggregate	Aggregate	Aggregate	Natural Gas	8.765449705	304.4964998	304.4965	0	44.96675698	0	0.046004809	7.679179758	0	0.001021988	0.028752881	0	0.003000001	0.014851131	0.001111505	0.031271382	0	0.012000003	0.042431802
853.2398	San Bernardino (S	2050	T6 Public Class 5 Aggregate	Aggregate	Aggregate	Diesel	98.81907228	3417.676143	3417.676	0	506.9418408	0	0.222697157	15.29053245	1.2755991	0.004115932	0.003863743	0	0.003000001	0.014851131	0.004302037	0.004038444	0	0.012000003	0.042431802
78.44209	San Bernardino (S	2050	T6 Public Class 5 Aggregate	Aggregate	Aggregate	Electricity	116.8570447	4452.329006	0	4452.329	599.4766395	4670.607853	0	0	0	0	0	0	0.003000001	0.007425565	0	0	0	0.012000003	0.021215901
175.6714	San Bernardino (S	2050	T6 Public Class 5 Aggregate	Aggregate	Aggregate	Natural Gas	20.06658244	688.438052	688.4381	0	102.9415679	0	0.053245655	7.741180744	0	0.00098466	0.027273995	0	0.003000001	0.014851131	0.001070908	0.029662958	0	0.012000003	0.042431802
642.874	San Bernardino (S	2050	T6 Public Class 6 Aggregate	Aggregate	Aggregate	Diesel	73.95512156	2554.461108	2554.461	0	379.3897736	0	0.202892144	15.187356	1.27618611	0.003948992	0.003721977	0	0.003000001	0.014851131	0.004127548	0.003890268	0	0.012000003	0.042431802
60.4019	San Bernardino (S	2050	T6 Public Class 6 Aggregate	Aggregate	Aggregate	Electricity	86.77743033	3300.669221	0	3300.669	445.1682176	3462.487063	0	0	0	0	0	0	0.003000001	0.007425565	0	0	0	0.012000003	0.021215901
103.5548	San Bernardino (S	2050	T6 Public Class 6 Aggregate	Aggregate	Aggregate	Natural Gas	14.53011955	500.797308	500.7973	0	74.5395133	0	0.047587569	7.696144215	0	0.001015084	0.028348235	0	0.003000001	0.014851131	0.001103996	0.030831292	0	0.012000003	0.042431802
1432.495	San Bernardino (S	2050	T6 Public Class 7 Aggregate	Aggregate	Aggregate	Diesel	190.4767631	8032.805204	8032.805	0	977.1457948	0	0.192512242	15.12420907	1.42487415	0.003864553	0.003724224	0	0.003000001	0.014851131	0.004039291	0.003892617	0	0.012000003	0.042431802
130.1009	San Bernardino (S	2050	T6 Public Class 7 Aggregate	Aggregate	Aggregate	Electricity	172.1018201	8020.543437	0	8020.543	882.8823373	8413.756736	0	0	0	0	0	0	0.003000001	0.007425565	0	0	0	0.012000003	0.021215901
216.5964	San Bernardino (S	2050	T6 Public Class 7 Aggregate	Aggregate	Aggregate	Natural Gas	36.79894207	1553.071147	1553.071	0	188.7785728	0	0.04517781	7.675146941	0	0.00102748	0.028849075	0	0.003000001	0.014851131	0.001117479	0.031376001	0	0.012000003	0.042431802
1934.341	San Bernardino (S	2050	T6 Utility Class 5 Aggregate	Aggregate	Aggregate	Diesel	75.47617281	3029.302582	3029.303	0	966.095012	0	0.128955229	7.847841191	0.81698472	0.003413813	0.001874138	0	0.003000001	0.014851131	0.00356817	0.001958878	0	0.012000003	0.042431802
312.8672	San Bernardino (S	2050	T6 Utility Class 5 Aggregate	Aggregate	Aggregate	Electricity	115.8145057	4724.877102	0	4724.877	1482.425672	4956.517829	0	0	0	0	0	0	0.003000001	0.007425565	0	0	0	0.012000003	0.021215901
11.03744	San Bernardino (S	2050	T6 Utility Class 5 Aggregate	Aggregate	Aggregate	Natural Gas	0.433857903	17.41326853	17.41327	0	5.553381153	0	0.044019618	4.033765874	0	0.001033927	0.015285264	0	0.003000001	0.014851131	0.00112449	0.01662412	0	0.012000003	0.042431802
365.0924	San Bernardino (S	2050	T6 Utility Class 6 Aggregate	Aggregate	Aggregate	Diesel	14.26333531	572.4833334	572.4833	0	182.570692	0	0.126588858	7.847841191	0.81700848	0.003397017	0.001874138	0	0.003000001	0.014851131	0.003550615	0.001958878	0	0.012000003	0.042431802
59.45086	San Bernardino (S	2050	T6 Utility Class 6 Aggregate	Aggregate	Aggregate	Electricity	21.88577893	892.8996245	0	892.8996	280.1379704	936.6747139	0	0	0	0	0	0	0.003000001	0.007425565	0	0	0	0.012000003	0.021215901
2.7661	San Bernardino (S	2050	T6 Utility Class 6 Aggregate	Aggregate	Aggregate	Natural Gas	0.081989594	3.290792432	3.290792	0	1.049466799	0	0.044019618	4.033765874	0	0.001033927	0.015285264	0	0.003000001	0.014851131	0.00112449	0.01662412	0	0.012000003	0.042431802
404.1556	San Bernardino (S	2050	T6 Utility Class 7 Aggregate	Aggregate	Aggregate	Diesel	15.86795833	788.4130379	788.413	0	203.1098666	0	0.123144902	7.847841191	0.81695506	0.00337872	0.001874138	0	0.003000001	0.014851131	0.003531491	0.001958878	0	0.012000003	0.042431802
65.37209	San Bernardino (S	2050	T6 Utility Class 7 Aggregate	Aggregate	Aggregate	Electricity	24.35151078	1250.467992	0	1250.468	311.6993379	1311.773145	0	0	0	0	0	0	0.003000001	0.007425565	0	0	0	0.012000003	0.021215901
3.344329	San Bernardino (S	2050	T6 Utility Class 7 Aggregate	Aggregate	Aggregate	Natural Gas	0.09121341	4.532016055	4.532016	0	1.167531652	0	0.044019618	4.033765874	0	0.001033927	0.015285264	0	0.003000001	0.014851131	0.00112449	0.01662412	0	0.012000003	0.042431802
25131.45	San Bernardino (S	2050	T6T5 Aggregate	Aggregate	Aggregate	Gasoline	655.4784219	32821.38627	32821.39	0	13114.81226	0	0.05894403	0.055339878	0.48307264	0.00098981	0	0.000471107	0.003000001	0.014892326	0.001076508	0	0.000512372	0.012000003	0.042549504
1829.467	San Bernardino (S	2050	T6T5 Aggregate	Aggregate	Aggregate	Electricity	707.3011704	44653.64966	0	44653.65	14151.68182	46745.00604	0	0	0	0	0	0	0.003000001	0.007446163	0	0	0	0.012000003	0.021274752
41026.17	San Bernardino (S	2050	T7 CAIRP Class 8 Aggregate	Aggregate	Aggregate	Diesel	2821.624464	597223.1685	597223.2	0	64840.93017	0	1.121812508	123.3006301	1.56470118	0.02707061	0.042485239	0	0.009000003	0.028929179	0.028294623	0.044406233	0	0.036000001	0.082654796
3621.637	San Bernardino (S	2050	T7 CAIRP Class 8 Aggregate	Aggregate	Aggregate	Electricity	801.0527992	175332.2117	0	175332.2	18408.19333	313397.9545	0	0	0	0	0	0	0.009000003	0.01446624	0	0	0	0.036000001	0.041332115
154.1745	San Bernardino (S	2050	T7 CAIRP Class 8 Aggregate	Aggregate	Aggregate	Natural Gas	10.32254863	2184.850741	2184.851	0	237.2121675	0	0.15108643	63.46732064	0	0.00173498	0.240485293	0	0.009000003	0.028929105	0.001886949	0.261549699	0	0.036000001	0.082654587
39126.5	San Bernardino (S	2050	T7 NNQOS Class 8 Aggregate	Aggregate	Aggregate	Diesel	3159.337073	917449.2032	917449.2	0	72601.56595	0	1.241919415	153.0328174	2.37634033	0.026748306	0.052729907	0	0.009000003	0.028926943	0.027957746	0.055114119	0	0.036000001	0.082648408
16941.24	San Bernardino (S	2050	T7 NNQOS Class 8 Aggregate	Aggregate	Aggregate	Diesel	1362.444925	333126.7483	333126.7	0	31308.98437	0	1.277687591	153.032686	2.37639757	0.028319097	0.052729907	0	0.009000003	0.028929592	0.029599561	0.055114119	0	0.036000001	0.082655979
36572.56	San Bernardino (S	2050	T7 POLA Class 8 Aggregate	Aggregate	Aggregate	Diesel	1830.97323	336829.5667	336829.6	0	29954.72205	0	1.106431951	40.3971439	1.93609886	0.023841027	0.013919497	0	0.009000003	0.029083571	0.024919012	0.014548875	0	0.036000001	0.083095913
746.1351	San Bernardino (S	2050	T7 POLA Class 8 Aggregate	Aggregate	Aggregate	Electricity	369.4794614	67315.76077	0	67315.76	6044.683989	120167.7844	0	0	0	0	0	0	0.009000003	0.014584326	0	0	0	0.036000001	0.041669506
601.5932	San Bernardino (S	2050	T7 POLA Class 8 Aggregate	Aggregate	Aggregate	Natural Gas	73.76040986	13568.16159	13568.16	0	1206.720305	0	0.151652835	20.79412297	0	0.001750475	0.078785332	0	0.009000003	0.0291201	0.001903801	0.085686237	0	0.036000001	0.083200284
2871.159	San Bernardino (S	2050	T7 Public Class 8 Aggregate	Aggregate	Aggregate	Diesel	224.823919	8634.126246	8634.126	0	1153.346704	0	1.327846193	17.29556665	5.14100001	0.017162053	0.007784773	0	0.009000003	0.028836493	0.017938045	0.008136766	0	0.036000001	0.08238998
306.2652	San Bernardino (S	2050	T7 Public Class 8 Aggregate	Aggregate	Aggregate	Electricity	453.6730659	20630.06334	0	20630.06	2327.342828	36826.54623	0	0	0	0	0	0	0.009000003	0.014559837	0	0	0	0.036000001	0.041599535
1644.768	San Bernardino (S	2050	T7 Public Class 8 Aggregate	Aggregate	Aggregate	Natural Gas	376.6785595	15718.92725	15718.93	0	1932.36101	0	0.165350943	7.373708294	0	0.001717623	0.027174257	0	0.009000003	0.028734711	0.001868071	0.029554484			

CO2_RUNEX	CO2_IDLEX	CO2_STREX	CH4_RUNEX	CH4_IDLEX	CH4_STREX	N2O_RUNEX	N2O_IDLEX	N2O_STREX	ROG_RUNEX	ROG_IDLEX	ROG_STREX	ROG_HOTSO	ROG_RUNLOSS	ROG_DIURN	TOG_RUNEX	TOG_IDLEX	TOG_STREX	TOG_HOTSOAK	TOG_RUNLOSS	TOG_DIURN	NH3_RUNEX	CO_RUNEX	CO_IDLEX	CO_STREX	SOx_RUNEX		
829.6450943	479.2610338	0	0.0002265	0.002291345	0	0.130710922	0.075507771	0	0.004876027	0.049332038	0	0	0	0	0.00555099	0.05616077	0	0	0	0	0	0.22	0.030510231	2.088948922	0	0.00785624	
987.7286741	2720.962042	0	0.0002213	0.011990547	0	0.155617055	0.428688678	0	0.004764111	0.25815319	0	0	0	0	0.00542358	0.293887756	0	0	0	0	0.21876078	0.028864029	10.84069975	0	0.0093532		
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
754.5492731	6614.564308	0	0.5224556	17.79111268	0	0.153819805	1.348422205	0	0.007464859	0.254199896	0	0	0	0	0.53320423	18.15713543	0	0	0	0	0	1.06	1.606855457	57.31516297	0	0	
990.8156515	2744.074464	0	0.0002238	0.011972607	0	0.156103409	0.432330049	0	0.004819261	0.257766953	0	0	0	0	0.00548636	0.293448055	0	0	0	0	0.21872394	0.029362267	10.83293455	0	0.00938243		
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
757.7354333	6535.647198	0	0.5148844	18.55661824	0	0.154469325	1.332334436	0	0.007356683	0.26513746	0	0	0	0	0.52547733	18.93839	0	0	0	0	0	1.06	1.659817185	53.9807445	0	0	
987.9123704	2727.036233	0	0.0002231	0.011994798	0	0.155645996	0.429645669	0	0.004803914	0.258244717	0	0	0	0	0.00546889	0.293991952	0	0	0	0	0.218921889	0.02892579	10.84380226	0	0.00935494		
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
756.2462523	6597.900834	0	0.5210143	18.00056719	0	0.154165746	1.345025247	0	0.007444266	0.257192588	0	0	0	0	0.5317333	18.37089912	0	0	0	0	0	1.06	1.618497857	56.40281298	0	0	
975.8955659	2682.952075	0	0.0002072	0.011973696	0	0.153752744	0.422700192	0	0.004461949	0.257790383	0	0	0	0	0.00507959	0.293474728	0	0	0	0	0.219209644	0.028040267	10.86897606	0	0.00924115		
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
755.6544096	6629.152638	0	0.5235295	17.74132083	0	0.154045095	1.351396131	0	0.007480204	0.253488469	0	0	0	0	0.53430025	18.10631919	0	0	0	0	0	1.06	1.600870783	57.53204823	0	0	
975.0532711	1401.67753	0	0.0001713	0.006297357	0	0.15362004	0.220834866	0	0.003686976	0.13558037	0	0	0	0	0.00419734	0.15434793	0	0	0	0	0	0.22	0.02403475	5.741129947	0	0.00923317	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
752.5098881	3478.042435	0	0.5248216	9.279357489	0	0.153404063	0.709021703	0	0.007498665	0.132583709	0	0	0	0	0.53561891	9.470264935	0	0	0	0	0	1.06	1.592424307	30.51026	0	0	
975.0544336	1401.680201	0	0.0001712	0.006297357	0	0.153620223	0.220835287	0	0.003686939	0.13558037	0	0	0	0	0.0041973	0.15434793	0	0	0	0	0	0.22	0.024034508	5.741129947	0	0.00923318	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
752.5098881	3478.042435	0	0.5248216	9.279357489	0	0.153404063	0.709021703	0	0.007498665	0.132583709	0	0	0	0	0.53561891	9.470264935	0	0	0	0	0	1.06	1.592424307	30.51026	0	0	
976.0110115	1401.674182	0	0.0001696	0.006297357	0	0.153770932	0.220834338	0	0.003652224	0.13558037	0	0	0	0	0.00415778	0.15434793	0	0	0	0	0	0.22	0.023808208	5.741129947	0	0.00924224	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
752.5098881	3478.042435	0	0.5248216	9.279357489	0	0.153404063	0.709021703	0	0.007498665	0.132583709	0	0	0	0	0.53561891	9.470264935	0	0	0	0	0	1.06	1.592424307	30.51026	0	0	
1382.229504	460.2480958	35.9951686	0.0020529	0.27302369	0.036639174	0.006277014	0.005532028	0.036962164	0.007582254	1.016384149	0.177928949	0.01314934	0.20522859	2.154305329	0.01106401	1.483105364	0.194809803	0.013149336	0.20522859	2.154305329	0.045	0.144230024	14.50920751	2.961843711	0.01366475		
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1264.232507	20071.70328	0	0.0004987	0.484642796	0	0.199180346	3.162305026	0	0.010736942	10.4342265	0	0	0	0	0.01222319	11.8785726	0	0	0	0	0	0.22	0.036014462	154.1742071	0	0.01197153	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1012.853961	47962.02998	0	0.9077753	146.0063343	0	0.206476906	9.777373566	0	0.012970317	2.086142427	0	0	0	0	0.92645124	149.0101733	0	0	0	0	0	1.06	2.853123113	480.0194117	0	0	
1209.613914	23868.81375	0	0.0004848	0.601507004	0	0.190575165	3.760541326	0	0.010436631	12.95028086	0	0	0	0	0.01188131	14.74290897	0	0	0	0	0	0.22	0.035013374	191.3508114	0	0.01145432	
1209.363513	23863.70327	0	0.0005001	0.601507017	0	0.190535714	3.759736168	0	0.01076803	12.95028114	0	0	0	0	0.01225858	14.74290929	0	0	0	0	0	0.22	0.036118272	191.3509804	0	0.01145195	
1346.739418	6536.449095	0	0.0004629	0.158784187	0	0.212179344	1.029820217	0	0.009966791	3.418579994	0	0	0	0	0.01134643	3.891793096	0	0	0	0	0	0.22	0.035480847	50.51232159	0	0.01275282	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1019.203138	15727.69339	0	0.9165336	47.83901751	0	0.207771227	3.206193184	0	0.013095456	0.683525167	0	0	0	0	0.93538974	48.82322624	0	0	0	0	0	1.06	2.956172271	157.2576892	0	0	
1494.505597	2609.376213	0	0.0007222	0.054785284	0	0.235459965	0.411108285	0	0.015548388	1.179512147	0	0	0	0	0.01770066	1.342784793	0	0	0	0	0.204302419	0.055168907	16.57724348	0	0.01415207		
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1057.692443	5732.402184	0	0.9130289	17.24144276	0	0.215617524	1.168587685	0	0.013045381	0.246346197	0	0	0	0	0.93181293	17.59615695	0	0	0	0	0	1.06	3.1869146	54.07016201	0	0	
1418.30143	3651.116796	0	0.0003648	0.08652394	0	0.223453968	0.575234938	0	0.007853906	1.862836697	0	0	0	0	0.00894107	2.120697778	0	0	0	0	0	0.22	0.029116472	27.52493473	0	0.01343047	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1050.070673	8798.467744	0	0.9223513	26.0706794	0	0.214063776	1.793625207	0	0.013178581	0.372498568	0	0	0	0	0.94132718	26.60704054	0	0	0	0	0	1.06	3.024546543	85.68123109	0	0	
1440.107502	3799.706305	0	0.0004258	0.086521329	0	0.226889523	0.598645276	0	0.009166796	1.862780483	0	0	0	0	0.0104357	2.120633783	0	0	0	0	0.219998819	0.035834557	27.49332534	0	0.01363696		
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1062.701337	8868.707179	0	0.9202939	26.68411167	0	0.21663862	1.807943975	0	0.013149184	0.381263304	0	0	0	0	0.93922743	27.23309318	0	0	0	0	0	1.06	3.24924832	83.00921925	0	0	
1429.230447	3719.385526	0	0.0003939	0.086523386	0	0.225175839	0.585990704	0	0.008479617	1.862824764	0	0	0	0	0.0096534	2.120684193	0	0	0	0	0.219999304	0.032040767	27.51811636	0	0.01353396		
0	0	0																									



SOx_IDLEX	SOx_STREX	SOx_IDLEX	SOx_STREX		Weighing factors		
					CO2	CH4	N2O
0.004538315	0	0.0049849		0	9679225	2.64226	0
0.025765883	0	0.03018293		0	1565473	0.35071	0
0	0	0		0	0	0	0
0.025984744	0	0.03001308		0	229757.6	159.086	0
0	0	0		0	3386287	0.76502	0
0	0	0		0	0	0	0
0.025823402	0	0.02960621		0	521653.9	354.466	0
0	0	0		0	2523584	0.56998	0
0	0	0		0	0	0	0
0.025405952	0	0.02878822		0	378726.1	260.923	0
0	0	0		0	7839179	1.66477	0
0	0	0		0	0	0	0
0.013273048	0	0.01438375		0	1173585	813.079	0
0	0	0		0	2953731	0.51877	0
0	0	0		0	0	0	0
0.013273073	0	0.01435822		0	13103.66	9.13886	0
0	0	0		0	558202.4	0.09804	0
0	0	0		0	0	0	0
0.013273016	0	0.01439411		0	2476.354	1.72708	0
0	0	0		0	769499.8	0.13374	0
0	0	0		0	0	0	0
0.004550021	0.000355849	0.00511685	0.000417914	0	3410.387	2.3785	0
0	0	0		0	45366688	67.3783	1213.15
0.190067027	0	0.20656167		0	0	0	0
0	0	0		0	7.55E+08	297.837	0
0	0	0		0	0	0	0
0.226023393	0	0.24349867		0	2212935	1983.35	0
0.225975	0	0.24765703		0	1.11E+09	444.738	0
0.061896264	0	0.07653491		0	4.03E+08	166.612	0
0	0	0		0	4.54E+08	155.929	0
0	0	0		0	0	0	0
0.024709232	0	0.02995751		0	13828713	12435.7	0
0	0	0		0	12903750	6.23541	0
0	0	0		0	0	0	0
0.034573893	0	0.03830117		0	16625791	14351.8	0
0	0	0		0	18249825	4.69394	0
0	0	0		0	0	0	0
0.035980947	0	0.04253888		0	1054655	926.378	0
0	0	0		0	32570137	9.6295	0
0	0	0		0	0	0	0
0.035220357	0	0.04000189		0	1868938	1618.49	0
0	0	0		0	1.88E+08	51.6942	0
0	0	0		0	0	0	0
0.033512566	0	0.03772799		0	10804761	9442.6	0
0	0	0		0	2574082	0.51912	0
0	0	0		0	0	0	0
0.062719392	0	0.073229		0	83621835	31360.8	0
0	0	0		0	6.61E+08	240.845	0
0	0	0		0	0	0	0
0.012512705	0	0.0142613		0	14756704	13204.2	0
0	0	0		0	4674250	1.24116	0
0	0	0		0	0	0	0
0	0.000417394	0	0.000515308	0	183570.7	7.39763	11.015
0	0	0		0	0	0	0
0	0.000335549	0	0.000399138	0	4458207	4.08801	394.208
0	0	0		0	0	0	0
0	0	0		0	4421309	16.0438	0
0	0	0		0	44198631	87783.1	9010.18
0	0	0		0	4917294	15997.3	1002.42



Emissions

Source: EMFAC2021 (v1.0.1) Emissions Inventory

Region Type: Sub-Area

Region: San Bernardino (SC)

Calendar Year: 2050

Season: Annual

Vehicle Classification: EMFAC202x Categories

Units: miles/day for CVMT and EVMT, trips/day for Trips, kWh/day for Energy Consumption, tons/day for Emissions, 1000 gallons/day for Fuel Consumption

Trips	Region	Calendar Year	Vehicle Category	Model Year	Speed	Fuel	Population	Total VMT	CVMT	EVMT	Trips	Energy Consumption	NOx_RUNEX	NOx_IDLEX	NOx_STREX	NOx_TOTEX	PM2.5_RUNEX	PM2.5_IDLEX	PM2.5_STREX
1598.635	San Bernardino (SC)	2050	All Other Buses	Aggregate	Aggregate	Diesel	190.0039446	9715.698348	9715.698	0	1691.035107	0	0.00571242	0.000350947	0.00161508	0.007678449	6.09517E-05	1.83135E-07	0
373.0488	San Bernardino (SC)	2050	All Other Buses	Aggregate	Aggregate	Natural Gas	56.2481208	2946.530911	2946.531	0	500.6082751	0	0.000216578	9.2177E-05	0	0.000308755	3.70518E-06	3.16829E-07	0
2101254	San Bernardino (SC)	2050	LDA	Aggregate	Aggregate	Gasoline	479562.4591	20102501.8	20102502	0	2229938.185	0	0.416800255	0	0.37903901	0.795839261	0.009750032	0	0.001774666
2744.074	San Bernardino (SC)	2050	LDA	Aggregate	Aggregate	Diesel	293.3189727	11614.21395	11614.21	0	1331.209427	0	0.00011279	0	0	0.00011279	9.87325E-06	0	0
186060.2	San Bernardino (SC)	2050	LDA	Aggregate	Aggregate	Electricity	66442.77135	2531574.81	0	2531575	311469.1765	977396.8189	0	0	0	0	0	0	0
72766.7	San Bernardino (SC)	2050	LDA	Aggregate	Aggregate	Plug-in Hybrid	22585.56718	942708.4567	383998.5	558709.9	93391.3203	168747.0453	0.002601116	0	0.01144501	0.014046123	0.000186567	0	7.75834E-05
159229.3	San Bernardino (SC)	2050	LDT1	Aggregate	Aggregate	Gasoline	33893.96457	1229992.696	1229993	0	153117.6026	0	0.027431642	0	0.02840311	0.055834753	0.000635153	0	0.000131046
1.585047	San Bernardino (SC)	2050	LDT1	Aggregate	Aggregate	Diesel	0.393709711	14.72915349	14.72915	0	1.808904372	0	4.34169E-07	0	0	4.34169E-07	6.474E-08	0	0
1417.55	San Bernardino (SC)	2050	LDT1	Aggregate	Aggregate	Electricity	1054.969063	39228.96427	0	39228.96	4904.868972	15145.61795	0	0	0	0	0	0	0
982.1864	San Bernardino (SC)	2050	LDT1	Aggregate	Aggregate	Plug-in Hybrid	804.707976	30718.97531	12499.32	18219.66	3327.467481	5502.879816	8.46674E-05	0	0.00040778	0.000492445	6.02981E-06	0	2.69146E-06
1039631	San Bernardino (SC)	2050	LDT2	Aggregate	Aggregate	Gasoline	274596.2535	10429930.84	10429931	0	1268159.966	0	0.244948127	0	0.27082213	0.515770262	0.00517438	0	0.001028305
3489.059	San Bernardino (SC)	2050	LDT2	Aggregate	Aggregate	Diesel	1045.134092	39895.86835	39895.87	0	4841.544077	0	0.001181919	0	0	0.001181919	0.000172288	0	0
20673.02	San Bernardino (SC)	2050	LDT2	Aggregate	Aggregate	Electricity	11208.95187	294206.421	0	294206.4	52468.5981	113587.9607	0	0	0	0	0	0	0
15059.07	San Bernardino (SC)	2050	LDT2	Aggregate	Aggregate	Plug-in Hybrid	7608.799559	290612.2249	118351.9	172260.3	31462.38618	52027.74859	0.000801688	0	0.00385568	0.00465737	5.74503E-05	0	2.56996E-05
238981.6	San Bernardino (SC)	2050	LHD1	Aggregate	Aggregate	Gasoline	10357.61967	361551.7155	361551.7	0	154313.1002	0	0.00616391	0.000268135	0.06265641	0.06908845	0.000405764	0	1.52081E-05
139456.2	San Bernardino (SC)	2050	LHD1	Aggregate	Aggregate	Diesel	7168.902015	240687.2733	240687.3	0	90175.76887	0	0.041580982	0.007057039	0	0.048638021	0.002718174	0.00020864	0
21569.72	San Bernardino (SC)	2050	LHD1	Aggregate	Aggregate	Electricity	14749.42958	591814.7824	0	591814.8	206465.0454	331308.4384	0	0	0	0	0	0	0
37286.49	San Bernardino (SC)	2050	LHD2	Aggregate	Aggregate	Gasoline	1298.21399	43119.44596	43119.45	0	19341.45411	0	0.001021569	2.92444E-05	0.00679712	0.007847931	4.83267E-05	0	1.89923E-06
62833.62	San Bernardino (SC)	2050	LHD2	Aggregate	Aggregate	Diesel	3614.286708	114366.7292	114366.7	0	45463.18002	0	0.02965582	0.00401122	0	0.03366704	0.001676846	0.000104903	0
5176.775	San Bernardino (SC)	2050	LHD2	Aggregate	Aggregate	Electricity	3725.242292	144719.3507	0	144719.4	49285.51607	81126.95993	0	0	0	0	0	0	0
42246.28	San Bernardino (SC)	2050	MCY	Aggregate	Aggregate	Gasoline	22648.52804	124934.3577	124934.4	0	45297.05608	0	0.061315111	0	0.00263591	0.063951021	0.000276432	0	0.000169398
681867.7	San Bernardino (SC)	2050	MDV	Aggregate	Aggregate	Gasoline	164730.8581	6261626.299	6261626	0	754182.5674	0	0.151705915	0	0.16977687	0.321482784	0.003124252	0	0.000618001
8403.383	San Bernardino (SC)	2050	MDV	Aggregate	Aggregate	Diesel	1807.282702	67801.34532	67801.35	0	8216.571653	0	0.000839941	0	0	0.000839941	6.51856E-05	0	0
21124.21	San Bernardino (SC)	2050	MDV	Aggregate	Aggregate	Electricity	10611.78069	274184.7286	0	274184.7	49394.81968	105857.935	0	0	0	0	0	0	0
9723.179	San Bernardino (SC)	2050	MDV	Aggregate	Aggregate	Plug-in Hybrid	4996.656844	190940.2031	77775.43	113164.8	20661.17605	34179.13432	0.000526832	0	0.00253201	0.003058838	3.80042E-05	0	1.70914E-05
251.9807	San Bernardino (SC)	2050	MH	Aggregate	Aggregate	Gasoline	1541.570404	15945.46247	15945.46	0	154.2187033	0	0.003513717	0	5.8559E-05	0.003572276	1.72652E-05	0	5.85451E-08
127.1491	San Bernardino (SC)	2050	MH	Aggregate	Aggregate	Diesel	992.1821755	9012.724826	9012.725	0	99.21821755	0	0.01745475	0	0	0.01745475	0.000167084	0	0
1218.746	San Bernardino (SC)	2050	Motor Coach	Aggregate	Aggregate	Diesel	55.59534343	7002.604945	7002.605	0	1277.580992	0	0.007244372	0.001079862	0.00135334	0.009677575	0.000105254	9.96845E-07	0
6095.713	San Bernardino (SC)	2050	OBUS	Aggregate	Aggregate	Gasoline	148.5689442	4865.875041	4865.875	0	2972.567436	0	0.001314065	7.57463E-06	0.00101283	0.002334468	5.39911E-06	0	9.20374E-07
350.2315	San Bernardino (SC)	2050	OBUS	Aggregate	Aggregate	Electricity	121.9019108	6669.864428	0	6669.864	2439.013431	7004.809233	0	0	0	0	0	0	0
0	San Bernardino (SC)	2050	PTO	Aggregate	Aggregate	Diesel	0	35690.15288	35690.15	0	0	0	0.092891007	0	0	0.092891007	0.000141478	0	0
0	San Bernardino (SC)	2050	PTO	Aggregate	Aggregate	Electricity	0	41487.39594	0	41487.4	0	85941.91933	0	0	0	0	0	0	0
1227.361	San Bernardino (SC)	2050	SBUS	Aggregate	Aggregate	Gasoline	102.0917625	4549.887697	4549.888	0	408.36705	0	0.000552589	6.41107E-05	0.00025401	0.000870713	7.82897E-06	0	3.61461E-07
4292.245	San Bernardino (SC)	2050	SBUS	Aggregate	Aggregate	Diesel	112.4994631	2325.837313	2325.837	0	1628.992226	0	0.000989373	0.001196501	0.00099898	0.003184852	8.20251E-06	2.85734E-07	0
530.1949	San Bernardino (SC)	2050	SBUS	Aggregate	Aggregate	Electricity	477.4128398	13217.39438	0	13217.39	6032.280139	15283.29087	0	0	0	0	0	0	0
6743.183	San Bernardino (SC)	2050	SBUS	Aggregate	Aggregate	Natural Gas	288.3956766	5995.008005	5995.008	0	4175.969397	0	0.001325621	0.001579354	0	0.002904974	2.72386E-05	5.90686E-06	0
127.1478	San Bernardino (SC)	2050	T6 CAIRP Class 4	Aggregate	Aggregate	Diesel	4.039614479	298.5842079	298.5842	0	92.83034072	0	5.54175E-05	1.27154E-05	3.5973E-05	0.000104106	1.3371E-06	3.03653E-09	0
16.23263	San Bernardino (SC)	2050	T6 CAIRP Class 4	Aggregate	Aggregate	Electricity	6.019859808	460.3753212	0	460.3753	138.3363784	483.6626294	0	0	0	0	0	0	0
163.5703	San Bernardino (SC)	2050	T6 CAIRP Class 5	Aggregate	Aggregate	Diesel	4.956095365	409.8003971	409.8004	0	113.8910715	0	7.61991E-05	1.56003E-05	4.4169E-05	0.000135968	1.83613E-06	3.72543E-09	0
19.42485	San Bernardino (SC)	2050	T6 CAIRP Class 5	Aggregate	Aggregate	Electricity	7.377361164	631.3555978	0	631.3556	169.5317596	663.2916545	0	0	0	0	0	0	0
636.0138	San Bernardino (SC)	2050	T6 CAIRP Class 6	Aggregate	Aggregate	Diesel	22.62071598	1069.703231	1069.703	0	519.8240533	0	0.000201379	7.12023E-05	0.00020115	0.000473727	4.82625E-06	1.70037E-08	0
96.14235	San Bernardino (SC)	2050	T6 CAIRP Class 6	Aggregate	Aggregate	Electricity	33.78294543	1650.867172	0	1650.867	776.3320859	1734.373499	0	0	0	0	0	0	0
1031.738	San Bernardino (SC)	2050	T6 CAIRP Class 7	Aggregate	Aggregate	Diesel	62.60823509	12843.92367	12843.92	0	1438.737242	0	0.002651361	0.000197069	0.00058565	0.003434081	6.16834E-05	4.70618E-08	0

PM2.5_TOTEX	PM2.5_PMTW	PM2.5_PMBW	PM2.5_TOTAL	PM10_RUNEX	PM10_IDLEX	PM10_STREX	PM10_TOTEX	PM10_PMTW	PM10_PMBW	PM10_TOTAL	CO2_RUNEX	CO2_IDLEX	CO2_STREX	CO2_TOTEX	CH4_RUNEX	CH4_IDLEX	CH4_STREX	CH4_TOTEX	N2O_RUNEX	
6.11348E-05	3.21292E-05	0.000164073	0.000257337	6.37076E-05	1.91416E-07	0	6.38991E-05	0.000128517	0.0004688	0.000661196	10.09718651	0.111049497	0	10.20823601	5.35833E-06	4.87284E-07	0	5.8456E-06	0.001590816	
4.022E-06	9.74398E-06	4.97593E-05	6.35253E-05	4.02972E-06	3.44581E-07	0	4.3743E-06	3.89759E-05	0.0001422	0.00018552	2.480418143	0.07176479	0	2.552182934	0.001967286	0.000223843	0	0.00219113	0.000505649	
0.011524697	0.04431843	0.059149343	0.11499247	0.010604049	0	0.001930111	0.01253416	0.177273721	0.1689981	0.358806003	5249.34511	0	136.6959166	5386.041026	0.021938114	0	0.07430737	0.09624548	0.069890809	
9.87325E-06	2.5605E-05	3.42139E-05	6.96921E-05	1.03197E-05	0	0	1.03197E-05	0.00010242	9.775E-05	0.000210493	2.440489347	0	0	2.440489347	2.20399E-06	0	0	2.204E-06	0.0003845	
0	0.005581167	0.004290699	0.009871866	0	0	0	0	0.022324668	0.0122591	0.034583808	0	0	0	0	0	0	0	0	0	
0.000264151	0.002078316	0.001462115	0.003804582	0.000202909	0	8.43791E-05	0.000287288	0.008313266	0.0041775	0.012778026	117.6729403	0	5.95348764	123.6264279	0.000358068	0	0.003986622	0.00434469	0.000450079	
0.000766199	0.00271167	0.004248772	0.007726641	0.000690786	0	0.000142525	0.000833311	0.010846679	0.0121393	0.023819338	369.0293055	0	10.88839385	379.9176994	0.001428701	0	0.005341958	0.00677066	0.004404294	
6.474E-08	3.24722E-08	5.06597E-08	1.47872E-07	6.76673E-08	0	0	6.76673E-08	1.29889E-07	1.447E-07	3.42298E-07	0.005797093	0	0	0.005797093	8.76731E-09	0	0	8.7673E-09	9.13334E-07	
0	8.64851E-05	6.65617E-05	0.000153047	0	0	0	0	0.00034594	0.0001902	0.000536117	0	0	0	0	0	0	0	0	0	
8.72127E-06	6.77237E-05	4.772E-05	0.000124165	6.55797E-06	0	2.92721E-06	9.48518E-06	0.000270895	0.0001363	0.000416723	3.830304592	0	0.243763161	4.074067753	1.15079E-05	0	0.000140673	0.00015218	1.42847E-05	
0.006202685	0.022994061	0.035601079	0.064797825	0.00562761	0	0.001118376	0.006745986	0.091976246	0.1017174	0.200439599	3333.019518	0	97.34425394	3430.363772	0.015107097	0	0.054079769	0.06918687	0.03830317	
0.000172288	8.79553E-05	0.000136078	0.000396321	0.000180078	0	0	0.000180078	0.000351821	0.0003888	0.000920693	11.90375988	0	0	11.90375988	2.35967E-05	0	0	2.3597E-05	0.001875442	
0	0.000648614	0.000498979	0.001147593	0	0	0	0	0.002594457	0.0014257	0.00402011	0	0	0	0	0	0	0	0	0	
8.31499E-05	0.00064069	0.000451214	0.001175054	6.24825E-05	0	2.79507E-05	9.04331E-05	0.002562761	0.0012892	0.003942376	36.26789126	0	2.479223325	38.74711458	0.000108963	0	0.001330571	0.00143953	0.000135251	
0.000420972	0.000797085	0.010880211	0.012098268	0.000441305	0	1.65402E-05	0.000457845	0.00318834	0.0310863	0.034732504	193.3495684	1.213632117	3.956261963	198.5194625	0.000179132	0.000929731	0.003097481	0.00420634	0.00062863	
0.002926813	0.000795937	0.007243026	0.010965776	0.002841078	0.000218073	0	0.003059151	0.003183748	0.0206944	0.026937258	122.2643403	0.904168946	0	123.1685092	0.000474999	4.02872E-05	0	0.00051529	0.019262797	
0	0.001304728	0.00890477	0.010209499	0	0	0	0	0.005218913	0.0254422	0.030661114	0	0	0	0	0	0	0	0	0	
5.0226E-05	9.50621E-05	0.001513864	0.001659152	5.25597E-05	0	2.06558E-06	5.46253E-05	0.000380248	0.0043253	0.0047602	26.03225542	0.175704289	0.490074925	26.69803463	1.97797E-05	0.000102095	0.000344284	0.00046616	0.000109046	
0.00178175	0.000378203	0.004015257	0.006175211	0.001752666	0.000109647	0	0.001862313	0.001512813	0.0114722	0.01484729	67.89576291	0.747653924	0	68.64341683	0.000287267	2.03113E-05	0	0.00030758	0.010697005	
0	0.000319052	0.002540448	0.0028595	0	0	0	0	0.001276206	0.0072584	0.008534629	0	0	0	0	0	0	0	0	0	
0.00044583	0.000137717	0.00057841	0.001161956	0.000296537	0	0.000181726	0.000478263	0.000550866	0.0016526	0.002681728	25.20852619	0	1.681485732	26.89001192	0.017579943	0	0.005867107	0.02344705	0.00471722	
0.003742253	0.013804523	0.021667433	0.039214209	0.003397909	0	0.000672133	0.004070042	0.055218092	0.061907	0.121195084	2418.294469	0	70.48948708	2488.783956	0.009319074	0	0.032971677	0.04229075	0.023468704	
6.51856E-05	0.000149476	0.000234957	0.000449619	6.8133E-05	0	0	6.8133E-05	0.000597906	0.0006713	0.001337345	26.35370249	0	0	26.35370249	1.41787E-05	0	0	1.4179E-05	0.004152037	
0	0.000604474	0.000465624	0.001070098	0	0	0	0	0.002417895	0.0013304	0.00374825	0	0	0	0	0	0	0	0	0	
5.50956E-05	0.000420951	0.000296752	0.000727298	4.13331E-05	0	1.85884E-05	5.99215E-05	0.001683804	0.0008479	0.002591588	23.83358905	0	1.982568403	25.81615745	7.16995E-05	0	0.000872837	0.00094454	8.91196E-05	
1.73237E-05	5.27306E-05	0.00026176	0.000331815	1.87775E-05	0	6.36732E-08	1.88411E-05	0.000210922	0.0007479	0.00097765	30.92680033	0	0.004954623	30.93175495	3.76179E-05	0	5.62728E-06	4.3245E-05	0.000296218	
0.000167084	3.97393E-05	0.000147543	0.000354367	0.000174639	0	0	0.000174639	0.000158957	0.0004216	0.000755148	9.963371084	0	0	9.963371084	1.44285E-05	0	0	1.4428E-05	0.001569733	
0.000106251	2.31572E-05	0.000257318	0.000386726	0.000110013	1.04192E-06	0	0.000111055	9.26286E-05	0.0007352	0.000938877	11.52344256	0.507182047	0	12.03062461	3.35354E-06	1.13713E-05	0	1.4725E-05	0.001815523	
6.31948E-06	1.60911E-05	8.21721E-05	0.000104583	5.87203E-06	0	1.00099E-06	6.87302E-06	6.43645E-05	0.0002348	0.000306015	7.624069186	0.055104801	0.084105002	7.76327899	7.64144E-06	3.20619E-05	8.85303E-05	0.00012823	7.6829E-05	
0	2.20568E-05	5.63184E-05	7.83752E-05	0	0	0	0	8.82272E-05	0.0001609	0.000249137	0	0	0	0	0	0	0	0	0	
0.000141478	0	0	0.000141478	0.000147875	0	0	0.000147875	0	0	0.000147875	67.3719299	0	0	67.3719299	2.47917E-05	0	0	2.4792E-05	0.010614475	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8.19043E-06	1.00308E-05	8.22311E-05	0.000100452	8.51471E-06	0	3.93122E-07	8.90784E-06	4.01231E-05	0.0002349	0.000283977	3.93220563	0.259224037	0.021728387	4.213158054	1.18558E-05	0.000277008	3.00458E-05	0.00031891	5.00698E-05	
8.48825E-06	7.69139E-06	4.20354E-05	5.8215E-05	8.57339E-06	2.98653E-07	0	8.87205E-06	3.07656E-05	0.0001201	0.000159739	2.86500114	0.226471284	0	3.091472425	1.15779E-06	9.60102E-07	0	2.1179E-06	0.000451382	
0	3.95809E-05	0.00011944	0.000159021	0	0	0	0	0.000158323	0.0003413	0.000499582	0	0	0	0	0	0	0	0	0	
3.31455E-05	1.98251E-05	0.000108349	0.00016132	2.96245E-05	6.42425E-06	0	3.60487E-05	7.93004E-05	0.0003096	0.000424918	9.464489486	1.378840936	0	10.84333042	0.02068395	0.003661466	0	0.02434542	0.001929398	
1.34014E-06	9.87398E-07	4.8754E-06	7.20294E-06	1.39756E-06	3.17383E-09	0	1.40073E-06	3.94959E-06	1.393E-05	1.92801E-05	0.322949056	0.002273437	0	0.325222493	7.00789E-08	1.02032E-08	0	8.0282E-08	5.08808E-05	
0	1.52243E-06	3.7586E-06	5.28103E-06	0	0	0	0	6.08972E-06	1.074E-05	1.68286E-05	0	0	0	0	0	0	0	0	0	
1.83986E-06	1.35518E-06	6.69139E-06	9.88643E-06	1.91915E-06	3.89388E-09	0	1.92305E-06	5.42073E-06	1.912E-05	2.6462E-05	0.443288079	0.002789826	0	0.446077905	9.62355E-08	1.25181E-08	0	1.0875E-07	6.98402E-05	
0	2.08785E-06	5.15452E-06	7.24237E-06	0	0	0	0	8.35141E-06	1.473E-05	2.30786E-05	0	0	0	0	0	0	0	0	0	
4.84325E-06	3.53744E-06	1.74665E-05	2.58472E-05	5.04447E-06	1.77725E-08	0	5.06224E-06	1.41498E-05	4.99E-05	6.91164E-05	1.156642403	0.012725011	0	1.169367414	2.50948E-07	5.71349E-08	0	3.0808E-07	0.000182229	
0	5.45931E-06	1.3478E-05	1.89373E-05	0	0	0	0	2.18372E-05	3.851E-05	6.03458E-05	0	0	0	0	0	0	0	0	0	
6.17304E-05	4.2474E-05	0.000209721	0.000313925	6.44724E-05	4.91898E-08	0	6.45216E-05	0.000169896	0.0005992	0.00083362	12.28327746	0.034547457	0	12.31782492	3.27305E-06	1.58134E-07	0	3.4312E-06	0.001935235	

N2O_IDLEX	N2O_STREX	N2O_TOTEX	ROG_RUNEX	ROG_IDLEX	ROG_STREX	ROG_TOTEX	ROG_DIURN	ROG_HOTSOA	ROG_RUNLOSS	ROG_TOTAL	TOG_RUNEX	TOG_IDLEX	TOG_STREX	TOG_TOTEX	TOG_DIURN	TOG_HOTSOAK	TOG_RUNLO	TOG_TOTA	CO_RUNEX	CO_IDLEX
1.74959E-05	0	0.001608312	0.000115363	1.04911E-05	0	0.000125854	0	0	0	0.000125854	0.00013133	1.19433E-05	0	0.00014328	0	0	0	0.000143	0.000696	0.000433
1.46297E-05	0	0.000520279	2.81086E-05	3.19827E-06	0	3.13069E-05	0	0	0	3.13069E-05	0.00200776	0.000228448	0	0.00223621	0	0	0	0.002236	0.007358	0.000625
0	0.06157703	0.131467843	0.062409791	0	0.274157476	0.336567267	0.502519126	0.089307247	0.366696951	1.295090592	0.09106822	0	0.300167928	0.39123615	0.502519126	0.089307247	0.366697	1.349759	10.96629	0
0	0	0.0003845	4.74507E-05	0	0	4.74507E-05	0	0	0	4.74507E-05	5.4019E-05	0	0	5.4019E-05	0	0	0	5.4E-05	0.001534	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0.00194807	0.002398145	0.001158736	0	0.016713755	0.01787249	0.022788921	0.004057387	0.008453954	0.053172753	0.00169082	0	0.018299458	0.01999028	0.022788921	0.004057387	0.008454	0.055291	0.191417	0
0	0.00444602	0.008850314	0.004161709	0	0.020155264	0.024316973	0.052879338	0.008291746	0.038255164	0.123743222	0.00607276	0	0.022067477	0.02814023	0.052879338	0.008291746	0.0382552	0.127566	0.717876	0
0	0	9.13334E-07	1.88755E-07	0	0	1.88755E-07	0	0	0	1.88755E-07	2.1489E-07	0	0	2.1489E-07	0	0	0	2.15E-07	2.03E-06	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	6.8073E-05	8.23577E-05	3.77173E-05	0	0.000595499	0.000633217	0.000889708	0.000149419	0.000324984	0.001997327	5.5037E-05	0	0.000651997	0.00070703	0.000889708	0.000149419	0.000325	0.002071	0.006231	0
0	0.04158654	0.079889709	0.04524465	0	0.209048894	0.254293544	0.321252748	0.054194691	0.234825285	0.864566267	0.06602089	0	0.228882225	0.29490311	0.321252748	0.054194691	0.2348253	0.905176	6.705845	0
0	0	0.001875442	0.000508023	0	0	0.000508023	0	0	0	0.000508023	0.00057835	0	0	0.00057835	0	0	0	0.000578	0.005365	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0.0006441	0.000779348	0.000357133	0	0.005630658	0.005987791	0.007678297	0.001348601	0.002802094	0.017816783	0.00052113	0	0.006164862	0.00668599	0.007678297	0.001348601	0.0028021	0.018515	0.058996	0
2.74563E-05	0.00629182	0.006947903	0.000579766	0.003079623	0.01324666	0.016906048	0.024301555	0.003139022	0.032709083	0.077055709	0.00084599	0.004493779	0.014503425	0.0198432	0.024301555	0.003139022	0.0327091	0.079993	0.229491	0.043173
0.000142452	0	0.019405249	0.010226454	0.000867361	0	0.011093814	0	0	0	0.011093814	0.01164214	0.000987432	0	0.01262957	0	0	0	0.01263	0.019226	0.007189
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3.00494E-06	0.00068943	0.000801481	6.31407E-05	0.000335882	0.001463245	0.001862268	0.003460668	0.000440233	0.004625852	0.010389021	9.2135E-05	0.000490118	0.001602069	0.00218432	0.003460668	0.000440233	0.0046259	0.010711	0.027722	0.005411
0.000117793	0	0.010814798	0.006184692	0.00043729	0	0.006621982	0	0	0	0.006621982	0.00704086	0.000497826	0	0.00753869	0	0	0	0.007539	0.011858	0.003624
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0.00018831	0.004905533	0.102986235	0	0.039797139	0.142783373	0.09533924	0.177994718	0.190270115	0.606387446	0.1291992	0	0.043357232	0.17255643	0.09533924	0.177994718	0.1902701	0.636161	1.286221	0
0	0.02561116	0.049079864	0.027993586	0	0.12820232	0.156195907	0.218178114	0.035645355	0.158205626	0.568225002	0.04084818	0	0.140365404	0.18121358	0.218178114	0.035645355	0.1582056	0.593243	4.13654	0
0	0	0.004152037	0.00030526	0	0	0.00030526	0	0	0	0.00030526	0.00034752	0	0	0.00034752	0	0	0	0.000348	0.009824	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0.0004221	0.00051122	0.000234691	0	0.003697622	0.003932314	0.005512058	0.000931669	0.002040304	0.012416345	0.00034246	0	0.004048431	0.00439089	0.005512058	0.000931669	0.0020403	0.012875	0.03877	0
0	6.8403E-06	0.000303059	0.000101941	0	1.85965E-05	0.000120538	0.003428005	0.00048033	1.9132E-05	0.004048005	0.00014875	0	2.03609E-05	0.00016911	0.003428005	0.00048033	1.913E-05	0.004097	0.002311	0
0	0	0.001569733	0.000310637	0	0	0.000310637	0	0	0	0.000310637	0.00035364	0	0	0.00035364	0	0	0	0.000354	0.00092	0
7.99067E-05	0	0.00189543	7.22008E-05	0.000244822	0	0.000317022	0	0	0	0.000317022	8.2195E-05	0.000278711	0	0.00036091	0	0	0	0.000361	0.000487	0.003617
7.6455E-07	7.368E-05	0.000151274	2.80554E-05	0.000122911	0.000450444	0.000601411	0.000567949	8.14033E-05	0.000631736	0.0018825	4.0938E-05	0.000179352	0.000493179	0.00071347	0.000567949	8.14033E-05	0.0006317	0.001995	0.000837	0.00095
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0.010614475	0.000533758	0	0	0.000533758	0	0	0	0.000533758	0.00060764	0	0	0.00060764	0	0	0	0.000608	0.006664	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7.32066E-06	2.4766E-05	8.21564E-05	5.13449E-05	0.001197563	0.000167051	0.001415959	0.000458282	5.16989E-05	0.000327912	0.002253851	7.4922E-05	0.001747481	0.0001829	0.0020053	0.000458282	5.16989E-05	0.0003279	0.002843	0.000996	0.009255
3.56806E-05	0	0.000487063	2.4927E-05	2.06707E-05	0	4.55977E-05	0	0	0	4.55977E-05	2.8377E-05	2.3532E-05	0	5.1909E-05	0	0	0	5.19E-05	0.000166	0.000875
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.000281086	0	0.002210484	0.000295533	5.23151E-05	0	0.000347848	0	0	0	0.000347848	0.02110949	0.003736794	0	0.02484628	0	0	0	0.024846	0.056879	0.011773
3.58181E-07	0	5.12389E-05	1.50878E-06	2.19672E-07	0	1.72845E-06	0	0	0	1.72845E-06	1.7176E-06	2.5008E-07	0	1.9677E-06	0	0	0	1.97E-06	9.44E-06	9.3E-06
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4.39538E-07	0	7.02798E-05	2.07192E-06	2.69511E-07	0	2.34143E-06	0	0	0	2.34143E-06	2.3587E-06	3.06818E-07	0	2.6655E-06	0	0	0	2.67E-06	1.3E-05	1.14E-05
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2.00483E-06	0	0.000184234	5.40285E-06	1.2301E-06	0	6.63294E-06	0	0	0	6.63294E-06	6.1507E-06	1.40037E-06	0	7.5511E-06	0	0	0	7.55E-06	3.38E-05	5.21E-05
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5.44297E-06	0	0.001940678	7.04678E-05	3.40459E-06	0	7.38724E-05	0	0	0	7.38724E-05	8.0222E-05	3.87587E-06	0	8.4098E-05	0	0	0	8.41E-05	0.000441	0.000144

CO_STREX	CO_TOTEX	SOx_RUNE	SOx_IDLEX	SOx_STREX	SOx_TOTEX	NH3_RUNE	Fuel Consu	NH3_RUNE	Fuel Consumption	Weighing factors		
										CO2	CH4	N2O
0	0.001129	9.56E-05	1.05E-06	0	9.67E-05	0.002341	0.911898	0.002111	0.925604	98101.2	0.05206	15.4559
0	0.007984	0	0	0	0	0.003443	0.294993	0.00278	0.254747	7308.63	5.79667	1.48991
3.71608335	14.68237	0.051895	0	0.001351	0.053246	0.929239	567.9513	0.842901	604.0182	1.1E+11	441011	1404980
0	0.001534	2.31E-05	0	0	2.31E-05	3.97E-05	0.218008	7.63E-05	0.486573	28344.4	0.0256	4.46567
0	0	0	0	0	0	0	0	0	0	0	0	0
0.127210864	0.318628	0.001163	0	5.89E-05	0.001222	0.017769	13.03625	0.016666	12.40192	1.1E+08	337.554	424.293
0.266549211	0.984425	0.003648	0	0.000108	0.003756	0.056582	40.06185	0.055503	47.93751	4.5E+08	1757.29	5417.25
0	2.03E-06	5.49E-08	0	0	5.49E-08	5.03E-08	0.000518	4.07E-08	0.00044	0.08539	1.3E-07	1.3E-05
0	0	0	0	0	0	0	0	0	0	0	0	0
0.004532434	0.010763	3.79E-05	0	2.41E-06	4.03E-05	0.000579	0.429605	0.000218	0.158597	117663	0.35351	0.43881
2.717030257	9.422875	0.03295	0	0.000962	0.033913	0.481654	361.7276	0.398938	342.6455	3.5E+10	157566	399499
0	0.005365	0.000113	0	0	0.000113	0.000136	1.063358	0.000107	0.88553	474911	0.94141	74.8224
0	0	0	0	0	0	0	0	0	0	0	0	0
0.042855774	0.101852	0.000359	0	2.45E-05	0.000383	0.005479	4.085835	0.003271	2.396349	1.1E+07	31.6659	39.3056
0.554499323	0.827164	0.001911	1.2E-05	3.91E-05	0.001963	0.017934	20.93363	0.029649	39.10256	7E+07	64.7654	227.282
0	0.026415	0.001159	8.57E-06	0	0.001167	0.05814	11.00259	0.086019	19.42647	2.9E+07	114.326	4636.31
0	0	0	0	0	0	0	0	0	0	0	0	0
0.069850655	0.102984	0.000257	1.74E-06	4.84E-06	0.000264	0.002139	2.815274	0.004258	6.51133	1122496	0.85289	4.70202
0	0.015482	0.000643	7.08E-06	0	0.00065	0.027185	6.131889	0.039364	10.25392	7765016	32.8538	1223.38
0	0	0	0	0	0	0	0	0	0	0	0	0
0.357923959	1.644144	0.000249	0	1.66E-05	0.000266	0.001266	2.835518	0.001208	2.850142	3149411	2196.34	589.343
1.646603588	5.783144	0.023907	0	0.000697	0.024604	0.288716	262.4392	0.254507	273.7214	1.5E+10	58352.6	146952
0	0.009824	0.00025	0	0	0.00025	0.000232	2.354166	0.000244	2.771922	1786816	0.96134	281.514
0	0	0	0	0	0	0	0	0	0	0	0	0
0.028143151	0.066913	0.000236	0	1.96E-05	0.000255	0.003601	2.722282	0.002176	1.609995	4550790	13.6903	17.0165
0.00034401	0.002655	0.000306	0	4.9E-08	0.000306	0.000791	3.261715	0.001114	4.596332	493142	0.59983	4.72334
0	0.00092	9.44E-05	0	0	9.44E-05	0.002155	0.890024	0.001893	1.077198	89797.1	0.13004	14.1476
0	0.004105	0.000109	4.8E-06	0	0.000114	0.001698	1.074691	0.001523	1.056313	80694.1	0.02348	12.7134
0.007158669	0.008945	7.54E-05	5.45E-07	8.31E-07	7.67E-05	0.000241	0.818628	0.000576	2.156178	37097.8	0.03718	0.37384
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0.006664	0.000638	0	0	0.000638	0.008655	6.018308	0.01006	7.773874	2404514	0.88482	378.832
0	0	0	0	0	0	0	0	0	0	0	0	0
0.003272385	0.013524	3.89E-05	2.56E-06	2.15E-07	4.17E-05	0.000226	0.444272	0.000709	1.572486	17891.1	0.05394	0.22781
0	0.001041	2.71E-05	2.14E-06	0	2.93E-05	0.000564	0.27616	0.000878	0.803636	6663.53	0.00269	1.04984
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0.068652	0	0	0	0	0.007005	1.253324	0.01273	2.49551	56739.7	124	11.5668
0	1.87E-05	3.06E-06	2.15E-08	0	3.08E-06	7.24E-05	0.029052	9.03E-05	0.038806	96.4275	2.1E-05	0.01519
0	0	0	0	0	0	0	0	0	0	0	0	0
0	2.44E-05	4.2E-06	2.64E-08	0	4.22E-06	9.94E-05	0.039848	0.000125	0.053775	181.66	3.9E-05	0.02862
0	0	0	0	0	0	0	0	0	0	0	0	0
0	8.59E-05	1.1E-05	1.2E-07	0	1.11E-05	0.000259	0.104459	0.000318	0.135439	1237.26	0.00027	0.19493
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0.000585	0.000116	3.27E-07	0	0.000117	0.003115	1.100346	0.002164	0.826104	157765	0.04204	24.856

Instructions

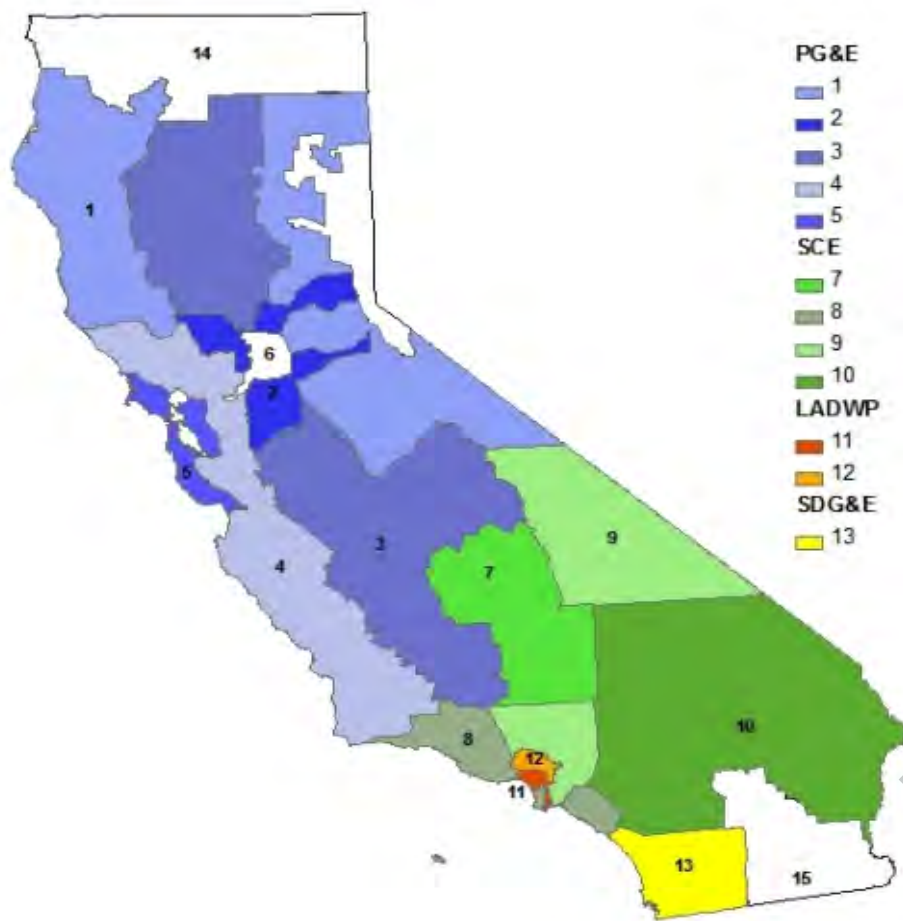
These tables summarize the forecasted effects of the Pavley standards on community emissions. There is no need to do anything on this tab.

Forecasted data	2016	2019	2030	2050
Passenger VMT	1,843,389,270	1,945,876,580	2,380,798,400	3,171,565,080
Commercial VMT	152,010,400	205,547,010	250,670,370	332,711,410
Total VMT	1,995,399,670	2,151,423,590	2,631,468,770	3,504,276,490
Passenger emissions	668,870	676,420	827,610	1,102,490
Commercial emissions	189,690	258,170	314,850	417,890
Total emissions	858,560	934,590	1,142,460	1,520,380

	2016	2019	2030	2050
Pavley coefficient (passenger)	0.000000	0.000348	0.000277	0.000253
Pavley coefficient (commercial)	0.000000	0.001256	0.001070	0.000734
Emissions (passenger)	668,870	676,420	660,110	800,860
Emissions (commercial)	189,690	258,170	268,320	244,200
Emissions (total)	858,560	934,590	928,430	1,045,060
Emission savings (passenger)	0	0	167,500	301,630
Emission savings commercial)	0	0	46,530	173,690
Emission savings (total)	0	0	214,030	475,320
Percent savings (passenger)	0.00%	0.00%	-20.24%	-27.36%
Percent savings (commercial)	0.00%	0.00%	-14.78%	-41.56%
Percent savings (total)	0.00%	0.00%	-18.73%	-31.26%

Results: California 2019 Residential Appliance Saturation Study (RASS)

<https://www.energy.ca.gov/publications/2021/2019-california-residential-appliance-saturation-study-rass>



For the purpose of this analysis, Ontario is in Zone 10

Annual kWh use per home	
Home type	kWh
Single family detached	8,019
Townhomes	5,192
2 to 4 units	4,809
5+ units	4,135
Mobile home	5,508
Average	6,630

Table 19: Space Conditioning Electric UECs for Single-Family Homes in Forecasting Climate Zones 7-12

Single-Family	Zone 7 UEC	Zone 7 Saturation	Zone 8 UEC	Zone 8 Saturation	Zone 9 UEC	Zone 9 Saturation	Zone 10 UEC	Zone 10 Saturation	Zone 11 UEC	Zone 11 Saturation	Zone 12 UEC	Zone 12 Saturation
All Household	6,900	4,807 homes	6,494	900 homes	9,079	602 homes	8,019	1,311 homes	9,605	1,314 homes	6,508	3,203 homes
Conv. Heat	824	0.09	983	0.04	2,024	0.08	935	0.07	1,244	0.06	1,291	0.09
Heat Pump	619	0.03	711	0.01	1,737	0.04	855	0.02	1,081	0.02	734	0.03
Aux. Heat	398	0.07	523	0.09	667	0.06	137	0.09	143	0.04	243	0.08
Central Air Conditioning	1,174	0.67	987	0.57	1,937	0.80	1,674	0.86	2,380	0.93	757	0.61
Room AC	731	0.19	406	0.13	1,829	0.15	1,143	0.13	946	0.07	493	0.16

Source: 2019 California Residential Appliance Saturation Survey

Table 22: Space Conditioning Electric UECs and Saturations for Townhomes in Forecasting Climate Zones 7-12

Townhome	Zone 7 UEC	Zone 7 Saturation	Zone 8 UEC	Zone 8 Saturation	Zone 9 UEC	Zone 9 Saturation	Zone 10 UEC	Zone 10 Saturation	Zone 11 UEC	Zone 11 Saturation	Zone 12 UEC	Zone 12 Saturation
All Household	5,079	756 homes	5,088	132 homes	5,679	30 homes	5,192	87 homes	8,262	75 homes	4,300	528 homes
Conv. Heat	452	0.21	796	0.16	1,468	0.40	634	0.12	809	0.04	728	0.21
Heat Pump	386	0.02	745	0.01	488	0.04	787	0.06	861	0.01	323	0.06
Aux. Heat	130	0.09	102	0.02	.	0.06	.	0.04	198	0.00	115	0.02
Central Air Conditioning	827	0.61	858	0.68	1,141	0.77	1,032	0.83	1,943	0.88	310	0.53
Room AC	352	0.18	291	0.02	525	0.17	779	0.05	1,230	0.45	181	0.12

Source: 2019 California Residential Appliance Saturation Survey

Table 25: Space Conditioning Electric UECs for 2-4 Unit Apartments in Forecasting Climate Zones 7-12

2-4 Unit Apartment	Zone 7 UEC	Zone 7 Saturation	Zone 8 UEC	Zone 8 Saturation	Zone 9 UEC	Zone 9 Saturation	Zone 10 UEC	Zone 10 Saturation	Zone 11 UEC	Zone 11 Saturation	Zone 12 UEC	Zone 12 Saturation
All Household	4,055	645 homes	4,437	82 homes	4,707	35 homes	4,089	85 homes	7,098	110 homes	3,759	349 homes
Conv. Heat	438	0.25	519	0.61	476	0.10	570	0.08	1,072	0.31	306	0.36
Heat Pump	429	0.04	552	0.03	376	0.05	250	0.25	402	0.04	504	0.08
Aux. Heat	91	0.03	112	0.02	.	0.15	160	0.06	.	0.28	66	0.07
Central Air Conditioning	622	0.49	1,072	0.67	1,058	0.68	879	0.81	2,540	0.81	370	0.35
Room AC	428	0.26	271	0.03	1,139	0.19	605	0.12	604	0.03	206	0.07

Source: 2019 California Residential Appliance Saturation Survey

Table 28: Space Conditioning Electric UECs for 5+ Unit Apartments in Forecasting Climate Zones 7-12

5+ Apartment	Zone 7 UEC	Zone 7 Saturation	Zone 8 UEC	Zone 8 Saturation	Zone 9 UEC	Zone 9 Saturation	Zone 10 UEC	Zone 10 Saturation	Zone 11 UEC	Zone 11 Saturation	Zone 12 UEC	Zone 12 Saturation
All Household	3,794	1,554 homes	3,035	141 homes	4,681	38 homes	4,135	185 homes	5,893	148 homes	3,358	1,019 homes
Conv. Heat	472	0.24	501	0.30	789	0.11	565	0.25	559	0.14	403	0.36
Heat Pump	352	0.08	380	0.02	988	0.15	375	0.06	394	0.11	279	0.12
Aux. Heat	93	0.04	68	0.01	232	0.02	69	0.06	70	0.02	95	0.04
Central Air Conditioning	584	0.49	378	0.40	1,489	0.84	852	0.73	1,893	0.90	321	0.46
Room AC	303	0.28	189	0.02	1,153	0.05	537	0.12	941	0.09	214	0.19

Source: 2019 California Residential Appliance Saturation Survey

Table 31: Space-Conditioning Electric UECs for Mobile Homes in Forecasting Climate Zones 7-12

Mobile Home	Zone 7 UEC	Zone 7 Saturation	Zone 8 UEC	Zone 8 Saturation	Zone 9 UEC	Zone 9 Saturation	Zone 10 UEC	Zone 10 Saturation	Zone 11 UEC	Zone 11 Saturation	Zone 12 UEC	Zone 12 Saturation
All Household	4,685	77 homes	3,879	24 homes	5,572	59 homes	5,508	56 homes	7,084	128 homes	3,950	73 homes
Conv. Heat	806	0.12	.	0.09	849	0.03	515	0.15	651	0.11	1,013	0.05
Heat Pump	211	0.00	325	0.03	1,276	0.00	.	0.00	530	0.03	680	0.00
Aux. Heat	.	0.02	.	0.02	.	0.01	.	0.04	161	0.07	.	0.02
Central Air Conditioning	936	0.68	408	0.62	2,235	0.09	1,350	0.56	2,067	0.66	701	0.91
Room AC	709	0.21	552	0.27	840	0.32	1,621	0.13	1,763	0.15	810	0.08

Source: 2019 California Residential Appliance Saturation Survey

Electricity	kWh	RASS homes	Total kWh	Ontario homes	Projected kWh	Adjusted kWh	Est kWh/home
Single-family detached	8,019	1,311	10,512,909	28,618	229,489,619	226,966,984	7,931
Townhomes	5,192	87	451,704	3,313	17,202,533	17,013,436	5,135
Multi-family (2-4 units)	4,809	85	408,765	4,348	20,910,860	20,681,000	4,756
Multi-family (5+ units)	4,135	185	764,975	9,923	41,033,206	40,582,154	4,090
Other households	5,508	56	308,448	2,072	11,411,616	11,286,175	5,447
Average	6,630	1,724	11,429,569	48,275	320,047,835	316,529,750	6,557

Natural gas	Therms	RASS homes	Total therms	Ontario homes	Projected therms	Adjusted therms	Est therm/home
Single-family detached	443	17,269	7,650,167	28,618	12,677,878	12,420,750	434
Townhomes	306	2,061	630,666	3,313	1,013,863	993,300	300
Multi-family (2-4 units)	225	1,437	323,325	4,348	978,362	958,519	220
Multi-family (5+ units)	202	2,501	505,202	9,923	2,004,524	1,963,869	198
Other households	300	338	101,400	2,072	621,548	608,942	294
Average	358	23,606	8,457,659	48,275	17,296,174	16,945,380	351

Actual home kWh	316,529,750
kWh/home avg	6,557
Adjustment factor	0.98900763

Actual home therms	16,945,380
Therms/home avg	351.02
Adjustment factor	0.97971838

Weather-specific uses

Electricity use and saturation per appliance		
Appliance	Annual kWh	Saturation
All	7,177	-
Conventional heating	707	10%
Heat pump	574	3%
Auxiliary heat	75	8%
Furnace fan	106	74%
Attic ceiling fan	143	3%
Central air conditioning	1,519	83%
Room AC	1,039	13%
Evaporator cooler	1,335	20%
Water heater	2,010	2%
Solar water heater	739	0%

Natural gas use and saturation per appliance		
Appliance	Annual therms	Saturation
All	360	-
Primary heat	132	84%
Auxiliary heat	39	2%
Conventional gas water heater	230	90%
Solar water heater with gas backup	199	0%
Dryer	13	60%
Range/oven	22	78%
Pool heater	167	8%
Spa heater	37	9%
Miscellaneous	15	9%

General non-weather-specific uses

Electricity use and saturation per appliance		
Appliance	Annual kWh	Saturation
All households	6,424	-
Primary conventional space heating	635	13%
Primary heat pump space heating	565	4%
Auxiliary space heating	123	6%
Furnace fan	101	67%
Attic fan	171	2%
Central air conditioning	1,344	68%
Room air conditioning	665	18%
Evaporative cooling	1,109	12%
Water heating	1,443	4%
Solar water heating	916	0%
Dryer	491	20%

Table 16: Electric UECs for Weather-Sensitive End Uses in Forecasting Climate Zones 7-12

	Zone 7 UEC	Zone 7 Saturation	Zone 8 UEC	Zone 8 Saturation	Zone 9 UEC	Zone 9 Saturation	Zone 10 UEC	Zone 10 Saturation	Zone 11 UEC	Zone 11 Saturation	Zone 12 UEC	Zone 12 Saturation
All Household	5,669	7,839 homes	5,740	1,279 homes	7,828	764 homes	7,177	1,724 homes	8,882	1,775 homes	5,230	5,172 homes
Conv. Heat	552	0.16	566	0.12	1,480	0.10	707	0.10	1,049	0.09	541	0.19
Heat Pump	455	0.04	604	0.01	1,383	0.05	574	0.03	746	0.03	433	0.05
Auxiliary Heat	75						75	0.08	139	0.06	90	0.06
Furnace Fan	106						106	0.74	126	0.84	90	0.61
Attic Ceiling Fan	165	0.03	116	0.02	443	0.01	143	0.03	280	0.01	145	0.02
Central Air Conditioning	979	0.60	914	0.57	1,807	0.70	1,519	0.83	2,296	0.90	599	0.54
Room AC	534	0.22	399	0.10	1,447	0.17	1,039	0.13	1,097	0.10	374	0.15
Evap. Cooler	722	0.10	605	0.05	1,287	0.20	1,335	0.20	2,081	0.13	525	0.08
Water Heat	1,198	0.05	1,192	0.04	2,401	0.07	2,010	0.02	1,992	0.04	1,290	0.06
Solar Water Heat	836	0.00	-	0.00	1,385	0.00	739	0.00	-	0.00	1,392	0.00

Source: 2019 California Residential Appliance Saturation Survey

Table 17: Gas UECs for Forecasting Climate Zones 9-12

	Zone 9 All Homes UEC	Zone 9 All Homes Saturation	Zone 9 Homes w/Gas Data UEC	Zone 9 Homes w/Gas Data Saturation	Zone 10 All Homes UEC	Zone 10 All Homes Saturation	Zone 10 Homes w/Gas Data UEC	Zone 10 Homes w/Gas Data Saturation	Zone 11 All Homes UEC	Zone 11 All Homes Saturation	Zone 11 Homes w/Gas Data UEC	Zone 11 Homes w/Gas Data Saturation	Zone 12 All Homes UEC	Zone 12 All Homes Saturation	Zone 12 Homes w/Gas Data UEC	Zone 12 Homes w/Gas Data Saturation
All Household UEC	430	572 homes	415	434 homes	360	1,378 homes	373	854 homes	363	1,552 homes	379	1,113 homes	279	4,210 homes	287	2,765 homes
Primary Heat	223	0.77	201	0.75	132	0.84	136	0.85	134	0.86	137	0.87	100	0.74	101	0.75
Auxiliary Heat	91	0.00	91	0.01	39	0.02	36	0.02	47	0.03	49	0.04	30	0.03	30	0.02
Conv. Gas Water Heat	268	0.93	275	0.95	230	0.90	229	0.93	220	0.91	228	0.92	206	0.86	208	0.88
Solar Water Heat w/Gas Backup	278	0.00	278	0.00	199	0.00	199	0.00	109	0.00	-	0.00	165	0.01	164	0.01
Dryer	14	0.55	14	0.54	13	0.60	11	0.63	12	0.57	12	0.57	10	0.56	10	0.57
Range/Oven	21	0.80	21	0.80	22	0.78	22	0.77	23	0.83	25	0.87	18	0.74	18	0.77
Pool Heat	143	0.00	138	0.00	167	0.08	168	0.09	155	0.10	157	0.10	138	0.04	134	0.04
Spa Heat	30	0.05	29	0.05	37	0.09	37	0.11	31	0.13	30	0.14	36	0.07	37	0.08
Miscellaneous	17	0.10	17	0.05	15	0.09	15	0.10	15	0.16	15	0.13	14	0.17	14	0.16

Source: 2019 California Residential Appliance Saturation Survey

Water heating	1,443	4%
Solar water heating	916	0%
Dryer	491	20%
Clothes washer	95	79%
Dish washer	89	67%
First refrigerator	1,145	100%
Additional refrigerator	1,093	30%
Freezer	836	16%
Pool pump	2,939	11%
Spa	314	10%
Outdoor lighting	229	61%
Range/oven	359	37%
Television	508	64%
Spa electric heat	911	3%
Microwave	155	87%
Home office equipment	50	15%
Personal computer	269	83%
Well pump	1,418	2%
Electric vehicle	1,142	6%
Miscellaneous	1,804	100%

Miscellaneous | 17 | 0.10 | 17 | 0.05 | 15 | 0.09 | 15 | 0.10 | 15 | 0.16 | 15 | 0.13 | 14 | 0.17 | 14 | 0.16 |
 Source: 2019 California Residential Appliance Saturation Survey

Table 14: Electric UECs by Electric Utility

	UEC	Saturation	SCE UEC	SCE Saturation	SDG&E UEC	SDG&E Saturation	SMUD UEC	SMUD Saturation	LADWP UEC	LADWP Saturation
All Household	6,266	15,987 homes	6,424	13,381 homes	5,230	5,172 homes	8,246	2,366 homes	5,112	2,796 homes
Conv. Heat	1,302	0.16	635	0.13	541	0.19	1,329	0.18	452	0.14
Heat Pump	1,163	0.03	565	0.04	433	0.05	1,160	0.10	542	0.06
Aux. Heat	655	0.09	123	0.06	90	0.06	776	0.08		0.08
Furnace Fan	171	0.65	101	0.67	90	0.61	201	0.79	73	0.46
Attic Ceiling Fan	133	0.02	171	0.02	145	0.02	159	0.02	136	0.01
Central Air Conditioning	1,132	0.51	1,344	0.68	599	0.54	1,194	0.89	1,021	0.52
Room AC	682	0.13	665	0.18	374	0.15	849	0.07	529	0.29
Evap. Cooler	809	0.10	1,109	0.12	525	0.08	801	0.13	597	0.09
Water Heat	2,071	0.07	1,443	0.04	1,290	0.06	2,677	0.08	1,538	0.05
Solar Water Heat	1,325	0.00	916	0.00	1,392	0.00	1,396	0.00	1,301	0.00
Dryer	511	0.46	491	0.20	420	0.24	602	0.59	438	0.17
Clothes Washer	82	0.81	95	0.79	83	0.78	112	0.81	89	0.62
Dishwasher	81	0.69	89	0.67	79	0.72	92	0.76	80	0.51
First Refrigerator	1,121	1.00	1,145	1.00	1,044	1.00	1,398	0.99	1,083	1.00
Second Refrigerator	1,080	0.27	1,093	0.30	922	0.26	1,442	0.24	1,062	0.20
Freezer	858	0.20	836	0.16	722	0.14	950	0.22	798	0.10
Pool Pump	2,775	0.08	2,939	0.11	2,723	0.08	3,468	0.14	2,898	0.07
Spa	319	0.07	314	0.10	332	0.11	305	0.09	243	0.04
Outdoor Lighting	214	0.62	229	0.61	225	0.62	275	0.67	219	0.46
Range/Oven	344	0.58	359	0.37	335	0.52	433	0.58	328	0.36
TV	442	0.63	508	0.64	397	0.64	543	0.66	404	0.65
Spa Electric Heat	1,102	0.05	911	0.03	985	0.05	1,023	0.05	822	0.02
Microwave	145	0.87	155	0.87	139	0.90	174	0.91	146	0.82
Home Office	47	0.16	50	0.15	55	0.19	59	0.17	54	0.19
PC	274	0.81	269	0.83	268	0.86	308	0.79	268	0.80
Well Pump	1,321	0.07	1,418	0.02	1,101	0.02	1,776	0.01	1,828	0.01
Elec Vehicle	929	0.06	1,142	0.06	772	0.06	1,632	0.02	719	0.06
Miscellaneous	1,772	1.00	1,804	1.00	1,700	1.00	2,097	1.00	1,582	1.00

Source: 2019 California Residential Appliance Saturation Survey

Natural gas use and saturation per appliance		
Appliance	Annual therms	Saturation
All households	358	-
Primary heat	127	76%
Auxiliary heat	40	3%
Conv. Gas water heater	254	83%
Solar water heater w/ gas backup	195	0%
Dryer	13	54%
Range/Oven	26	83%
Pool Heater	176	5%
Spa Heater	38	7%
Miscellaneous	17	11%

Table 36: Gas UECs by Gas Utility for All Households and for Homes with Gas Account Data

	PG&E All Homes UEC	PG&E All Homes Saturation	PG&E Homes w/Gas Data UEC	PG&E Homes w/Gas Data Saturation	SoCalGas All Homes UEC	SoCalGas All Homes Saturation	SoCalGas Homes w/Gas Data UEC	SoCalGas Homes w/Gas Data Saturation	SDG&E All Homes UEC	SDG&E All Homes Saturation	SDG&E Homes w/Gas Data UEC	SDG&E Homes w/Gas Data Saturation
All Household UEC	402	13,480 homes	416	10,338 homes	358	12,922 homes	363	10,503 homes	280	3,629 homes	287	2,765 homes
Primary Heat	202	0.78	207	0.79	127	0.76	128	0.76	100	0.74	101	0.75
SoCal Water Heat w/Gas Backup	211	0.00	218	0.00	40	0.03	40	0.03	30	0.02	30	0.02
Dryer	13	0.28	13	0.30	264	0.83	267	0.84	205	0.88	208	0.88
Range/Oven	22	0.62	22	0.63	195	0.00	196	0.00	165	0.01	164	0.01
Pool Heat	148	0.02	139	0.03	13	0.54	13	0.54	10	0.55	10	0.57
Spa Heat	34	0.03	34	0.03	26	0.83	26	0.84	18	0.75	18	0.77
Miscellaneous	18	0.08	17	0.08	176	0.05	180	0.05	134	0.04	134	0.04
					38	0.07	39	0.07	37	0.07	37	0.08
					17	0.11	18	0.11	14	0.15	14	0.16

Source: 2019 California Residential Appliance Saturation Survey

Table 33: Gas UECs by Residence Type for All Households and for Households with Gas Account Data

	Single Family All Homes UEC	Single Family All Homes Saturation	Single Family Homes w/Gas Data UEC	Single Family Homes w/Gas Data Saturation	Town-home All Homes UEC	Town-home All Homes Saturation	Town-home Homes w/Gas Data UEC	Town-home Homes w/Gas Data Saturation	2-4 Unit Apt. All Homes UEC	2-4 Unit Apt. All Homes Saturation	2-4 Unit Apt. Homes w/Gas Data UEC	2-4 Unit Apt. Homes w/Gas Data Saturation	5+ Unit Apt. All Homes UEC	5+ Unit Apt. All Homes Saturation	5+ Unit Apt. Homes w/Gas Data UEC	5+ Unit Apt. Homes w/Gas Data Saturation	Mobile Home All Homes UEC	Mobile Home All Homes Saturation	Mobile Home Homes w/Gas Data UEC	Mobile Home Homes w/Gas Data Saturation
All Household UEC	434	22,846 homes	443	17,269 homes	301	2,872 homes	306	2,061 homes	221	2,124 homes	225	1,437 homes	173	4,169 homes	202	2,501 homes	324	551 homes	300	338 homes
Primary Heat	189	0.83	191	0.83	83	0.72	81	0.71	69	0.59	69	0.58	53	0.54	53	0.60	144	0.78	136	0.73
Auxiliary Heat	59	0.02	59	0.02	42	0.04	43	0.05	44	0.02	49	0.02	38	0.02	41	0.02	52	0.00	37	0.00
Conv. Gas Water Heat	258	0.93	260	0.94	257	0.83	258	0.85	246	0.64	251	0.64	248	0.50	246	0.60	253	0.84	257	0.85
Solar Water Heat w/Gas Backup	187	0.00	184	0.00	168	0.00	229	0.00	199	0.00	.	0.00	154	0.00	154	0.00	174	0.00	174	0.00
Dryer	11	0.52	12	0.53	19	0.41	19	0.41	18	0.26	18	0.26	17	0.16	17	0.19	17	0.45	17	0.35
Range/Oven	25	0.76	25	0.77	22	0.73	22	0.73	24	0.67	25	0.68	21	0.66	22	0.71	19	0.86	20	0.82
Pool Heat	162	0.06	163	0.05	150	0.00	150	0.00	210	0.01	211	0.01	177	0.01	170	0.01	181	0.01	181	0.01
Spa Heat	38	0.07	38	0.08	29	0.01	28	0.02	.	0.00	.	0.00	.	0.00	.	0.00	39	0.01	38	0.00
Misc.	17	0.13	17	0.12	17	0.08	17	0.07	17	0.05	17	0.05	19	0.05	19	0.05	21	0.06	27	0.05

Note: Apt. = apartment

Source: 2019 California Residential Appliance Saturation Survey

Annual therm use per home		
Home type	Therms	Homes
Single family detached	443	17,269
Single family attached	306	2,061
2 to 4 units	225	1,437
5+ units	202	2,501
Mobile home	300	338
Average	358	

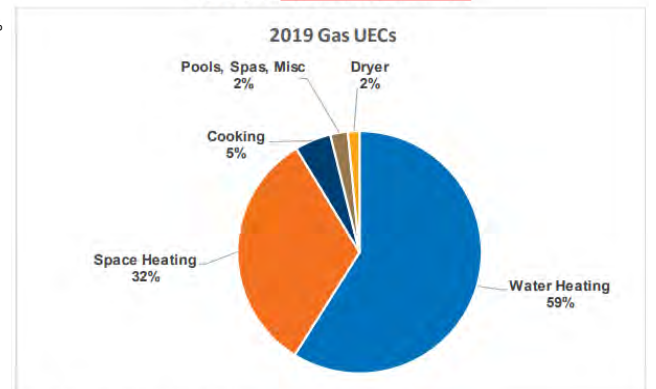
Table 14: Electric UECs by Electric Utility

	PG&E UEC	PG&E Saturation	SCE UEC	SCE Saturation	SDG&E UEC	SDG&E Saturation	SMUD UEC	SMUD Saturation	LADWP UEC	LADWP Saturation
All Household	6,266	15,967 homes	6,424	13,381 homes	5,230	5,172 homes	8,246	2,366 homes	5,112	2,796 homes
Conv. Heat	1,302	0.16	635	0.13	541	0.19	1,329	0.18	452	0.14
Heat Pump	1,163	0.03	565	0.04	433	0.05	1,160	0.10	542	0.06
Aux. Heat	655	0.09	123	0.06	90	0.06	776	0.08	.	0.08
Furnace Fan	171	0.65	101	0.67	90	0.61	201	0.79	73	0.46
Attic Ceiling Fan	133	0.02	171	0.02	145	0.02	159	0.02	136	0.01
Central Air Conditioning	1,132	0.51	1,344	0.68	599	0.54	1,194	0.89	1,021	0.52
Room AC	682	0.13	665	0.18	374	0.15	849	0.07	529	0.29
Evap. Cooler	809	0.10	1,109	0.12	525	0.08	801	0.13	587	0.09
Water Heat	2,071	0.07	1,443	0.04	1,290	0.06	2,677	0.08	1,538	0.05
Solar Water Heat	1,325	0.00	916	0.00	1,392	0.00	1,396	0.00	1,301	0.00
Dryer	511	0.46	491	0.20	420	0.24	602	0.59	438	0.17
Clothes Washer	82	0.81	95	0.79	83	0.78	112	0.81	89	0.62
Dishwasher	81	0.69	89	0.67	79	0.72	92	0.76	80	0.51
First Refrigerator	1,121	1.00	1,145	1.00	1,044	1.00	1,398	0.99	1,083	1.00
Second Refrigerator	1,080	0.27	1,093	0.30	922	0.26	1,442	0.24	1,062	0.20
Freezer	858	0.20	836	0.16	722	0.14	950	0.22	798	0.10
Pool Pump	2,775	0.08	2,939	0.11	2,723	0.08	3,468	0.14	2,898	0.07
Spa	319	0.07	314	0.10	332	0.11	305	0.09	243	0.04
Outdoor Lighting	214	0.62	229	0.61	225	0.62	275	0.67	219	0.46
Range/Oven	344	0.58	359	0.37	335	0.52	433	0.58	328	0.36
TV	442	0.63	508	0.64	397	0.64	543	0.66	404	0.65
Spa Electric Heat	1,102	0.05	911	0.03	985	0.05	1,023	0.05	822	0.02
Microwave	145	0.87	155	0.87	139	0.90	174	0.91	146	0.82
Home Office	47	0.16	50	0.15	55	0.19	59	0.17	54	0.19
PC	274	0.81	269	0.83	268	0.86	308	0.79	268	0.80
Well Pump	1,321	0.07	1,418	0.02	1,101	0.02	1,776	0.01	1,828	0.01
Elec Vehicle	929	0.06	1,142	0.06	772	0.06	1,632	0.02	719	0.06
Miscellaneous	1,772	1.00	1,804	1.00	1,700	1.00	2,097	1.00	1,582	1.00

Source: 2019 California Residential Appliance Saturation Survey

	PG&E	SDG&E	SCE	LADWP	SMUD
Electrical use	6,266	5,230	6,424	5,112	8,246
Number of households	15,967	5,172	13,381	2,796	2,366
Percent of households	40.24%	13.03%	33.72%	7.05%	5.96%
Average electrical use (kWh)	246,861,514				
Average natural gas use (therms)	360				

2019 RASS: 360 therms per household



Source: 2019 California Residential Appliance Saturation Survey.

Instructions

Select the community's electricity provider. If the community has more than one provider, or if the provider is not given here, additional calculations will be needed.

Electric provider: Southern California Edison

Emission savings	2019	2030	2050
Residential electricity	0	25,530	169,250
Non-Residential electricity	0	95,650	593,260
Indirect water energy	0	5,560	30,840
Indirect wastewater energy	0	1,060	4,510
Total	0	127,800	797,860

Electricity use	2008	2016	2019	2030	2050
Residential electricity	317,534,340	313,059,680	316,529,750	437,202,640	815,532,580
Non-Residential electricity	1,273,004,280	1,540,464,030	1,242,306,720	1,637,865,370	2,858,631,210
Indirect water energy	139,120,870	63,020,780	61,387,950	80,264,120	141,159,360
Indirect wastewater energy	9,735,890	6,806,891	7,672,160	10,031,270	17,641,850
Total	1,739,395,380	1,923,351,381	1,627,896,580	2,165,363,400	3,832,965,000

Electricity emissions (no RPS)	2008	2016	2019	2030	2050
Residential electricity	93,670	79,180	65,690	90,730	169,250
Non-Residential electricity	375,540	326,030	257,820	339,910	593,260
Indirect water energy	29,040	13,880	13,410	17,530	30,840
Indirect wastewater energy	6,590	5,400	1,960	2,560	4,510
Total	504,840	424,490	338,880	450,730	797,860

Electricity emissions (with Rf)	2008	2016	2019	2030	2050
Residential electricity	93,670	79,180	65,690	65,200	0
Non-Residential electricity	375,540	326,030	257,820	244,260	0
Indirect water energy	29,040	13,880	13,410	11,970	0
Indirect wastewater energy	6,590	5,400	1,960	1,500	0
Total	504,840	424,490	338,880	322,930	0

Emission factor (SCE)	2016	2019	2030	2050
MTCO _{2e} /kWh	0.00021867	0.00019505	0.00014913	0.00000000
RPS percent	28.2%	39.0%	60.0%	100.0%

Reported renewable electricity supplies

Providers	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Pacific Gas & Electric	12.3%	11.9%	11.4%	12.1%	14.4%	16.0%	18.6%	19.3%	23.3%	28.0%	29.5%	32.9%	33.0%	39.0%	31.0%
San Diego Gas & Electric	5.2%	5.3%	5.2%	6.0%	10.5%	11.9%	20.8%	20.5%	29.0%	36.4%	35.2%	43.2%	44.0%	44.0%	38.0%
Southern California Edison	17.0%	15.7%	15.3%	15.2%	16.7%	19.1%	20.6%	19.8%	22.1%	23.2%	24.3%	28.2%	32.0%	36.0%	39.0%
Direct access													29.0%	29.0%	31.7%

Projected renewable electricity supplies

Providers	2020	2030	2035	2040	2045	2050
Pacific Gas & Electric	33.0%	60.0%	73.3%	86.7%	100.0%	100.0%
San Diego Gas & Electric	33.0%	60.0%	73.3%	86.7%	100.0%	100.0%
Southern California Edison	33.0%	60.0%	73.3%	86.7%	100.0%	100.0%
Direct access						

Table 1: Actual 2018 Large Investor-Owned Utilities RPS Procurement Percentages

Pacific Gas and Electric	39%
Southern California Edison	36%
San Diego Gas & Electric	44%

Data Source: IOU's Annual RPS Compliance Reports, August 2019

Table 1: 2019 Large Investor-Owned Utilities RPS Procurement Percentages

Pacific Gas and Electric	31%
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https://www.cpuc.ca.gov/uploadedFiles/CPUC_Public_Website/Content/Utilities_and_Industries/Energy_-_Electricity_and_Natural_Gas/2019%20RPS%20Annual%20Report.pdf
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Version: July 2018

2017 POWER CONTENT LABEL				
MARIN CLEAN ENERGY				
ENERGY RESOURCES	2017 MCE LIGHT GREEN POWER MIX	2017 MCE DEEP GREEN POWER MIX	2017 MCE LOCAL SOLAR POWER MIX	2017 CA Power Mix**
	Eligible Renewable	61%	100%	
Biomass & biowaste	6%	0%	0%	2%
Geothermal	10%	0%	0%	4%
Eligible hydroelectric	9%	0%	0%	3%
Solar	9%	50%	100%	10%
Wind	27%	50%	0%	10%
Coal	0%	0%	0%	4%
Large Hydroelectric	26%	0%	0%	15%
Natural Gas	5%	0%	0%	34%
Nuclear	0%	0%	0%	9%
Other	1%	0%	0%	<1%
Unspecified sources of power*	6%	0%	0%	9%
TOTAL	100%	100%	100%	100%

* "Unspecified sources of power" means electricity from transactions that are not traceable to specific generation sources.
 ** Percentages are estimated annually by the California Energy Commission based on the electricity sold to California consumers during the identified year.

For specific information about this electricity product, contact:
MARIN CLEAN ENERGY
 1 (888) 632-3674
info@mceCleanEnergy.org

For general information about the Power Content Label, please visit:
<http://www.energy.ca.gov/pcl/>

For additional questions, please contact the California Energy Commission at:
 844-454-2906

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Electric provider: Southern California Edison

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Total	504,840	424,490	338,880	322,930	0

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Southern California Edison	17.0%	15.7%	15.3%	15.2%	16.7%	19.1%	20.6%	19.8%	22.1%	23.2%	24.3%	28.2%	32.0%	36.0%	39.0%
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	Eligible Renewable	61%	100%	
Biomass & biowaste	6%	0%	0%	2%
Geothermal	10%	0%	0%	4%
Eligible hydroelectric	9%	0%	0%	3%
Solar	9%	50%	100%	10%
Wind	27%	50%	0%	10%
Coal	0%	0%	0%	4%
Large Hydroelectric	26%	0%	0%	15%
Natural Gas	5%	0%	0%	34%
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Other	1%	0%	0%	<1%
Unspecified sources of power*	6%	0%	0%	9%
TOTAL	100%	100%	100%	100%

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Emission savings	2030	2050
Municipal solid waste (MTCO ₂ e)	25,360	44,610

Solid waste savings	2030	2050
Municipal solid waste (tons)	56,810	99,900

SB 1383 targets	2030	2050
Percent of organics	75%	75%

	2030	2050
Total solid waste generation without SB 1383 (tons)	376,530	662,210
Percent of waste that is compostable	20.12%	20.12%
Compostable solid waste	75,741	133,206
Solid waste to be composted	56,805	99,905
Food waste to be composted	42,100	74,042
Compostable paper to be composted	14,705	25,863

Tons of methane produced per ton of food waste	0.01609
Tons of methane produced per ton of paper	0.02185
Tons of methane produced per ton of compost	0.01758
MTCO ₂ e produced per ton of compost	0.44652

Uncomposted waste		
Solid waste that is not composted (tons)	319,725	562,305
Emissions from solid waste that is not composted (MTCO ₂ e)	82,350	144,820
Emission factor for solid waste (MTCO ₂ e/ton)	0.25757	0.25755

<< Food waste and compostable paper. Not including green waste

Compostable material type	Tons
Food - potentially donatable - vegetative	577,303
Food - potentially donatable - eggs, dairy, and dairy alternatives	69,497
Food - potentially donatable - animal meat	84,608
Food - potentially donatable - cooked/baked/prepared perishables	153,255
Food - potentially donatable - packaged non-perishables	232,584
Food - not donatable - meat	436,986
Food - not donatable - non-meat	3,752,620
Food - inedible	552,682
Compostable paper - packaging	515,393
Compostable paper - non-packaging	1,531,324
All materials	39,304,457

Waste Type	WIPFRAC	TDOC	DANF	%ANDOC
Newspaper	1.65%	47.09%	15.05%	0.12%
Office Paper	1.84%	38.54%	87.03%	0.62%
Corrugated Boxes	4.80%	44.84%	44.25%	0.95%
Coated Paper	8.98%	33.03%	24.31%	0.72%
Food	15.50%	14.83%	86.52%	1.99%
Grass	1.90%	13.30%	47.36%	0.12%
Leaves	3.24%	29.13%	7.30%	0.07%
Branches	1.95%	44.24%	23.14%	0.20%
Lumber	14.51%	43.00%	23.26%	1.45%
Textiles	5.47%	24.00%	50.00%	0.66%
Diapers	4.33%	24.00%	50.00%	0.52%
Construction/Demolition	5.48%	4.00%	50.00%	0.11%
Medical Waste	0.00%	15.00%	50.00%	0.00%
Sludge/Manure	0.05%	5.00%	50.00%	0.00%

<https://www.arb.ca.gov/cc/landfills/landfills.htm>

Methane destruction efficiency	0.99
Methane collection efficiency	0.8
Methane oxidation percent	0.1
Decomposing carbon to methane fraction	0.5
Carbon to methane fraction	1.333333

Source: US Community Protocol

Table 4. Material Composition of California's Overall Disposed Waste Stream

Material	Estimated Percent	+ / -	Estimated Tons
Paper	16.6%		6,525,762
Uncoated Corrugated Cardboard	5.2%	0.2%	2,037,360
Paper Grocery Bags	0.1%	0.0%	29,248
Other Paper Bags/Kraft Paper	0.4%	0.0%	159,212
Newspapers/Newspaper Inserts	0.7%	0.1%	276,453
White Office-type Paper and Mail	0.4%	0.1%	156,662
Magazines and Catalogs	0.4%	0.0%	161,958
Folding Cartons and Other Paperboard Packaging	1.2%	0.0%	457,564
Other Recyclable Paper	1.4%	0.1%	559,779
Miscellaneous Paper Packaging	0.9%	0.1%	352,975
Aseptic Containers	0.1%	0.0%	28,002
Gable-top Cartons	0.1%	0.0%	46,766
Compostable Paper - Packaging	1.3%	0.1%	515,393
Compostable Paper - Non-packaging	3.9%	0.1%	1,531,324
Remainder/Composite Paper - Other	0.5%	0.1%	213,067
Glass	1.7%		658,952
Clear Glass Bottles and Containers - CRV	0.4%	0.0%	157,110
Clear Glass Bottles and Containers - Non-CRV	0.5%	0.0%	182,580
Green Glass Bottles and Containers - CRV	0.1%	0.0%	25,814
Green Glass Bottles and Containers - Non-CRV	0.3%	0.0%	111,804
Brown Glass Bottles and Containers - CRV	0.2%	0.0%	81,903
Brown Glass Bottles and Containers - Non-CRV	0.0%	0.0%	16,805
Other Colored Glass Bottles and Containers	0.0%	0.0%	6,331
Remainder/Composite Glass	0.2%	0.0%	76,605
Metal	4.6%		1,811,134
Remainder/Composite Metal	1.0%	0.2%	388,923
Other Ferrous	1.0%	0.1%	408,151
Aluminum Cans - CRV	0.1%	0.0%	52,830
Tin/Steel Cans	0.8%	0.1%	299,777
Major Appliances	0.5%	0.1%	194,962
Aluminum Cans - Non-CRV	0.0%	0.0%	5,415
Other Non-Ferrous	1.2%	0.1%	461,077
Plastic	11.5%		4,524,052
PETE Containers - CRV	0.3%	0.0%	128,410
PETE Containers - Non-CRV	0.1%	0.0%	58,855
PETE Containers, Lids, and other Packaging	0.3%	0.0%	113,793
HDPE Containers - CRV	0.0%	0.0%	7,374
HDPE Containers - Non-CRV	0.4%	0.0%	158,020
HDPE Containers, Lids, and other Packaging	0.1%	0.0%	25,748
Polypropylene Containers and Packaging	0.6%	0.0%	242,664
Other Plastic Containers and Packaging	0.3%	0.0%	136,479
Expanded Polystyrene Packaging	0.5%	0.0%	209,172
Plastic Trash Bags	1.7%	0.1%	655,233
Plastic Grocery and Other Merchandise Bags	0.4%	0.0%	139,810
Non-Bag Commercial and Industrial Packaging Film	1.0%	0.1%	393,308
Film Products	0.5%	0.1%	202,512
Flexible Plastic Pouches	0.1%	0.0%	22,059
Other Film	2.4%	0.1%	936,713
Durable Plastic Items	1.8%	0.1%	687,944
Remainder/Composite Plastic	1.0%	0.1%	405,956
Electronics	0.6%		228,480
Large Equipment	0.2%	0.0%	86,218
Consumer Electronics and Small Equipment	0.3%	0.1%	127,308
Covered Video Display Devices	0.0%	0.0%	14,954

Tons
577,303
69,497
84,608
153,255
232,584
436,986
3,752,620
552,682
515,393
1,531,324
39,304,457

Material	Estimated Percent	+ / -	Estimated Tons
Organic	34.1%		13,397,041
Food - Potentially Donatable - Vegetative	1.5%	0.2%	577,303
Food - Potentially Donatable - Eggs, Dairy, and Dairy Alternatives	0.2%	0.0%	69,497
Food - Potentially Donatable - Animal Meat	0.2%	0.0%	84,608
Food - Potentially Donatable - Cooked/Baked/Prepared Perishable Items	0.4%	0.1%	153,255
Food - Potentially Donatable - Packaged Non-perishable	0.6%	0.1%	232,584
Food - Not Donatable - Meat	1.1%	0.1%	436,986
Food - Not Donatable - Non-meat	9.5%	0.3%	3,752,620
Food - Inedible	1.4%	0.1%	552,682
Leaves and Grass	2.3%	0.2%	905,885
Prunings and Trimmings	3.1%	0.3%	1,221,926
Branches and Stumps	1.5%	0.2%	608,127
Manures	0.6%	0.2%	254,093
Clean Dimensional Lumber	2.0%	0.2%	802,353
Clean Engineered Wood	2.2%	0.2%	875,510
Clean Pallets and Crates	2.2%	0.2%	872,840
Wood Waste - Treated/Painted/Stained	4.4%	0.3%	1,740,699
Other Recyclable Wood	0.0%	0.0%	13,824
Remainder/Composite Organic	0.6%	0.1%	242,248
Inerts and Other	14.1%		5,556,049
Concrete	1.5%	0.2%	604,195
Asphalt Paving	0.0%	0.0%	5,077
Asphalt Roofing	1.7%	0.2%	687,155
Gypsum Board	1.9%	0.2%	754,446
Carpet	1.6%	0.2%	627,926
Rock, Soil and Fines	2.6%	0.3%	1,018,002
Remainder/Composite Inerts and Other	4.7%	0.4%	1,859,249
Household Hazardous Waste (HHW)	0.2%		95,996
Paint	0.0%	0.0%	13,913
Used Oil	0.0%	0.0%	2,994
Lead-acid (Automotive) Batteries	0.0%	0.0%	6,900
Other Batteries	0.0%	0.0%	8,892
One-Pound Propane Gas Cylinders	0.0%	0.0%	1,754
Pharmaceuticals	0.1%	0.0%	21,773
Remainder/Composite Household Hazardous	0.1%	0.0%	39,769
Special Waste	6.7%		2,639,651
Tires	0.4%	0.2%	161,150
Bulky Items	5.3%	0.4%	2,074,965
Mattresses and Foundations	0.7%	0.1%	265,399
Remainder/Composite Special Waste	0.4%	0.1%	138,137
Miscellaneous	9.8%		3,867,339
Textiles - Organic	1.1%	0.1%	434,956
Textiles - Synthetic, Mixed, Unknown	1.6%	0.1%	644,473
Textiles - Shoes, Purses, Belts	0.3%	0.0%	120,032
Solar Panels	0.0%	0.0%	1,990
Diapers and Sanitary Products	2.3%	0.1%	895,351
Remainder/Composite Organic - Non-compostable	0.4%	0.1%	147,514
Mixed Residue	3.1%	0.1%	1,225,126
MRF Residual Fines	0.0%	0.0%	0
Miscellaneous Inorganics	1.0%	0.1%	397,895
Totals	100.0%		39,304,457
Sample Count	892		

Source: 2018 Disposal-Facility-Based Characterization of Solid Waste in California (DRRR-2020-1666): <https://www2.calrecycle.ca.gov/Publications/Details/1666>

Ontario Quantification Workbook

Application Preceding 1 Supercedin Matched C Application/Utility	Service City/Service Zip Service Cot Technology System Siz System Siz Storage Ca Storage Siz Inverter Siz Tilt	Azimuth	Mounting T Tracking	Customer 5 App Received [App Complete App Approved EDecommis:Self Installe Installer Na Installer Ph Installer CII Installer St:Installer Zi:CSLB Numt Third Party Third Party Third Party Face Finan Pace Finan Electric Vel Electric Vel System Out/ System Out/ System Out/ Total System Itc Cost Ba: Cost/Watt	NEM Tariff	Interconne	VNEM	NEF Project is V NEMPV or	Generator	Generator	Generator																						
SCE-INT-500118448	SCE-CSI-18 Interconne SCE	ONTARIO	91761 San Bernar Solar PV	7.244898	7.1	24	270	RoofTop	Fixed	Residential	9/2/2011		10/28/2011	No	SolarCity C650-963-51 SAN MATEI CA	94402	888104	Yes	Lease	Fontane Solar I, LLC	No	Yes	Yes	Enphase Energy, Inc	1	NEM	None	No	NEMPV	Generic M:Generic M:	1		
SCE-INT-500115744	SCE-CSI-24 Interconne SCE	ONTARIO	91762 San Bernar Solar PV	3.163265	3.1			RoofTop	Fixed	Residential	9/14/2011		11/1/2011	No	Galkos Con 714-373-85 HUNTINGT CA	92649	492715	No				Yes	Yes	Enphase Energy, Inc	1	NEM	None	No	NEMPV	Generic M:Generic M:	1		
SCE-INT-500115818	SCE-CSI-24 Interconne SCE	ONTARIO	91761 San Bernar Solar PV	6.632653	6.5			RoofTop	Fixed	Residential	9/2/2011		12/12/2011	No	GALKOS 714-373-85 HUNTINGT CA	92649	492715	No	PPA	PV HOME PPA 1 LLC	Yes	Yes	Yes	Yes	Locus Energy, LLC	1	NEM	None	No	NEMPV	Generic M:Generic M:	1	
SCE-INT-500118679	Interconne SCE	ONTARIO	91764 San Bernar Solar PV	4.081633	4	9	160	RoofTop	Fixed	Residential	9/3/2011		11/9/2011	No	SolarCity C650-963-51 SAN MATEI CA	94402	888104	Yes	PPA	Sequoia Pacific Solar I, LLC	Yes	Yes	Yes	Yes	SolarCity	1	NEM	None	No	NEMPV	Generic M:Generic M:	1	
SCE-INT-500125618	Interconne SCE	ONTARIO	91764 San Bernar Solar PV	4.081633	4			RoofTop	Fixed	Residential	9/30/2011	4/16/2012	4/19/2012	No	GRID ALTEI 310-735-96 Los Angeles CA	90015	984380	No				Yes	Yes	Yes	Yes	SolarCity	1	NEM	None	No	NEMPV	Generic M:Generic M:	1
SCE-INT-500127898	SCE-CSI-23 Interconne SCE	ONTARIO	91761 San Bernar Solar PV	6.530612	6.4	22	188	RoofTop	Fixed	Residential	10/3/2011	3/7/2012	3/8/2012	No	SUNWIZE T949-417-07 TUSTIN CA	92780	890619	Yes	PPA	Sun Run, Inc	No	Yes	Yes	Yes	Yes	Locus Energy, LLC	1	NEM	None	No	NEMPV	Generic M:Generic M:	1
SCE-INT-500128122	SCE-CSI-22 Interconne SCE	ONTARIO	91761 San Bernar Solar PV	4.387755	4.3	24	260	RoofTop	Fixed	Residential	10/7/2011		11/29/2011	No	VERENGO 714-744-66 ORANGE CA	92867	935263	Yes	PPA	SunRun, Inc	No	Yes	Yes	Yes	Yes	Locus Energy, LLC	1	NEM	None	No	NEMPV	Generic M:Generic M:	1
SCE-INT-500129409	SCE-CSI-24 Interconne SCE	ONTARIO	91764 San Bernar Solar PV	3.367347	3.3	19	268	RoofTop	Fixed	Residential	10/12/2011		11/11/2011	No	GALKOS 714-373-85 HUNTINGT CA	92649	492715	Yes	PPA	GREENDAY FINANCE I, LLC	Yes	Yes	Yes	Yes	Locus Energy, LLC	1	NEM	None	No	NEMPV	Generic M:Generic M:	1	
SCE-INT-500130118	SCE-CSI-15 Interconne SCE	ONTARIO	91762 San Bernar Solar PV	7.959184	7.8			RoofTop	Fixed	Residential	10/12/2011	1/19/2012	1/27/2012	No	SolarCity C650-963-51 SAN MATEI CA	94402	888104	Yes	Lease	Sequoia Pacific Solar I LLC	Yes	Yes	Yes	Yes	SolarCity	1	NEM	None	No	NEMPV	Generic M:Generic M:	1	
SCE-INT-500131292	SCE-CSI-21 Interconne SCE	ONTARIO	91761 San Bernar Solar PV	6.836735	6.7	18	270	RoofTop	Fixed	Residential	10/18/2011	1/20/2012	1/30/2012	No	SolarCity C650-963-51 SAN MATEI CA	94402	888104	Yes	Lease	Sequoia Pacific Solar I, LLC	Yes	Yes	Yes	Yes	SolarCity	1	NEM	None	No	NEMPV	Generic M:Generic M:	1	
SCE-INT-500131317	SCE-CSI-22 Interconne SCE	ONTARIO	91761 San Bernar Solar PV	3.571429	3.5	23	206	RoofTop	Fixed	Residential	10/25/2011	2/3/2012	2/10/2012	No	PETERSEN I510-371-65 Fremont CA	94538	468117	Yes	PPA	SunRun, Inc	Yes	Yes	Yes	Yes	SolarCity	1	NEM	None	No	NEMPV	Generic M:Generic M:	1	
SCE-INT-500131594	SCE-CSI-24 Interconne SCE	ONTARIO	91762 San Bernar Solar PV	3.571429	3.5			RoofTop	Fixed	Residential	10/19/2011	1/17/2012	1/24/2012	No	SUNGEVITY I510-495-5F OAKLAND CA	94607	909236	Yes	Lease	Sungevity Development, LLC	Yes	Yes	Yes	Yes	Locus Energy, LLC	1	NEM	None	No	NEMPV	Generic M:Generic M:	1	
SCE-INT-500134265	SCE-CSI-26 Interconne SCE	ONTARIO	91761 San Bernar Solar PV	5.306122	5.2	22	196	RoofTop	Fixed	Residential	11/4/2011		12/29/2011	No	AMERICAN VISION		778326	Yes	PPA	GreenDay Finance I, LLC	No	Yes	Yes	Yes	SunRun, Inc	1	NEM	None	No	NEMPV	Generic M:Generic M:	1	
SCE-INT-500135340	SCE-CSI-24 Interconne SCE	ONTARIO	91761 San Bernar Solar PV	7.346939	7.2			RoofTop	Fixed	Residential	11/8/2011	7/6/2012	7/10/2012	No	PETERSEN I510-371-65 Fremont CA	94538	468117	Yes	PPA	SunRun, Inc	Yes	Yes	Yes	Yes	SunRun, Inc	1	NEM	None	No	NEMPV	Generic M:Generic M:	1	
SCE-INT-500136493	Interconne SCE	ONTARIO	91761 San Bernar Solar PV	1.530612	1.5			RoofTop	Fixed	Residential	11/8/2011	4/16/2012	4/19/2012	No	SolarCity C650-963-51 SAN MATEI CA	94402	888104	Yes			Yes	Yes	Yes	Yes	SunRun, Inc	1	NEM	None	No	NEMPV	Generic M:Generic M:	1	
SCE-INT-500136520	Interconne SCE	ONTARIO	91761 San Bernar Solar PV	1.530612	1.5			RoofTop	Fixed	Residential	11/8/2011	3/9/2012	3/10/2012	No	SolarCity C650-963-51 SAN MATEI CA	94402	888104	Yes			Yes	Yes	Yes	Yes	SunRun, Inc	1	NEM	None	No	NEMPV	Generic M:Generic M:	1	
SCE-INT-500136521	Interconne SCE	ONTARIO	91761 San Bernar Solar PV	1.530612	1.5			RoofTop	Fixed	Residential	11/8/2011	3/19/2012	3/19/2012	No	SolarCity C650-963-51 SAN MATEI CA	94402	888104	Yes			Yes	Yes	Yes	Yes	SunRun, Inc	1	NEM	None	No	NEMPV	Generic M:Generic M:	1	
SCE-INT-500136525	Interconne SCE	ONTARIO	91761 San Bernar Solar PV	1.530612	1.5			RoofTop	Fixed	Residential	11/8/2011	3/26/2012	3/26/2012	No	SolarCity C650-963-51 SAN MATEI CA	94402	888104	Yes			Yes	Yes	Yes	Yes	SunRun, Inc	1	NEM	None	No	NEMPV	Generic M:Generic M:	1	
SCE-INT-500136529	Interconne SCE	ONTARIO	91761 San Bernar Solar PV	1.530612	1.5			RoofTop	Fixed	Residential	11/8/2011	6/23/2012	7/3/2012	No	SolarCity C650-963-51 SAN MATEI CA	94402	888104	Yes			Yes	Yes	Yes	Yes	SunRun, Inc	1	NEM	None	No	NEMPV	Generic M:Generic M:	1	
SCE-INT-500136540	Interconne SCE	ONTARIO	91761 San Bernar Solar PV	1.530612	1.5			RoofTop	Fixed	Residential	11/8/2011	5/9/2012	5/17/2012	No	SolarCity C650-963-51 SAN MATEI CA	94402	888104	Yes			Yes	Yes	Yes	Yes	SunRun, Inc	1	NEM	None	No	NEMPV	Generic M:Generic M:	1	
SCE-INT-500136541	Interconne SCE	ONTARIO	91761 San Bernar Solar PV	1.530612	1.5			RoofTop	Fixed	Residential	11/8/2011	2/8/2012	2/24/2012	No	SolarCity C650-963-51 SAN MATEI CA	94402	888104	Yes			Yes	Yes	Yes	Yes	SunRun, Inc	1	NEM	None	No	NEMPV	Generic M:Generic M:	1	
SCE-INT-500136544	Interconne SCE	ONTARIO	91761 San Bernar Solar PV	1.530612	1.5			RoofTop	Fixed	Residential	11/8/2011	1/11/2012	1/23/2012	No	SolarCity C650-963-51 SAN MATEI CA	94402	888104	Yes			Yes	Yes	Yes	Yes	SunRun, Inc	1	NEM	None	No	NEMPV	Generic M:Generic M:	1	
SCE-INT-500136546	Interconne SCE	ONTARIO	91761 San Bernar Solar PV	1.530612	1.5			RoofTop	Fixed	Residential	11/8/2011	2/8/2012	2/9/2012	No	SolarCity C650-963-51 SAN MATEI CA	94402	888104	Yes			Yes	Yes	Yes	Yes	SunRun, Inc	1	NEM	None	No	NEMPV	Generic M:Generic M:	1	
SCE-INT-500136572	Interconne SCE	ONTARIO	91761 San Bernar Solar PV	1.530612	1.5			RoofTop	Fixed	Residential	11/8/2011	1/10/2012	2/23/2012	No	SolarCity C650-963-51 SAN MATEI CA	94402	888104	Yes			Yes	Yes	Yes	Yes	SunRun, Inc	1	NEM	None	No	NEMPV	Generic M:Generic M:	1	
SCE-INT-500136574	Interconne SCE	ONTARIO	91761 San Bernar Solar PV	1.530612	1.5			RoofTop	Fixed	Residential	11/8/2011	1/11/2012	1/11/2012	No	SolarCity C650-963-51 SAN MATEI CA	94402	888104	Yes			Yes	Yes	Yes	Yes	SunRun, Inc	1	NEM	None	No	NEMPV	Generic M:Generic M:	1	
SCE-INT-500136577	Interconne SCE	ONTARIO	91761 San Bernar Solar PV	1.530612	1.5			RoofTop	Fixed	Residential	11/8/2011	1/11/2012	1/11/2012	No	SolarCity C650-963-51 SAN MATEI CA	94402	888104	Yes			Yes	Yes	Yes	Yes	SunRun, Inc	1	NEM	None	No	NEMPV	Generic M:Generic M:	1	
SCE-INT-500136580	Interconne SCE	ONTARIO	91761 San Bernar Solar PV	2.959184	2.9			RoofTop	Fixed	Residential	11/8/2011	1/11/2012	1/11/2012	No	SolarCity C650-963-51 SAN MATEI CA	94402	888104	Yes			Yes	Yes	Yes	Yes	SunRun, Inc	1	NEM	None	No	NEMPV	Generic M:Generic M:	1	
SCE-INT-500136581	Interconne SCE	ONTARIO	91761 San Bernar Solar PV	1.530612	1.5			RoofTop	Fixed	Residential	11/8/2011	6/1/2012	6/11/2012	No	SolarCity C650-963-51 SAN MATEI CA	94402	888104	Yes			Yes	Yes	Yes	Yes	SunRun, Inc	1	NEM	None	No	NEMPV	Generic M:Generic M:	1	
SCE-INT-500136583	Interconne SCE	ONTARIO	91761 San Bernar Solar PV	1.530612	1.5			RoofTop	Fixed	Residential	11/8/2011	7/16/2012	8/3/2012	No	SolarCity C650-963-51 SAN MATEI CA	94402	888104	Yes			Yes	Yes	Yes	Yes	SunRun, Inc	1	NEM	None	No	NEMPV	Generic M:Generic M:	1	
SCE-INT-500136584	Interconne SCE	ONTARIO	91761 San Bernar Solar PV	1.530612	1.5			RoofTop	Fixed	Residential	11/8/2011	5/17/2012	5/31/2012	No	SolarCity C650-963-51 SAN MATEI CA	94402	888104	Yes			Yes	Yes	Yes	Yes	SunRun, Inc	1	NEM	None	No	NEMPV	Generic M:Generic M:	1	
SCE-INT-500136586	Interconne SCE	ONTARIO	91761 San Bernar Solar PV	1.530612	1.5			RoofTop	Fixed	Residential	11/8/2011	7/9/2012	7/17/2012	No	SolarCity C650-963-51 SAN MATEI CA	94402	888104	Yes			Yes	Yes	Yes	Yes	SunRun, Inc	1	NEM	None	No	NEMPV	Generic M:Generic M:	1	
SCE-INT-500136610	Interconne SCE	ONTARIO	91761 San Bernar Solar PV	1.530612	1.5			RoofTop	Fixed	Residential	11/8/2011	9/7/2012	10/23/2012	No	SolarCity C650-963-51 SAN MATEI CA	94402	888104	Yes			Yes	Yes	Yes	Yes	SunRun, Inc	1	NEM	None	No	NEMPV	Generic M:Generic M:	1	
SCE-INT-500136612	Interconne SCE	ONTARIO	91761 San Bernar Solar PV	1.530612	1.5			RoofTop	Fixed	Residential	11/8/2011	9/7/2012	10/23/2012	No	SolarCity C650-963-51 SAN MATEI CA	94402	888104	Yes			Yes	Yes	Yes	Yes	SunRun, Inc	1	NEM	None	No	NEMPV	Generic M:Generic M:	1	
SCE-INT-500136613	Interconne SCE	ONTARIO	91761 San Bernar Solar PV	1.530612	1.5			RoofTop	Fixed	Residential	11/8/2011	9/7/2012	10/23/2012	No	SolarCity C650-963-51 SAN MATEI CA	94402	888104	Yes			Yes	Yes	Yes	Yes	SunRun, Inc	1	NEM	None	No	NEMPV	Generic M:Generic M:	1	
SCE-INT-500136615	Interconne SCE	ONTARIO	91761 San Bernar Solar PV	1.530612	1.5			RoofTop	Fixed	Residential	11/8/2011	7/27/2012	8/3/2012	No	SolarCity C650-963-51 SAN MATEI CA	94402	888104	Yes			Yes	Yes	Yes	Yes	SunRun, Inc	1	NEM	None	No	NEMPV	Generic M:Generic M:	1	
SCE-INT-500136619	Interconne SCE	ONTARIO	91761 San Bernar Solar PV	1.530612	1.5			RoofTop	Fixed	Residential	11/8/2011	3/25/2013	5/21/2013	No	SolarCity C650-963-51 SAN MATEI CA	94402	888104	Yes			Yes	Yes	Yes	Yes	SunRun, Inc	1	NEM	None	No	NEMPV	Generic M:Generic M:	1	
SCE-INT-500136622	SCE-CSI-23 Interconne SCE	ONTARIO	91762 San Bernar Solar PV	6.836735	6.7	8	180	RoofTop	Fixed	Residential	11/11/2011	3/22/2012	3/26/2012	No	SolarCity C650-963-51 SAN MATEI CA	94402	888104	Yes	Lease	USB Solar City Owner IV, LLC	Yes	Yes	Yes	Yes	SolarCity	1	NEM	None	No	NEMPV			

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Application Preceding 1 Supercedin Matched C Application/Utility	Service City/Service Zip Service Cot. Technology/System Siz System Siz Storage Ca Storage Siz Inverter Siz Tilt	Azimuth	Mounting	Tracking	Customer 5 App Received [App Complete App Approved EDecommis:Self Installe Installer Na Installer Ph Installer CII Installer St:Installer Zi:CSLB Numt Third Party Third Party Third Party Pace Finan-Pace Finan Electric Vel Electric Vel System Out/ System Out/ System Out/ Total System Itc Cost Ba:Cost/Watt NEM Tariff Interconne V NEM, NEF Project is V NEMPV or Generator Generator Generator																				
SCE-INT-500462135	SCE-CSI-68 Interconne SCE ONTARIO 91762 San Bernar Solar PV 3.571429 3.5	20	180	Rooftop	Fixed	Residential	10/1/2013	5/14/2014	5/21/2014	No	SolarCity C650-963-51SAN MATEI CA	94402	888104	Yes	PPA	Mound Solar Owner VIII, LLC	Yes	Yes	SolarCity	1 NEM	None	No	NEMPV	Generic M:Generic M:	1
SCE-INT-500462366	SCE-CSI-68 Interconne SCE ONTARIO 91762 San Bernar Solar PV 2.142857 2.1	15	180	Rooftop	Fixed	Residential	10/1/2013	10/1/2013	12/4/2013	No	UNLEASH SOLAR	976594	No	No	No	No	No	No	SolarCity	1 NEM	None	No	NEMPV	Generic M:Generic M:	1
SCE-INT-500462741	SCE-CSI-54 Interconne SCE ONTARIO 91762 San Bernar Solar PV 7.040815 6.9			Rooftop	Fixed	Residential	10/7/2013	12/3/2013	12/3/2013	No	SMART EM951-273-9: Corona CA	94280	990049	Yes	Lease	SunPower Capital, LLC	Yes	Yes	SunPower Corporation, Systems Richmond-SolarEdge Technologies	1 NEM	None	No	NEMPV	Generic M:Generic M:	1
SCE-INT-500464529	SCE-CSI-62 Interconne SCE ONTARIO 91761 San Bernar Solar PV 6.530612 6.4			Rooftop	Fixed	Residential	10/7/2013	1/11/2014	1/17/2014	No	PERKINS	94802	888104	Yes	Yes	Yes	Yes	SolarCity	1 NEM	None	No	NEMPV	Generic M:Generic M:	1	
SCE-INT-500464596	SCE-CSI-61 Interconne SCE ONTARIO 91764 San Bernar Solar PV 2.040816 2			Rooftop	Fixed	Residential	10/10/2013	1/2/2014	1/15/2014	No	SolarCity C650-963-51SAN MATEI CA	94402	888104	Yes	PPA	Solar House 1, LLC	Yes	Yes	SolarCity	1 NEM	None	No	NEMPV	Generic M:Generic M:	1
SCE-INT-500466297	SCE-CSI-60 Interconne SCE ONTARIO 91762 San Bernar Solar PV 2.244898 2.2			Rooftop	Fixed	Residential	10/14/2013	11/27/2013	12/14/2013	No	AMERICAN 424-214-6: SANTA MO CA	94044	941069	Yes	Lease	ASD Solar LP	Yes	Yes	American Solar Direct	1 NEM	None	No	NEMPV	Generic M:Generic M:	1
SCE-INT-500466844	SCE-CSI-57 Interconne SCE ONTARIO 91761 San Bernar Solar PV 2.653061 2.6			Rooftop	Fixed	Residential	10/16/2013	12/31/2013	1/3/2014	No	SolarCity C650-963-51SAN MATEI CA	94402	888104	Yes	PPA	Solar House 1, LLC	Yes	Yes	SolarCity	1 NEM	None	No	NEMPV	Generic M:Generic M:	1
SCE-INT-500468189	Interconne SCE ONTARIO 91762 San Bernar Solar PV 11.63265 11.4			Rooftop	Fixed	Residential	10/18/2013	1/3/2014	2/3/2014	No	Smart Ener 951-273-9: Corona CA	92880	990049	No	No	No	No	SolarCity	1 NEM	None	No	NEMPV	Generic M:Generic M:	1	
SCE-INT-500468320	SCE-CSI-65 Interconne SCE ONTARIO 91762 San Bernar Solar PV 5.918367 5.8			Rooftop	Fixed	Residential	10/19/2013	3/25/2014	4/3/2014	No	Moore Solar & GREENHILL REMODELING INC	959463	No	No	No	No	No	SolarCity	1 NEM	None	No	NEMPV	Generic M:Generic M:	1	
SCE-INT-500468336	Interconne SCE ONTARIO 91761 San Bernar Solar PV 4.387755 4.3			Rooftop	Fixed	Residential	10/21/2013		6/28/2014	No	GREENHILL REMODELING INC			No	No	No	No	SolarCity	1 NEM	None	No	NEMPV	Generic M:Generic M:	1	
SCE-INT-500469086	SCE-CSI-57 Interconne SCE ONTARIO 91761 San Bernar Solar PV 5.918367 5.8			Rooftop	Fixed	Residential	10/23/2013	10/24/2013	11/21/2013	No	Triple Line Solar	958524	Yes	Lease	SunPower Capital, LLC.	Yes	Yes	SunPower Corporation, Systems Richmond-	1 NEM	None	No	NEMPV	Generic M:Generic M:	1	
SCE-INT-500471059	Interconne SCE ONTARIO 91761 San Bernar Solar PV 4.591837 4.5			Rooftop	Fixed	Residential	10/23/2013	2/6/2014	2/18/2014	No	Future Ene 800-985-0: Rancho Cuc CA	91730	463720	No	No	No	No	SolarCity	1 NEM	None	No	NEMPV	Generic M:Generic M:	1	
SCE-INT-500471407	SCE-CSI-72 Interconne SCE ONTARIO 91761 San Bernar Solar PV 4.897959 4.8			Rooftop	Fixed	Residential	10/28/2013	11/26/2013	12/11/2013	No	GREEN HILL REMODELING INC	938682	No	No	No	No	No	SolarCity	1 NEM	None	No	NEMPV	Generic M:Generic M:	1	
SCE-INT-500471426	SCE-CSI-62 Interconne SCE ONTARIO 91762 San Bernar Solar PV 5.510204 5.4			Rooftop	Fixed	Residential	10/28/2013	11/4/2013	11/25/2013	No	Greenhill			No	No	No	No	SolarCity	1 NEM	None	No	NEMPV	Generic M:Generic M:	1	
SCE-INT-500473008	SCE-CSI-62 Interconne SCE ONTARIO 91761 San Bernar Solar PV 7.653061 7.5			Rooftop	Fixed	Residential	10/30/2013	7/7/2014	7/14/2014	No	Sun Bees Groups Inc DBA True Power Solar	970591	Yes	Lease	SunPower Capital LLC	Yes	Yes	SolarCity	1 NEM	None	No	NEMPV	Generic M:Generic M:	1	
SCE-INT-500474648	SCE-CSI-68 Interconne SCE ONTARIO 91764 San Bernar Solar PV 4.591837 4.5			Rooftop	Fixed	Residential	11/1/2013	1/15/2014	1/24/2014	No	VERENGO 714-744-6: ORANGE CA	92867	935263	Yes	PPA	Sunrun, inc.	Yes	Yes	American Solar Direct	1 NEM	None	No	NEMPV	Generic M:Generic M:	1
SCE-INT-500474651	SCE-CSI-65 Interconne SCE ONTARIO 91761 San Bernar Solar PV 3.163265 3.1			Rooftop	Fixed	Residential	11/1/2013	3/12/2014	3/21/2014	No	SolarCity C650-963-51SAN MATEI CA	94402	888104	Yes	PPA	Solar House 1, LLC	Yes	Yes	SolarCity	1 NEM	None	No	NEMPV	Generic M:Generic M:	1
SCE-INT-500475263	SCE-CSI-61 Interconne SCE ONTARIO 91764 San Bernar Solar PV 5.306122 5.2			Rooftop	Fixed	Residential	11/4/2013	7/7/2014	7/7/2014	No	Sun Bees Inc.	970591	Yes	Lease	SunPower Capital LLC	No	No	SolarCity	1 NEM	None	No	NEMPV	Generic M:Generic M:	1	
SCE-INT-500475348	SCE-CSI-58 Decommis:SCE ONTARIO 91762 San Bernar Solar PV 4.795918 4.7			Rooftop	Fixed	Residential	11/4/2013	4/29/2014	5/6/2014 8/17/2021	No	sungevity, 510-495-5: OAKLAND CA	94607	909236	Yes	Lease	Sungevity Development, LLC	Yes	Yes	Lucus Energy, LLC	1 NEM	None	No	NEMPV	Generic M:Generic M:	1
SCE-INT-500476009	SCE-CSI-53 Interconne SCE ONTARIO 91761 San Bernar Solar PV 8.265306 8.1			Rooftop	Fixed	Residential	11/6/2013	1/8/2014	1/10/2014	No	Burke Elect 951-530-5: Riverside CA	92507	896796	No	No	No	No	SolarCity	1 NEM	None	No	NEMPV	Generic M:Generic M:	1	
SCE-INT-500477000	SCE-CSI-57 Interconne SCE ONTARIO 91761 San Bernar Solar PV 3.979592 3.9			Rooftop	Fixed	Residential	11/7/2013	11/18/2013	12/4/2013	No	SolarCity C650-963-51SAN MATEI CA	94402	888104	Yes	Lease	Solar House 1, LLC	Yes	Yes	SolarCity	1 NEM	None	No	NEMPV	Generic M:Generic M:	1
SCE-INT-500477108	SCE-CSI-59 Interconne SCE ONTARIO 91761 San Bernar Solar PV 4.795918 4.7			Rooftop	Fixed	Residential	11/7/2013	12/30/2013	1/7/2014	No	REC SOLAR 805-540-5: SAN LUIS O CA	93401	750184	Yes	PPA	SunRun, Inc.	Yes	Yes	American Solar Direct	1 NEM	None	No	NEMPV	Generic M:Generic M:	1
SCE-INT-500477374	Interconne SCE ONTARIO 91764 San Bernar Solar PV 4.897959 4.8			Rooftop	Fixed	Residential	11/7/2013	1/6/2014	1/9/2014	No	REC SOLAR 805-540-5: SAN LUIS O CA	93401	750184	Yes	PPA	SunRun, Inc.	Yes	Yes	American Solar Direct	1 NEM	None	No	NEMPV	Generic M:Generic M:	1
SCE-INT-500478203	SCE-CSI-66 Interconne SCE ONTARIO 91762 San Bernar Solar PV 7.44898 7.3			Rooftop	Fixed	Residential	11/12/2013	5/6/2014	5/12/2014	No	SUNGEVITY 510-495-5: OAKLAND CA	94607	909236	Yes	Lease	Sungevity Development, LLC	Yes	Yes	Lucus Energy, LLC	1 NEM	None	No	NEMPV	Generic M:Generic M:	1
SCE-INT-500479182	SCE-CSI-66 Interconne SCE ONTARIO 91762 San Bernar Solar PV 7.040816 6.9			Rooftop	Fixed	Residential	11/13/2013	12/2/2013	12/14/2013	No	Greenhill			No	No	No	No	SolarCity	1 NEM	None	No	NEMPV	Generic M:Generic M:	1	
SCE-INT-500479185	Interconne SCE ONTARIO 91762 San Bernar Solar PV 8.061224 7.9			Rooftop	Fixed	Residential	11/13/2013	4/29/2014	5/12/2014	No	ACA SOLAR 909-606-8: Chino Hills CA	91709	952623	No	No	No	No	SolarCity	1 NEM	None	No	NEMPV	Generic M:Generic M:	1	
SCE-INT-500479251	Interconne SCE ONTARIO 91761 San Bernar Solar PV 3.673469 3.6			Rooftop	Fixed	Residential	11/13/2013	2/4/2014	2/13/2014	No	Future Ene 800-985-0: Rancho Cuc CA	91730	463720	No	No	No	No	SolarCity	1 NEM	None	No	NEMPV	Generic M:Generic M:	1	
SCE-INT-500480369	SCE-CSI-65 Interconne SCE ONTARIO 91762 San Bernar Solar PV 8.265306 8.1			Rooftop	Fixed	Residential	11/15/2013	2/18/2014	2/25/2014	No	SOLAR HOLMES INC	985474	No	No	No	No	No	Sun Edison LLC	1 NEM	None	No	NEMPV	Generic M:Generic M:	1	
SCE-INT-500482589	Interconne SCE ONTARIO 91761 San Bernar Solar PV 4.483673 4.1			Rooftop	Fixed	Residential	11/19/2013	1/3/2014	1/8/2014	No	PACIFIC COAST HOME			No	No	No	No	SolarCity	1 NEM	None	No	NEMPV	Generic M:Generic M:	1	
SCE-INT-500484662	Interconne SCE ONTARIO 91764 San Bernar Solar PV 3.77551 3.7			Rooftop	Fixed	Residential	11/25/2013	11/25/2013	12/18/2013	No	Vivint Solar 801-229-6: Lehi UT	84043	973756	No	No	No	No	SolarCity	1 NEM	None	No	NEMPV	Generic M:Generic M:	1	
SCE-INT-500484754	Interconne SCE ONTARIO 91761 San Bernar Solar PV 6.326531 6.2			Rooftop	Fixed	Residential	11/25/2013	3/24/2015	3/28/2015	No	UNLEASH SOLAR	976594	No	No	No	No	No	SolarCity	1 NEM	None	No	NEMPV	Generic M:Generic M:	1	
SCE-INT-500485836	SCE-CSI-70 Interconne SCE ONTARIO 91762 San Bernar Solar PV 3.979592 3.9			Rooftop	Fixed	Residential	12/6/2013	12/6/2013	1/3/2014	No	GREEN HILL REMODELING INC	938682	No	No	No	No	No	SolarCity	1 NEM	None	No	NEMPV	Generic M:Generic M:	1	
SCE-INT-500486474	SCE-CSI-66 Interconne SCE ONTARIO 91762 San Bernar Solar PV 3.469388 3.4			Rooftop	Fixed	Residential	12/4/2013	5/7/2014	5/13/2014	No	LA SOLAR GROUP	974115	Yes	Lease	Sunnova Energy Corporation	Yes	Yes	SolarCity	1 NEM	None	No	NEMPV	Generic M:Generic M:	1	
SCE-INT-500489335	Interconne SCE ONTARIO 91761 San Bernar Solar PV 5.918367 5.8			Rooftop	Fixed	Residential	12/12/2013	12/19/2013	12/31/2013	No	Vivint Solar 801-229-6: Lehi UT	84043	973756	No	No	No	No	SolarCity	1 NEM	None	No	NEMPV	Generic M:Generic M:	1	
SCE-INT-500491728	SCE-CSI-71 Interconne SCE ONTARIO 91762 San Bernar Solar PV 2.244898 2.2			Rooftop	Fixed	Residential	12/16/2013	1/6/2014	1/24/2014	No	GREEN HILL	938682	No	No	No	No	No	SolarCity	1 NEM	None	No	NEMPV	Generic M:Generic M:	1	
SCE-INT-500492013	Interconne SCE ONTARIO 91764 San Bernar Solar PV 3.673469 3.6			Rooftop	Fixed	Residential	12/17/2013	12/17/2013	1/20/2014	No	VIVINT SOL 801-229-6: Lehi UT	84043	973756	No	No	No	No	SolarCity	1 NEM	None	No	NEMPV	Generic M:Generic M:	1	
SCE-INT-500492122	Interconne SCE ONTARIO 91761 San Bernar Solar PV 5.612245 5.5			Rooftop	Fixed	Residential	12/17/2013	12/17/2013	1/23/2014	No	Vivint Solar 801-229-6: Lehi UT	84043	973756	No	No	No	No	SolarCity	1 NEM	None	No	NEMPV	Generic M:Generic M:	1	
SCE-INT-500494394	SCE-CSI-62 Interconne SCE ONTARIO 91761 San Bernar Solar PV 5.918367 5.8			Rooftop	Fixed	Residential	12/19/2013	3/11/2014	3/20/2014	No	LA POWER CENTER CORP	978687	Yes	Lease	SunPower Capital, LLC.	Yes	Yes	SunPower Corporation, Systems Richmond-	1 NEM	None	No	NEMPV	Generic M:Generic M:	1	
SCE-INT-500499842	SCE-CSI-68 Interconne SCE ONTARIO 91761 San Bernar Solar PV 7.755102 7.6			Rooftop	Fixed	Residential	1/8/2014	6/26/2014	7/3/2014	No	HORIZON 951-926-11:HEMET CA	92545	1004233	Yes	PPA	Sunrun, Inc.	Yes	Yes	Lucus Energy, LLC	1 NEM	None	No	NEMPV	Generic M:Generic M:	1
SCE-INT-500501663	SCE-CSI-70 Interconne SCE ONTARIO 91762 San Bernar Solar PV 6.326531 6.2			Rooftop	Fixed	Residential	1/13/2014	3/24/2014	4/2/2014	No	SolarCity C650-963-51SAN MATEI CA	94402	888104	Yes	PPA	Solar House 1, LLC	Yes	Yes	SolarCity	1 NEM	None	No	NEMPV	Generic M:Generic M:	1
SCE-INT-500502093	SCE-CSI-64 Interconne SCE ONTARIO 91761 San Bernar Solar PV 5.816327 5.7			Rooftop	Fixed	Residential	1/14/2014	1/20/2014	1/28/2014	No	PELL SOLAR 909-800-2: Ontario CA	91761	949122	Yes	PPA	Tredegars Solar Fund 1, LLC	Yes	Yes	Enphase Energy, Inc	1 NEM	None	No	NEMPV	Generic M:Generic M:	1
SCE-INT-500503175	SCE-CSI-65 Interconne SCE ONTARIO 91761 San Bernar Solar PV 8.367347 8.2			Rooftop	Fixed	Residential	1/15/2014	1/28/2014	2/6/2014	No	HELIDPOW 951-677-7: MURRIETA CA	92562	915598	Yes	PPA	SunRun, Inc.	Yes	Yes	American Solar Direct	1 NEM	None	No	NEMPV	Generic M:Generic M:	1
SCE-INT-500509109	SCE-CSI-68 Interconne SCE ONTARIO 91761 San Bernar Solar PV 5.510204 5.4			Rooftop	Fixed	Residential	1/28/2014	3/12/2014	3/13/2014	No	AMERICAN 424-214-6: SANTA MO CA	94044	941069	Yes	Lease	NRG Residential Solar Solutions LLC	Yes	Yes	American Solar Direct	1 NEM	None	No	NEMPV	Generic M:Generic M:	1
SCE-INT-500509928	SCE-CSI-71 Interconne SCE ONTARIO 91762 San Bernar Solar PV 3.06																								

Ontario Quantification Workbook

Application Preceding 1 Supercedin Matched C Application/Utility	Service City/Service Zip Service Co. Technology/System Siz System Siz Storage Ca Storage Siz Inverter Siz Tilt	Azimuth	Mounting / Tracking	Customer 5 App Received [App Complete App Approved EDecommis:Self Installe	Installer Na Installer Ph Installer CII Installer St:Installer Zi	CSLB Numt Third Party Third Party Third Party Party Pace Finan Pace Finan Electric Vel Electric Vel System Out/ System Out/ System Out/ Total System ITC Cost Ba: Cost/Watt	NEM Tariff	Interconne V NEM, NEF Project is V NEMPV or	Generator Generator Generator
SCE-INT-500640707	Interconne SCE ONTARIO 91761 San Bernar Solar PV 5.816327 5.7		Roof/tp Fixed Residential	11/3/2014 11/3/2014 12/29/2014	No Verengo so 714-744-65 ORANGE CA	92867 935263	1 NEM None No	NEMPV	Generic M:Generic M: 1
SCE-INT-500640740	Interconne SCE ONTARIO 91761 San Bernar Solar PV 4.795918 4.7		Roof/tp Fixed Residential	11/3/2014 1/16/2015 2/7/2015	No Enver Solar HORIZON 5951-926-11HEMET CA	92545 987021	1 NEM None No	NEMPV	Generic M:Generic M: 1
SCE-INT-500640975	Interconne SCE ONTARIO 91761 San Bernar Solar PV 5.918367 5.8		Roof/tp Fixed Residential	11/3/2014 2/27/2015 3/12/2015	No Verengo 714-744-65 ORANGE CA	92867 935263	1 NEM None No	NEMPV	Generic M:Generic M: 1
SCE-INT-500642194	Interconne SCE ONTARIO 91761 San Bernar Solar PV 8.877551 3.7		Roof/tp Fixed Residential	11/4/2014 11/4/2014 12/31/2014	No Enver Solar	987021	1 NEM None No	NEMPV	Generic M:Generic M: 1
SCE-INT-500644388	Interconne SCE ONTARIO 91761 San Bernar Solar PV 3.77551 3.7		Roof/tp Fixed Residential	11/5/2014 3/5/2015 3/17/2015	No Verengo 714-744-65 ORANGE CA	92867 935263	1 NEM None No	NEMPV	Generic M:Generic M: 1
SCE-INT-500642842	Decommis: SCE ONTARIO 91764 San Bernar Solar PV 2.755102 2.7		Roof/tp Fixed Residential	11/5/2014 1/30/2015 2/23/2015	4/2/2021 No SolarCity C:650-963-51 SAN MATEI CA	94402 888104	1 NEM None No	NEMPV	Generic M:Generic M: 1
SCE-INT-500644503	Interconne SCE ONTARIO 91762 San Bernar Solar PV 7.040816 6.9		Roof/tp Fixed Residential	11/5/2014 1/14/2015 2/4/2015	No SOLAR CENTER		1 NEM None No	NEMPV	Generic M:Generic M: 1
SCE-INT-500644552	Interconne SCE ONTARIO 91761 San Bernar Solar PV 8.673469 8.5		Roof/tp Fixed Residential	11/10/2014 3/10/2015 3/19/2015	No HORIZON 5951-926-11HEMET CA	92545 1004233	1 NEM None No	NEMPV	Generic M:Generic M: 1
SCE-INT-500644990	Interconne SCE ONTARIO 91762 San Bernar Solar PV 4.183673 4.1		Roof/tp Fixed Residential	11/11/2014 3/12/2015 3/20/2015	No VERENGO 714-744-65 ORANGE CA	92867 935263	1 NEM None No	NEMPV	Generic M:Generic M: 1
SCE-INT-500646266	Interconne SCE ONTARIO 91761 San Bernar Solar PV 4.489796 4.4		Roof/tp Fixed Residential	11/14/2014 12/18/2014 1/19/2015	No SolarCity C:650-963-51 SAN MATEI CA	94402 888104	1 NEM None No	NEMPV	Generic M:Generic M: 1
SCE-INT-500646930	Interconne SCE ONTARIO 91761 San Bernar Solar PV 4.183673 4.1		Roof/tp Fixed Residential	11/14/2014 3/27/2015 4/2/2015	No Suncrest Sc 385-235-5: Salt Lake UT	84111 987868	1 NEM None No	NEMPV	Generic M:Generic M: 1
SCE-INT-500647161	Interconne SCE ONTARIO 91761 San Bernar Solar PV 6.632653 6.5		Roof/tp Fixed Residential	11/16/2014 7/30/2015 7/30/2015	No SolarCity C:650-963-51 SAN MATEI CA	94402 888104	1 NEM None No	NEMPV	Generic M:Generic M: 1
SCE-INT-500647254	Interconne SCE ONTARIO 91761 San Bernar Solar PV 5.306122 5.2		Roof/tp Fixed Residential	11/17/2014 2/10/2015 3/2/2015	No RESTART SI 909-981-7: Upland CA	91786 998791	1 NEM None No	NEMPV	Generic M:Generic M: 1
SCE-INT-500647446	Interconne SCE ONTARIO 91762 San Bernar Solar PV 3.77551 3.7		Roof/tp Fixed Residential	11/17/2014 2/26/2015 3/11/2015	No SMART EN 951-273-95 Corona CA	92880 990049	1 NEM None No	NEMPV	Generic M:Generic M: 1
SCE-INT-500647783	Interconne SCE ONTARIO 91761 San Bernar Solar PV 7.346939 7.2		Roof/tp Fixed Residential	11/17/2014 12/23/2014 1/23/2015	No SolarCity C:650-963-51 SAN MATEI CA	94402 888104	1 NEM None No	NEMPV	Generic M:Generic M: 1
SCE-INT-500647958	SCE-CSI-76 Interconne SCE ONTARIO 91761 San Bernar Solar PV 235.9184 231.2		Roof/tp Fixed Commercial	11/18/2014 5/13/2015 5/13/2015	No HELIOPOW 951-677-7: MURRIETA CA	92562 915598	1 NEM None No	NEMPV	Generic M:Generic M: 1
SCE-INT-500648400	Interconne SCE ONTARIO 91762 San Bernar Solar PV 5.306122 5.2		Roof/tp Fixed Residential	11/21/2014 11/21/2014 1/19/2015	No JDC ENERGY SOLUTIONS		1 NEM None No	NEMPV	Generic M:Generic M: 1
SCE-INT-500649681	Interconne SCE ONTARIO 91764 San Bernar Solar PV 4.693878 4.6		Roof/tp Fixed Residential	11/20/2014 1/12/2015 1/15/2015	No NuVision Energy	967291	1 NEM None No	NEMPV	Generic M:Generic M: 1
SCE-INT-500649771	Interconne SCE ONTARIO 91761 San Bernar Solar PV 6.122449 6		Roof/tp Fixed Residential	11/21/2014 4/2/2015 4/10/2015	No Suncrest Sc 385-235-5: Salt Lake UT	84111 987868	1 NEM None No	NEMPV	Generic M:Generic M: 1
SCE-INT-500650218	Interconne SCE ONTARIO 91762 San Bernar Solar PV 4.489796 4.4		Roof/tp Fixed Residential	11/24/2014 5/29/2015 5/29/2015	No SolarCity C:650-963-51 SAN MATEI CA	94402 888104	1 NEM None No	NEMPV	Generic M:Generic M: 1
SCE-INT-500650623	Interconne SCE ONTARIO 91761 San Bernar Solar PV 3.061224 3		Roof/tp Fixed Residential	11/25/2014 2/9/2015 3/2/2015	No PIERRO CONSTRUCTION	733173	1 NEM None No	NEMPV	Generic M:Generic M: 1
SCE-INT-500651133	Interconne SCE ONTARIO 91761 San Bernar Solar PV 3.77551 3.7		Roof/tp Fixed Residential	1/13/2015 3/17/2015 3/23/2015	No BRITE ENERGY	996579	1 NEM None No	NEMPV	Generic M:Generic M: 1
SCE-INT-500652839	Interconne SCE ONTARIO 91762 San Bernar Solar PV 3.163265 3.1		Roof/tp Fixed Residential	12/3/2014 12/3/2014 1/15/2015	No SolarCity C:650-963-51 SAN MATEI CA	94402 888104	1 NEM None No	NEMPV	Generic M:Generic M: 1
SCE-INT-500652907	Interconne SCE ONTARIO 91761 San Bernar Solar PV 4.387755 4.3		Roof/tp Fixed Residential	12/2/2014 12/22/2014 1/19/2015	No smart ener 951-273-95 Corona CA	92880 990049	1 NEM None No	NEMPV	Generic M:Generic M: 1
SCE-INT-500653042	Interconne SCE ONTARIO 91762 San Bernar Solar PV 3.265306 3.2		Roof/tp Fixed Residential	12/2/2014 3/3/2015 3/13/2015	No PIERRO CONSTRUCTION	733173	1 NEM None No	NEMPV	Generic M:Generic M: 1
SCE-INT-500653261	Interconne SCE ONTARIO 91761 San Bernar Solar PV 3.265306 3.2		Roof/tp Fixed Residential	1/13/2015 3/3/2015 3/13/2015	No BRITE ENERGY	996579	1 NEM None No	NEMPV	Generic M:Generic M: 1
SCE-INT-500653263	Interconne SCE ONTARIO 91761 San Bernar Solar PV 3.469388 3.4		Roof/tp Fixed Residential	1/13/2015 4/15/2015 4/15/2015	No BRITE ENERGY	996579	1 NEM None No	NEMPV	Generic M:Generic M: 1
SCE-INT-500653793	Interconne SCE ONTARIO 91761 San Bernar Solar PV 2.346939 2.3		Roof/tp Fixed Residential	12/8/2014 12/8/2014 1/23/2015	No Titan Const 866-575-11 SHERMAN CA	91730 962965	1 NEM None No	NEMPV	Generic M:Generic M: 1
SCE-INT-500654405	Interconne SCE ONTARIO 91761 San Bernar Solar PV 5.408163 5.3		Roof/tp Fixed Residential	12/5/2014 12/16/2014 1/13/2015	No AMERICAN 424-214-6: SANTA MO CA	94044 941069	1 NEM None No	NEMPV	Generic M:Generic M: 1
SCE-INT-500654871	Interconne SCE ONTARIO 91762 San Bernar Solar PV 5.408163 5.3		Roof/tp Fixed Residential	12/6/2014 7/27/2015 7/27/2015	No SolarCity C:650-963-51 SAN MATEI CA	94402 888104	1 NEM None No	NEMPV	Generic M:Generic M: 1
SCE-INT-500654895	Interconne SCE ONTARIO 91761 San Bernar Solar PV 4.285714 4.2		Roof/tp Fixed Residential	12/5/2014 12/5/2014 2/17/2015	No SOLAR SER 760-969-88 THOUSAND CA	92276 933775	1 NEM None No	NEMPV	Generic M:Generic M: 1
SCE-INT-500655528	Interconne SCE ONTARIO 91761 San Bernar Solar PV 3.367347 3.3		Roof/tp Fixed Residential	12/8/2014 1/6/2015 1/29/2015	No GREEN NRG	909516	1 NEM None No	NEMPV	Generic M:Generic M: 1
SCE-INT-500656977	Interconne SCE ONTARIO 91764 San Bernar Solar PV 3.163265 3.1		Roof/tp Fixed Residential	12/9/2014 2/27/2015 3/12/2015	No SolarCity C:650-963-51 SAN MATEI CA	94402 888104	1 NEM None No	NEMPV	Generic M:Generic M: 1
SCE-INT-500657342	Interconne SCE ONTARIO 91764 San Bernar Solar PV 3.77551 3.7		Roof/tp Fixed Residential	12/10/2014 1/27/2015 2/19/2015	No SolarCity C:650-963-51 SAN MATEI CA	94402 888104	1 NEM None No	NEMPV	Generic M:Generic M: 1
SCE-INT-500658027	Interconne SCE ONTARIO 91761 San Bernar Solar PV 4.897959 4.8		Roof/tp Fixed Residential	12/10/2014 1/8/2015 1/23/2015	No NATURAL ENERGY	481870	1 NEM None No	NEMPV	Generic M:Generic M: 1
SCE-INT-500658585	Interconne SCE ONTARIO 91761 San Bernar Solar PV 9.285714 9.1		Roof/tp Fixed Residential	12/11/2014 2/9/2015 3/2/2015	No SUNRUN 805-547-2: San Luis Ot CA	93401 750184	1 NEM None No	NEMPV	Generic M:Generic M: 1
SCE-INT-500658877	Interconne SCE ONTARIO 91761 San Bernar Solar PV 2.653061 2.6		Roof/tp Fixed Residential	12/11/2014 3/3/2015 3/13/2015	No PIERRO CONSTRUCTION	733173	1 NEM None No	NEMPV	Generic M:Generic M: 1
SCE-INT-500659237	Interconne SCE ONTARIO 91761 San Bernar Solar PV 2.959184 2.9		Roof/tp Fixed Residential	12/12/2014 4/17/2015 4/27/2015	No BRIGHT LIFE SOLAR	981632	1 NEM None No	NEMPV	Generic M:Generic M: 1
SCE-INT-500659294	Interconne SCE ONTARIO 91762 San Bernar Solar PV 5.306122 5.2		Roof/tp Fixed Residential	12/12/2014 3/12/2015 3/21/2015	No VERENGO 714-744-65 ORANGE CA	92867 935263	1 NEM None No	NEMPV	Generic M:Generic M: 1
SCE-INT-500660850	Interconne SCE ONTARIO 91761 San Bernar Solar PV 5.612245 5.5		Roof/tp Fixed Residential	12/16/2014 4/3/2015 4/13/2015	No PETERSEN 510-371-65 Fremont CA	94538 468117	1 NEM None No	NEMPV	Generic M:Generic M: 1
SCE-INT-500662464	Interconne SCE ONTARIO 91761 San Bernar Solar PV 3.571429 3.5		Roof/tp Fixed Residential	12/22/2014 12/22/2014 2/7/2015	No VERENGO 714-744-65 ORANGE CA	92867 935263	1 NEM None No	NEMPV	Generic M:Generic M: 1
SCE-INT-500663306	Interconne SCE ONTARIO 91762 San Bernar Solar PV 4.183673 4.1		Roof/tp Fixed Residential	2/26/2015 2/26/2015 3/13/2015	No Solar Energy	897374	1 NEM None No	NEMPV	Generic M:Generic M: 1
SCE-INT-500664121	Interconne SCE ONTARIO 91764 San Bernar Solar PV 4.285714 4.2		Roof/tp Fixed Residential	12/23/2014 3/5/2015 3/16/2015	No SolarCity C:650-963-51 SAN MATEI CA	94402 888104	1 NEM None No	NEMPV	Generic M:Generic M: 1
SCE-INT-500664959	Interconne SCE ONTARIO 91761 San Bernar Solar PV 2.857143 2.8		Roof/tp Fixed Residential	1/8/2015 2/5/2015 2/12/2015	No GREEN NRG	909516	1 NEM None No	NEMPV	Generic M:Generic M: 1
SCE-INT-500665002	Interconne SCE ONTARIO 91762 San Bernar Solar PV 4.183673 4.1		Roof/tp Fixed Residential	12/26/2014 5/14/2015 5/14/2015	No AMEKO APS	705881	1 NEM None No	NEMPV	Generic M:Generic M: 1
SCE-INT-500665163	Interconne SCE ONTARIO 91761 San Bernar Solar PV 4.387755 4.3		Roof/tp Fixed Residential	12/29/2014 3/11/2015 3/19/2015	No Sunrun 805-547-2: San Luis Ot CA	93401 750184	1 NEM None No	NEMPV	Generic M:Generic M: 1
SCE-INT-500666275	Interconne SCE ONTARIO 91762 San Bernar Solar PV 6.428571 6.3		Roof/tp Fixed Residential	12/29/2014 8/3/2015 8/6/2015	No Sunrun 805-547-2: San Luis Ot CA	93401 750184	1 NEM None No	NEMPV	Generic M:Generic M: 1
SCE-INT-500667969	Interconne SCE ONTARIO 91761 San Bernar Solar PV 2.755102 2.7		Roof/tp Fixed Residential	1/6/2015 5/7/2015 5/7/2015	No TITAN SOL 866-575-11 VAN NUYS CA	91406 962965	1 NEM None No	NEMPV	Generic M:Generic M: 1
SCE-INT-500667987	Decommis: SCE ONTARIO 91761 San Bernar Solar PV 5.714286 5.6		Roof/tp Fixed Residential	1/6/2015 5/20/2015 5/20/2015	##### AMERICAN 424-214-6: SANTA MO CA	94044 941069	1 NEM None No	NEMPV	Generic M:Generic M: 1
SCE-INT-500668314	Interconne SCE ONTARIO 91764 San Bernar Solar PV 2.857143 2.8		Roof/tp Fixed Residential	1/7/2015 1/7/2015 2/4/2015	No A1 Solar Pc 855-410-4: Van Nuys CA	91411 493623	1 NEM None No	NEMPV	Generic M:Generic M: 1
SCE-INT-500668630	Interconne SCE ONTARIO 91762 San Bernar Solar PV 4.795918 4.7		Roof/tp Fixed Residential	1/7/2015 2/5/2015 2/10/2015	No A1 SOLAR F855-410-4: Van Nuys CA	91411 493623	1 NEM None No	NEMPV	Generic M:Generic M: 1
SCE-INT-500669003	Interconne SCE ONTARIO 91762 San Bernar Solar PV 4.489796 4.4		Roof/tp Fixed Residential	1/8/2015 2/9/2015 2/12/2015	No A1 SOLAR F855-410-4: Van Nuys CA	91411 493623	1 NEM None No	NEMPV	Generic M:Generic M: 1
SCE-INT-500669074	Interconne SCE ONTARIO 91762 San Bernar Solar PV 3.571429 3.5		Roof/tp Fixed Residential	1/8/2015 3/11/2015 3/25/2015	No GREENTECH		1 NEM None No	NEMPV	Generic M:Generic M: 1
SCE-INT-500671638	Interconne SCE ONTARIO 91762 San Bernar Solar PV 5.714286 5.6		Roof/tp Fixed Residential	1/17/2015 3/16/2015 3/23/2015	No HORIZON 5951-926-11HEMET CA	92545 1004233	1 NEM None No	NEMPV	Generic M:Generic M: 1
SCE-INT-500671808	Interconne SCE ONTARIO 91764 San Bernar Solar PV 132.3469 129.7		Roof/tp Fixed Residential	1/19/2015 2/11/2015 3/16/2015	No SHOREBREAK ENERGY	972616	1 NEM None No	NEMPV	Generic M:Generic M: 1
SCE-INT-500672194	Interconne SCE ONTARIO 91761 San Bernar Solar PV 2.653061 2.6		Roof/tp Fixed Residential	1/19/2015 5/14/2015 5/14/2015	No AMEKO APS	705881	1 NEM None No	NEMPV	Generic M:Generic M: 1
SCE-INT-500673156	Interconne SCE ONTARIO 91761 San Bernar Solar PV 9.795918 9.6		Roof/tp Fixed Residential	1/21/2015 1/21/2015 2/12/2015	No SMART EN 951-273-95 Corona CA	92880 990049	1 NEM None No	NEMPV	Generic M:Generic M: 1
SCE-INT-500673434	Interconne SCE ONTARIO 91764 San Bernar Solar PV 2.959184 2.9		Roof/tp Fixed Residential	1/27/2015 1/31/2015 2/24/2015	No SolarCity C:650-963-51 SAN MATEI CA	94402 888104	1 NEM None No	NEMPV	Generic M:Generic M: 1
SCE-INT-500673731	Interconne SCE ONTARIO 91761 San Bernar Solar PV 5.306122 5.2		Roof/tp Fixed Residential	1/23/2015 3/3/2015 3/12/2015	No PELL SOLAF 909-900-2: Ontario CA	91761 949122	1 NEM None No	NEMPV	Generic M:Generic M: 1
SCE-INT-500673848	Interconne SCE ONTARIO 91764 San Bernar Solar PV 4.489796 4.4		Roof/tp Fixed Residential	1/23/2015 1/23/2015 2/14/2015	No GCI Solar 714-373-85 Huntingtor CA	92649 1004645	1 NEM None No	NEMPV	Generic M:Generic M: 1
SCE-INT-500674822	Interconne SCE ONTARIO 91761 San Bernar Solar PV 7.040816 6.9		Roof/tp Fixed Residential	2/4/2015 5/7/2015 5/7/2015	No HORIZON 5951-926-11HEMET CA	92545 1004233	1 NEM None No	NEMPV	Generic M:Generic M: 1
SCE-INT-500675795	Interconne SCE ONTARIO 91761 San Bernar Solar PV 3.979592 3.9		Roof/tp Fixed Residential	1/30/2015 1/30/2015 2/19/2015	No PETERSEN I510-371-65 Fremont CA	94538 468117	1 NEM None No	NEMPV	Generic M:Generic M: 1
SCE-INT-500676014	Interconne SCE ONTARIO 91762 San Bernar Solar PV 6.122449 6		Roof/tp Fixed Residential	1/30/2015 4/13/2015 4/21/2015	No APPLIED SOLAR ENERGY	678517	1 NEM None No	NEMPV	Generic M:Generic M: 1
SCE-INT-500676115	Interconne SCE ONTARIO 91762 San Bernar Solar PV 4.897959 4.8		Roof/tp Fixed Residential	1/30/2015 1/30/2015 2/20/2015	No SOLAR SER 760-969-88 THOUSAND CA	92276 933775	1 NEM None No	NEMPV	Generic M:Generic M: 1
SCE-INT-500676184	Interconne SCE ONTARIO 91761 San Bernar Solar PV 6.122449 6		Roof/tp Fixed Residential	1/31/2015 2/27/2015 3/12/2015	No SolarCity C:650-963-51 SAN MATEI CA	94402 888104	1 NEM None No	NEMPV	Generic M:Generic M: 1
SCE-INT-500676251	Interconne SCE ONTARIO 91764 San Bernar Solar PV 2.857143 2.8		Roof/tp Fixed Residential	2/4/2015 2/17/2015 3/6/2015	No PIERRO CONSTRUCTION	733173	1 NEM None No	NEMPV	Generic M:Generic M: 1

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Application	Preceding	1 Supercedin	Matched	C Application	Utility	Service City	Service Zip	Service Cot	Technology	System Siz	System Siz	Storage Ca	Storage Siz	Inverter Siz	Tilt	Azimuth	Mounting	Tracking	Customer	5 App	Received	App Complete	App Approved	EDecommis	Self Installe	Installer	Na Installer	Ph Installer	CI Installer	St Installer	Zig	CSLB Numt	Third Party	Third Party	Third Party	Third Party	Face	Face	Finan	Electric Vel	Electric Vel	System Out	System Out	System Out	Total	System Itc	Cost	Cost/Watt	NEM Tariff	Interconne	VNEM	NEF Project	V NEMPV or	Generator	Generator	Generator
SCE-INT-NST-10102					Interconne SCE	ONTARIO	91761	San Bernar	Solar PV	2.565306	2.514					23	180	RoofTop	Fixed	Residential	9/6/2017	12/12/2017	12/13/2017	No	SUNSTREET626-360-8 MIAMI	FL		33172	1001133	Yes	PPA	LENNAR HC No	No	No	No	No	No	No	No	No	No	1109.6	0.441368		2	NEM-ST	None	No	NEMPV	HIS-5265R/Hyundai H	H	11				
SCE-INT-NST-10103					Interconne SCE	ONTARIO	91761	San Bernar	Solar PV	3.265306	3.2					18	270	RoofTop	Fixed	Residential	9/6/2017	12/12/2017	12/13/2017	No	SUNSTREET626-360-8 MIAMI	FL		33172	1001133	Yes	PPA	LENNAR HC No	No	No	No	No	No	No	1409.8	0.440562		2	NEM-ST	None	No	NEMPV	HIS-5265R/Hyundai H	H	14							
SCE-INT-NST-10104					Interconne SCE	ONTARIO	91761	San Bernar	Solar PV	3.265306	3.2					27	180	RoofTop	Fixed	Residential	9/6/2017	12/14/2017	12/15/2017	No	SUNSTREET626-360-8 MIAMI	FL		33172	1001133	Yes	PPA	LENNAR HC No	No	No	No	No	No	1409.8	0.440562		2	NEM-ST	None	No	NEMPV	HIS-5265R/Hyundai H	H	14								
SCE-INT-NST-10105					Interconne SCE	ONTARIO	91762	San Bernar	Solar PV	2.765306	2.71					18	178	RoofTop	Fixed	Residential	7/30/2019	7/30/2019	7/31/2019	No	SunPower 1877-344-66 ROSEVILLE CA	CA		95661	890895	No	Lease	Trumark Hk No	No	No	No	No	No	12813.75	4.728321		2	NEM-ST	None	No	NEMPV	SPR-X21-3:SunPower	Q	9								
SCE-INT-NST-10106					Interconne SCE	ONTARIO	91762	San Bernar	Solar PV	2.765306	2.71					18	270	RoofTop	Fixed	Residential	7/30/2019	7/30/2019	8/5/2019	No	SunPower 1877-344-66 ROSEVILLE CA	CA		95661	890895	No	Lease	KB Home No	No	No	No	No	No	12813.75	4.728321		2	NEM-ST	None	No	NEMPV	SPR-X21-3:SunPower	Q	9								
SCE-INT-NST-101206					Interconne SCE	ONTARIO	91762	San Bernar	Solar PV	6.833673	6.697					17	268	RoofTop	Fixed	Residential	7/30/2019	7/30/2019	7/31/2019	No	SOLARMA951-300-0 RIVERSIDE CA	CA		92507	972048	Yes	Lease	SunRun No	No	No	No	No	25429	3.797073		2	NEM-ST	None	No	NEMPV	Q PEAK BU Hanwha Q-	Q	25									
SCE-INT-NST-101250					Interconne SCE	ONTARIO	91764	San Bernar	Solar PV	6.602041	6.47					24	180	RoofTop	Fixed	Residential	7/31/2019	8/27/2019	8/29/2019	No	FREEDOM 1951-215-66 TEMECULA CA	CA		92590	1029644	Yes	Lease	Sunrun No	No	No	No	No	20341.88	3.14403		2	NEM-ST	None	No	NEMPV	Q PLUS BFF Hanwha Q-	Q	17									
SCE-INT-NST-101261					Interconne SCE	ONTARIO	91762	San Bernar	Solar PV	3.687755	3.614					18	270	RoofTop	Fixed	Residential	7/31/2019	7/31/2019	8/6/2019	No	SunPower 1877-344-66 ROSEVILLE CA	CA		95661	890895	Yes	Lease	KB Home No	No	No	No	No	20421.6	5.650691		2	NEM-ST	None	No	NEMPV	SPR-X21-3:SunPower	Q	12									
SCE-INT-NST-101293					Interconne SCE	ONTARIO	91762	San Bernar	Solar PV	4.646939	4.554					18	180	RoofTop	Fixed	Residential	7/31/2019	7/31/2019	8/1/2019	No	ENERGY SE 310-904-61 TORRANCE CA	CA		95052	619149	No	Lease	KB Home No	No	No	No	No	27063.34	5.942762		2	NEM-ST	None	No	NEMPV	Q PEAK BU Hanwha Q-	Q	17									
SCE-INT-NST-101421					Interconne SCE	ONTARIO	91761	San Bernar	Solar PV	2.765306	2.71					18	180	RoofTop	Fixed	Residential	7/31/2019	7/31/2019	8/1/2019	No	SunPower 1877-344-66 ROSEVILLE CA	CA		95661	890895	Yes	Lease	DR Horton No	No	No	No	No	15316.2	5.651734		2	NEM-ST	None	No	NEMPV	SPR-X21-3:SunPower	Q	9									
SCE-INT-NST-101584					Interconne SCE	ONTARIO	91764	San Bernar	Solar PV	4.753061	4.658					26	180	RoofTop	Fixed	Residential	8/1/2019	10/7/2019	10/9/2019	No	FREEDOM 1951-215-66 TEMECULA CA	CA		92590	1029644	No	Lease	KB Home No	No	No	No	No	34884	7.489051		2	NEM-ST	None	No	NEMPV	Q PLUS BFF Hanwha Q-	Q	7									
SCE-INT-NST-101655					Interconne SCE	ONTARIO	91762	San Bernar	Solar PV	2.782653	2.727					23	275	RoofTop	Fixed	Residential	8/1/2019	10/31/2019	11/6/2019	No	SunStreet 1949-450-58 MIAMI	FL		33172	1001133	Yes	PPA	Lennar Hor No	No	No	No	No	11590	4.250091		2	NEM-ST	None	No	NEMPV	BVM6610A/Boviet Sola	Q	10									
SCE-INT-NST-101661					Interconne SCE	ONTARIO	91762	San Bernar	Solar PV	2.782653	2.727					18	235	RoofTop	Fixed	Residential	8/1/2019	10/1/2019	10/3/2019	No	SunStreet 1949-450-58 MIAMI	FL		33172	1001133	Yes	PPA	Lennar Hor No	No	No	No	No	11590	4.250091		2	NEM-ST	None	No	NEMPV	BVM6610A/Boviet Sola	Q	10									
SCE-INT-NST-101670					Interconne SCE	ONTARIO	91762	San Bernar	Solar PV	2.782653	2.727					16	180	RoofTop	Fixed	Residential	8/1/2019	10/25/2019	10/31/2019	No	SunStreet 1949-450-58 MIAMI	FL		33172	1001133	Yes	PPA	Lennar Hor No	No	No	No	No	11590	4.250091		2	NEM-ST	None	No	NEMPV	BVM6610A/Boviet Sola	Q	10									
SCE-INT-NST-101861					Interconne SCE	ONTARIO	91762	San Bernar	Solar PV	5.494898	5.385					20	180	RoofTop	Fixed	Residential	8/2/2019	1/23/2020	2/5/2020	No	PRO CUSTC 714-617-21 ORANGE CA	CA		92868	1026366	No	Lease	KB Home No	No	No	No	No	19000	3.528319		2	NEM-ST	None	No	NEMPV	Q PEAK DU Hanwha Q-	Q	4									
SCE-INT-NST-102009					Interconne SCE	ONTARIO	91762	San Bernar	Solar PV	4.427551	4.339					11	270	RoofTop	Fixed	Residential	8/5/2019	8/5/2019	8/6/2019	No	VIVINT SOL 385-352-01 LEHI UT	UT		84043	973756	Yes	PPA	Vivint Solar No	No	No	No	No	24381	5.619036		2	NEM-ST	None	No	NEMPV	Q PEAK DU Hanwha Q-	Q	10									
SCE-INT-NST-102209					Interconne SCE	ONTARIO	91762	San Bernar	Solar PV	8.052041	7.891					18	129	RoofTop	Fixed	Residential	8/6/2019	8/6/2019	8/7/2019	No	TESLA ENER1888-765-2 FREMONT CA	CA		94538	888104	No	Lease	KB Home No	No	No	No	No	3098846	2.4453		2	NEM-ST	None	No	NEMPV	SC30 SolarCity	Q	26									
SCE-INT-NST-102219					Interconne SCE	ONTARIO	91764	San Bernar	Solar PV	6.865306	6.728					18	270	RoofTop	Fixed	Residential	8/6/2019	10/7/2019	10/9/2019	No	FREEDOM 1951-215-66 TEMECULA CA	CA		92590	1029644	No	Lease	DR Horton No	No	No	No	No	30744	4.56956		2	NEM-ST	None	No	NEMPV	Q PLUS BFF Hanwha Q-	Q	14									
SCE-INT-NST-102450					Interconne SCE	ONTARIO	91761	San Bernar	Solar PV	3.687755	3.614					23	180	RoofTop	Fixed	Residential	8/7/2019	8/7/2019	8/8/2019	No	SunPower 1877-344-66 ROSEVILLE CA	CA		95661	890895	Yes	Lease	DR Horton No	No	No	No	No	20421.6	5.650691		2	NEM-ST	None	No	NEMPV	SPR-X21-3:SunPower	Q	12									
SCE-INT-NST-102507					Interconne SCE	ONTARIO	91764	San Bernar	Solar PV	3.384694	3.317					23	160	RoofTop	Fixed	Residential	8/7/2019	8/7/2019	8/8/2019	No	TESLA ENER1888-765-2 FREMONT CA	CA		94538	888104	No	Lease	KB Home No	No	No	No	18739.2	5.649442		2	NEM-ST	None	No	NEMPV	Q PEAK G4 Hanwha Q-	Q	12										
SCE-INT-NST-102597					Interconne SCE	ONTARIO	91762	San Bernar	Solar PV	2.765306	2.71					18	270	RoofTop	Fixed	Residential	8/8/2019	8/12/2019	8/15/2019	No	SunPower 1877-344-66 ROSEVILLE CA	CA		95661	890895	No	Lease	KB Home No	No	No	No	No				2	NEM-ST	None	No	NEMPV	SPR-X21-3:SunPower	Q	9									
SCE-INT-NST-102747					Interconne SCE	ONTARIO	91762	San Bernar	Solar PV	5.207143	5.103					26	180	RoofTop	Fixed	Residential	8/9/2019	8/9/2019	8/12/2019	No	SUNERGY (951-496-8) CORONA CA	CA		92881	1005730	No	Lease	KB Home No	No	No	No	No	31124	6.099157		2	NEM-ST	None	No	NEMPV	Q PEAK DU Hanwha Q-	Q	17									
SCE-INT-NST-102759					Interconne SCE	ONTARIO	91762	San Bernar	Solar PV	2.15102	2.108					18	180	RoofTop	Fixed	Residential	8/9/2019	8/12/2019	8/14/2019	No	SunPower 1877-344-66 ROSEVILLE CA	CA		95661	890895	No	Lease	DR Horton No	No	No	No	No	9966.25	4.727822		2	NEM-ST	None	No	NEMPV	SPR-X21-3:SunPower	Q	7									
SCE-INT-NST-102900					Interconne SCE	ONTARIO	91761	San Bernar	Solar PV	3.687755	3.614					18	180	RoofTop	Fixed	Residential	8/9/2019	8/9/2019	8/12/2019	No	SunPower 1877-344-66 ROSEVILLE CA	CA		95661	890895	Yes	Lease	DR Horton No	No	No	No	No	20421.6	5.650691		2	NEM-ST	None	No	NEMPV	SPR-X21-3:SunPower	Q	12									
SCE-INT-NST-102967					Interconne SCE	ONTARIO	91762	San Bernar	Solar PV	2.765306	2.71					18	270	RoofTop	Fixed	Residential	8/12/2019	8/12/2019	8/16/2019	No	SunPower 1877-344-66 ROSEVILLE CA	CA		95661	890895	No	Lease	DR Horton No	No	No	No	No	12813.75	4.728321		2	NEM-ST	None	No	NEMPV	SPR-X21-3:SunPower	Q	9									
SCE-INT-NST-102988					Interconne SCE	ONTARIO	91761	San Bernar	Solar PV	3.687755	3.614					23	180	RoofTop	Fixed	Residential	8/12/2019	8/12/2019	8/13/2019	No	SunPower 1877-344-66 ROSEVILLE CA	CA		95661	890895	Yes	Lease	DR Horton No	No	No	No	No	20421.6	5.650691		2	NEM-ST	None	No	NEMPV	SPR-X21-3:SunPower	Q	13									
SCE-INT-NST-103085					Interconne SCE	ONTARIO	91761	San Bernar	Solar PV	3.403061	3.335					21	180	RoofTop	Fixed	Residential	8/12/2019	8/12/2019	8/13/2019	No	Best Solar 1855-808-8 ENCINO CA	CA		91316	988425	No	Lease	KB Home No	No	No	No	No	14800	4.437781		2	NEM-ST	None	No	NEMPV	Sunmodule SolarWorld	Q	12									
SCE-INT-NST-103094					Interconne SCE	ONTARIO	91761	San Bernar	Solar PV	2.765306	2.71					23	178	RoofTop	Fixed	Residential	8/12/2019																																			

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Application Preceding 1 Supercedin Matched C	Application/Utility	Service City/Service Zip	Service Cot	Technology	System Siz	System Siz	Storage Ca	Storage Siz	Inverter Siz	Tilt	Azimuth	Mounting	Tracking	Customer 5	App Received	App Complete	App Approved	EDecommis	Self Install	Installer Na	Installer Ph	Installer Cil	Installer St	Installer Zi	CSLB Numt	Third Party	Third Party	Third Party	Third Party	Face Fin	Face Fin	Electric Vel	Electric Vel	System Out	System Out	Total Syste	Itc Cost	Cost/Watt	NEM Tariff	Interconne	VNEM	NEF Project	V NEMPV or	Generator	Generator	Generator
SCE-INT-NST-117862	Interconne SCE	ONTARIO	91762	San Bernar Solar PV	3.914286	3.836					18	180	Rooftop	Fixed	Residential	11/7/2019	1/23/2020	2/5/2020	No	SUNPOWEI941-720-3R RICHMOND CA				94804	890895	Yes	Lease	Richmond /No	No	No	Yes	No	21336	5.562043	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower				12		
SCE-INT-NST-117871	Interconne SCE	ONTARIO	91762	San Bernar Solar PV	3.914286	3.836					27	180	Rooftop	Fixed	Residential	11/7/2019	1/23/2020	2/5/2020	No	SUNPOWEI941-720-3R RICHMOND CA				94804	890895	Yes	Lease	Richmond /No	No	Yes	No	21336	5.562043	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower				9			
SCE-INT-NST-117950	Interconne SCE	ONTARIO	91762	San Bernar Solar PV	2.765306	2.71					18	179	Rooftop	Fixed	Residential	11/8/2019	3/18/2020	4/1/2020	No	SUNPOWEI941-720-3R RICHMOND CA				94804	890895	Yes	Lease	Richmond /No	No	Yes	No	12813.75	4.728321	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower				9			
SCE-INT-NST-118005	Interconne SCE	ONTARIO	91762	San Bernar Solar PV	2.765306	2.71					18	179	Rooftop	Fixed	Residential	11/8/2019	1/23/2020	3/4/2020	No	SUNPOWEI877-344-6R ROSEVILLE CA				95661	890895	No	Lease	Richmond /No	No	Yes	No	12813.75	4.728321	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower				9			
SCE-INT-NST-118048	Interconne SCE	ONTARIO	91762	San Bernar Solar PV	12.80102	12.545					10	270	Rooftop	Fixed	Residential	11/8/2019	1/15/2020	1/28/2020	No	FREEDOM 1951-252-6R TEMECULA CA				92590	1029644	No	Lease	sunrun /No	No	Yes	No	12813.75	752575	2	NEM-ST	None	No	NEMPV	LG3300K-LG Elector				10			
SCE-INT-NST-118048	Interconne SCE	ONTARIO	91761	San Bernar Solar PV/St	7.021429	6.881	9.8		5		22	180	Rooftop	Fixed	Residential	11/8/2019	11/19/2019	11/19/2019	No	RAYKER IN 310-477-7E SANTA MO CA				90403	1018241	No	Lease	Califirst	Califirst	Yes	Yes	52326	7.604417	2	NEM-ST	None	No	NEMPV	Q.PLUS BFF/Hanwha Q-				27			
SCE-INT-NST-118197	Interconne SCE	ONTARIO	91762	San Bernar Solar PV	3.572449	3.501					18	180	Rooftop	Fixed	Residential	11/11/2019	11/11/2019	11/18/2019	No	TESLA ENEI844-834-5: FREMONT CA				94538	888104	Yes	Lease	Tesla Energy	Tesla Energy	Yes	Yes	18163.2	5.188003	2	NEM-ST	None	No	NEMPV	SC320B2 SolarCity				12			
SCE-INT-NST-118227	Interconne SCE	ONTARIO	91764	San Bernar Solar PV	2.765306	2.71					18	270	Rooftop	Fixed	Residential	11/11/2019	11/11/2019	11/18/2019	No	SUNPOWEI941-720-3R RICHMOND CA				94804	890895	Yes	Lease	KB Home	No	Yes	No	15316.2	5.651734	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower				9			
SCE-INT-NST-118237	Interconne SCE	ONTARIO	91764	San Bernar Solar PV	2.765306	2.71					18	270	Rooftop	Fixed	Residential	11/11/2019	12/11/2019	12/23/2019	No	SUNPOWEI941-720-3R RICHMOND CA				94804	890895	Yes	Lease	KB Home	No	Yes	No	15316.2	5.651734	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower				9			
SCE-INT-NST-118258	Interconne SCE	ONTARIO	91761	San Bernar Solar PV	6.720408	6.586					23	270	Rooftop	Fixed	Residential	11/11/2019	11/12/2019	11/20/2019	No	SUNLUX 909-757-01RANCHO CI CA				91730	1008374	No	Lease	KB Home	No	Yes	No	47204	7.167324	2	NEM-ST	None	No	NEMPV	VBNH325K Panasonic t				22			
SCE-INT-NST-118385	Interconne SCE	ONTARIO	91761	San Bernar Solar PV	3.956122	3.877					21	180	Rooftop	Fixed	Residential	11/11/2019	11/12/2019	11/20/2019	No	SUNERGY 951-736-25 CORONA CA				92880	1005730	No	Lease	KB Home	No	Yes	No	22385	5.773294	2	NEM-ST	None	No	NEMPV	SN310M-11S Energy				18			
SCE-INT-NST-118408	Interconne SCE	ONTARIO	91762	San Bernar Solar PV	3.572449	3.501					18	270	Rooftop	Fixed	Residential	11/11/2019	11/11/2019	11/18/2019	No	TESLA ENEI844-834-5: FREMONT CA				94538	888104	Yes	Lease	Tesla	Tesla	Yes	Yes	18163.2	5.188003	2	NEM-ST	None	No	NEMPV	SC320B2 SolarCity				12			
SCE-INT-NST-118474	Interconne SCE	ONTARIO	91761	San Bernar Solar PV	2.765306	2.71					18	180	Rooftop	Fixed	Residential	11/12/2019	2/18/2020	3/2/2020	No	SUNPOWEI877-344-6R ROSEVILLE CA				95661	890895	No	Lease	DR Horton	No	Yes	No	4.728321	4.728321	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower				9			
SCE-INT-NST-118479	Interconne SCE	ONTARIO	91761	San Bernar Solar PV	2.765306	2.71					18	270	Rooftop	Fixed	Residential	11/12/2019	2/18/2020	2/29/2020	No	SUNPOWEI941-720-3R RICHMOND CA				94804	890895	No	Lease	DR Horton	No	Yes	No	4.728321	4.728321	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower				9			
SCE-INT-NST-118484	Interconne SCE	ONTARIO	91761	San Bernar Solar PV	2.765306	2.71					18	180	Rooftop	Fixed	Residential	11/12/2019	3/26/2020	4/6/2020	No	SUNPOWEI941-720-3R RICHMOND CA				94804	890895	No	Lease	DR Horton	No	Yes	No	4.728321	4.728321	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower				9			
SCE-INT-NST-118489	Interconne SCE	ONTARIO	91761	San Bernar Solar PV	2.765306	2.71					18	180	Rooftop	Fixed	Residential	11/12/2019	3/9/2020	3/24/2020	No	SUNPOWEI877-344-6R ROSEVILLE CA				95661	890895	No	Lease	DR Horton	No	Yes	No	15316.2	5.651734	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower				9			
SCE-INT-NST-118493	Interconne SCE	ONTARIO	91761	San Bernar Solar PV	2.765306	2.71					18	270	Rooftop	Fixed	Residential	11/12/2019	3/26/2020	4/6/2020	No	SUNPOWEI941-720-3R RICHMOND CA				94804	890895	No	Lease	DR Horton	No	Yes	No	4.728321	4.728321	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower				9			
SCE-INT-NST-118498	Interconne SCE	ONTARIO	91761	San Bernar Solar PV	3.687755	3.614					18	270	Rooftop	Fixed	Residential	11/12/2019	4/1/2020	4/9/2020	No	SUNPOWEI941-720-3R RICHMOND CA				94804	890895	No	Lease	DR Horton	No	Yes	No	17085	4.727448	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower				12			
SCE-INT-NST-118506	Interconne SCE	ONTARIO	91761	San Bernar Solar PV	3.687755	3.614					27	180	Rooftop	Fixed	Residential	11/12/2019	4/1/2020	4/10/2020	No	SUNPOWEI941-720-3R RICHMOND CA				94804	890895	Yes	Lease	DR Horton	No	Yes	No	20421.6	5.650691	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower				12			
SCE-INT-NST-118512	Interconne SCE	ONTARIO	91761	San Bernar Solar PV	3.687755	3.614					23	180	Rooftop	Fixed	Residential	11/12/2019	1/22/2020	2/4/2020	No	SUNPOWEI941-720-3R RICHMOND CA				94804	890895	Yes	Lease	DR Horton	No	Yes	No	20421.6	5.650691	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower				12			
SCE-INT-NST-118588	Interconne SCE	ONTARIO	91761	San Bernar Solar PV	3.914286	3.836					23	170	Rooftop	Fixed	Residential	11/12/2019	2/13/2020	2/27/2020	No	SUNPOWEI941-720-3R RICHMOND CA				94804	890895	No	Lease	DR Horton	No	Yes	No	17850	4.653284	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower				12			
SCE-INT-NST-118595	Interconne SCE	ONTARIO	91761	San Bernar Solar PV	4.567347	4.476					18	175	Rooftop	Fixed	Residential	11/12/2019	2/13/2020	2/27/2020	No	SUNPOWEI941-720-3R RICHMOND CA				94804	890895	No	Lease	DR Horton	No	Yes	No	20825	4.652591	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower				14			
SCE-INT-NST-118598	Interconne SCE	ONTARIO	91761	San Bernar Solar PV	3.914286	3.836					34	270	Rooftop	Fixed	Residential	11/12/2019	2/13/2020	2/27/2020	No	SUNPOWEI941-720-3R RICHMOND CA				94804	890895	No	Lease	DR Horton	No	Yes	No	17850	4.653284	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower				12			
SCE-INT-NST-118605	Interconne SCE	ONTARIO	91762	San Bernar Solar PV	2.765306	2.71					18	179	Rooftop	Fixed	Residential	11/12/2019	3/5/2020	3/18/2020	No	SUNPOWEI877-344-6R ROSEVILLE CA				95661	890895	No	Lease	DR Horton	No	Yes	No	12813.75	4.728321	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower				9			
SCE-INT-NST-118611	Interconne SCE	ONTARIO	91762	San Bernar Solar PV	2.765306	2.71					18	269	Rooftop	Fixed	Residential	11/12/2019	2/25/2020	4/28/2020	No	SUNPOWEI941-720-3R RICHMOND CA				94804	890895	No	Lease	DR Horton	No	Yes	No	12813.75	4.728321	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower				9			
SCE-INT-NST-118618	Interconne SCE	ONTARIO	91762	San Bernar Solar PV	2.765306	2.71					18	269	Rooftop	Fixed	Residential	11/12/2019	2/6/2020	4/15/2020	No	SUNPOWEI941-720-3R RICHMOND CA				94804	890895	No	Lease	DR Horton	No	Yes	No	12813.75	4.728321	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower				9			
SCE-INT-NST-118626	Interconne SCE	ONTARIO	91762	San Bernar Solar PV	2.765306	2.71					18	179	Rooftop	Fixed	Residential	11/12/2019	3/19/2020	4/1/2020	No	SUNPOWEI941-720-3R RICHMOND CA				94804	890895	No	Lease	DR Horton	No	Yes	No	12813.75	4.728321	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower				9			
SCE-INT-NST-118632	Interconne SCE	ONTARIO	91762	San Bernar Solar PV	2.765306	2.71					18	269	Rooftop	Fixed	Residential	11/12/2019	2/20/2020	6/12/2020	No	SUNPOWEI941-720-3R RICHMOND CA				94804	890895	No	Lease	DR Horton	No	Yes	No	12813.75	4.728321	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower				9			
SCE-INT-NST-118661	Interconne SCE	ONTARIO	91761	San Bernar Solar PV	3.687755	3.614					18	270	Rooftop	Fixed	Residential	11/13/2019	2/11/2020	2/25/2020	No	SUNPOWEI941-720-3R RICHMOND CA				94804	890895	Yes	Lease	DR Horton	No	Yes	No	20421.6	5.650691	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower				12			
SCE-INT-NST-118672	Interconne SCE	ONTARIO	91																																											

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SCE-INT-NST-123307	Interconne SCE	ONTARIO 91761 San Bernar Solar PV			3.673469	3.6					18	180	RoofTop	Fixed	Residential	12/13/2019	12/27/2019	1/10/2020	No	ENERGY SE 866-865-4 TORRANCE CA					90502	619149	No	No	No	No	No	No	No	16317.98	4.532772	2	NEM-ST	None	No	NEMPV	SN310M-11S-Energy			13		
SCE-INT-NST-123325	Interconne SCE	ONTARIO 91761 San Bernar Solar PV			5.206122	5.102					18	180	RoofTop	Fixed	Residential	12/13/2019	1/9/2020	1/23/2020	No	PRO CUSTC 732-902-6 SOUTH PL# NJ					7080	1026366	No	No	No	No	No	No	18000	3.528028	2	NEM-ST	None	No	NEMPV	Q.PEAK DU Hanwha Q-			11			
SCE-INT-NST-123359	Interconne SCE	ONTARIO 91762 San Bernar Solar PV			8.339796	8.369					10	90	RoofTop	Fixed	Residential	12/13/2019	2/25/2020	3/2/2020	No	FREEDOM 947-693-7 EL DORAD CA					92590	1029644	Yes	Lease	Sunrun	No	No	No	23237.45	2.77661	2	NEM-ST	None	No	NEMPV	REC295TP2REC Solar			23			
SCE-INT-NST-123408	Interconne SCE	ONTARIO 91762 San Bernar Solar PV			4.232653	4.148					8	180	RoofTop	Fixed	Residential	12/13/2019	12/13/2019	12/27/2019	No	V3 ELECTRI 916-459-2 EL DORAD CA					95762	1000573	Yes	PPA	Sunrun	No	No	17755.58	4.220515	2	NEM-ST	None	No	NEMPV	Q.PEAK G4 Hanwha Q-			5				
SCE-INT-NST-123418	Interconne SCE	ONTARIO 91761 San Bernar Solar PV			4.737959	4.702	9.8		5		26	180	RoofTop	Fixed	Residential	12/13/2019	12/13/2019	12/31/2019	No	SUNRUN IN 855-478-6 SAN FRAN CA					94104	750184	No	Yes	Sunrun, Inc	29749.82	6.327056	2	NEM-ST	None	No	NEMPV	REC290TP2REC Solar			18						
SCE-INT-NST-123510	Interconne SCE	ONTARIO 91762 San Bernar Solar PV			2.935714	2.877					23	270	RoofTop	Fixed	Residential	12/16/2019	3/19/2020	4/2/2020	No	SUNPOWEI941-720-3 RICHMONT CA					94804	890895	No	No	No	No	No	13387.5	4.653284	2	NEM-ST	None	No	NEMPV	SPR-X21-3S SunPower			9				
SCE-INT-NST-123514	Interconne SCE	ONTARIO 91761 San Bernar Solar PV			3.914286	3.836					18	180	RoofTop	Fixed	Residential	12/16/2019	4/15/2020	4/21/2020	No	SUNPOWEI941-720-3 RICHMONT CA					94804	890895	No	No	No	No	17850	4.653284	2	NEM-ST	None	No	NEMPV	SPR-X21-3S SunPower			12					
SCE-INT-NST-123516	Interconne SCE	ONTARIO 91761 San Bernar Solar PV			3.914286	3.836					18	270	RoofTop	Fixed	Residential	12/16/2019	4/27/2020	4/29/2020	No	SUNPOWEI941-720-3 RICHMONT CA					94804	890895	No	No	No	No	17850	4.653284	2	NEM-ST	None	No	NEMPV	SPR-X21-3S SunPower			12					
SCE-INT-NST-123518	Interconne SCE	ONTARIO 91761 San Bernar Solar PV			3.914286	3.836					23	270	RoofTop	Fixed	Residential	12/16/2019	2/18/2020	3/2/2020	No	SUNPOWEI877-344-6 Roseville CA					95661	890895	No	No	No	No	17850	4.653284	2	NEM-ST	None	No	NEMPV	SPR-X21-3S SunPower			12					
SCE-INT-NST-123519	Interconne SCE	ONTARIO 91761 San Bernar Solar PV			4.287755	4.202					10	180	RoofTop	Fixed	Residential	12/16/2019	12/16/2019	12/17/2019	No	VIVINT SOL 801-845-0 LEHI UT					84043	973756	Yes	PPA	Vivint Solar No	No	Yes	Yes	Solar Edge Technology	26026	6.193717	2	NEM-ST	None	No	NEMPV	CS1H-325N Canadian S			14		
SCE-INT-NST-123522	Interconne SCE	ONTARIO 91761 San Bernar Solar PV			3.914286	3.836					23	270	RoofTop	Fixed	Residential	12/16/2019	3/19/2020	4/2/2020	No	SUNPOWEI941-720-3 RICHMONT CA					94804	890895	No	No	No	No	17850	4.653284	2	NEM-ST	None	No	NEMPV	SPR-X21-3S SunPower			12					
SCE-INT-NST-123539	Interconne SCE	ONTARIO 91762 San Bernar Solar PV			3.914286	3.836					23	270	RoofTop	Fixed	Residential	12/16/2019	2/20/2020	3/4/2020	No	SUNPOWEI877-344-6 Roseville CA					95661	890895	Yes	Lease	KB Home No	No	Yes	No	21336	5.562043	2	NEM-ST	None	No	NEMPV	SPR-X21-3S SunPower			12			
SCE-INT-NST-123545	Interconne SCE	ONTARIO 91762 San Bernar Solar PV			3.914286	3.836					23	180	RoofTop	Fixed	Residential	12/16/2019	2/18/2020	3/2/2020	No	SUNPOWEI877-344-6 Roseville CA					95661	890895	Yes	Lease	KB Home No	No	Yes	No	21336	5.562043	2	NEM-ST	None	No	NEMPV	SPR-X21-3S SunPower			12			
SCE-INT-NST-123548	Interconne SCE	ONTARIO 91762 San Bernar Solar PV			3.914286	3.836					23	270	RoofTop	Fixed	Residential	12/16/2019	2/18/2020	3/2/2020	No	SUNPOWEI877-344-6 Roseville CA					95661	890895	Yes	Lease	KB Home No	No	Yes	No	21336	5.562043	2	NEM-ST	None	No	NEMPV	SPR-X21-3S SunPower			12			
SCE-INT-NST-123551	Interconne SCE	ONTARIO 91762 San Bernar Solar PV			3.914286	3.836					23	180	RoofTop	Fixed	Residential	12/16/2019	2/20/2020	3/4/2020	No	SUNPOWEI877-344-6 Roseville CA					95661	890895	Yes	Lease	KB Home No	No	Yes	No	21336	5.562043	2	NEM-ST	None	No	NEMPV	SPR-X21-3S SunPower			12			
SCE-INT-NST-123672	Interconne SCE	ONTARIO 91762 San Bernar Solar PV			5.545918	5.435					22	180	RoofTop	Fixed	Residential	12/16/2019	12/16/2019	12/17/2019	No	RAYKER IN 310-477-6 SANTA MO CA					90403	1018241	Yes	PPA	Sunrun No	No	Yes	Yes	Sun Run Inc	8325.74	1.531874	2	NEM-ST	None	No	NEMPV	Q.PLUS BFF Hanwha Q-			21		
SCE-INT-NST-123692	Interconne SCE	ONTARIO 91762 San Bernar Solar PV			3.666327	3.593					19	180	RoofTop	Fixed	Residential	12/16/2019	12/16/2019	12/17/2019	No	SUNLUX 909-757-0K RANCHO CI CA					91730	1008374	No	No	No	No	No	9.003061	4.320061	2	NEM-ST	None	No	NEMPV	VBNH325K Panasonic c			12				
SCE-INT-NST-123759	Interconne SCE	ONTARIO 91764 San Bernar Solar PV			2.941837	2.883					18	182	RoofTop	Fixed	Residential	12/17/2019	12/17/2019	1/2/2020	No	V3 ELECTRI 916-459-2 EL DORAD CA					95762	1000573	Yes	PPA	Sunrun No	No	Yes	Yes	Sunrun	11273.85	3.910457	2	NEM-ST	None	No	NEMPV	Q.Peak Du Hanwha Q-			4		
SCE-INT-NST-123809	Interconne SCE	ONTARIO 91762 San Bernar Solar PV			4.632653	6.304					18	90	RoofTop	Fixed	Residential	12/31/2019	1/9/2020	1/27/2020	No	VIVINT SOL 385-352-01 LEHI UT					84043	973756	Yes	PPA	Vivint Solar No	No	Yes	Yes	Solar Edge Technology	37332.75	5.922073	2	NEM-ST	None	No	NEMPV	CS1H-325N Canadian S			21		
SCE-INT-NST-123853	Interconne SCE	ONTARIO 91762 San Bernar Solar PV			3.914286	3.836					23	114	RoofTop	Fixed	Residential	12/17/2019	3/10/2020	3/25/2020	No	SUNPOWEI877-344-6 Roseville CA					95661	890895	No	No	No	No	17850	4.653284	2	NEM-ST	None	No	NEMPV	SPR-X21-3S SunPower			12					
SCE-INT-NST-12388	Interconne SCE	ONTARIO 91761 San Bernar Solar PV			1020.115	999.713					10	180	RoofTop	Fixed	Commercial	9/20/2017	1/9/2018	1/12/2018	No	RENEWABL 949-337-1 CORONA CA					92880	989857	No	No	No	No	1992000	1.992571	2	NEM-ST	None	No	NEMPV	CS6X-320P Canadian S			3484					
SCE-INT-NST-123948	Interconne SCE	ONTARIO 91762 San Bernar Solar PV			3.518367	3.448					25	181	RoofTop	Fixed	Residential	12/17/2019	12/17/2019	12/18/2019	No	SOLARMA 951-300-0 RIVERSIDE CA					92507	972048	No	No	No	No	12641	3.666183	2	NEM-ST	None	No	NEMPV	SMX-265P Sunspark T			15					
SCE-INT-NST-12395	Interconne SCE	ONTARIO 91761 San Bernar Solar PV			1020.115	999.713					5	180	RoofTop	Fixed	Commercial	9/20/2017	1/23/2018	1/26/2018	No	Renewable 949-337-1 CORONA CA					92880	989857	No	No	No	No	3992000	3.993146	2	NEM-ST	None	No	NEMPV	CS6X-320P Canadian S			3484					
SCE-INT-NST-123974	Interconne SCE	ONTARIO 91761 San Bernar Solar PV			32.33265	31.686					18	180	RoofTop	Fixed	Commercial	12/17/2019	1/2/2020	1/11/2020	No	J D C ENER 909-297-3 RANCHO CI CA					91730	1025569	No	No	No	No	110800	3.496812	2	NEM-ST	None	No	NEMPV	LG335N1C-LG Electroc			105					
SCE-INT-NST-124107	Interconne SCE	ONTARIO 91761 San Bernar Solar PV			7.237755	7.093					20	166	RoofTop	Fixed	Residential	12/18/2019	12/19/2019	1/28/2020	Yes									No	No	No	No	30000	4.229522	2	NEM-ST	None	No	NEMPV	LG335N1C-LG Electroc			2				
SCE-INT-NST-124359	Interconne SCE	ONTARIO 91762 San Bernar Solar PV			3.914286	3.836					27	197	RoofTop	Fixed	Residential	12/19/2019	3/10/2020	3/25/2020	No	SUNPOWEI877-344-6 Roseville CA					95661	890895	No	No	No	No	17850	4.653284	2	NEM-ST	None	No	NEMPV	SPR-X21-3S SunPower			12					
SCE-INT-NST-124369	Interconne SCE	ONTARIO 91762 San Bernar Solar PV			3.914286	3.836					23	107	RoofTop	Fixed	Residential	12/19/2019	4/23/2020	4/27/2020	No	SUNPOWEI941-720-3 RICHMONT CA					94804	890895	No	No	No	No	17850	4.653284	2	NEM-ST	None	No	NEMPV	SPR-X21-3S SunPower			12					
SCE-INT-NST-124373	Interconne SCE	ONTARIO 91762 San Bernar Solar PV			3.914286	3.836					27	180	RoofTop	Fixed	Residential	12/19/2019	2/20/2020	6/12/2020	No	SUNPOWEI941-720-3 RICHMONT CA					94804	890895	Yes	Lease	KB Home No	No	Yes	No	21336	5.562043	2	NEM-ST	None	No	NEMPV	SPR-X21-3S SunPower			12			
SCE-INT-NST-124409	Interconne SCE	ONTARIO 91761 San Bernar Solar PV			5.775551	7.426					23	269	RoofTop	Fixed	Residential	12/19/2019	4/17/2020	4/22/2020	No	FREEDOM 951-319-45 TEMECULA CA					92590	1029644	No	No	No	No	32541	4.382036	2	NEM-ST	None	No	NEMPV	REC290TP2REC Solar			6					
SCE-INT-NST-124411	Interconne SCE	ONTARIO 91764 San Bernar Solar PV			5.207143	5.103					23	270	RoofTop	Fixed	Residential	12/19/2019	12/19/2019	12/20/2019	No	VIVINT SOL 801-845-0 LEHI UT					84043	973756	Yes	PPA	Vivint Solar No	No	Yes	Yes	SolarEdge Technologie	30829.5	6.041446	2	NEM-ST	None	No	NEMPV	CS1H-3					

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Application Preceding 1 Supercedin Matched C Application/Utility	Service City/Service Zip Service Cot Technology System Siz System Siz Storage Ca Storage Siz Inverter Siz Tilt	Azimuth	Mounting	Tracking	Customer 5 App Received	App Complete	App Approved	EDecommis	Self Install	Installer Na	Installer Ph	Installer Ctl	Installer St	Installer Z	CSLB Numt	Third Party	Third Party	Third Party	Face Fin	Face Fin	Electric Vel	Electric Vel	System Out	System Out	Total System	Itc Cost	Cost/Watt	NEM Tariff	Interconne	VNEM	NEF Project	V NEMPV or	Generator	Generator	Generator
SCE-INT-NST-128872	Interconne SCE ONTARIO 91762 San Bernar Solar PV 2.381633 2.334	18	270	RoofTop	Fixed	Residential	1/21/2020	2/14/2020	2/27/2020	No	TESLA ENER1844-834-5: FREMONT CA	94538	888104	Yes	Other	Tesla	No	No	No	No	Yes	Yes	Tesla	12108.8	5.188003	2	NEM-ST	None	No	NEMPV	SC32082	SolarCity	8		
SCE-INT-NST-128884	Interconne SCE ONTARIO 91761 San Bernar Solar PV 3.914286 3.836	18	270	RoofTop	Fixed	Residential	1/21/2020	3/10/2020	3/24/2020	No	SUNPOWER1877-344-6: ROSEVILLE CA	95661	890895	Yes	Lease	KB Home	No	No	No	No	Yes	Yes	121336	5.562043	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower	12				
SCE-INT-NST-128887	Interconne SCE ONTARIO 91761 San Bernar Solar PV 3.914286 3.836	18	270	RoofTop	Fixed	Residential	1/21/2020	3/9/2020	3/23/2020	No	SUNPOWER1877-344-6: ROSEVILLE CA	95661	890895	Yes	Lease	KB Home	No	No	No	Yes	No	21336	5.562043	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower	12					
SCE-INT-NST-128895	Interconne SCE ONTARIO 91761 San Bernar Solar PV 2.935714 2.877	27	180	RoofTop	Fixed	Residential	1/21/2020	4/15/2020	4/22/2020	No	SUNPOWER1941-720-3: RICHMOND CA	94804	890895	No	Lease	KB Home	No	No	No	Yes	No	13387.5	4.653284	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower	9					
SCE-INT-NST-128934	Interconne SCE ONTARIO 91764 San Bernar Solar PV 3.197959 3.134	18	180	RoofTop	Fixed	Residential	1/21/2020	4/23/2020	4/27/2020	No	SOLCIUS LL 800-960-41: PROVO UT	84604	976336	No	Lease	KB Home	No	No	No	Yes	No	15456	4.931716	2	NEM-ST	None	No	NEMPV	SN310M-115-ENergy	11					
SCE-INT-NST-129042	Interconne SCE ONTARIO 91762 San Bernar Solar PV 2.935714 2.877	18	180	RoofTop	Fixed	Residential	1/22/2020	3/10/2020	3/25/2020	No	SUNPOWER1877-344-6: ROSEVILLE CA	95661	890895	Yes	Lease	KB Home	No	No	No	Yes	No	16002	5.562043	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower	9					
SCE-INT-NST-129045	Interconne SCE ONTARIO 91762 San Bernar Solar PV 2.935714 2.877	18	270	RoofTop	Fixed	Residential	1/22/2020	4/15/2020	4/21/2020	No	SUNPOWER1941-720-3: RICHMOND CA	94804	890895	Yes	Lease	KB Home	No	No	No	Yes	No	16002	5.562043	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower	9					
SCE-INT-NST-129048	Interconne SCE ONTARIO 91762 San Bernar Solar PV 2.935714 2.877	23	270	RoofTop	Fixed	Residential	1/22/2020	2/28/2020	3/12/2020	No	SUNPOWER1877-344-6: ROSEVILLE CA	95661	890895	No	Lease	KB Home	No	No	No	Yes	No	13387.5	4.653284	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower	9					
SCE-INT-NST-129052	Interconne SCE ONTARIO 91761 San Bernar Solar PV 3.914286 3.836	23	270	RoofTop	Fixed	Residential	1/22/2020	3/9/2020	3/23/2020	No	SUNPOWER1877-344-6: ROSEVILLE CA	95661	890895	No	Lease	KB Home	No	No	No	Yes	No	17850	4.653284	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower	12					
SCE-INT-NST-129076	Interconne SCE ONTARIO 91761 San Bernar Solar PV 2.765306 2.71	23	90	RoofTop	Fixed	Residential	1/22/2020	3/9/2020	3/24/2020	No	SUNPOWER1877-344-6: ROSEVILLE CA	95661	890895	No	Lease	KB Home	No	No	No	Yes	No	12813.75	4.728321	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower	9					
SCE-INT-NST-129079	Interconne SCE ONTARIO 91761 San Bernar Solar PV 2.765306 2.71	23	180	RoofTop	Fixed	Residential	1/22/2020	2/25/2020	3/6/2020	No	SUNPOWER1877-344-6: ROSEVILLE CA	95661	890895	No	Lease	KB Home	No	No	No	Yes	No	12813.75	4.728321	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower	9					
SCE-INT-NST-129083	Interconne SCE ONTARIO 91761 San Bernar Solar PV 2.765306 2.71	27	180	RoofTop	Fixed	Residential	1/22/2020	2/26/2020	3/6/2020	No	SUNPOWER1877-344-6: ROSEVILLE CA	95661	890895	Yes	Lease	DR Horton	No	No	No	Yes	No	15316.2	5.651734	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower	9					
SCE-INT-NST-129322	Interconne SCE ONTARIO 91761 San Bernar Solar PV 2.765306 2.71	27	180	RoofTop	Fixed	Residential	1/23/2020	2/18/2020	3/2/2020	No	SUNPOWER1877-344-6: ROSEVILLE CA	95661	890895	Yes	Lease	DR Horton	No	No	No	Yes	No	15316.2	5.651734	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower	9					
SCE-INT-NST-129326	Interconne SCE ONTARIO 91761 San Bernar Solar PV 2.765306 2.71	18	270	RoofTop	Fixed	Residential	1/23/2020	3/19/2020	4/2/2020	No	SUNPOWER1941-720-3: RICHMOND CA	94804	890895	Yes	Lease	DR Horton	No	No	No	Yes	No	15316.2	5.651734	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower	9					
SCE-INT-NST-129333	Interconne SCE ONTARIO 91761 San Bernar Solar PV 2.765306 2.71	23	180	RoofTop	Fixed	Residential	1/23/2020	2/20/2020	3/3/2020	No	SUNPOWER1877-344-6: ROSEVILLE CA	95661	890895	Yes	Lease	DR Horton	No	No	No	Yes	No	15316.2	5.651734	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower	9					
SCE-INT-NST-129440	Decommis: SCE ONTARIO 91762 San Bernar Solar PV 2.935714 2.877	18	180	RoofTop	Fixed	Residential	1/23/2020	4/15/2020	4/20/2020	7/23/2021	No	SUNPOWER1941-720-3: RICHMOND CA	94804	890895	No	Lease	DR Horton	No	No	No	Yes	No	13387.5	4.653284	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower	9				
SCE-INT-NST-129445	Interconne SCE ONTARIO 91762 San Bernar Solar PV 3.914286 3.836	18	180	RoofTop	Fixed	Residential	1/23/2020	2/28/2020	3/12/2020	No	SUNPOWER1877-344-6: ROSEVILLE CA	95661	890895	No	Lease	DR Horton	No	No	No	Yes	No	17850	4.653284	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower	12					
SCE-INT-NST-129449	Interconne SCE ONTARIO 91762 San Bernar Solar PV 2.935714 2.877	18	180	RoofTop	Fixed	Residential	1/23/2020	3/10/2020	3/24/2020	No	SUNPOWER1877-344-6: ROSEVILLE CA	95661	890895	No	Lease	DR Horton	No	No	No	Yes	No	13387.5	4.653284	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower	9					
SCE-INT-NST-129452	Interconne SCE ONTARIO 91762 San Bernar Solar PV 2.935714 2.877	18	180	RoofTop	Fixed	Residential	1/23/2020	4/15/2020	4/20/2020	No	SUNPOWER1941-720-3: RICHMOND CA	94804	890895	No	Lease	DR Horton	No	No	No	Yes	No	13387.5	4.653284	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower	9					
SCE-INT-NST-129455	Interconne SCE ONTARIO 91762 San Bernar Solar PV 2.935714 2.877	18	180	RoofTop	Fixed	Residential	1/23/2020	5/26/2020	5/27/2020	No	SUNPOWER1941-720-3: RICHMOND CA	94804	890895	No	Lease	DR Horton	No	No	No	Yes	No	13387.5	4.653284	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower	9					
SCE-INT-NST-129463	Interconne SCE ONTARIO 91762 San Bernar Solar PV 2.935714 2.877	18	180	RoofTop	Fixed	Residential	1/23/2020	3/11/2020	3/26/2020	No	SUNPOWER1877-344-6: ROSEVILLE CA	95661	890895	Yes	Lease	KB Home	No	No	No	Yes	No	16002	5.562043	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower	9					
SCE-INT-NST-129468	Interconne SCE ONTARIO 91762 San Bernar Solar PV 2.935714 2.877	18	180	RoofTop	Fixed	Residential	1/23/2020	3/9/2020	3/23/2020	No	SUNPOWER1877-344-6: ROSEVILLE CA	95661	890895	No	Lease	KB Home	No	No	No	Yes	No	13387.5	4.653284	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower	9					
SCE-INT-NST-129472	Interconne SCE ONTARIO 91762 San Bernar Solar PV 2.935714 2.877	18	180	RoofTop	Fixed	Residential	1/23/2020	3/2/2020	3/13/2020	No	SUNPOWER1877-344-6: ROSEVILLE CA	95661	890895	No	Lease	KB Home	No	No	No	Yes	No	13387.5	4.653284	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower	9					
SCE-INT-NST-129477	Interconne SCE ONTARIO 91762 San Bernar Solar PV 3.914286 3.836	18	270	RoofTop	Fixed	Residential	1/23/2020	3/10/2020	3/24/2020	No	SUNPOWER1877-344-6: ROSEVILLE CA	95661	890895	Yes	Lease	KB Home	No	No	No	Yes	No	21336	5.562043	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower	12					
SCE-INT-NST-129593	Interconne SCE ONTARIO 91762 San Bernar Solar PV 3.914286 3.836	18	180	RoofTop	Fixed	Residential	1/24/2020	4/8/2020	4/14/2020	No	SUNPOWER1941-720-3: RICHMOND CA	94804	890895	Yes	Lease	Richmond / No	No	No	No	Yes	No	21336	5.562043	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower	12					
SCE-INT-NST-129594	Interconne SCE ONTARIO 91762 San Bernar Solar PV 7.094898 6.953	21	268	RoofTop	Fixed	Residential	1/24/2020	2/6/2020	2/19/2020	No	PRO CUST C 732-902-6: SOUTH PL NJ	7080	1026366	No	Lease	Richmond / No	No	No	No	Yes	No	22000	3.164101	2	NEM-ST	None	No	NEMPV	LG350N1C-LG Elector	22					
SCE-INT-NST-129599	Interconne SCE ONTARIO 91762 San Bernar Solar PV 3.914286 3.836	27	180	RoofTop	Fixed	Residential	1/24/2020	4/7/2020	4/13/2020	No	SUNPOWER1941-720-3: RICHMOND CA	94804	890895	Yes	Lease	Richmond / No	No	No	No	Yes	No	21336	5.562043	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower	12					
SCE-INT-NST-129670	Interconne SCE ONTARIO 91762 San Bernar Solar PV 2.935714 2.877	18	180	RoofTop	Fixed	Residential	1/24/2020	2/12/2020	2/16/2020	No	SUNPOWER1941-720-3: RICHMOND CA	94804	890895	No	Lease	Richmond / No	No	No	No	Yes	No	9966.25	4.727822	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower	7					
SCE-INT-NST-129676	Interconne SCE ONTARIO 91762 San Bernar Solar PV 8.488776 8.319	19	180	RoofTop	Fixed	Residential	1/27/2020	1/27/2020	2/6/2020	No	COMMUN 877-966-3: YUCAIPA CA	92399	1045673	No	Lease	HERO	Yes	HERO	Yes	1	No	49436	5.942541	2	NEM-ST	None	No	NEMPV	HIS-5290R/Hyundai En	32					
SCE-INT-NST-129990	Interconne SCE ONTARIO 91761 San Bernar Solar PV 2.935714 2.877	18	180	RoofTop	Fixed	Residential	1/28/2020	6/3/2020	6/5/2020	No	SUNPOWER1941-720-3: RICHMOND CA	94804	890895	No	Lease	KB Home	No	No	No	Yes	No	13387.5	4.653284	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower	9					
SCE-INT-NST-129991	Interconne SCE ONTARIO 91761 San Bernar Solar PV 2.935714 2.877	18	180	RoofTop	Fixed	Residential	1/28/2020	6/3/2020	6/5/2020	No	SUNPOWER1941-720-3: RICHMOND CA	94804	890895	No	Lease	KB Home	No	No	No	Yes	No	13387.5	4.653284	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower	9					
SCE-INT-NST-129992	Interconne SCE ONTARIO 91761 San Bernar Solar PV 2.935714 2.877	18	180	RoofTop	Fixed	Residential	1/28/2020	6/3/2020	6/5/2020	No	SUNPOWER1941-720-3: RICHMOND CA	94804	890895	No	Lease	KB Home	No	No	No	Yes	No	13387.5	4.653284	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower	9					
SCE-INT-NST-130007	Interconne SCE ONTARIO 91762 San Bernar Solar PV 4.483673 4.394	18	270	RoofTop	Fixed	Residential	1/28/2020	2/12/2020	2/26/2020	No	V3 ELECTRI 916-459-2: EL DORAD CA	95762	1000573	Yes	Lease	PPA Sunrun	No	No	No	Yes	Yes	Sunrun	16828.8	3.829949	2	NEM-ST	None	No	NEMPV	Q.Peak Du/Hanwha Q-	15				
SCE-INT-NST-130034	Interconne SCE ONTARIO 91761 San Bernar Solar PV 2.765306 2.71	27	270	RoofTop	Fixed	Residential	1/28/2020	1/10/2021	1/14/2021	No	SUNPOWER1941-720-3: RICHMOND CA	94804	890895	No	Lease	KB Home	No	No	No	Yes	No	12813.75	4.728321	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower	9					
SCE-INT-NST-130045	Interconne SCE ONTARIO 91761 San Bernar Solar PV 2.765306 2.71	18	180	RoofTop	Fixed	Residential	1/28/2020	6/1/2020	6/3/2020	No	SUNPOWER1941-720-3: RICHMOND CA	94804	890895	No	Lease	KB Home	No	No	No	Yes	No	12813.75	4.728321	2	NEM-ST	None	No								

Ontario Quantification Workbook

Application Preceding 1	Supercedin	Matched C	Application/Utility	Service City/Service Zip	Service Cot	Technology	System Siz	System Siz	Storage Ca	Storage Siz	Inverter Siz	Tilt	Azimuth	Mounting I	Tracking	Customer 5	App Received	App Complete	App Approved	EDecommis	Self Installe	Installer Na	Installer Ph	Installer Cil	Installer St	Installer Zi	CSLB Numt	Third Party	Third Party	Third Party	Third Party	Finan	Finan	Electric Vel	Electric Vel	System Out	System Out	System Out	Total Syste	Itc Cost	Cost/Watt	NEM Tariff	Interconne	VNEM	NEF Project	V NEMPV or	Generator	Generator	Generator
SCE-INT-NST-141939			Interconne SCE	ONTARIO	91762	San Bernar Solar PV	5.910204	5.792				18	90	Rooftop	Fixed	Residential	4/27/2020	4/27/2020	4/30/2020	No	TESLA ENEI844-837-5-FREMONT CA				94538	888104	Yes	Lease		Tesla Energy No			Yes	Yes	Tesla Energy			30272	5.226519		2 NEM-ST	None	No	NEMPV	Q,PEAK DU Hanwha Q-			20	
SCE-INT-NST-142032			Interconne SCE	ONTARIO	91762	San Bernar Solar PV	9.361224	9.174				18	180	Rooftop	Fixed	Residential	4/28/2020	4/28/2020	4/29/2020	No	SOLARMAX951-300-0-RIVERSIDE CA				92507	972048	No	PPA	SunRun	No	No	Yes	Yes	SunRun			37588.24	4.097257		2 NEM-ST	None	No	NEMPV	SST-300M Sunspark T			33		
SCE-INT-NST-142085			Interconne SCE	ONTARIO	91762	San Bernar Solar PV	3.267245	3.224				12	180	Rooftop	Fixed	Residential	4/28/2020	4/28/2020	4/29/2020	No	COMPLETE 877-299-45-SAN RAMO CA				94583	961988	Yes	PPA	SunRun	No	No	Yes	Yes	SunRun			19181.5	4.599865		2 NEM-ST	None	No	NEMPV	Q,PEAK DU Hanwha Q-			13		
SCE-INT-NST-142098			Interconne SCE	ONTARIO	91762	San Bernar Solar PV	5.328571	5.222				18	179	Rooftop	Fixed	Residential	4/28/2020	6/23/2020	6/27/2020	No	GRID ALITE1510-731-1-DANLAND CA				94608	867533	Yes	PPA	Sunrun	No	No	Yes	Yes	Sunrun			14376.38	5.458003		2 NEM-ST	None	No	NEMPV	Q,PEAK DU Hanwha Q-			5		
SCE-INT-NST-142124			Interconne SCE	ONTARIO	91762	San Bernar Solar PV	3.470408	3.401				15	180	Rooftop	Fixed	Residential	10/5/2017	10/5/2017	10/13/2017	No	WINDTEK 1310-694-6-PANORAM CA				91402	831210	No			No	No	No	No	Yes	Yes	26660	5.105323		2 NEM-ST	None	No	NEMPV	SPR-A410-SunPower			7			
SCE-INT-NST-142164			Interconne SCE	ONTARIO	91762	San Bernar Solar PV	3.063265	3.002				14	180	Rooftop	Fixed	Residential	4/29/2020	6/3/2020	6/5/2020	No	VIVINT SOL 801-845-0-LEHI UT				84043	973756	No			No	No	Yes	Yes	SolarEdge 1 20563.49	12500	3.675389		2 NEM-ST	None	No	NEMPV	SW 325 XL SolarWorld			12				
SCE-INT-NST-14217			Interconne SCE	ONTARIO	91762	San Bernar Solar PV	2.916327	2.858				22	180	Rooftop	Fixed	Residential	10/5/2017	10/5/2017	10/6/2017	No	SOLARCITY 888-765-2-SAN MATEI CA				94402	888104	Yes	PPA	SolarCity	No	No	No	No	Yes	No	15230	5.328901		2 NEM-ST	None	No	NEMPV	TSM-300D Changzhou			11			
SCE-INT-NST-142313			Interconne SCE	ONTARIO	91761	San Bernar Solar PV	2.22551	2.181				18	209	Rooftop	Fixed	Residential	4/29/2020	5/15/2020	5/18/2020	No	SUNSTREET1949-450-58-MIAMI FL				33172	1001133	Yes	PPA	Lennar Hor No	No	Yes	No	Yes	No	7800	3.576341		2 NEM-ST	None	No	NEMPV	BVM6610A-Boviet Sola			8				
SCE-INT-NST-142320			Interconne SCE	ONTARIO	91761	San Bernar Solar PV	2.22551	2.181				18	209	Rooftop	Fixed	Residential	4/29/2020	7/1/2020	7/9/2020	No	SUNSTREET1949-450-58-MIAMI FL				33172	1001133	Yes	PPA	Lennar Hor No	No	Yes	No	1	0.000458		2 NEM-ST	None	No	NEMPV	BVM6610A-Boviet Sola			8						
SCE-INT-NST-142399			Interconne SCE	ONTARIO	91761	San Bernar Solar PV	2.22551	2.181				14	209	Rooftop	Fixed	Residential	4/30/2020	5/15/2020	5/18/2020	No	SUNSTREET1949-450-58-MIAMI FL				33172	1001133	Yes	PPA	Lennar Hor No	No	Yes	No	7800	3.576341		2 NEM-ST	None	No	NEMPV	BVM6610A-Boviet Sola			8						
SCE-INT-NST-142401			Interconne SCE	ONTARIO	91761	San Bernar Solar PV	2.22551	2.181				18	209	Rooftop	Fixed	Residential	4/30/2020	5/15/2020	5/18/2020	No	SUNSTREET1949-450-58-MIAMI FL				33172	1001133	Yes	PPA	Lennar Hor No	No	Yes	No	7800	3.576341		2 NEM-ST	None	No	NEMPV	BVM6610A-Boviet Sola			8						
SCE-INT-NST-142405			Interconne SCE	ONTARIO	91761	San Bernar Solar PV	2.22551	2.181				14	119	Rooftop	Fixed	Residential	4/30/2020	5/15/2020	5/18/2020	No	SUNSTREET1949-450-58-MIAMI FL				33172	1001133	Yes	PPA	Lennar Hor No	No	Yes	No	7800	3.576341		2 NEM-ST	None	No	NEMPV	BVM6610A-Boviet Sola			8						
SCE-INT-NST-142408			Interconne SCE	ONTARIO	91761	San Bernar Solar PV	2.22551	2.181				18	209	Rooftop	Fixed	Residential	4/30/2020	5/15/2020	5/18/2020	No	SUNSTREET1949-450-58-MIAMI FL				33172	1001133	Yes	PPA	Lennar Hor No	No	Yes	No	7800	3.576341		2 NEM-ST	None	No	NEMPV	BVM6610A-Boviet Sola			8						
SCE-INT-NST-142414			Interconne SCE	ONTARIO	91761	San Bernar Solar PV	2.22551	2.181				14	209	Rooftop	Fixed	Residential	4/30/2020	5/15/2020	5/18/2020	No	SUNSTREET1949-450-58-MIAMI FL				33172	1001133	Yes	PPA	Lennar Hor No	No	Yes	No	7800	3.576341		2 NEM-ST	None	No	NEMPV	BVM6610A-Boviet Sola			8						
SCE-INT-NST-142416			Interconne SCE	ONTARIO	91761	San Bernar Solar PV	2.22551	2.181				18	209	Rooftop	Fixed	Residential	4/30/2020	5/15/2020	5/18/2020	No	SUNSTREET1949-450-58-MIAMI FL				33172	1001133	Yes	PPA	Lennar Hor No	No	Yes	No	7800	3.576341		2 NEM-ST	None	No	NEMPV	BVM6610A-Boviet Sola			8						
SCE-INT-NST-142434			Interconne SCE	ONTARIO	91762	San Bernar Solar PV	8.002041	7.842				19	180	Rooftop	Fixed	Residential	4/30/2020	4/30/2020	5/1/2020	No	EMPIRE SO 385-283-0-SALT LAKE UT				84111	1062912	No			No	No	No	No	Yes	No	51303	6.542081		2 NEM-ST	None	No	NEMPV	AC-310M/Axitec			14			
SCE-INT-NST-142436			Interconne SCE	ONTARIO	91761	San Bernar Solar PV	2.935714	2.877				18	270	Rooftop	Fixed	Residential	4/30/2020	6/25/2020	7/2/2020	No	SUNPOWER1877-344-66-RICHMONC CA				94804	890895	Yes	Lease	DR Horton No	No	No	Yes	No	1	0.000347		2 NEM-ST	None	No	NEMPV	SPR-X21-3S SunPower			9					
SCE-INT-NST-142442			Interconne SCE	ONTARIO	91761	San Bernar Solar PV	2.935714	2.877				18	180	Rooftop	Fixed	Residential	4/30/2020	6/30/2020	7/8/2020	No	SUNPOWER1877-344-66-RICHMONC CA				94804	890895	No			No	No	Yes	No	13387.5	4.653284		2 NEM-ST	None	No	NEMPV	SPR-X21-3S SunPower			9					
SCE-INT-NST-142478			Interconne SCE	ONTARIO	91762	San Bernar Solar PV	6.12551	6.003				21	181	Rooftop	Fixed	Residential	4/30/2020	6/9/2020	6/11/2020	No	VIVINT SOL 801-845-0-LEHI UT				84043	973756	Yes	PPA	Vivint Solar No	No	Yes	Yes	SolarEdge Technologie	37505	6.247709		2 NEM-ST	None	No	NEMPV	CS1H-325A Canadian S			7					
SCE-INT-NST-142710			Interconne SCE	ONTARIO	91761	San Bernar Solar PV	5.328571	5.222				23	258	Rooftop	Fixed	Residential	5/4/2020	6/22/2020	6/26/2020	No	PACIFIC STI 323-928-8-RANCHO CI CA				91730	965340	No			No	No	Yes	Yes	26948.8	5.160628		2 NEM-ST	None	No	NEMPV	SPR-A410-SunPower			7					
SCE-INT-NST-142993			Interconne SCE	ONTARIO	91761	San Bernar Solar PV	18.07551	17.714				24	148	Rooftop	Fixed	Residential	5/6/2020	5/6/2020	5/7/2020	No	SOLARMAX951-300-0-RIVERSIDE CA				92507	972048	No			No	No	No	No	Yes	Yes	57861	3.266399		2 NEM-ST	None	No	NEMPV	LG320N1K-LG Elector			32			
SCE-INT-NST-143165			Interconne SCE	ONTARIO	91761	San Bernar Solar PV	2.610204	2.558				18	180	Rooftop	Fixed	Residential	5/7/2020	7/27/2020	8/3/2020	No	SUNPOWER1877-344-66-RICHMONC CA				94804	890895	Yes	Lease	Brookfield No	No	Yes	No	14224	5.560594		2 NEM-ST	None	No	NEMPV	SPR-X21-3S SunPower			8						
SCE-INT-NST-143168			Interconne SCE	ONTARIO	91761	San Bernar Solar PV	2.610204	2.558				18	180	Rooftop	Fixed	Residential	5/7/2020	7/27/2020	8/3/2020	No	SUNPOWER1877-344-66-RICHMONC CA				94804	890895	No			No	No	Yes	No	11900	4.652071		2 NEM-ST	None	No	NEMPV	SPR-X21-3S SunPower			10					
SCE-INT-NST-143170			Interconne SCE	ONTARIO	91761	San Bernar Solar PV	3.262245	3.197				18	270	Rooftop	Fixed	Residential	5/7/2020	7/29/2020	8/8/2020	No	SUNPOWER1877-344-66-RICHMONC CA				94804	890895	No			No	No	Yes	No	14875	4.652799		2 NEM-ST	None	No	NEMPV	SPR-X21-3S SunPower			8					
SCE-INT-NST-143172			Interconne SCE	ONTARIO	91761	San Bernar Solar PV	3.262245	3.197				18	270	Rooftop	Fixed	Residential	5/7/2020	7/29/2020	8/8/2020	No	SUNPOWER1877-344-66-RICHMONC CA				94804	890895	No			No	No	Yes	No	14875	4.652799		2 NEM-ST	None	No	NEMPV	SPR-X21-3S SunPower			10					
SCE-INT-NST-143173			Interconne SCE	ONTARIO	91761	San Bernar Solar PV	2.610204	2.558				18	270	Rooftop	Fixed	Residential	5/7/2020	10/12/2020	10/12/2020	No	SUNPOWER1877-344-66-RICHMONC CA				94804	890895	No			No	No	Yes	No	11900	4.652071		2 NEM-ST	None	No	NEMPV	SPR-X21-3S SunPower			8					
SCE-INT-NST-143174			Interconne SCE	ONTARIO	91761	San Bernar Solar PV	2.610204	2.558				18	180	Rooftop	Fixed	Residential	5/7/2020	8/24/2020	9/2/2020	No	SUNPOWER1877-344-66-RICHMONC CA				94804	890895	No			No	No	Yes	No	11900	4.652071		2 NEM-ST	None	No	NEMPV	SPR-X21-3S SunPower			8					
SCE-INT-NST-143175			Interconne SCE	ONTARIO	91761	San Bernar Solar PV	2.610204	2.558				18	90	Rooftop	Fixed	Residential	5/7/2020	6/19/2020	6/25/2020	No	SUNPOWER1877-344-66-RICHMONC CA				94804	890895	Yes	Lease	Brookfield No	No	Yes	No	14224	5.560594		2 NEM-ST	None	No	NEMPV	SPR-X21-3S SunPower			8						
SCE-INT-NST-143318			Interconne SCE	ONTARIO	91762	San Bernar Solar PV	5.05102	4.95				22	180	Rooftop	Fixed	Residential	5/8/2020	5/8/2020	5/11/2020	No	VIVINT SOL 801-845-0-LEHI UT				84043	973756	Yes	PPA	Vivint Solar No	No	Yes	Yes	Solar Edge Technolog	32096	6.4840														

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SCE-INT-NST-145771	Interconne SCE	ONTARIO 91761	San Bernar Solar PV	3.59898	3.527	18	180	RoofTop Fixed	Residential 6/1/2020	6/1/2020	6/2/2020	No	ENERGY SE 866-865-4 TORRANCE CA	90502	619149	No	No	No	Yes	No	12453.35	3.530861		2 NEM-ST	None	None	NEMPV	SN310M-11S-Energy	13		
SCE-INT-NST-145823	Interconne SCE	ONTARIO 91764	San Bernar Solar PV	5.65204	5.539	27	180	RoofTop Fixed	Residential 6/1/2020	6/1/2020	6/2/2020	No	A C A SOLA 909-606-86 CHINO HILL CA	91709	952623	No	No	No	Yes	No	14000	2.527532		2 NEM-ST	None	None	NEMPV	Q PEAK DU Hanwha Q-	15		
SCE-INT-NST-145949	Interconne SCE	ONTARIO 91761	San Bernar Solar PV	4.571429	4.48	23	269	RoofTop Fixed	Residential 6/2/2020	7/10/2020	7/18/2020	No	FREEDOM 951-252-6 TEMECULA CA	92590	1029644	Yes	Lease	SUNRUN	No	Yes	No	1	0.000223		2 NEM-ST	None	None	NEMPV	Q PEAK DU Hanwha Q-	15	
SCE-INT-NST-146083	Interconne SCE	ONTARIO 91761	San Bernar Solar PV	9.213627	9.034	18	90	RoofTop Fixed	Residential 6/1/2020	7/9/2020	7/16/2020	No	FREEDOM 951-252-6 TEMECULA CA	92590	1029644	Yes	Lease	SUNRUN	No	Yes	No	1	0.00021		2 NEM-ST	None	None	NEMPV	Q PEAK DU Hanwha Q-	9	
SCE-INT-NST-146088	Interconne SCE	ONTARIO 91761	San Bernar Solar PV	2.935714	2.877	18	90	RoofTop Fixed	Residential 6/3/2020	7/24/2020	8/3/2020	No	SUNPOWER 877-344-66 RICHMOND CA	94804	890895	No	No	No	Yes	No	13387.5	4.653284		2 NEM-ST	None	None	NEMPV	SPR-X21-3S SunPower	9		
SCE-INT-NST-146088	Interconne SCE	ONTARIO 91761	San Bernar Solar PV	2.935714	2.877	18	180	RoofTop Fixed	Residential 6/3/2020	7/15/2020	7/23/2020	No	SUNPOWER 877-344-66 RICHMOND CA	94804	890895	No	No	No	Yes	No	13387.5	4.653284		2 NEM-ST	None	None	NEMPV	SPR-X21-3S SunPower	9		
SCE-INT-NST-146095	Interconne SCE	ONTARIO 91761	San Bernar Solar PV	2.935714	2.877	18	249	RoofTop Fixed	Residential 6/3/2020	7/14/2020	7/21/2020	No	SUNPOWER 877-344-66 RICHMOND CA	94804	890895	No	No	No	Yes	No	13387.5	4.653284		2 NEM-ST	None	None	NEMPV	SPR-X21-3S SunPower	9		
SCE-INT-NST-146102	Interconne SCE	ONTARIO 91761	San Bernar Solar PV	2.935714	2.877	18	180	RoofTop Fixed	Residential 6/3/2020	7/24/2020	8/3/2020	No	SUNPOWER 877-344-66 RICHMOND CA	94804	890895	No	No	No	Yes	No	13387.5	4.653284		2 NEM-ST	None	None	NEMPV	SPR-X21-3S SunPower	9		
SCE-INT-NST-146223	Interconne SCE	ONTARIO 91761	San Bernar Solar PV	2.935714	2.877	18	270	RoofTop Fixed	Residential 6/4/2020	7/22/2020	7/29/2020	No	SUNPOWER 877-344-66 RICHMOND CA	94804	890895	Yes	Lease	DR Horton	No	Yes	No	1	0.000347		2 NEM-ST	None	None	NEMPV	SPR-X21-3S SunPower	9	
SCE-INT-NST-146224	Interconne SCE	ONTARIO 91761	San Bernar Solar PV	2.935714	2.877	18	270	RoofTop Fixed	Residential 6/4/2020	7/23/2020	7/31/2020	No	SUNPOWER 877-344-66 RICHMOND CA	94804	890895	No	No	No	Yes	No	13387.5	4.653284		2 NEM-ST	None	None	NEMPV	SPR-X21-3S SunPower	9		
SCE-INT-NST-146225	Interconne SCE	ONTARIO 91761	San Bernar Solar PV	2.935714	2.877	18	270	RoofTop Fixed	Residential 6/4/2020	7/22/2020	7/29/2020	No	SUNPOWER 877-344-66 RICHMOND CA	94804	890895	No	No	No	Yes	No	13387.5	4.653284		2 NEM-ST	None	None	NEMPV	SPR-X21-3S SunPower	9		
SCE-INT-NST-146319	Interconne SCE	ONTARIO 91762	San Bernar Solar PV	5.644898	5.532	22	180	RoofTop Fixed	Residential 6/4/2020	6/4/2020	6/5/2020	No	VIVINT SOL 801-845-01 LEHI UT	84043	973756	Yes	PPA	Vivint Solar	No	Yes	Yes	SolarEdge Technologie	35142.4	6.325566		2 NEM-ST	None	None	NEMPV	JKM320M-Jinko Solar	9
SCE-INT-NST-146350	Interconne SCE	ONTARIO 91762	San Bernar Solar PV	2.673469	2.62	20	269	RoofTop Fixed	Residential 6/4/2020	6/4/2020	6/5/2020	No	VIVINT SOL 801-845-01 LEHI UT	84043	973756	Yes	PPA	VivintSolar	No	Yes	Yes	Solar Edge Technologie	16646.4	6.353587		2 NEM-ST	None	None	NEMPV	JKM320M-Jinko Solar	9
SCE-INT-NST-146427	Interconne SCE	ONTARIO 91761	San Bernar Solar PV	4.427551	4.339	23	180	RoofTop Fixed	Residential 6/4/2020	6/4/2020	6/5/2020	No	SUNLUX 909-757-01 RANCHO C CA	91730	1008374	Yes	Lease	SUNRUN	No	Yes	Yes	SUNRUN	16159.5	3.724245		2 NEM-ST	None	None	NEMPV	Q PEAK DU Hanwha Q-	15
SCE-INT-NST-146440	Interconne SCE	ONTARIO 91761	San Bernar Solar PV	3.15	2.877	18	270	RoofTop Fixed	Residential 6/5/2020	2/18/2021	2/24/2021	No	SUNPOWER 877-344-66 RICHMOND CA	94804	890895	No	No	No	Yes	Yes	13387.5	4.653284		2 NEM-ST	None	None	NEMPV	SPR-X21-3S SunPower	9		
SCE-INT-NST-146441	Interconne SCE	ONTARIO 91761	San Bernar Solar PV	2.935714	2.877	18	270	RoofTop Fixed	Residential 6/5/2020	12/3/2020	13/9/2020	No	SUNPOWER 877-344-66 RICHMOND CA	94804	890895	No	No	No	Yes	No	13387.5	4.653284		2 NEM-ST	None	None	NEMPV	SPR-X21-3S SunPower	9		
SCE-INT-NST-146442	Interconne SCE	ONTARIO 91761	San Bernar Solar PV	3.59625	2.877	18	270	RoofTop Fixed	Residential 6/5/2020	7/20/2021	7/26/2021	No	SUNPOWER 877-344-66 RICHMOND CA	94804	890895	No	No	No	Yes	No	13387.5	4.653284		2 NEM-ST	None	None	NEMPV	SPR-X21-3S SunPower	9		
SCE-INT-NST-146442	Interconne SCE	ONTARIO 91761	San Bernar Solar PV	3.59625	2.877	18	270	RoofTop Fixed	Residential 6/5/2020	6/5/2020	6/8/2020	No	ENERGY SE 866-865-4 TORRANCE CA	90502	619149	No	PPA	Sunrun	No	Yes	No				2 NEM-ST	None	None	NEMPV	Q PEAK DU Hanwha Q-	12	
SCE-INT-NST-146443	Interconne SCE	ONTARIO 91761	San Bernar Solar PV	4.67088	3.401	18	180	RoofTop Fixed	Residential 6/5/2020	6/5/2020	6/9/2020	No	V3 ELECTRI 916-382-81 EL DORAD CA	95762	1000573	Yes	PPA	Sunrun	No	Yes	Yes	Sunrun	4312.26	1.267938		2 NEM-ST	None	None	NEMPV	Q PEAK DU Hanwha Q-	12
SCE-INT-NST-146453	Interconne SCE	ONTARIO 91761	San Bernar Solar PV	3.470088	3.336	18	339	RoofTop Fixed	Residential 6/9/2020	8/13/2020	8/21/2020	No	SUNPOWER 877-344-66 RICHMOND CA	94804	890895	No	No	No	Yes	No	13387.5	4.653284		2 NEM-ST	None	None	NEMPV	SPR-X21-3S SunPower	9		
SCE-INT-NST-146800	Interconne SCE	ONTARIO 91761	San Bernar Solar PV	3.914286	3.836	23	180	RoofTop Fixed	Residential 6/9/2020	7/13/2020	7/20/2020	No	SUNPOWER 877-344-66 RICHMOND CA	94804	890895	No	No	No	Yes	No	13387.5	4.653284		2 NEM-ST	None	None	NEMPV	SPR-X21-3S SunPower	9		
SCE-INT-NST-146817	Interconne SCE	ONTARIO 91761	San Bernar Solar PV	3.914286	3.836	27	180	RoofTop Fixed	Residential 6/9/2020	7/16/2020	7/23/2020	No	SUNPOWER 877-344-66 RICHMOND CA	94804	890895	Yes	Lease	KB Home	No	Yes	No	1	0.00026		2 NEM-ST	None	None	NEMPV	SPR-X21-3S SunPower	12	
SCE-INT-NST-146822	Interconne SCE	ONTARIO 91761	San Bernar Solar PV	3.914286	3.836	27	270	RoofTop Fixed	Residential 6/9/2020	7/23/2020	7/30/2020	No	SUNPOWER 877-344-66 RICHMOND CA	94804	890895	No	No	No	Yes	No	17850	4.653284		2 NEM-ST	None	None	NEMPV	SPR-X21-3S SunPower	12		
SCE-INT-NST-146958	Interconne SCE	ONTARIO 91762	San Bernar Solar PV	3.914286	3.836	18	180	RoofTop Fixed	Residential 6/10/2020	8/3/2020	8/12/2020	No	SUNPOWER 877-344-66 RICHMOND CA	94804	890895	No	No	No	Yes	No	17850	4.653284		2 NEM-ST	None	None	NEMPV	SPR-X21-3S SunPower	12		
SCE-INT-NST-146961	Interconne SCE	ONTARIO 91762	San Bernar Solar PV	3.914286	3.836	18	180	RoofTop Fixed	Residential 6/10/2020	10/8/2020	10/8/2020	No	SUNPOWER 877-344-66 RICHMOND CA	94804	890895	No	No	No	Yes	No	17850	4.653284		2 NEM-ST	None	None	NEMPV	SPR-X21-3S SunPower	12		
SCE-INT-NST-146971	Interconne SCE	ONTARIO 91762	San Bernar Solar PV	3.914286	3.836	18	270	RoofTop Fixed	Residential 6/10/2020	9/1/2020	9/12/2020	No	SUNPOWER 877-344-66 RICHMOND CA	94804	890895	Yes	Lease	Richmond /	No	Yes	No	21336	5.562043		2 NEM-ST	None	None	NEMPV	SPR-X21-3S SunPower	12	
SCE-INT-NST-146977	Interconne SCE	ONTARIO 91762	San Bernar Solar PV	3.914286	3.836	27	180	RoofTop Fixed	Residential 6/10/2020	8/11/2020	8/20/2020	No	SUNPOWER 877-344-66 RICHMOND CA	94804	890895	No	No	No	Yes	No	17850	4.653284		2 NEM-ST	None	None	NEMPV	SPR-X21-3S SunPower	12		
SCE-INT-NST-146999	Interconne SCE	ONTARIO 91762	San Bernar Solar PV	5.076531	4.975	19	180	RoofTop Fixed	Residential 6/26/2020	6/29/2020	7/7/2020	No	GRID ALTEF 510-731-1 OAKLAND CA	94608	867533	Yes	PPA	Sunrun	No	Yes	Yes	Sunrun	13115.52	1.000201		2 DAC-SASH	None	None	NEMPV	Q PEAK DU Hanwha Q-	17
SCE-INT-NST-147004	Decommission	ONTARIO 91761	San Bernar Solar PV	3.29888	3.233	23	185	RoofTop Fixed	Residential 6/10/2020	6/15/2020	6/18/2020	#####	V3 ELECTRI 916-459-2 EL DORAD CA	95762	1000573	Yes	PPA	Sunrun	No	Yes	Yes	Sunrun	4056.764	1.267938		2 NEM-ST	None	None	NEMPV	Q PEAK DU Hanwha Q-	11
SCE-INT-NST-147029	Interconne SCE	ONTARIO 91762	San Bernar Solar PV	2.364286	2.317	18	180	RoofTop Fixed	Residential 6/10/2020	6/15/2020	6/15/2020	No	TESLA ENI 844-837-5 FREMONT CA	94538	888104	Yes	Lease	Tesla Energy	No	Yes	No	12108.8	5.226068		2 NEM-ST	None	None	NEMPV	Q PEAK DU Hanwha Q-	8	
SCE-INT-NST-147076	Interconne SCE	ONTARIO 91764	San Bernar Solar PV	4.520408	4.43	18	180	RoofTop Fixed	Residential 6/10/2020	6/10/2020	6/11/2020	No	ENERGY SE 866-865-4 TORRANCE CA	90502	619149	No	No	No	Yes	No	22554.84	5.091386		2 NEM-ST	None	None	NEMPV	SN310M-11S-Energy	16		
SCE-INT-NST-147134	Interconne SCE	ONTARIO 91761	San Bernar Solar PV	2.921429	2.863	18	180	RoofTop Fixed	Residential 6/11/2020	9/24/2020	10/3/2020	No	SUNPOWER 877-344-66 RICHMOND CA	94804	890895	Yes	Lease	Brookfield	No	Yes	No	16002	5.589242		2 NEM-ST	None	None	NEMPV	SPR-X21-3S SunPower	9	
SCE-INT-NST-147134	Interconne SCE	ONTARIO 91761	San Bernar Solar PV	3.57875	2.863	18	180	RoofTop Fixed	Residential 6/11/2020	3/7/2021	3/10/2021	No	SUNPOWER 877-344-66 RICHMOND CA	94804	890895	Yes	Lease	Brookfield	No	Yes	No	16002	5.589242		2 NEM-ST	None	None	NEMPV	SPR-X21-3S SunPower	9	
SCE-INT-NST-147134	Interconne SCE	ONTARIO 91761	San Bernar Solar PV	2.921429	2.863	18	180	RoofTop Fixed	Residential 6/11/2020	9/23/2020	10/2/2020	No	SUNPOWER 877-344-66 RICHMOND CA	94804	890895	No	No	No	Yes	No	13387.5	4.676039		2 NEM-ST	None	None	NEMPV	SPR-X21-3S SunPower	9		
SCE-INT-NST-147136	Interconne SCE	ONTARIO 91761	San Bernar Solar PV	2.921429	2.863	18	180	RoofTop Fixed	Residential 6/11/2020	10/21/2020	10/30/2020	No	SUNPOWER 877-344-66 RICHMOND CA	94804	890895	No	No	No	Yes	No	13387.5	4.676039		2 NEM-ST	None	None	NEMPV	SPR-X21-3S SunPower	9		
SCE-INT-NST-147136	Interconne SCE	ONTARIO 91761	San Bernar Solar PV	2.921429	2.863	18	180	RoofTop Fixed	Residential 6/11/2020	9/30/2020	10/9/2020	No	SUNPOWER 877-344-66 RICHMOND CA	94804	890895	Yes	Lease	Brookfield	No	Yes	No										

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Application Preceding 1 Supercedin Matched C Application Utility	Service City Service Zip Service Cot Technology System Siz System Siz Storage Ca Storage Siz Inverter Siz Tilt	Azimuth	Mounting	Tracking	Customer 5 App Received	App Complete	App Approved	EDecommiss	Self Install	Installer Na	Installer Ph	Installer Cil	Installer St	Installer Zi	CSLB Numt	Third Party	Third Party	Third Party	Face Financ	Face Financ	Electric Vel	Electric Vel	System Out	System Out	System Out	Total System	Itc Cost	Cost/Watt	NEM Tariff	Interconne	VNEM	NEF Project	V NEMPV or	Generator	Generator	Generator
SCE-INT-NST-149565	Interconne SCE ONTARIO 91761 San Bernar Solar PV 2.22551 2.181	18	210	RoofTop	Fixed	Residential	6/29/2020	8/7/2020	8/17/2020	No	SUNSTREET949-450-58 MIAMI FL	FL	33172	1001133	Yes	PPA	Lennar Hor No	No	No	No	No	Yes	No	No	No	8000	3.668042	2	NEM-ST	None	No	NEMPV	BVM6610N-Boviet Sola	8		
SCE-INT-NST-149567	Interconne SCE ONTARIO 91761 San Bernar Solar PV 2.22551 2.181	14	210	RoofTop	Fixed	Residential	6/29/2020	8/7/2020	9/4/2020	No	SUNSTREET949-450-58 MIAMI FL	FL	33172	1001133	Yes	PPA	Lennar Hor No	No	No	No	Yes	No	No	No	8000	3.668042	2	NEM-ST	None	No	NEMPV	BVM6610N-Boviet Sola	8			
SCE-INT-NST-149570	Interconne SCE ONTARIO 91761 San Bernar Solar PV 2.22551 2.181	20	270	RoofTop	Fixed	Residential	10/12/2017	10/12/2017	10/30/2017	No	COMMERC 552-252-06 PICO RIVER CA	CA	90660	978025	No	PPA	Lennar Hor No	Yes	No	No	Yes	No	No	21200	6.845334	2	NEM-ST	None	No	NEMPV	SW 3200 M SolarWorld	12				
SCE-INT-NST-149629	Interconne SCE ONTARIO 91761 San Bernar Solar PV 2.254082 2.109	16	180	RoofTop	Fixed	Residential	6/29/2020	8/13/2020	9/19/2020	No	SUNSTREET949-450-58 MIAMI FL	FL	33172	1001133	Yes	PPA	Lennar Hor No	No	No	No	Yes	No	No	No	8000	3.668042	2	NEM-ST	None	No	NEMPV	BVM6610N-Boviet Sola	8			
SCE-INT-NST-15024	Interconne SCE ONTARIO 91761 San Bernar Solar PV 13.74082 13.466	15	250	RoofTop	Fixed	Residential	10/13/2017	10/13/2017	10/16/2017	No	Petersen D 510-371-65 Fremont CA	CA	94538	468117	No	PPA	SunRun No	No	No	No	Yes	No	No	52160.04	3.873462	2	NEM-ST	None	No	NEMPV	MSE295SO Mission So	10				
SCE-INT-NST-150358	Interconne SCE ONTARIO 91764 San Bernar Solar PV 2.39888 2.351	9	90	RoofTop	Fixed	Residential	7/7/2020	7/7/2020	7/22/2020	No	V3 ELECTRI 916-459-21 EL DORAD CA	CA	95762	1000573	Yes	PPA	SunRun No	No	No	No	Yes	Yes	Yes	SunRun	1	0.000425	2	NEM-ST	None	No	NEMPV	Q.PEAK DU Hanwha Q-	3			
SCE-INT-NST-150387	Interconne SCE ONTARIO 91764 San Bernar Solar PV 4.558163 4.467	18	180	RoofTop	Fixed	Residential	7/7/2020	7/7/2020	7/21/2020	No	ENERGY SE 866-865-4E TORRANCE CA	CA	90502	619149	No	PPA	SunRun No	No	No	No	Yes	No	No	33055.04	7.399829	2	NEM-ST	None	No	NEMPV	SN310M-11S-Energy	16				
SCE-INT-NST-150511	Interconne SCE ONTARIO 91761 San Bernar Solar PV 3.914286 3.836	18	180	RoofTop	Fixed	Residential	7/8/2020	8/20/2020	8/29/2020	No	SUNPOWER877-344-66 RICHMON CA	CA	94804	890895	No	PPA	Lennar Hor No	No	No	No	Yes	No	No	17850	4.653284	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower	12				
SCE-INT-NST-150554	Interconne SCE ONTARIO 91761 San Bernar Solar PV 2.970408 2.911	23	180	RoofTop	Fixed	Residential	7/8/2020	8/11/2020	9/10/2020	No	SUNSTREET949-450-58 MIAMI FL	FL	33172	1001133	Yes	PPA	Lennar Hor No	No	No	No	Yes	No	No	10000	3.435245	2	NEM-ST	None	No	NEMPV	LG320N1K-LG Electron	8				
SCE-INT-NST-150559	Interconne SCE ONTARIO 91761 San Bernar Solar PV 3.861224 3.784	18	270	RoofTop	Fixed	Residential	7/8/2020	8/11/2020	9/10/2020	No	SUNSTREET949-450-58 MIAMI FL	FL	33172	1001133	Yes	PPA	Lennar Hor No	No	No	No	Yes	No	No	13000	3.435517	2	NEM-ST	None	No	NEMPV	LG320N1K-LG Electron	9				
SCE-INT-NST-150561	Interconne SCE ONTARIO 91761 San Bernar Solar PV 2.970408 2.911	23	180	RoofTop	Fixed	Residential	7/8/2020	8/12/2020	9/10/2020	No	SUNSTREET949-450-58 MIAMI FL	FL	33172	1001133	Yes	PPA	Lennar Hor No	No	No	No	Yes	No	No	10000	3.435245	2	NEM-ST	None	No	NEMPV	LG320N1K-LG Electron	8				
SCE-INT-NST-150564	Decommiss SCE ONTARIO 91761 San Bernar Solar PV 3.267347 3.202	23	270	RoofTop	Fixed	Residential	7/8/2020	8/12/2020	9/10/2020	#####	SUNSTREET949-450-58 MIAMI FL	FL	33172	1001133	Yes	PPA	Lennar Hor No	No	No	No	Yes	No	No	11000	3.435352	2	NEM-ST	None	No	NEMPV	LG320N1K-LG Electron	11				
SCE-INT-NST-150568	Interconne SCE ONTARIO 91761 San Bernar Solar PV 2.970408 2.911	23	180	RoofTop	Fixed	Residential	7/8/2020	8/12/2020	9/10/2020	No	SUNSTREET949-450-58 MIAMI FL	FL	33172	1001133	Yes	PPA	Lennar Hor No	No	No	No	Yes	No	No	10000	3.435245	2	NEM-ST	None	No	NEMPV	LG320N1K-LG Electron	8				
SCE-INT-NST-150584	Interconne SCE ONTARIO 91761 San Bernar Solar PV 6.493878 6.364	29	268	RoofTop	Fixed	Residential	7/8/2020	7/16/2020	7/24/2020	No	BRIGHT PLJ 888-997-4 AU BURN MA	MA	1501	1020761	Yes	PPA	Sunrun No	No	No	No	Yes	No	No	10000	3.435245	2	NEM-ST	None	No	NEMPV	LG320N1K-LG Electron	8				
SCE-INT-NST-150621	Interconne SCE ONTARIO 91761 San Bernar Solar PV 3.861224 3.784	18	180	RoofTop	Fixed	Residential	7/8/2020	8/12/2020	9/10/2020	No	SUNSTREET949-450-58 MIAMI FL	FL	33172	1001133	Yes	PPA	Lennar Hor No	No	No	No	Yes	No	No	13000	3.435517	2	NEM-ST	None	No	NEMPV	LG320N1K-LG Electron	4				
SCE-INT-NST-150631	Interconne SCE ONTARIO 91761 San Bernar Solar PV 3.267347 3.202	18	270	RoofTop	Fixed	Residential	7/8/2020	8/13/2020	9/10/2020	No	SUNSTREET949-450-58 MIAMI FL	FL	33172	1001133	Yes	PPA	Lennar Hor No	No	No	No	Yes	No	No	11000	3.435352	2	NEM-ST	None	No	NEMPV	LG320N1K-LG Electron	11				
SCE-INT-NST-150648	Interconne SCE ONTARIO 91761 San Bernar Solar PV 3.861224 3.784	27	180	RoofTop	Fixed	Residential	7/8/2020	8/13/2020	9/10/2020	No	SUNSTREET949-450-58 MIAMI FL	FL	33172	1001133	Yes	PPA	Lennar Hor No	No	No	No	Yes	No	No	13000	3.435517	2	NEM-ST	None	No	NEMPV	LG320N1K-LG Electron	13				
SCE-INT-NST-150786	Interconne SCE ONTARIO 91762 San Bernar Solar PV 4.180612 4.097	16	180	RoofTop	Fixed	Residential	7/9/2020	7/9/2020	7/15/2020	No	GRID ALTEF 510-731-1 OAKLAND CA	CA	94608	867533	Yes	PPA	Sunrun No	No	No	No	Yes	Yes	Yes	Sunrun	1	0.000244	2	DAC-SASH	None	No	NEMPV	Q.PEAK DU Hanwha Q-	10			
SCE-INT-NST-151056	Interconne SCE ONTARIO 91764 San Bernar Solar PV 5.923469 5.805	27	90	RoofTop	Fixed	Residential	7/11/2020	10/5/2020	10/14/2020	No	FREEDOM 1951-363-03 TEMECULA CA	CA	92590	1029644	Yes	Lease	Sunrun No	No	No	No	Yes	No	No	18963.2	3.266701	2	NEM-ST	None	No	NEMPV	Q.PEAK G4 Hanwha Q-	10				
SCE-INT-NST-151069	Interconne SCE ONTARIO 91761 San Bernar Solar PV 5.978575 5.859	18	269	RoofTop	Fixed	Residential	7/12/2020	7/12/2020	7/20/2020	No	V3 ELECTRI 916-459-21 EL DORAD CA	CA	95762	1000573	Yes	PPA	V3 Electric No	No	No	No	Yes	Yes	Yes	SunRun	1	0.00017	2	NEM-ST	None	No	NEMPV	Q.PEAK DU Hanwha Q-	9			
SCE-INT-NST-151132	Interconne SCE ONTARIO 91761 San Bernar Solar PV 3.914286 3.836	18	154	RoofTop	Fixed	Residential	7/13/2020	12/14/2020	12/16/2020	No	SUNPOWER877-344-66 RICHMON CA	CA	94804	890895	No	PPA	Sunrun No	No	No	No	Yes	No	No	17850	4.653284	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower	12				
SCE-INT-NST-151138	Interconne SCE ONTARIO 91761 San Bernar Solar PV 3.914286 3.836	18	153	RoofTop	Fixed	Residential	7/13/2020	9/1/2020	9/14/2020	No	SUNPOWER877-344-66 RICHMON CA	CA	94804	890895	No	PPA	Sunrun No	No	No	No	Yes	No	No	17850	4.653284	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower	12				
SCE-INT-NST-151142	Interconne SCE ONTARIO 91761 San Bernar Solar PV 4.567347 4.476	18	243	RoofTop	Fixed	Residential	7/13/2020	10/9/2020	10/17/2020	No	SUNPOWER877-344-66 RICHMON CA	CA	94804	890895	No	PPA	Sunrun No	No	No	No	Yes	No	No	20825	4.652591	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower	14				
SCE-INT-NST-151144	Interconne SCE ONTARIO 91761 San Bernar Solar PV 3.914286 3.836	23	243	RoofTop	Fixed	Residential	7/13/2020	10/12/2020	10/20/2020	No	SUNPOWER877-344-66 RICHMON CA	CA	94804	890895	No	PPA	Sunrun No	No	No	No	Yes	No	No	17850	4.653284	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower	12				
SCE-INT-NST-151177	Interconne SCE ONTARIO 91761 San Bernar Solar PV 25.04796 24.547	7	178	Ground	Fixed	Commercial	7/13/2020	12/7/2020	12/10/2020	No	SIERRA SUI 951-600-7E LAKE ELSIN CA	CA	92530	588512	No	PPA	Sunrun No	No	No	No	Yes	No	No	78328	3.190939	2	NEM-ST	None	No	NEMPV	SunmoduleSolarWorld	120				
SCE-INT-NST-151297	Interconne SCE ONTARIO 91761 San Bernar Solar PV 4.608163 4.516	20	180	RoofTop	Fixed	Residential	7/14/2020	7/14/2020	7/15/2020	No	SOLARMAV 951-300-07 RIVERSIDE CA	CA	92507	972048	No	PPA	Sunrun No	No	No	No	Yes	No	No	14500	3.210806	2	NEM-ST	None	No	NEMPV	LG350N1C-LG Electron	3				
SCE-INT-NST-151481	Interconne SCE ONTARIO 91762 San Bernar Solar PV 2.327551 2.281	18	118	RoofTop	Fixed	Residential	7/15/2020	9/17/2020	10/9/2020	No	SUNSTREET949-450-58 MIAMI FL	FL	33172	1001133	Yes	PPA	SUNSTREET No	No	No	No	Yes	No	No	8200	3.594914	2	NEM-ST	None	No	NEMPV	LG320N1K-LG Electron	8				
SCE-INT-NST-151513	Interconne SCE ONTARIO 91762 San Bernar Solar PV 2.327551 2.281	23	217	RoofTop	Fixed	Residential	7/15/2020	9/17/2020	10/9/2020	No	SUNSTREET949-450-58 MIAMI FL	FL	33172	1001133	Yes	PPA	SUNSTREET No	No	No	No	Yes	No	No	8200	3.594914	2	NEM-ST	None	No	NEMPV	LG320N1K-LG Electron	8				
SCE-INT-NST-151517	Interconne SCE ONTARIO 91762 San Bernar Solar PV 2.327551 2.281	18	123	RoofTop	Fixed	Residential	7/15/2020	9/17/2020	10/9/2020	No	SUNSTREET949-450-58 MIAMI FL	FL	33172	1001133	Yes	PPA	SUNSTREET No	No	No	No	Yes	No	No	8200	3.594914	2	NEM-ST	None	No	NEMPV	LG320N1K-LG Electron	8				
SCE-INT-NST-151549	Interconne SCE ONTARIO 91762 San Bernar Solar PV 2.327551 2.281	27	213	RoofTop	Fixed	Residential	7/15/2020	9/17/2020	10/9/2020	No	SUNSTREET949-450-58 MIAMI FL	FL	33172	1001133	Yes	PPA	SUNSTREET No	No	No	No	Yes	No	No	8200	3.594914	2	NEM-ST	None	No	NEMPV	LG320N1K-LG Electron	8				
SCE-INT-NST-151563	Interconne SCE ONTARIO 91762 San Bernar Solar PV 10.7 10.486	17	270	RoofTop	Fixed	Residential	7/15/2020	7/21/2020	7/28/2020	No	SUNERGY I 562-544-7E RANCHO N CA	CA	92694	1061794	No	PPA	Sunrun No	No	No	No	Yes	No	No	31000	2.956322	2	NEM-ST	None	No	NEMPV	Solaria Pow Solaria	33				
SCE-INT-NST-151568	Interconne SCE ONTARIO 91764 San Bernar Solar PV 3.438776 3.37	19	270	RoofTop	Fixed	Residential	7/16/2020	7/24/2020	8/3/2020	No	SUNFINITY 916-836-3 DALLAS TX	TX	75248	1057894	No	PPA	Sunrun No	No	No	No	Yes	No	No	19700	5.845697	2	NEM-ST	None	No	NEMPV	JKM315M-Jinko Solar	12				
SCE-INT-NST-151718	Interconne SCE ONTARIO 91761 San Bernar Solar PV 3.583673 3.512	18	91	RoofTop	Fixed	Residential	7/16/2020	7/16/2020	7/17/2020	No	GRID ALTEF 510-731-1 OAKLAND CA	CA	94608	867533	Yes	PPA	Sunrun No	No	No	No	Yes	Yes														

Ontario Quantification Workbook

Application Preceding 1	Supercedin Matched C	Application/Utility	Service City/Service Zip	Service Cot	Technology	System Siz	System Siz	Storage Ca	Storage Siz	Inverter Siz	Tilt	Azimuth	Mounting	Tracking	Customer 5	App Received	App Complete	App Approved	EDecommis	Self Install	Installer Na	Installer Ph	Installer Cil	Installer St	Installer Zi	CSLB Numt	Third Party	Third Party	Third Party	Third Party	Face Fin	Face Fin	Electric Vel	Electric Vel	System Out	System Out	System Out	Total Syste	Itc Cost	Cost/Watt	NEM Tariff	Interconne	VNEM	NEF Project	V NEMPV or	Generator	Generator	Generator
SCE-INT-NST-154874		Interconne SCE	ONTARIO	91762	San Bernar Solar PV	4.2	4.116					18	270	Rooftop	Fixed	Residential	8/10/2020	8/27/2020	9/9/2020	No	VIVINT SOL 801-845-01 LEHI UT				84043	973756	Yes	PPA	VivintSolar	No	No	No	Yes	Yes	Solar Edge	Technologie	25894.4	6.291156	2	NEM-ST	None	No	NEMPV	Q.PEAK DU Hanwha Q-				14
SCE-INT-NST-154926		Interconne SCE	ONTARIO	91764	San Bernar Solar PV	4.842857	4.746					18	180	Rooftop	Fixed	Residential	8/11/2020	8/11/2020	8/12/2020	No	ENERGY SE 310-904-61 TORRANCE CA				90502	619149	No	PPA	Sunrun	No	No	Yes	Yes	Solar Edge	Technologie	22159.34	4.669956	2	NEM-ST	None	No	NEMPV	SN310M-11S-Energy				14	
SCE-INT-NST-155087		Interconne SCE	ONTARIO	91762	San Bernar Solar PV	3.616327	3.544					20	115	Rooftop	Fixed	Residential	8/11/2020	8/12/2020	8/20/2020	No	SUN BEES (714-676-88) POMONA CA				91767	970591	No	PPA	Sunrun	No	No	Yes	Yes	Solar Edge	Technologie	17265.6	4.871783	2	NEM-ST	None	No	NEMPV	SPR-E20-3S-SunPower				9	
SCE-INT-NST-155140		Interconne SCE	ONTARIO	91764	San Bernar Solar PV	5	4.9					14	90	Rooftop	Fixed	Residential	8/12/2020	9/3/2020	9/15/2020	No	ANCA SOLA 707-782-31 LOS ANGELES CA				90041	973756	No	PPA	Sunrun	No	No	Yes	Yes	Solar Edge	Technologie	14288.57	2.916034	2	NEM-ST	None	No	NEMPV	SPR-E20-3S-SunPower				9	
SCE-INT-NST-155145		Interconne SCE	ONTARIO	91762	San Bernar Solar PV	5.72551	5.611					22	175	Rooftop	Fixed	Residential	8/12/2020	8/13/2020	8/22/2020	No	SUN BEES (714-676-88) POMONA CA				91767	970591	No	PPA	Sunrun	No	No	Yes	Yes	Solar Edge	Technologie	26405.25	4.705979	2	NEM-ST	None	No	NEMPV	SPR-E20-3S-SunPower				19	
SCE-INT-NST-155383		Interconne SCE	ONTARIO	91762	San Bernar Solar PV	5.09898	4.997					18	180	Rooftop	Fixed	Residential	8/13/2020	8/13/2020	8/14/2020	No	ENERGY SE 310-904-61 TORRANCE CA				90502	619149	No	PPA	Sunrun	No	No	Yes	Yes	Solar Edge	Technologie	22360.19	4.474722	2	NEM-ST	None	No	NEMPV	Q.PEAK DU Hanwha Q-				17	
SCE-INT-NST-155438		Interconne SCE	ONTARIO	91762	San Bernar Solar PV	2.364286	2.317					18	218	Rooftop	Fixed	Residential	8/13/2020	8/31/2020	9/11/2020	No	TESLA ENEI844-837-5 FREMONT CA				94538	888104	Yes	Lease	Tesla	No	No	Yes	Yes	Tesla	Technologie	12108.8	5.226068	2	NEM-ST	None	No	NEMPV	Q.PEAK DU Hanwha Q-				8	
SCE-INT-NST-155454		Interconne SCE	ONTARIO	91762	San Bernar Solar PV	2.935714	2.877					18	102	Rooftop	Fixed	Residential	8/14/2020	10/14/2020	10/22/2020	No	SUNPOWER1877-344-66 RICHMOND CA				94804	890895	No	PPA	Sunrun	No	No	Yes	Yes	Solar Edge	Technologie	13387.5	4.653284	2	NEM-ST	None	No	NEMPV	SPR-X21-3S-SunPower				9	
SCE-INT-NST-155455		Interconne SCE	ONTARIO	91762	San Bernar Solar PV	3.914286	3.836					23	180	Rooftop	Fixed	Residential	8/14/2020	10/21/2020	10/28/2020	No	SUNPOWER1877-344-66 RICHMOND CA				94804	890895	No	PPA	Sunrun	No	No	Yes	Yes	Solar Edge	Technologie	17850	4.653284	2	NEM-ST	None	No	NEMPV	SPR-X21-3S-SunPower				12	
SCE-INT-NST-155458		Interconne SCE	ONTARIO	91762	San Bernar Solar PV	3.914286	3.836					18	180	Rooftop	Fixed	Residential	8/14/2020	10/12/2020	10/21/2020	No	SUNPOWER1877-344-66 RICHMOND CA				94804	890895	No	PPA	Sunrun	No	No	Yes	Yes	Solar Edge	Technologie	17850	4.653284	2	NEM-ST	None	No	NEMPV	SPR-X21-3S-SunPower				12	
SCE-INT-NST-155460		Interconne SCE	ONTARIO	91762	San Bernar Solar PV	4.795	3.836					23	180	Rooftop	Fixed	Residential	8/14/2020	10/14/2020	3/1/2021	No	SUNPOWER1877-344-66 RICHMOND CA				94804	890895	No	PPA	Sunrun	No	No	Yes	Yes	Solar Edge	Technologie	17850	4.653284	2	NEM-ST	None	No	NEMPV	SPR-X21-3S-SunPower				12	
SCE-INT-NST-155464		Interconne SCE	ONTARIO	91762	San Bernar Solar PV	3.914286	3.836					18	270	Rooftop	Fixed	Residential	8/14/2020	10/22/2020	10/29/2020	No	SUNPOWER1877-344-66 RICHMOND CA				94804	890895	No	PPA	Sunrun	No	No	Yes	Yes	Solar Edge	Technologie	17850	4.653284	2	NEM-ST	None	No	NEMPV	SPR-X21-3S-SunPower				12	
SCE-INT-NST-155477		Interconne SCE	ONTARIO	91762	San Bernar Solar PV	3.914286	3.836					23	180	Rooftop	Fixed	Residential	8/14/2020	10/12/2020	10/21/2020	No	SUNPOWER1877-344-66 RICHMOND CA				94804	890895	Yes	Lease	KB Home	No	No	Yes	Yes	Solar Edge	Technologie	21336	5.562043	2	NEM-ST	None	No	NEMPV	SPR-X21-3S-SunPower				12	
SCE-INT-NST-155480		Interconne SCE	ONTARIO	91762	San Bernar Solar PV	3.15	2.877					18	270	Rooftop	Fixed	Residential	8/14/2020	10/27/2020	11/3/2020	No	SUNPOWER1877-344-66 RICHMOND CA				94804	890895	Yes	Lease	KB Home	No	No	Yes	Yes	Solar Edge	Technologie	16002	5.562043	2	NEM-ST	None	No	NEMPV	SPR-X21-3S-SunPower				12	
SCE-INT-NST-155511		Interconne SCE	ONTARIO	91761	San Bernar Solar PV	2.657143	2.604					27	269	Rooftop	Fixed	Residential	8/14/2020	8/14/2020	8/17/2020	No	BRIGHT PLJ 888-997-4 AUBURN MA				1501	1020761	Yes	PPA	Sunrun	No	No	Yes	Yes	Solar Edge	Technologie	9412.2	3.614516	2	NEM-ST	None	No	NEMPV	Q.PEAK DU Hanwha Q-				9	
SCE-INT-NST-155514		Interconne SCE	ONTARIO	91761	San Bernar Solar PV	4.2	3.836					27	180	Rooftop	Fixed	Residential	8/14/2020	11/11/2020	11/18/2020	No	SUNPOWER1877-344-66 RICHMOND CA				94804	890895	Yes	Lease	KB Home	No	No	Yes	Yes	Solar Edge	Technologie	21336	5.562043	2	NEM-ST	None	No	NEMPV	SPR-X21-3S-SunPower				12	
SCE-INT-NST-155534		Interconne SCE	ONTARIO	91762	San Bernar Solar PV	4.132653	4.05					18	180	Rooftop	Fixed	Residential	8/14/2020	8/14/2020	8/17/2020	No	ENERGY SE 310-904-61 TORRANCE CA				90502	619149	Yes	PPA	Sunrun	No	No	Yes	Yes	Solar Edge	Technologie	4654.04	1.149145	2	NEM-ST	None	No	NEMPV	Q.PEAK DU Hanwha Q-				14	
SCE-INT-NST-155541		Interconne SCE	ONTARIO	91762	San Bernar Solar PV	3.3333	2.71					23	171	Rooftop	Fixed	Residential	8/14/2020	8/14/2020	8/30/2021	No	SUNPOWER1877-344-66 RICHMOND CA				94804	890895	Yes	Lease	KB Home	No	No	Yes	Yes	Solar Edge	Technologie	15316.2	5.651734	2	NEM-ST	None	No	NEMPV	SPR-X21-3S-SunPower				9	
SCE-INT-NST-155588		Interconne SCE	ONTARIO	91764	San Bernar Solar PV	4.722449	4.628					18	180	Rooftop	Fixed	Residential	8/15/2020	8/15/2020	8/17/2020	No	ENERGY SE 310-904-61 TORRANCE CA				90502	619149	Yes	PPA	Sunrun	No	No	Yes	Yes	Solar Edge	Technologie	6094.17	1.316804	2	NEM-ST	None	No	NEMPV	Q.PEAK DU Hanwha Q-				16	
SCE-INT-NST-155611		Interconne SCE	ONTARIO	91762	San Bernar Solar PV	2.765306	2.71					18	270	Rooftop	Fixed	Residential	8/16/2020	8/27/2020	9/9/2020	No	SUNPOWER1877-344-66 RICHMOND CA				94804	890895	Yes	Lease	Trumark Hx No	No	No	Yes	Yes	Solar Edge	Technologie	15316.2	5.651734	2	NEM-ST	None	No	NEMPV	SPR-X21-3S-SunPower				9	
SCE-INT-NST-155623		Interconne SCE	ONTARIO	91764	San Bernar Solar PV	3.673469	3.6					18	180	Rooftop	Fixed	Residential	8/17/2020	8/24/2020	9/3/2020	No	ENERGY SE 707-782-31 TORRANCE CA				90502	619149	Yes	PPA	Sunrun	No	No	Yes	Yes	Solar Edge	Technologie	15316.2	5.651734	2	NEM-ST	None	No	NEMPV	SPR-X21-3S-SunPower				9	
SCE-INT-NST-155628		Interconne SCE	ONTARIO	91762	San Bernar Solar PV	2.69898	2.645					23	91	Rooftop	Fixed	Residential	8/17/2020	8/26/2020	9/4/2020	No	V3 ELECTRI 916-459-2 EL DORAD CA				95762	1000573	Yes	PPA	V3 Electric	No	No	Yes	Yes	SunRun	Technologie	11462.4	4.33361	2	NEM-ST	None	No	NEMPV	Q.PEAK DU Hanwha Q-				21	
SCE-INT-NST-155800		Interconne SCE	ONTARIO	91761	San Bernar Solar PV	6.914286	6.918					26	118	Rooftop	Fixed	Residential	8/18/2020	9/1/2020	9/11/2020	No	CHARGED I 310-910-04 LOS ANGELES CA				90045	692824	No	PPA	Sunrun	No	No	Yes	Yes	SunRun	Technologie	25992.92	2.599292	2	NEM-ST	None	No	NEMPV	JKM320M-Jinko Solar				2	
SCE-INT-NST-155843		Interconne SCE	ONTARIO	91761	San Bernar Solar PV	5.342857	5.236					17	180	Rooftop	Fixed	Residential	8/18/2020	8/31/2020	9/10/2020	No	ANCA SOLA 707-782-31 LOS ANGELES CA				90041	873768	No	PPA	Sunrun	No	No	Yes	Yes	SunRun	Technologie	21699	4.144194	2	NEM-ST	None	No	NEMPV	LG35N1C-LG Elector				14	
SCE-INT-NST-155945		Interconne SCE	ONTARIO	91762	San Bernar Solar PV	6.036735	5.916					21	180	Rooftop	Fixed	Residential	8/18/2020	8/19/2020	8/19/2020	No	VIVINT SOL 801-845-01 LEHI UT				84043	973756	Yes	PPA	Vivint Solar	No	No	Yes	Yes	Solar Edge	Technologie	38870	6.570317	2	NEM-ST	None	No	NEMPV	JKM325M-Jinko Solar				2	
SCE-INT-NST-156001		Decommiss: SCE	ONTARIO	91761	San Bernar Solar PV	8.028571	7.868					18	180	Rooftop	Fixed	Residential	8/19/2020	8/19/2020	8/20/2020	11/3/2021	No	ENERGY SE 310-904-61 TORRANCE CA				90502	619149	No	PPA	Sunrun	No	No	Yes	Yes	Solar Edge	Technologie	38130	4.846212	2	NEM-ST	None	No	NEMPV	SN310M-11S-Energy				29
SCE-INT-NST-156006		Interconne SCE	ONTARIO	91762	San Bernar Solar PV	6.535714	6.405					18	270	Rooftop	Fixed	Residential	8/19/2020	8/20/2020	8/20/2020	No	VIVINT SOL 801-845-01 LEHI UT				84043	973756	Yes	PPA	Vivint Solar	No	No	Yes	Yes	Solar Edge	Technologie	41113.6	6.418985	2	NEM-ST	None	No	NEMPV	JKM320M-Jinko Solar				14	
SCE-INT-NST-156190		Interconne SCE	ONTARIO	91761	San Bernar Solar PV	4.79898	4.703					18	270	Rooftop	Fixed																																	

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Application Preceding 1 Supercedin Matched C	Application/Utility	Service City/Service Zip Service Co. Technology System Siz System Siz Storage Ca Storage Siz Inverter Siz Tilt	Azimuth	Mounting / Tracking	Customer 5 App Received [App Complete App Approved EDecommission Self Installe Installer Na Installer Ph Installer CII Installer St Installer Zi CLS B Numt Third Party Third Party Third Party Face Finace Finace Electric Vel Electric Vel System Out System Out System Out Total System ITC Cost Bas Cost/Watt NEM Tariff Interconne V NEM, NEF Project is V NEMPV or Generator Generator Generator																	
SCE-INT-NST-160765	Interconne SCE	ONTARIO 91762 San Bernar Solar PV 4.2 4.116	18	180 Rooftop Fixed	Residential 9/21/2020 9/21/2020 9/30/2020	No	VIVINT SOL 801-845-0:LEHI UT	84043 973756 Yes	Lease	VivintSolar No	No	Yes	Yes	Solar Edge Technology	26163.2	6.356462	2 NEM-ST	None	No	NEMPV	Q.PEAK DU Hanwha Q-	14
SCE-INT-NST-160849	Interconne SCE	ONTARIO 91762 San Bernar Solar PV 2.364286 2.317	18	270 Rooftop Fixed	Residential 9/21/2020 9/21/2020 10/1/2020	No	TESLA ENET844-837-5:FREMONT CA	94538 888104 Yes	Lease	Tesla Energe No	No	Yes	Yes	Solar Edge Technology	12108.8	5.226068	2 NEM-ST	None	No	NEMPV	Q.PEAK DU Hanwha Q-	8
SCE-INT-NST-160888	Interconne SCE	ONTARIO 91762 San Bernar Solar PV 4.2 4.116	23	180 Rooftop Fixed	Residential 9/22/2020 9/22/2020 10/1/2020	No	VIVINT SOL 801-845-0:LEHI UT	84043 973756 Yes	PPA	VivintSolar No	No	Yes	Yes	Solar Edge Technology	25894.4	6.291156	2 NEM-ST	None	No	NEMPV	Q.PEAK DU Hanwha Q-	14
SCE-INT-NST-160921	Interconne SCE	ONTARIO 91761 San Bernar Solar PV 3.15 2.877	18	270 Rooftop Fixed	Residential 9/22/2020 2/18/2021 2/23/2021	No	SUNPOWEI510-260-8:RICHMONT CA	94804 890895 Yes	Lease	Brookfield No	No	Yes	No		16002	5.562043	2 NEM-ST	None	No	NEMPV	SPR-X21-35SunPower	9
SCE-INT-NST-160929	Interconne SCE	ONTARIO 91761 San Bernar Solar PV 3.15 2.877	18	270 Rooftop Fixed	Residential 9/22/2020 2/17/2021 2/23/2021	No	SUNPOWEI510-260-8:RICHMONT CA	94804 890895 Yes	Lease	Brookfield No	No	Yes	No		16002	5.562043	2 NEM-ST	None	No	NEMPV	SPR-X21-35SunPower	9
SCE-INT-NST-160931	Interconne SCE	ONTARIO 91761 San Bernar Solar PV 3.59625 2.877	18	270 Rooftop Fixed	Residential 9/22/2020 6/23/2021 6/24/2021	No	SUNPOWEI510-260-8:RICHMONT CA	94804 890895 Yes	Lease	Brookfield No	No	Yes	No		16002	5.562043	2 NEM-ST	None	No	NEMPV	SPR-X21-35SunPower	9
SCE-INT-NST-160934	Interconne SCE	ONTARIO 91761 San Bernar Solar PV 3.59625 2.877	18	270 Rooftop Fixed	Residential 9/22/2020 11/3/2021 11/9/2021	No	SUNPOWEI510-260-8:RICHMONT CA	94804 890895 Yes	Lease	Brookfield No	No	Yes	No		16002	5.562043	2 NEM-ST	None	No	NEMPV	SPR-X21-35SunPower	9
SCE-INT-NST-160967	Interconne SCE	ONTARIO 91761 San Bernar Solar PV 3.267347 3.202	23	270 Rooftop Fixed	Residential 9/22/2020 9/22/2020 10/5/2020	No	SUNSTREE1949-450-58 MIAMI FL	33172 1001133 Yes	PPA	Lennar Hor No	No	Yes	No		11230	3.507183	2 NEM-ST	None	No	NEMPV	LG320N1K-LG Elector	11
SCE-INT-NST-161041	Interconne SCE	ONTARIO 91761 San Bernar Solar PV 3.15 2.877	18	270 Rooftop Fixed	Residential 9/22/2020 2/17/2021 2/24/2021	No	SUNPOWEI510-260-8:RICHMONT CA	94804 890895 No	No	No	No	Yes	No	13387.5	4.653284	2 NEM-ST	None	No	NEMPV	SPR-X21-35SunPower	9	
SCE-INT-NST-161046	Interconne SCE	ONTARIO 91761 San Bernar Solar PV 3.15 2.877	18	270 Rooftop Fixed	Residential 9/22/2020 2/15/2021 2/19/2021	No	SUNPOWEI510-260-8:RICHMONT CA	94804 890895 No	No	No	No	Yes	No	13387.5	4.653284	2 NEM-ST	None	No	NEMPV	SPR-X21-35SunPower	9	
SCE-INT-NST-161048	Interconne SCE	ONTARIO 91761 San Bernar Solar PV 3.53871 2.877	18	270 Rooftop Fixed	Residential 9/22/2020 8/10/2021 8/18/2021	No	SUNPOWEI510-260-8:RICHMONT CA	94804 890895 No	No	No	No	Yes	No	13387.5	4.653284	2 NEM-ST	None	No	NEMPV	SPR-X21-35SunPower	9	
SCE-INT-NST-161050	Interconne SCE	ONTARIO 91761 San Bernar Solar PV 3.59625 2.877	18	270 Rooftop Fixed	Residential 9/22/2020 5/12/2021 11/29/2021	No	SUNPOWEI908-216-1:RICHMONT CA	94804 890895 No	No	No	No	Yes	No	13387.5	4.653284	2 NEM-ST	None	No	NEMPV	SPR-X21-35SunPower	9	
SCE-INT-NST-161121	Interconne SCE	ONTARIO 91762 San Bernar Solar PV 3.527551 3.457	18	180 Rooftop Fixed	Residential 9/23/2020 9/23/2020 9/24/2020	No	ENERGY SE 707-782-3:TORRANCE CA	90502 619149 No	No	No	No	Yes	No	14983.36	4.634208	2 NEM-ST	None	No	NEMPV	Q.PEAK DU Hanwha Q-	12	
SCE-INT-NST-161128	Interconne SCE	ONTARIO 91762 San Bernar Solar PV 4.675531 4.583	18	180 Rooftop Fixed	Residential 9/23/2020 12/18/2020 12/21/2020	No	FREEDOM 1951-319-45:TEMECULA CA	92590 1029644 Yes	Lease	Sunrun No	No	Yes	Yes	14805.6	3.230547	2 NEM-ST	None	No	NEMPV	LR6-60HPH LONGI Gre	16	
SCE-INT-NST-161159	Interconne SCE	ONTARIO 91762 San Bernar Solar PV 4.749959 3.748	14	180 Rooftop Fixed	Residential 9/23/2020 9/23/2020 10/2/2020	No	V3 ELECTRI 844-837-5:EL DORADO CA	95762 1000573 Yes	Lease	SunRun No	No	Yes	Yes	SunRun	25768	3.506804	2 NEM-ST	None	No	NEMPV	Q.PEAK DU Hanwha Q-	8
SCE-INT-NST-161230	Interconne SCE	ONTARIO 91761 San Bernar Solar PV 2.970408 2.911	23	180 Rooftop Fixed	Residential 9/23/2020 10/14/2020 10/22/2020	No	SUNSTREE1949-450-58 MIAMI FL	33172 1001133 Yes	PPA	Lennar Hor No	No	Yes	No	10210	3.507385	2 NEM-ST	None	No	NEMPV	LG320N1K-LG Elector	10	
SCE-INT-NST-161236	Interconne SCE	ONTARIO 91761 San Bernar Solar PV 3.267347 3.202	18	270 Rooftop Fixed	Residential 9/23/2020 10/21/2020 10/28/2020	No	SUNSTREE1949-450-58 MIAMI FL	33172 1001133 Yes	PPA	Lennar Hor No	No	Yes	No	11230	3.507183	2 NEM-ST	None	No	NEMPV	LG320N1K-LG Elector	7	
SCE-INT-NST-161239	Interconne SCE	ONTARIO 91761 San Bernar Solar PV 3.861224 3.784	18	270 Rooftop Fixed	Residential 9/23/2020 10/21/2020 10/28/2020	No	SUNSTREE1949-450-58 MIAMI FL	33172 1001133 Yes	PPA	Lennar Hor No	No	Yes	No	13300	3.514799	2 NEM-ST	None	No	NEMPV	LG320N1K-LG Elector	9	
SCE-INT-NST-161243	Interconne SCE	ONTARIO 91761 San Bernar Solar PV 3.267347 3.202	27	270 Rooftop Fixed	Residential 9/23/2020 10/14/2020 10/22/2020	No	SUNSTREE1949-450-58 MIAMI FL	33172 1001133 Yes	PPA	Lennar Hor No	No	Yes	No	11230	3.507183	2 NEM-ST	None	No	NEMPV	LG320N1K-LG Elector	7	
SCE-INT-NST-161304	Interconne SCE	ONTARIO 91761 San Bernar Solar PV 4.79898 4.703	18	180 Rooftop Fixed	Residential 9/24/2020 9/24/2020 9/29/2020	No	ENERGY SE 707-782-3:TORRANCE CA	90502 619149 No	No	No	No	Yes	No	20479.62	4.354586	2 NEM-ST	None	No	NEMPV	Q.PEAK DU Hanwha Q-	16	
SCE-INT-NST-161314	Interconne SCE	ONTARIO 91761 San Bernar Solar PV 3.267347 3.202	27	270 Rooftop Fixed	Residential 9/24/2020 10/14/2020 10/22/2020	No	SUNSTREE1949-450-58 MIAMI FL	33172 1001133 Yes	PPA	Lennar Hor No	No	Yes	No	11230	3.507183	2 NEM-ST	None	No	NEMPV	LG320N1K-LG Elector	11	
SCE-INT-NST-161317	Interconne SCE	ONTARIO 91761 San Bernar Solar PV 3.606122 3.534	18	180 Rooftop Fixed	Residential 9/24/2020 11/24/2020 12/3/2020	No	SUN CAPIT.888-688-8:POMONA CA	91766 1021860 No	No	No	No	Yes	No	21520	6.089417	2 NEM-ST	None	No	NEMPV	REC320TP2REC Solar	12	
SCE-INT-NST-161318	Interconne SCE	ONTARIO 91761 San Bernar Solar PV 3.267347 3.202	18	270 Rooftop Fixed	Residential 9/24/2020 10/21/2020 10/28/2020	No	SUNSTREE1949-450-58 MIAMI FL	33172 1001133 Yes	PPA	Lennar Hor No	No	Yes	No	11230	3.507183	2 NEM-ST	None	No	NEMPV	LG320N1K-LG Elector	7	
SCE-INT-NST-161327	Interconne SCE	ONTARIO 91761 San Bernar Solar PV 3.861224 3.784	23	180 Rooftop Fixed	Residential 9/24/2020 10/21/2020 10/28/2020	No	SUNSTREE1949-450-58 MIAMI FL	33172 1001133 Yes	PPA	Lennar Hor No	No	Yes	No	10210	3.507385	2 NEM-ST	None	No	NEMPV	LG320N1K-LG Elector	6	
SCE-INT-NST-161587	Interconne SCE	ONTARIO 91762 San Bernar Solar PV 5.70102 5.587	18	180 Rooftop Fixed	Residential 9/25/2020 9/25/2020 9/30/2020	No	ENERGY SE 707-782-3:TORRANCE CA	90502 619149 No	No	No	No	Yes	No	23080.09	4.131034	2 NEM-ST	None	No	NEMPV	Q.PEAK DU Hanwha Q-	19	
SCE-INT-NST-161627	Interconne SCE	ONTARIO 91761 San Bernar Solar PV 7.616129 7.469	18	180 Rooftop Fixed	Residential 9/25/2020 1/11/2021 1/14/2021	No	SUN CAPIT.888-688-8:POMONA CA	91766 1021860 No	No	No	No	Yes	No	40150	5.375552	2 NEM-ST	None	No	NEMPV	LG350Q1C-1G Elector	16	
SCE-INT-NST-161665	Interconne SCE	ONTARIO 91764 San Bernar Solar PV 9.970408 9.771	18	180 Rooftop Fixed	Residential 9/25/2020 10/7/2020 10/16/2020	No	ENERGY SE 310-904-6:TORRANCE CA	90502 619149 No	No	No	No	Yes	No	48003.38	4.912862	2 NEM-ST	None	No	NEMPV	SN310M-11S-Energy	35	
SCE-INT-NST-161810	Interconne SCE	ONTARIO 91762 San Bernar Solar PV 3.703061 3.629	18	180 Rooftop Fixed	Residential 9/28/2020 10/14/2020 10/22/2020	No	ENERGY SE 310-904-6:TORRANCE CA	90502 619149 No	No	No	No	Yes	No	15922.62	4.387605	2 NEM-ST	None	No	NEMPV	SN310M-11S-Energy	13	
SCE-INT-NST-161849	Interconne SCE	ONTARIO 91764 San Bernar Solar PV 7.427551 7.279	19	180 Rooftop Fixed	Residential 9/28/2020 9/28/2020 10/2/2020	No	VIVINT SOL 801-845-0:LEHI UT	84043 973756 Yes	PPA	Vivint Solar No	No	Yes	Yes	Solar Edge Technologi	47840	6.572331	2 NEM-ST	None	No	NEMPV	JKM320M-Jinko Solar	14
SCE-INT-NST-161877	Interconne SCE	ONTARIO 91762 San Bernar Solar PV 5.893878 5.776	20	270 Rooftop Fixed	Residential 10/23/2017 10/23/2017 10/24/2017	No	SolarMax 951-300-0:Riverside CA	92507 972048 No	No	No	No	Yes	No	22000	3.808864	2 NEM-ST	None	No	NEMPV	SMX-26SP Sunpark T	5	
SCE-INT-NST-161959	Interconne SCE	ONTARIO 91761 San Bernar Solar PV 4.2 3.836	18	180 Rooftop Fixed	Residential 9/28/2020 11/19/2020 11/25/2020	No	SUNPOWEI510-260-8:RICHMONT CA	94804 890895 Yes	Lease	KB Home No	No	Yes	No	21336	5.562043	2 NEM-ST	None	No	NEMPV	SPR-X21-35SunPower	12	
SCE-INT-NST-162036	Interconne SCE	ONTARIO 91761 San Bernar Solar PV 4.527551 4.437	18	180 Rooftop Fixed	Residential 9/29/2020 9/29/2020 10/6/2020	No	VIVINT SOL 801-845-0:LEHI UT	84043 973756 Yes	PPA	Vivint Solar No	No	Yes	Yes	Solar Edge Technologi	29152.5	6.570317	2 NEM-ST	None	No	NEMPV	JKM325M-Jinko Solar	15
SCE-INT-NST-162066	Interconne SCE	ONTARIO 91762 San Bernar Solar PV 4.795 3.836	18	180 Rooftop Fixed	Residential 9/29/2020 11/12/2020 3/5/2021	No	SUNPOWEI510-260-8:RICHMONT CA	94804 890895 Yes	Lease	KB Home No	No	Yes	No	21336	5.562043	2 NEM-ST	None	No	NEMPV	SPR-X21-35SunPower	12	
SCE-INT-NST-162067	Interconne SCE	ONTARIO 91762 San Bernar Solar PV 4.2 3.836	18	180 Rooftop Fixed	Residential 9/29/2020 11/12/2020 11/19/2020	No	SUNPOWEI510-260-8:RICHMONT CA	94804 890895 No	No	No	No	Yes	No	17850	4.653284	2 NEM-ST	None	No	NEMPV	SPR-X21-35SunPower	12	
SCE-INT-NST-162108	Interconne SCE	ONTARIO 91762 San Bernar Solar PV 4.2 3.836	18	270 Rooftop Fixed	Residential 9/29/2020 11/18/2020 11/25/2020	No	SUNPOWEI510-260-8:RICHMONT CA	94804 890895 No	No	No	No	Yes	No	17850	4.653284	2 NEM-ST	None	No	NEMPV	SPR-X21-35SunPower	12	
SCE-INT-NST-162149	Interconne SCE	ONTARIO 91761 San Bernar Solar PV 3.494898 3.425	27	173 Rooftop Fixed	Residential 9/29/2020 9/29/2020 10/6/2020	No	SUNRUN IN 855-478-6:SAN FRANC CA	94104 750184 No	No	No	No	Yes	Yes	Sunrun, Inc 17499.88	5.109454	2 NEM-ST	None	No	NEMPV	LG345M1C-LG Elector	11	
SCE-INT-NST-162162	Interconne SCE	ONTARIO 91762 San Bernar Solar PV 18.15204 17.789	22	90 Rooftop Fixed	Residential 9/29/2020 9/29/2020 10/16/2020	No	SUNRUN IN 855-478-6:SAN FRANC CA	94104 750184 No	No	No	No	Yes	Yes	Sunrun, Inc 49749.79	2.79666	2 NEM-ST	None	No	NEMPV	LR6-60HPH LONGI Gre	16	
SCE-INT-NST-162228	Interconne SCE	ONTARIO 91764 San Bernar Solar PV 37.27392 30.304	5	180 Rooftop Fixed	Non-Profit 10/2/2020 6/21/2021 7/12/2021	No	Grid Altern 951-616-7:OAKLAND CA	94608 867533 Yes	PPA	National C Co No	No	Yes	Yes	541200	17.85903	2 MASH-VN V NEM	Yes	NEMPV	JKM390M-Jinko Solar	87		
SCE-INT-NST-162248	Interconne SCE	ONTARIO 91764 San Bernar Solar PV 12.99 10.392	18	180 Rooftop Fixed	Residential 9/29/2020 3/8/2021 3/10/2021	No	ELEVATION 480-492-4:CHANDLER AZ	85286 1048076 No	No	No	No	Yes	Yes	Enphase Er 54348.06	5.229797	2 NEM-ST	None	No	NEMPV	Q.PEAK DU Hanwha Q-	8	
SCE-INT-NST-162294	Interconne SCE	ONTARIO 91762 San Bernar Solar PV 3.914286 3.836	18	218 Rooftop Fixed	Residential 9/30/2020 1/26/2021 1/27/2021	No	SUNPOWEI510-260-8:RICHMONT CA	94804 890895 No	No	No	No	Yes	No	17850	4.653284	2 NEM-ST	None	No	NEMPV	SPR-X21-35SunPower	12	
SCE-INT-NST-162300	Interconne SCE	ONTARIO 91762 San Bernar Solar PV 4.2 3.836	27	218 Rooftop Fixed	Residential 9/30/2020 1/13/2021 2/5/2021	No	SUNPOWEI510-260-8:RICHMONT CA	94804 890895 No	No	No	No	Yes	No	17850	4.653284	2 NEM-ST	None	No	NEMPV	SPR-X21-35SunPower	12	
SCE-INT-NST-162305	Interconne SCE	ONTARIO 91762 San Bernar Solar PV 3.914286 3.836	18	218 Rooft																		

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Application Preceding 1 Supercedin Matched C	Application/Utility	Service City/Service Zip Service Cot Technology System Siz System Siz Storage Ca Storage Siz Inverter Siz Tilt	Azimuth	Mounting / Tracking	Customer 5 App Received [App Complete App Approved CDecommission Self Installe Installer Na Installer Ph Installer CII Installer St Installer ZI/CSLB Numt Third Party Third Party Third Party Pace Finan Pace Finan Electric Vel Electric Vel System Out/ System Out/ System Out/ Total System Itc Cost Ba Cost/Watt NEM Tariff Interconne V NEM, NEF Project is V NEMPV or Generator Generator Generator																	
SCE-INT-NST-165357	Interconne SCE	ONTARIO 91761 San Bernar Solar PV 7.75 6.984	23	180 Rooftop Fixed	Residential 10/19/2020 10/30/2020 11/6/2020	No	CALIFORNIA 855-775-8 BEVERLY H CA	90210 1049108	No	No	Yes	No	31958	4.575887	2 NEM-ST	None	No	NEMPV	AC-310MH Axtec	15		
SCE-INT-NST-165444	Interconne SCE	ONTARIO 91762 San Bernar Solar PV 12.36735 12.12	18	180 Rooftop Fixed	Residential 10/19/2020 10/19/2020 10/28/2020	No	ENERGY SE 866-865-4 TORRANCE CA	90502 619149	Yes	PPA Sunnova	No	Yes	No	4113.83	4.339424	2 NEM-ST	None	No	NEMPV	Q.PEAK DU Hanwha Q-	13	
SCE-INT-NST-165520	Interconne SCE	ONTARIO 91761 San Bernar Solar PV 3.914286 3.836	23	244 Rooftop Fixed	Residential 10/20/2020 1/4/2021 1/5/2021	No	SUNPOWEI510-260-8; RICHMOND CA	94804 890895	No	No	No	Yes	No	17850	4.653284	2 NEM-ST	None	No	NEMPV	SPR-X21-35SunPower	12	
SCE-INT-NST-165527	Interconne SCE	ONTARIO 91761 San Bernar Solar PV 3.914286 3.836	18	244 Rooftop Fixed	Residential 10/20/2020 12/26/2020 12/24/2020	No	SUNPOWEI510-260-8; RICHMOND CA	94804 890895	No	No	No	Yes	No	17850	4.653284	2 NEM-ST	None	No	NEMPV	SPR-X21-35SunPower	12	
SCE-INT-NST-165530	Interconne SCE	ONTARIO 91761 San Bernar Solar PV 4.567347 4.476	18	243 Rooftop Fixed	Residential 10/20/2020 12/26/2020 12/28/2020	No	SUNPOWEI510-260-8; RICHMOND CA	94804 890895	No	No	No	Yes	No	20825	4.652591	2 NEM-ST	None	No	NEMPV	SPR-X21-35SunPower	14	
SCE-INT-NST-165535	Interconne SCE	ONTARIO 91761 San Bernar Solar PV 3.914286 3.836	18	153 Rooftop Fixed	Residential 10/20/2020 1/4/2021 1/5/2021	No	SUNPOWEI510-260-8; RICHMOND CA	94804 890895	No	No	No	Yes	No	17850	4.652384	2 NEM-ST	None	No	NEMPV	SPR-X21-35SunPower	12	
SCE-INT-NST-165538	Interconne SCE	ONTARIO 91761 San Bernar Solar PV 4.567347 4.476	23	180 Rooftop Fixed	Residential 10/20/2020 12/16/2020 12/18/2020	No	SUNPOWEI510-260-8; RICHMOND CA	94804 890895	Yes	Lease Pulte Home	No	Yes	No	24892	5.561215	2 NEM-ST	None	No	NEMPV	SPR-X21-35SunPower	14	
SCE-INT-NST-165643	Interconne SCE	ONTARIO 91761 San Bernar Solar PV 4.9 4.476	23	180 Rooftop Fixed	Residential 10/20/2020 4/27/2021 5/5/2021	No	SUNPOWEI510-260-8; RICHMOND CA	94804 890895	No	No	No	Yes	No	20825	4.652591	2 NEM-ST	None	No	NEMPV	SPR-X21-35SunPower	14	
SCE-INT-NST-165650	Interconne SCE	ONTARIO 91761 San Bernar Solar PV 4.567347 4.476	23	270 Rooftop Fixed	Residential 10/20/2020 12/16/2020 12/21/2020	No	SUNPOWEI510-260-8; RICHMOND CA	94804 890895	No	No	No	Yes	No	20825	4.652591	2 NEM-ST	None	No	NEMPV	SPR-X21-35SunPower	14	
SCE-INT-NST-165653	Interconne SCE	ONTARIO 91761 San Bernar Solar PV 4.567347 4.476	23	180 Rooftop Fixed	Residential 10/20/2020 12/16/2020 12/18/2020	No	SUNPOWEI510-260-8; RICHMOND CA	94804 890895	No	No	No	Yes	No	20825	4.652591	2 NEM-ST	None	No	NEMPV	SPR-X21-35SunPower	14	
SCE-INT-NST-165664	Interconne SCE	ONTARIO 91762 San Bernar Solar PV 4.96 4.559	19	180 Rooftop Fixed	Residential 10/20/2020 11/5/2020 11/13/2020	No	SUNERGY 951-736-2 CORONA CA	92880 1005730	No	No	No	Yes	No	24800	5.439789	2 NEM-ST	None	No	NEMPV	SN310M-11S-Energy	16	
SCE-INT-NST-165665	Interconne SCE	ONTARIO 91761 San Bernar Solar PV 4.567347 4.476	23	90 Rooftop Fixed	Residential 10/20/2020 12/16/2020 12/18/2020	No	SUNPOWEI510-260-8; RICHMOND CA	94804 890895	No	No	No	Yes	No	20825	4.652591	2 NEM-ST	None	No	NEMPV	SPR-X21-35SunPower	14	
SCE-INT-NST-165686	Interconne SCE	ONTARIO 91762 San Bernar Solar PV 3.246939 3.182	18	181 Rooftop Fixed	Residential 10/20/2020 10/20/2020 10/28/2020	No	SUNRUN IN 855-478-61 SAN FRANC CA	94104 750184	Yes	PPA Sunrun Inc	No	Yes	Yes	Sunrun Inc.	16141.01	5.072598	2 NEM-ST	None	No	NEMPV	Q.PEAK DU Hanwha Q-	11
SCE-INT-NST-165766	Interconne SCE	ONTARIO 91762 San Bernar Solar PV 13.9625 11.17	23	179 Rooftop Fixed	Residential 10/21/2020 3/9/2021 3/11/2021	No	FREEDOM 1951-319-4 TEMECULA CA	92590 1029644	Yes	Lease SunRun	No	Yes	No	41734.68	3.736318	2 NEM-ST	None	No	NEMPV	LR6-60HPH LONGI Gre	11	
SCE-INT-NST-165893	Interconne SCE	ONTARIO 91764 San Bernar Solar PV 8.96 8.233	18	180 Rooftop Fixed	Residential 10/21/2020 10/30/2020 11/6/2020	No	ENERGY SE 310-904-61 TORRANCE CA	90502 619149	No	No	No	Yes	No	39230.56	4.765038	2 NEM-ST	None	No	NEMPV	Q.PEAK DU Hanwha Q-	28	
SCE-INT-NST-165898	Interconne SCE	ONTARIO 91764 San Bernar Solar PV 4.03 3.629	18	180 Rooftop Fixed	Residential 10/21/2020 10/21/2020 11/3/2020	No	ENERGY SE 310-904-61 TORRANCE CA	90502 619149	No	No	No	Yes	No	26522.77	7.308561	2 NEM-ST	None	No	NEMPV	SN310M-11S-Energy	13	
SCE-INT-NST-166004	Interconne SCE	ONTARIO 91762 San Bernar Solar PV 5.89 5.414	20	270 Rooftop Fixed	Residential 10/22/2020 10/22/2020 11/4/2020	No	SUNERGY 951-736-2 CORONA CA	92880 1005730	No	No	No	Yes	No	26843	4.958071	2 NEM-ST	None	No	NEMPV	SN310M-11S-Energy	19	
SCE-INT-NST-166194	Interconne SCE	ONTARIO 91762 San Bernar Solar PV 5.44 4.898	18	180 Rooftop Fixed	Residential 10/22/2020 10/22/2020 11/4/2020	No	ENERGY SE 310-904-61 TORRANCE CA	90502 619149	No	No	No	Yes	No	24883.69	5.080377	2 NEM-ST	None	No	NEMPV	Q.PEAK DU Hanwha Q-	17	
SCE-INT-NST-16634	Interconne SCE	ONTARIO 91761 San Bernar Solar PV 7.041837 6.901	20	225 Rooftop Fixed	Residential 10/26/2017 10/26/2017 11/14/2017	No	FLUENT SO 801-312-0 DRAPER UT	84020 1024791	Yes	PPA Sunrun	No	Yes	Yes	Sunrun	8900	1.289668	2 NEM-ST	None	No	NEMPV	HIS-5290R Hydual Hd	14
SCE-INT-NST-166430	Interconne SCE	ONTARIO 91761 San Bernar Solar PV 5.04 4.583	23	270 Rooftop Fixed	Residential 10/23/2020 11/6/2020 11/14/2020	No	SUNRUN IN 855-478-61 SAN FRANC CA	94104 750184	No	No	No	Yes	Yes	Sunrun, Inc	29750.11	6.491405	2 NEM-ST	None	No	NEMPV	LR6-60HPH LONGI Gre	16
SCE-INT-NST-166547	Interconne SCE	ONTARIO 91730 San Bernar Solar PV 171.9863 137.589	5	180 Rooftop Fixed	Non-Profit 10/26/2020 7/9/2021 7/12/2021	No	Grid Altern 951-616-7 OAKLAND CA	94608 867533	No	No	No	Yes	Yes	5412000	39.33454	2 MASH-VN V NEM	Yes	NEMPV	JKM320M-Jinko Solar	132		
SCE-INT-NST-166557	Interconne SCE	ONTARIO 91761 San Bernar Solar PV 2.612024 2.558	18	180 Rooftop Fixed	Residential 10/26/2020 12/27/2020 12/28/2020	No	SUNPOWEI510-260-8; RICHMOND CA	94804 890895	No	No	No	Yes	No	11900	4.652071	2 NEM-ST	None	No	NEMPV	SPR-X21-35SunPower	8	
SCE-INT-NST-166566	Interconne SCE	ONTARIO 91761 San Bernar Solar PV 3.62245 3.197	18	90 Rooftop Fixed	Residential 10/26/2020 12/27/2020 12/28/2020	No	SUNPOWEI510-260-8; RICHMOND CA	94804 890895	No	No	No	Yes	No	14875	4.652799	2 NEM-ST	None	No	NEMPV	SPR-X21-35SunPower	10	
SCE-INT-NST-166711	Interconne SCE	ONTARIO 91761 San Bernar Solar PV 7.37 6.686	21	180 Rooftop Fixed	Residential 10/26/2020 5/17/2021 5/21/2021	No	INFINITY EP 916-244-2 ROCKLIN CA	95765 998627	No	No	No	Yes	No	32428	4.850134	2 NEM-ST	None	No	NEMPV	Q.PEAK DU Hanwha Q-	22	
SCE-INT-NST-166782	Interconne SCE	ONTARIO 91761 San Bernar Solar PV 5.84 5.265	18	180 Rooftop Fixed	Residential 10/27/2020 10/27/2020 11/10/2020	No	SUNLUX 909-575-0 RANCHO CA	91730 1008374	No	No	No	Yes	No	20908	3.97113	2 NEM-ST	None	No	NEMPV	Solaria Pow Solaria	16	
SCE-INT-NST-166784	Interconne SCE	ONTARIO 91761 San Bernar Solar PV 9.87875 7.903	30	145 Rooftop Fixed	Residential 10/26/2020 3/5/2021 3/9/2021	No	FREEDOM 1951-319-4 TEMECULA CA	92590 1029644	No	No	No	Yes	No	41438	5.243253	2 NEM-ST	None	No	NEMPV	Q.PLUS BFF Hanwha Q-	17	
SCE-INT-NST-166785	Interconne SCE	ONTARIO 91762 San Bernar Solar PV 4.2 4.116	18	180 Rooftop Fixed	Residential 10/26/2020 10/26/2020 10/31/2020	No	VIVINT SOL 801-845-0 LEHI UT	84043 973756	Yes	Other VivintSolar	No	Yes	Yes	Solar Edge Technologie	26163.2	6.356462	2 NEM-ST	None	No	NEMPV	Q.PEAK DU Hanwha Q-	14
SCE-INT-NST-166821	Interconne SCE	ONTARIO 91764 San Bernar Solar PV 3.84 3.527	30	180 Rooftop Fixed	Residential 10/27/2020 10/27/2020 11/3/2020	No	V3 ELECTRI 844-837-6 EL DORADO CA	95762 1000573	Yes	PPA SunRun	No	Yes	Yes	SunRun	17740.8	5.029997	2 NEM-ST	None	No	NEMPV	Q.PEAK DU Hanwha Q-	12
SCE-INT-NST-166826	Interconne SCE	ONTARIO 91761 San Bernar Solar PV 5.553061 5.442	18	190 Rooftop Fixed	Residential 10/27/2020 1/4/2021 1/5/2021	No	BRIGHT PU 888-997-4 AUBURN MA	1501 1020761	Yes	PPA Sunrun Inc	No	Yes	Yes	24973.6	4.589048	2 NEM-ST	None	No	NEMPV	LR6-60HPH LONGI Gre	19	
SCE-INT-NST-166865	Interconne SCE	ONTARIO 91762 San Bernar Solar PV 4.41 4.05	18	180 Rooftop Fixed	Residential 10/27/2020 10/27/2020 11/3/2020	No	VIVINT SOL 801-845-0 LEHI UT	84043 973756	Yes	PPA VivintSolar	No	Yes	Yes	Solar Edge Technologie	26163.2	6.460049	2 NEM-ST	None	No	NEMPV	Q.PEAK DU Hanwha Q-	14
SCE-INT-NST-166898	Interconne SCE	ONTARIO 91761 San Bernar Solar PV 4.65 4.296	18	180 Rooftop Fixed	Residential 10/27/2020 10/27/2020 11/9/2020	No	BRIGHT PU 888-997-4 AUBURN MA	1501 1020761	Yes	PPA Sunrun Inc	No	Yes	Yes	19716	4.589385	2 NEM-ST	None	No	NEMPV	LR6-60HPH LONGI Gre	15	
SCE-INT-NST-166952	Interconne SCE	ONTARIO 91762 San Bernar Solar PV 4.55 4.141	15	181 Rooftop Fixed	Residential 10/27/2020 10/27/2020 11/10/2020	No	VIVINT SOL 801-845-0 LEHI UT	84043 973756	Yes	Lease VivintSolar	No	Yes	Yes	Solar Edge Technologie	26299	6.350881	2 NEM-ST	None	No	NEMPV	JKM325M-Jinko Solar	7
SCE-INT-NST-167175	Interconne SCE	ONTARIO 91762 San Bernar Solar PV 7.36 6.697	19	359 Rooftop Fixed	Residential 10/28/2020 11/18/2020 11/25/2020	No	VIVINT SOL 801-845-0 LEHI UT	84043 973756	Yes	PPA VivintSolar	No	Yes	Yes	Solar Edge Technologie	44160	6.593997	2 NEM-ST	None	No	NEMPV	JKM320M-Jinko Solar	9
SCE-INT-NST-167194	Interconne SCE	ONTARIO 91762 San Bernar Solar PV 6.48 4.116	18	270 Rooftop Fixed	Residential 10/28/2020 11/6/2020 11/14/2020	No	VIVINT SOL 801-845-0 LEHI UT	84043 973756	Yes	Other VivintSolar	No	Yes	Yes	Solar Edge Technologie	25894.4	6.291156	2 NEM-ST	None	No	NEMPV	Q.PEAK DU Hanwha Q-	14
SCE-INT-NST-167324	Interconne SCE	ONTARIO 91761 San Bernar Solar PV 4.4 5.881	18	180 Rooftop Fixed	Residential 10/29/2020 10/29/2020 11/12/2020	No	ENERGY SE 866-865-4 TORRANCE CA	90502 619149	No	No	No	Yes	No	17913.47	3.04599	2 NEM-ST	None	No	NEMPV	Q.PEAK DU Hanwha Q-	20	
SCE-INT-NST-167601	Interconne SCE	ONTARIO 91762 San Bernar Solar PV 10.92117 8.879	26	181 Rooftop Fixed	Residential 10/30/2020 3/9/2021 3/11/2021	No	FREEDOM 1951-319-4 TEMECULA CA	92590 1029644	Yes	Lease SunRun	No	Yes	No	39429.83	4.440796	2 NEM-ST	None	No	NEMPV	LR6-60HPH LONGI Gre	9	
SCE-INT-NST-167745	Interconne SCE	ONTARIO 91762 San Bernar Solar PV 4.48 4.116	18	180 Rooftop Fixed	Residential 11/4/2020 11/4/2020 11/12/2020	No	VIVINT SOL 801-845-0 LEHI UT	84043 973756	Yes	Other VivintSolar	No	Yes	Yes	Solar Edge Technologie	26790.4	6.508843	2 NEM-ST	None	No	NEMPV	Q.PEAK DU Hanwha Q-	14
SCE-INT-NST-167966	Interconne SCE	ONTARIO 91761 San Bernar Solar PV 12.915 11.625	25	180 Rooftop Fixed	Residential 11/3/2020 11/25/2020 12/4/2020	No	SUNRUN IN 855-478-61 SAN FRANC CA	94104 750184	Yes	PPA Sunrun Inst	No	Yes	Yes	Sunrun, Inc	67267.51	5.786452	2 NEM-ST	None	No	NEMPV	LR6-60HPH LONGI Gre	16
SCE-INT-NST-167971	Interconne SCE	ONTARIO 91764 San Bernar Solar PV 4.838776 4.742	18	270 Rooftop Fixed	Residential 11/3/2020 1/26/2021 1/27/2021	No	FREEDOM 1951-319-4 TEMECULA CA	92590 1029644	No	No	No	Yes	No	29311	6.181147	2 NEM-ST	None	No	NEMPV	Q.PLUS BFF Hanwha Q-	9	
SCE-INT-NST-167979	Interconne SCE	ONTARIO 91762 San Bernar Solar PV 8.32 7.57	17	180 Rooftop Fixed	Residential 11/3/2020 11/3/2020 11/16/2020	No	VIVINT SOL 801-845-0 LEHI UT	84043 973756	Yes	PPA Vivint Solar	No	Yes	Yes	Solar Edge Technologie	48089.6	6.352655	2 NEM-ST	None	No	NEMPV	JKM320M-Jinko Solar	5
SCE-INT-NST-168048	Interconne SCE	ONTARIO 91764 San Bernar Solar PV 6.365306 6.238	18	180 Rooftop Fixed	Residential 11/3/2020 11/25/2020 12/4/2020	No	SUNRUN IN 855-478-61 SAN FRANC CA	94104 750184	Yes	PPA Sunrun	No	Yes	Yes	Sunrun, Inc	24999.98	4.007691	2 NEM-ST	None	No	NEMPV	LR6-60HPH LONGI Gre	10
SCE-INT-NST-168139	Interconne SCE	ONTARIO 91762 San Bernar Solar PV 8.64 7.939	18	180 Rooftop Fixed	Residential 11/4/2020 11/12/2020 11/18/2020	No	ENERGY SE 866-86															

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Application Preceding	Supercedin	Matched	C	Application/Utility	Service City/Service Zip	Service Cot	Technology	System Siz	System Siz	Storage Ca	Storage Siz	Inverter Siz	Tilt	Azimuth	Mounting	Tracking	Customer	5 App Received	App Complete	App Approved	EDecommis	Self Install	Installer Na	Installer Ph	Installer Cil	Installer St	Installer Zi	CSLB Num	Third Party	Third Party	Third Party	Face Fin	Face Fin	Electric Vel	Electric Vel	System Out	System Out	System Out	Total Syste	Itc Cost	Cost/Watt	NEM Tariff	Interconne	VNEM	NEF Project	V NEMPV or	Generator	Generator	Generator
SCE-INT-NST-171639				Interconne SCE	ONTARIO	91761	San Bernar Solar PV	6.96	6.323					18	220	Rooftop	Fixed	Residential	11/20/2020	2/22/2021	2/25/2021	No	FREEDOM 1951-319-45	TEMECULA CA		92590	1029644	No	No	No	No	No	No	No	No	No	No	33943	5.368179	2	NEM-ST	None	No	NEMPV	Q.PLUS BFF Hanwha Q-				24
SCE-INT-NST-171698				Interconne SCE	ONTARIO	91761	San Bernar Solar PV	7.032653	6.892					20	180	Rooftop	Fixed	Residential	11/20/2020	11/20/2020	12/1/2020	No	MEGA POW800-528-0	WOODLAN CA		91367	876625	No	No	No	No	No	No	No	No	No	No	23747	3.445589	2	NEM-ST	None	No	NEMPV	VBNH3405 Panasonic I-				22
SCE-INT-NST-171921				Interconne SCE	ONTARIO	91761	San Bernar Solar PV	6.30102	6.175					18	180	Rooftop	Fixed	Residential	11/23/2020	1/7/2021	1/12/2021	No	ENERGY SE 866-865-45	TORRANCE CA		90502	619149	No	No	No	No	No	No	No	No	No	23842.41	3.861119	2	NEM-ST	None	No	NEMPV	Q.PEAK DU Hanwha Q-				21	
SCE-INT-NST-172028				Interconne SCE	ONTARIO	91762	San Bernar Solar PV	4.68	4.246					20	270	Rooftop	Fixed	Residential	11/23/2020	2/4/2021	2/10/2021	No	NEW DAY 5855-444-63	MURRIETA CA		92562	612958	No	No	No	No	No	No	No	No	No	15267	3.595519	2	NEM-ST	None	No	NEMPV	LG340N1K-LG Elector				6	
SCE-INT-NST-172107				Interconne SCE	ONTARIO	91762	San Bernar Solar PV	2.935714	2.877					27	270	Rooftop	Fixed	Residential	11/23/2020	1/25/2021	1/27/2021	No	SUNPOWER1510-260-8	RICHMOND CA		94804	890895	No	No	No	No	No	No	No	No	No	13387.5	4.653284	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower				9	
SCE-INT-NST-172109				Interconne SCE	ONTARIO	91762	San Bernar Solar PV	2.935714	2.877					23	270	Rooftop	Fixed	Residential	11/23/2020	1/11/2021	1/14/2021	No	SUNPOWER1510-260-8	RICHMOND CA		94804	890895	No	No	No	No	No	No	No	No	13387.5	4.653284	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower				9		
SCE-INT-NST-172121				Interconne SCE	ONTARIO	91762	San Bernar Solar PV	2.935714	2.877					18	180	Rooftop	Fixed	Residential	11/23/2020	1/26/2021	1/27/2021	No	SUNPOWER1510-260-8	RICHMOND CA		94804	890895	No	No	No	No	No	No	No	No	13387.5	4.653284	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower				9		
SCE-INT-NST-172335				Interconne SCE	ONTARIO	91761	San Bernar Solar PV	5.595	4.476					23	180	Rooftop	Fixed	Residential	11/24/2020	3/28/2021	3/30/2021	No	SUNPOWER1510-260-8	RICHMOND CA		94804	890895	No	No	No	No	No	No	No	No	20825	4.652591	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower				14		
SCE-INT-NST-172345				Interconne SCE	ONTARIO	91761	San Bernar Solar PV	2.941837	2.883					18	180	Rooftop	Fixed	Residential	11/24/2020	11/24/2020	13/8/2020	No	CLEAN ENE 800-994-11	SAN DIMAS CA		91773	998787	Yes	PPA	Sunrun	No	No	No	No	No	No	No	8347	2.895248	2	NEM-ST	None	No	NEMPV	Q.Peak Du Hanwha Q-				9
SCE-INT-NST-172401				Interconne SCE	ONTARIO	91761	San Bernar Solar PV	4.219388	4.135					22	180	Rooftop	Fixed	Residential	11/24/2020	11/24/2020	13/6/2020	No	SUN BEES (714-676-8	POMONA CA		91767	970591	No	No	No	No	No	No	No	No	20601	4.982103	2	NEM-ST	None	No	NEMPV	SPR-E20-31SunPower				14		
SCE-INT-NST-172412				Interconne SCE	ONTARIO	91764	San Bernar Solar PV	7.712245	7.558					25	270	Rooftop	Fixed	Residential	11/24/2020	12/15/2020	12/17/2020	No	TESLA ENEI888-765-2	FREMONT CA		94538	888104	No	No	No	No	No	No	No	No	16921	2.238819	2	NEM-ST	None	No	NEMPV	Q.PEAK DU Hanwha Q-				24		
SCE-INT-NST-172537				Interconne SCE	ONTARIO	91764	San Bernar Solar PV	7.280612	7.135					20	180	Rooftop	Fixed	Residential	11/25/2020	11/25/2020	12/7/2020	No	PACIFIC SU 951-308-11	MURRIETA CA		92562	896158	No	No	No	No	No	No	No	No	19474.95	2.729495	2	NEM-ST	None	No	NEMPV	Q.PEAK DU Hanwha Q-				12		
SCE-INT-NST-172544				Interconne SCE	ONTARIO	91762	San Bernar Solar PV	3.6	3.301					12	134	Rooftop	Fixed	Residential	11/25/2020	2/8/2021	2/11/2021	No	SOLCIUS LL844-970-01	PROVO UT		84604	976336	No	No	No	No	No	No	No	No	14400	4.362314	2	NEM-ST	None	No	NEMPV	DNA-144-B Aptos Solar				9		
SCE-INT-NST-172576				Interconne SCE	ONTARIO	91761	San Bernar Solar PV	3.9	3.822					13	180	Rooftop	Fixed	Residential	11/25/2020	11/25/2020	12/8/2020	No	ENERGY SE 866-865-45	TORRANCE CA		90502	619149	No	No	No	No	No	No	No	No	20856.35	5.45692	2	NEM-ST	None	No	NEMPV	Q.PEAK DU Hanwha Q-				13		
SCE-INT-NST-172683				Interconne SCE	ONTARIO	91764	San Bernar Solar PV	2.69898	2.645					18	180	Rooftop	Fixed	Residential	11/27/2020	11/27/2020	12/3/2020	No	V3 ELECTRI844-837-6	EL DORADO CA		95762	1000573	Yes	PPA	SunRun	No	No	No	No	No	No	12038.4	4.551379	2	NEM-ST	None	No	NEMPV	Q.PEAK DU Hanwha Q-				9	
SCE-INT-NST-172696				Interconne SCE	ONTARIO	91762	San Bernar Solar PV	4.876531	4.779					14	180	Rooftop	Fixed	Residential	11/27/2020	11/27/2020	12/6/2020	No	COMPLETE 877-299-45	SAN RAMO CA		94583	961988	Yes	PPA	SunRun	No	No	No	No	No	25012	5.23373	2	NEM-ST	None	No	NEMPV	Q.PEAK DU Hanwha Q-				16		
SCE-INT-NST-172718				Interconne SCE	ONTARIO	91761	San Bernar Solar PV	3.15	2.877					18	180	Rooftop	Fixed	Residential	11/29/2020	2/17/2021	2/22/2021	No	SUNPOWER1510-260-8	RICHMOND CA		94804	890895	No	No	No	No	No	No	No	No	13387.5	4.653284	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower				9		
SCE-INT-NST-172720				Interconne SCE	ONTARIO	91761	San Bernar Solar PV	3.15	2.877					18	180	Rooftop	Fixed	Residential	11/29/2020	2/17/2021	2/22/2021	No	SUNPOWER1510-260-8	RICHMOND CA		94804	890895	No	No	No	No	No	No	No	13387.5	4.653284	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower				9			
SCE-INT-NST-172722				Interconne SCE	ONTARIO	91761	San Bernar Solar PV	3.15	2.877					18	180	Rooftop	Fixed	Residential	11/29/2020	2/17/2021	2/22/2021	No	SUNPOWER1510-260-8	RICHMOND CA		94804	890895	No	No	No	No	No	No	No	13387.5	4.653284	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower				9			
SCE-INT-NST-172723				Interconne SCE	ONTARIO	91761	San Bernar Solar PV	5.595	4.476					23	180	Rooftop	Fixed	Residential	11/29/2020	3/1/2021	3/3/2021	No	SUNPOWER1510-260-8	RICHMOND CA		94804	890895	Yes	Lease	Pulte HomNo	No	No	No	No	No	24892	5.561215	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower				14		
SCE-INT-NST-172724				Interconne SCE	ONTARIO	91761	San Bernar Solar PV	3.15	2.877					18	180	Rooftop	Fixed	Residential	11/29/2020	2/17/2021	2/22/2021	No	SUNPOWER1510-260-8	RICHMOND CA		94804	890895	No	No	No	No	No	No	No	13387.5	4.653284	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower				9			
SCE-INT-NST-172725				Interconne SCE	ONTARIO	91761	San Bernar Solar PV	5.50548	4.476					23	180	Rooftop	Fixed	Residential	11/29/2020	3/1/2021	10/6/2021	No	SUNPOWER1510-260-8	RICHMOND CA		94804	890895	Yes	Lease	Pulte HomNo	No	No	No	No	No	24892	5.561215	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower				14		
SCE-INT-NST-172726				Interconne SCE	ONTARIO	91761	San Bernar Solar PV	3.15	2.877					18	180	Rooftop	Fixed	Residential	11/29/2020	2/17/2021	2/20/2021	No	SUNPOWER1510-260-8	RICHMOND CA		94804	890895	No	No	No	No	No	No	No	13387.5	4.653284	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower				9			
SCE-INT-NST-172752				Interconne SCE	ONTARIO	91762	San Bernar Solar PV	2.935714	2.877					18	270	Rooftop	Fixed	Residential	11/29/2020	1/19/2021	1/22/2021	No	SUNPOWER1510-260-8	RICHMOND CA		94804	890895	Yes	Lease	KB Home	No	No	No	No	No	16002	5.562043	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower				9		
SCE-INT-NST-172753				Interconne SCE	ONTARIO	91762	San Bernar Solar PV	3.914286	3.836					23	180	Rooftop	Fixed	Residential	11/29/2020	1/11/2021	1/14/2021	No	SUNPOWER1510-260-8	RICHMOND CA		94804	890895	Yes	Lease	KB Home	No	No	No	No	No	21336	5.562043	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower				12		
SCE-INT-NST-172777				Interconne SCE	ONTARIO	91762	San Bernar Solar PV	3.722449	3.648					18	180	Rooftop	Fixed	Residential	11/30/2020	11/30/2020	12/8/2020	No	SUNRUN IN 855-478-63	SAN FRANC CA		94104	750184	Yes	PPA	Sunrun, Inc No	No	No	No	No	Yes	15842.74	4.342856	2	NEM-ST	None	No	NEMPV	LR6-60HPB LONGI Gre				13		
SCE-INT-NST-172779				Interconne SCE	ONTARIO	91761	San Bernar Solar PV	7.167347	7.024					22	180	Rooftop	Fixed	Residential	11/30/2020	12/12/2020	12/12/2020	No	GREEN DAY 951-335-5	SACRAMEN CA		95827	1038673	No	No	No	No	No	No	No	No	50700	7.218109	2	NEM-ST	None	No	NEMPV	Q.PEAK DU Hanwha Q-				10		
SCE-INT-NST-172800				Interconne SCE	ONTARIO	91761	San Bernar Solar PV	2.72	2.429					14	180	Rooftop	Fixed	Residential	11/30/2020	4/8/2021	5/27/2021	No	SUNSTREET305-485-41	MIAMI FL		33172	1001133	Yes	PPA	Lennar Hor No	No	No	No	No	No	10853	4.468093	2	NEM-ST	None	No	NEMPV	LG340N1K-LG Elector				8		

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Application Preceding 1 Supercedin Matched C Application Utility	Service City Service Zip Service Cot Technology System Siz System Siz Storage Ca Storage Siz Inverter Siz Tilt	Azimuth	Mounting	Tracking	Customer 5 App Received	App Complete	App Approved	EDecommission	Self Install	Installer Na	Installer Ph	Installer Cil	Installer St	Installer Zi	CSLB Num	Third Party	Third Party	Third Party	Third Party	Face Fin	Face Fin	Electric Vel	Electric Vel	System Out	System Out	System Out	Total System	Itc Cost	Cost/Watt	NEM Tariff	Interconn	VNEM	NEF Project	V NEMPV or	Generator	Generator	Generator
SCE-INT-NST-181026	Interconne SCE ONTARIO 91762 San Bernar Solar PV 4.2 4.116	18	270	Rooftop	Fixed	Residential	1/15/2021	1/15/2021	1/21/2021	No	VIVINT SOL 801-845-0; LEHI UT	UT	84043	973756	No	No	No	No	No	No	No	No	Yes	Yes	SolarEdge 1	15920	3.867832	2	NEM-ST	None	No	NEMPV	Q.PEAK DU Hanwha Q-	5			
SCE-INT-NST-181152	Interconne SCE ONTARIO 91762 San Bernar Solar PV 4.2 4.116	26	270	Rooftop	Fixed	Residential	1/19/2021	1/25/2021	1/27/2021	No	VIVINT SOL 801-845-0; LEHI UT	UT	84043	973756	No	No	No	No	No	No	No	Yes	Yes	SolarEdge 1	15920	3.867832	2	NEM-ST	None	No	NEMPV	Q.PEAK DU Hanwha Q-	5				
SCE-INT-NST-181164	Interconne SCE ONTARIO 91762 San Bernar Solar PV 5.0625 4.05	17	180	Rooftop	Fixed	Residential	1/15/2021	7/6/2021	7/9/2021	No	VIVINT SOL 801-845-0; LEHI UT	UT	84043	973756	No	No	No	No	No	No	No	Yes	Yes	Solar Edge	13230	3.266666	2	NEM-ST	None	No	NEMPV	Q.PEAK DU Hanwha Q-	10				
SCE-INT-NST-181172	Interconne SCE ONTARIO 91762 San Bernar Solar PV 4.132653 4.05	27	180	Rooftop	Fixed	Residential	1/15/2021	1/15/2021	1/21/2021	No	VIVINT SOL 801-845-0; LEHI UT	UT	84043	973756	No	No	No	No	No	No	No	Yes	Yes	Solar Edge	13230	3.266666	2	NEM-ST	None	No	NEMPV	Q.PEAK DU Hanwha Q-	14				
SCE-INT-NST-181195	Interconne SCE ONTARIO 91764 San Bernar Solar PV 4.868367 4.771	17	270	Rooftop	Fixed	Residential	1/15/2021	1/25/2021	1/27/2021	No	SOLAR CON 818-925-1; TARZANA CA	CA	91356	1014977	No	No	No	No	No	No	No	Yes	Yes	Solar Edge	40000	8.385395	2	NEM-ST	None	No	NEMPV	VBHNS405; Panasonic 1	15				
SCE-INT-NST-181222	Interconne SCE ONTARIO 91762 San Bernar Solar PV 4.2 4.116	18	180	Rooftop	Fixed	Residential	1/15/2021	1/15/2021	1/21/2021	No	VIVINT SOL 801-845-0; LEHI UT	UT	84043	973756	Yes	PPA	VIVINT SOL	No	No	No	No	Yes	Yes	Solar Edge Technologi	22489.6	5.463945	2	NEM-ST	None	No	NEMPV	Q.PEAK DU Hanwha Q-	14				
SCE-INT-NST-181237	Interconne SCE ONTARIO 91762 San Bernar Solar PV 7.240959 7.103	18	180	Rooftop	Fixed	Residential	1/15/2021	1/15/2021	1/25/2021	No	ESP CONTR866-865-4E TORRANCE CA	CA	90502	619149	No	No	No	No	No	No	No	Yes	Yes	Solar Edge Technologi	12138.85	1.708975	2	NEM-ST	None	No	NEMPV	Q.PEAK DU Hanwha Q-	10				
SCE-INT-NST-181330	Interconne SCE ONTARIO 91762 San Bernar Solar PV 4.2 4.116	21	270	Rooftop	Fixed	Residential	1/18/2021	1/18/2021	1/21/2021	No	VIVINT SOL 801-845-0; LEHI UT	UT	84043	973756	Yes	Lease	VIVINT SOL	No	No	No	No	Yes	Yes	Solar Edge Technologi	25894.4	6.291156	2	NEM-ST	None	No	NEMPV	Q.PEAK DU Hanwha Q-	14				
SCE-INT-NST-181339	Interconne SCE ONTARIO 91762 San Bernar Solar PV 8.70102 8.537	18	180	Rooftop	Fixed	Residential	1/18/2021	1/18/2021	1/19/2021	No	ESP CONTR866-865-4E TORRANCE CA	CA	90502	619149	No	No	No	No	No	No	No	Yes	Yes	Solar Edge Technologi	25894.4	6.291156	2	NEM-ST	None	No	NEMPV	Q.PEAK DU Hanwha Q-	29				
SCE-INT-NST-18134	Interconne SCE ONTARIO 91761 San Bernar Solar PV 7.7 6.86	24	179	Rooftop	Fixed	Residential	11/7/2017	12/4/2017	12/5/2017	No	SOLARCITY 626-360-8; SAN MATEO CA	CA	94402	888104	No	No	No	No	No	No	No	Yes	Yes	SolarCity	39936	5.821574	2	NEM-ST	None	No	NEMPV	TSM-300D/Changzhou	8				
SCE-INT-NST-181423	Interconne SCE ONTARIO 91762 San Bernar Solar PV 4.48 4.116	23	180	Rooftop	Fixed	Residential	1/18/2021	1/18/2021	2/26/2021	No	VIVINT SOL 801-845-0; LEHI UT	UT	84043	973756	No	No	No	No	No	No	No	Yes	Yes	Solar Edge	15920	3.867832	2	NEM-ST	None	No	NEMPV	Q.PEAK DU Hanwha Q-	14				
SCE-INT-NST-181488	Interconne SCE ONTARIO 91762 San Bernar Solar PV 4.2 4.116	18	190	Rooftop	Fixed	Residential	1/18/2021	1/25/2021	1/27/2021	No	VIVINT SOL 801-845-0; LEHI UT	UT	84043	973756	Yes	PPA	VIVINT SOL	No	No	No	No	Yes	Yes	Solar Edge Technologi	25894.4	6.291156	2	NEM-ST	None	No	NEMPV	Q.PEAK DU Hanwha Q-	14				
SCE-INT-NST-181523	Interconne SCE ONTARIO 91761 San Bernar Solar PV 3.99625 3.197	18	270	Rooftop	Fixed	Residential	1/18/2021	3/8/2021	3/10/2021	No	SUNPOWEI510-260-8; RICHMONT CA	CA	94804	890895	Yes	Lease	Brookfield	No	No	No	No	Yes	Yes	Brookfield	17780	5.561463	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower	10				
SCE-INT-NST-181524	Interconne SCE ONTARIO 91761 San Bernar Solar PV 3.1975 2.558	18	180	Rooftop	Fixed	Residential	1/18/2021	3/14/2021	3/16/2021	No	SUNPOWEI510-260-8; RICHMONT CA	CA	94804	890895	Yes	Lease	Brookfield	No	No	No	No	Yes	No	Brookfield	14224	5.560594	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower	8				
SCE-INT-NST-181525	Interconne SCE ONTARIO 91761 San Bernar Solar PV 3.1975 2.558	18	270	Rooftop	Fixed	Residential	1/18/2021	3/9/2021	3/11/2021	No	SUNPOWEI510-260-8; RICHMONT CA	CA	94804	890895	Yes	Lease	Brookfield	No	No	No	No	Yes	No	Brookfield	14224	5.560594	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower	8				
SCE-INT-NST-181526	Interconne SCE ONTARIO 91761 San Bernar Solar PV 3.1975 2.558	18	270	Rooftop	Fixed	Residential	1/18/2021	3/18/2021	3/22/2021	No	SUNPOWEI510-260-8; RICHMONT CA	CA	94804	890895	Yes	Lease	Brookfield	No	No	No	No	Yes	No	Brookfield	14224	5.560594	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower	8				
SCE-INT-NST-181716	Interconne SCE ONTARIO 91762 San Bernar Solar PV 6.303061 6.177	15	180	Rooftop	Fixed	Residential	1/19/2021	1/20/2021	1/25/2021	No	TREPUBLI 310-849-0; LOS ANGELES CA	CA	90077	96593	No	No	No	No	No	No	No	Yes	No	Solar Edge	18023	2.917759	2	NEM-ST	None	No	NEMPV	LG37501C-LG Elector	18				
SCE-INT-NST-181748	Interconne SCE ONTARIO 91761 San Bernar Solar PV 2.8 2.558	18	180	Rooftop	Fixed	Residential	1/19/2021	3/31/2021	4/5/2021	No	SUNPOWEI510-260-8; RICHMONT CA	CA	94804	890895	Yes	Lease	Brookfield	No	No	No	No	Yes	No	Brookfield	14224	5.560594	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower	8				
SCE-INT-NST-181749	Interconne SCE ONTARIO 91762 San Bernar Solar PV 5.018367 4.918	18	180	Rooftop	Fixed	Residential	1/19/2021	1/19/2021	1/20/2021	No	SUNRUN IN 855-478-6; SAN FRANC CA	CA	94104	750184	No	No	No	No	No	No	No	Yes	Yes	Sunrun Inc.	20249.93	4.117513	2	NEM-ST	None	No	NEMPV	Q.PEAK DU Hanwha Q-	8				
SCE-INT-NST-181761	Interconne SCE ONTARIO 91761 San Bernar Solar PV 4.9 4.476	23	180	Rooftop	Fixed	Residential	1/19/2021	4/4/2021	4/9/2021	No	SUNPOWEI510-260-8; RICHMONT CA	CA	94804	890895	Yes	Lease	Pulte Hom	No	No	No	No	Yes	No	Pulte Hom	24892	5.561215	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower	14				
SCE-INT-NST-181832	Interconne SCE ONTARIO 91762 San Bernar Solar PV 11.26531 11.04	15	180	Rooftop	Fixed	Residential	1/20/2021	1/20/2021	1/21/2021	No	SUNERGY 6951-736-2; CORONA CA	CA	92880	1005730	No	No	No	No	No	No	No	Yes	No	Solar Edge	55925	5.06567	2	NEM-ST	None	No	NEMPV	LG35001C-LG Elector	34				
SCE-INT-NST-181872	Interconne SCE ONTARIO 91762 San Bernar Solar PV 4.41 4.05	12	90	Rooftop	Fixed	Residential	1/20/2021	1/20/2021	2/5/2021	No	VIVINT SOL 801-845-0; LEHI UT	UT	84043	973756	No	No	No	No	No	No	No	Yes	Yes	Solar Edge	13230	3.266666	2	NEM-ST	None	No	NEMPV	Q.PEAK DU Hanwha Q-	14				
SCE-INT-NST-181879	Interconne SCE ONTARIO 91762 San Bernar Solar PV 4.41 4.05	13	181	Rooftop	Fixed	Residential	1/20/2021	1/25/2021	2/19/2021	No	VIVINT SOL 801-845-0; LEHI UT	UT	84043	973756	No	No	No	No	No	No	No	Yes	Yes	Solar Edge	13230	3.266666	2	NEM-ST	None	No	NEMPV	Q.PEAK DU Hanwha Q-	14				
SCE-INT-NST-181885	Interconne SCE ONTARIO 91761 San Bernar Solar PV 4.009184 3.929	16	270	Rooftop	Fixed	Residential	1/20/2021	1/20/2021	1/21/2021	No	GRID ALTEF 510-731-1; OAKLAND CA	CA	94608	867533	Yes	PPA	Sunrun	No	No	No	No	Yes	Yes	Sunrun	17928.54	4.56313	2	DAC-SASH	None	No	NEMPV	LR6-60HPBLONGI Grea	14				
SCE-INT-NST-181894	Interconne SCE ONTARIO 91762 San Bernar Solar PV 4.132653 4.05	18	180	Rooftop	Fixed	Residential	1/20/2021	1/20/2021	1/23/2021	No	VIVINT SOL 801-845-0; LEHI UT	UT	84043	973756	No	No	No	No	No	No	No	Yes	Yes	Solar Edge	13230	3.266666	2	NEM-ST	None	No	NEMPV	Q.PEAK DU Hanwha Q-	14				
SCE-INT-NST-181918	Interconne SCE ONTARIO 91762 San Bernar Solar PV 4.159184 4.076	18	180	Rooftop	Fixed	Residential	1/20/2021	1/25/2021	1/27/2021	No	VIVINT SOL 801-845-0; LEHI UT	UT	84043	973756	Yes	PPA	VIVINT SOL	No	No	No	No	Yes	Yes	Solar Edge Technologi	25894.4	6.328894	2	NEM-ST	None	No	NEMPV	JKM320M-Jinko Solar	14				
SCE-INT-NST-181936	Interconne SCE ONTARIO 91762 San Bernar Solar PV 4.48 4.116	19	270	Rooftop	Fixed	Residential	1/20/2021	2/11/2021	2/17/2021	No	VIVINT SOL 801-845-0; LEHI UT	UT	84043	973756	Yes	PPA	VIVINT SOL	No	No	No	No	Yes	Yes	Solar Edge Technologi	24147.2	5.866666	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower	14				
SCE-INT-NST-181958	Interconne SCE ONTARIO 91762 San Bernar Solar PV 3.246939 3.182	18	270	Rooftop	Fixed	Residential	1/20/2021	1/20/2021	1/23/2021	No	SUNRUN IN 855-478-6; SAN FRANC CA	CA	94104	750184	No	No	No	No	No	No	No	Yes	Yes	Sunrun Inc.	13999.99	4.399745	2	NEM-ST	None	No	NEMPV	Q.PEAK DU Hanwha Q-	7				
SCE-INT-NST-182017	Interconne SCE ONTARIO 91762 San Bernar Solar PV 7.890816 7.733	18	180	Rooftop	Fixed	Residential	1/21/2021	1/21/2021	1/22/2021	No	ESP CONTR866-865-4E TORRANCE CA	CA	90502	619149	Yes	PPA	Sunrun	No	No	No	No	Yes	Yes	Sunrun Inc.	30550.5	3.950665	2	NEM-ST	None	No	NEMPV	LR6-60HPBLONGI Grea	25				
SCE-INT-NST-182018	Interconne SCE ONTARIO 91762 San Bernar Solar PV 2.924449 2.864	18	180	Rooftop	Fixed	Residential	1/21/2021	1/21/2021	1/22/2021	No	ESP CONTR866-865-4E TORRANCE CA	CA	90502	619149	Yes	PPA	Sunrun	No	No	No	No	Yes	Yes	Sunrun Inc.	11160	3.896648	2	NEM-ST	None	No	NEMPV	LR6-60HPBLONGI Grea	10				
SCE-INT-NST-182040	Interconne SCE ONTARIO 91762 San Bernar Solar PV 7.969388 7.81	22	90	Rooftop	Fixed	Residential	1/21/2021	1/25/2021	1/25/2021	No	VIVINT SOL 801-845-0; LEHI UT	UT	84043	973756	Yes	PPA	VIVINT SOL	No	No	No	No	Yes	Yes	SolarEdge Technologie	13052	1.67119	2	NEM-ST	None	No	NEMPV	JKM325M-Jinko Solar	8				
SCE-INT-NST-182113	Interconne SCE ONTARIO 91762 San Bernar Solar PV 4.768367 4.673	21	270	Rooftop	Fixed	Residential	1/21/2021	1/21/2021	1/22/2021	No	SOLARMAX 951-300-0; RIVERSIDE CA	CA	92507	972048	No	No	No	No	No	No	No	No	No	No	15508	3.318638	2	NEM-ST	None	No	NEMPV	LG36501C-LG Elector</					

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Application Preceding 1 Supercedin Matched C Application/Utility	Service City/Service Zip Service Cot Technology System Siz System Siz Storage Ca Storage Siz Inverter Siz Tilt	Azimuth	Mounting	Tracking	Customer 5 App Received	App Complete	App Approved	EDecommission	Self Install	Installer Na	Installer Ph	Installer Ctl	Installer St	Installer Zi	CSLB Num	Third Party	Third Party	Third Party	Third Party	Face Fin	Face Fin	Electric Vel	Electric Vel	System Out	System Out	Total System ITC	Cost Base	Cost/Watt	NEM Tariff	Interconne	VNEM	NEF Project	V NEMPV or	Generator	Generator	Generator
SCE-INT-NST-184866	Interconne SCE ONTARIO 91761 San Bernar Solar PV 8.28 7.512	22	270	RoofTop	Fixed	Residential	2/5/2021	2/5/2021	2/8/2021	No	SOLARMA951-300-0:RIVERSIDE CA				92507	972048	No	No	No	No	No	No	No	No	29303.3	3.900805	2	NEM-ST	None	No	NEMPV	LG360N1C-LG Elector			23	
SCE-INT-NST-184971	Interconne SCE ONTARIO 91762 San Bernar Solar PV 4.2 3.836	18	180	RoofTop	Fixed	Residential	2/7/2021	3/8/2021	4/28/2021	No	SUNPOWEI510-260-8:RICHMONT CA				94804	890895	Yes	Lease	KB Home	No	No	No	Yes	No	21336	5.562043	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower			12	
SCE-INT-NST-184987	Interconne SCE ONTARIO 91762 San Bernar Solar PV 3.59625 2.877	23	270	RoofTop	Fixed	Residential	2/7/2021	3/16/2021	6/21/2021	No	SUNPOWEI510-260-8:RICHMONT CA				94804	890895	Yes	Lease	KB Home	No	No	Yes	No	16002	5.562043	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower			9		
SCE-INT-NST-185005	Interconne SCE ONTARIO 91761 San Bernar Solar PV 6.08 5.587	18	180	RoofTop	Fixed	Residential	2/7/2021	3/8/2021	5/3/2021	No	SUNPOWEI510-260-8:RICHMONT CA				94804	890895	Yes	Lease	KB Home	No	No	Yes	No	21336	5.562043	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower			12		
SCE-INT-NST-185134	Interconne SCE ONTARIO 91761 San Bernar Solar PV 3.5 3.197	18	270	RoofTop	Fixed	Residential	2/8/2021	3/30/2021	4/2/2021	No	SUNPOWEI510-260-8:RICHMONT CA				94804	890895	No	No	No	No	No	Yes	No	26731.62	1.4875	2	NEM-ST	None	No	NEMPV	Q.PEAK DU Hanwha Q-			19		
SCE-INT-NST-185148	Interconne SCE ONTARIO 91761 San Bernar Solar PV 3.5 3.197	18	270	RoofTop	Fixed	Residential	2/8/2021	3/31/2021	4/5/2021	No	SUNPOWEI510-260-8:RICHMONT CA				94804	890895	No	No	No	No	No	Yes	No		14875	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower			10		
SCE-INT-NST-185158	Interconne SCE ONTARIO 91761 San Bernar Solar PV 3.15 2.863	18	180	RoofTop	Fixed	Residential	2/8/2021	5/13/2021	5/19/2021	No	SUNPOWEI510-260-8:RICHMONT CA				94804	890895	No	No	No	No	No	Yes	No		13387.5	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower			9		
SCE-INT-NST-185163	Interconne SCE ONTARIO 91761 San Bernar Solar PV 3.15 2.863	18	180	RoofTop	Fixed	Residential	2/8/2021	5/13/2021	5/19/2021	No	SUNPOWEI510-260-8:RICHMONT CA				94804	890895	No	No	No	No	No	Yes	No		13387.5	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower			9		
SCE-INT-NST-185171	Interconne SCE ONTARIO 91761 San Bernar Solar PV 3.15 2.863	18	180	RoofTop	Fixed	Residential	2/8/2021	5/12/2021	5/18/2021	No	SUNPOWEI510-260-8:RICHMONT CA				94804	890895	No	No	No	No	No	Yes	No		13387.5	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower			9		
SCE-INT-NST-185173	Interconne SCE ONTARIO 91761 San Bernar Solar PV 3.15 2.863	18	180	RoofTop	Fixed	Residential	2/8/2021	5/13/2021	5/19/2021	No	SUNPOWEI510-260-8:RICHMONT CA				94804	890895	No	No	No	No	No	Yes	No		13387.5	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower			9		
SCE-INT-NST-185179	Interconne SCE ONTARIO 91761 San Bernar Solar PV 3.15 2.863	18	180	RoofTop	Fixed	Residential	2/8/2021	5/13/2021	5/19/2021	No	SUNPOWEI510-260-8:RICHMONT CA				94804	890895	No	No	No	No	No	Yes	No		13387.5	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower			9		
SCE-INT-NST-185180	Interconne SCE ONTARIO 91761 San Bernar Solar PV 3.15 2.863	18	180	RoofTop	Fixed	Residential	2/8/2021	5/13/2021	5/19/2021	No	SUNPOWEI510-260-8:RICHMONT CA				94804	890895	No	No	No	No	No	Yes	No		13387.5	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower			9		
SCE-INT-NST-185185	Interconne SCE ONTARIO 91761 San Bernar Solar PV 3.57875 2.863	18	180	RoofTop	Fixed	Residential	2/8/2021	5/13/2021	6/8/2021	No	SUNPOWEI510-260-8:RICHMONT CA				94804	890895	No	No	No	No	No	Yes	No		13387.5	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower			9		
SCE-INT-NST-185188	Interconne SCE ONTARIO 91761 San Bernar Solar PV 3.57875 2.863	18	180	RoofTop	Fixed	Residential	2/8/2021	5/13/2021	6/8/2021	No	SUNPOWEI510-260-8:RICHMONT CA				94804	890895	No	No	No	No	No	Yes	No		13387.5	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower			9		
SCE-INT-NST-185239	Interconne SCE ONTARIO 91762 San Bernar Solar PV 4.48 4.076	40	90	RoofTop	Fixed	Residential	2/9/2021	2/9/2021	2/16/2021	No	VIVINT SOL 801-845-0:LEHI UT				84043	973756	Yes	Lease	VIVINT SOL	No	No	Yes	Yes	Solar Edge Technology	22489.6	5.517566	2	NEM-ST	None	No	NEMPV	JKM320M-Jinko Solar			4	
SCE-INT-NST-185259	Interconne SCE ONTARIO 91762 San Bernar Solar PV 4.48 4.116	18	270	RoofTop	Fixed	Residential	2/9/2021	2/9/2021	5/13/2021	No	VIVINT SOL 801-845-0:LEHI UT				84043	973756	Yes	Lease	VIVINT SOL	No	No	Yes	Yes	Solar Edge Technology	22489.6	5.463945	2	NEM-ST	None	No	NEMPV	Q.PEAK DU Hanwha Q-			5	
SCE-INT-NST-185261	Interconne SCE ONTARIO 91762 San Bernar Solar PV 5.145 4.116	18	180	RoofTop	Fixed	Residential	2/9/2021	2/9/2021	3/8/2021	No	Vivint Solar 801-845-0:Lehi UT				84043	973756	Yes	PPA	Vivint Solar	No	No	Yes	Yes	Solar Edge Technology	22489.6	5.463945	2	NEM-ST	None	No	NEMPV	Q.PEAK DU Hanwha Q-			3	
SCE-INT-NST-185274	Interconne SCE ONTARIO 91761 San Bernar Solar PV.St 8.16 7.444	27	25	270	RoofTop	Fixed	Residential	2/9/2021	2/9/2021	2/17/2021	No	TESLA ENET888-765-2:FREMONT CA			94538	888104	No	No	No	No	No	Yes	Yes	TESLA ENET	22489.6	5.463945	2	NEM-ST	None	No	NEMPV	Q.PEAK DU Hanwha Q-			24	
SCE-INT-NST-185276	Interconne SCE ONTARIO 91762 San Bernar Solar PV 5.145 4.116	18	180	RoofTop	Fixed	Residential	2/9/2021	2/9/2021	3/30/2021	No	Vivint Solar 801-845-0:Lehi UT				84043	973756	Yes	Lease	Vivint Solar	No	No	Yes	Yes	Solar Edge Technology	22489.6	5.463945	2	NEM-ST	None	No	NEMPV	Q.PEAK DU Hanwha Q-			14	
SCE-INT-NST-185300	Interconne SCE ONTARIO 91762 San Bernar Solar PV 5.145 4.116	18	180	RoofTop	Fixed	Residential	2/9/2021	2/9/2021	3/18/2021	No	Vivint Solar 801-845-0:Lehi UT				84043	973756	Yes	PPA	Vivint Solar	No	No	Yes	Yes	Solar Edge Technology	22489.6	5.463945	2	NEM-ST	None	No	NEMPV	Q.PEAK DU Hanwha Q-			14	
SCE-INT-NST-185403	Interconne SCE ONTARIO 91761 San Bernar Solar PV 3.57875 2.863	18	180	RoofTop	Fixed	Residential	2/9/2021	6/17/2021	6/21/2021	No	SUNPOWEI510-260-8:RICHMONT CA				94804	890895	No	No	No	No	No	Yes	No		13387.5	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower			9		
SCE-INT-NST-185406	Interconne SCE ONTARIO 91761 San Bernar Solar PV 3.15 2.863	18	180	RoofTop	Fixed	Residential	2/9/2021	5/13/2021	5/19/2021	No	SUNPOWEI510-260-8:RICHMONT CA				94804	890895	No	No	No	No	No	Yes	No		13387.5	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower			9		
SCE-INT-NST-185411	Interconne SCE ONTARIO 91761 San Bernar Solar PV 3.15 2.863	18	180	RoofTop	Fixed	Residential	2/9/2021	5/20/2021	5/24/2021	No	SUNPOWEI510-260-8:RICHMONT CA				94804	890895	No	No	No	No	No	Yes	No		13387.5	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower			9		
SCE-INT-NST-185453	Interconne SCE ONTARIO 91762 San Bernar Solar PV 5.145 4.116	30	270	RoofTop	Fixed	Residential	2/10/2021	2/10/2021	3/8/2021	No	Vivint Solar 801-845-0:Lehi UT				84043	973756	Yes	PPA	Vivint Solar	No	No	Yes	Yes	SolarEdge Technology	22489.6	5.463945	2	NEM-ST	None	No	NEMPV	Q.PEAK DU Hanwha Q-			14	
SCE-INT-NST-185577	Interconne SCE ONTARIO 91761 San Bernar Solar PV 5.77125 4.617	26	179	RoofTop	Fixed	Residential	2/10/2021	3/8/2021	3/10/2021	No	GUYOU CO 714-750-9:RIVERSIDE CA				92503	997054	No	No	No	No	No	Yes	No		20430	4.424951	2	NEM-ST	None	No	NEMPV	REC320TP2REC Solar			16	
SCE-INT-NST-185582	Interconne SCE ONTARIO 91762 San Bernar Solar PV 4.65 4.201	8	270	RoofTop	Fixed	Residential	2/11/2021	2/15/2021	2/19/2021	No	SUNUSO E1800-730-11:VAN NUYS CA				91406	976259	No	No	No	No	No	Yes	No		25575	6.087836	2	NEM-ST	None	No	NEMPV	STP310S-21Wuxi Sunte			8	
SCE-INT-NST-185890	Interconne SCE ONTARIO 91762 San Bernar Solar PV 5.25 4.853	18	180	RoofTop	Fixed	Residential	2/11/2021	2/11/2021	2/12/2021	No	ESP CONTR866-865-4:TORRANCE CA				90502	619149	Yes	PPA	Sunrun	No	No	Yes	No		19477.5	4.013496	2	NEM-ST	None	No	NEMPV	LR4-60HPBLONGI Gre			15	
SCE-INT-NST-185976	Interconne SCE ONTARIO 91764 San Bernar Solar PV.St 12.24 11.337	27	10	180	RoofTop	Fixed	Residential	2/11/2021	2/11/2021	2/22/2021	No	TESLA ENET844-837-5:FREMONT CA			94538	888104	No	No	No	No	No	Yes	Yes	TESLA ENET	22489.6	5.463945	2	NEM-ST	None	No	NEMPV	Q.PEAK DU Hanwha Q-			36	
SCE-INT-NST-186005	Interconne SCE ONTARIO 91762 San Bernar Solar PV.St 4.225 3.787	9.8	23	181	RoofTop	Fixed	Residential	2/12/2021	2/15/2021	2/19/2021	No	VIVINT SOL 801-845-0:LEHI UT			84043	973756	Yes	PPA	VIVINT SOL	No	No	Yes	Yes	Solar Edge Technology	25688	6.783205	2	NEM-ST	None	No	NEMPV	JKM325M-Jinko Solar			2	
SCE-INT-NST-186018	Interconne SCE ONTARIO 91762 San Bernar Solar PV 4.48 4.076	18	180	RoofTop	Fixed	Residential	2/12/2021	3/5/2021	4/26/2021	No	Vivint Solar 801-845-0:Lehi UT				84043	973756	No	No	No	No	No	Yes	Yes	SolarEdge 1	15920	3.905789	2	NEM-ST	None	No	NEMPV	JKM320M-Jinko Solar			14	
SCE-INT-NST-186107	Interconne SCE ONTARIO 91762 San Bernar Solar PV 5.145 4.116	18	181	RoofTop	Fixed	Residential	2/12/2021	3/29/2021	6/14/2021	No	Vivint Solar 801-845-0:Lehi UT				84043	973756	No	No	No	No	No	Yes	Yes	Solar Edge	15920	3.867832	2	NEM-ST	None	No	NEMPV	Q.PEAK DU Hanwha Q-			8	
SCE-INT-NST-186211	Interconne SCE ONTARIO 91761 San Bernar Solar PV.St 14.17125 11.337	27	10	20	269	RoofTop	Fixed	Residential	2/14/2021	2/25/2021	3/12/2021	No	TESLA ENET877-571:FREMONT CA			94538	888104	No	No	No	No	Yes	Yes	TESLA ENET	22489.6	5.463945	2	NEM-ST	None	No	NEMPV	Q.PEAK DU Hanwha Q-			36	
SCE-INT-NST-186222	Interconne SCE ONTARIO 91762 San Bernar Solar PV.St 7.013265 6.873	27	10	18	180	RoofTop	Fixed	Residential	11/10/2017	11/20/2017	11/22/2017	No	SOLARCITY 888-765-2:Las Vegas NV			89119	888104	No	No	No	No	No	Yes	Yes	SolarCity	38272	5.568456	2	NEM-ST	None	No	NEMPV	SC325 SolarCity			5
SCE-INT-NST-186228	Interconne SCE ONTARIO 91762 San Bernar Solar PV 4.48 4.116	18	180	RoofTop	Fixed	Residential	2/16/2021	2/16/2021	2/20/2021	No	VIVINT SOL 801-845-0:LEHI UT				84043																					

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Application Preceding 1	Supercedin	Matched C	Application/Utility	Service City/Service Zip	Service Cot	Technology	System Siz	System Siz	Storage Ca	Storage Siz	Inverter Siz	Tilt	Azimuth	Mounting	Tracking	Customer 5	App Received	App Complete	App Approved	EDecommis	Self Installe	Installer Na	Installer Ph	Installer Cil	Installer St	Installer Zi	CSLB Numt	Third Party	Third Party	Third Party	Third Party	Face Fin	Face Finan	Electric Vel	Electric Vel	System Out	System Out	System Out	Total Syste	Its Cost	Cost/Watt	NEM Tariff	Interconne	VNEM	NEF Project	V NEMPV or	Generator	Generator	Generator
SCE-INT-NST-194209			Interconne SCE	ONTARIO	91761	San Bernar Solar PV	4.9	4.476					23	180	Rooftop	Fixed	Residential	3/30/2021	5/4/2021	5/20/2021	No	SUNPOWEI908-216-1-RICHMONT CA				94804	890895	No	No	No	No	No	No	No	No	No	20825	4.652591	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower				14	
SCE-INT-NST-194213			Interconne SCE	ONTARIO	91761	San Bernar Solar PV	5.50548	4.476					23	270	Rooftop	Fixed	Residential	3/30/2021	5/4/2021	10/4/2021	No	SUNPOWEI908-216-1-RICHMONT CA				94804	890895	No	No	No	No	No	No	No	No	No	20825	4.652591	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower				14	
SCE-INT-NST-194237			Interconne SCE	ONTARIO	91761	San Bernar Solar PV	16.32	14.734					23	269	Rooftop	Fixed	Residential	3/31/2021	3/31/2021	4/1/2021	No	TESLA ENER1844-837-5-FREMONT CA				94538	888104	No	No	No	No	No	No	No	No	2.296679	2.921639	2	NEM-ST	None	No	NEMPV	Q.PEAK DU Hanwha Q-				48		
SCE-INT-NST-194364			Interconne SCE	ONTARIO	91762	San Bernar Solar PV	3.052041	2.891					18	170	Rooftop	Fixed	Residential	1/18/2018	4/5/2021	4/12/2021	No	TESLA ENER1844-837-5-FREMONT CA				94538	888104	No	No	No	No	No	No	No	6.987529	6.987529	2	NEM-ST	None	No	NEMPV	Q.PEAK DU Hanwha Q-				10			
SCE-INT-NST-194367			Interconne SCE	ONTARIO	91762	San Bernar Solar PV	3.052041	2.891					17	170	Rooftop	Fixed	Residential	1/18/2018	1/18/2018	1/19/2018	No	Future Ene 800-985-07-Rancho Cu Ca				91730	463720	No	No	No	No	No	No	No	20900	20900	2	NEM-ST	None	No	NEMPV	Protect SW SolarWorld				12			
SCE-INT-NST-194520			Interconne SCE	ONTARIO	91762	San Bernar Solar PV	9.945	8.636					23	270	Rooftop	Fixed	Residential	3/31/2021	3/31/2021	4/1/2021	No	TESLA ENER1877-571-7-FREMONT CA				94538	888104	No	No	No	No	No	No	No	No	3.577026	3.577026	2	NEM-ST	None	No	NEMPV	SR60T1 Tesla				170		
SCE-INT-NST-194724			Interconne SCE	ONTARIO	91762	San Bernar Solar PV	15.12	13.68	19.6	10			23	182	Rooftop	Fixed	Residential	4/1/2021	4/1/2021	4/12/2021	No	SUNRUN IN 855-478-61-SAN FRANCIS CA				94104	750184	Yes	PPA	Sunrun InstNo	No	No	No	No	No	66686.35	4.874733	2	NEM-ST	None	No	NEMPV	LR6-60HPH LONGI Grea				21		
SCE-INT-NST-194747			Interconne SCE	ONTARIO	91762	San Bernar Solar PV	3.6	3.301					13	180	Rooftop	Fixed	Residential	4/1/2021	5/24/2021	5/26/2021	No	SOLCIUS LL 844-970-01-PROVO UT				84604	976336	No	No	No	No	No	No	No	17280	5.234777	2	NEM-ST	None	No	NEMPV	DNA-144-8Apotos Solar				5			
SCE-INT-NST-194765			Interconne SCE	ONTARIO	91761	San Bernar Solar PV	5.595	4.476					23	270	Rooftop	Fixed	Residential	4/1/2021	5/4/2021	6/3/2021	No	SUNPOWEI908-216-1-RICHMONT CA				94804	890895	No	No	No	No	No	No	No	20825	4.652591	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower				14			
SCE-INT-NST-194775			Interconne SCE	ONTARIO	91761	San Bernar Solar PV	3.1975	2.558					18	180	Rooftop	Fixed	Residential	4/1/2021	6/16/2021	6/17/2021	No	SUNPOWEI908-216-1-RICHMONT CA				94804	890895	No	No	No	No	No	No	No	11900	4.652071	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower				8			
SCE-INT-NST-194777			Interconne SCE	ONTARIO	91761	San Bernar Solar PV	3.14634	2.558					18	270	Rooftop	Fixed	Residential	4/1/2021	6/16/2021	9/9/2021	No	SUNPOWEI908-216-1-RICHMONT CA				94804	890895	No	No	No	No	No	No	No	11900	4.652071	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower				8			
SCE-INT-NST-194779			Interconne SCE	ONTARIO	91761	San Bernar Solar PV	3.99625	3.197					18	180	Rooftop	Fixed	Residential	4/1/2021	6/30/2021	7/6/2021	No	SUNPOWEI908-216-1-RICHMONT CA				94804	890895	No	No	No	No	No	No	No	14875	4.652799	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower				10			
SCE-INT-NST-194780			Interconne SCE	ONTARIO	91761	San Bernar Solar PV	3.14634	2.558					18	270	Rooftop	Fixed	Residential	4/1/2021	6/16/2021	9/17/2021	No	SUNPOWEI908-216-1-RICHMONT CA				94804	890895	No	No	No	No	No	No	No	11900	4.652071	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower				8			
SCE-INT-NST-194781			Interconne SCE	ONTARIO	91761	San Bernar Solar PV	3.1975	2.558					18	270	Rooftop	Fixed	Residential	4/1/2021	6/16/2021	7/7/2021	No	SUNPOWEI908-216-1-RICHMONT CA				94804	890895	No	No	No	No	No	No	No	11900	4.652071	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower				10			
SCE-INT-NST-194889			Interconne SCE	ONTARIO	91764	San Bernar Solar PV	3.1975	4.378					16	180	Rooftop	Fixed	Residential	4/2/2021	4/2/2021	4/5/2021	No	Grid Altern 510-731-11-OAKLAND CA				94608	867533	Yes	PPA	Sunrun No	No	No	No	No	Yes	Yes	Sunrun	9823.44	2.243819	2	NEM-SASH	None	No	NEMPV	Q.PEAK-G4 Hanwha Q-				16
SCE-INT-NST-194980			Interconne SCE	ONTARIO	91761	San Bernar Solar PV	7.245	6.561					20	270	Rooftop	Fixed	Residential	4/2/2021	4/2/2021	4/5/2021	No	SUNRUN IN 855-478-61-SAN FRANCIS CA				94104	750184	Yes	PPA	Sunrun InstNo	No	No	No	No	Yes	Yes	Sunrun, Inc	29575.3	4.507742	2	NEM-ST	None	No	NEMPV	LR6-60HPH LONGI Grea				23
SCE-INT-NST-195057			Interconne SCE	ONTARIO	91761	San Bernar Solar PV	5.595	4.476					23	180	Rooftop	Fixed	Residential	4/4/2021	5/9/2021	11/22/2021	No	SUNPOWEI908-216-1-RICHMONT CA				94804	890895	No	No	No	No	No	No	No	20825	4.652591	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower				14			
SCE-INT-NST-195060			Interconne SCE	ONTARIO	91764	San Bernar Solar PV	3.015	2.71					18	180	Rooftop	Fixed	Residential	4/5/2021	4/28/2021	5/6/2021	No	SUNPOWEI908-216-1-RICHMONT CA				94804	890895	Yes	Lease	KB Home No	No	No	No	Yes	No	15316.2	5.651734	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower				9		
SCE-INT-NST-195205			Interconne SCE	ONTARIO	91761	San Bernar Solar PV	3.57875	2.863					18	180	Rooftop	Fixed	Residential	4/5/2021	6/29/2021	7/1/2021	No	SUNPOWEI908-216-1-RICHMONT CA				94804	890895	Yes	Lease	Brookfield No	No	No	No	Yes	No	16002	5.589242	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower				9		
SCE-INT-NST-195208			Interconne SCE	ONTARIO	91761	San Bernar Solar PV	3.57875	2.863					18	180	Rooftop	Fixed	Residential	4/5/2021	6/29/2021	7/1/2021	No	SUNPOWEI908-216-1-RICHMONT CA				94804	890895	Yes	Lease	Brookfield No	No	No	No	Yes	No	16002	5.589242	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower				9		
SCE-INT-NST-195212			Interconne SCE	ONTARIO	91761	San Bernar Solar PV	3.57875	2.863					18	180	Rooftop	Fixed	Residential	4/5/2021	6/29/2021	7/1/2021	No	SUNPOWEI908-216-1-RICHMONT CA				94804	890895	Yes	Lease	Brookfield No	No	No	No	Yes	No	16002	5.589242	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower				9		
SCE-INT-NST-195213			Interconne SCE	ONTARIO	91761	San Bernar Solar PV	3.57875	2.863					18	180	Rooftop	Fixed	Residential	4/5/2021	6/29/2021	7/1/2021	No	SUNPOWEI908-216-1-RICHMONT CA				94804	890895	Yes	Lease	Brookfield No	No	No	No	Yes	No	16002	5.589242	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower				9		
SCE-INT-NST-195214			Interconne SCE	ONTARIO	91761	San Bernar Solar PV	3.57875	2.863					18	180	Rooftop	Fixed	Residential	4/5/2021	6/21/2021	6/22/2021	No	SUNPOWEI908-216-1-RICHMONT CA				94804	890895	No	No	No	No	No	No	No	13387.5	4.676039	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower				9			
SCE-INT-NST-195216			Interconne SCE	ONTARIO	91761	San Bernar Solar PV	3.57875	2.863					18	180	Rooftop	Fixed	Residential	4/5/2021	6/21/2021	6/22/2021	No	SUNPOWEI908-216-1-RICHMONT CA				94804	890895	Yes	Lease	Brookfield No	No	No	No	Yes	No	16002	5.589242	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower				9		
SCE-INT-NST-195218			Interconne SCE	ONTARIO	91761	San Bernar Solar PV	3.57875	2.863					18	180	Rooftop	Fixed	Residential	4/5/2021	6/21/2021	6/22/2021	No	SUNPOWEI908-216-1-RICHMONT CA				94804	890895	No	No	No	No	No	No	No	13387.5	4.676039	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower				9			
SCE-INT-NST-195219			Interconne SCE	ONTARIO	91761	San Bernar Solar PV	3.57875	2.863					18	180	Rooftop	Fixed	Residential	4/5/2021	6/21/2021	6/22/2021	No	SUNPOWEI908-216-1-RICHMONT CA				94804	890895	Yes	Lease	Brookfield No	No	No	No	Yes	No	16002	5.589242	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower				9		
SCE-INT-NST-195220			Interconne SCE	ONTARIO	91761	San Bernar Solar PV	3.57875	2.863					18	180	Rooftop	Fixed	Residential	4/5/2021	6/21/2021	6/22/2021	No	SUNPOWEI908-216-1-RICHMONT CA				94804	890895	No	No	No	No	No	No	No	13387.5	4.676039	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower				9			
SCE-INT-NST-195223			Interconne SCE	ONTARIO	91761	San Bernar Solar PV	3.57875	2.863					18	180	Rooftop	Fixed	Residential	4/5/2021	6/21/2021	6/22/2021	No	SUNPOWEI908-216-1-RICHMONT CA				94804	890895	No	No	No	No	No	No	No	13387.5	4.676039	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower				9			
SCE-INT-NST-195296			Interconne SCE	ONTARIO	91761	San Bernar Solar PV	10.85	9.821																																									

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Application Preceding	Supercedin	Matched	C	Application/Utility	Service City/Service Zip	Service Cot	Technology	System Siz	System Siz	Storage Ca	Storage Siz	Inverter Siz	Tilt	Azimuth	Mounting	Tracking	Customer	5 App Received	App Complete	App Approved	EDecommission	Self Install	Installer Na	Installer Ph	Installer Ctl	Installer St	Installer Zi	CSLB Num	Third Party	Third Party	Third Party	Third Party	Face Fin	Face Fin	Electric Vel	Electric Vel	System Out	System Out	System Out	Total Syste	Itc Cost	Cost/Watt	NEM Tariff	Interconne	VNEM	NEF Project	V NEMPV or	Generator	Generator	Generator
SCE-INT-NST-199112				Interconne SCE	ONTARIO	91761	San Bernar Solar PV	3,52149	2,863				18	180	RoofTop	Fixed	Residential	4/26/2021	8/25/2021	9/2/2021	No	SUNPOWEI908-216-1-RICHMONT CA					94804	890895	Yes	Lease	Brookfield	No	No	Yes	No	Yes	No	13387.5	16002	5.589242	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower			9	
SCE-INT-NST-199113				Interconne SCE	ONTARIO	91761	San Bernar Solar PV	3,57875	2,863				18	180	RoofTop	Fixed	Residential	4/26/2021	6/21/2021	6/22/2021	No	SUNPOWEI908-216-1-RICHMONT CA					94804	890895	Yes	Lease	Brookfield	No	No	Yes	No	13387.5	16002	5.589242	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower			9			
SCE-INT-NST-199117				Interconne SCE	ONTARIO	91761	San Bernar Solar PV	3,57875	2,863				18	180	RoofTop	Fixed	Residential	4/26/2021	6/23/2021	6/25/2021	No	SUNPOWEI908-216-1-RICHMONT CA					94804	890895	Yes	Lease	Brookfield	No	No	Yes	No	13387.5	16002	5.589242	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower			9			
SCE-INT-NST-199118				Interconne SCE	ONTARIO	91761	San Bernar Solar PV	3,52149	2,863				18	180	RoofTop	Fixed	Residential	4/26/2021	7/22/2021	9/9/2021	No	SUNPOWEI908-216-1-RICHMONT CA					94804	890895	Yes	Lease	Brookfield	No	No	Yes	No	13387.5	16002	5.589242	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower			9			
SCE-INT-NST-199119				Interconne SCE	ONTARIO	91761	San Bernar Solar PV	3,57875	2,863				18	180	RoofTop	Fixed	Residential	4/26/2021	7/19/2021	7/26/2021	No	SUNPOWEI908-216-1-RICHMONT CA					94804	890895	Yes	Lease	Brookfield	No	No	Yes	No	13387.5	16002	5.589242	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower			9			
SCE-INT-NST-199123				Interconne SCE	ONTARIO	91761	San Bernar Solar PV	3,57875	2,863				18	180	RoofTop	Fixed	Residential	4/26/2021	7/21/2021	7/27/2021	No	SUNPOWEI908-216-1-RICHMONT CA					94804	890895	Yes	Lease	Brookfield	No	No	Yes	No	13387.5	16002	5.589242	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower			9			
SCE-INT-NST-199124				Interconne SCE	ONTARIO	91761	San Bernar Solar PV	3,57875	2,863				18	180	RoofTop	Fixed	Residential	4/26/2021	7/21/2021	7/27/2021	No	SUNPOWEI908-216-1-RICHMONT CA					94804	890895	Yes	Lease	Brookfield	No	No	Yes	No	13387.5	16002	5.589242	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower			9			
SCE-INT-NST-199125				Interconne SCE	ONTARIO	91761	San Bernar Solar PV	3,57875	2,863				18	180	RoofTop	Fixed	Residential	4/26/2021	7/21/2021	7/27/2021	No	SUNPOWEI908-216-1-RICHMONT CA					94804	890895	Yes	Lease	Brookfield	No	No	Yes	No	13387.5	16002	5.589242	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower			9			
SCE-INT-NST-199139				Interconne SCE	ONTARIO	91761	San Bernar Solar PV	3,57875	2,863				18	180	RoofTop	Fixed	Residential	4/26/2021	6/29/2021	7/1/2021	No	SUNPOWEI908-216-1-RICHMONT CA					94804	890895	Yes	Lease	Brookfield	No	No	Yes	No	16002	5.589242	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower			9				
SCE-INT-NST-199144				Interconne SCE	ONTARIO	91761	San Bernar Solar PV	3,57875	2,863				18	180	RoofTop	Fixed	Residential	4/26/2021	6/24/2021	6/28/2021	No	SUNPOWEI908-216-1-RICHMONT CA					94804	890895	Yes	Lease	Brookfield	No	No	Yes	No	16002	5.589242	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower			9				
SCE-INT-NST-199149				Interconne SCE	ONTARIO	91761	San Bernar Solar PV	3,52149	2,863				18	180	RoofTop	Fixed	Residential	4/26/2021	7/22/2021	9/9/2021	No	SUNPOWEI908-216-1-RICHMONT CA					94804	890895	Yes	Lease	Brookfield	No	No	Yes	No	16002	5.589242	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower			9				
SCE-INT-NST-199155				Interconne SCE	ONTARIO	91761	San Bernar Solar PV	3,52149	2,863				18	180	RoofTop	Fixed	Residential	4/26/2021	8/2/2021	8/9/2021	No	SUNPOWEI908-216-1-RICHMONT CA					94804	890895	Yes	Lease	Brookfield	No	No	Yes	No	16002	5.589242	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower			9				
SCE-INT-NST-199253				Interconne SCE	ONTARIO	91762	San Bernar Solar PV	7,01346	5,702				23	270	RoofTop	Fixed	Residential	4/27/2021	8/17/2021	8/25/2021	No	FREEDOM I951-528-9;Temecula CA					92590	1029644	No			No	No	Yes	No	32723		5.738863	2	NEM-ST	None	No	NEMPV	HIA-5310H/Hyundai En			18			
SCE-INT-NST-199278				Interconne SCE	ONTARIO	91762	San Bernar Solar PV	3,91386	3,182				18	179	RoofTop	Fixed	Residential	4/27/2021	9/1/2021	9/10/2021	No	SUNRUN IN 855-478-6;San Francis CA					94104	750184	Yes	PPA	SUNRUN IN	No	No	Yes	Yes	Solar Edge	15920	16803.86	5.280911	2	NEM-ST	None	No	NEMPV	Q.PEAK DU/Hanwha Q-			11		
SCE-INT-NST-199286				Interconne SCE	ONTARIO	91762	San Bernar Solar PV	4,48	4,076				18	180	RoofTop	Fixed	Residential	4/27/2021	4/27/2021	5/5/2021	No	VIVINT SOL 801-845-0;LEHI UT					84043	973756	No	PPA		No	No	Yes	Yes	Solar Edge	15920	3.905789	2	NEM-ST	None	No	NEMPV	JKM320M-Jinko Solar			9			
SCE-INT-NST-199287				Interconne SCE	ONTARIO	91761	San Bernar Solar PV	8.32	7,645				18	180	RoofTop	Fixed	Residential	4/27/2021	4/27/2021	4/28/2021	No	ESP CONTR866-865-4;TORRANCE CA					90502	619149	No			No	No	Yes	No	31343.62		4.099884	2	NEM-ST	None	No	NEMPV	Q.PEAK DU/Hanwha Q-			26			
SCE-INT-NST-199305				Interconne SCE	ONTARIO	91761	San Bernar Solar PV	8	7,202				18	180	RoofTop	Fixed	Residential	4/27/2021	4/27/2021	4/28/2021	No	ESP CONTR866-865-4;TORRANCE CA					90502	619149	No			No	No	Yes	No	27140		3.768397	2	NEM-ST	None	No	NEMPV	Q.PEAK DU/Hanwha Q-			25			
SCE-INT-NST-199321				Interconne SCE	ONTARIO	91762	San Bernar Solar PV	4,48	4,076				18	270	RoofTop	Fixed	Residential	4/27/2021	4/27/2021	5/4/2021	No	VIVINT SOL 801-845-0;LEHI UT					84043	973756	No	PPA		No	No	Yes	Yes	Solarege 1	15920	3.905789	2	NEM-ST	None	No	NEMPV	JKM320M-Jinko Solar			14			
SCE-INT-NST-199405				Interconne SCE	ONTARIO	91762	San Bernar Solar PV	3.15	2,877				18	180	RoofTop	Fixed	Residential	4/27/2021	5/24/2021	5/26/2021	No	SUNPOWEI908-216-1-RICHMONT CA					94804	890895	Yes	Lease	KB Home	No	No	Yes	No	16002	5.562043	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower			9				
SCE-INT-NST-199470				Interconne SCE	ONTARIO	91764	San Bernar Solar PV	5.18	4,732				18	180	RoofTop	Fixed	Residential	4/28/2021	4/28/2021	4/29/2021	No	SEMPER SC 619-715-4;EL CAJON CA					92020	978152	No			No	No	Yes	No	25500		5.388841	2	NEM-ST	None	No	NEMPV	SIL-370BK Silfab			14			
SCE-INT-NST-199804				Interconne SCE	ONTARIO	91762	San Bernar Solar PV	3.465	3,182				18	270	RoofTop	Fixed	Residential	4/29/2021	5/6/2021	5/6/2021	No	SUNRUN IN 855-478-6;SAN FRANC CA					94104	750184	Yes	PPA	Sunrun Inst	No	No	Yes	Yes	Sunrun Inc.	15898.11	4.996263	2	NEM-ST	None	No	NEMPV	Q.PEAK DU/Hanwha Q-			5			
SCE-INT-NST-199818				Interconne SCE	ONTARIO	91762	San Bernar Solar PV	3.465	3,182				18	270	RoofTop	Fixed	Residential	4/29/2021	4/29/2021	5/6/2021	No	SUNRUN IN 855-478-6;SAN FRANC CA					94104	750184	Yes	PPA	Sunrun Inst	No	No	Yes	Yes	Sunrun Inc.	15925.83	5.004974	2	NEM-ST	None	No	NEMPV	Q.PEAK DU/Hanwha Q-			24			
SCE-INT-NST-199886				Interconne SCE	ONTARIO	91762	San Bernar Solar PV	10.23	9,421				10	180	RoofTop	Fixed	Residential	4/29/2021	4/29/2021	4/30/2021	No	Precis Solar 951-696-9;WILDOMAI CA					92595	952305	No			No	No	Yes	No	48900		5.190531	2	NEM-ST	None	No	NEMPV	VBNH330S;Panasonic C			5			
SCE-INT-NST-199962				Interconne SCE	ONTARIO	91761	San Bernar Solar PV	3.1975	2,558				18	180	RoofTop	Fixed	Residential	4/29/2021	7/14/2021	7/20/2021	No	SUNPOWEI908-216-1-RICHMONT CA					94804	890895	Yes	Lease	Brookfield	No	No	Yes	No	14224	5.560594	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower			8				
SCE-INT-NST-199981				Interconne SCE	ONTARIO	91761	San Bernar Solar PV	3.59625	2,877				18	270	RoofTop	Fixed	Residential	4/29/2021	6/23/2021	7/21/2021	No	SUNPOWEI908-216-1-RICHMONT CA					94804	890895	Yes	Lease	Brookfield	No	No	Yes	No	16002	5.562043	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower			9				
SCE-INT-NST-199983				Interconne SCE	ONTARIO	91761	San Bernar Solar PV	3.59625	2,877				18	270	RoofTop	Fixed	Residential	4/29/2021	6/30/2021	7/6/2021	No	SUNPOWEI908-216-1-RICHMONT CA					94804	890895	Yes	Lease	Brookfield	No	No	Yes	No	16002	5.562043	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower			9				
SCE-INT-NST-199984				Interconne SCE	ONTARIO	91761	San Bernar Solar PV	3.59625	2,877				18	270	RoofTop	Fixed	Residential	4/30/2021	6/30/2021	7/6/2021	No	SUNPOWEI908-216-1-RICHMONT CA					94804	890895	Yes	Lease	Brookfield	No	No	Yes	No	16002	5.562043	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower			9				
SCE-INT-NST-199986				Interconne SCE	ONTARIO	91761	San Bernar Solar PV	3.99625	3,197				18	180	RoofTop	Fixed	Residential	4/30/2021	7/15/2021	7/21/2021	No	SUNPOWEI908-216-1-RICHMONT CA					94804	890895	Yes	Lease	Brookfield	No	No	Yes	No	17780	5.561463	2	NEM-ST	None	No	NEMPV								

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Application Preceding 1	Supercedin Matched C	Application Utility	Service City	Service Zip	Service Cot	Technology	System Siz	System Siz	Storage Ca	Storage Siz	Inverter Siz	Tilt	Azimuth	Mounting	I Tracking	Customer 5	App Received	App Complete	App Approved	EDecommis	Self Installe	Installer Na	Installer Ph	Installer Cil	Installer St	Installer Zi	CSLB Numt	Third Party	Third Party	Third Party	Face Fin	Face Fin	Electric Vel	Electric Vel	System Out	System Out	Total System	Itc Cost	Ba Cost/Watt	NEM Tariff	Interconne	VNEM	NEF Project	V NEMPV or	Generator	Generator	Generator
SCE-INT-NST-205211		Interconne SCE	ONTARIO	91762	San Bernar Solar PV		4.6032	3.836				18	270	Rooftop	Fixed	Residential	5/27/2021	7/7/2021	12/21/2021	No	SUNPOWEI908-216-1	RICHMONT CA				94804	890895	No	No	No	No	No	No	Yes	No	17850	4.653284	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower			12	
SCE-INT-NST-205215		Interconne SCE	ONTARIO	91762	San Bernar Solar PV		3.53871	2.877				18	270	Rooftop	Fixed	Residential	5/27/2021	9/1/2021	9/21/2021	No	SUNPOWEI908-216-1	RICHMONT CA				94804	890895	No	No	No	No	Yes	No	13387.5	4.653284	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower			9			
SCE-INT-NST-205483		Interconne SCE	ONTARIO	91764	San Bernar Solar PV		9.985	7.988				20	180	Rooftop	Fixed	Residential	5/29/2021	5/29/2021	6/1/2021	No	SOLARCE SC714-715-55	CLAREMONT CA				91711	805496	No	No	Yes	No	1	No	23456.03	2.936408	2	NEM-ST	None	No	NEMPV	REC355AA REC Solar			20			
SCE-INT-NST-205913		Interconne SCE	ONTARIO	91762	San Bernar Solar PV		6.602041	6.47				12	270	Rooftop	Fixed	Residential	11/28/2017	11/29/2017	11/29/2017	No	SOLARMAX951-300-07	RIVERSIDE CA				92507	972049	No	No	No	No	Yes	No	25345	3.91731	2	NEM-ST	None	No	NEMPV	SKM-265P Sunspark T			28			
SCE-INT-NST-205913		Interconne SCE	ONTARIO	91762	San Bernar Solar PV		5.36	4.768				12	270	Rooftop	Fixed	Residential	6/2/2021	7/15/2021	7/23/2021	No	SOLICIUS LL844-970-01	PROVO UT				84604	976386	No	No	No	No	Yes	No	22360	4.688597	2	NEM-ST	None	No	NEMPV	DNA-144A Aptos Solar			13			
SCE-INT-NST-206415		Interconne SCE	ONTARIO	91761	San Bernar Solar PV		4.19307	3.409				18	180	Rooftop	Fixed	Residential	6/4/2021	6/22/2021	8/16/2021	No	SUNNOVA 281-985-95	Houston TX	PPA	LENNAR HC No		77046	1003498	Yes	No	No	Yes	No	14.21	0.004168	2	NEM-ST	None	No	NEMPV	LG340N1K-LG Electror			11				
SCE-INT-NST-206417		Interconne SCE	ONTARIO	91761	San Bernar Solar PV		4.57314	3.718				18	90	Rooftop	Fixed	Residential	6/4/2021	6/22/2021	8/16/2021	No	SUNNOVA 281-985-95	Houston TX	PPA	LENNAR HC No		77046	1003498	Yes	No	No	Yes	No	15.5	0.004168	2	NEM-ST	None	No	NEMPV	LG340N1K-LG Electror			12				
SCE-INT-NST-206419		Interconne SCE	ONTARIO	91761	San Bernar Solar PV		4.95444	4.028				18	180	Rooftop	Fixed	Residential	6/4/2021	6/22/2021	8/16/2021	No	SUNNOVA 281-985-95	Houston TX	PPA	LENNAR HC No		77046	1003498	Yes	No	No	Yes	No	16.8	0.00417	2	NEM-ST	None	No	NEMPV	LG340N1K-LG Electror			13				
SCE-INT-NST-206422		Interconne SCE	ONTARIO	91761	San Bernar Solar PV		4.57314	3.718				18	180	Rooftop	Fixed	Residential	6/4/2021	6/24/2021	8/16/2021	No	SUNNOVA 281-985-95	Houston TX	PPA	LENNAR HC No		77046	1003498	Yes	No	No	Yes	No	15.5	0.004168	2	NEM-ST	None	No	NEMPV	LG340N1K-LG Electror			12				
SCE-INT-NST-206425		Interconne SCE	ONTARIO	91761	San Bernar Solar PV		4.57314	3.718				18	180	Rooftop	Fixed	Residential	6/4/2021	6/24/2021	8/16/2021	No	SUNNOVA 281-985-95	Houston TX	PPA	LENNAR HC No		77046	1003498	Yes	No	No	Yes	No	15.5	0.004168	2	NEM-ST	None	No	NEMPV	LG340N1K-LG Electror			12				
SCE-INT-NST-206428		Interconne SCE	ONTARIO	91761	San Bernar Solar PV		4.95444	4.028				18	180	Rooftop	Fixed	Residential	6/4/2021	6/22/2021	8/16/2021	No	SUNNOVA 281-985-95	Houston TX	PPA	LENNAR HC No		77046	1003498	Yes	No	No	Yes	No	16.8	0.00417	2	NEM-ST	None	No	NEMPV	LG340N1K-LG Electror			13				
SCE-INT-NST-206429		Interconne SCE	ONTARIO	91761	San Bernar Solar PV		4.19307	3.409				18	180	Rooftop	Fixed	Residential	6/4/2021	6/24/2021	8/16/2021	No	SUNNOVA 281-985-95	Houston TX	PPA	LENNAR HC No		77046	1003498	Yes	No	No	Yes	No	14.21	0.004168	2	NEM-ST	None	No	NEMPV	LG340N1K-LG Electror			11				
SCE-INT-NST-206432		Interconne SCE	ONTARIO	91761	San Bernar Solar PV		4.57314	3.718				18	180	Rooftop	Fixed	Residential	6/4/2021	6/24/2021	8/16/2021	No	SUNNOVA 281-985-95	Houston TX	PPA	LENNAR HC No		77046	1003498	Yes	No	No	Yes	No	15.5	0.004168	2	NEM-ST	None	No	NEMPV	LG340N1K-LG Electror			12				
SCE-INT-NST-206458		Interconne SCE	ONTARIO	91761	San Bernar Solar PV		3.93846	3.202				34	180	Rooftop	Fixed	Residential	6/4/2021	6/30/2021	8/13/2021	No	SUNNOVA 281-985-95	Houston TX	PPA	LENNAR HC No		77046	1003498	Yes	No	No	Yes	No	13376	4.177389	2	NEM-ST	None	No	NEMPV	LG320N1K-LG Electror			4				
SCE-INT-NST-206459		Interconne SCE	ONTARIO	91761	San Bernar Solar PV		3.58053	2.911				23	180	Rooftop	Fixed	Residential	6/4/2021	6/30/2021	8/13/2021	No	SUNNOVA 281-985-95	Houston TX	PPA	LENNAR HC No		77046	1003498	Yes	No	No	Yes	No	12.16	0.004177	2	NEM-ST	None	No	NEMPV	LG320N1K-LG Electror			10				
SCE-INT-NST-206460		Interconne SCE	ONTARIO	91761	San Bernar Solar PV		3.93846	3.202				23	270	Rooftop	Fixed	Residential	6/4/2021	6/30/2021	8/12/2021	No	SUNNOVA 281-985-95	Houston TX	PPA	LENNAR HC No		77046	1003498	Yes	No	No	Yes	No	13.38	0.004178	2	NEM-ST	None	No	NEMPV	LG320N1K-LG Electror			11				
SCE-INT-NST-206462		Interconne SCE	ONTARIO	91761	San Bernar Solar PV		3.58053	2.911				23	180	Rooftop	Fixed	Residential	6/4/2021	7/2/2021	10/13/2021	No	SUNNOVA 281-985-95	Houston TX	PPA	LENNAR HC No		77046	1003498	Yes	No	No	Yes	No	12.16	0.004177	2	NEM-ST	None	No	NEMPV	LG320N1K-LG Electror			10				
SCE-INT-NST-206463		Interconne SCE	ONTARIO	91761	San Bernar Solar PV		3.93846	3.202				27	270	Rooftop	Fixed	Residential	6/4/2021	6/30/2021	8/12/2021	No	SUNNOVA 281-985-95	Houston TX	PPA	LENNAR HC No		77046	1003498	Yes	No	No	Yes	No	13.38	0.004178	2	NEM-ST	None	No	NEMPV	LG320N1K-LG Electror			11				
SCE-INT-NST-206465		Interconne SCE	ONTARIO	91761	San Bernar Solar PV		4.65432	3.784				18	90	Rooftop	Fixed	Residential	6/4/2021	7/30/2021	8/4/2021	No	SUNNOVA 281-985-95	Houston TX	PPA	LENNAR HC No		77046	1003498	Yes	No	No	Yes	No	15.81	0.004178	2	NEM-ST	None	No	NEMPV	LG320N1K-LG Electror			3				
SCE-INT-NST-206466		Interconne SCE	ONTARIO	91761	San Bernar Solar PV		3.93846	3.202				23	180	Rooftop	Fixed	Residential	6/4/2021	6/30/2021	9/17/2021	No	SUNNOVA 281-985-95	Houston TX	PPA	Lennar Hor No		77046	1003498	Yes	No	No	Yes	No	13.38	0.004178	2	NEM-ST	None	No	NEMPV	LG320N1K-LG Electror			11				
SCE-INT-NST-206467		Interconne SCE	ONTARIO	91761	San Bernar Solar PV		4.65432	3.784				18	180	Rooftop	Fixed	Residential	6/4/2021	8/5/2021	8/12/2021	No	SUNNOVA 281-985-95	Houston TX	PPA	LENNAR HC No		77046	1003498	Yes	No	No	Yes	No	15.808	4.177589	2	NEM-ST	None	No	NEMPV	LG320N1K-LG Electror			4				
SCE-INT-NST-206508		Interconne SCE	ONTARIO	91764	San Bernar Solar PV		7.98875	6.391				20	180	Rooftop	Fixed	Residential	6/6/2021	6/6/2021	6/7/2021	No	PELL SOLAR866-646-8	Ontario CA				91761	949122	No	No	No	No	Yes	No	23500	3.677045	2	NEM-ST	None	No	NEMPV	DNA-120-Aptos Solar			10			
SCE-INT-NST-206532		Interconne SCE	ONTARIO	91761	San Bernar Solar PV		3.53871	2.877				18	90	Rooftop	Fixed	Residential	6/6/2021	8/10/2021	8/17/2021	No	SUNPOWEI908-216-1	RICHMONT CA				94804	890895	No	No	No	No	Yes	No	13387.5	4.653284	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower			9			
SCE-INT-NST-206548		Interconne SCE	ONTARIO	91761	San Bernar Solar PV		3.53871	2.877				18	90	Rooftop	Fixed	Residential	6/6/2021	8/9/2021	8/16/2021	No	SUNPOWEI908-216-1	RICHMONT CA				94804	890895	No	No	No	No	Yes	No	13387.5	4.653284	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower			9			
SCE-INT-NST-206549		Interconne SCE	ONTARIO	91761	San Bernar Solar PV		3.53871	2.877				18	90	Rooftop	Fixed	Residential	6/6/2021	8/9/2021	8/16/2021	No	SUNPOWEI908-216-1	RICHMONT CA				94804	890895	No	No	No	No	Yes	No	13387.5	4.653284	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower			9			
SCE-INT-NST-206550		Interconne SCE	ONTARIO	91761	San Bernar Solar PV		3.53871	2.877				18	90	Rooftop	Fixed	Residential	6/6/2021	8/9/2021	8/16/2021	No	SUNPOWEI908-216-1	RICHMONT CA				94804	890895	No	No	No	No	Yes	No	13387.5	4.653284	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower			9			
SCE-INT-NST-206551		Interconne SCE	ONTARIO	91761	San Bernar Solar PV		3.53871	2.877				18	90	Rooftop	Fixed	Residential	6/6/2021	8/9/2021	8/16/2021	No	SUNPOWEI908-216-1	RICHMONT CA				94804	890895	No	No	No	No	Yes	No	13387.5	4.653284	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower			9			
SCE-INT-NST-206552		Interconne SCE	ONTARIO	91761	San Bernar Solar PV		3.53871	2.877				18	90	Rooftop	Fixed	Residential	6/6/2021	8/9/2021	8/16/2021	No	SUNPOWEI908-216-1	RICHMONT CA				94804	890895	No	No	No	No	Yes	No	13387.5	4.653284	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower			9			
SCE-INT-NST-206727		Interconne SCE	ONTARIO	91761	San Bernar Solar PV		3.55625	2.845				19	176	Rooftop	Fixed	Residential	6/7/2021	6/7/2021	6/8/2021	No	Grid Altern 951-266-5	OAKLAND CA	PPA	SunRun No		94608	867533	Yes	PPA	SunRun No	No	Yes	Yes	SunRun	6158.25	2.164586	2	NEM-SASH	None	No	NEMPV	CS3K-315M Canadian S			10		
SCE-INT-NST-206730		Interconne SCE	ONTARIO	91761	San Bernar Solar PV		3.53871	2.87																																							

Ontario Quantification Workbook

Application Preceding 1	Supercedin Matched C	Application/Utility	Service City/Service Zip	Service Cot	Technology	System Siz	System Siz	Storage Ca	Storage Siz	Inverter Siz	Tilt	Azimuth	Mounting	Tracking	Customer 5	App Received	App Complete	App Approved	EDecommis	Self Installe	Installer Na	Installer Ph	Installer Cil	Installer St	Installer Zi	CSLB Numt	Third Party	Third Party	Third Party	Third Party	Finan Pace	Finan Pace	Finan	Electric Vel	Electric Vel	System Out	System Out	System Out	Total Syste	Itc Cost	Ba Cost/Watt	NEM Tariff	Interconne	VNEM	NEF Project	V NEMPV or	Generator	Generator	Generator
SCE-INT-NST-208914		Interconne SCE	ONTARIO	91762	San Bernar Solar PV	5.01348	4.076				23	180	Rooftop	Fixed	Residential	6/17/2021	6/23/2021	8/12/2021	No	Vivint Solar 801-845-0; Lehi UT	UT			84043	973756	Yes	PPA	Vivint Solar No	No	No	No	No	Yes	Yes	SolarEdge Technology	23537.92	5.774759	2	NEM-ST	None	No	NEMPV	JKM320M-Jinko Solar		14				
SCE-INT-NST-209039		Interconne SCE	ONTARIO	91762	San Bernar Solar PV	5.01348	4.076				23	270	Rooftop	Fixed	Residential	6/17/2021	6/25/2021	8/12/2021	No	Vivint Solar 801-845-0; Lehi UT	UT			84043	973756	No	No	No	No	No	No	No	Yes	Yes	SolarEdge 1	15920	3.905789	2	NEM-ST	None	No	NEMPV	JKM320M-Jinko Solar		14				
SCE-INT-NST-209198		Interconne SCE	ONTARIO	91762	San Bernar Solar PV	4.03563	3.281				10	180	Rooftop	Fixed	Residential	6/18/2021	9/1/2021	9/10/2021	No	EMPOWER 800-306-6; Fresno CA	CA			92710	1057693	No	No	No	No	No	No	No	Yes	Yes	SolarEdge 1	18292	5.575129	2	NEM-ST	None	No	NEMPV	TSM-3300M-Trina Solar		11				
SCE-INT-NST-209232		Interconne SCE	ONTARIO	91761	San Bernar Solar PV	3.883673	3.806				21	180	Rooftop	Fixed	Residential	11/30/2017	12/4/2017	12/6/2017	No	SULLIVAN 626-360-8; SAN DIEGO CA	CA			92121	839077	No	No	No	No	No	No	Yes	Yes	SULLIVAN 5	16000	4.202868	2	NEM-ST	None	No	NEMPV	KU270-6M-Hyocore So		16					
SCE-INT-NST-209352		Interconne SCE	ONTARIO	91762	San Bernar Solar PV	3.70625	2.965				27	181	Rooftop	Fixed	Residential	6/18/2021	6/18/2021	6/21/2021	No	SUNRUN IN 855-478-6; San Francis CA	CA			94104	750184	Yes	PPA	Sunrun InstNo	No	No	No	No	Yes	Yes	SUNRUN, Inc	12949.34	4.367399	2	NEM-ST	None	No	NEMPV	LR4-60HPB LONGI Gree		5				
SCE-INT-NST-209562		Interconne SCE	ONTARIO	91762	San Bernar Solar PV	12.49625	9.997				20	180	Rooftop	Fixed	Residential	6/18/2021	6/22/2021	6/23/2021	No	BETTER EA1888-373-9; SANTA AN CA	CA			92705	1024460	No	No	No	No	No	No	Yes	Yes	SUNRUN, Inc	39222.93	3.92347	2	NEM-ST	None	No	NEMPV	Q PEAK DU Hanwha Q-		10					
SCE-INT-NST-209570		Interconne SCE	ONTARIO	91762	San Bernar Solar PV	14.00375	11.203	13.5	5		20	158	Rooftop	Fixed	Residential	6/21/2021	6/23/2021	6/25/2021	No	TESLA ENEI844-837-5; FREMONT CA	CA			94538	888104	No	No	No	No	No	No	Yes	Yes	TESLA ENEI	36538.56	3.261497	2	NEM-ST	None	No	NEMPV	Q PEAK DU Hanwha Q-		12					
SCE-INT-NST-209630		Interconne SCE	ONTARIO	91762	San Bernar Solar PV	5.01348	4.076				18	90	Rooftop	Fixed	Residential	6/21/2021	6/21/2021	9/7/2021	No	Vivint Solar 801-845-0; Lehi UT	UT			84043	973756	Yes	Lease	Vivint Solar No	No	No	No	Yes	Yes	SolarEdge Technology	22489.6	5.517566	2	NEM-ST	None	No	NEMPV	JKM320M-Jinko Solar		6					
SCE-INT-NST-209643		Interconne SCE	ONTARIO	91762	San Bernar Solar PV	5.01348	4.076				18	180	Rooftop	Fixed	Residential	6/21/2021	6/23/2021	8/18/2021	No	Vivint Solar 801-845-0; Lehi UT	UT			84043	973756	Yes	Other	Vivint Solar No	No	No	No	Yes	Yes	SolarEdge Technology	23009.28	5.645063	2	NEM-ST	None	No	NEMPV	JKM320M-Jinko Solar		8					
SCE-INT-NST-209655		Interconne SCE	ONTARIO	91762	San Bernar Solar PV	5.06268	4.116				18	270	Rooftop	Fixed	Residential	6/21/2021	6/23/2021	9/30/2021	No	Vivint Solar 801-845-0; Lehi UT	UT			84043	973756	Yes	Lease	Vivint Solar No	No	No	No	Yes	Yes	SolarEdge Technology	22489.6	5.463945	2	NEM-ST	None	No	NEMPV	Q PEAK DU Hanwha Q-		14					
SCE-INT-NST-209668		Interconne SCE	ONTARIO	91762	San Bernar Solar PV	5.01348	4.076				18	180	Rooftop	Fixed	Residential	6/21/2021	6/23/2021	8/12/2021	No	Vivint Solar 801-845-0; Lehi UT	UT			84043	973756	No	No	No	No	No	No	Yes	Yes	SolarEdge 1	15920	3.905789	2	NEM-ST	None	No	NEMPV	JKM320M-Jinko Solar		3					
SCE-INT-NST-209679		Interconne SCE	ONTARIO	91762	San Bernar Solar PV	5.01348	4.076				18	180	Rooftop	Fixed	Residential	6/21/2021	6/23/2021	8/12/2021	No	Vivint Solar 801-845-0; Lehi UT	UT			84043	973756	No	No	No	No	No	No	Yes	Yes	SolarEdge 1	15920	3.905789	2	NEM-ST	None	No	NEMPV	JKM320M-Jinko Solar		14					
SCE-INT-NST-209686		Interconne SCE	ONTARIO	91762	San Bernar Solar PV	5.01348	4.076				18	180	Rooftop	Fixed	Residential	6/21/2021	6/23/2021	9/17/2021	No	Vivint Solar 801-845-0; Lehi UT	UT			84043	973756	No	No	No	No	No	No	Yes	Yes	SolarEdge 1	15920	3.905789	2	NEM-ST	None	No	NEMPV	JKM320M-Jinko Solar		14					
SCE-INT-NST-209696		Interconne SCE	ONTARIO	91762	San Bernar Solar PV	5.01348	4.076				18	180	Rooftop	Fixed	Residential	6/21/2021	6/23/2021	8/17/2021	No	Vivint Solar 801-845-0; Lehi UT	UT			84043	973756	Yes	Lease	Vivint Solar No	No	No	No	Yes	Yes	SolarEdge Technology	23009.28	5.645063	2	NEM-ST	None	No	NEMPV	JKM320M-Jinko Solar		14					
SCE-INT-NST-209797		Interconne SCE	ONTARIO	91762	San Bernar Solar PV	5.06268	4.116				31	269	Rooftop	Fixed	Residential	6/22/2021	6/22/2021	8/2/2021	No	Vivint Solar 801-845-0; Lehi UT	UT			84043	973756	Yes	Lease	Vivint Solar No	No	No	No	Yes	Yes	SolarEdge Technology	22489.6	5.463945	2	NEM-ST	None	No	NEMPV	Q PEAK DU Hanwha Q-		14					
SCE-INT-NST-209855		Interconne SCE	ONTARIO	91762	San Bernar Solar PV	5.01348	4.076				18	180	Rooftop	Fixed	Residential	6/22/2021	6/22/2021	8/12/2021	No	Vivint Solar 801-845-0; Lehi UT	UT			84043	973756	Yes	PPA	Vivint Solar No	No	No	No	Yes	Yes	SolarEdge Technology	23537.92	5.774759	2	NEM-ST	None	No	NEMPV	JKM320M-Jinko Solar		4					
SCE-INT-NST-210010		Interconne SCE	ONTARIO	91764	San Bernar Solar PV	4.755	3.804				22	270	Rooftop	Fixed	Residential	6/22/2021	6/22/2021	6/23/2021	No	Grid Altern 510-731-1; OAKLAND CA	CA			94608	867533	Yes	PPA	SunRun No	No	No	No	Yes	Yes	SunRun	11412	3	2	NEM-SASH	None	No	NEMPV	LR4-60HPB LONGI Gree		12					
SCE-INT-NST-210024		Interconne SCE	ONTARIO	91764	San Bernar Solar PV	7.79625	6.237				18	180	Rooftop	Fixed	Residential	6/23/2021	6/23/2021	6/24/2021	No	ESP CONTR 866-865-4; Torrance CA	CA			95052	619149	No	No	No	No	No	No	Yes	Yes	SunRun	22474.34	3.603389	2	NEM-ST	None	No	NEMPV	LR4-60HPB LONGI Gree		12					
SCE-INT-NST-210034		Interconne SCE	ONTARIO	91764	San Bernar Solar PV	9.917347	9.719				Multiple	180	Rooftop	Fixed	Residential	11/30/2017	12/20/2017	12/22/2017	No	Freedom S 626-360-8; Murrieta CA	CA			92562	828292	Yes	Lease	Sunrun No	No	No	No	Yes	No	SunRun	33275	3.423706	2	NEM-ST	None	No	NEMPV	CSK-275M Canadian S		19					
SCE-INT-NST-210091		Interconne SCE	ONTARIO	91761	San Bernar Solar PV	9.37449	9.187				15	270	Rooftop	Fixed	Residential	12/1/2017	12/1/2017	12/4/2017	No	Peak Powe 626-360-8; Costa Mesa CA	CA			92626	973253	No	No	No	No	No	No	Yes	No	SunRun	40300	4.386633	2	NEM-ST	None	No	NEMPV	TSM-3000M-Trina Solar		35					
SCE-INT-NST-210943		Interconne SCE	ONTARIO	91761	San Bernar Solar PV	8.29	6.632				18	180	Mixed	Fixed	Residential	6/25/2021	6/25/2021	6/28/2021	No	MYERS ELE 951-205-2; COLTON CA	CA			92324	972274	No	No	No	No	No	No	Yes	No	SunRun	30889	4.657569	2	NEM-ST	None	No	NEMPV	Q PEAK DU Hanwha Q-		21					
SCE-INT-NST-211083		Interconne SCE	ONTARIO	91761	San Bernar Solar PV	3.14634	2.558				18	270	Rooftop	Fixed	Residential	6/27/2021	9/6/2021	10/21/2021	No	SUNPOWEI908-216-1; RICHMONT CA	CA			94804	890895	No	No	No	No	No	No	Yes	No	SunRun	11900	4.652071	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower		8					
SCE-INT-NST-211085		Interconne SCE	ONTARIO	91761	San Bernar Solar PV	3.14634	2.558				18	270	Rooftop	Fixed	Residential	6/27/2021	9/6/2021	10/29/2021	No	SUNPOWEI908-216-1; RICHMONT CA	CA			94804	890895	No	No	No	No	No	No	Yes	No	SunRun	11900	4.652071	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower		8					
SCE-INT-NST-211087		Interconne SCE	ONTARIO	91761	San Bernar Solar PV	3.14634	2.558				18	270	Rooftop	Fixed	Residential	6/27/2021	9/6/2021	10/18/2021	No	SUNPOWEI908-216-1; RICHMONT CA	CA			94804	890895	No	No	No	No	No	No	Yes	No	SunRun	11900	4.652071	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower		8					
SCE-INT-NST-211090		Interconne SCE	ONTARIO	91761	San Bernar Solar PV	4.71828	3.836				34	180	Rooftop	Fixed	Residential	6/27/2021	7/26/2021	8/2/2021	No	SUNPOWEI908-216-1; RICHMONT CA	CA			94804	890895	No	No	No	No	No	No	Yes	No	SunRun	17850	4.653284	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower		12					
SCE-INT-NST-211091		Interconne SCE	ONTARIO	91761	San Bernar Solar PV	5.50548	4.476				34	180	Rooftop	Fixed	Residential	6/27/2021	7/26/2021	8/2/2021	No	SUNPOWEI908-216-1; RICHMONT CA	CA			94804	890895	No	No	No	No	No	No	Yes	No	SunRun	20825	4.652591	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower		14					
SCE-INT-NST-211092		Interconne SCE	ONTARIO	91761	San Bernar Solar PV	4.71828	3.836				18	180	Rooftop	Fixed	Residential	6/27/2021	7/28/2021	8/4/2021	No	SUNPOWEI908-216-1; RICHMONT CA	CA			94804	890895	No	No	No	No	No	No	Yes	No	SunRun	17850	4.653284	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower		12					
SCE-INT-NST-211093		Interconne SCE	ONTARIO	91761	San Bernar Solar PV	5.50548	4.476				34	180	Rooftop	Fixed	Residential	6/28/2021	7/29/2021	8/6/2021	No	SUNPOWEI908-216-1; RICHMONT CA	CA			94804	890895	No	No	No	No	No	No	Yes	No	SunRun	20825	4.652591	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower		14					
SCE-INT-NST-211094		Interconne SCE	ONTARIO	91761	San Bernar Solar PV	4.795	3.836				23	180	Rooftop	Fixed	Residential	6/28/2021	7/25/2021	7/30/2021	No	SUNPOWEI908-216-1; RICHMONT																													

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Application Preceding	Supercedin	Matched	C	Application/Utility	Service City	Service Zip	Service Cot	Technology	System Siz	System Siz	Storage Ca	Storage Siz	Inverter Siz	Tilt	Azimuth	Mounting	Tracking	Customer	App Received	App Complete	App Approved	EDecommission	Self Install	Installer Na	Installer Ph	Installer Cil	Installer St	Installer Z	CSLB Num	Third Party	Third Party	Third Party	Third Party	Face	Face	Face	Finan	Electric Vel	Electric Vel	System Out	System Out	System Out	Total System	Itc Cost	Bat Cost/Watt	NEM Tariff	Interconne	VNEM	NEP	Project is V	NEMPV or	Generator	Generator	Generator				
SCE-INT-NST-215824				Interconne SCE	ONTARIO	91761	San Bernar Solar PV		3.53871	2.877			18	270	Rooftop	Fixed	Residential	7/19/2021	8/19/2021	8/27/2021		No	SUNPOWEI908-216-1	RICHMONT CA	94804	890895	Yes	Lease	Brookfield	No	No	No	Yes	No	16002	5.562043	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower	9															
SCE-INT-NST-215827				Interconne SCE	ONTARIO	91761	San Bernar Solar PV		3.53871	2.877			18	270	Rooftop	Fixed	Residential	7/19/2021	9/20/2021	9/23/2021		No	SUNPOWEI908-216-1	RICHMONT CA	94804	890895	Yes	Lease	Brookfield	No	No	Yes	No	16002	5.562043	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower	9																
SCE-INT-NST-215832				Interconne SCE	ONTARIO	91761	San Bernar Solar PV		3.53871	2.877			18	270	Rooftop	Fixed	Residential	7/19/2021	9/29/2021	10/5/2021		No	SUNPOWEI908-216-1	RICHMONT CA	94804	890895	Yes	Lease	Brookfield	No	No	Yes	No	16002	5.562043	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower	9																
SCE-INT-NST-215839				Interconne SCE	ONTARIO	91761	San Bernar Solar PV		3.53871	2.877			18	270	Rooftop	Fixed	Residential	7/19/2021	8/30/2021	9/8/2021		No	SUNPOWEI908-216-1	RICHMONT CA	94804	890895	Yes	Lease	Brookfield	No	No	Yes	No	16002	5.562043	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower	9																
SCE-INT-NST-215853				Interconne SCE	ONTARIO	91762	San Bernar Solar PV		5.01348	4.076			18	180	Rooftop	Fixed	Residential	7/20/2021	7/20/2021	9/18/2021		No	Vivint Solar 801-845-0	Lehi UT	84043	973756	Yes	Lease	Vivint Solar	No	No	Yes	Yes	Solar Edge Technology	22489.6	5.517566	2	NEM-ST	None	No	NEMPV	JKM320M-Jinko Solar	14															
SCE-INT-NST-215860				Interconne SCE	ONTARIO	91762	San Bernar Solar PV		5.01348	4.076			18	180	Rooftop	Fixed	Residential	7/20/2021	8/16/2021	10/14/2021		No	Vivint Solar 801-845-0	Lehi UT	84043	973756	Yes	Lease	Vivint Solar	No	No	Yes	Yes	SolarEdge 1	15920	3.905789	2	NEM-ST	None	No	NEMPV	JKM320M-Jinko Solar	14															
SCE-INT-NST-215868				Interconne SCE	ONTARIO	91762	San Bernar Solar PV		5.01348	4.076			18	180	Rooftop	Fixed	Residential	7/20/2021	10/21/2021	10/27/2021		No	Vivint Solar 801-845-0	Lehi UT	84043	973756	Yes	Lease	Vivint Solar	No	No	Yes	Yes	SolarEdge 1	15920	3.905789	2	NEM-ST	None	No	NEMPV	JKM320M-Jinko Solar	14															
SCE-INT-NST-215869				Interconne SCE	ONTARIO	91762	San Bernar Solar PV		5.095	4.076			23	180	Rooftop	Fixed	Residential	7/20/2021	11/4/2021	11/9/2021		No	Vivint Solar 385-352-0	Lehi UT	84043	973756	Yes	Lease	VIVINT SOL	No	No	Yes	Yes	Solar Edge Technology	22489.6	5.517566	2	NEM-ST	None	No	NEMPV	JKM320M-Jinko Solar	14															
SCE-INT-NST-215874				Interconne SCE	ONTARIO	91762	San Bernar Solar PV		5.01348	4.076			23	180	Rooftop	Fixed	Residential	7/20/2021	7/20/2021	8/25/2021		No	Vivint Solar 801-845-0	Lehi UT	84043	973756	Yes	Lease	Vivint Solar	No	No	Yes	Yes	SolarEdge Technologie	22489.6	5.517566	2	NEM-ST	None	No	NEMPV	JKM320M-Jinko Solar	14															
SCE-INT-NST-215883				Interconne SCE	ONTARIO	91762	San Bernar Solar PV		5.095	4.076			18	180	Rooftop	Fixed	Residential	7/20/2021	7/20/2021	11/16/2021		No	Vivint Solar 801-845-0	Lehi UT	84043	973756	Yes	Lease	Vivint Solar	No	No	Yes	Yes	SolarEdge 1	15920	3.905789	2	NEM-ST	None	No	NEMPV	JKM320M-Jinko Solar	14															
SCE-INT-NST-215974				Interconne SCE	ONTARIO	91762	San Bernar Solar PV		9.82647	7.989			13	270	Rooftop	Fixed	Residential	7/20/2021	8/3/2021	8/10/2021		No	EXO ENERC 208-351-41	Temecula CA	92592	1063308	Yes	Other	SUNNOVA	No	No	Yes	No	23890.68	2.990446	2	NEM-ST	None	No	NEMPV	LR4-60HPB LONGI Gre	8																
SCE-INT-NST-216006				Interconne SCE	ONTARIO	91761	San Bernar Solar PV		12.49434	10.158			18	180	Mixed	Fixed	Residential	7/20/2021	7/28/2021	8/4/2021		No	MYERS ELE 909-996-3	COLTON CA	92324	972274	No	Lease	SUNNOVA	No	No	Yes	No	22212.3	2.18668	2	NEM-ST	None	No	NEMPV	Q.PEAK DU Hanwha Q-	21																
SCE-INT-NST-216081				Interconne SCE	ONTARIO	91761	San Bernar Solar PV		6.51875	5.215			21	180	Rooftop	Fixed	Residential	7/20/2021	7/20/2021	7/21/2021		No	SUN BEES 7714-676-8	Pomona CA	91767	970591	No	Lease	SUNNOVA	No	No	Yes	No	39956.5	7.661927	2	NEM-ST	None	No	NEMPV	SPR-X22-36SunPower	8																
SCE-INT-NST-216200				Interconne SCE	ONTARIO	91761	San Bernar Solar PV		8.86956	4.772			18	126	Rooftop	Fixed	Residential	7/21/2021	7/30/2021	8/9/2021		No	EMPOWER 800-306-6	Fresno CA	93710	1057693	No	Lease	SUNNOVA	No	No	Yes	No	300221	6.332984	2	NEM-ST	None	No	NEMPV	TSM-3300I Trina Solar	16																
SCE-INT-NST-216297				Interconne SCE	ONTARIO	91762	San Bernar Solar PV		3.9775	3.182			18	270	Rooftop	Fixed	Residential	7/21/2021	7/21/2021	7/27/2021		No	SUNRUN IN 855-478-6	San Francis CA	94104	750184	No	Lease	SUNNOVA	No	No	Yes	Yes	Sunrun Inc.	13999.99	4.399745	2	NEM-ST	None	No	NEMPV	Q.PEAK DU Hanwha Q-	8															
SCE-INT-NST-216579				Interconne SCE	ONTARIO	91762	San Bernar Solar PV		5.01348	4.076			18	90	Rooftop	Fixed	Residential	7/22/2021	7/30/2021	9/10/2021		No	Vivint Solar 801-845-0	Lehi UT	84043	973756	Yes	Lease	Vivint Solar	No	No	Yes	Yes	Sunrun Edge Technology	22489.6	5.517566	2	NEM-ST	None	No	NEMPV	JKM320M-Jinko Solar	14															
SCE-INT-NST-216640				Interconne SCE	ONTARIO	91762	San Bernar Solar PV		5.01348	4.076			18	270	Rooftop	Fixed	Residential	7/22/2021	7/29/2021	9/2/2021		No	Vivint Solar 801-845-0	Lehi UT	84043	973756	Yes	Lease	Vivint Solar	No	No	Yes	Yes	Solar Edge 1	15920	3.905789	2	NEM-ST	None	No	NEMPV	JKM320M-Jinko Solar	14															
SCE-INT-NST-216644				Interconne SCE	ONTARIO	91762	San Bernar Solar PV		5.01348	4.076			18	180	Rooftop	Fixed	Residential	7/22/2021	7/22/2021	8/4/2021		No	Vivint Solar 801-845-0	Lehi UT	84043	973756	Yes	Lease	Vivint Solar	No	No	Yes	Yes	Solar Edge 1	15920	3.905789	2	NEM-ST	None	No	NEMPV	JKM320M-Jinko Solar	14															
SCE-INT-NST-216793				Interconne SCE	ONTARIO	91762	San Bernar Solar PV		5.01348	4.076			27	180	Rooftop	Fixed	Residential	7/23/2021	7/23/2021	8/13/2021		No	Vivint Solar 801-845-0	Lehi UT	84043	973756	Yes	Lease	Vivint Solar	No	No	Yes	Yes	SolarEdge Technologie	15920	3.905789	2	NEM-ST	None	No	NEMPV	JKM320M-Jinko Solar	14															
SCE-INT-NST-216798				Interconne SCE	ONTARIO	91762	San Bernar Solar PV		5.095	4.076			22	180	Rooftop	Fixed	Residential	7/23/2021	7/23/2021	7/29/2021		No	Vivint Solar 801-845-0	Lehi UT	84043	973756	Yes	Lease	Vivint Solar	No	No	Yes	Yes	Solar Edge Technology	23537.92	5.774759	2	NEM-ST	None	No	NEMPV	JKM320M-Jinko Solar	14															
SCE-INT-NST-216810				Interconne SCE	ONTARIO	91762	San Bernar Solar PV		4.8912	4.076			18	180	Rooftop	Fixed	Residential	7/23/2021	7/23/2021	12/6/2021		No	Vivint Solar 801-845-0	Lehi UT	84043	973756	Yes	Lease	Vivint Solar	No	No	Yes	Yes	SolarEdge 1	15920	3.905789	2	NEM-ST	None	No	NEMPV	JKM320M-Jinko Solar	14															
SCE-INT-NST-216812				Interconne SCE	ONTARIO	91762	San Bernar Solar PV		5.01348	4.076			18	180	Rooftop	Fixed	Residential	7/23/2021	7/23/2021	8/17/2021		No	Vivint Solar 801-845-0	Lehi UT	84043	973756	Yes	Lease	Vivint Solar	No	No	Yes	Yes	Solar Edge 1	15920	3.905789	2	NEM-ST	None	No	NEMPV	JKM320M-Jinko Solar	14															
SCE-INT-NST-216830				Interconne SCE	ONTARIO	91762	San Bernar Solar PV		4.8912	4.076			22	180	Rooftop	Fixed	Residential	7/23/2021	7/23/2021	12/6/2021		No	Vivint Solar 801-845-0	Lehi UT	84043	973756	Yes	Lease	Vivint Solar	No	No	Yes	Yes	Solar Edge 1	15920	3.905789	2	NEM-ST	None	No	NEMPV	JKM320M-Jinko Solar	14															
SCE-INT-NST-216835				Interconne SCE	ONTARIO	91762	San Bernar Solar PV		5.01348	4.076			18	180	Rooftop	Fixed	Residential	7/23/2021	7/30/2021	9/1/2021		No	Vivint Solar 801-845-0	Lehi UT	84043	973756	Yes	Lease	Vivint Solar	No	No	Yes	Yes	Solar Edge Technologie	22489.6	5.517566	2	NEM-ST	None	No	NEMPV	JKM320M-Jinko Solar	14															
SCE-INT-NST-216880				Interconne SCE	ONTARIO	91762	San Bernar Solar PV		5.01348	4.076			26	180	Rooftop	Fixed	Residential	7/23/2021	8/2/2021	9/9/2021		No	Vivint Solar 801-845-0	Lehi UT	84043	973756	Yes	Lease	Vivint Solar	No	No	Yes	Yes	SolarEdge 1	15920	3.905789																						

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Application Preceding	Supercedin	Matched	C	Application/Utility	Service City/Service Zip	Service Cot	Technology	System Siz	System Siz	Storage Ca	Storage Siz	Inverter Siz	Tilt	Azimuth	Mounting	Tracking	Customer	5 App Received	App Complete	App Approved	EDecommis	Self Install	Installer Na	Installer Ph	Installer Cil	Installer St	Installer Zi	CSLB Num	Third Party	Third Party	Third Party	Face Fin	Face Fin	Electric Vel	Electric Vel	System Out	System Out	System Out	Total System	Itc Cost	Cost/Watt	NEM Tariff	Interconne	VNEM	NEF Project	V NEMPV or	Generator	Generator	Generator								
SCE-INT-NST-221755				Interconne SCE	ONTARIO	91761	San Bernar Solar PV	7.16475	5.825					17	180	RoofTop	Fixed	Residential	8/12/2021	8/19/2021	8/30/2021	No	SOUTH WE 855-808-8 North Holly CA	91605	1012298	No	No	No	No	No	No	No	No	No	55800	9.579399	2	NEM-ST	None	No	NEMPV	MSE320SR Mission So				20											
SCE-INT-NST-222029				Interconne SCE	ONTARIO	91761	San Bernar Solar PV	3.4932	2.911					23	180	RoofTop	Fixed	Residential	8/13/2021	8/13/2021	12/8/2021	No	SUNNOVA 281-985-95 Houston TX	77046	1003498	Yes	PPA	LENNAR HC No	No	No	No	No	No	No	34080	1216	0.417725	2	NEM-ST	None	No	NEMPV	LG320N1K-LG Electror				10										
SCE-INT-NST-222033				Interconne SCE	ONTARIO	91761	San Bernar Solar PV	6.36033	5.171					23	180	RoofTop	Fixed	Residential	8/13/2021	8/20/2021	8/27/2021	No	PENGLIN 1888-488-86 RIVERSIDE CA	92506	1033658	No	No	No	No	No	No	No	No	No	No	No	No	No	15808	4.177389	2	NEM-ST	None	No	NEMPV	DNA-120-Aptos Solar				18							
SCE-INT-NST-222037				Interconne SCE	ONTARIO	91761	San Bernar Solar PV	4.65432	3.784					18	270	RoofTop	Fixed	Residential	8/13/2021	8/16/2021	9/27/2021	No	SUNNOVA 281-985-95 Houston TX	77046	1003498	Yes	PPA	Lennar Hor No	No	No	No	No	No	No	No	15504	4.169983	2	NEM-ST	None	No	NEMPV	LG340N1K-LG Electror				9										
SCE-INT-NST-222041				Interconne SCE	ONTARIO	91761	San Bernar Solar PV	3.93846	3.202					18	270	RoofTop	Fixed	Residential	8/13/2021	8/16/2021	9/1/2021	No	SUNNOVA 281-985-95 Houston TX	77046	1003498	Yes	PPA	Lennar Hor No	No	No	No	No	No	No	No	15504	4.169811	2	NEM-ST	None	No	NEMPV	LG340N1K-LG Electror				6										
SCE-INT-NST-222045				Interconne SCE	ONTARIO	91761	San Bernar Solar PV	3.93846	3.202					18	270	RoofTop	Fixed	Residential	8/13/2021	8/17/2021	9/13/2021	No	SUNNOVA 281-985-95 Houston TX	77046	1003498	Yes	PPA	Lennar Hor No	No	No	No	No	No	No	15504	4.169983	2	NEM-ST	None	No	NEMPV	LG340N1K-LG Electror				11											
SCE-INT-NST-222048				Interconne SCE	ONTARIO	91761	San Bernar Solar PV	3.58053	2.911					23	180	RoofTop	Fixed	Residential	8/13/2021	8/17/2021	8/31/2021	No	SUNNOVA 281-985-95 Houston TX	77046	1003498	Yes	PPA	LENNAR HC No	No	No	No	No	No	No	1216	0.417725	2	NEM-ST	None	No	NEMPV	LG320N1K-LG Electror				6											
SCE-INT-NST-222053				Interconne SCE	ONTARIO	91761	San Bernar Solar PV	3.8424	3.202					23	180	RoofTop	Fixed	Residential	8/13/2021	8/19/2021	12/21/2021	No	SUNNOVA 281-985-95 Houston TX	77046	1003498	Yes	PPA	LENNAR HC No	No	No	No	No	No	No	13376	4.177389	2	NEM-ST	None	No	NEMPV	LG320N1K-LG Electror				11											
SCE-INT-NST-222056				Interconne SCE	ONTARIO	91761	San Bernar Solar PV	3.4932	2.911					23	180	RoofTop	Fixed	Residential	8/13/2021	8/19/2021	12/21/2021	No	SUNNOVA 281-985-95 Houston TX	77046	1003498	Yes	PPA	LENNAR HC No	No	No	No	No	No	No	1216	0.417725	2	NEM-ST	None	No	NEMPV	LG320N1K-LG Electror				11											
SCE-INT-NST-222121				Interconne SCE	ONTARIO	91762	San Bernar Solar PV	7.17951	5.837	9.8	5			16	271	RoofTop	Fixed	Residential	8/16/2021	8/16/2021	9/9/2021	No	Vivint Solar 801-845-01 Lehi UT	84043	973756	Yes	PPA	Vivint Solar No	No	No	No	No	No	No	SolarEdge Technologie	27409.2	4.695768	2	NEM-ST	None	No	NEMPV	JKM320M-Jinko Solar				6										
SCE-INT-NST-222218				Interconne SCE	ONTARIO	91761	San Bernar Solar PV	7.52022	6.114					18	180	RoofTop	Fixed	Residential	8/16/2021	8/16/2021	8/17/2021	No	CURRENT 1866-454-61 Hemet CA	92545	1045016	Yes	PPA	SunRun No	No	No	No	No	No	No	No	No	No	No	20328	3.324828	2	NEM-ST	None	No	NEMPV	JKM320M-Jinko Solar				17							
SCE-INT-NST-222303				Interconne SCE	ONTARIO	91764	San Bernar Solar PV,St	9.57678	7.786	13.44	5.12			18	170	RoofTop	Fixed	Residential	8/16/2021	8/27/2021	9/15/2021	No	AS ELECTRI 562-923-01 Downey CA	90241	944493	No	No	No	No	No	No	No	No	No	No	No	45250	5.811713	2	NEM-ST	None	No	NEMPV	LG370Q1C-LG Electror				18									
SCE-INT-NST-222425				Interconne SCE	ONTARIO	91764	San Bernar Solar PV	4.746939	4.652					21	180	RoofTop	Fixed	Residential	12/9/2017	12/9/2017	12/11/2017	No	Daylight So 888-825-01 Ontario CA	91761	903293	No	Yes	herog progr	No	No	No	No	No	No	No	21900	4.707652	2	NEM-ST	None	No	NEMPV	SW 290 Mc.SolarWorld				18										
SCE-INT-NST-222502				Interconne SCE	ONTARIO	91762	San Bernar Solar PV	3.8184	3.182					18	271	RoofTop	Fixed	Residential	8/16/2021	8/23/2021	12/8/2021	No	SUNRUN 1855-478-61 San Francis CA	94104	750184	Yes	PPA	Sunrun Inc No	No	No	No	No	No	No	16666.79	5.237834	2	NEM-ST	None	No	NEMPV	Q.PEAK DU Hanwha Q-				11											
SCE-INT-NST-222525				Interconne SCE	ONTARIO	91764	San Bernar Solar PV	6.541837	6.411					14	180	RoofTop	Fixed	Residential	12/10/2017	12/13/2017	12/15/2017	No	BLA LOCK E 888-825-01 WILDOMON CA	92595	915397	No	No	No	No	No	No	No	No	No	No	No	28350	4.422087	2	NEM-ST	None	No	NEMPV	HIS-5280R/Hyundai H-				11									
SCE-INT-NST-222533				Interconne SCE	ONTARIO	91764	San Bernar Solar PV	12.07755	11.836					14	180	RoofTop	Fixed	Residential	12/10/2017	12/10/2017	12/11/2017	No	BLA LOCK E 888-825-01 WILDOMON CA	92595	915397	No	No	No	No	No	No	No	No	No	46255	3.930804	2	NEM-ST	None	No	NEMPV	HIS-5280R/Hyundai H-				48											
SCE-INT-NST-222549				Interconne SCE	ONTARIO	91761	San Bernar Solar PV	13.87215	11.205					18	180	RoofTop	Fixed	Residential	8/17/2021	8/17/2021	8/18/2021	No	TESLA ENEI844-837-51 FREMONT CA	94538	888104	Yes	PPA	TESLA ENEI No	No	No	No	No	No	No	62668.8	5.592931	2	NEM-ST	None	No	NEMPV	Q.PEAK DU Hanwha Q-				25											
SCE-INT-NST-222579				Interconne SCE	ONTARIO	91762	San Bernar Solar PV	11.09952	9.024					25	271	RoofTop	Fixed	Residential	8/17/2021	8/17/2021	8/18/2021	No	SUNRUN 1855-478-61 San Francis CA	94104	750184	Yes	PPA	Sunrun Inc No	No	No	No	No	No	No	1749.6	0.193882	2	NEM-ST	None	No	NEMPV	LR4-60HP/LONGI Gre				16											
SCE-INT-NST-222662				Interconne SCE	ONTARIO	91762	San Bernar Solar PV	8.88186	4.782					18	180	RoofTop	Fixed	Residential	8/17/2021	8/17/2021	8/18/2021	No	ENERGY SE 866-865-41 Torrance CA	90502	619149	No	No	No	No	No	No	No	No	No	No	No	20686.65	4.325941	2	NEM-ST	None	No	NEMPV	LR4-60HP/LONGI Gre				15									
SCE-INT-NST-222842				Interconne SCE	ONTARIO	91762	San Bernar Solar PV	5.45751	4.437					18	180	RoofTop	Fixed	Residential	8/23/2021	8/23/2021	8/24/2021	No	Vivint Solar 385-352-01 Lehi UT	84043	973756	Yes	PPA	Vivint Solar No	No	No	No	No	No	No	No	No	No	25613.25	5.727625	2	NEM-ST	None	No	NEMPV	JKM325M-Jinko Solar				15								
SCE-INT-NST-222994				Interconne SCE	ONTARIO	91762	San Bernar Solar PV	5.21889	4.243					22	180	RoofTop	Fixed	Residential	8/18/2021	8/18/2021	8/19/2021	No	FREEVOLT 1760-345-01 Palm Deser CA	92211	1029455	No	No	No	No	No	No	No	No	No	No	No	23778	5.604053	2	NEM-ST	None	No	NEMPV	PV-GRAF-6 Freewolt				16									
SCE-INT-NST-223030				Interconne SCE	ONTARIO	91762	San Bernar Solar PV	5.01348	4.076					18	180	RoofTop	Fixed	Residential	8/18/2021	8/31/2021	10/21/2021	No	Vivint Solar 385-352-01 Lehi UT	84043	973756	Yes	PPA	Vivint Solar No	No	No	No	No	No	No	No	No	No	15920	3.905789	2	NEM-ST	None	No	NEMPV	JKM320M-Jinko Solar				14								
SCE-INT-NST-223055				Interconne SCE	ONTARIO	91764	San Bernar Solar PV	8.88798	7.226					9	180	RoofTop	Fixed	Residential	8/18/2021	9/22/2021	9/24/2021	Yes	Solar	Yes	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	30000	4.151674	2	NEM-ST	None	No	NEMPV	JKM405M-Jinko Solar				9			
SCE-INT-NST-223083				Interconne SCE	ONTARIO	91761	San Bernar Solar PV	10.16349	8.263					18	180	RoofTop	Fixed	Residential	8/18/2021	10/13/2021	10/19/2021	No	ENERGY SE 866-865-41 Torrance CA	90502	619149	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	29689.74	3.593094	2	NEM-ST	None	No	NEMPV	DNA-144-Aptos Solar				23	
SCE-INT-NST-223085				Interconne SCE	ONTARIO	91762	San Bernar Solar PV	8.80557	7.159					18	180	RoofTop	Fixed	Residential	8/18/2021	8/24/2021	8/24/2021	No	EMPOWER 559-242-41 Fresno CA	93710	1057693	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	39859	5.567677	2	NEM-ST	None	No	NEMPV	TSM-330DD/Trina Solar				24	
SCE-INT-NST-223215				Interconne SCE	ONTARIO	91762	San Bernar Solar PV	10.34553	8.411					13	269	RoofTop	Fixed	Residential	8/18/2021	8/18/2021	8/24/2021	No	V3 ELECTRI 844-837-61 El Dorado CA	95762	1000573	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	20404	2.42587	2	NEM-ST	None	No	NEMPV	Q.PEAK DU Hanwha Q-				4	
SCE-INT-NST-223217				Interconne SCE	ONTARIO	91762	San Bernar Solar PV	5.37141	4.367					18	269	RoofTop	Fixed	Residential	8/18/2021	8/18/2021	8/19/2021	No	CURRENT 1866-454-61 Hemet CA	92545	1045016	Yes	PPA	SunRun No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	16377.6	3.750309	2	NEM-ST	None	No	NEMPV	JKM320M-Jinko Solar				8
SCE-INT-NST-223234				Interconne SCE	ONTARIO																																																				

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Application Preceding	Supercedin	Matched	C	Application/Utility	Service City/Service Zip	Service Cot	Technology	System Siz	System Siz	Storage Ca	Storage Siz	Inverter Siz	Tilt	Azimuth	Mounting	Tracking	Customer	5 App Received	App Complete	App Approved	EDecommis	Self Install	Installer Na	Installer Ph	Installer Ctl	Installer St	Installer Zi	CSLB Numt	Third Party	Third Party	Third Party	Face Fin	Face Fin	Electric Vel	Electric Vel	System Out	System Out	Total Syste	Itc Cost	Cost/Watt	NEM Tariff	Interconne	VNEM	NEF Project	V NEMPV or	Generator	Generator	Generator
SCE-INT-NST-225608				Interconne SCE	ONTARIO	91761	San Bernar Solar PV	3.53871	2.877					18	180	Rooftop	Fixed	Residential	8/29/2021	10/3/2021	10/7/2021	No	SUNPOWEI908-216-1-RICHMONT CA	94804	890895	Yes	Lease	Brookfield	No	No	No	Yes	Yes	No	16002	5.562043	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower				9		
SCE-INT-NST-225609				Interconne SCE	ONTARIO	91761	San Bernar Solar PV	3.52149	2.863					18	270	Rooftop	Fixed	Residential	8/29/2021	10/7/2021	10/12/2021	No	SUNPOWEI908-216-1-RICHMONT CA	94804	890895	Yes	Lease	Brookfield	No	No	Yes	Yes	No	16002	5.589242	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower				9			
SCE-INT-NST-225610				Interconne SCE	ONTARIO	91761	San Bernar Solar PV	3.52149	2.863					18	270	Rooftop	Fixed	Residential	8/29/2021	10/5/2021	10/11/2021	No	SUNPOWEI908-216-1-RICHMONT CA	94804	890895	Yes	Lease	Brookfield	No	No	Yes	Yes	No	16002	5.589242	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower				9			
SCE-INT-NST-225611				Interconne SCE	ONTARIO	91761	San Bernar Solar PV	3.53871	2.877					18	180	Rooftop	Fixed	Residential	8/29/2021	10/4/2021	10/8/2021	No	SUNPOWEI908-216-1-RICHMONT CA	94804	890895	Yes	No	No	No	No	Yes	No	13389	4.653806	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower				9				
SCE-INT-NST-225612				Interconne SCE	ONTARIO	91761	San Bernar Solar PV	3.52149	2.863					18	270	Rooftop	Fixed	Residential	8/29/2021	10/18/2021	10/18/2021	No	SUNPOWEI908-216-1-RICHMONT CA	94804	890895	Yes	No	No	No	No	Yes	No	13387.5	4.676039	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower				9				
SCE-INT-NST-225613				Interconne SCE	ONTARIO	91761	San Bernar Solar PV	3.52149	2.863					18	270	Rooftop	Fixed	Residential	8/29/2021	10/3/2021	10/7/2021	No	SUNPOWEI908-216-1-RICHMONT CA	94804	890895	Yes	No	No	No	No	Yes	No	13387.5	4.676039	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower				9				
SCE-INT-NST-225614				Interconne SCE	ONTARIO	91761	San Bernar Solar PV	3.53871	2.877					18	180	Rooftop	Fixed	Residential	8/29/2021	10/4/2021	10/8/2021	No	SUNPOWEI908-216-1-RICHMONT CA	94804	890895	Yes	No	No	No	No	Yes	No	13389	4.653806	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower				9				
SCE-INT-NST-225615				Interconne SCE	ONTARIO	91761	San Bernar Solar PV	3.52149	2.863					18	270	Rooftop	Fixed	Residential	8/29/2021	10/19/2021	10/25/2021	No	SUNPOWEI908-216-1-RICHMONT CA	94804	890895	Yes	No	No	No	No	Yes	No	13387.5	4.676039	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower				9				
SCE-INT-NST-225616				Interconne SCE	ONTARIO	91761	San Bernar Solar PV	3.53871	2.877					18	180	Rooftop	Fixed	Residential	8/29/2021	10/3/2021	10/7/2021	No	SUNPOWEI908-216-1-RICHMONT CA	94804	890895	Yes	Lease	Brookfield	No	No	Yes	No	16002	5.562043	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower				9				
SCE-INT-NST-225618				Interconne SCE	ONTARIO	91761	San Bernar Solar PV	3.52149	2.863					18	270	Rooftop	Fixed	Residential	8/29/2021	10/4/2021	10/7/2021	No	SUNPOWEI908-216-1-RICHMONT CA	94804	890895	Yes	No	No	No	No	Yes	No	13387.5	4.676039	2	NEM-ST	None	No	NEMPV	SPR-X21-35SunPower				9				
SCE-INT-NST-225689				Interconne SCE	ONTARIO	91762	San Bernar Solar PV	5.01348	4.076					11	270	Rooftop	Fixed	Residential	8/30/2021	8/30/2021	10/14/2021	No	Vivint Solar 385-352-01Lehi UT	84043	973756	No	No	No	No	No	Yes	Yes	SolarEdge 1	15920	3.905789	2	NEM-ST	None	No	NEMPV	JKM320M-Jinko Solar				14			
SCE-INT-NST-225728				Interconne SCE	ONTARIO	91762	San Bernar Solar PV	5.095	4.076					18	180	Rooftop	Fixed	Residential	8/30/2021	8/30/2021	11/1/2021	No	Vivint Solar 385-352-01Lehi UT	84043	973756	No	No	No	No	No	Yes	Yes	SolarEdge 1	15920	3.905789	2	NEM-ST	None	No	NEMPV	JKM320M-Jinko Solar				8			
SCE-INT-NST-225760				Interconne SCE	ONTARIO	91762	San Bernar Solar PV	5.095	4.076					18	180	Rooftop	Fixed	Residential	8/30/2021	8/30/2021	11/1/2021	No	Vivint Solar 385-352-01Lehi UT	84043	973756	No	No	No	No	No	Yes	Yes	SolarEdge 1	15920	3.905789	2	NEM-ST	None	No	NEMPV	JKM320M-Jinko Solar				8			
SCE-INT-NST-225828				Interconne SCE	ONTARIO	91762	San Bernar Solar PV	5.01348	4.076					18	270	Rooftop	Fixed	Residential	8/30/2021	8/30/2021	10/19/2021	No	Vivint Solar 801-845-01Lehi UT	84043	973756	No	No	No	No	No	Yes	Yes	Solar Edge	15920	3.905789	2	NEM-ST	None	No	NEMPV	JKM320M-Jinko Solar				14			
SCE-INT-NST-225855				Interconne SCE	ONTARIO	91762	San Bernar Solar PV	5.01348	4.076					18	180	Rooftop	Fixed	Residential	8/30/2021	8/30/2021	10/14/2021	No	Vivint Solar 801-845-01Lehi UT	84043	973756	Yes	Lease	VIVINT SOL	No	Yes	Yes	Solar Edge Technologi	23009.28	5.645063	2	NEM-ST	None	No	NEMPV	JKM320M-Jinko Solar				3				
SCE-INT-NST-22593				Interconne SCE	ONTARIO	91764	San Bernar Solar PV	3.95102	3.872					5	180	Rooftop	Fixed	Residential	12/12/2017	12/13/2017	12/15/2017	No	SIMPLY SOL888-825-01GARDENA CA	90249	990055	No	No	No	No	No	Yes	No	18225	4.706869	2	NEM-ST	None	No	NEMPV	SW 290 McSolarWorld				15				
SCE-INT-NST-225994				Interconne SCE	ONTARIO	91762	San Bernar Solar PV	5.01348	4.076					18	180	Rooftop	Fixed	Residential	8/31/2021	8/31/2021	10/19/2021	No	Vivint Solar 801-845-01Lehi UT	84043	973756	Yes	Lease	VIVINT SOL	No	Yes	Yes	Solar Edge Technologi	22489.6	5.517566	2	NEM-ST	None	No	NEMPV	JKM320M-Jinko Solar				5				
SCE-INT-NST-226028				Interconne SCE	ONTARIO	91762	San Bernar Solar PV	5.01348	4.076					18	270	Rooftop	Fixed	Residential	8/31/2021	8/31/2021	9/9/2021	No	Vivint Solar 385-352-01Lehi UT	84043	973756	No	No	No	No	No	Yes	Yes	SolarEdge 1	15920	3.905789	2	NEM-ST	None	No	NEMPV	JKM320M-Jinko Solar				14			
SCE-INT-NST-226137				Interconne SCE	ONTARIO	91764	San Bernar Solar PV	10.87197	8.839					20	90	Rooftop	Fixed	Residential	8/31/2021	8/31/2021	9/1/2021	No	FREEDOM 1800-885-9-Temecula CA	92590	1029644	No	No	No	No	No	Yes	Yes	24235.69	4.778333	2	NEM-ST	None	No	NEMPV	HIA-5310H/Hyundai Enl				2				
SCE-INT-NST-226244				Interconne SCE	ONTARIO	91762	San Bernar Solar PV	5.095	4.076					18	180	Rooftop	Fixed	Residential	9/1/2021	9/1/2021	11/1/2021	No	Vivint Solar 385-352-01Lehi UT	84043	973756	Yes	Lease	VIVINT SOL	No	Yes	Yes	SolarEdge Technologie	22489.6	5.517566	2	NEM-ST	None	No	NEMPV	JKM320M-Jinko Solar				14				
SCE-INT-NST-226274				Interconne SCE	ONTARIO	91764	San Bernar Solar PV	4.67892	3.804					9	180	Rooftop	Fixed	Residential	9/2/2021	9/2/2021	9/10/2021	No	EMPOWER 800-306-65 fresno CA	93710	1057693	No	No	No	No	No	Yes	No	22211	5.838853	2	NEM-ST	None	No	NEMPV	LR4-60HPB LONGI Gre				12				
SCE-INT-NST-226821				Interconne SCE	ONTARIO	91761	San Bernar Solar PV	17.86575	14.525					20	180	Rooftop	Fixed	Residential	9/2/2021	9/2/2021	9/3/2021	No	FREEDOM 1951-541-2Temecula CA	92590	1029644	Yes	Lease	Sunrun	No	No	Yes	No	48576.03	3.344304	2	NEM-ST	None	No	NEMPV	LR4-60HPB LONGI Gre				16				
SCE-INT-NST-226905				Interconne SCE	ONTARIO	91761	San Bernar Solar PV	6.6744	5.562					18	180	Rooftop	Fixed	Residential	9/2/2021	9/2/2021	12/8/2021	No	ENERGY SE 866-865-4-Torrance CA	90502	619149	Yes	PPA	SunRun	No	No	Yes	No	12873.72	2.314584	2	NEM-ST	None	No	NEMPV	LR4-60HPB LONGI Gre				12				
SCE-INT-NST-226907				Interconne SCE	ONTARIO	91761	San Bernar Solar PV	4.61988	3.756					16	180	Rooftop	Fixed	Residential	9/2/2021	9/15/2021	9/20/2021	No	SUNNOVA 281-985-9-Houston TX	77046	1003498	Yes	PPA	Lennar Hor No	No	No	Yes	No	15884	4.228966	2	NEM-ST	None	No	NEMPV	Q.PEAK DU Hanwha Q-				11				
SCE-INT-NST-226912				Interconne SCE	ONTARIO	91761	San Bernar Solar PV	4.61988	3.756					27	180	Rooftop	Fixed	Residential	9/2/2021	9/15/2021	9/21/2021	No	SUNNOVA 281-985-9-Houston TX	77046	1003498	Yes	PPA	Lennar Hor No	No	No	Yes	No	15884	4.228966	2	NEM-ST	None	No	NEMPV	Q.PEAK DU Hanwha Q-				11				
SCE-INT-NST-226924				Interconne SCE	ONTARIO	91761	San Bernar Solar PV	4.61988	3.756					16	180	Rooftop	Fixed	Residential	9/2/2021	9/21/2021	10/8/2021	No	SUNNOVA 281-985-9-Houston TX	77046	1003498	Yes	PPA	Lennar HCN	No	No	Yes	No	15884	4.228966	2	NEM-ST	None	No	NEMPV	Q.PEAK DU Hanwha Q-				11				
SCE-INT-NST-226931				Interconne SCE	ONTARIO	91761	San Bernar Solar PV	4.61988	3.756					27	180	Rooftop	Fixed	Residential	9/2/2021	9/15/2021	10/15/2021	No	SUNNOVA 281-985-9-Houston TX	77046	1003498	Yes	PPA	Lennar Hor No	No	No	Yes	No	15884	4.228966	2	NEM-ST	None	No	NEMPV	Q.PEAK DU Hanwha Q-				11				
SCE-INT-NST-226932				Interconne SCE	ONTARIO	91761	San Bernar Solar PV	4.61988	3.756					18	270	Rooftop	Fixed	Residential	9/2/2021	9/21/2021	9/23/2021	No	SUNNOVA 281-985-9-Houston TX	77046	1003498	Yes	PPA	Lennar Hor No	No	No	Yes	No	15884	4.228966	2	NEM-ST	None	No	NEMPV	Q.PEAK DU Hanwha Q-				11				
SCE-INT-NST-226939				Interconne SCE	ONTARIO	91761	San Bernar Solar PV	4.61988	3.756					16	180	Rooftop	Fixed	Residential	9/2/2021	9/21/2021	9/23/2021	No	SUNNOVA 281-985-9-Houston TX	77046	1003498	Yes	PPA	Lennar Hor No	No	No	Yes	No	15884	4.228966	2	NEM-ST	None	No										

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Application Preceding 1 Supercedin Matched C Application Utility	Service City Service Zip Service Cot Technology System Siz System Siz Storage Ca Storage Siz Inverter Siz Tilt	Azimuth	Mounting	Tracking	Customer 5 App Received	App Complete	App Approved	EDecommission	Self Install	Installer Na	Installer Ph	Installer Ctl	Installer St	Installer Zi	CSLB Numt	Third Party	Third Party	Third Party	Third Party	Face Fin	Face Fin	Electric Vel	Electric Vel	System Out	System Out	System Out	Total System	Itc Cost	Cost/Watt	NEM Tariff	Interconne	VNEM	NEF Project	V NEMPV or	Generator	Generator	Generator	
SCE-INT-NST-230421	Interconne SCE ONTARIO 91761 San Bernar Solar PV 9.4956 7.72	15	180	RoofTop	Fixed	Residential	9/17/2021	9/17/2021	9/20/2021	No	BURKE ELE 949-521-3	RIVERSIDE CA	92507	1000555	No	No	No	No	No	No	No	No	No	No	No	29369	3.804274	2	NEM-ST	None	No	NEMPV	LR4-60HPB LONGI Gre	24				
SCE-INT-NST-230436	Interconne SCE ONTARIO 91761 San Bernar Solar PV 3.03625 2.429	18	180	RoofTop	Fixed	Residential	9/17/2021	10/27/2021	11/2/2021	No	SUNNOVA 281-985-95	Houston TX	77046	1003498	Yes	PPA	LENNAR HC No	No	No	No	No	Yes	Yes	No	No	10336	4.255249	2	NEM-ST	None	No	NEMPV	LG340N1K-LG Elector	8				
SCE-INT-NST-230437	Interconne SCE ONTARIO 91761 San Bernar Solar PV 3.03625 2.429	14	270	RoofTop	Fixed	Residential	9/17/2021	11/8/2021	11/8/2021	No	SUNNOVA 281-985-95	Houston TX	77046	1003498	Yes	PPA	LENNAR HC No	No	No	No	Yes	Yes	No	No	10336	4.255249	2	NEM-ST	None	No	NEMPV	LG340N1K-LG Elector	8					
SCE-INT-NST-230439	Interconne SCE ONTARIO 91761 San Bernar Solar PV 2.98767 2.429	18	180	RoofTop	Fixed	Residential	9/17/2021	10/7/2021	10/12/2021	No	SUNNOVA 281-985-95	Houston TX	77046	1003498	Yes	PPA	LENNAR HC No	No	No	No	Yes	Yes	No	No	10336	4.255249	2	NEM-ST	None	No	NEMPV	LG340N1K-LG Elector	8					
SCE-INT-NST-230664	Interconne SCE ONTARIO 91762 San Bernar Solar PV 8.94579 7.273	21	180	RoofTop	Fixed	Residential	9/20/2021	9/20/2021	9/21/2021	No	SUNPOWER908-216-1	RICHMOND CA	94804	890895	No	Lease	Pulte Home No	No	No	No	No	Yes	Yes	No	No	58402.44	8.030034	2	NEM-ST	None	No	NEMPV	SPR-A400-SunPower	20				
SCE-INT-NST-230678	Interconne SCE ONTARIO 91761 San Bernar Solar PV 11.32092 9.204	18	180	RoofTop	Fixed	Residential	9/20/2021	10/8/2021	10/14/2021	No	ENERGY SE 866-865-4E	TORRANCE CA	90502	619149	No	Lease	Vivint Solar No	No	No	No	No	Yes	Yes	No	No	29597.85	3.215759	2	NEM-ST	None	No	NEMPV	DNA-144-Aptos Solar	23				
SCE-INT-NST-230688	Interconne SCE ONTARIO 91761 San Bernar Solar PV 3.912245 3.834	16	278	RoofTop	Fixed	Residential	12/14/2017	12/18/2017	12/20/2017	No	FLUENT SO 888-825-07	DRAPER UT	84020	1024791	Yes	PPA	Sunrun No	No	No	No	Yes	Yes	Yes	Sunrun	4900	1.278038	2	NEM-ST	None	No	NEMPV	HIS-5290R-Hyundai H	15					
SCE-INT-NST-230715	Interconne SCE ONTARIO 91761 San Bernar Solar PV 4.03809 3.283	18	106	RoofTop	Fixed	Residential	9/20/2021	9/20/2021	9/21/2021	No	COMPLETE 877-299-4E	San Ramon CA	94583	961988	Yes	PPA	Sunrun No	No	No	No	Yes	Yes	Yes	Sunrun	13866.3	4.223667	2	NEM-ST	None	No	NEMPV	LR4-60HPB LONGI Gre	10					
SCE-INT-NST-230718	Interconne SCE ONTARIO 91761 San Bernar Solar PV 7.00052 7.324	22	217	RoofTop	Fixed	Residential	9/20/2021	9/23/2021	9/28/2021	No	SUNRUN IH 855-478-6I	San Francis CA	94104	750184	Yes	PPA	Sunrun Inc No	No	No	No	Yes	Yes	Yes	Sunrun	550.8	0.075204	2	NEM-ST	None	No	NEMPV	LR4-60HPB LONGI Gre	9					
SCE-INT-NST-230758	Interconne SCE ONTARIO 91762 San Bernar Solar PV 7.20753 5.911	18	270	RoofTop	Fixed	Residential	9/20/2021	9/20/2021	9/21/2021	No	STH AVENI 951-285-4E	MURRIETA CA	92562	971486	No	Lease	Pulte Home No	No	No	No	Yes	Yes	Yes	Sunrun	35000	5.921163	2	NEM-ST	None	No	NEMPV	DNA-120-Aptos Solar	21					
SCE-INT-NST-230899	Interconne SCE ONTARIO 91761 San Bernar Solar PV 2.98767 2.429	18	160	RoofTop	Fixed	Residential	9/21/2021	9/28/2021	10/1/2021	No	SUNNOVA 281-985-95	Houston TX	77046	1003498	Yes	PPA	LENNAR HC No	No	No	No	Yes	Yes	No	No	10336	4.255249	2	NEM-ST	None	No	NEMPV	LG340N1K-LG Elector	8					
SCE-INT-NST-230918	Interconne SCE ONTARIO 91761 San Bernar Solar PV 3.36036 2.732	18	250	RoofTop	Fixed	Residential	9/21/2021	9/27/2021	9/30/2021	No	SUNNOVA 281-985-95	Houston TX	77046	1003498	Yes	PPA	LENNAR HC No	No	No	No	Yes	Yes	No	No	11628	4.256222	2	NEM-ST	None	No	NEMPV	LG340N1K-LG Elector	9					
SCE-INT-NST-230926	Interconne SCE ONTARIO 91761 San Bernar Solar PV 3.36036 2.732	18	160	RoofTop	Fixed	Residential	9/21/2021	10/1/2021	10/7/2021	No	SUNNOVA 281-985-95	Houston TX	77046	1003498	Yes	PPA	LENNAR HC No	No	No	No	Yes	Yes	No	No	11628	4.256222	2	NEM-ST	None	No	NEMPV	LG340N1K-LG Elector	9					
SCE-INT-NST-230933	Interconne SCE ONTARIO 91761 San Bernar Solar PV 2.98767 2.429	18	160	RoofTop	Fixed	Residential	9/21/2021	9/28/2021	10/4/2021	No	SUNNOVA 281-985-95	Houston TX	77046	1003498	Yes	PPA	LENNAR HC No	No	No	No	Yes	Yes	No	No	10336	4.255249	2	NEM-ST	None	No	NEMPV	LG340N1K-LG Elector	9					
SCE-INT-NST-230938	Interconne SCE ONTARIO 91761 San Bernar Solar PV 2.98767 2.429	18	250	RoofTop	Fixed	Residential	9/21/2021	10/1/2021	10/6/2021	No	SUNNOVA 281-985-95	Houston TX	77046	1003498	Yes	PPA	LENNAR HC No	No	No	No	Yes	Yes	No	No	10336	4.255249	2	NEM-ST	None	No	NEMPV	LG340N1K-LG Elector	8					
SCE-INT-NST-230949	Interconne SCE ONTARIO 91761 San Bernar Solar PV 2.98767 2.429	18	250	RoofTop	Fixed	Residential	9/21/2021	10/11/2021	10/18/2021	No	SUNNOVA 281-985-95	Houston TX	77046	1003498	Yes	PPA	LENNAR HC No	No	No	No	Yes	Yes	No	No	10336	4.255249	2	NEM-ST	None	No	NEMPV	LG340N1K-LG Elector	8					
SCE-INT-NST-230954	Interconne SCE ONTARIO 91761 San Bernar Solar PV 2.98767 2.429	18	250	RoofTop	Fixed	Residential	9/21/2021	10/11/2021	10/18/2021	No	SUNNOVA 281-985-95	Houston TX	77046	1003498	Yes	PPA	LENNAR HC No	No	No	No	Yes	Yes	No	No	10336	4.255249	2	NEM-ST	None	No	NEMPV	LG340N1K-LG Elector	8					
SCE-INT-NST-231137	Interconne SCE ONTARIO 91762 San Bernar Solar PV 7.01838 5.706	22	270	RoofTop	Fixed	Residential	9/21/2021	9/30/2021	10/6/2021	No	KOTA CON 858-229-91	NEWBURY CA	91320	1063901	No	Lease	Pulte Home No	No	No	No	Yes	Yes	No	No	34650	6.072555	2	NEM-ST	None	No	NEMPV	LR4-60HPB LONGI Gre	2					
SCE-INT-NST-231218	Interconne SCE ONTARIO 91761 San Bernar Solar PV 18.68124 15.188	27	10			Residential	9/22/2021	9/22/2021	9/27/2021	No	TESLA ENEI 877-571-7	FREMONT CA	94538	888104	No	Lease	Pulte Home No	No	No	No	Yes	Yes	Yes	Tesla Energy	77456.75	5.099865	2	NEM-ST	None	No	NEMPV	1092170-x-Tesla	2					
SCE-INT-NST-231224	Interconne SCE ONTARIO 91762 San Bernar Solar PV 8.43534 6.858	30	264	RoofTop	Fixed	Residential	9/22/2021	9/23/2021	10/1/2021	No	TESLA ENEI 888-765-2	FREMONT CA	94538	888104	No	Lease	Pulte Home No	No	No	No	Yes	Yes	Yes	Tesla Energy	15511.02	2.261741	2	NEM-ST	None	No	NEMPV	Q-PEAK DU Hanwha Q-	22					
SCE-INT-NST-231257	Interconne SCE ONTARIO 91762 San Bernar Solar PV 11.37381 9.247	14	180	RoofTop	Fixed	Residential	9/22/2021	9/27/2021	9/30/2021	No	EMPOWER 800-306-6E	fresno CA	93710	1057693	No	Lease	Pulte Home No	No	No	No	Yes	Yes	No	No	67253	7.272953	2	NEM-ST	None	No	NEMPV	TSM-3300I-Trina Solar	31					
SCE-INT-NST-231325	Interconne SCE ONTARIO 91761 San Bernar Solar PV 5.21204 5.106	14	180	RoofTop	Fixed	Residential	12/15/2017	4/17/2018	4/19/2018	No	SOLARCITY 888-765-2	SAN MATEO CA	94402	888104	No	Lease	Pulte Home No	No	No	No	Yes	Yes	Yes	SolarCity Ci	62828	5.540148	2	NEM-ST	None	No	NEMPV	SC325-TrinaSolar	8					
SCE-INT-NST-231388	Interconne SCE ONTARIO 91761 San Bernar Solar PV 5.70677 4.529	14	162	RoofTop	Fixed	Residential	9/22/2021	10/1/2021	10/6/2021	No	SUNNOVA 281-985-95	Houston TX	77046	1003498	Yes	PPA	LENNAR HC No	No	No	No	Yes	Yes	No	No	14440	4.229642	2	NEM-ST	None	No	NEMPV	Q-PEAK DU Hanwha Q-	8					
SCE-INT-NST-231394	Interconne SCE ONTARIO 91761 San Bernar Solar PV 4.19922 3.414	16	252	RoofTop	Fixed	Residential	9/22/2021	10/1/2021	10/6/2021	No	SUNNOVA 281-985-95	Houston TX	77046	1003498	Yes	PPA	LENNAR HC No	No	No	No	Yes	Yes	No	No	14440	4.229642	2	NEM-ST	None	No	NEMPV	Q-PEAK DU Hanwha Q-	2					
SCE-INT-NST-231401	Interconne SCE ONTARIO 91761 San Bernar Solar PV 4.19922 3.414	16	162	RoofTop	Fixed	Residential	9/22/2021	10/1/2021	10/7/2021	No	SUNNOVA 281-985-95	Houston TX	77046	1003498	Yes	PPA	LENNAR HC No	No	No	No	Yes	Yes	No	No	14440	4.229642	2	NEM-ST	None	No	NEMPV	Q-PEAK DU Hanwha Q-	8					
SCE-INT-NST-231458	Interconne SCE ONTARIO 91761 San Bernar Solar PV 4.19922 3.414	27	210	RoofTop	Fixed	Residential	9/22/2021	10/18/2021	10/22/2021	No	SUNNOVA 281-985-95	Houston TX	77046	1003498	Yes	PPA	LENNAR HC No	No	No	No	Yes	Yes	No	No	14440	4.229642	2	NEM-ST	None	No	NEMPV	Q-PEAK DU Hanwha Q-	10					
SCE-INT-NST-231524	Interconne SCE ONTARIO 91761 San Bernar Solar PV 13.55829 11.023	22	180	RoofTop	Fixed	Residential	9/22/2021	10/12/2021	10/14/2021	No	FREEDOM 1951-363-0	Temecula CA	92590	1029644	No	Lease	Pulte Home No	No	No	No	Yes	Yes	No	No	44545	6.55652	2	NEM-ST	None	No	NEMPV	LR4-60HPB LONGI Gre	3					
SCE-INT-NST-231544	Interconne SCE ONTARIO 91761 San Bernar Solar PV 4.19922 3.414	20	162	RoofTop	Fixed	Residential	9/22/2021	10/18/2021	10/22/2021	No	SUNNOVA 281-985-95	Houston TX	77046	1003498	Yes	PPA	LENNAR HC No	No	No	No	Yes	Yes	No	No	14440	4.229642	2	NEM-ST	None	No	NEMPV	Q-PEAK DU Hanwha Q-	10					
SCE-INT-NST-231545	Interconne SCE ONTARIO 91761 San Bernar Solar PV 4.19922 3.414	18	165	RoofTop	Fixed	Residential	9/22/2021	10/18/2021	10/22/2021	No	SUNNOVA 281-985-95	Houston TX	77046	1003498	Yes	PPA	LENNAR HC No	No	No	No	Yes	Yes	No	No	14440	4.229642	2	NEM-ST	None	No	NEMPV	Q-PEAK DU Hanwha Q-	10					
SCE-INT-NST-231548	Interconne SCE ONTARIO 91761 San Bernar Solar PV 4.19922 3.414	16	255	RoofTop	Fixed	Residential	9/22/2021	10/18/2021	10/22/2021	No	SUNNOVA 281-985-95	Houston TX	77046	1003498	Yes	PPA	LENNAR HC No	No	No	No	Yes	Yes	No	No	14440	4.229642	2	NEM-ST	None	No	NEMPV	Q-PEAK DU Hanwha Q-	10					
SCE-INT-NST-231798	Interconne SCE ONTARIO 91762 San Bernar Solar PV 3.91386 3.182	18	181	RoofTop	Fixed	Residential	9/23/2021	10/4/2021	10/11/2021	No	SUNRUN IH 855-478-6I	San Francis CA	94104	750184	Yes	PPA	Sunrun Inst No	No	No	No	Yes	Yes	Yes	Sunrun, Inc	17215.16	5.410169	2	NEM-ST	None	No	NEMPV	Q-PEAK DU Hanwha Q-	11					
SCE-INT-NST-231816	Interconne SCE ONTARIO 91762 San Bernar Solar PV 5.31852 4.324	20	270	RoofTop																																		

Ontario Quantification Workbook

Application Preceding 1	Supercedin Matched C	Application/Utility	Service City/Service Zip	Service Cot	Technology	System Siz	System Siz	Storage Ca	Storage Siz	Inverter Siz	Tilt	Azimuth	Mounting	Tracking	Customer 5	App Received	App Complete	App Approved	EDecommis	Self Install	Installer Na	Installer Ph	Installer Cil	Installer St	Installer Zi	CSLB Numt	Third Party	Third Party	Third Party	Party Pace	Finan	Finan	Electric Vel	Electric Vel	System Out	System Out	System Out	Total Syste	Itc Cost	Cost/Watt	NEM Tariff	Interconne	VNEM	NEF	Project is V	NEMPV or	Generator	Generator	Generator
SCE-INT-NST-241975		Interconne SCE	ONTARIO 91761 San Bernar Solar PV			5.095	4.076					16	270	RoofTop	Fixed	Residential	11/3/2021	11/3/2021	11/9/2021	No	Vivint Solar 385-352-01Lehi UT	UT		84043	973756	No	No	No	No	No	No	Yes	Yes	SolarEdge 1	16173	3.96786	2	NEM-ST	None	No	NEMPV	JKM320M-Jinko Solar				12			
SCE-INT-NST-242021		Interconne SCE	ONTARIO 91761 San Bernar Solar PV			5.095	4.076					16	270	RoofTop	Fixed	Residential	11/3/2021	11/3/2021	11/8/2021	No	Vivint Solar 385-352-01Lehi UT	UT		84043	973756	No	No	No	No	No	Yes	Yes	SolarEdge 1	16173	3.96786	2	NEM-ST	None	No	NEMPV	JKM320M-Jinko Solar				14				
SCE-INT-NST-242040		Interconne SCE	ONTARIO 91762 San Bernar Solar PV			6.1775	4.942					18	90	RoofTop	Fixed	Residential	11/3/2021	11/3/2021	11/4/2021	No	SUNRUN IH 855-478-67 San Francis CA	CA		94104	750184	Yes	PPA	Sunrun Inst No	No	No	No	Yes	Yes	Sunrun, Inc	21433.02	4.336912	2	NEM-ST	None	No	NEMPV	LR4-60HPBLONGI Gref				15			
SCE-INT-NST-242041		Interconne SCE	ONTARIO 91762 San Bernar Solar PV			3.8436	3.203					18	180	RoofTop	Fixed	Residential	11/3/2021	12/7/2021	12/13/2021	No	SUNRUN IH 855-478-67 San Francis CA	CA		94104	750184	Yes	PPA	Sunrun Inc No	No	No	Yes	Yes	Sunrun, Inc	17811.47	3.96786	2	NEM-ST	None	No	NEMPV	JKM320M-Jinko Solar				14				
SCE-INT-NST-242115		Interconne SCE	ONTARIO 91761 San Bernar Solar PV			5.095	4.076					16	180	RoofTop	Fixed	Residential	11/3/2021	11/3/2021	11/9/2021	No	Vivint Solar 801-845-02Lehi UT	UT		84043	973756	No	No	No	No	No	Yes	Yes	Solar Edge	16173	3.96786	2	NEM-ST	None	No	NEMPV	JKM320M-Jinko Solar				14				
SCE-INT-NST-242137		Interconne SCE	ONTARIO 91762 San Bernar Solar PV			5.745	4.596					18	180	RoofTop	Fixed	Residential	11/3/2021	11/19/2021	11/24/2021	No	ENERGY SE 866-865-4 Torrance CA	CA		90502	619149	Yes	PPA	SunRun No	No	No	Yes	No			17161.41	3.733988	2	NEM-ST	None	No	NEMPV	LR4-60HPBLONGI Gref				14			
SCE-INT-NST-242215		Interconne SCE	ONTARIO 91762 San Bernar Solar PV			8.26235	6.613					18	180	RoofTop	Fixed	Residential	11/3/2021	11/3/2021	11/4/2021	No	SUN BEES (714-676-88 Pomona CA	CA		91767	970591	No	No	No	No	Yes	No		56176.04	5.494789	2	NEM-ST	None	No	NEMPV	Q.PEAK DU Hanwha Q-				3					
SCE-INT-NST-242267		Interconne SCE	ONTARIO 91764 San Bernar Solar PV			5.27	4.216					17	195	RoofTop	Fixed	Residential	11/3/2021	11/3/2021	11/4/2021	No	V3 ELECTRI 844-837-66 El Dorado I CA	CA		95762	1000573	Yes	PPA	SunRun No	No	No	Yes	Yes	SunRun	18195.45	4.315808	2	NEM-ST	None	No	NEMPV	Q.PEAK DU Hanwha Q-				9				
SCE-INT-NST-242321		Interconne SCE	ONTARIO 91762 San Bernar Solar PV			5.095	4.076					18	180	RoofTop	Fixed	Residential	11/4/2021	11/15/2021	11/19/2021	No	Vivint Solar 385-352-01Lehi UT	UT		84043	973756	Yes	Lease	VIVINT SOL No	No	No	Yes	Yes	SolarEdge Technologie	21463.68	5.265868	2	NEM-ST	None	No	NEMPV	JKM320M-Jinko Solar				4				
SCE-INT-NST-242443		Interconne SCE	ONTARIO 91761 San Bernar Solar PV			5.095	4.076					16	180	RoofTop	Fixed	Residential	11/4/2021	11/4/2021	11/9/2021	No	Vivint Solar 385-352-01Lehi UT	UT		84043	973756	Yes	Lease	VIVINT SOL No	No	No	Yes	Yes	SolarEdge Technologie	23054.08	5.656054	2	NEM-ST	None	No	NEMPV	JKM320M-Jinko Solar				4				
SCE-INT-NST-242451		Interconne SCE	ONTARIO 91762 San Bernar Solar PV			5.145	4.116					27	270	RoofTop	Fixed	Residential	11/4/2021	11/10/2021	11/16/2021	No	Vivint Solar 801-845-02Lehi UT	UT		84043	973756	Yes	Lease	Vivint Solar No	No	No	Yes	Yes	SolarEdge Technologie	22656	5.504373	2	NEM-ST	None	No	NEMPV	Q.PEAK DU Hanwha Q-				4				
SCE-INT-NST-242459		Interconne SCE	ONTARIO 91761 San Bernar Solar PV			5.095	4.076					16	90	RoofTop	Fixed	Residential	11/4/2021	11/4/2021	11/10/2021	No	Vivint Solar 385-352-01Lehi UT	UT		84043	973756	Yes	Lease	VIVINT SOL No	No	No	Yes	Yes	SolarEdge Technologie	23054.08	5.656054	2	NEM-ST	None	No	NEMPV	JKM320M-Jinko Solar				6				
SCE-INT-NST-242496		Interconne SCE	ONTARIO 91762 San Bernar Solar PV			4.8912	4.076					18	270	RoofTop	Fixed	Residential	11/4/2021	11/11/2021	12/13/2021	No	Vivint Solar 385-352-01Lehi UT	UT		84043	973756	Yes	Lease	Vivint Solar No	No	No	Yes	Yes	Solar Edge Technologie	21463.68	5.265868	2	NEM-ST	None	No	NEMPV	JKM320M-Jinko Solar				4				
SCE-INT-NST-242625		Interconne SCE	ONTARIO 91764 San Bernar Solar PV			9.16	7.328					16	90	RoofTop	Fixed	Residential	11/4/2021	11/12/2021	11/18/2021	No	PENGWIN I 888-488-8 RIVERSIDE CA	CA		92506	1033658	No	No	No	No	No	Yes	No		13921.55	1.899774	2	NEM-ST	None	No	NEMPV	Q.PEAK DU Hanwha Q-				12				
SCE-INT-NST-242708		Interconne SCE	ONTARIO 91762 San Bernar Solar PV			5.095	4.076					27	270	RoofTop	Fixed	Residential	11/4/2021	11/4/2021	11/18/2021	No	Vivint Solar 385-352-01Lehi UT	UT		84043	973756	Yes	Lease	Vivint Solar No	No	No	Yes	Yes	Solar Edge Technologie	21463.68	5.265868	2	NEM-ST	None	No	NEMPV	JKM320M-Jinko Solar				12				
SCE-INT-NST-242869		Interconne SCE	ONTARIO 91761 San Bernar Solar PV			11.21625	8.973					18	248	RoofTop	Fixed	Residential	11/5/2021	11/5/2021	11/12/2021	No	SUNRUN IH 855-478-67 San Francis CA	CA		94104	750184	Yes	PPA	Sunrun Inst No	No	No	Yes	Yes	Sunrun, Inc	612	0.068204	2	NEM-ST	None	No	NEMPV	LR4-60HPBLONGI Gref				10				
SCE-INT-NST-24289		Interconne SCE	ONTARIO 91761 San Bernar Solar PV/St			152.8878	149.83	174	130			7	180	Mixed	Fixed	Educationa	12/21/2017	3/19/2019	3/29/2019	No	SolarCity C 702-680-61 Las Vegas NV	NV		89119	888104	Yes	PPA	SolarCity C No	No	No	Yes	Yes	SolarCity Corporation I	183319.2	1.223514	2	NEM-ST	None	No	NEMPV	Q.PLUS L-G Hanwha Q-				480				
SCE-INT-NST-24310		Interconne SCE	ONTARIO 91762 San Bernar Solar PV			4.433673	4.345					20	168	RoofTop	Fixed	Residential	12/21/2017	12/21/2017	12/26/2017	No	FLUENT SO 801-312-0 DRAPER UT	UT		84020	1024791	Yes	PPA	Sunrun No	No	No	Yes	Yes	Sunrun, Inc	5600	1.288837	2	NEM-ST	None	No	NEMPV	HIS-5290RHyundai He				14				
SCE-INT-NST-243116		Interconne SCE	ONTARIO 91761 San Bernar Solar PV			5.095	4.076					18	270	RoofTop	Fixed	Residential	11/8/2021	11/8/2021	11/12/2021	No	Vivint Solar 385-352-01Lehi UT	UT		84043	973756	Yes	Lease	VIVINT SOL No	No	Yes	Yes	SolarEdge Technologie	21463.68	5.265868	2	NEM-ST	None	No	NEMPV	JKM320M-Jinko Solar				10					
SCE-INT-NST-243125		Interconne SCE	ONTARIO 91762 San Bernar Solar PV			5.095	4.076					18	270	RoofTop	Fixed	Residential	11/8/2021	11/8/2021	11/12/2021	No	Vivint Solar 385-352-01Lehi UT	UT		84043	973756	Yes	Lease	VIVINT SOL No	No	Yes	Yes	SolarEdge Technologie	21463.68	5.265868	2	NEM-ST	None	No	NEMPV	JKM320M-Jinko Solar				10					
SCE-INT-NST-243228		Interconne SCE	ONTARIO 91762 San Bernar Solar PV			7.28	5.824					18	90	RoofTop	Fixed	Residential	11/8/2021	11/8/2021	11/9/2021	No	FREEDOM I 800-885-9 Tecumeca CA	CA		92590	1029644	No	No	No	No	Yes	No		37858.54	6.500436	2	NEM-ST	None	No	NEMPV	LR4-60HPBLONGI Gref				18					
SCE-INT-NST-24337		Interconne SCE	ONTARIO 91762 San Bernar Solar PV			5.488776	5.379					18	359	RoofTop	Fixed	Residential	12/21/2017	12/21/2017	12/22/2017	No	SOLAR CITY 888-765-2 Las Vegas NV	NV		89119	888104	Yes	PPA	SolarCity C No	No	No	Yes	Yes	SolarCity Corp DBA Te	29952	5.568321	2	NEM-ST	None	No	NEMPV	SC325 SolarCity				9				
SCE-INT-NST-243618		Interconne SCE	ONTARIO 91761 San Bernar Solar PV			6.64625	5.317					17	270	RoofTop	Fixed	Residential	11/9/2021	11/9/2021	11/10/2021	No	SOUTH WE 855-808-8 North Holly CA	CA		91605	1012298	No	No	No	No	No	Yes	Yes	31000	5.830355	2	NEM-ST	None	No	NEMPV	CS1H-320I CSI Solar				9					
SCE-INT-NST-243676		Interconne SCE	ONTARIO 91762 San Bernar Solar PV			4.0908	3.409					18	270	RoofTop	Fixed	Residential	11/9/2021	11/11/2021	12/8/2021	No	SUNNOVA 281-985-9 Houston TX	TX		77046	1003498	Yes	PPA	LENNAR H No	No	No	Yes	No		14212	4.168964	2	NEM-ST	None	No	NEMPV	LG340N1K-LG Elector				11				
SCE-INT-NST-243708		Interconne SCE	ONTARIO 91761 San Bernar Solar PV			4.00375	3.203					18	180	RoofTop	Fixed	Residential	11/9/2021	11/9/2021	11/15/2021	No	SUNRUN IH 855-478-67 San Francis CA	CA		94104	750184	No	No	No	No	Yes	Yes	Sunrun Inc	14250.16	4.449004	2	NEM-ST	None	No	NEMPV	LR4-60HPBLONGI Gref				11					
SCE-INT-NST-244012		Interconne SCE	ONTARIO 91762 San Bernar Solar PV			5.70625	4.565					18	180	RoofTop	Fixed	Residential	11/10/2021	11/10/2021	11/30/2021	No	SOLARMAX 951-300-0 RIVERSIDE CA	CA		92507	972048	No	No	No	No	No	No	Yes	No		22215	4.866374	2	NEM-ST	None	No	NEMPV	TA205 Tesla				12			
SCE-INT-NST-244082		Interconne SCE	ONTARIO 91762 San Bernar Solar PV			5.84875	4.679					19	180	RoofTop	Fixed	Residential	11/10/2021	11/10/2021	11/12/2021	No	SUNRUN IH 855-478-67 San Francis CA	CA		94104	750184	No	No	No	No	Yes	Yes	Sunrun Inc	19250	4.141126	2	NEM-ST	None	No	NEMPV	LR4-60HPBLONGI Gref				14					
SCE-INT-NST-244202		Interconne SCE	ONTARIO 91761 San Bernar Solar PV			10.5275	8.422					21	230	RoofTop	Fixed	Residential	11/11/2021	11/11/2021	11/12/2021	No	MARC JON 951-383-9 ROUNDRO TX	TX		78665	1080382	No	No	No	No	Yes	No		47366	5.623842	2	NEM-ST	None	No	NEMPV	LG375N1C-LG Elector				25					
SCE-INT-NST-244230		Interconne SCE	ONTARIO 91762 San Bernar Solar PV			10.18625	8.149					18	180	RoofTop	Fixed																																		

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Application Preceding 1 Supercedin Matched C	Application Utility	Service City Service Zip Service Co. Technology System Siz System Siz Storage Ca Storage Siz Inverter Siz Tilt	Azimuth	Mounting	Tracking	Customer 5 App Received	App Complete	App Approved	EDecommiss	Self Install	Installer Na	Installer Ph	Installer Cil	Installer St	Installer Zi	CSLB Numt	Third Party	Third Party	Third Party	Third Party	Face	Face	Face	Face	Electric Vel	Electric Vel	System Out	System Out	System Out	Total	Itc Cost	Cost/Watt	NEM Tariff	Interconn	VNEM	NEP	Project is V	NEMPV or	Generator	Generator	Generator
SCE-INT-NST-253256	Interconne SCE	ONTARIO 91761 San Bernar Solar PV 3.4944 2.912	14	270	RoofTop	Fixed	Residential	12/16/2021	12/21/2021	12/28/2021	No	Vivint Solar 385-352-01 Lehi UT 84043 973756 Yes	Lease	SunRun	No	No	No	No	No	No	No	No	No	No	No	Yes	Yes	Solar Edge Technology	16467.2	5.654945	2	NEM-ST	None	No	NEMPV	JKM320M-Jinko Solar	10				
SCE-INT-NST-253326	Interconne SCE	ONTARIO 91761 San Bernar Solar PV 3.4944 2.912	14	180	RoofTop	Fixed	Residential	12/16/2021	12/16/2021	12/21/2021	No	Vivint Solar 801-845-01 Lehi UT 84043 973756 Yes	Lease	Vivint Solar	No	No	No	No	No	No	No	No	No	No	No	Yes	Yes	Solar Edge Technology	17331.2	5.951648	2	NEM-ST	None	No	NEMPV	JKM320M-Jinko Solar	10				
SCE-INT-NST-253335	Interconne SCE	ONTARIO 91761 San Bernar Solar PV 3.4944 2.912	14	180	RoofTop	Fixed	Residential	12/16/2021	12/16/2021	12/21/2021	No	Vivint Solar 801-845-01 Lehi UT 84043 973756 Yes	Lease	Vivint Solar	No	No	No	No	No	No	No	No	No	No	No	Yes	Yes	Solar Edge Technology	17331.2	5.951648	2	NEM-ST	None	No	NEMPV	JKM320M-Jinko Solar	10				
SCE-INT-NST-253361	Interconne SCE	ONTARIO 91761 San Bernar Solar PV 3.4944 2.912	14	180	RoofTop	Fixed	Residential	12/16/2021	12/16/2021	12/21/2021	No	Vivint Solar 801-845-01 Lehi UT 84043 973756 Yes	Lease	Vivint Solar	No	No	No	No	No	No	No	No	No	No	No	Yes	Yes	Solar Edge Technology	16467.2	5.654945	2	NEM-ST	None	No	NEMPV	JKM320M-Jinko Solar	10				
SCE-INT-NST-253365	Interconne SCE	ONTARIO 91761 San Bernar Solar PV 3.4944 2.912	14	180	RoofTop	Fixed	Residential	12/16/2021	12/16/2021	12/21/2021	No	Vivint Solar 385-352-01 Lehi UT 84043 973756 Yes	Lease	Vivint Solar	No	No	No	No	No	No	No	No	No	No	No	Yes	Yes	Solar Edge Technology	17331.2	5.951648	2	NEM-ST	None	No	NEMPV	JKM320M-Jinko Solar	10				
SCE-INT-NST-253401	Interconne SCE	ONTARIO 91761 San Bernar Solar PV 3.4944 2.912	14	180	RoofTop	Fixed	Residential	12/16/2021	12/16/2021	12/22/2021	No	Vivint Solar 385-352-01 Lehi UT 84043 973756 Yes	Lease	Vivint Solar	No	No	No	No	No	No	No	No	No	No	No	Yes	Yes	Solar Edge Technology	17331.2	5.951648	2	NEM-ST	None	No	NEMPV	JKM320M-Jinko Solar	10				
SCE-INT-NST-253406	Interconne SCE	ONTARIO 91761 San Bernar Solar PV 3.4944 2.912	14	180	RoofTop	Fixed	Residential	12/16/2021	12/16/2021	12/22/2021	No	Vivint Solar 801-845-01 Lehi UT 84043 973756 Yes	Lease	Vivint Solar	No	No	No	No	No	No	No	No	No	No	No	Yes	Yes	Solar Edge Technology	17331.2	5.951648	2	NEM-ST	None	No	NEMPV	JKM320M-Jinko Solar	10				
SCE-INT-NST-253577	Interconne SCE	ONTARIO 91762 San Bernar Solar PV 6.63 5.525	23	356	RoofTop	Fixed	Residential	12/17/2021	12/20/2021	12/23/2021	No	SUNGRADE 800-346-7 Walnut Cre CA 94597 1031675 No	Lease	SunRun	No	No	No	No	No	No	No	No	No	No	No	Yes	Yes	Solar Edge Technol	25000.67	4.615505	2	NEM-ST	None	No	NEMPV	DNA-120-Aptos Solar	4				
SCE-INT-NST-253576	Interconne SCE	ONTARIO 91761 San Bernar Solar PV 5.8188 4.849	27	150	RoofTop	Fixed	Residential	12/17/2021	12/17/2021	12/20/2021	No	SUNPOWER 908-216-11 RICHMONT CA 94804 890895 No	Lease	SunRun	No	No	No	No	No	No	No	No	No	No	No	Yes	Yes	Solar Edge Technol	25155	5.187667	2	NEM-ST	None	No	NEMPV	SPR-A410-JSunPower	13				
SCE-INT-NST-253783	Interconne SCE	ONTARIO 91761 San Bernar Solar PV 4.2926 4.108	23	180	RoofTop	Fixed	Residential	12/18/2021	12/18/2021	12/30/2021	No	Vivint Solar 385-352-01 Lehi UT 84043 973756 No	Lease	Vivint Solar	No	No	No	No	No	No	No	No	No	No	No	Yes	Yes	SolarEdge 1	16173	3.936952	2	NEM-ST	None	No	NEMPV	JAM60517-JA Solar Ho	4				
SCE-INT-NST-253784	Interconne SCE	ONTARIO 91761 San Bernar Solar PV 4.8912 4.076	16	180	RoofTop	Fixed	Residential	12/18/2021	12/23/2021	12/30/2021	No	Vivint Solar 801-845-01 Lehi UT 84043 973756 No	Lease	Vivint Solar	No	No	No	No	No	No	No	No	No	No	No	Yes	Yes	SolarEdge 1	16173	3.96786	2	NEM-ST	None	No	NEMPV	JKM320M-Jinko Solar	10				
SCE-INT-NST-253785	Interconne SCE	ONTARIO 91761 San Bernar Solar PV 4.2926 4.108	16	180	RoofTop	Fixed	Residential	12/18/2021	12/18/2021	12/23/2021	No	Vivint Solar 801-845-01 Lehi UT 84043 973756 No	Lease	Vivint Solar	No	No	No	No	No	No	No	No	No	No	No	Yes	Yes	SolarEdge 1	16173	3.936952	2	NEM-ST	None	No	NEMPV	JAM60517-JA Solar Ho	4				
SCE-INT-NST-253860	Interconne SCE	ONTARIO 91761 San Bernar Solar PV 4.8912 4.076	16	180	RoofTop	Fixed	Residential	12/20/2021	12/20/2021	12/23/2021	No	Vivint Solar 385-352-01 Lehi UT 84043 973756 No	Lease	Vivint Solar	No	No	No	No	No	No	No	No	No	No	No	Yes	Yes	SolarEdge 1	16173	3.96786	2	NEM-ST	None	No	NEMPV	JKM320M-Jinko Solar	10				
SCE-INT-NST-253935	Interconne SCE	ONTARIO 91761 San Bernar Solar PV 6.4392 5.366	27	180	RoofTop	Fixed	Residential	12/20/2021	12/20/2021	12/21/2021	No	SUNRUN IN 855-478-61 San Francis CA 94104 750184 Yes	Lease	Sunrun Inst	No	No	No	No	No	No	No	No	No	No	No	Yes	Yes	Sunrun, inc	23709.47	4.418462	2	NEM-ST	None	No	NEMPV	JAM60517-JA Solar Ho	6				
SCE-INT-NST-253942	Interconne SCE	ONTARIO 91761 San Bernar Solar PV 9.9456 8.288	20	268	RoofTop	Fixed	Residential	12/20/2021	12/20/2021	12/23/2021	No	LIFT ENER 661-412-95 Lehi UT 84043 1030273 No	Lease	SunRun	No	No	No	No	No	No	No	No	No	No	No	Yes	Yes	SolarEdge 1	57371.4	6.922224	2	NEM-ST	None	No	NEMPV	CS1Y-395M-CSolar	23				
SCE-INT-NST-254006	Interconne SCE	ONTARIO 91761 San Bernar Solar PV 9.8844 8.237	23	149	RoofTop	Fixed	Residential	12/20/2021	12/20/2021	12/21/2021	No	SUNRUN IN 855-478-61 San Francis CA 94104 750184 No	Lease	SunRun	No	No	No	No	No	No	No	No	No	No	No	Yes	Yes	SolarEdge 1	43968.61	5.37939	2	NEM-ST	None	No	NEMPV	LR4-60HPHLONGI Gree	12				
SCE-INT-NST-254099	Interconne SCE	ONTARIO 91764 San Bernar Solar PV 2.9556 2.463	18	180	RoofTop	Fixed	Residential	12/20/2021	12/20/2021	12/21/2021	No	POWER UP 951-264-66 NORCO CA 92860 1046636 No	Lease	SunRun	No	No	No	No	No	No	No	No	No	No	No	Yes	Yes	SolarEdge 1	7133.8	2.896386	2	NEM-ST	None	No	NEMPV	Q.PEAK-G4 Hanwha Q-	9				
SCE-INT-NST-254332	Interconne SCE	ONTARIO 91761 San Bernar Solar PV 4.2926 4.108	23	270	RoofTop	Fixed	Residential	12/21/2021	12/21/2021	12/28/2021	No	Vivint Solar 385-352-01 Lehi UT 84043 973756 No	Lease	Vivint Solar	No	No	No	No	No	No	No	No	No	No	Yes	Yes	Solar Edge	16173	3.936952	2	NEM-ST	None	No	NEMPV	JAM60517-JA Solar Ho	4					
SCE-INT-NST-254385	Interconne SCE	ONTARIO 91761 San Bernar Solar PV 4.8912 4.076	14	90	RoofTop	Fixed	Residential	12/21/2021	12/21/2021	12/28/2021	No	Vivint Solar 385-352-01 Lehi UT 84043 973756 No	Lease	Vivint Solar	No	No	No	No	No	No	No	No	No	No	Yes	Yes	Solar Edge	16173	3.96786	2	NEM-ST	None	No	NEMPV	JKM320M-Jinko Solar	14					
SCE-INT-NST-254431	Interconne SCE	ONTARIO 91761 San Bernar Solar PV 4.8912 4.076	23	180	RoofTop	Fixed	Residential	12/21/2021	12/21/2021	12/28/2021	No	Vivint Solar 385-352-01 Lehi UT 84043 973756 No	Lease	Vivint Solar	No	No	No	No	No	No	No	No	No	No	Yes	Yes	Solar Edge	16173	3.96786	2	NEM-ST	None	No	NEMPV	JKM320M-Jinko Solar	14					
SCE-INT-NST-254522	Interconne SCE	ONTARIO 91762 San Bernar Solar PV 2.8008 2.334	18	180	RoofTop	Fixed	Residential	12/21/2021	12/21/2021	12/22/2021	No	TESLA ENER 844-837-51 FREMONT CA 94538 888104 Yes	Lease	Tesla	No	No	No	No	No	No	No	No	No	No	No	Yes	Yes	Tesla	12108.8	5.188003	2	NEM-ST	None	No	NEMPV	SC2302 SolarCity	8				
SCE-INT-NST-254673	Interconne SCE	ONTARIO 91762 San Bernar Solar PV 4.5648 3.804	18	180	RoofTop	Fixed	Residential	12/22/2021	12/22/2021	12/29/2021	No	EMPOWER 800-306-65 Fresno CA 93710 1057693 No	Lease	SunRun	No	No	No	No	No	No	No	No	No	No	No	Yes	Yes	SolarEdge 1	18807	4.944006	2	NEM-ST	None	No	NEMPV	LR4-60HPHLONGI Gree	12				
SCE-INT-NST-254676	Interconne SCE	ONTARIO 91762 San Bernar Solar PV 6.756 5.63	18	180	RoofTop	Fixed	Residential	12/22/2021	12/22/2021	12/23/2021	No	SEMPER SC 619-715-4 El Cajon CA 92020 978152 No	Lease	SunRun	No	No	No	No	No	No	No	No	No	No	No	Yes	Yes	SolarEdge 1	28836	5.121847	2	NEM-ST	None	No	NEMPV	SIL-370BK Silfab	17				
SCE-INT-NST-254797	Interconne SCE	ONTARIO 91762 San Bernar Solar PV 8.154 6.795	18	180	Mixed	Fixed	Residential	12/22/2021	12/22/2021	12/29/2021	No	MYERS ELE 951-235-0 COLTON CA 92324 972274 No	Lease	SunRun	No	No	No	No	No	No	No	No	No	No	No	Yes	Yes	SolarEdge 1	23194.25	3.413428	2	NEM-ST	None	No	NEMPV	DNA-144-Aptos Solar	10				
SCE-INT-NST-254801	Interconne SCE	ONTARIO 91762 San Bernar Solar PV 5.0076 4.173	12	180	RoofTop	Fixed	Residential	12/22/2021	12/22/2021	12/29/2021	No	Vivint Solar 801-845-01 Lehi UT 84043 973756 No	Lease	Vivint Solar	No	No	No	No	No	No	No	No	No	No	No	Yes	Yes	SolarEdge 1	15920	3.815001	2	NEM-ST	None	No	NEMPV	JAM60517-JA Solar Ho	4				
SCE-INT-NST-254898	Interconne SCE	ONTARIO 91762 San Bernar Solar PV 6.9888 5.824	24	90	RoofTop	Fixed	Residential	12/22/2021	12/22/2021	12/23/2021	No	FREEDOM I 800-885-9 Tecumeca CA 92590 1029644 Yes	Lease	Sunrun frei	No	No	No	No	No	No	No	No	No	No	No	Yes	Yes	Solar Edge Technol	25687.8	4.410679	2	NEM-ST	None	No	NEMPV	LR4-60HPHLONGI Gree	12				
SCE-INT-NST-255094	Interconne SCE	ONTARIO 91762 San Bernar Solar PV 4.2926 4.108	12	180	RoofTop	Fixed	Residential	12/23/2021	12/23/2021	12/30/2021	No	Vivint Solar 385-352-01 Lehi UT 84043 973756 Yes	Lease	Vivint Solar	No	No	No	No	No	No	No	No	No	No	Yes	Yes	Solar Edge Technol	8019.2	1.952093	2	NEM-ST	None	No	NEMPV	JAM60517-JA Solar Ho	4					
SCE-INT-NST-255253	Interconne SCE	ONTARIO 91762 San Bernar Solar PV 4.8912 4.076	18	180	RoofTop	Fixed	Residential	12/23/2021	12/23/2021	12/30/2021	No	Vivint Solar 801-845-01 Lehi UT 84043 973756 Yes	Lease	Vivint Solar	No	No	No	No	No	No	No	No	No	No	Yes	Yes	SolarEdge Technology	23054.08	5.656054	2	NEM-ST	None	No	NEMPV	JKM320M-Jinko Solar	14					
SCE-INT-NST-255267	Interconne SCE	ONTARIO 91761 San Bernar Solar PV 4.6584 3.882	21	180	RoofTop	Fixed	Residential	12/27/2021	12/27/2021	12/28/2021	No	FREEDOM I 800-885-9 Tecumeca CA 92590 1029644 Yes	Lease	FREEDOM I	No	No	No	No	No	No	No	No	No	No	No	Yes	Yes	SolarEdge 1	18186	4.684698	2	NEM-ST	None	No	NEMPV	LR4-60HPHLONGI Gree	12				
SCE-INT-NST-258775	Interconne SCE	ONTARIO 91761 San Bernar Solar PV 3.687755 3.614	27	270	RoofTop	Fixed	Residential	1/4/2018	3/21/2018	3/21/2018	No	SunPower I 877-344-66 Roseville CA 95661 890895 No	Lease	Sun																											

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Application	Preceding	1 Supercedin	Matched	C Application	Utility	Service City	Service Zip	Service Cot	Technology	System Siz	System Siz	Storage Ca	Storage Siz	Inverter Siz	Tilt	Azimuth	Mounting	Tracking	Customer	5 App	Received	App Complete	App Approved	EDecommis	Self Installe	Installer Na	Installer Ph	Installer Cil	Installer St	Installer Zi	CSLB Numt	Third Party	Third Party	Third Party	Third Party	Face	Pace	Finan	Electric Vel	Electric Vel	System Out	System Out	System Out	Total	Itc Cost	Ba Cost	Watt	NEM Tariff	Interconne	VNEM	NEP	Project is V	NEMPV or	Generator	Generator	Generator
SCE-INT-NST-31376					Interconne SCE	ONTARIO	91762	San Bernar Solar PV	2.765306	2.71	34	235	Rooftop	Fixed	Residential	2/16/2018	2/16/2018	2/16/2018	No	SunPower	1877-344-66	Roseville	CA	95661	890895	Yes	Lease	KB Home	No	No	No	No	No	No	No	No	No	No	No	Yes	No	15316.2	5.651734	2	NEM-ST	None	No	NEMPV	SPR-X21-33	SunPower	9					
SCE-INT-NST-31390					Interconne SCE	ONTARIO	91762	San Bernar Solar PV	2.765306	2.71	34	159	Rooftop	Fixed	Residential	2/16/2018	2/16/2018	2/16/2018	No	SunPower	1877-344-66	Roseville	CA	95661	890895	Yes	Lease	KB Home	No	No	No	No	No	No	No	No	No	Yes	No	15316.2	5.651734	2	NEM-ST	None	No	NEMPV	SPR-X21-33	SunPower	9							
SCE-INT-NST-31444					Interconne SCE	ONTARIO	91762	San Bernar Solar PV	3.687755	3.614	23	159	Rooftop	Fixed	Residential	2/16/2018	2/16/2018	2/16/2018	No	SunPower	1877-344-66	Roseville	CA	95661	890895	Yes	Lease	KB Home	No	No	No	No	No	No	No	No	No	Yes	No	20421.6	5.650691	2	NEM-ST	None	No	NEMPV	SPR-X21-33	SunPower	12							
SCE-INT-NST-31448					Interconne SCE	ONTARIO	91762	San Bernar Solar PV	5.888776	5.771	23	180	Rooftop	Fixed	Residential	2/16/2018	2/16/2018	2/16/2018	No	Vivint Solar	385-352-01	Lehi	UT	84043	973756	Yes	PPA	Vivint Solar	No	No	No	No	No	No	No	No	No	Yes	Yes	28710.9	4.97503	2	NEM-ST	None	No	NEMPV	JKM285M-Jinko Solar	23								
SCE-INT-NST-31505					Interconne SCE	ONTARIO	91762	San Bernar Solar PV	2.765306	2.71	23	159	Rooftop	Fixed	Residential	2/16/2018	2/16/2018	2/16/2018	No	SunPower	1877-344-66	Roseville	CA	95661	890895	Yes	Lease	KB Home	No	No	No	No	No	No	No	No	No	No	No	No	Yes	No	15316.2	5.651734	2	NEM-ST	None	No	NEMPV	SPR-X21-33	SunPower	9				
SCE-INT-NST-31602					Interconne SCE	ONTARIO	91762	San Bernar Solar PV	1.78	1.75	5	180	Rooftop	Fixed	Commercial	2/19/2018	4/13/2018	5/9/2018	No	SUNVALLEY	909-582-54	WALNUT	CA	91789	1003786	No	Lease	KB Home	No	No	No	No	No	No	No	No	No	No	No	No	Yes	No	550000	3.141474	2	NEM-ST	None	No	NEMPV	Q.PLUS L-GHanwha Q-	582					
SCE-INT-NST-31679					Interconne SCE	ONTARIO	91762	San Bernar Solar PV	2.765306	2.71	23	169	Rooftop	Fixed	Residential	2/20/2018	2/20/2018	2/20/2018	No	SunPower	1877-344-66	Roseville	CA	95661	890895	Yes	Lease	KB Home	No	No	No	No	No	No	No	No	No	No	No	No	Yes	No	15316.2	5.651734	2	NEM-ST	None	No	NEMPV	SPR-X21-33	SunPower	9				
SCE-INT-NST-31882					Interconne SCE	ONTARIO	91764	San Bernar Solar PV	2.765306	2.71	23	131	Rooftop	Fixed	Residential	2/21/2018	2/21/2018	2/21/2018	No	SunPower	1877-344-66	Roseville	CA	95661	890895	Yes	Lease	KB Home	No	No	No	No	No	No	No	No	No	No	No	No	Yes	No	15316.2	5.651734	2	NEM-ST	None	No	NEMPV	SPR-X21-33	SunPower	9				
SCE-INT-NST-31899					Interconne SCE	ONTARIO	91762	San Bernar Solar PV	3.134694	3.072	21	233	Rooftop	Fixed	Residential	5/10/2018	5/10/2018	5/11/2018	No	HoSoPo Co	951-471-75	HEMET	CA	92545	1004233	Yes	PPA	Clean PowNo	No	No	No	No	No	No	No	No	No	No	No	Yes	Yes	Clean Power Finance	8911.95	2.901025	2	NEM-ST	None	No	NEMPV	Q.PEAK-G4 Hanwha Q-	11					
SCE-INT-NST-31996					Interconne SCE	ONTARIO	91761	San Bernar Solar PV	3.687755	3.614	18	270	Rooftop	Fixed	Residential	2/22/2018	2/22/2018	2/22/2018	No	SunPower	1877-344-66	Roseville	CA	95661	890895	Yes	Lease	DR Horton	No	No	No	No	No	No	No	No	No	No	No	No	Yes	No	20421.6	5.650691	2	NEM-ST	None	No	NEMPV	SPR-X21-33	SunPower	12				
SCE-INT-NST-32087					Interconne SCE	ONTARIO	91761	San Bernar Solar PV	6.281633	6.156	22	185	Rooftop	Fixed	Residential	2/22/2018	2/22/2018	2/22/2018	No	SOLCIUS LL	385-225-8	PROVO	UT	84604	976336	No	Lease	DR Horton	No	No	No	No	No	No	No	No	No	No	No	Yes	No	33060	5.37037	2	NEM-ST	None	No	NEMPV	SW 285 Mc.SolarWorld	24						
SCE-INT-NST-32303					Interconne SCE	ONTARIO	91761	San Bernar Solar PV	4.685714	4.592	21	180	Rooftop	Fixed	Residential	2/23/2018	3/1/2018	3/2/2018	No	SUNRUN IN	855-478-61	SAN LUIS O	CA	93401	750184	No	Lease	DR Horton	No	No	No	No	No	No	No	No	No	No	No	Yes	Yes	Sunrun Inc.	18000.14	3.919891	2	NEM-ST	None	No	NEMPV	REC285TP2REC Solar	18					
SCE-INT-NST-32356					Interconne SCE	ONTARIO	91762	San Bernar Solar PV	3.711224	3.637	23	172	Rooftop	Fixed	Residential	2/25/2018	2/25/2018	2/25/2018	No	TESLA ENER	1888-765-2	SAN MATEI	CA	94402	888104	Yes	Lease	Tesla Energy	No	No	No	No	No	No	No	No	No	No	No	No	Yes	Yes	21504	5.912565	2	NEM-ST	None	No	NEMPV	TSM-3000TTrina Solar	7					
SCE-INT-NST-32409					Interconne SCE	ONTARIO	91764	San Bernar Solar PV	5.22449	5.12	18	180	Rooftop	Fixed	Residential	2/26/2018	2/26/2018	2/26/2018	No	SEMPER SC	619-559-7	EL CAJON	CA	92020	978152	No	Lease	DR Horton	No	No	No	No	No	No	No	No	No	No	No	Yes	No	22355	4.36521	2	NEM-ST	None	No	NEMPV	SPR-X21-33	SunPower	17					
SCE-INT-NST-32427					Interconne SCE	ONTARIO	91761	San Bernar Solar PV	4.609184	4.517	23	270	Rooftop	Fixed	Residential	2/26/2018	2/28/2018	3/1/2018	No	SunPower	1877-344-66	Roseville	CA	95661	890895	Yes	Lease	DR Horton	No	No	No	No	No	No	No	No	No	No	No	Yes	No	25527	5.651317	2	NEM-ST	None	No	NEMPV	SPR-X21-33	SunPower	15					
SCE-INT-NST-32484					Interconne SCE	ONTARIO	91761	San Bernar Solar PV	8.895918	8.718	23	90	Rooftop	Fixed	Residential	2/26/2018	3/6/2018	3/7/2018	No	Sunrun	INT805-242-7	San Luis O	CA	93401	750184	No	Lease	DR Horton	No	No	No	No	No	No	No	No	No	No	Yes	Yes	Sunrun Inc.	34000	3.899977	2	NEM-ST	None	No	NEMPV	REC285TP2REC Solar	10						
SCE-INT-NST-32505					Interconne SCE	ONTARIO	91761	San Bernar Solar PV	2.810204	2.754	16	180	Rooftop	Fixed	Residential	2/26/2018	2/26/2018	2/26/2018	No	EQUISO	LAF818-784-2	ENCINO	CA	91436	1006535	No	Lease	DR Horton	No	No	No	No	No	No	No	No	No	No	No	Yes	No	19200	6.971677	2	NEM-ST	None	No	NEMPV	SLIG360M Silfab	9						
SCE-INT-NST-32526					Interconne SCE	ONTARIO	91764	San Bernar Solar PV	28.30204	27.736	5	180	Rooftop	Fixed	Commercial	2/26/2018	1/28/2020	2/11/2020	No	TENCO SOL	562-490-2	RIVERSIDE	CA	92692	820684	No	Lease	DR Horton	No	No	No	No	No	No	No	No	No	No	No	Yes	No	153252	5.525382	2	NEM-ST	None	No	NEMPV	GCL-P6/72-GCL System	96						
SCE-INT-NST-32533					Interconne SCE	ONTARIO	91764	San Bernar Solar PV	62.79592	61.54	1	180	Rooftop	Fixed	Commercial	2/26/2018	3/6/2020	4/4/2020	Yes	TESLA ENER	1888-765-2	SAN MATEI	CA	94402	888104	Yes	Lease	Tesla Energy	No	No	No	No	No	No	No	No	No	No	No	Yes	No	411510	6.68687	2	NEM-ST	None	No	NEMPV	GCL-P6/72-GCL System	213						
SCE-INT-NST-32534					Interconne SCE	ONTARIO	91764	San Bernar Solar PV	62.79592	61.54	18	180	Rooftop	Fixed	Commercial	2/26/2018	2/29/2020	2/21/2020	No	TENCO SOL	562-490-2	RIVERSIDE	CA	92692	820684	No	Lease	KB Home	No	No	No	No	No	No	No	No	No	No	No	Yes	No	466722	7.584042	2	NEM-ST	None	No	NEMPV	GCL-P6/72-GCL System	213						
SCE-INT-NST-32549					Interconne SCE	ONTARIO	91762	San Bernar Solar PV	4.609184	4.517	23	110	Rooftop	Fixed	Residential	2/27/2018	2/27/2018	2/27/2018	No	SunPower	1877-344-66	Roseville	CA	95661	890895	Yes	Lease	KB Home	No	No	No	No	No	No	No	No	No	No	No	Yes	No	25527	5.651317	2	NEM-ST	None	No	NEMPV	SPR-X21-33	SunPower	15					
SCE-INT-NST-32769					Interconne SCE	ONTARIO	91762	San Bernar Solar PV	7.011224	6.871	22	180	Rooftop	Fixed	Residential	3/9/2018	3/9/2018	3/9/2018	No	GREEN NRI	818-495-4	CHATSWO	CA	91311	909516	No	Lease	DR Horton	No	No	No	No	No	No	No	No	No	No	No	Yes	No	34800	5.064764	2	NEM-ST	None	No	NEMPV	JKM350M-Jinko Solar	22						
SCE-INT-NST-32930					Interconne SCE	ONTARIO	91761	San Bernar Solar PV	5.740816	5.626	15	270	Rooftop	Fixed	Residential	3/1/2018	3/1/2018	3/1/2018	No	Sunlux	909-214-35	ONTARIO	CA	91761	10083274	Yes	Lease	Sunlux	No	No	No	No	No	No	No	No	No	No	No	Yes	No	2000	0.355492	2	NEM-ST	None	No	NEMPV	Q.PEAK BLHanwha Q-	12						
SCE-INT-NST-33014					Interconne SCE	ONTARIO	91761	San Bernar Solar PV	4.510204	4.42	18	180	Rooftop	Fixed	Residential	3/1/2018	3/1/2018	3/1/2018	No	JDC ENER	909-297-3	RANCHO C	CA	91730	1025569	No	Lease	DR Horton	No	No	No	No	No	No	No	No	No	No	Yes	No	21320	4.823529	2	NEM-ST	None	No	NEMPV	HIS-M260RHyundai H-	9							
SCE-INT-NST-33077					Interconne SCE	ONTARIO	91761	San Bernar Solar PV	4.95	4.851	17	180	Rooftop	Fixed	Residential	3/2/2018	3/2/2018	3/2/2018	No	PETERSEN	951-758-4	FREMONT	CA	94538	468117	No	Lease	DR Horton	No	No	No	No	No	No	No	No	No	No	No	Yes	No	23589.05	4.862719	2	NEM-ST	None	No	NEMPV	MSE295SQMission So	12						
SCE-INT-NST-33137					Interconne SCE	ONTARIO	91761	San Bernar Solar PV	3.687755	3.614	18	270	Rooftop	Fixed	Residential	3/2/2018	3/2/2018	3/2/2018	No	SunPower	1877-344-66	Roseville	CA	95661	890895	Yes	Lease	DR Horton	No	No	No	No	No	No	No	No	No	No	No	Yes	No	17085	4.727448	2	NEM-ST	None	No	NEMPV	SPR-X21-33	SunPower	12					
SCE-INT-NST-33408					Interconne SCE	ONTARIO	91761																																																	

Ontario Quantification Workbook

Application Preceding	Supercedin	Matched	C	Application	Utility	Service City	Service Zip	Service Cot	Technology	System Siz	System Siz	Storage Ca	Storage Siz	Inverter Siz	Tilt	Azimuth	Mounting	Tracking	Customer	5 App	Received	App Complete	App Approved	EDecommis	Self Installe	Installer	Na Installer	Ph Installer	CI Installer	St Installer	Zi	CSLB	Numt	Third Party	Third Party	Third Party	Face	Pace	Finan	Electric Vel	Electric Vel	System Out	System Out	System Out	Total	Its	Cost	Cost/Watt	NEM Tariff	Interconne	VNEM	NEP	Project is V	NEMPV or	Generator	Generator	Generator
SCE-INT-NST-42788				Interconne SCE	ONTARIO	91762	San Bernar Solar PV	2.917347	2.859	23	270	Rooftop	Fixed	Residential	5/22/2018	6/5/2018	6/6/2018	No	SUNSTREET949-450-5E MIAMI FL	33172	1001133	Yes	PPA	LENNAR HC No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	12160	4.253235	2	NEM-ST	None	No	NEMPV	LG320E1K-LG Elector	10					
SCE-INT-NST-42789				Interconne SCE	ONTARIO	91762	San Bernar Solar PV	2.917347	2.859	18	270	Rooftop	Fixed	Residential	5/22/2018	6/5/2018	6/6/2018	No	SUNSTREET949-450-5E MIAMI FL	33172	1001133	Yes	PPA	LENNAR HC No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	12160	4.253235	2	NEM-ST	None	No	NEMPV	LG320E1K-LG Elector	5			
SCE-INT-NST-42803				Interconne SCE	ONTARIO	91761	San Bernar Solar PV	9.3513061	9.172	24	180	Rooftop	Fixed	Residential	5/22/2018	5/22/2018	5/23/2018	No	SUNLUX 909-214-35 ONTARIO CA	91761	1008374	Yes	Lease	Sunlux No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	10000	1.114827	2	NEM-ST	None	No	NEMPV	Q.PEAK BU Hanwha Q-	34				
SCE-INT-NST-43203				Interconne SCE	ONTARIO	91761	San Bernar Solar PV	4.085714	4.004	11	180	Rooftop	Fixed	Residential	5/24/2018	5/25/2018	5/29/2018	No	Vivint Solar 385-352-01LEHI UT	84043	973756	Yes	PPA	Vivint Solar No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	22500	4.990867	2	NEM-ST	None	No	NEMPV	JKM290M-Jinko Solar	12						
SCE-INT-NST-43270				Interconne SCE	ONTARIO	91761	San Bernar Solar PV	2.397959	2.35	17	187	Rooftop	Fixed	Residential	5/24/2018	5/24/2018	5/25/2018	No	INTEGRITY 760-409-62 MENIFEE CA	92584	840846	No	Yes	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	14355	6.10851	2	NEM-ST	None	No	NEMPV	HIS-5350TT Hyundai H	13						
SCE-INT-NST-43276				Interconne SCE	ONTARIO	91761	San Bernar Solar PV	3.196939	3.133	25	182	Rooftop	Fixed	Residential	5/24/2018	5/24/2018	5/25/2018	No	SOLCIUS LL 385-225-87 PROVO UT	84604	976336	No	Yes	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	14355	6.10851	2	NEM-ST	None	No	NEMPV	SunmoduleSolarWorld	9							
SCE-INT-NST-43278				Interconne SCE	ONTARIO	91762	San Bernar Solar PV	2.765306	2.71	23	245	Rooftop	Fixed	Residential	5/24/2018	5/24/2018	6/1/2018	No	SOLCIUS LL 385-225-87 PROVO UT	84604	976336	No	Yes	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	18444	5.887009	2	NEM-ST	None	No	NEMPV	SunmoduleSolarWorld	10							
SCE-INT-NST-43279				Interconne SCE	ONTARIO	91761	San Bernar Solar PV	3.687755	3.614	27	270	Rooftop	Fixed	Residential	5/24/2018	5/24/2018	5/25/2018	No	SunPower 1877-344-66 ROSEVILLE CA	95661	890895	Yes	Lease	KB Home No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	15316.2	5.651734	2	NEM-ST	None	No	NEMPV	SPR-X21-3:SunPower	12						
SCE-INT-NST-43315				Interconne SCE	ONTARIO	91761	San Bernar Solar PV	4.844898	4.748	23	90	Rooftop	Fixed	Residential	5/25/2018	5/29/2018	5/30/2018	No	V3 Electric 916-459-21 EL DORADO CA	95762	1000573	Yes	PPA	Sunrun No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	5973.12	1.258028	2	NEM-ST	None	No	NEMPV	Q.PEAK-G4 Hanwha Q-	8							
SCE-INT-NST-43455				Interconne SCE	ONTARIO	91761	San Bernar Solar PV	5.74449	4.483	21	268	Rooftop	Fixed	Residential	5/26/2018	5/26/2018	5/29/2018	No	TESLA ENER1888-765-21 SAN MATEI CA	94402	888104	No	Yes	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	24806	5.533348	2	NEM-ST	None	No	NEMPV	SC325 SolarCity	15								
SCE-INT-NST-43488				Interconne SCE	ONTARIO	91761	San Bernar Solar PV	3.687755	3.614	23	270	Rooftop	Fixed	Residential	5/28/2018	5/29/2018	5/30/2018	No	SunPower 1877-344-66 ROSEVILLE CA	95661	890895	Yes	Lease	DR Horton No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	20421.6	5.650691	2	NEM-ST	None	No	NEMPV	SPR-X21-3:SunPower	12						
SCE-INT-NST-43897				Interconne SCE	ONTARIO	91761	San Bernar Solar PV	4.920408	4.822	22	270	Rooftop	Fixed	Residential	5/31/2018	6/5/2018	6/6/2018	No	Future Ene 909-920-51 RANCHO CI CA	91730	463720	No	Yes	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	27663	5.736831	2	NEM-ST	None	No	NEMPV	Q.PEAK BU Hanwha Q-	8							
SCE-INT-NST-44023				Interconne SCE	ONTARIO	91762	San Bernar Solar PV	2.62551	2.573	23	270	Rooftop	Fixed	Residential	6/1/2018	7/5/2018	7/6/2018	No	SUNSTREET949-450-5E MIAMI FL	33172	1001133	Yes	PPA	LENNAR HC No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	1094	0.425184	2	NEM-ST	None	No	NEMPV	LG320E1K-LG Elector	7					
SCE-INT-NST-44025				Interconne SCE	ONTARIO	91762	San Bernar Solar PV	2.917347	2.859	18	270	Rooftop	Fixed	Residential	6/1/2018	7/25/2018	7/26/2018	No	SUNSTREET949-450-5E MIAMI FL	33172	1001133	Yes	PPA	LENNAR HC No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	12160	4.253235	2	NEM-ST	None	No	NEMPV	LG320E1K-LG Elector	6					
SCE-INT-NST-44027				Interconne SCE	ONTARIO	91762	San Bernar Solar PV	2.62551	2.573	23	180	Rooftop	Fixed	Residential	6/1/2018	7/9/2018	7/10/2018	No	SUNSTREET949-450-5E MIAMI FL	33172	1001133	Yes	PPA	LENNAR HC No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	1094	0.425184	2	NEM-ST	None	No	NEMPV	LG320E1K-LG Elector	9					
SCE-INT-NST-44028				Interconne SCE	ONTARIO	91762	San Bernar Solar PV	2.917347	2.859	23	135	Rooftop	Fixed	Residential	6/1/2018	7/25/2018	7/26/2018	No	SUNSTREET949-450-5E MIAMI FL	33172	1001133	Yes	PPA	LENNAR HC No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	12160	4.253235	2	NEM-ST	None	No	NEMPV	LG320E1K-LG Elector	2						
SCE-INT-NST-44031				Interconne SCE	ONTARIO	91762	San Bernar Solar PV	2.917347	2.859	18	180	Rooftop	Fixed	Residential	6/1/2018	7/12/2018	7/13/2018	No	SUNSTREET949-450-5E MIAMI FL	33172	1001133	Yes	PPA	LENNAR HC No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	12160	4.253235	2	NEM-ST	None	No	NEMPV	LG320E1K-LG Elector	6						
SCE-INT-NST-44035				Interconne SCE	ONTARIO	91762	San Bernar Solar PV	2.62551	2.573	23	180	Rooftop	Fixed	Residential	6/1/2018	7/25/2018	7/26/2018	No	SUNSTREET949-450-5E MIAMI FL	33172	1001133	Yes	PPA	LENNAR HC No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	1094	0.425184	2	NEM-ST	None	No	NEMPV	LG320E1K-LG Elector	7						
SCE-INT-NST-44037				Interconne SCE	ONTARIO	91762	San Bernar Solar PV	2.917347	2.859	18	270	Rooftop	Fixed	Residential	6/1/2018	7/25/2018	7/26/2018	No	SUNSTREET949-450-5E MIAMI FL	33172	1001133	Yes	PPA	LENNAR HC No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	12160	4.253235	2	NEM-ST	None	No	NEMPV	LG320E1K-LG Elector	10						
SCE-INT-NST-44038				Interconne SCE	ONTARIO	91762	San Bernar Solar PV	2.917347	2.859	18	180	Rooftop	Fixed	Residential	6/1/2018	7/25/2018	7/26/2018	No	SUNSTREET949-450-5E MIAMI FL	33172	1001133	Yes	PPA	LENNAR HC No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	12160	4.253235	2	NEM-ST	None	No	NEMPV	LG320E1K-LG Elector	5						
SCE-INT-NST-44126				Interconne SCE	ONTARIO	91761	San Bernar Solar PV	2.62551	2.573	23	180	Rooftop	Fixed	Residential	6/4/2018	6/4/2018	6/5/2018	No	SUNSTREET949-450-5E MIAMI FL	33172	1001133	Yes	PPA	LENNAR HC No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	1094	0.425184	2	NEM-ST	None	No	NEMPV	LG320E1K-LG Elector	9						
SCE-INT-NST-44127				Interconne SCE	ONTARIO	91761	San Bernar Solar PV	2.62551	2.573	23	180	Rooftop	Fixed	Residential	6/4/2018	6/4/2018	6/11/2018	No	SUNSTREET949-450-5E MIAMI FL	33172	1001133	Yes	PPA	LENNAR HC No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	1094	0.425184	2	NEM-ST	None	No	NEMPV	LG320E1K-LG Elector	9						
SCE-INT-NST-44134				Interconne SCE	ONTARIO	91761	San Bernar Solar PV	2.957143	2.898	23	180	Rooftop	Fixed	Residential	6/4/2018	8/9/2018	8/10/2018	No	SOLCIUS LL 385-225-87 PROVO UT	84604	976336	No	Yes	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	14993	5.173567	2	NEM-ST	None	No	NEMPV	SunmoduleSolarWorld	11						
SCE-INT-NST-44141				Interconne SCE	ONTARIO	91762	San Bernar Solar PV	2.62551	2.573	23	90	Rooftop	Fixed	Residential	6/4/2018	6/4/2018	6/11/2018	No	SUNSTREET949-450-5E MIAMI FL	33172	1001133	Yes	PPA	LENNAR HC No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	1094	0.425184	2	NEM-ST	None	No	NEMPV	LG320E1K-LG Elector	5							
SCE-INT-NST-44145				Interconne SCE	ONTARIO	91761	San Bernar Solar PV	2.62551	2.573	23	180	Rooftop	Fixed	Residential	6/4/2018	6/4/2018	6/5/2018	No	SUNSTREET949-450-5E MIAMI FL	33172	1001133	Yes	PPA	LENNAR HC No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	1094	0.425184	2	NEM-ST	None	No	NEMPV	LG320E1K-LG Elector	7						
SCE-INT-NST-44148				Interconne SCE	ONTARIO	91761	San Bernar Solar PV	2.917347	2.859	23	270	Rooftop	Fixed	Residential	6/4/2018	6/4/2018	6/11/2018	No	SUNSTREET949-450-5E MIAMI FL	33172	1001133	Yes	PPA	LENNAR HC No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	12160	4.253235	2	NEM-ST</											

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Application Preceding 1 Supercedin Matched C Application/Utility	Service City/Service Zip Service Cot Technology System Siz System Siz Storage Ca Storage Siz Inverter Siz Tilt	Azimuth	Mounting / Tracking	Customer 5 App Received [App Complete App Approved EDecommis:Self Installe Installer Na Installer Ph Installer Ctl Installer St:Installer Zi:CSLB Numt Third Party Third Party Third Party Pace Finan Pace Finan Electric Vel Electric Vel System Out/ System Out/ System Out/ Total System Itc Cost Ba:Cost/Watt NEM Tariff Interconne V NEM, NEF Project is V NEMPV or Generator Generator Generator
SCE-INT-NST-48482	Interconne SCE ONTARIO 91761 San Bernar Solar PV 5.64898 5.236	24	180 Rooftop Fixed	Residential 7/9/2018 7/10/2018 7/11/2018 No Future Ene 909-920-51-RANCHO O CA 91730 463720 No No No No 35835 6.473085
SCE-INT-NST-48524	Interconne SCE ONTARIO 91762 San Bernar Solar PV 2.333673 2.287	18	270 Rooftop Fixed	Residential 7/10/2018 7/25/2018 7/31/2018 No SUNSTREET1949-450-5E MIAMI FL 33172 1001133 Yes PPA LENNAR HC No No No No 9728 4.253607
SCE-INT-NST-48525	Interconne SCE ONTARIO 91762 San Bernar Solar PV 2.041837 2.001	23	180 Rooftop Fixed	Residential 7/10/2018 7/25/2018 7/31/2018 No SUNSTREET1949-450-5E MIAMI FL 33172 1001133 Yes PPA LENNAR HC No No No No 8512 4.253607
SCE-INT-NST-48526	Interconne SCE ONTARIO 91762 San Bernar Solar PV 2.333673 2.287	18	270 Rooftop Fixed	Residential 7/10/2018 7/25/2018 7/31/2018 No SUNSTREET1949-450-5E MIAMI FL 33172 1001133 Yes PPA LENNAR HC No No No No 9728 4.253607
SCE-INT-NST-48529	Interconne SCE ONTARIO 91762 San Bernar Solar PV 2.62551 2.573	23	90 Rooftop Fixed	Residential 7/10/2018 8/24/2018 8/25/2018 No SUNSTREET1949-450-5E MIAMI FL 33172 1001133 Yes PPA LENNAR HC No No No No 9728 4.253607
SCE-INT-NST-48531	Interconne SCE ONTARIO 91762 San Bernar Solar PV 2.917347 2.859	23	180 Rooftop Fixed	Residential 7/10/2018 7/25/2018 7/31/2018 No SUNSTREET1949-450-5E MIAMI FL 33172 1001133 Yes PPA LENNAR HC No No No No 12160 4.253235
SCE-INT-NST-48532	Interconne SCE ONTARIO 91762 San Bernar Solar PV 2.333673 2.287	23	90 Rooftop Fixed	Residential 7/10/2018 9/4/2018 9/5/2018 No SUNSTREET1949-450-5E MIAMI FL 33172 1001133 Yes PPA LENNAR HC No No No No 9728 4.253607
SCE-INT-NST-48533	Interconne SCE ONTARIO 91762 San Bernar Solar PV 2.041837 2.001	18	270 Rooftop Fixed	Residential 7/10/2018 7/25/2018 7/31/2018 No SUNSTREET1949-450-5E MIAMI FL 33172 1001133 Yes PPA LENNAR HC No No No No 8512 4.253607
SCE-INT-NST-48535	Interconne SCE ONTARIO 91762 San Bernar Solar PV 2.333673 2.287	23	90 Rooftop Fixed	Residential 7/10/2018 7/25/2018 7/31/2018 No SUNSTREET1949-450-5E MIAMI FL 33172 1001133 Yes PPA LENNAR HC No No No No 9728 4.253607
SCE-INT-NST-48836	Interconne SCE ONTARIO 91758 San Bernar Solar PV 2.333673 2.287	23	215 Rooftop Fixed	Residential 7/11/2018 5/9/2019 5/18/2019 No SUNSTREET1949-450-5E MIAMI FL 33172 1001133 Yes PPA WOODSIDE No No No No 9728 4.253607
SCE-INT-NST-48839	Interconne SCE ONTARIO 91758 San Bernar Solar PV 2.333673 2.287	18	225 Rooftop Fixed	Residential 7/11/2018 5/9/2019 5/18/2019 No SUNSTREET1949-450-5E MIAMI FL 33172 1001133 Yes PPA WILLIAM L No No No No 9728 4.253607
SCE-INT-NST-48841	Interconne SCE ONTARIO 91758 San Bernar Solar PV 2.333673 2.287	18	135 Rooftop Fixed	Residential 7/11/2018 5/9/2019 5/18/2019 No SUNSTREET1949-450-5E MIAMI FL 33172 1001133 Yes PPA WOODSIDE No No No No 9728 4.253607
SCE-INT-NST-48843	Interconne SCE ONTARIO 91762 San Bernar Solar PV 2.333673 2.287	27	102 Rooftop Fixed	Residential 7/11/2018 11/13/2018 11/13/2018 No SUNSTREET1949-450-5E MIAMI FL 33172 1001133 Yes PPA WOODSIDE No No No No 9728 4.253607
SCE-INT-NST-48844	Interconne SCE ONTARIO 91758 San Bernar Solar PV 2.333673 2.287	18	189 Rooftop Fixed	Residential 7/11/2018 8/31/2018 9/4/2018 No SUNSTREET1949-450-5E MIAMI FL 33172 1001133 Yes PPA WOODSIDE No No No No 9728 4.253607
SCE-INT-NST-48846	Interconne SCE ONTARIO 91758 San Bernar Solar PV 2.333673 2.287	18	263 Rooftop Fixed	Residential 7/11/2018 8/31/2018 9/4/2018 No SUNSTREET1949-450-5E MIAMI FL 33172 1001133 Yes PPA WOODSIDE No No No No 9728 4.253607
SCE-INT-NST-48847	Interconne SCE ONTARIO 91758 San Bernar Solar PV 2.333673 2.287	27	270 Rooftop Fixed	Residential 7/11/2018 8/31/2018 9/4/2018 No SUNSTREET1949-450-5E MIAMI FL 33172 1001133 Yes PPA WOODSIDE No No No No 9728 4.253607
SCE-INT-NST-48849	Interconne SCE ONTARIO 91758 San Bernar Solar PV 2.333673 2.287	27	270 Rooftop Fixed	Residential 7/11/2018 8/31/2018 9/4/2018 No SUNSTREET1949-450-5E MIAMI FL 33172 1001133 Yes PPA WOODSIDE No No No No 9728 4.253607
SCE-INT-NST-48852	Interconne SCE ONTARIO 91762 San Bernar Solar PV 2.333673 2.287	18	184 Rooftop Fixed	Residential 7/11/2018 8/31/2018 9/4/2018 No SUNSTREET1949-450-5E MIAMI FL 33172 1001133 Yes PPA WOODSIDE No No No No 9728 4.253607
SCE-INT-NST-48899	Interconne SCE ONTARIO 91761 San Bernar Solar PV 2.689796 2.636	18	199 Rooftop Fixed	Residential 7/11/2018 9/19/2018 9/19/2018 No SOLCIUS LL 385-225-8I PROVO UT 84604 976336 No No No No 15000 5.69044
SCE-INT-NST-48978	Interconne SCE ONTARIO 91761 San Bernar Solar PV 3.687755 3.614	18	270 Rooftop Fixed	Residential 7/12/2018 7/12/2018 7/13/2018 No SunPower 1877-344-6E ROSEVILLE CA 95661 890895 Yes Lease DR Horton No No No No 20421.6 5.650691
SCE-INT-NST-49003	Interconne SCE ONTARIO 91761 San Bernar Solar PV 4.609184 4.517	18	270 Rooftop Fixed	Residential 7/12/2018 7/12/2018 7/13/2018 No SunPower 1877-344-6E ROSEVILLE CA 95661 890895 Yes Lease DR Horton No No No No 25527 5.651317
SCE-INT-NST-49440	Interconne SCE ONTARIO 91762 San Bernar Solar PV St 12.75306 12.498	20	270 Rooftop Fixed	Residential 7/16/2018 7/16/2018 7/31/2018 No PETERSEN-951-758-4E FREMONT CA 94538 468117 No No Yes Service Fin No No No No 52420.44 4.194306
SCE-INT-NST-49592	Interconne SCE ONTARIO 91761 San Bernar Solar PV 3.687755 3.614	23	225 Rooftop Fixed	Residential 7/17/2018 7/17/2018 7/18/2018 No SunPower 1877-344-6E ROSEVILLE CA 95661 890895 Yes Lease DR Horton No No No No 20421.6 5.650691
SCE-INT-NST-49594	Interconne SCE ONTARIO 91762 San Bernar Solar PV 2.62551 2.573	18	90 Rooftop Fixed	Residential 7/17/2018 7/25/2018 7/31/2018 No SUNSTREET1949-450-5E MIAMI FL 33172 1001133 Yes PPA LENNAR HC No No No No 1094 0.425184
SCE-INT-NST-49595	Interconne SCE ONTARIO 91762 San Bernar Solar PV 2.62551 2.573	18	180 Rooftop Fixed	Residential 7/17/2018 10/29/2018 10/30/2018 No SUNSTREET1949-450-5E MIAMI FL 33172 1001133 Yes PPA LENNAR HC No No No No 1094 0.425184
SCE-INT-NST-49597	Interconne SCE ONTARIO 91762 San Bernar Solar PV 2.62551 2.573	23	180 Rooftop Fixed	Residential 7/17/2018 8/30/2018 8/31/2018 No SUNSTREET1949-450-5E MIAMI FL 33172 1001133 Yes PPA LENNAR HC No No No No 1094 0.425184
SCE-INT-NST-49599	Interconne SCE ONTARIO 91762 San Bernar Solar PV 2.917347 2.859	18	180 Rooftop Fixed	Residential 7/17/2018 8/23/2018 8/24/2018 No SUNSTREET1949-450-5E MIAMI FL 33172 1001133 Yes PPA LENNAR HC No No No No 12160 4.253235
SCE-INT-NST-49600	Interconne SCE ONTARIO 91762 San Bernar Solar PV 2.917347 2.859	23	180 Rooftop Fixed	Residential 7/17/2018 8/23/2018 8/24/2018 No SUNSTREET1949-450-5E MIAMI FL 33172 1001133 Yes PPA LENNAR HC No No No No 12160 4.253235
SCE-INT-NST-49604	Interconne SCE ONTARIO 91762 San Bernar Solar PV 2.917347 2.859	18	180 Rooftop Fixed	Residential 7/17/2018 8/23/2018 8/24/2018 No SUNSTREET1949-450-5E MIAMI FL 33172 1001133 Yes PPA LENNAR HC No No No No 12160 4.253235
SCE-INT-NST-49605	Interconne SCE ONTARIO 91762 San Bernar Solar PV 2.62551 2.573	18	90 Rooftop Fixed	Residential 7/17/2018 9/14/2018 9/17/2018 No SUNSTREET1949-450-5E MIAMI FL 33172 1001133 Yes PPA LENNAR HC No No No No 1094 0.425184
SCE-INT-NST-49606	Interconne SCE ONTARIO 91762 San Bernar Solar PV 2.62551 2.573	23	180 Rooftop Fixed	Residential 7/17/2018 8/23/2018 8/24/2018 No SUNSTREET1949-450-5E MIAMI FL 33172 1001133 Yes PPA LENNAR HC No No No No 1094 0.425184
SCE-INT-NST-49609	Interconne SCE ONTARIO 91762 San Bernar Solar PV 2.62551 2.573	18	180 Rooftop Fixed	Residential 7/17/2018 8/23/2018 8/24/2018 No SUNSTREET1949-450-5E MIAMI FL 33172 1001133 Yes PPA LENNAR HC No No No No 1094 0.425184
SCE-INT-NST-49612	Interconne SCE ONTARIO 91762 San Bernar Solar PV 2.917347 2.859	18	180 Rooftop Fixed	Residential 7/17/2018 8/23/2018 8/24/2018 No SUNSTREET1949-450-5E MIAMI FL 33172 1001133 Yes PPA LENNAR HC No No No No 12160 4.253235
SCE-INT-NST-49615	Interconne SCE ONTARIO 91762 San Bernar Solar PV 2.917347 2.859	18	180 Rooftop Fixed	Residential 7/17/2018 8/23/2018 8/24/2018 No SUNSTREET1949-450-5E MIAMI FL 33172 1001133 Yes PPA LENNAR HC No No No No 12160 4.253235
SCE-INT-NST-49616	Interconne SCE ONTARIO 91762 San Bernar Solar PV 2.917347 2.859	23	180 Rooftop Fixed	Residential 7/17/2018 8/23/2018 8/24/2018 No SUNSTREET1949-450-5E MIAMI FL 33172 1001133 Yes PPA LENNAR HC No No No No 12160 4.253235
SCE-INT-NST-49837	Interconne SCE ONTARIO 91761 San Bernar Solar PV 9.336735 9.15	23	Multiple Rooftop Fixed	Residential 7/18/2018 7/18/2018 7/19/2018 No Vivint Solar 385-352-0I LEHI UT 84043 973756 Yes PPA Vivint Solar No No No No 26158 2.859797
SCE-INT-NST-49958	Interconne SCE ONTARIO 91764 San Bernar Solar PV 8.934694 8.756	14	180 Rooftop Fixed	Residential 7/19/2018 7/19/2018 7/20/2018 No HosoPO C951-916-8I HEMET CA 92545 1004233 No No Yes Yes SolarEdge Technologie Sunnova, Ir 38064 4.34719
SCE-INT-NST-49969	Interconne SCE ONTARIO 91761 San Bernar Solar PV 4.497959 4.408	18	180 Rooftop Fixed	Residential 7/18/2018 9/11/2018 9/12/2018 No bright life s949-326-3I costa mesa CA 92627 981632 No No No No 26000 5.898366
SCE-INT-NST-50008	Interconne SCE ONTARIO 91761 San Bernar Solar PV 2.957143 2.898	28	279 Rooftop Fixed	Residential 7/18/2018 10/23/2018 10/24/2018 No SOLCIUS LL 385-225-8I PROVO UT 84604 976336 No No No No 15950 5.503795
SCE-INT-NST-50023	Interconne SCE ONTARIO 91761 San Bernar Solar PV 4.644898 4.552	23	179 Rooftop Fixed	Residential 7/19/2018 7/19/2018 7/20/2018 No TESLA ENER1888-765-2I FREMONT CA 94555 888104 No No Yes Yes Tesla Energ 24960 5.483304
SCE-INT-NST-50040	Interconne SCE ONTARIO 91762 San Bernar Solar PV 4.683673 4.59	18	90 Rooftop Fixed	Residential 7/25/2018 7/25/2018 7/26/2018 No HOSOPO C951-537-6E HEMET CA 92545 1004233 Yes Lease Sunnova No No No No 19750.5 4.302941
SCE-INT-NST-50078	Interconne SCE ONTARIO 91761 San Bernar Solar PV 3.687755 3.614	18	180 Rooftop Fixed	Residential 7/19/2018 7/19/2018 7/20/2018 No SunPower 1877-344-6E ROSEVILLE CA 95661 890895 No No No No 17085 4.727448
SCE-INT-NST-50271	Interconne SCE ONTARIO 91762 San Bernar Solar PV 5.577551 5.466	6	180 Rooftop Fixed	Residential 12/11/2018 12/12/2018 12/13/2018 No HOSOPO C951-537-6E HEMET CA 92545 1004233 Yes PPA Sunrun Inc No No No No 24855.71 4.54733
SCE-INT-NST-50418	Interconne SCE ONTARIO 91761 San Bernar Solar PV 4.878571 4.781	25	268 Rooftop Fixed	Residential 7/20/2018 7/20/2018 7/23/2018 No TESLA ENER1888-765-2I FREMONT CA 94555 888104 No No Yes Yes Tesla Energ 26624 5.568709
SCE-INT-NST-50473	Interconne SCE ONTARIO 91761 San Bernar Solar PV 3.763265 3.688	24	195 Rooftop Fixed	Residential 7/23/2018 7/23/2018 7/24/2018 No SOLCIUS LL 385-225-8I PROVO UT 84604 976336 No No No No 20000 5.422993
SCE-INT-NST-50599	Interconne SCE ONTARIO 91761 San Bernar Solar PV St 6.770408 6.635	11	180 Rooftop Fixed	Residential 7/23/2018 7/23/2018 8/7/2018 No PETERSEN-951-758-4E FREMONT CA 94538 468117 No No Yes Service Fin No No No No 39213 5.910022
SCE-INT-NST-50836	Interconne SCE ONTARIO 91761 San Bernar Solar PV 7.740816 7.586	23	195 Rooftop Fixed	Residential 7/24/2018 10/30/2018 11/1/2018 No TESLA ENER1888-765-2I FREMONT CA 94555 888104 No No Yes Yes Tesla Energ 41600 5.483785
SCE-INT-NST-51011	Interconne SCE ONTARIO 91761 San Bernar Solar PV 4.609184 4.517	23	270 Rooftop Fixed	Residential 7/25/2018 7/25/2018 7/26/2018 No SunPower 1877-344-6E ROSEVILLE CA 95661 890895 No No No No 21356.25 4.727972
SCE-INT-NST-51042	Interconne SCE ONTARIO 91761 San Bernar Solar PV 7.459184 7.31	40	179 Rooftop Fixed	Residential 7/25/2018 7/25/2018 7/26/2018 No SOLCIUS LL 385-225-8I PROVO UT 84604 976336 No No No No 40600 5.554035
SCE-INT-NST-51043	Interconne SCE ONTARIO 91761 San Bernar Solar PV 6.817347 6.681	12	180 Rooftop Fixed	Residential 7/25/2018 7/25/2018 7/26/2018 No HIGH POW 909-917-5I POMONA CA 91767 958583 No No No No 22432 3.357581
SCE-INT-NST-51116	Interconne SCE ONTARIO 91761 San Bernar Solar PV 7.694898 7.541	23	180 Rooftop Fixed	Residential 7/26/2018 8/14/2018 8/15/2018 No SUNERGY 951-736-2I CORONA CA 92881 1005730 Yes PPA Sunrun No No No No 8662.95 1.14878
SCE-INT-NST-51216	Interconne SCE ONTARIO 91762 San Bernar Solar PV 21.56429 21.133	9	270 Rooftop Fixed	Commercia 7/26/2018 8/8/2018 8/9/2018 No SUNLUX 909-757-0I ONTARIO CA 91761 1008374 No No No No 69000 3.265035
SCE-INT-NST-51256	Interconne SCE ONTARIO 91761 San Bernar Solar PV 3.687755 3.614	18	180 Rooftop Fixed	Residential 7/27/2018 7/27/2018 7/30/2018 No SunPower 1877-344-6E ROSEVILLE CA 95661 890895 No No No No 17085 4.727448
SCE-INT-NST-51265	Interconne SCE ONTARIO 91762 San Bernar Solar PV 6.461224 6.332	18	90 Rooftop Fixed	Residential 7/27/2018 7/27/2018 7/30/2018 No TESLA ENER1888-765-2I FREMONT CA 94555 888104 No No Yes Yes Tesla Energ 36864 5.821857
SCE-INT-NST-51322	Interconne SCE ONTARIO 91761 San Bernar Solar PV 3.687755 3.614	18	90 Rooftop Fixed	Residential 7/27/2018 7/27/2018 7/30/2018 No SunPower 1877-344-6E ROSEVILLE CA 95661 890895 Yes Lease DR Horton No No No No 20421.6 5.650691
SCE-INT-NST-51419	Interconne SCE ONTARIO 91762 San Bernar Solar PV 4.785714 4.69	18	180 Rooftop Fixed	Residential 7/28/2018 8/5/2018 8/7/2018 No P W R LOGI 925-570-7E REDLANDS CA 92373 556438 No No No No 21000 4.477611
SCE-INT-NST-51438	Interconne SCE ONTARIO 91761 San Bernar Solar PV 4.609184 4.517	18	270 Rooftop Fixed	Residential 7/30/2018 7/30/2018 7/31/2018 No SunPower 1877-344-6E ROSEVILLE CA 95661 890895 No No No No 21356.25 4.727972
SCE-INT-NST-51462	Interconne SCE ONTARIO 91761 San Bernar Solar PV 3.687755 3.614	23	90 Rooftop Fixed	Residential 7/30/2018 7/30/2018 7/31/2018 No SunPower 1877-344-6E ROSEVILLE CA 95661 890895 Yes Lease DR Horton No No No No 20421.6 5.650691
SCE-INT-NST-51480	Interconne SCE ONTARIO 91764 San Bernar Solar PV 4.878571 4.781	9	179 Rooftop Fixed	Residential 7/30/2018 7/30/2018 7/31/2018 No TESLA ENER1888-765-2I FREMONT CA 94555 888104 No No Yes Yes Tesla ENER 26624 5.568709
SCE-INT-NST-51614	Interconne SCE ONTARIO 91762 San Bernar Solar PV 3.687755 3.614	23	117 Rooftop Fixed	Residential 7/31/2018 7/31/2018 8/1/2018 No SunPower 1877-344-6E Roseville CA 95661 890895 Yes Lease KB Home No No No No 20421.6 5.650691
SCE-INT-NST-51640	Interconne SCE ONTARIO 91764 San Bernar Solar PV 3.784694 3.709	18	180 Rooftop Fixed	Residential 7/31/2018 8/9/2018 8/3/2018 No Progressve 909-570-4E Yucalpa CA 92399 926487 No No Yes PACE 18000 4.85306
SCE-INT-NST-51696	Interconne SCE ONTARIO 91762 San Bernar Solar PV 6.486253 6.357	19	359 Rooftop Fixed	Residential 7/31/2018 7/31/2018 8/1/2018 No Tesla Energ1888-765-2I Las Vegas NV 89119 888104 No No Yes Yes Tesla Energ 35916.8 5.64906
SCE-INT-NST-51824	Interconne SCE ONTARIO 91762 San Bernar Solar PV 6.443878 6.315	18	180 Rooftop Fixed	Residential 9/1/2018 9/21/2018 9/24/2018 No TESLA ENER1888-765-2I FREMONT CA 94555 888104 No No Yes No 5.61822
SCE-INT-NST-52052	Interconne SCE ONTARIO 91762 San Bernar Solar PV 5.311224 5.205	18	180 Rooftop Fixed	Residential 9/18/2018 9/18/2018 9/19/2018 No HOSOPO C951-902-6E HEMET CA 92545 1004233 Yes PPA Sunrun Inc No No No No 25684.2 4.934524
SCE-INT-NST-52070	Interconne SCE ONTARIO 91761 San Bernar Solar PV 4.943878 4.845	25	269 Rooftop Fixed	Residential 8/7/2018 8/7/2018 8/8/2018 No SUNRUN I 805-242-75 SAN LUIS O CA 93401 750184 No No Yes Yes Sunrun, Inc 19499.96 4.024759
SCE-INT-NST-52089	Interconne SCE ONTARIO 91762 San Bernar Solar PV 7.395918 7.248	34	90 Rooftop Fixed	Commercia 8/2/2018 8/7/2018 8/13/2018 No V3 ELECTRI 916-459-2E El Dorado I CA 95762 1000573 No No No No 54497.97 7.519035
SCE-INT-NST-52316	Interconne SCE ONTARIO 91761 San Bernar Solar PV 3.687755 3.614	5	117 Rooftop Fixed	Residential 8/5/2018 8/6/2018 8/7/2018 No SunPower 1877-344-6E Roseville CA 95661 890895 No No No No 35000 9.68456
SCE-INT-NST-52405	Interconne SCE ONTARIO 91764 San Bernar Solar PV 4.117347 4.035	17	180 Rooftop Fixed	Residential 8/6/2018 8/24/2018 8/27/2018 No PEACE OF 1951-634-7I TEMECULA CA 92592 883823 No No Yes hero No No No No 13000 3.221809
SCE-INT-NST-52473	Interconne SCE ONTARIO 91761 San Bernar Solar PV 3.687755 3.614	15	158 Rooftop Fixed	Residential 8/7/2018 8/7/2018 8/8/2018

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Application Preceding	Supercedin	Matched	C	Application/Utility	Service City/Service Zip	Service Cot	Technology	System Siz	System Siz	Storage Ca	Storage Siz	Inverter Siz	Tilt	Azimuth	Mounting	Tracking	Customer	5 App Received	App Complete	App Approved	EDecommis	Self Install	Installer Na	Installer Ph	Installer Cil	Installer St	Installer Zi	CSLB Numt	Third Party	Third Party	Third Party	Third Party	Face Financ	Face Financ	Electric Vel	Electric Vel	System Out	System Out	System Out	Total System	Itc Cost	Cost/Watt	NEM Tariff	Interconne	VNEM	NEF Project	V NEMPV or	Generator	Generator	Generator
SCE-INT-NST-53940				Interconne SCE	ONTARIO	91762	San Bernar Solar PV	2.917347	2.859					18	180	RoofTop	Fixed	Residential	8/16/2018	11/7/2018	11/8/2018	No	SunStreet	E949-450-5F Miami	FL	33172	1001133	Yes	PPA	Lennar Hor No	No	No	No	No	No	Yes	No	12160	4.253235	2	NEM-ST	None	No	NEMPV	LG320E1K-LG Elector	5				
SCE-INT-NST-53944				Interconne SCE	ONTARIO	91762	San Bernar Solar PV	2.62551	2.573					23	180	RoofTop	Fixed	Residential	8/16/2018	8/24/2018	10/10/2018	No	SunStreet	E949-450-5F Miami	FL	33172	1001133	Yes	PPA	Lennar Hor No	No	No	No	Yes	No	10944	4.2534	2	NEM-ST	None	No	NEMPV	LG320E1K-LG Elector	9						
SCE-INT-NST-53975				Interconne SCE	ONTARIO	91764	San Bernar Solar PV	3.773469	3.698					21	180	RoofTop	Fixed	Residential	8/16/2018	8/16/2018	8/17/2018	No	SEMPER	SC619-537-7E EL CAJON	CA	92020	978152	No	PPA	SUNNOVA No	No	No	No	Yes	No	19350	2.600	5.232558	2	NEM-ST	None	No	NEMPV	VBNH3305-Panasonic (12					
SCE-INT-NST-54264				Interconne SCE	ONTARIO	91762	San Bernar Solar PV	6.720918	6.286					24	185	RoofTop	Fixed	Residential	8/18/2018	8/17/2018	8/20/2018	No	SOUTH WE	714-582-35 GARDEN	CA	92843	1004667	Yes	PPA	SUNNOVA No	No	No	No	Yes	Yes	SUNNOVA	26000	2.600	3.559719	2	NEM-ST	None	No	NEMPV	Q.PEAK DU HanWha Q-	26				
SCE-INT-NST-54304				Interconne SCE	ONTARIO	91762	San Bernar Solar PV	6.720918	6.286					18	185	RoofTop	Fixed	Residential	8/18/2018	10/11/2018	10/15/2018	Yes						No						No	No	No	No	No	No	1822046	2	NEM-ST	None	No	NEMPV	Sunmodule SolarWorld	23			
SCE-INT-NST-54569				Interconne SCE	ONTARIO	91761	San Bernar Solar PV	5.530612	5.42					18	180	RoofTop	Fixed	Residential	8/21/2018	8/22/2018	8/23/2018	No	SunPower	I877-344-6F Roseville	CA	95661	890895	Yes	PPA	Lennar Hor No	No	No	No	No	Yes	No	10944	2.019188	2	NEM-ST	None	No	NEMPV	SPR-X21-3:SunPower	3					
SCE-INT-NST-54793				Interconne SCE	ONTARIO	91761	San Bernar Solar PV	4.609184	4.517					18	224	RoofTop	Fixed	Residential	8/22/2018	8/23/2018	8/23/2018	No	SunPower	I877-344-6F Roseville	CA	95661	890895	No	PPA	Lennar Hor No	No	No	No	No	Yes	No	16125	3.569847	2	NEM-ST	None	No	NEMPV	SPR-X21-3:SunPower	15					
SCE-INT-NST-54882				Interconne SCE	ONTARIO	91764	San Bernar Solar PV	4.117347	4.035					16	90	RoofTop	Fixed	Residential	8/22/2018	8/25/2018	8/27/2018	No	PEACE OF	1951-634-7F TEMECULA	CA	92592	883823	No						hero	No	No	13000	3.221809	2	NEM-ST	None	No	NEMPV	AC-350M/Axteck	13					
SCE-INT-NST-54893				Interconne SCE	ONTARIO	91762	San Bernar Solar PV	6.108163	5.986					22	Multiple	RoofTop	Fixed	Residential	10/2/2018	10/2/2018	10/3/2018	No	Hosopo Co	951-902-6F Hemet	CA	92545	1004233	Yes	PPA	Sunrun Inc No	No	No	No	Yes	Yes	Sunrun Inc	24332.16	4.064844	2	NEM-ST	None	No	NEMPV	LR6-60-285LONGI Gre	9					
SCE-INT-NST-54977				Interconne SCE	ONTARIO	91764	San Bernar Solar PV	3.983673	3.904					17	180	RoofTop	Fixed	Residential	9/18/2018	9/18/2018	9/19/2018	No	HOSOPO	C0951-537-6F Hemet	CA	92545	1004233	Yes	PPA	Sunrun Inc No	No	No	No	Yes	Yes	Sunrun Inc	19340	4.953893	2	NEM-ST	None	No	NEMPV	LR6-60-285LONGI Gre	15					
SCE-INT-NST-54987				Interconne SCE	ONTARIO	91762	San Bernar Solar PV	2.333673	2.287					18	270	RoofTop	Fixed	Residential	8/23/2018	10/24/2018	10/25/2018	No	SunStreet	E949-450-5F Miami	FL	33172	1001133	Yes	PPA	Lennar Hor No	No	No	No	Yes	No	9728	4.253607	2	NEM-ST	None	No	NEMPV	LG320E1K-LG Elector	8						
SCE-INT-NST-54991				Interconne SCE	ONTARIO	91762	San Bernar Solar PV	2.041837	2.001					18	270	RoofTop	Fixed	Residential	8/23/2018	10/23/2018	10/24/2018	No	SunStreet	E949-450-5F Miami	FL	33172	1001133	Yes	PPA	Lennar Hor No	No	No	No	Yes	No	8512	4.253873	2	NEM-ST	None	No	NEMPV	LG320E1K-LG Elector	7						
SCE-INT-NST-54996				Interconne SCE	ONTARIO	91762	San Bernar Solar PV	2.333673	2.287					23	270	RoofTop	Fixed	Residential	8/23/2018	10/24/2018	10/25/2018	No	SunStreet	E949-450-5F Miami	FL	33172	1001133	Yes	PPA	Lennar Hor No	No	No	No	Yes	No	9728	4.253607	2	NEM-ST	None	No	NEMPV	LG320E1K-LG Elector	8						
SCE-INT-NST-55002				Interconne SCE	ONTARIO	91762	San Bernar Solar PV	2.62551	2.573					18	270	RoofTop	Fixed	Residential	8/23/2018	9/5/2018	9/6/2018	No	SUNSTREET	E949-450-5F Miami	FL	33172	1001133	Yes	PPA	Lennar Hor No	No	No	No	Yes	No	10944	4.2534	2	NEM-ST	None	No	NEMPV	LG320E1K-LG Elector	9						
SCE-INT-NST-55020				Interconne SCE	ONTARIO	91762	San Bernar Solar PV	2.917347	2.859					18	270	RoofTop	Fixed	Residential	8/23/2018	9/5/2018	9/6/2018	No	SUNSTREET	E949-450-5F Miami	FL	33172	1001133	Yes	PPA	Lennar Hor No	No	No	No	Yes	No	12160	4.253235	2	NEM-ST	None	No	NEMPV	LG320E1K-LG Elector	10						
SCE-INT-NST-55024				Interconne SCE	ONTARIO	91762	San Bernar Solar PV	2.333673	2.287					18	90	RoofTop	Fixed	Residential	8/23/2018	9/5/2018	4/9/2019	No	SunStreet	E949-450-5F Miami	FL	33172	1001133	Yes	PPA	Lennar Hor No	No	No	No	Yes	No	9728	4.253607	2	NEM-ST	None	No	NEMPV	LG320E1K-LG Elector	2						
SCE-INT-NST-55029				Interconne SCE	ONTARIO	91762	San Bernar Solar PV	2.041837	2.001					23	180	RoofTop	Fixed	Residential	8/23/2018	10/9/2018	10/10/2018	No	SunStreet	E949-450-5F Miami	FL	33172	1001133	Yes	PPA	Lennar Hor No	No	No	No	Yes	No	8512	4.253873	2	NEM-ST	None	No	NEMPV	LG320E1K-LG Elector	7						
SCE-INT-NST-55036				Interconne SCE	ONTARIO	91762	San Bernar Solar PV	2.333673	2.287					18	90	RoofTop	Fixed	Residential	8/23/2018	9/5/2018	9/12/2018	No	SUNSTREET	E949-450-5F Miami	FL	33172	1001133	Yes	PPA	Lennar Hor No	No	No	No	Yes	No	9728	4.253607	2	NEM-ST	None	No	NEMPV	LG320E1K-LG Elector	2						
SCE-INT-NST-55065				Interconne SCE	ONTARIO	91761	San Bernar Solar PV	7.95918	7.64					16	180	RoofTop	Fixed	Residential	8/23/2018	10/29/2018	10/30/2018	No	SOLCIUS	LL 844-765-2F PROVO	UT	84604	976336	No						No	Yes	No	39948	5.228795	2	NEM-ST	None	No	NEMPV	Sunmodule SolarWorld	15					
SCE-INT-NST-55164				Interconne SCE	ONTARIO	91764	San Bernar Solar PV	5.056122	4.955					1	215	RoofTop	Fixed	Residential	8/23/2018	8/28/2018	8/29/2018	No	SOL RELIAB	310-993-1F VALLEY VIL	CA	91601	842003	No						No	No	21000	4.238143	2	NEM-ST	None	No	NEMPV	Sunmodule SolarWorld	9						
SCE-INT-NST-55373				Interconne SCE	ONTARIO	91762	San Bernar Solar PV	5.129592	5.027					24	260	RoofTop	Fixed	Residential	8/24/2018	9/6/2018	9/7/2018	No	SUNWORK	916-496-9F ROSEVILLE	CA	95678	441690	No						No	No	19764	3.931569	2	NEM-ST	None	No	NEMPV	Q.PEAK-G4 HanWha Q-	18						
SCE-INT-NST-55660				Interconne SCE	ONTARIO	91762	San Bernar Solar PV	2.62551	2.573					18	180	RoofTop	Fixed	Residential	8/28/2018	10/8/2018	10/9/2018	No	SunStreet	E949-450-5F Miami	FL	33172	1001133	Yes	PPA	Lennar Hor No	No	No	No	Yes	No	10944	4.2534	2	NEM-ST	None	No	NEMPV	LG320E1K-LG Elector	9						
SCE-INT-NST-55664				Interconne SCE	ONTARIO	91762	San Bernar Solar PV	2.62551	2.573					23	180	RoofTop	Fixed	Residential	8/28/2018	10/8/2018	10/9/2018	No	SunStreet	E949-450-5F Miami	FL	33172	1001133	Yes	PPA	Lennar Hor No	No	No	No	Yes	No	10944	4.2534	2	NEM-ST	None	No	NEMPV	LG320E1K-LG Elector	3						
SCE-INT-NST-55673				Interconne SCE	ONTARIO	91762	San Bernar Solar PV	2.62551	2.573					18	90	RoofTop	Fixed	Residential	8/28/2018	10/8/2018	10/9/2018	No	SunStreet	E949-450-5F Miami	FL	33172	1001133	Yes	PPA	Lennar Hor No	No	No	No	Yes	No	10944	4.2534	2	NEM-ST	None	No	NEMPV	LG320E1K-LG Elector	4						
SCE-INT-NST-55675				Interconne SCE	ONTARIO	91762	San Bernar Solar PV	2.917347	2.859					18	180	RoofTop	Fixed	Residential	8/28/2018	10/8/2018	10/9/2018	No	SunStreet	E949-450-5F Miami	FL	33172	1001133	Yes	PPA	Lennar Hor No	No	No	No	Yes	No	12160	4.253235	2	NEM-ST	None	No	NEMPV	LG320E1K-LG Elector	10						
SCE-INT-NST-55677				Interconne SCE	ONTARIO	91762	San Bernar Solar PV	2.917347	2.859					18	180	RoofTop	Fixed	Residential	8/28/2018	10/8/2018	10/9/2018	No	SunStreet	E949-450-5F Miami	FL	33172	1001133	Yes	PPA	Lennar Hor No	No	No	No	Yes	No	12160	4.253235	2	NEM-ST	None	No	NEMPV	LG320E1K-LG Elector	10						
SCE-INT-NST-55684				Interconne SCE	ONTARIO	91762	San Bernar Solar PV	2.917347	2.859					23	180	RoofTop	Fixed	Residential	8/28/2018	11/21/2018	11/26/2018	No	SunStreet	E949-450-5F Miami	FL	33172	1001133	Yes	PPA	Lennar Hor No	No	No	No	Yes	No	12160	4.253235	2	NEM-ST	None	No	NEMPV	LG320E1K-LG Elector	10						
SCE-INT-NST-55689				Interconne SCE	ONTARIO	91762	San Bernar Solar PV	2.62551	2.573					18	180	RoofTop	Fixed	Residential	8/28/2018	9/24/2018	9/25/2018	No	SUNSTREET	E949-450-5F Miami	FL	33172	1001133	Yes	PPA	Lennar Hor No	No	No	No	Yes	No	10944	4.2534	2	NEM-ST	None	No	NEMPV	LG320E1K-LG Elector	2						
SCE-INT-NST-55696				Interconne SCE	ONTARIO	91762	San Bernar Solar PV	2.62551	2.573					18	180	RoofTop	Fixed	Residential	8/28/2018	9/24/2018	9/25/2018	No	SUNSTREET	E949-450-5F Miami	FL	33172	1001133	Yes	PPA	Lennar Hor No	No	No	No	Yes																

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Application Preceding 1 Supercedin Matched C Application/Utility	Service City/Service Zip Service Co. Technology System Siz System Siz Storage Ca Storage Siz Inverter Siz Tilt	Azimuth	Mounting	Tracking	Customer 5 App Received	App Complete	App Approved	EDecommis	Self Install	Installer Na	Installer Ph	Installer Cil	Installer St	Installer Zi	CSLB Numt	Third Party	Third Party	Third Party	Face Financ	Face Financ	Electric Vel	Electric Vel	System Out	System Out	Total System Itc	Cost Base	Cost/Watt	NEM Tariff	Interconne	VNEM	NEF Project	V NEMPV or	Generator	Generator	Generator			
SCE-INT-NST-74309	Interconne SCE ONTARIO 91761 SAN BERN/Solar PV 4.609184 4.517	18	270	RoofTop	Fixed	Residential	1/11/2019	1/22/2019	1/23/2019	No	SunPower	1877-344-66	Roseville CA	95661	890895	Yes	Lease	DR Horton	No	No	No	Yes	No															
SCE-INT-NST-74315	Interconne SCE ONTARIO 91761 SAN BERN/Solar PV 4.526531 4.436	18	180	RoofTop	Fixed	Residential	1/11/2019	1/14/2019	1/17/2019	No	Evolution	E 562-923-01	Downey CA	90241	944493	No	No	No	No	No	Yes	No			20500	25527	5.651317	2	NEM-ST	None	No	NEMPV	SPR-X21-3:SunPower			15		
SCE-INT-NST-74328	Interconne SCE ONTARIO 91761 SAN BERN/Solar PV 2.765306 2.71	23	180	RoofTop	Fixed	Residential	1/11/2019	1/11/2019	1/16/2019	No	SunPower	1877-344-66	Roseville CA	95661	890895	No	No	No	No	No	Yes	No			12813.75		4.62128	2	NEM-ST	None	No	NEMPV	SLA300M_SilFab			8		
SCE-INT-NST-74425	Interconne SCE ONTARIO 91762 SAN BERN/Solar PV 3.687755 3.614	18	180	RoofTop	Fixed	Residential	1/11/2019	1/11/2019	1/18/2019	No	SunPower	1877-344-66	Roseville CA	95661	890895	Yes	Lease	TRI Pointe	No	No	Yes	No					20421.6	5.650691	2	NEM-ST	None	No	NEMPV	SPR-X21-3:SunPower			12	
SCE-INT-NST-74442	Interconne SCE ONTARIO 91762 SAN BERN/Solar PV 3.687755 3.614	18	180	RoofTop	Fixed	Residential	1/11/2019	1/11/2019	1/18/2019	No	SunPower	1877-344-66	Roseville CA	95661	890895	Yes	Lease	TRI Pointe	No	No	Yes	No					20421.6	5.650691	2	NEM-ST	None	No	NEMPV	SPR-X21-3:SunPower			12	
SCE-INT-NST-74518	Interconne SCE ONTARIO 91764 SAN BERN/Solar PV 3.19898 6.075	22	90	RoofTop	Fixed	Residential	1/14/2019	1/14/2019	1/15/2019	No	Vivint Solar	385-352-01	Lehi UT	84043	973756	Yes	PPA	Vivint Solar	No	No	Yes	Yes	SolarEdge Technologie			35191.8	5.792888	2	NEM-ST	None	No	NEMPV	Q.PEAK DU Hanwha Q-			6		
SCE-INT-NST-74530	Interconne SCE ONTARIO 91762 SAN BERN/Solar PV 2.765306 2.71	18	180	RoofTop	Fixed	Residential	1/14/2019	1/14/2019	1/15/2019	No	SunPower	1877-344-66	Roseville CA	95661	890895	Yes	Lease	Trumark Hk	No	No	Yes	No					15316.2	5.651734	2	NEM-ST	None	No	NEMPV	SPR-X21-3:SunPower			9	
SCE-INT-NST-74563	Interconne SCE ONTARIO 91762 SAN BERN/Solar PV/St 4.793878 4.698	18	250	RoofTop	Fixed	Residential	1/14/2019	1/14/2019	1/19/2019	No	SUNRUN	1805-242-75	SAN LUIS O CA	93401	750184	No	No	No	No	No	Yes	Yes	Sunrun, Inc	27500			5.853554	2	NEM-ST	None	No	NEMPV	REC290TP2REC Solar			10		
SCE-INT-NST-74597	Interconne SCE ONTARIO 91762 SAN BERN/Solar PV 2.85 2.793	9	180	RoofTop	Fixed	Residential	1/14/2019	1/16/2019	1/18/2019	No	Raytek Inc	310-477-7	Santa Mon CA	90403	1018241	Yes	PPA	Sun Run Inst	No	No	Yes	Yes	Sunrun, Inc	27500			5.853554	2	NEM-ST	None	No	NEMPV	Q.PEAK G4 Hanwha Q-			10		
SCE-INT-NST-74653	Interconne SCE ONTARIO 91762 SAN BERN/Solar PV 3.687755 3.614	18	119	RoofTop	Fixed	Residential	1/15/2019	1/15/2019	1/19/2019	No	SunPower	1877-344-66	Roseville CA	95661	890895	Yes	Lease	TRI Pointe	No	No	Yes	No					20421.6	5.650691	2	NEM-ST	None	No	NEMPV	SPR-X21-3:SunPower			12	
SCE-INT-NST-74661	Interconne SCE ONTARIO 91762 SAN BERN/Solar PV 2.765306 2.71	18	262	RoofTop	Fixed	Residential	1/15/2019	1/15/2019	1/16/2019	No	SunPower	1877-344-66	Roseville CA	95661	890895	Yes	Lease	Trumark Hk	No	No	Yes	No					15316.2	5.651734	2	NEM-ST	None	No	NEMPV	SPR-X21-3:SunPower			9	
SCE-INT-NST-74665	Interconne SCE ONTARIO 91762 SAN BERN/Solar PV 2.765306 2.71	18	262	RoofTop	Fixed	Residential	1/15/2019	1/15/2019	1/16/2019	No	SunPower	1877-344-66	Roseville CA	95661	890895	Yes	Lease	Trumark Hk	No	No	Yes	No					15316.2	5.651734	2	NEM-ST	None	No	NEMPV	SPR-X21-3:SunPower			9	
SCE-INT-NST-74791	Interconne SCE ONTARIO 91762 SAN BERN/Solar PV 2.765306 2.71	23	270	RoofTop	Fixed	Residential	1/15/2019	1/15/2019	1/19/2019	No	SunPower	1877-344-66	Roseville CA	95661	890895	Yes	Lease	DR Horton	No	No	Yes	No					15316.2	5.651734	2	NEM-ST	None	No	NEMPV	SPR-X21-3:SunPower			9	
SCE-INT-NST-74803	Interconne SCE ONTARIO 91761 SAN BERN/Solar PV 2.765306 2.71	18	270	RoofTop	Fixed	Residential	1/15/2019	1/15/2019	1/19/2019	No	SunPower	1877-344-66	Roseville CA	95661	890895	Yes	Lease	DR Horton	No	No	Yes	No					15316.2	5.651734	2	NEM-ST	None	No	NEMPV	SPR-X21-3:SunPower			12	
SCE-INT-NST-74812	Interconne SCE ONTARIO 91762 SAN BERN/Solar PV 3.687755 3.614	18	180	RoofTop	Fixed	Residential	1/15/2019	1/15/2019	1/19/2019	No	SunPower	1877-344-66	Roseville CA	95661	890895	Yes	Lease	TRI Pointe	No	No	Yes	No					20421.6	5.650691	2	NEM-ST	None	No	NEMPV	SPR-X21-3:SunPower			12	
SCE-INT-NST-74821	Interconne SCE ONTARIO 91761 SAN BERN/Solar PV 2.765306 2.71	18	270	RoofTop	Fixed	Residential	1/15/2019	1/16/2019	1/19/2019	No	SunPower	1877-344-66	Roseville CA	95661	890895	Yes	Lease	DR Horton	No	No	Yes	No					15316.2	5.651734	2	NEM-ST	None	No	NEMPV	SPR-X21-3:SunPower			12	
SCE-INT-NST-74826	Interconne SCE ONTARIO 91762 SAN BERN/Solar PV 3.687755 3.614	18	180	RoofTop	Fixed	Residential	1/15/2019	1/15/2019	1/19/2019	No	SunPower	1877-344-66	Roseville CA	95661	890895	Yes	Lease	TRI Pointe	No	No	Yes	No					20421.6	5.650691	2	NEM-ST	None	No	NEMPV	SPR-X21-3:SunPower			9	
SCE-INT-NST-74842	Interconne SCE ONTARIO 91761 SAN BERN/Solar PV 2.85 2.793	18	180	RoofTop	Fixed	Residential	2/20/2019	3/6/2019	3/7/2019	No	Solar Spect	951-916-81	Oakland CA	94607	1032817	No	No	No	No	No	Yes	No			16518		5.91407	2	NEM-ST	None	No	NEMPV	Q.PEAK-G4 Hanwha Q-			10		
SCE-INT-NST-74850	Interconne SCE ONTARIO 91762 SAN BERN/Solar PV 2.765306 2.71	18	172	RoofTop	Fixed	Residential	1/15/2019	1/15/2019	1/16/2019	No	SunPower	1877-344-66	Roseville CA	95661	890895	Yes	Lease	Trumark Hk	No	No	Yes	No					15316.2	5.651734	2	NEM-ST	None	No	NEMPV	SPR-X21-3:SunPower			10	
SCE-INT-NST-74891	Interconne SCE ONTARIO 91764 SAN BERN/Solar PV 11.62857 11.396	19	181	RoofTop	Fixed	Residential	1/16/2019	1/16/2019	1/18/2019	No	Vivint Solar	385-352-01	Lehi UT	84043	973756	Yes	PPA	Vivint Solar	No	No	Yes	Yes	SolarEdge Technologie	21850.95			1.917422	2	NEM-ST	None	No	NEMPV	JKM285M/Jinko Solar			10		
SCE-INT-NST-74897	Interconne SCE ONTARIO 91761 SAN BERN/Solar PV 2.952041 2.893	20	269	RoofTop	Fixed	Residential	1/16/2019	1/16/2019	1/17/2019	No	Vivint Solar	385-352-01	Lehi UT	84043	973756	Yes	PPA	Vivint Solar	No	No	Yes	Yes	SolarEdge Technologie	16758			5.792602	2	NEM-ST	None	No	NEMPV	Q.PEAK DU Hanwha Q-			16		
SCE-INT-NST-74905	Interconne SCE ONTARIO 91762 SAN BERN/Solar PV 2.765306 2.71	18	172	RoofTop	Fixed	Residential	1/16/2019	1/16/2019	1/17/2019	No	SunPower	1877-344-66	Roseville CA	95661	890895	Yes	Lease	Trumark Hk	No	No	Yes	No					15316.2	5.651734	2	NEM-ST	None	No	NEMPV	SPR-X21-3:SunPower			9	
SCE-INT-NST-74976	Interconne SCE ONTARIO 91758 SAN BERN/Solar PV 2.33673 2.287	23	131	RoofTop	Fixed	Residential	1/16/2019	3/25/2019	3/28/2019	No	SunStreet	1949-450-58	Miami FL	33172	1001133	Yes	PPA	SUNSTREETNO	No	No	Yes	No					9728	4.253607	2	NEM-ST	None	No	NEMPV	LG320E1K-LG Elector			8	
SCE-INT-NST-74985	Interconne SCE ONTARIO 91758 SAN BERN/Solar PV 2.33673 2.287	18	131	RoofTop	Fixed	Residential	1/16/2019	4/1/2019	4/5/2019	No	SunStreet	1949-450-58	Miami FL	33172	1001133	Yes	PPA	SUNSTREETNO	No	No	Yes	No					9728	4.253607	2	NEM-ST	None	No	NEMPV	LG320E1K-LG Elector			8	
SCE-INT-NST-74987	Interconne SCE ONTARIO 91758 SAN BERN/Solar PV 2.33673 2.287	27	131	RoofTop	Fixed	Residential	1/16/2019	3/25/2019	3/28/2019	No	SunStreet	1949-450-58	Miami FL	33172	1001133	Yes	PPA	SUNSTREETNO	No	No	Yes	No					9728	4.253607	2	NEM-ST	None	No	NEMPV	LG320E1K-LG Elector			8	
SCE-INT-NST-74988	Interconne SCE ONTARIO 91761 SAN BERN/Solar PV 3.515306 3.445	20	324	RoofTop	Fixed	Residential	1/16/2019	1/16/2019	1/17/2019	No	SUNRUN	1805-242-75	SAN LUIS O CA	93401	750184	Yes	PPA	Sunrun Inst	No	No	Yes	Yes	Sunrun, Inc					8306	2.41103	2	NEM-ST	None	No	NEMPV	REC290TP2REC Solar			5
SCE-INT-NST-74990	Interconne SCE ONTARIO 91762 SAN BERN/Solar PV 2.33673 2.287	18	221	RoofTop	Fixed	Residential	1/16/2019	3/25/2019	3/28/2019	No	SunStreet	1949-450-58	Miami FL	33172	1001133	Yes	PPA	SUNSTREETNO	No	No	Yes	No					9728	4.253607	2	NEM-ST	None	No	NEMPV	LG320E1K-LG Elector			8	
SCE-INT-NST-74994	Interconne SCE ONTARIO 91762 SAN BERN/Solar PV 2.33673 2.287	18	131	RoofTop	Fixed	Residential	1/16/2019	3/25/2019	3/28/2019	No	SunStreet	1949-450-58	Miami FL	33172	1001133	Yes	PPA	SUNSTREETNO	No	No	Yes	No					9728	4.253607	2	NEM-ST	None	No	NEMPV	LG320E1K-LG Elector			8	
SCE-INT-NST-75000	Interconne SCE ONTARIO 91761 SAN BERN/Solar PV 5.984694 5.865	25	270	RoofTop	Fixed	Residential	2/20/2019	3/5/2019	3/6/2019	No	SOLAR SPE	951-916-81	OAKLAND CA	94607	1032817	No	No	No	No	No	Yes	No			26865		4.580562	2	NEM-ST	None	No	NEMPV	Q.PEAK-G4 Hanwha Q-			21		
SCE-INT-NST-75011	Interconne SCE ONTARIO 91762 SAN BERN/Solar PV 3.687755 3.614	18	95	RoofTop	Fixed	Residential	1/16/2019	1/18/2019	1/22/2019	No	SunPower	1877-344-66	Roseville CA	95661	890895	No	No	No	No	No	Yes	No			17085		4.727448	2	NEM-ST	None	No	NEMPV	SPR-X21-3:SunPower			12		
SCE-INT-NST-75012	Interconne SCE ONTARIO 91761 SAN BERN/Solar PV 2.765306 2.71	23	180	RoofTop	Fixed	Residential	1/16/2019	1/16/2019	1/19/2019	No	SunPower	1877-344-66	Roseville CA	95661	890895	Yes	Lease	DR Horton	No	No	Yes	No			15316.2	5.651734	2	NEM-ST	None	No	NEMPV	SPR-X21-3:SunPower			9			
SCE-INT-NST-75024	Interconne SCE ONTARIO 91762 SAN BERN/Solar PV/St 8.05 7.889	18	270	RoofTop	Fixed	Residential	1/16/2019	1/16/2019	1/23/2019	No	TESLA ENER	888-765-2	FREMONT CA	94555	888104	No	No	No	No	No	Yes	Yes	Tesla Energy	48764			6.181265	2	NEM-ST	None	No	NEMPV	SC325 SolarCity			26		
SCE																																						

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Application Preceding 1 Supercedin Matched C Application/Utility	Service City/Service Zip Service Cot Technology System Siz System Siz Storage Ca Storage Siz Inverter Siz Tilt	Azimuth	Mounting I Tracking	Customer 5 App Received I App Complete App Approved E Decommis:Self Installe Installer Na Installer Ph Installer Ct Installer St: Installer Zi:CSLB Numt Third Party Third Party Third Party Pace Finan Pace Finan Electric Vel Electric Vel System Out/ System Out/ System Out/ Total System Itc Cost Ba: Cost/Watt NEM Tariff Interconne V NEM, NEF Project is V NEMPV or Generator Generator Generator	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212	213	214	215	216	217	218	219	220	221	222	223	224	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239	240	241	242	243	244	245	246	247	248	249	250	251	252	253	254	255	256	257	258	259	260	261	262	263	264	265	266	267	268	269	270	271	272	273	274	275	276	277	278	279	280	281	282	283	284	285	286	287	288	289	290	291	292	293	294	295	296	297	298	299	300	301	302	303	304	305	306	307	308	309	310	311	312	313	314	315	316	317	318	319	320	321	322	323	324	325	326	327	328	329	330	331	332	333	334	335	336	337	338	339	340	341	342	343	344	345	346	347	348	349	350	351	352	353	354	355	356	357	358	359	360	361	362	363	364	365	366	367	368	369	370	371	372	373	374	375	376	377	378	379	380	381	382	383	384	385	386	387	388	389	390	391	392	393	394	395	396	397	398	399	400	401	402	403	404	405	406	407	408	409	410	411	412	413	414	415	416	417	418	419	420	421	422	423	424	425	426	427	428	429	430	431	432	433	434	435	436	437	438	439	440	441	442	443	444	445	446	447	448	449	450	451	452	453	454	455	456	457	458	459	460	461	462	463	464	465	466	467	468	469	470	471	472	473	474	475	476	477	478	479	480	481	482	483	484	485	486	487	488	489	490	491	492	493	494	495	496	497	498	499	500	501	502	503	504	505	506	507	508	509	510	511	512	513	514	515	516	517	518	519	520	521	522	523	524	525	526	527	528	529	530	531	532	533	534	535	536	537	538	539	540	541	542	543	544	545	546	547	548	549	550	551	552	553	554	555	556	557	558	559	560	561	562	563	564	565	566	567	568	569	570	571	572	573	574	575	576	577	578	579	580	581	582	583	584	585	586	587	588	589	590	591	592	593	594	595	596	597	598	599	600	601	602	603	604	605	606	607	608	609	610	611	612	613	614	615	616	617	618	619	620	621	622	623	624	625	626	627	628	629	630	631	632	633	634	635	636	637	638	639	640	641	642	643	644	645	646	647	648	649	650	651	652	653	654	655	656	657	658	659	660	661	662	663	664	665	666	667	668	669	670	671	672	673	674	675	676	677	678	679	680	681	682	683	684	685	686	687	688	689	690	691	692	693	694	695	696	697	698	699	700	701	702	703	704	705	706	707	708	709	710	711	712	713	714	715	716	717	718	719	720	721	722	723	724	725	726	727	728	729	730	731	732	733	734	735	736	737	738	739	740	741	742	743	744	745	746	747	748	749	750	751	752	753	754	755	756	757	758	759	760	761	762	763	764	765	766	767	768	769	770	771	772	773	774	775	776	777	778	779	780	781	782	783	784	785	786	787	788	789	790	791	792	793	794	795	796	797	798	799	800	801	802	803	804	805	806	807	808	809	810	811	812	813	814	815	816	817	818	819	820	821	822	823	824	825	826	827	828	829	830	831	832	833	834	835	836	837	838	839	840	841	842	843	844	845	846	847	848	849	850	851	852	853	854	855	856	857	858	859	860	861	862	863	864	865	866	867	868	869	870	871	872	873	874	875	876	877	878	879	880	881	882	883	884	885	886	887	888	889	890	891	892	893	894	895	896	897	898	899	900	901	902	903	904	905	906	907	908	909	910	911	912	913	914	915	916	917	918	919	920	921	922	923	924	925	926	927	928	929	930	931	932	933	934	935	936	937	938	939	940	941	942	943	944	945	946	947	948	949	950	951	952	953	954	955	956	957	958	959	960	961	962	963	964	965	966	967	968	969	970	971	972	973	974	975	976	977	978	979	980	981	982	983	984	985	986	987	988	989	990	991	992	993	994	995	996	997	998	999	1000
SCE-INT-NST-78297	Interconne SCE	ONTARIO	91761	San Bernar Solar PV	5.457143	5.348	9	180	RoofTop	Fixed	Residential	2/11/2019	2/11/2019	2/12/2019	No	SUNRUN I# 805-242-7: SAN LUIS O CA	93401	750184	Yes	PPA	Sunrun Inst No	No	No	Yes	Yes	Sunrun, Inc	47606.32	10887	2.035714	2	NEM-ST	None	No	NEMPV	LG330NIC-LG Elector	18																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
SCE-INT-NST-78341	Interconne SCE	ONTARIO	91761	San Bernar Solar PV	5.548989	8.378	23	150	RoofTop	Fixed	Residential	2/11/2019	2/12/2019	2/22/2019	No	SUNERGY (951-496-8: CORONA CA	92881	1005730	No	PPA	Sunrun No	No	No	Yes	Yes	Sunrun, Inc	47606.32	10887	2.035714	2	NEM-ST	None	No	NEMPV	Q.PEAK-G4 Hanwha Q-	18																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
SCE-INT-NST-78454	Interconne SCE	ONTARIO	91764	San Bernar Solar PV	4.968367	4.869	16	181	RoofTop	Fixed	Residential	2/12/2019	2/25/2019	2/27/2019	No	BRIGHT PL#888-997-44: AUBURN MA	1501	1020761	Yes	PPA	Sunrun No	No	No	Yes	Yes	Sunrun, Inc	47606.32	10887	2.035714	2	NEM-ST	None	No	NEMPV	Q.PEAK-G4 Hanwha Q-	18																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
SCE-INT-NST-78645	Interconne SCE	ONTARIO	91762	San Bernar Solar PV	2.765306	2.71	18	172	RoofTop	Fixed	Residential	2/13/2019	2/13/2019	2/14/2019	No	SunPower I877-344-66: ROSEVILLE CA	95661	890895	Yes	Lease	Trumark Ht No	No	No	Yes	No		12813.75	15316.2	5.651734	2	NEM-ST	None	No	NEMPV	SPR-X21-3:SunPower	9																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
SCE-INT-NST-78682	Interconne SCE	ONTARIO	91762	San Bernar Solar PV	2.765306	2.71	18	263	RoofTop	Fixed	Residential	2/13/2019	2/13/2019	2/14/2019	No	SunPower I877-344-66: ROSEVILLE CA	95661	890895	Yes	Lease	Trumark Ht No	No	No	Yes	No		12813.75	15316.2	5.651734	2	NEM-ST	None	No	NEMPV	SPR-X21-3:SunPower	9																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
SCE-INT-NST-78777	Interconne SCE	ONTARIO	91762	San Bernar Solar PV	3.687755	3.614	18	121	RoofTop	Fixed	Residential	2/13/2019	3/12/2019	3/13/2019	No	SunPower I877-344-66: ROSEVILLE CA	95661	890895	Yes	Lease	Trumark Ht No	No	No	Yes	No		17085	4.727448	2	NEM-ST	None	No	NEMPV	SPR-X21-3:SunPower	12																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
SCE-INT-NST-78795	Interconne SCE	ONTARIO	91762	San Bernar Solar PV	5.293878	5.188	18	100	RoofTop	Fixed	Residential	2/13/2019	2/14/2019	2/21/2019	No	FREEVOLT I760-345-0: PALM DESE CA	92211	1029455	No	Lease	DR Horton No	No	No	Yes	No		28914	5.573245	2	NEM-ST	None	No	NEMPV	SW Premiu Freevolt	10																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
SCE-INT-NST-78858	Interconne SCE	ONTARIO	91761	San Bernar Solar PV	2.765306	2.71	18	270	RoofTop	Fixed	Residential	2/14/2019	2/15/2019	2/22/2019	No	SunPower I877-344-66: ROSEVILLE CA	95661	890895	Yes	Lease	DR Horton No	No	No	Yes	No		12813.75	4.728321	2	NEM-ST	None	No	NEMPV	SPR-X21-3:SunPower	9																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
SCE-INT-NST-78889	Interconne SCE	ONTARIO	91764	San Bernar Solar PV	4.865306	4.768	19	270	RoofTop	Fixed	Residential	2/14/2019	2/18/2019	2/21/2019	No	CALL ONE S 714-242-3: IRVINE CA	92612																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										

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Application Preceding 1	Supercedin Matched C	Application/Utility	Service City/Service Zip	Service Cot	Technology	System Siz	System Siz	Storage Ca	Storage Siz	Inverter Siz	Tilt	Azimuth	Mounting	Tracking	Customer 5	App Received	App Complete	App Approved	EDecommis	Self Install	Installer Na	Installer Ph	Installer Ctl	Installer St	Installer Zi	CSLB Numt	Third Party	Third Party	Third Party	Third Party	Face	Pace	Finan	Electric Vel	Electric Vel	System Out	System Out	Total Syste	Itc Cost	Cost/Watt	NEM Tariff	Interconne	VNEM	NEF Project	V NEMPV or	Generator	Generator	Generator
SCE-INT-NST-89148		Interconne SCE	ONTARIO	91761	San Bernar Solar PV	2.782653	2.727					23	180	RoofTop	Fixed	Residential	5/7/2019	6/11/2019	6/15/2019	No	SunStreet	E949-450-5f MIAMI	FL	33172	1001133	Yes	PPA	Lennar Hor No	No	No	No	No	No	Yes	Yes	No	11590	4.250091	2	NEM-ST	None	No	NEMPV	BVM6610A	Boviet Sola	10		
SCE-INT-NST-89150		Interconne SCE	ONTARIO	91761	San Bernar Solar PV	2.782653	2.727					18	180	RoofTop	Fixed	Residential	5/7/2019	6/5/2019	6/11/2019	No	SunStreet	E949-450-5f MIAMI	FL	33172	1001133	Yes	PPA	Lennar Hor No	No	No	No	No	Yes	Yes	No	11590	4.250091	2	NEM-ST	None	No	NEMPV	BVM6610A	Boviet Sola	10			
SCE-INT-NST-89156		Interconne SCE	ONTARIO	91761	San Bernar Solar PV	2.504082	2.454					23	180	RoofTop	Fixed	Residential	5/7/2019	6/5/2019	6/11/2019	No	SunStreet	E949-450-5f MIAMI	FL	33172	1001133	Yes	PPA	Lennar Hor No	No	No	No	No	Yes	Yes	No	10412	4.242868	2	NEM-ST	None	No	NEMPV	BVM6610A	Boviet Sola	9			
SCE-INT-NST-89179		Interconne SCE	ONTARIO	91761	San Bernar Solar PV	2.782653	2.727					18	180	RoofTop	Fixed	Residential	5/7/2019	8/23/2019	8/26/2019	No	SunStreet	E949-450-5f MIAMI	FL	33172	1001133	Yes	PPA	Lennar Hor No	No	No	No	No	Yes	Yes	No	11590	4.250091	2	NEM-ST	None	No	NEMPV	BVM6610A	Boviet Sola	8			
SCE-INT-NST-89181		Interconne SCE	ONTARIO	91762	San Bernar Solar PV	2.504082	2.454					23	180	RoofTop	Fixed	Residential	5/7/2019	6/28/2019	7/5/2019	No	SunStreet	E949-450-5f MIAMI	FL	33172	1001133	Yes	PPA	Lennar Hor No	No	No	No	No	Yes	Yes	No	10412	4.242868	2	NEM-ST	None	No	NEMPV	BVM6610A	Boviet Sola	10			
SCE-INT-NST-89195		Interconne SCE	ONTARIO	91761	San Bernar Solar PV	2.782653	2.727					18	180	RoofTop	Fixed	Residential	5/7/2019	6/10/2019	6/13/2019	No	SunStreet	E949-450-5f MIAMI	FL	33172	1001133	Yes	PPA	Lennar Hor No	No	No	No	No	Yes	Yes	No	11590	4.250091	2	NEM-ST	None	No	NEMPV	BVM6610A	Boviet Sola	9			
SCE-INT-NST-89199		Interconne SCE	ONTARIO	91761	San Bernar Solar PV	2.782653	2.727					18	180	RoofTop	Fixed	Residential	5/7/2019	8/23/2019	8/26/2019	No	SunStreet	E949-450-5f MIAMI	FL	33172	1001133	Yes	PPA	Lennar Hor No	No	No	No	No	Yes	Yes	No	11590	4.250091	2	NEM-ST	None	No	NEMPV	BVM6610A	Boviet Sola	10			
SCE-INT-NST-89204		Interconne SCE	ONTARIO	91762	San Bernar Solar PV	2.15102	2.108					18	90	RoofTop	Fixed	Residential	5/7/2019	6/24/2019	6/27/2019	No	SunPower	I877-344-6f ROSEVILLE	CA	95661	890895	No	No	No	No	No	No	No	No	No	Yes	No	9966.25	4.727822	2	NEM-ST	None	No	NEMPV	SPR-X21-3f SunPower	7			
SCE-INT-NST-89205		Interconne SCE	ONTARIO	91762	San Bernar Solar PV	2.782653	2.727					18	180	RoofTop	Fixed	Residential	5/7/2019	9/16/2019	9/18/2019	No	SunStreet	E949-450-5f MIAMI	FL	33172	1001133	Yes	PPA	Lennar Hor No	No	No	No	No	Yes	Yes	No	11590	4.250091	2	NEM-ST	None	No	NEMPV	BVM6610A	Boviet Sola	10			
SCE-INT-NST-89207		Interconne SCE	ONTARIO	91761	San Bernar Solar PV	2.504082	2.454					23	180	RoofTop	Fixed	Residential	5/7/2019	9/15/2019	7/30/2019	No	SunStreet	E949-450-5f MIAMI	FL	33172	1001133	Yes	PPA	Lennar Hor No	No	No	No	No	Yes	Yes	No	10412	4.242868	2	NEM-ST	None	No	NEMPV	BVM6610A	Boviet Sola	7			
SCE-INT-NST-89208		Interconne SCE	ONTARIO	91761	San Bernar Solar PV	5.414286	5.306					23	180	RoofTop	Fixed	Residential	5/7/2019	5/7/2019	5/15/2019	No	V3 Electric	916-459-2f El Dorado I CA	CA	95762	1000573	Yes	PPA	SunRun	No	No	No	No	Yes	Yes	SunRun	6154.29	1.159873	2	NEM-ST	None	No	NEMPV	Q.PEAK-G4 Hanwha Q-	11				
SCE-INT-NST-89474		Interconne SCE	ONTARIO	91761	San Bernar Solar PV	8.622425	8.097					22	90	RoofTop	Fixed	Residential	5/9/2019	5/9/2019	5/10/2019	No	SUNRUN	IN 805-242-7f SAN LUIS O CA	CA	93401	750184	No	No	No	No	No	No	No	Yes	Yes	Sunrun, Inc	33750.26	4.168242	2	NEM-ST	None	No	NEMPV	REC290TP2REC Solar	14				
SCE-INT-NST-89497		Interconne SCE	ONTARIO	91764	San Bernar Solar PV	2.782653	2.727					18	270	RoofTop	Fixed	Residential	5/9/2019	5/9/2019	5/10/2019	No	SunPower	I877-344-6f ROSEVILLE	CA	95661	890895	Yes	Lease	KB Home	No	No	No	No	Yes	Yes	No	15316.2	5.651734	2	NEM-ST	None	No	NEMPV	SPR-X21-3f SunPower	9				
SCE-INT-NST-89616		Interconne SCE	ONTARIO	91761	San Bernar Solar PV	9.097959	8.916					27	90	RoofTop	Fixed	Residential	5/9/2019	5/22/2019	5/31/2019	No	PINGO SOL	760-888-1f BUENA PAI CA	CA	90621	1012212	No	No	No	No	No	No	No	Yes	Yes	No	23270	2.609914	2	NEM-ST	None	No	NEMPV	HIS-5300R Hyundai Hc	24				
SCE-INT-NST-89749		Interconne SCE	ONTARIO	91764	San Bernar Solar PV	2.765306	2.71					27	270	RoofTop	Fixed	Residential	5/10/2019	5/10/2019	5/13/2019	No	SunPower	I877-344-6f ROSEVILLE	CA	95661	890895	Yes	Lease	KB Home	No	No	No	No	Yes	Yes	No	15316.2	5.651734	2	NEM-ST	None	No	NEMPV	SPR-X21-3f SunPower	9				
SCE-INT-NST-89943		Interconne SCE	ONTARIO	91762	San Bernar Solar PV	2.765306	2.71					27	180	RoofTop	Fixed	Residential	5/13/2019	5/13/2019	5/14/2019	No	SunPower	I877-344-6f ROSEVILLE	CA	95661	890895	Yes	Lease	KB Home	No	No	No	No	Yes	Yes	No	15316.2	5.651734	2	NEM-ST	None	No	NEMPV	SPR-X21-3f SunPower	9				
SCE-INT-NST-89969		Interconne SCE	ONTARIO	91761	San Bernar Solar PV	9.15102	8.968					23	179	RoofTop	Fixed	Residential	5/13/2019	5/13/2019	5/14/2019	No	Vivint Solar	385-352-0f Lehi UT	UT	84043	973756	Yes	PPA	Vivint Solar No	No	Yes	Yes	SolarEdge Technologie	52145.1	5.815474	2	NEM-ST	None	No	NEMPV	Q.PEAK DU Hanwha Q-	9							
SCE-INT-NST-90058		Interconne SCE	ONTARIO	91761	San Bernar Solar PV	2.765306	2.71					18	180	RoofTop	Fixed	Residential	5/14/2019	5/17/2019	5/28/2019	No	SunPower	I877-344-6f ROSEVILLE	CA	95661	890895	Yes	Lease	DR Horton	No	No	No	No	Yes	Yes	No	15316.2	5.651734	2	NEM-ST	None	No	NEMPV	SPR-X21-3f SunPower	9				
SCE-INT-NST-90174		Interconne SCE	ONTARIO	91761	San Bernar Solar PV	2.765306	2.71					18	180	RoofTop	Fixed	Residential	5/14/2019	5/14/2019	5/15/2019	No	SunPower	I877-344-6f ROSEVILLE	CA	95661	890895	Yes	Lease	DR Horton	No	No	No	No	Yes	Yes	No	15316.2	5.651734	2	NEM-ST	None	No	NEMPV	SPR-X21-3f SunPower	9				
SCE-INT-NST-90287		Interconne SCE	ONTARIO	91764	San Bernar Solar PV	6.717347	6.583	9.8	5			18	181	RoofTop	Fixed	Residential	5/15/2019	5/15/2019	5/30/2019	No	SUNRUN	IN 805-242-7f SAN LUIS O CA	CA	93401	750184	No	No	No	No	No	No	Yes	Yes	Sunrun, Inc	38250	5.81042	2	NEM-ST	None	No	NEMPV	LG36001C-LG Electror	15					
SCE-INT-NST-90315		Interconne SCE	ONTARIO	91762	San Bernar Solar PV	2.765306	2.71					18	175	RoofTop	Fixed	Residential	5/15/2019	5/15/2019	7/30/2019	No	SunPower	I877-344-6f ROSEVILLE	CA	95661	890895	Yes	Lease	Trumark Hk No	No	No	No	No	Yes	Yes	No	15316.2	5.651734	2	NEM-ST	None	No	NEMPV	SPR-X21-3f SunPower	9				
SCE-INT-NST-90319		Interconne SCE	ONTARIO	91761	San Bernar Solar PV	2.765306	2.71					18	175	RoofTop	Fixed	Residential	5/15/2019	5/15/2019	5/16/2019	No	SunPower	I877-344-6f ROSEVILLE	CA	95661	890895	Yes	Lease	Trumark Hk No	No	No	No	No	Yes	Yes	No	15316.2	5.651734	2	NEM-ST	None	No	NEMPV	SPR-X21-3f SunPower	9				
SCE-INT-NST-90321		Interconne SCE	ONTARIO	91762	San Bernar Solar PV	2.765306	2.71					18	175	RoofTop	Fixed	Residential	5/15/2019	5/15/2019	5/16/2019	No	SunPower	I877-344-6f ROSEVILLE	CA	95661	890895	Yes	Lease	Trumark Hk No	No	No	No	Yes	Yes	No	15316.2	5.651734	2	NEM-ST	None	No	NEMPV	SPR-X21-3f SunPower	9					
SCE-INT-NST-90337		Interconne SCE	ONTARIO	91761	San Bernar Solar PV	2.765306	2.71					18	180	RoofTop	Fixed	Residential	5/15/2019	5/15/2019	5/16/2019	No	SunPower	I877-344-6f ROSEVILLE	CA	95661	890895	Yes	Lease	DR Horton	No	No	No	No	Yes	Yes	No	15316.2	5.651734	2	NEM-ST	None	No	NEMPV	SPR-X21-3f SunPower	9				
SCE-INT-NST-90412		Interconne SCE	ONTARIO	91764	San Bernar Solar PV	5.503061	5.393					21	180	RoofTop	Fixed	Residential	5/15/2019	5/21/2019	5/30/2019	Yes														2	Yes	Yes	SOLAREDG	12000	2.225106	2	NEM-ST	None	No	NEMPV	PV-MJE275Mitsubishi	22		
SCE-INT-NST-90474		Interconne SCE	ONTARIO	91761	San Bernar Solar PV	7.74449	6.569					21	215	RoofTop	Fixed	Residential	5/16/2019	7/23/2019	7/26/2019	No	SOLCIUS LL 844-765-2f PROVO UT		UT	84604	976336	No	No	No	No	No	No	No	Yes	Yes	SunRun	27590	4.875419	2	NEM-ST	None	No	NEMPV	MSE3105Q Mission So	14				
SCE-INT-NST-90608		Interconne SCE	ONTARIO	91762	San Bernar Solar PV	3.989796	3.91					22	270	RoofTop	Fixed	Residential	5/16/2019	5/20/2019	5/29/2019	No	Complete	S877-299-4f San Ramon CA	CA	94583	961988	Yes	PPA	SunRun	No	No	No	Yes	Yes	SunRun	19091.17	4.882652	2	NEM-ST	None	No	NEMPV	Q.PEAK-G4 Hanwha Q-	8					
SCE-INT-NST-90629		Interconne SCE	ONTARIO	91761	San Bernar Solar PV	2.765306	2.71					18	270	RoofTop	Fixed	Residential	5/16/2019	5/16/2019	5/17/2019	No	SunPower	I877-344-6f ROSEVILLE	CA	95661	890895	Yes	Lease	DR Horton	No	No	No	No	Yes	Yes	No	15316	5.651666	2	NEM-ST	None	No	NEMPV	SPR-X21-3f SunPower	9				
SCE-INT-NST-90682		Interconne SCE	ONTARIO	91762	San Bernar Solar PV	2.765306	2.71					23	189	RoofTop	Fixed	Residential	5/17/2019	5/17/2019	5/28/2019	No	SunPower	I877-344-6f ROSEVILLE	CA	95661</																								

Ontario Quantification Workbook

Application Preceding 1 Supercedin Matched C Application Utility	Service City Service Zip Service Cot Technology System Siz System Siz Storage Ca Storage Siz Inverter Siz Tilt	Azimuth	Mounting	Tracking	Customer 5 App Received	App Complete	App Approved	EDecommis	Self Installe	Installer Na	Installer Ph	Installer Cil	Installer St	Installer Zi	CSLB Numt	Third Party	Third Party	Third Party	Third Party	Face Fin	Face Fin	Electric Vel	Electric Vel	System Out	System Out	System Out	Total System Itc	Cost B	Cost/Watt	NEM Tariff	Interconne	VNEM	NEF Project	V NEMPV or	Generator	Generator	Generator
SCE-INT-NST-95122	Interconne SCE ONTARIO 91761 San Bernar Solar PV 2.765306 2.71	18	180	Rooftop	Fixed	Residential	6/19/2019	6/19/2019	8/6/2019	No	SunPower	1877-344-66 ROSEVILLE CA	95661	890895	Yes	Lease	Brookfield	No	No	No	No	Yes	No	No	No	33731.77	15316.2	5.651734	2 NEM-ST	None	No	NEMPV	SPR-X21-3:SunPower			9	
SCE-INT-NST-95142	Interconne SCE ONTARIO 91761 San Bernar Solar PV 9.107143 8.925	20	180	Rooftop	Fixed	Residential	6/19/2019	7/3/2019	7/9/2019	No	JAMES PET 951-758-46 FREMONT CA	94538	1050201	No	Lease	KB Home	No	No	No	No	Yes	No	No	No	No	33731.77	15316.2	5.651734	2 NEM-ST	None	No	NEMPV	SLA320M 1 SilFab			31	
SCE-INT-NST-95146	Interconne SCE ONTARIO 91762 San Bernar Solar PV 2.765306 2.71	27	90	Rooftop	Fixed	Residential	6/19/2019	6/19/2019	6/20/2019	No	SunPower	1877-344-66 ROSEVILLE CA	95661	890895	No	Lease	KB Home	No	No	No	Yes	No	No	No	No		12813.75	15316.2	5.651734	2 NEM-ST	None	No	NEMPV	SPR-X21-3:SunPower			9
SCE-INT-NST-95202	Interconne SCE ONTARIO 91761 San Bernar Solar PV 3.381633 3.118	18	181	Rooftop	Fixed	Residential	6/20/2019	7/2/2019	7/8/2019	No	SunPower	1877-344-66 ROSEVILLE CA	95661	890895	No	Lease	KB Home	No	No	No	Yes	No	Yes	Yes	Yes	12813.75	14500.12	4.650455	2 NEM-ST	None	No	NEMPV	REC290TP2REC Solar			12	
SCE-INT-NST-95235	Interconne SCE ONTARIO 91761 San Bernar Solar PV 6.014286 5.894	19	180	Rooftop	Fixed	Residential	6/20/2019	6/20/2019	6/21/2019	No	SUNRUN IN 805-242-75 SAN FRANC CA	93401	750184	No	Lease	DR Horton	No	No	No	No	Yes	No	No	No	No	20988.66	3.561021	2 NEM-ST	None	No	NEMPV	Q PEAK BL Hanwha Q-			20		
SCE-INT-NST-95235	Interconne SCE ONTARIO 91761 San Bernar Solar PV 7.922449 7.764	23	240	Rooftop	Fixed	Residential	6/20/2019	8/13/2019	8/16/2019	No	FREEDOM 951-215-66 TEMECULA CA	92590	1029644	No	Lease	DR Horton	No	No	No	No	Yes	No	No	No	No	41968	5.405461	2 NEM-ST	None	No	NEMPV	Q PLUS BFF Hanwha Q-			32		
SCE-INT-NST-95458	Interconne SCE ONTARIO 91761 San Bernar Solar PV 2.765306 2.71	18	180	Rooftop	Fixed	Residential	6/21/2019	6/21/2019	6/24/2019	No	SunPower	1877-344-66 ROSEVILLE CA	95661	890895	Yes	Lease	DR Horton	No	No	No	Yes	No	No	No	No		15316.2	5.651666	2 NEM-ST	None	No	NEMPV	SPR-X21-3:SunPower			9	
SCE-INT-NST-95462	Interconne SCE ONTARIO 91761 San Bernar Solar PV 2.765306 2.71	18	180	Rooftop	Fixed	Residential	6/21/2019	6/21/2019	6/24/2019	No	SunPower	1877-344-66 ROSEVILLE CA	95661	890895	Yes	Lease	DR Horton	No	No	No	Yes	No	No	No	No		15316.2	5.651666	2 NEM-ST	None	No	NEMPV	SPR-X21-3:SunPower			9	
SCE-INT-NST-95469	Interconne SCE ONTARIO 91764 San Bernar Solar PV 2.765306 2.71	18	119	Rooftop	Fixed	Residential	6/21/2019	6/21/2019	6/24/2019	No	SunPower	1877-344-66 ROSEVILLE CA	95661	890895	Yes	Lease	DR Horton	No	No	No	Yes	No	No	No	No		15316.2	5.651666	2 NEM-ST	None	No	NEMPV	SPR-X21-3:SunPower			9	
SCE-INT-NST-95478	Interconne SCE ONTARIO 91761 San Bernar Solar PV 2.765306 2.71	18	209	Rooftop	Fixed	Residential	6/21/2019	6/21/2019	6/24/2019	No	SunPower	1877-344-66 ROSEVILLE CA	95661	890895	Yes	Lease	DR Horton	No	No	No	Yes	No	No	No	No		15316.2	5.651666	2 NEM-ST	None	No	NEMPV	SPR-X21-3:SunPower			9	
SCE-INT-NST-95482	Interconne SCE ONTARIO 91761 San Bernar Solar PV 2.765306 2.71	18	180	Rooftop	Fixed	Residential	6/21/2019	6/21/2019	6/24/2019	No	SunPower	1877-344-66 ROSEVILLE CA	95661	890895	Yes	Lease	DR Horton	No	No	No	Yes	No	No	No	No		15316.2	5.651666	2 NEM-ST	None	No	NEMPV	SPR-X21-3:SunPower			9	
SCE-INT-NST-95582	Interconne SCE ONTARIO 91762 San Bernar Solar PV 2.765306 2.71	18	269	Rooftop	Fixed	Residential	6/21/2019	6/21/2019	6/24/2019	No	SunPower	1877-344-66 ROSEVILLE CA	95661	890895	Yes	Lease	Trumark Ht No	No	No	No	Yes	No	No	No	No		15316.2	5.651734	2 NEM-ST	None	No	NEMPV	SPR-X21-3:SunPower			9	
SCE-INT-NST-95583	Interconne SCE ONTARIO 91761 San Bernar Solar PV 2.765306 2.71	23	178	Rooftop	Fixed	Residential	6/21/2019	6/21/2019	7/23/2019	No	SunPower	1877-344-66 ROSEVILLE CA	95661	890895	Yes	Lease	DR Horton	No	No	No	Yes	No	No	No	No		15316.2	5.651734	2 NEM-ST	None	No	NEMPV	SPR-X21-3:SunPower			9	
SCE-INT-NST-95585	Interconne SCE ONTARIO 91761 San Bernar Solar PV 2.765306 2.71	23	178	Rooftop	Fixed	Residential	6/21/2019	6/21/2019	6/24/2019	No	SunPower	1877-344-66 ROSEVILLE CA	95661	890895	Yes	Lease	DR Horton	No	No	No	Yes	No	No	No	No		15316.2	5.651734	2 NEM-ST	None	No	NEMPV	SPR-X21-3:SunPower			9	
SCE-INT-NST-95590	Interconne SCE ONTARIO 91761 San Bernar Solar PV 2.765306 2.71	18	178	Rooftop	Fixed	Residential	6/21/2019	6/21/2019	6/24/2019	No	SunPower	1877-344-66 ROSEVILLE CA	95661	890895	Yes	Lease	DR Horton	No	No	No	Yes	No	No	No	No		15316.2	5.651734	2 NEM-ST	None	No	NEMPV	SPR-X21-3:SunPower			9	
SCE-INT-NST-95594	Interconne SCE ONTARIO 91761 San Bernar Solar PV 2.765306 2.71	23	268	Rooftop	Fixed	Residential	6/21/2019	6/21/2019	6/24/2019	No	SunPower	1877-344-66 ROSEVILLE CA	95661	890895	Yes	Lease	DR Horton	No	No	No	Yes	No	No	No	No		15316.2	5.651734	2 NEM-ST	None	No	NEMPV	SPR-X21-3:SunPower			9	
SCE-INT-NST-95679	Interconne SCE ONTARIO 91761 San Bernar Solar PV 5.313265 5.207	23	181	Rooftop	Fixed	Residential	6/24/2019	6/26/2019	7/2/2019	No	Vivint Solar 385-352-01 LEHI UT	84043	973756	Yes	PPA	Vivint Solar No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	SolarEdge Technologie	30561.3	5.869272	2 NEM-ST	None	No	NEMPV	Q PEAK DU Hanwha Q-			18	
SCE-INT-NST-95686	Interconne SCE ONTARIO 91761 San Bernar Solar PV 2.765306 2.71	23	268	Rooftop	Fixed	Residential	6/24/2019	6/25/2019	7/1/2019	No	SunPower	1877-344-66 ROSEVILLE CA	95661	890895	Yes	Lease	DR Horton	No	No	No	Yes	No	No	No	No		15316.2	5.651734	2 NEM-ST	None	No	NEMPV	SPR-X21-3:SunPower			9	
SCE-INT-NST-95692	Interconne SCE ONTARIO 91761 San Bernar Solar PV 2.765306 2.71	23	178	Rooftop	Fixed	Residential	6/24/2019	6/24/2019	6/25/2019	No	SunPower	1877-344-66 ROSEVILLE CA	95661	890895	Yes	Lease	DR Horton	No	No	No	Yes	No	No	No	No		15316.2	5.651734	2 NEM-ST	None	No	NEMPV	SPR-X21-3:SunPower			9	
SCE-INT-NST-95705	Interconne SCE ONTARIO 91761 San Bernar Solar PV 2.765306 2.71	23	268	Rooftop	Fixed	Residential	6/24/2019	6/24/2019	6/25/2019	No	SunPower	1877-344-66 ROSEVILLE CA	95661	890895	Yes	Lease	DR Horton	No	No	No	Yes	No	No	No	No		15316.2	5.651734	2 NEM-ST	None	No	NEMPV	SPR-X21-3:SunPower			9	
SCE-INT-NST-95745	Interconne SCE ONTARIO 91762 San Bernar Solar PV 2.15102 2.108	18	180	Rooftop	Fixed	Residential	6/24/2019	6/24/2019	7/8/2019	No	SunPower	1877-344-66 ROSEVILLE CA	95661	890895	No	Lease	DR Horton	No	No	No	Yes	No	No	No	No	9966	4.727703	2 NEM-ST	None	No	NEMPV	SPR-X21-3:SunPower			7		
SCE-INT-NST-95752	Interconne SCE ONTARIO 91764 San Bernar Solar PV 2.765306 2.71	27	270	Rooftop	Fixed	Residential	6/24/2019	6/24/2019	8/1/2019	No	SunPower	1877-344-66 ROSEVILLE CA	95661	890895	No	Lease	DR Horton	No	No	No	Yes	No	No	No	No	12814	4.728413	2 NEM-ST	None	No	NEMPV	SPR-X21-3:SunPower			9		
SCE-INT-NST-95755	Interconne SCE ONTARIO 91762 San Bernar Solar PV 2.765306 2.71	18	184	Rooftop	Fixed	Residential	6/24/2019	6/24/2019	6/25/2019	No	SunPower	1877-344-66 ROSEVILLE CA	95661	890895	No	Lease	DR Horton	No	No	No	Yes	No	No	No	No	12814	4.728413	2 NEM-ST	None	No	NEMPV	SPR-X21-3:SunPower			9		
SCE-INT-NST-95764	Interconne SCE ONTARIO 91762 San Bernar Solar PV 6.826531 6.69	18	269	Rooftop	Fixed	Residential	6/24/2019	7/8/2019	7/10/2019	No	Vivint Solar 385-352-01 LEHI UT	84043	973756	Yes	PPA	Vivint Solar No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	SolarEdge Technologie	13582.8	2.030313	2 NEM-ST	None	No	NEMPV	Q PEAK DU Hanwha Q-			8		
SCE-INT-NST-95797	Interconne SCE ONTARIO 91762 San Bernar Solar PV 5.42449 5.316	11	179	Rooftop	Fixed	Residential	6/24/2019	7/17/2019	7/24/2019	No	PACIFIC ST 909-377-54 RANCHO CI CA	91730	965340	No	Lease	KB Home	No	No	No	No	Yes	No	No	No	No	24778	4.661023	2 NEM-ST	None	No	NEMPV	SPR-E20-3:SunPower			8		
SCE-INT-NST-95802	Interconne SCE ONTARIO 91762 San Bernar Solar PV 2.765306 2.71	18	269	Rooftop	Fixed	Residential	6/24/2019	6/24/2019	7/2/2019	No	SunPower	1877-344-66 ROSEVILLE CA	95661	890895	Yes	Lease	Trumark Ht No	No	No	No	Yes	No	No	No	No		15316.2	5.651734	2 NEM-ST	None	No	NEMPV	SPR-X21-3:SunPower			9	
SCE-INT-NST-95808	Interconne SCE ONTARIO 91762 San Bernar Solar PV 2.765306 2.71	23	270	Rooftop	Fixed	Residential	6/24/2019	6/24/2019	6/25/2019	No	SunPower	1877-344-66 ROSEVILLE CA	95661	890895	Yes	Lease	KB Home	No	No	No	Yes	No	No	No	No		15316.2	5.651734	2 NEM-ST	None	No	NEMPV	SPR-X21-3:SunPower			9	
SCE-INT-NST-95810	Interconne SCE ONTARIO 91762 San Bernar Solar PV 2.15102 2.108	18	270	Rooftop	Fixed	Residential	6/24/2019	6/24/2019	6/25/2019	No	SunPower	1877-344-66 ROSEVILLE CA	95661	890895	No	Lease	KB Home	No	No	No	Yes	No	No	No	No	9966	4.727703	2 NEM-ST	None	No	NEMPV	SPR-X21-3:SunPower			7		
SCE-INT-NST-95928	Interconne SCE ONTARIO 91762 San Bernar Solar PV 6.822449 6.686	18	175	Rooftop	Fixed	Residential	6/25/2019	7/12/2019	7/12/2019	No	Solar Optin 818-804-31 GLENDALE CA	91204	972228	No	Lease	KB Home	No	No	No	Yes	Yes	Yes	Yes	Yes	Enphase Er	21941.11	3.281649	2 NEM-ST	None	No	NEMPV	VBNH330S Panasonic i			16		
SCE-INT-NST-96003	Interconne SCE ONTARIO 91761 San Bernar Solar PV 4.962245 4.863	20	180	Rooftop	Fixed	Residential	6/25/2019	6/25/2019	6/26/2019	No	TLP Electric 714-921-81 ORANGE CA	92865	824287	No	Lease	KB Home	No	No	No	Yes	No	No	No	No	19275	3.963602	2 NEM-ST	None	No	NEMPV	VBNH330S Panasonic i			8			
SCE-INT-NST-96058	Interconne SCE ONTARIO 91762 San Bernar Solar PV 5.878571 5.761	20	120	Rooftop	Fixed	Residential	6/25/2019	7/3/2019	7/9/2019	No	SUN BEES 714-676-81 POMONA CA	91767	970591	No	Lease	KB Home	No	No	No	Yes	No	No	No	No	24800	4.304808	2 NEM-ST	None	No	NEMPV	SPR-X21-34 SunPower			5			
SCE-INT-NST-96113	Interconne SCE ONTARIO 91762 San Bernar Solar PV 2.765306 2.71	18	180	Rooftop	Fixed	Residential	6/26/2019	6/26/2019	8/23/2019	No	SunPower	1877-344-66 ROSEVILLE CA	95661	890895	Yes	Lease	KB Home	No	No	No	Yes	No	No	No	No		15316.2	5.651734	2 NEM-ST	None	No	NEMPV	SPR-X21-3:SunPower			9	

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Application Preceding 1	Supercedin	Matched C	Application/Utility	Service City/Service Zip	Service Cot	Technology	System Siz	System Siz	Storage Ca	Storage Siz	Inverter Siz	Tilt	Azimuth	Mounting	Tracking	Customer 5	App Received	App Complete	App Approved	EDecommis	Self Install	Installer Na	Installer Ph	Installer Ctl	Installer St	Installer Zi	CSLB Numt	Third Party	Third Party	Third Party	Third Party	Face Financ	Face Financ	Electric Vel	Electric Vel	System Out	System Out	System Out	Total Syste	Itc Cost	Cost/Watt	NEM Tariff	Interconne	VNEM	NEF Project	V NEMPV or	Generator	Generator	Generator
SCE-INT-SCE-101406			Interconne SCE	ONTARIO	91764	San Bernar Solar PV	5.416327	5.308					19	180	RoofTop	Fixed	Residential	2/2/2017	2/2/2017	2/7/2017	No	Vivint Solar	385-352-01Lehi	UT	84043	973756	Yes	PPA	Vivint Solar No	No	No	Yes	Yes	SolarEdge		14151	2.665975	1	NEM	None	No	NEMPV	JKM265PP	Jinko Solar	2				
SCE-INT-SCE-101514			Interconne SCE	ONTARIO	91764	San Bernar Solar PV	3.143878	3.081					20	180	RoofTop	Fixed	Residential	2/3/2017	2/6/2017	2/8/2017	No	Simply Sola	310-532-05 GARDENA	CA	90249	990055	No	Lease	SolarCity No	No	No	Yes	Yes		17400		5.647517	1	NEM	None	No	NEMPV	SW 290 MtSolarWorld	3					
SCE-INT-SCE-101653			Interconne SCE	ONTARIO	91762	San Bernar Solar PV	4.701022	4.607					18	179	RoofTop	Fixed	Residential	2/6/2017	2/8/2017	2/10/2017	No	SolarCity C888-765-2	Las Vegas	NV	89119	888104	Yes	PPA	SolarCity No	No	No	Yes	Yes		26726.4	5.801258	1	NEM	None	No	NEMPV	TSM-2800P	Trina Solar	6					
SCE-INT-SCE-101705			Interconne SCE	ONTARIO	91761	San Bernar Solar PV	3.280612	7.135					21	270	RoofTop	Fixed	Residential	2/6/2017	2/6/2017	2/7/2017	No	SolarCity C888-765-2	Las Vegas	NV	89119	888104	Yes	PPA	SolarCity No	No	No	Yes	Yes	SolarCity Ci	40320	5.651016	1	NEM	None	No	NEMPV	LG315M1C-LG	Electror	9					
SCE-INT-SCE-10174			Interconne SCE	ONTARIO	91761	San Bernar Solar PV	4.580612	4.489					18	270	RoofTop	Fixed	Residential	6/29/2015	7/6/2015	7/6/2015	No	GNRG SOLR	818-306-31 VAN NUYS	CA	91411	0	No	Lease	SolarCity No	No	No	Yes	Yes		21500	4.789485	1	NEM	None	No	NEMPV	SE-F270K	Sun Edison	11					
SCE-INT-SCE-101771			Interconne SCE	ONTARIO	91761	San Bernar SOLAR PV	8.683673	8.51					21	90	RoofTop	Fixed	Residential	7/7/2017	4/17/2017	4/26/2017	No	SolarCity C888-765-2	Las Vegas	NV	89119	888104	Yes	PPA	SolarCity No	No	No	Yes	Yes	SolarCity	48742	5.727614	1	NEM	None	No	NEMPV	Q-PLUS-G4	Hanwha Q-	22					
SCE-INT-SCE-10201			Interconne SCE	ONTARIO	91764	San Bernar Solar PV	4.472449	4.383					18	359	RoofTop	Fixed	Residential	6/29/2015	10/7/2015	10/14/2015	No	SolarCity C888-765-2	Las Vegas	NV	89119	888104	Yes	PPA	SolarCity No	No	No	Yes	Yes	SolarCity	26112	5.957563	1	NEM	None	No	NEMPV	KU255-6X	Kyocera So	26					
SCE-INT-SCE-10214			Interconne SCE	ONTARIO	91764	San Bernar Solar PV	6.720408	6.586					18	180	RoofTop	Fixed	Residential	6/29/2015	6/29/2015	3/6/2015	No	Solar Servc	888-760-7 Corona	CA	92879	961939	Yes	PPA	Solar Servc No	No	No	Yes	Yes	Solar Service Center, L	8870.1	1.346811	1	NEM	None	No	NEMPV	TSM-250P	Trina Solar	5					
SCE-INT-SCE-102277			Interconne SCE	ONTARIO	91764	San Bernar Solar PV	2.44898	4.164					20	180	RoofTop	Fixed	Residential	2/10/2017	2/15/2017	2/17/2017	No	Vision Sola	888-781-7 Provo	UT	84604	853582	Yes	PPA	Sunnova No	No	No	Yes	Yes		18150.49	4.358907	1	NEM	None	No	NEMPV	SLA280M	Silfab	17					
SCE-INT-SCE-102442			Interconne SCE	ONTARIO	91762	San Bernar Solar PV	4.029592	3.949					23	160	RoofTop	Fixed	Residential	2/13/2017	2/13/2017	2/14/2017	No	Sunsystem	951-675-65 Ontario	CA	91761	1009107	Yes	PPA	Spruce No	No	No	Yes	Yes		5021.54	1.271597	1	NEM	None	No	NEMPV	HIS-S270R	Hyundai H	17					
SCE-INT-SCE-102645			Interconne SCE	ONTARIO	91764	San Bernar SOLAR PV	269.3755	263.988					10	180	RoofTop	Fixed	Industrial	2/14/2017	4/5/2017	4/13/2017	No	Gregg Elect	909-321-3K Ontario	CA	91762	201042	No	Lease	SolarCity No	No	No	Yes	Yes		736000	2.788005	1	NEM	None	No	NEMPV	CS6K-320P	Canadian S	800					
SCE-INT-SCE-102908			Interconne SCE	ONTARIO	91762	San Bernar Solar PV	3.471429	3.402					14	180	RoofTop	Fixed	Residential	2/16/2017	2/20/2017	2/22/2017	No	Zero Energy	626-701-31 Cerritos	CA	90703	953417	No	Lease	SolarCity No	No	No	Yes	Yes		34014	9.998236	1	NEM	None	No	NEMPV	HIS-M260R	Hyundai H	15					
SCE-INT-SCE-102960			Interconne SCE	ONTARIO	91761	San Bernar Solar PV	3.87449	3.797					18	266	RoofTop	Fixed	Residential	2/16/2017	2/16/2017	2/17/2017	No	Future Ene	800-985-01 RANCHO	CA	91730	463720	No	Lease	SolarCity No	No	No	Yes	Yes		28750	7.571767	1	NEM	None	No	NEMPV	Protect SW	SolarWorld	16					
SCE-INT-SCE-103225			Interconne SCE	ONTARIO	91762	San Bernar Solar PV	4.081633	4					20	97	RoofTop	Fixed	Residential	2/20/2017	2/28/2017	3/1/2017	No	Syntrol Plu	916-757-66 Roseville	CA	95474	728304	No	Lease	SolarCity No	No	No	Yes	Yes		25053	6.26325	1	NEM	None	No	NEMPV	CS6P-265P	Canadian S	9					
SCE-INT-SCE-103235			Interconne SCE	ONTARIO	91761	San Bernar Solar PV	9.827551	9.631					25	130	RoofTop	Fixed	Residential	2/20/2017	2/20/2017	2/21/2017	No	Sun Bees G	714-676-8 Pomona	CA	91767	970591	No	Lease	SolarCity No	No	No	Yes	Yes		5.081299	5.081299	1	NEM	None	No	NEMPV	SPR-X22-3E	SunPower	19					
SCE-INT-SCE-103262			Interconne SCE	ONTARIO	91764	San Bernar Solar PV	2.765531	2.721					14	180	RoofTop	Fixed	Residential	2/20/2017	2/20/2017	2/21/2017	No	Zero Energy	626-701-31 Cerritos	CA	90703	953417	No	Lease	SolarCity No	No	No	Yes	Yes		31995	14.36788	1	NEM	None	No	NEMPV	HIS-M260R	Hyundai H	12					
SCE-INT-SCE-103677			Interconne SCE	ONTARIO	91761	San Bernar SOLAR PV	2.833673	2.777					18	180	RoofTop	Fixed	Residential	2/23/2017	4/10/2017	4/14/2017	No	Energy Ren	858-737-1 SAN DIEGO	CA	92123	968844	No	Lease	SolarCity No	No	No	Yes	Yes		21455	7.902417	1	NEM	None	No	NEMPV	Protect SW	SolarWorld	11					
SCE-INT-SCE-103711			Interconne SCE	ONTARIO	91762	San Bernar Solar PV	8.807143	8.631					12	179	RoofTop	Fixed	Residential	2/23/2017	3/9/2017	3/13/2017	No	SolarCity C888-765-2	Las Vegas	NV	89119	888104	Yes	PPA	SolarCity No	No	No	Yes	Yes	SolarCity Ci	50585.6	5.860919	1	NEM	None	No	NEMPV	REC260PE	REC Solar	13					
SCE-INT-SCE-103783			Interconne SCE	ONTARIO	91762	San Bernar Solar PV	4.097959	4.016					36	268	RoofTop	Fixed	Residential	2/24/2017	2/24/2017	2/27/2017	No	SolarCity C888-765-2	Las Vegas	NV	89119	888104	Yes	PPA	SolarCity No	No	No	Yes	Yes	SolarCity Ci	22579.2	5.62231	1	NEM	None	No	NEMPV	LG315M1C-LG	Electror	4					
SCE-INT-SCE-103870			Interconne SCE	ONTARIO	91761	San Bernar Solar PV	4.803061	4.707					14	270	RoofTop	Fixed	Residential	2/24/2017	2/24/2017	2/28/2017	No	SolarCity C888-765-2	Las Vegas	NV	89119	888104	Yes	PPA	SolarCity No	No	No	Yes	Yes	SolarCity	27955.2	5.939069	1	NEM	None	No	NEMPV	SC260	SolarCity	10					
SCE-INT-SCE-103879			Interconne SCE	ONTARIO	91764	San Bernar Solar PV	5.712245	5.598					23	172	RoofTop	Fixed	Residential	2/24/2017	2/24/2017	2/27/2017	No	BlueSky En	909-301-3 Fontana	CA	92336	1016637	No	Lease	SolarCity No	No	No	Yes	Yes		27000	4.823151	1	NEM	None	No	NEMPV	SW 290 Mc	SolarWorld	22					
SCE-INT-SCE-103885			Interconne SCE	ONTARIO	91761	San Bernar Solar PV	3.069388	3.008					18	269	RoofTop	Fixed	Residential	2/24/2017	3/2/2017	3/3/2017	No	SunTime Er	818-574-35 Van Nuys	CA	91406	992379	Yes	Lease	sunrun No	No	No	Yes	Yes		12432	4.132978	1	NEM	None	No	NEMPV	REC280TP	REC Solar	12					
SCE-INT-SCE-104160			Interconne SCE	ONTARIO	91761	San Bernar Solar PV	198.5255	194.555					7	180	Ground	Fixed	Educationa	2/28/2017	5/26/2017	6/13/2017	No	Onyx Rene	646-517-0 New York	NY	10022	4833309	Yes	PPA	Onyx Rene No	No	No	Yes	Yes	Onyx Renewable Partr	1	0.000005	1	NEM	None	No	NEMPV	SE-F335EzE	Sun Edison	360					
SCE-INT-SCE-104171			Interconne SCE	ONTARIO	91764	San Bernar Solar PV	143.7031	140.829					7	180	Ground	Fixed	Educationa	2/28/2017	5/11/2017	6/19/2017	No	Onyx Rene	646-517-0 New York	NY	10022	4833309	Yes	PPA	Onyx Rene No	No	No	Yes	Yes	Onyx Renewable Partr	1	0.000007	1	NEM	None	No	NEMPV	SE-F335EzE	Sun Edison	468					
SCE-INT-SCE-104281			Interconne SCE	ONTARIO	91761	San Bernar Solar PV	7.661224	7.508					18	196	RoofTop	Fixed	Residential	3/1/2017	6/15/2017	6/26/2017	No	SolarCity C888-765-2	Las Vegas	NV	89119	888104	Yes	PPA	SolarCity No	No	No	Yes	Yes	SolarCity Corporation	43008	5.728289	1	NEM	None	No	NEMPV	Q-PLUS-G4	Hanwha Q-	16					
SCE-INT-SCE-10458			Interconne SCE	ONTARIO	91764	San Bernar Solar PV	2.67449	2.621					30	226	RoofTop	Fixed	Residential	7/1/2015	7/1/2015	7/30/2015	No	SolarCity C888-765-2	San Mateo	CA	94402	888104	Yes	Lease	SolarCity No	No	No	Yes	Yes	SolarCity	4700.16	1.793269	1	NEM	None	No	NEMPV	TSM-250P	Trina Solar	12					
SCE-INT-SCE-10466			Interconne SCE	ONTARIO	91764	San Bernar Solar PV	2.747959	2.693					14	226	RoofTop	Fixed	Residential	7/1/2015	8/12/2015	8/17/2015	No	SolarCity C888-765-2	San Mateo	CA	94402	888104	Yes	Lease	SolarCity No	No	No	Yes	Yes	SolarCity	4700.16	1.745324	1	NEM	None	No	NEMPV	TSM-250P	Trina Solar	12					
SCE-INT-SCE-104758			Interconne SCE	ONTARIO	91761	San Bernar Solar PV	3.731633	3.657					32	180	RoofTop	Fixed	Residential	3/6/2017	3/6/2017	3/7/2017	No	SolarCity C888-765-2	Las Vegas	NV	89119	888104	Yes	PPA	SolarCity No	No	No	Yes	Yes	SolarCity Corporation	21708.8	5.936231	1	NEM	None	No	NEMPV	KU265-6ZP	Kyocera So	7					
SCE-INT-SCE-104760			Interconne SCE	ONTARIO	91762	San Bernar Solar PV	4.218367	4.134					23	180	RoofTop	Fixed	Residential	3/6/2017	3/7/2017	3/8/2017	No	Barnes Sol	657-231-6 Fountain V	CA	92708	943909	No	Lease	SolarCity No	No	No	Yes	Yes																

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Application Preceding	1 Supercedin	Matched	C Application	Utility	Service City	Service Zip	Service Cot	Technology	System Siz	System Siz	Storage Ca	Storage Siz	Inverter Siz	Tilt	Azimuth	Mounting	Tracking	Customer	5 App	Received	App Complete	App Approved	EDecommis	Self Install	Installer	Na Installer	Ph Installer	CI Installer	St Installer	Zi	CSLB	Numt	Third Party	Third Party	Third Party	Face	Pace	Finan	Electric Vel	Electric Vel	System Out	System Out	System Out	Total	Its Cost	Cost/Watt	NEM Tariff	Interconne	VNEM	NEF	Project is	V NEMPV	Generator	Generator	Generator
SCE-INT-SCE-110873				Interconne SCE	ONTARIO	91761	San Bernar	SOLAR PV	3.440816	3.372				23	180	Rooftop	Fixed	Residential	4/24/2017	4/24/2017	4/25/2017	No		SolarCity	G888-765-2	Las Vegas	NV	89119	888104	No	No	No	No	No	No	No	No	No	16230	4.813167	1 NEM	None	No	NEMPV	LG315N1C-LG	Electror				12					
SCE-INT-SCE-110886				Interconne SCE	ONTARIO	91762	San Bernar	SOLAR PV	4.19898	4.115				10	90	Rooftop	Fixed	Residential	4/25/2017	4/26/2017	4/28/2017	No		Vision Sola	888-781-7	Provo	UT	84604	853582	No	No	No	No	No	No	No	No	17272.68	4.197492	1 NEM	None	No	NEMPV	TSM-260P/Trina Solar					8						
SCE-INT-SCE-111475				Interconne SCE	ONTARIO	91762	San Bernar	Solar PV	3.788776	3.713				22	180	Rooftop	Fixed	Residential	4/27/2017	5/1/2017	5/2/2017	No		provident	s951-245-3	Temecula	CA	92590	991491	No	No	No	No	No	No	No	No	19800	5.326215	1 NEM	None	No	NEMPV	Q-PRO BFR Hanwha Q-					16						
SCE-INT-SCE-111551				Interconne SCE	ONTARIO	91761	San Bernar	Solar PV	3.965306	3.886				18	270	Rooftop	Fixed	Residential	7/6/2015	6/9/2015	6/9/2015	No		SolarCity	G888-765-2	Las Vegas	NV	89119	888104	Yes	PPA	SolarCity	No	No	No	No	Yes	Yes	SolarCity	23066	5.355666	1 NEM	None	No	NEMPV	KU265-62P Kyocera So					17				
SCE-INT-SCE-111608				Interconne SCE	ONTARIO	91764	San Bernar	Solar PV	7.375531	7.228				18	270	Rooftop	Fixed	Residential	4/28/2017	4/28/2017	5/3/2017	No		SUNERGY	0951-782-0	RIVERSIDE	CA	92509	1005730	Yes	PPA	SUNPOWER	No	No	No	No	29000	4.012174	1 NEM	None	No	NEMPV	SPR-X21-3S-SunPower					10							
SCE-INT-SCE-111701				Interconne SCE	ONTARIO	91762	San Bernar	Solar PV	4.117347	4.035				18	225	Rooftop	Fixed	Residential	4/28/2017	4/29/2017	5/1/2017	No		SolarCity	G888-765-2	Las Vegas	NV	89119	888104	No	Lease	Solarcity	No	No	No	No	21549.6	5.340669	1 NEM	None	No	NEMPV	SC260 SolarCity					9							
SCE-INT-SCE-111738				Interconne SCE	ONTARIO	91762	San Bernar	Solar PV	4.873673	4.688				18	269	Rooftop	Fixed	Residential	5/1/2017	5/1/2017	5/2/2017	No		SolarCity	G888-765-2	Las Vegas	NV	89119	888104	Yes	Lease	SolarCity	No	No	No	No	27673.6	5.9307071	1 NEM	None	No	NEMPV	YL235P-29I Yingli Energ					23							
SCE-INT-SCE-111745				Interconne SCE	ONTARIO	91761	San Bernar	Solar PV	6.860204	6.723				18	179	Rooftop	Fixed	Residential	5/1/2017	5/4/2017	5/5/2017	No		SolarCity	G888-765-2	Las Vegas	NV	89119	888104	No	Lease	Solarcity	No	No	No	No	25455.04	3.786262	1 NEM	None	No	NEMPV	TSM-2900I/Trina Solar					8							
SCE-INT-SCE-112077				Interconne SCE	ONTARIO	91762	San Bernar	Solar PV	4.72449	4.63				23	245	Rooftop	Fixed	Residential	5/3/2017	6/28/2017	6/29/2017	No		LA Solar Gr	818-855-7	Van Nuys	CA	91406	974115	No	PPA	SolarCity	No	No	Yes	Yes	Sunlight Fir No	25992	5.613822	1 NEM	None	No	NEMPV	SPR-E20-33-SunPower					16						
SCE-INT-SCE-112225				Interconne SCE	ONTARIO	91762	San Bernar	Solar PV	5.354082	5.247				15	270	Rooftop	Fixed	Residential	5/4/2017	5/11/2017	5/12/2017	No		PSG Constr	323-680-0	Valley Villa	CA	90607	992695	No	PPA	SolarCity	No	No	Yes	Yes	HERO	24000	4.574042	1 NEM	None	No	NEMPV	REC290P2REC Solar					20						
SCE-INT-SCE-112272				Interconne SCE	ONTARIO	91761	San Bernar	Solar PV	5.462245	5.353				14	90	Rooftop	Fixed	Residential	7/7/2015	7/7/2015	7/13/2015	No		Solar Servc	888-760-7	Corona	CA	92879	961939	Yes	PPA	Solar Servc	No	No	No	No	92879	961939	Yes	Yes	Solar Service Center	6833.49	1.276572	1 NEM	None	No	NEMPV	SW250 Mo SolarWorld					5		
SCE-INT-SCE-112953				Interconne SCE	ONTARIO	91764	San Bernar	Solar PV	4.837755	4.741				23	181	Rooftop	Fixed	Residential	5/9/2017	5/9/2017	5/10/2017	No		Sunrun	Inst805-540-5	San Luis O	CA	93401	750184	No	PPA	Solarcity	No	No	No	No	11690	2.465724	1 NEM	None	No	NEMPV	REC275P REC Solar					5							
SCE-INT-SCE-112999				Interconne SCE	ONTARIO	91764	San Bernar	Solar PV	1.894898	1.857				18	348	Rooftop	Fixed	Residential	7/7/2015	11/24/2015	12/4/2015	No		SolarCity	G888-765-2	Las Vegas	NV	89119	888104	No	Lease	SolarCity	No	No	No	No	10854	5.844911	1 NEM	None	No	NEMPV	KU265-62P Kyocera So					8							
SCE-INT-SCE-113136				Interconne SCE	ONTARIO	91764	San Bernar	Solar PV	5.571429	5.46				18	270	Rooftop	Fixed	Residential	7/7/2015	7/22/2015	7/28/2015	No		Vision Sola	888-781-7	Provo	UT	84604	0	Yes	PPA	Sunnova Er No	No	No	No	No	21875.95	4.006584	1 NEM	None	No	NEMPV	TSM-250P/Trina Solar					14							
SCE-INT-SCE-113173				Interconne SCE	ONTARIO	91761	San Bernar	Solar PV	3.240816	3.176				28	280	Rooftop	Fixed	Residential	5/11/2017	5/11/2017	5/12/2017	No		Petersen D	510-371-65	Fremont	CA	94538	468117	No	Lease	SolarCity	No	No	No	No	13501	4.250944	1 NEM	None	No	NEMPV	SW 260 McSolarWorld					10							
SCE-INT-SCE-11342				Interconne SCE	ONTARIO	91761	San Bernar	Solar PV	4.903061	4.805				17	90	Rooftop	Fixed	Residential	7/7/2015	7/16/2015	7/21/2015	No		Vision Sola	888-781-7	Provo	UT	84604	0	Yes	PPA	Sunnova Er No	No	No	No	No	19542.72	4.067163	1 NEM	None	No	NEMPV	TSM-250P/Trina Solar					22							
SCE-INT-SCE-113473				Interconne SCE	ONTARIO	91761	San Bernar	Solar PV	3.134694	3.072				24	90	Rooftop	Fixed	Residential	5/12/2017	5/17/2017	5/18/2017	No		Canopy Enr	818-293-1	Van Nuys	CA	91405	1018825	No	PPA	Sunnova Er No	No	No	No	No	22560	7.34375	1 NEM	None	No	NEMPV	SW 270 McSolarWorld					13							
SCE-INT-SCE-113554				Interconne SCE	ONTARIO	91762	San Bernar	Solar PV	4.607143	4.515				18	359	Rooftop	Fixed	Residential	5/15/2017	5/15/2017	5/16/2017	No		SolarCity	G888-765-2	Las Vegas	NV	89119	888104	No	Lease	SolarCity	No	No	No	No	26726.4	5.919468	1 NEM	None	No	NEMPV	TSM-2900I/Changzhou					6							
SCE-INT-SCE-113657				Interconne SCE	ONTARIO	91761	San Bernar	Solar PV	4.85	4.753				23	180	Rooftop	Fixed	Residential	5/15/2017	5/16/2017	5/17/2017	No		American	5424-214-6	Anahem	CA	92802	941069	No	No	No	No	No	No	26646	5.606143	1 NEM	None	No	NEMPV	CS6K-295M Canadian S					18								
SCE-INT-SCE-113820				Interconne SCE	ONTARIO	91764	San Bernar	Solar PV	4.69898	4.605				20	90	Rooftop	Fixed	Residential	5/16/2017	5/16/2017	5/18/2017	No		Sunluxx Enr	909-390-1	Ontario	CA	91761	1008374	No	No	No	No	No	No	18270	3.967426	1 NEM	None	No	NEMPV	Q-PEAK BLH Hanwha Q-					14								
SCE-INT-SCE-114040				Interconne SCE	ONTARIO	91762	San Bernar	Solar PV	4.09898	4.017				14	271	Rooftop	Fixed	Residential	5/17/2017	6/26/2017	6/27/2017	No		GNRG Sola	855-384-6	Van Nuys	CA	91411	915911	No	No	No	No	No	No	27000	6.721433	1 NEM	None	No	NEMPV	CS6K-320P Canadian S					14								
SCE-INT-SCE-114320				Interconne SCE	ONTARIO	91764	San Bernar	Solar PV	4.573469	4.482				18	180	Rooftop	Fixed	Residential	5/18/2017	5/19/2017	5/23/2017	No		Energy Sen	310-904-6	Torrance	CA	90502	619149	Yes	PPA	Spruce	No	No	No	No	No	No	3169.33	0.707124	1 NEM	None	No	NEMPV	Q-PLUS BFF Hanwha Q-					30					
SCE-INT-SCE-114454				Interconne SCE	ONTARIO	91761	San Bernar	Solar PV	7.560204	7.409				20	269	Rooftop	Fixed	Residential	5/19/2017	7/01/2017	7/3/2017	No		Sunrun	Inst805-540-5	San Luis O	CA	93401	750184	Yes	PPA	Sunrun Inc	No	No	No	No	20499939	1.276572	1 NEM	None	No	NEMPV	REC275P REC Solar					18							
SCE-INT-SCE-114458				Interconne SCE	ONTARIO	91761	San Bernar	Solar PV	4.156122	4.073				22	269	Rooftop	Fixed	Residential	5/19/2017	6/8/2017	6/9/2017	No		SolarCity	G888-765-2	Las Vegas	NV	89119	888104	No	Lease	SolarCity	No	No	No	No	23756.8	5.832752	1 NEM	None	No	NEMPV	TSM-2900I/Trina Solar					8							
SCE-INT-SCE-114540				Interconne SCE	ONTARIO	91762	San Bernar	Solar PV	2.287755	2.242				23	180	Rooftop	Fixed	Residential	5/20/2017	5/20/2017	5/22/2017	No		SolarCity	G888-765-2	Las Vegas	NV	89119	888104	Yes	PPA	SolarCity	No	No	No	Yes	Yes	SolarCity	13312	5.937555	1 NEM	None	No	NEMPV	SC260 SolarCity					10					
SCE-INT-SCE-114541				Interconne SCE	ONTARIO	91762	San Bernar	Solar PV	4.095918	4.014				18	90	Rooftop	Fixed	Residential	5/20/2017	5/20/2017	5/22/2017	No		SolarCity	G888-765-2	Las Vegas	NV	89119	888104	Yes	Lease	SolarCity	No	No	No	No	23756.8	5.918485	1 NEM	None	No	NEMPV	TSM-2900I/Changzhou					16							
SCE-INT-SCE-114822				Interconne SCE	ONTARIO	91761	San Bernar	Solar PV	8.236735	8.072				20	90	Rooftop	Fixed	Residential	5/23/2017	5/23/2017	5/24/2017	No		Petersen D	510-371-65	Fremont	CA	94538	468117	No	Lease	SolarCity	No	No	No	No	34464	4.269573	1 NEM	None	No	NEMPV	SW 285 McSolarWorld					16							
SCE-INT-SCE-115201				Interconne SCE	ONTARIO	91762	San Bernar	Solar PV	3.002041	2.942				18	179	Rooftop	Fixed	Residential	5/24/2017	5/24/2017	5/25/2017	No		SolarCity	G888-765-2	Las Vegas	NV	89119	888104	Yes	PPA	SolarCity	No	No	No	No	No	No	30391.2	4.59776	1 NEM	None	No	NEMPV	Q-PLUS G4 Hanwha Q-					12					
SCE-INT-SCE-115229				Interconne SCE	ONTARIO	91762	San Bernar	Solar PV	6.744898	6.61				5	270	Rooftop	Fixed	Residential	5/24/2017	5/24/2017	5/25/2017	No		Nexus Ener	805-233-8	Camarillo	CA	93012	359060	No	No	No	No	No	No	30391.2	4.59776	1 NEM	None	No	NEMPV	RCM-280-6Recom					27								
SCE-INT-SCE-115249				Interconne SCE	ONTARIO	91762	San Bernar	Solar PV	6.988776	6.849				18	180	Rooftop	Fixed	Residential	5/24/2017	5/24/2017	5/25/2017	No		SolarCity	G888-765-2	Las Vegas	NV	89119	888104	Yes	Lease	SolarCity	No	No	No	No	38707.2	5.651511	1 NEM	None	No	NEMPV	LG315N1C-LG	Electror				6							
SCE-INT-SCE-115306				Interconne SCE	ONTARIO	91762	San Bernar	Solar PV	3.687755	3.614				27	246	Rooftop	Fixed	Residential	5/24/2017	5/24/2017	5/25/2017	No		SunPower	1877-344-6	Roseville	CA	95661	890895	No	No	No	No	No	No	17085	4.727448	1 NEM	None	No	NEMPV	SPR-X21-3S-SunPower					12								
SCE-INT-SCE-115591				Interconne SCE																																																			

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Application	Preceding 1	Supercedin	Matched	C	Application	Utility	Service City	Service Zip	Service Cot	Technology	System Siz	System Siz	Storage Ca	Storage Siz	Inverter Siz	Tilt	Azimuth	Mounting	Tracking	Customer	App Received	App Complete	App Approved	EDecommis	Self Install	Installer	Nz Installer	Ph Installer	Cil Installer	St Installer	Zi	CSLB Num	Third Party	Third Party	Third Party	Face	Face	Finan	Electric Vel	Electric Vel	System Out	System Out	System Out	Total	Itc Cost	Cost/Watt	NEM Tariff	Interconne	VNEM	NEF Project	V NEMPV or	Generator	Generator	Generator
SCE-INT-SCE-25056					Interconne SCE	ONTARIO	91762	San Bernar	Solar PV	3.031633	2.971	20	180	RoofTop	Fixed	Residential	10/4/2015	12/22/2015	12/23/2015	No	SolarCity	C888-765-2	Las Vegas NV	89119	888104	Yes	PPA	SolarCity	No	No	Yes	Yes	SolarCity		17638.4	5.936856	1	NEM	None	No	NEMPV	KU265-62P	Kycocera So	13										
SCE-INT-SCE-25104					Interconne SCE	ONTARIO	91764	San Bernar	Solar PV	4.923469	4.825	22	270	RoofTop	Fixed	Residential	10/5/2015	11/30/2015	12/7/2015	No	SolarCity	C888-765-2	Las Vegas NV	89119	888104	Yes	PPA	SolarCity	No	No	Yes	Yes	SolarCity		28492.8	5.905243	1	NEM	None	No	NEMPV	KU265-62P	Kycocera So	21										
SCE-INT-SCE-25203					Interconne SCE	ONTARIO	91761	San Bernar	Solar PV	4.589796	4.498	15	200	Ground	Fixed	Residential	10/5/2015	10/8/2015	10/15/2015	No	SolarGiem	E909-980-16	Rancho Cuc CA	91730	929565	No	PPA	SolarCity	No	No	Yes	Yes	SolarCity	21000	4.668741	5.936856	1	NEM	None	No	NEMPV	SW 285 McSolarWorld		1										
SCE-INT-SCE-25471					Interconne SCE	ONTARIO	91764	San Bernar	Solar PV	2.845928	2.789	14	180	RoofTop	Fixed	Residential	10/6/2015	10/9/2015	10/15/2015	No	Solar Serv	888-760-7	Corona CA	92879	961939	Yes	PPA	Solar Serv	No	No	Yes	Yes	Solar Service Center, L	3868.88	1.387192	1	NEM	None	No	NEMPV	HIS-M250R	Hyundai H	1											
SCE-INT-SCE-25471					Interconne SCE	ONTARIO	91762	San Bernar	Solar PV	2.754082	2.699	14	230	RoofTop	Fixed	Residential	10/6/2015	11/25/2015	11/25/2015	No	Clean Ener	800-994-11	San Dimas CA	91773	998787	Yes	Lease	Sunnova EFCo	No	No	Yes	Yes	Sunnova Energy Corpo	4039.2	1.466554	1	NEM	None	No	NEMPV	CS6P-255P	Canadian S	12											
SCE-INT-SCE-25743					Interconne SCE	ONTARIO	91764	San Bernar	Solar PV	2.09898	2.057	18	179	RoofTop	Fixed	Residential	10/7/2015	10/7/2015	10/14/2015	No	SolarCity	C888-765-2	Las Vegas NV	89119	888104	No	PPA	SolarCity	No	No	Yes	Yes	SUNRUN, INC.	12185	5.923675	1	NEM	None	No	NEMPV	KU265-62P	Kycocera So	9											
SCE-INT-SCE-25795					Interconne SCE	ONTARIO	91761	San Bernar	Solar PV	5.732653	5.618	23	180	RoofTop	Fixed	Residential	10/8/2015	11/19/2015	12/1/2015	No	Horizon So	951-537-6	HEMET CA	92545	1004233	Yes	PPA	SUNRUN, IN	No	No	Yes	Yes	SUNRUN, INC.	32110	24555	4.370772	1	NEM	None	No	NEMPV	Q.PRO BFR	Hanwha Q-	3										
SCE-INT-SCE-25832					Interconne SCE	ONTARIO	91762	San Bernar	Solar PV	4.37551	4.288	18	90	RoofTop	Fixed	Residential	10/8/2015	11/13/2015	11/13/2015	No	Green Sola	310-693-5	North Holli CA	91606	991275	No	PPA	Solar Serv	No	No	Yes	Yes	Solar Service Center, L	62403.7	1.412596	1	NEM	None	No	NEMPV	SW260 Mo	SolarWorld	11											
SCE-INT-SCE-25943					Interconne SCE	ONTARIO	91764	San Bernar	Solar PV	4.582653	4.491	19	180	RoofTop	Fixed	Residential	10/8/2015	10/8/2015	10/15/2015	No	Solar Serv	888-760-7	Corona CA	92879	961939	Yes	PPA	Solar Serv	No	No	Yes	Yes	Solar Service Center, L	6346.97	1.412596	1	NEM	None	No	NEMPV	HIS-M250R	Hyundai H	4											
SCE-INT-SCE-25952					Interconne SCE	ONTARIO	91761	San Bernar	Solar PV	70.63571	69.223	5	180	RoofTop	Fixed	Commercia	10/8/2015	8/30/2016	8/31/2016	No	REC Solar	I805-235-5	San Luis Ot CA	93401	0	No	PPA	Solar Serv	No	No	Yes	Yes	SolarCity	263580	3.807693	1	NEM	None	No	NEMPV	CS6K-305P	Canadian S	252											
SCE-INT-SCE-26023					Interconne SCE	ONTARIO	91761	San Bernar	Solar PV	7.230612	7.086	18	179	RoofTop	Fixed	Residential	10/9/2015	11/20/2015	12/3/2015	No	SolarCity	C888-765-2	Las Vegas NV	89119	888104	Yes	Lease	SolarCity	No	No	Yes	Yes	SolarCity Corporation	4240.8	5.93576	1	NEM	None	No	NEMPV	KU265-62P	Kycocera So	5											
SCE-INT-SCE-26116					Interconne SCE	ONTARIO	91761	San Bernar	Solar PV	4.802041	4.706	18	179	RoofTop	Fixed	Residential	10/9/2015	12/7/2015	12/10/2015	No	Horizon So	951-537-6	HEMET CA	92545	1004233	Yes	PPA	SUNRUN, IN	No	No	Yes	Yes	SUNRUN, INC.	22503	4.781767	1	NEM	None	No	NEMPV	Q.PRO BFR	Hanwha Q-	20											
SCE-INT-SCE-26135					Interconne SCE	ONTARIO	91764	San Bernar	Solar PV	4.80102	4.705	12	90	RoofTop	Fixed	Residential	10/9/2015	10/9/2015	10/22/2015	No	Solar Serv	888-760-7	Corona CA	92879	961939	Yes	PPA	Solar Serv	No	No	Yes	Yes	Solar Service Center, L	5582.16	1.186431	1	NEM	None	No	NEMPV	HIS-M250R	Hyundai H	11											
SCE-INT-SCE-26218					Interconne SCE	ONTARIO	91764	San Bernar	Solar PV	2.09898	2.057	27	130	RoofTop	Fixed	Residential	10/12/2015	12/31/2015	1/4/2016	No	SolarCity	C888-765-2	Las Vegas NV	89119	888104	No	PPA	Solar Serv	No	No	Yes	Yes	SolarCity	12211.2	5.936412	1	NEM	None	No	NEMPV	KU265-62P	Kycocera So	9											
SCE-INT-SCE-26299					Interconne SCE	ONTARIO	91764	San Bernar	Solar PV	4.927551	4.829	19	110	RoofTop	Fixed	Residential	10/12/2015	2/24/2016	2/25/2016	No	Hitech Rerr	855-233-9	Calabasas CA	91302	989591	Yes	Lease	Sunrun	No	No	Yes	Yes	Sunrun	27861.75	5.769672	1	NEM	None	No	NEMPV	LG305N1C-LG	Electror	9											
SCE-INT-SCE-26316					Interconne SCE	ONTARIO	91762	San Bernar	Solar PV	5.822449	5.706	20	180	RoofTop	Fixed	Residential	10/12/2015	10/12/2015	10/20/2015	No	Verengo	714-923-4	Torrance CA	90501	935263	No	PPA	SolarCity	No	No	Yes	Yes	Sunrun	27675	4.850157	1	NEM	None	No	NEMPV	Q.PRO BFR	Hanwha Q-	25											
SCE-INT-SCE-26353					Interconne SCE	ONTARIO	91761	San Bernar	Solar PV	4.80102	4.705	20	180	RoofTop	Fixed	Residential	10/12/2015	10/12/2015	10/19/2015	No	Verengo	714-923-4	Torrance CA	90501	935263	Yes	PPA	Green Day	No	No	Yes	Yes	Sunnova	28317.9	6.018682	1	NEM	None	No	NEMPV	HIS-M250R	Hyundai H	4											
SCE-INT-SCE-26366					Interconne SCE	ONTARIO	91764	San Bernar	Solar PV	3.547959	3.477	18	Multiple	RoofTop	Fixed	Residential	10/12/2015	11/3/2015	11/4/2015	No	SolarMax	R951-300-0	Riverside CA	92507	972048	Yes	Lease	SolarMax	No	Yes	Yes	Sunnova	13387.5	3.850301	1	NEM	None	No	NEMPV	Q.PRO BFR	Hanwha Q-	17												
SCE-INT-SCE-26464					Interconne SCE	ONTARIO	91762	San Bernar	Solar PV	3.031633	2.971	35	90	RoofTop	Fixed	Residential	10/13/2015	11/14/2015	11/25/2015	No	SolarCity	C888-765-2	Las Vegas NV	89119	888104	Yes	PPA	SolarCity	No	Yes	Yes	SolarCity Corporation	17638.4	5.936856	1	NEM	None	No	NEMPV	KU265-62P	Kycocera So	5												
SCE-INT-SCE-26554					Interconne SCE	ONTARIO	91761	San Bernar	Solar PV	4.341837	4.255	23	90	RoofTop	Fixed	Residential	10/13/2015	10/13/2015	10/21/2015	No	Verengo	714-923-4	Torrance CA	90501	935263	Yes	PPA	Green Day	No	No	Yes	Yes	SolarCity	21103.54	4.959703	1	NEM	None	No	NEMPV	HIS-M250R	Hyundai H	9											
SCE-INT-SCE-26609					Interconne SCE	ONTARIO	91764	San Bernar	Solar PV	3.064286	3.003	12	210	RoofTop	Fixed	Residential	10/13/2015	10/13/2015	10/20/2015	No	Solar Serv	888-760-7	Corona CA	92879	961939	Yes	PPA	Solar Serv	No	No	Yes	Yes	SolarCity	4241.47	1.41241	1	NEM	None	No	NEMPV	HIS-M250R	Hyundai H	14											
SCE-INT-SCE-26753					Interconne SCE	ONTARIO	91761	San Bernar	Solar PV	5.181633	5.078	22	240	RoofTop	Fixed	Residential	10/14/2015	12/7/2015	12/10/2015	No	LA Solar Gr	818-666-3	Van Nuys CA	91406	974115	No	PPA	SolarCity	No	No	Yes	No		25000	4.923198	1	NEM	None	No	NEMPV	SW 285 McSolarWorld		8											
SCE-INT-SCE-26773					Interconne SCE	ONTARIO	91764	San Bernar	Solar PV	4.665306	4.572	18	180	RoofTop	Fixed	Residential	10/14/2015	1/13/2016	1/14/2016	No	Solar Serv	888-765-2	Las Vegas NV	89119	888104	Yes	PPA	SolarCity	No	No	Yes	Yes	SolarCity	27136	5.935258	1	NEM	None	No	NEMPV	KU265-62P	Kycocera So	20											
SCE-INT-SCE-26787					Interconne SCE	ONTARIO	91762	San Bernar	Solar PV	6.361224	6.234	18	180	RoofTop	Fixed	Residential	10/14/2015	12/18/2015	12/21/2015	No	Solar Homr	909-981-1	Upland CA	91786	985474	No	PPA	SolarCity	No	No	Yes	No		41228	6.61341	1	NEM	None	No	NEMPV	SPR-E20-3	SunPower	21											
SCE-INT-SCE-26791					Interconne SCE	ONTARIO	91762	San Bernar	Solar PV	5.789796	5.674	19	180	RoofTop	Fixed	Residential	10/14/2015	1/11/2016	1/21/2016	No	Solar Holm	909-981-1	Upland CA	91786	0	No	PPA	SolarCity	No	No	Yes	Yes	SolarCity	36406	6.416284	1	NEM	None	No	NEMPV	REC Sol	1												
SCE-INT-SCE-27062					Interconne SCE	ONTARIO	91764	San Bernar	Solar PV	1.865306	1.828	27	280	RoofTop	Fixed	Residential	10/15/2015	10/15/2015	10/24/2015	No	SolarCity	C888-765-2	San Mateo CA	94402	888104	Yes	Pre-Paid Le	SolarCity	No	No	Yes	No	REC Solar	3194.88	1.747746	1	NEM	None	No	NEMPV	REC260PE	REC Solar	1											
SCE-INT-SCE-27516					Interconne SCE	ONTARIO	91764	San Bernar	Solar PV	5.158163	5.055	18	90	RoofTop	Fixed	Residential	10/17/2015	10/28/2015	10/28/2015	No	SolarCity	C888-765-2	Las Vegas NV	89119	888104	Yes	Lease	SolarCity	No	No	Yes	Yes	SolarCity	29849.6	5.904965	1	NEM	None	No	NEMPV	KU265-62P	Kycocera So	7											
SCE-INT-SCE-27613					Interconne SCE	ONTARIO	91762	San Bernar	Solar PV	3.031633	2.971	20	179	RoofTop	Fixed	Residential	10/18/2015	2/4/2016	2/5/2016	No	SolarCity	C888-765-2	Las Vegas NV	89119	888104	No	PPA	SolarCity	No	No	Yes	Yes	SolarCity	17638.4	5.936856	1	NEM	None	No	NEMPV	KU265-62P	Kycocera So	13											
SCE-INT-SCE-27708					Interconne SCE	ONTARIO	91761	San Bernar	Solar PV	4.897959	4.8	23	180	RoofTop	Fixed	Residential	10/19/2015	10/19/2015	10/29/2015	No	SolarCity	C888-765-2	Las Vegas NV	89119	888104	No	PPA	SolarCity	No	No	Yes	Yes	SolarCity	28492	5.9																			

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Application	Preceding	1 Supercedin	Matched	C Application/Utility	Service City	Service Zip	Service Cot	Technology	System Siz	System Siz	Storage Ca	Storage Siz	Inverter Siz	Tilt	Azimuth	Mounting	Tracking	Customer	5 App Received	App Complete	App Approved	EDCommiss	Self Install	Installer Na	Installer Ph	Installer Cit	Installer St	Installer Zi	CSLB Num	Third Party	Third Party	Third Party	Face	Pace	Finan	Electric Vel	Electric Vel	System Out	System Out	System Out	Total Syste	Itc Cost	Ba Cost/Watt	NEM Tariff	Interconne	VNEM	NEF Project	V NEMPV or	Generator	Generator	Generator
SCE-INT-SCE-36541				Interconne SCE	ONTARIO	91764	San Bernar	Solar PV	3.266327	3.201					17	158	Rooftop	Fixed	Residential	12/7/2015	12/29/2015	12/31/2015	No	Sunnyside	213-587-04	La Verne	CA	91750	1002414	No	No	No	No	No	No	Yes	No	22000		6.872852	1	NEM	None	No	NEMPV	JC260M-24	Renesola A	9			
SCE-INT-SCE-36662				Interconne SCE	ONTARIO	91761	San Bernar	Solar PV	5.656122	5.543					21	270	Rooftop	Fixed	Residential	12/8/2015	12/11/2015	12/14/2015	No	New Day	5855-444-6	Murrieta	CA	92562	812958	No	No	No	No	No	No	Yes	No	27036		4.877503	1	NEM	None	No	NEMPV	KU265-62P	Kycocera So	18			
SCE-INT-SCE-36795				Interconne SCE	ONTARIO	91764	San Bernar	Solar PV	3.498988	3.429					12	180	Rooftop	Fixed	Residential	12/9/2015	4/26/2016	4/27/2016	No	SolarCity	G888-765-2	Las Vegas	NV	89119	888104	No	No	No	No	No	No	Yes	No	20326		5.927675	1	NEM	None	No	NEMPV	KU265-62P	Kycocera So	15			
SCE-INT-SCE-36922				Interconne SCE	ONTARIO	91762	San Bernar	Solar PV	2.394898	2.249					18	280	Rooftop	Fixed	Residential	12/9/2015	12/15/2015	12/17/2015	No	SolarCity	G888-765-2	San Mateo	CA	94402	888104	Yes	Lease	SolarCity	Edison	CA	94402	888104	Yes	Yes	No	No	3993.6	1.725722	1	NEM	None	No	NEMPV	REC260RP	REC Solar	10	
SCE-INT-SCE-36937				Interconne SCE	ONTARIO	91762	San Bernar	Solar PV	6.038776	5.918					19	270	Rooftop	Fixed	Residential	12/9/2015	12/14/2015	12/23/2015	No	Barnes Sol	949-613-55	Fountain V	CA	92708	943909	Yes	Lease	SolarCity	Edison	CA	92708	943909	Yes	Yes	No	No	6682.5	1.129182	1	NEM	None	No	NEMPV	SE-F270Kt	Sun Edison	25	
SCE-INT-SCE-36995				Interconne SCE	ONTARIO	91761	San Bernar	Solar PV	6.178571	6.055					17	90	Rooftop	Fixed	Residential	12/9/2015	12/9/2015	12/15/2015	No	Future Ene	800-985-07	Rancho Cuc	CA	91730	463720	No	PPA	SolarCity	Edison	CA	91730	463720	No	Yes	No	43946		7.257803	1	NEM	None	No	NEMPV	SW 280 McSolarWorld	25		
SCE-INT-SCE-37005				Interconne SCE	ONTARIO	91761	San Bernar	Solar PV	4.215206	4.131					21	180	Rooftop	Fixed	Residential	12/9/2015	12/9/2015	12/15/2015	No	Solar Serv	888-760-7	Corona	CA	92879	961939	Yes	PPA	Solar Serv	Edison	CA	92879	961939	Yes	Yes	Yes	Solar Service Center, L	6038.52	1.461757	1	NEM	None	No	NEMPV	HIS-M250R	Hyundai H	15	
SCE-INT-SCE-37139				Interconne SCE	ONTARIO	91764	San Bernar	Solar PV	4.209184	4.125					10	180	Rooftop	Fixed	Residential	12/9/2015	12/16/2015	12/17/2015	No	GNRG Sola	855-467-4	Van Nuys	CA	91411	915911	No	PPA	Solar Serv	Edison	CA	91411	915911	Yes	No	31620		7.665454	1	NEM	None	No	NEMPV	CS6X-310P	Canadian S	15		
SCE-INT-SCE-37221				Interconne SCE	ONTARIO	91761	San Bernar	Solar PV	6.656122	6.523					26	269	Rooftop	Fixed	Residential	12/10/2015	2/8/2016	2/9/2016	No	Horizon So	909-253-01	Hemet	CA	92545	1004233	Yes	Pre-Paid	Le Sunrun, Inc	Edison	CA	92545	1004233	Yes	Yes	Yes	SUNRUN INC.	27518.4	4.218672	1	NEM	None	No	NEMPV	REC280TP	REC Solar	21	
SCE-INT-SCE-37265				Interconne SCE	ONTARIO	91764	San Bernar	Solar PV	9.565306	9.374					18	180	Rooftop	Fixed	Residential	12/10/2015	12/30/2015	12/31/2015	No	Vivint Solar	801-229-65	Lehi	UT	84043	973756	Yes	PPA	Vivint Solar	Edison	CA	84043	973756	Yes	Yes	Yes	Vivint Solar Developer	23664	2.524429	1	NEM	None	No	NEMPV	YL255P-29I	Yingli Energ	20	
SCE-INT-SCE-37317				Interconne SCE	ONTARIO	91764	San Bernar	Solar PV	9.815306	9.739					10	180	Rooftop	Fixed	Residential	12/10/2015	2/2/2016	2/3/2016	No	LA Solar Gr	818-666-3	Van Nuys	CA	91406	974115	Yes	Lease	SolarCity	Edison	CA	91406	974115	Yes	Yes	No	13721.29	3.669775	1	NEM	None	No	NEMPV	SE-F270Kt	Sun Edison	16		
SCE-INT-SCE-37802				Interconne SCE	ONTARIO	91761	San Bernar	Solar PV	6.680612	6.547					22	180	Rooftop	Fixed	Residential	12/14/2015	2/12/2016	2/16/2016	No	T&G Roofr	909-931-3	Upland	CA	91786	583458	No	Lease	SolarCity	Edison	CA	91786	583458	Yes	HERO	HERO	HERO	28000		4.276767	1	NEM	None	No	NEMPV	LG310M1-LG	Electror	24
SCE-INT-SCE-37917				Interconne SCE	ONTARIO	91762	San Bernar	Solar PV	3.498988	3.633					17	180	Rooftop	Fixed	Residential	12/14/2015	12/14/2015	12/17/2015	No	Future Ene	800-985-07	Rancho Cuc	CA	91730	463720	No	No	No	No	No	No	Yes	No	24857		6.842003	1	NEM	None	No	NEMPV	SW 280 McSolarWorld	15				
SCE-INT-SCE-37983				Interconne SCE	ONTARIO	91761	San Bernar	Solar PV	4.802041	4.706					18	270	Rooftop	Fixed	Residential	12/14/2015	12/14/2015	12/17/2015	No	Sunrun Inst	805-540-5	San Luis O	CA	93401	750184	No	No	No	No	No	No	Yes	No	22074.5		4.690713	1	NEM	None	No	NEMPV	Q.PRO	BFR Hanwha Q	20			
SCE-INT-SCE-37988				Interconne SCE	ONTARIO	91761	San Bernar	Solar PV	4.968367	4.869					20	180	Rooftop	Fixed	Residential	12/14/2015	4/8/2016	4/11/2016	No	PavWest P	888-511-3	Riverside	CA	92507	978235	No	No	No	No	No	No	Yes	No	22783		4.679194	1	NEM	None	No	NEMPV	CS6X-305P	Canadian S	18			
SCE-INT-SCE-38272				Interconne SCE	ONTARIO	91764	San Bernar	Solar PV	104.8816	102.784					10	180	Mixed	Fixed	Commercia	12/16/2015	6/21/2016	6/23/2016	No	REC Solar C	707-331-4	Petaluma	CA	94954	990001	No	Yes	Yes	Yes	Yes	Yes	Yes	Locus Enerj	484480		4.713574	1	NEM	None	No	NEMPV	LG310M1-LG	Electror	326			
SCE-INT-SCE-38517				Interconne SCE	ONTARIO	91761	San Bernar	Solar PV	3.498988	3.429					23	90	Rooftop	Fixed	Residential	12/16/2015	1/5/2016	1/6/2016	No	SolarCity	G888-765-2	Las Vegas	NV	89119	888104	Yes	PPA	SolarCity	Edison	CA	89119	888104	Yes	Yes	No	20326		5.927675	1	NEM	None	No	NEMPV	KU265-62P	Kycocera So	9	
SCE-INT-SCE-38570				Interconne SCE	ONTARIO	91764	San Bernar	Solar PV	5.184694	5.081					22	150	Rooftop	Fixed	Residential	12/17/2015	12/17/2015	12/22/2015	No	New Day	5855-444-6	Murrieta	CA	92562	812958	No	No	No	No	No	No	Yes	No	21808		4.292068	1	NEM	None	No	NEMPV	KU265-62P	Kycocera So	22			
SCE-INT-SCE-38636				Interconne SCE	ONTARIO	91762	San Bernar	Solar PV	4.658163	4.565					18	214	Rooftop	Fixed	Residential	12/17/2015	12/17/2015	12/21/2015	No	SolarCity	G888-765-2	San Mateo	CA	94402	888104	Yes	Lease	SolarCity	Edison	CA	94402	888104	Yes	Yes	No	7987.2	1.749666	1	NEM	None	No	NEMPV	KU260-6XP	Kycocera So	5		
SCE-INT-SCE-38745				Interconne SCE	ONTARIO	91761	San Bernar	Solar PV	2.797959	2.742					24	270	Rooftop	Fixed	Residential	12/17/2015	12/17/2015	12/22/2015	No	A1 Solar P	818-924-4	North Holly	CA	91601	493623	No	No	No	No	No	No	Yes	No	20000		7.293946	1	NEM	None	No	NEMPV	SW 280 McSolarWorld	11				
SCE-INT-SCE-38774				Interconne SCE	ONTARIO	91762	San Bernar	Solar PV	8.196939	8.033					14	180	Rooftop	Fixed	Residential	12/17/2015	12/17/2015	12/19/2015	No	Suncrest S	385-235-5	Salt Lake	UT	84111	987868	Yes	PPA	Suncrest	Edison	CA	84111	987868	Yes	Yes	Yes	Suncrest	1	0.000124	1	NEM	None	No	NEMPV	Q.PRO	G4	Hanwha Q	6
SCE-INT-SCE-38788				Interconne SCE	ONTARIO	91761	San Bernar	Solar PV	3.965306	3.886					21	180	Rooftop	Fixed	Residential	12/17/2015	12/17/2015	12/19/2015	No	SolarCity	G888-765-2	Las Vegas	NV	89119	888104	No	No	No	No	No	No	Yes	No	23040		5.928975	1	NEM	None	No	NEMPV	KU265-62P	Kycocera So	17			
SCE-INT-SCE-38923				Interconne SCE	ONTARIO	91761	San Bernar	Solar PV	4.796939	4.701					18	180	Rooftop	Fixed	Residential	12/18/2015	12/18/2015	12/22/2015	No	green hom	951-639-11	lake elsinor	CA	92530	960777	No	No	No	No	No	No	No	Yes	No	26775		5.695596	1	NEM	None	No	NEMPV	SW 270 McSolarWorld	20			
SCE-INT-SCE-38926				Interconne SCE	ONTARIO	91761	San Bernar	Solar PV	3.516327	3.446					18	196	Rooftop	Fixed	Residential	12/18/2015	2/17/2016	3/1/2016	No	Lennar Hor	949-450-5	IRVINE	CA	92618	1001133	Yes	PPA	LENNAR HC	Edison	CA	92618	1001133	Yes	Yes	No	16716		4.850841	1	NEM	None	No	NEMPV	HIS-5265R	Hyundai H	15	
SCE-INT-SCE-38938				Interconne SCE	ONTARIO	91762	San Bernar	Solar PV	3.751022	3.676					23	270	Rooftop	Fixed	Residential	12/18/2015	2/18/2016	2/18/2016	No	Lennar Hor	949-450-5	IRVINE	CA	92618	1001133	Yes	PPA	LENNAR HC	Edison	CA	92618	1001133	Yes	Yes	No	17808		4.844396	1	NEM	None	No	NEMPV	HIS-5265R	Hyundai H	15	
SCE-INT-SCE-38942				Interconne SCE	ONTARIO	91761	San Bernar	Solar PV	4.220408	4.136					18	270	Rooftop	Fixed	Residential	12/18/2015	2/17/2016	3/1/2016	No	Lennar Hor	949-450-5	IRVINE	CA	92618	1001133	Yes	PPA	LENNAR HC	Edison	CA	92618	1001133	Yes	Yes	No	20034		4.843811	1	NEM	None	No	NEMPV	HIS-5265R	Hyundai H	15	
SCE-INT-SCE-38948				Interconne SCE	ONTARIO	91761	San Bernar	Solar PV	3.516327	3.446					18	270	Rooftop	Fixed	Residential	12/18/2015																															

Ontario Quantification Workbook

Application Preceding 1	Supercedin Matched C	Application/Utility	Service City/Service Zip	Service Cot	Technology	System Siz	System Siz	Storage Ca	Storage Siz	Inverter Siz	Tilt	Azimuth	Mounting I	Tracking	Customer 5	App Received I	App Complete App	Approved E	Decommis	Self Installe	Installer Na	Installer Ph	Installer CII	Installer St	Installer Zi	CSLB Numt	Third Party	Third Party	Third Party	Face Financ	Face Financ	Electric Vel	Electric Vel	System Out	System Out	Total System	Itc Cost	Cost/Watt	NEM Tariff	Interconne	VNEM	NEF Project	V NEMPV or	Generator	Generator	Generator
SCE-INT-SCE-58476		Interconne SCE	ONTARIO 91761	San Bernar Solar PV		4.614286	4.522				18	260	Rooftop	Fixed	Residential	4/13/2016	5/27/2016	5/28/2016	No	Horizon So 951-438-21	HEMET	CA		92545	1004233	Yes	PPA	SUNRUN, II No	No	No	No	No	18084	3.999115	1	NEM	None	No	NEMPV	CS6P-255P Canadian S				20		
SCE-INT-SCE-58948		Interconne SCE	ONTARIO 91764	San Bernar Solar PV		4.634694	4.542				18	270	Rooftop	Fixed	Residential	4/18/2016	4/26/2016	4/27/2016	No	Verengo 310-803-9C	Torrance	CA		90501	935263	Yes	PPA	Clean Powe No	No	No	No	No	23265	5.122192	1	NEM	None	No	NEMPV	HIS-M250RHyundai Hc				21		
SCE-INT-SCE-59002		Interconne SCE	ONTARIO 91762	San Bernar Solar PV		11.02245	10.802				14	180	Rooftop	Fixed	Residential	4/18/2016	4/20/2016	4/21/2016	No	Barnes Solr 949-813-55	Fountain V	CA		92708	943909	Yes	PPA	Spruce No	No	No	No	No	13638.3	1.262571	1	NEM	None	No	NEMPV	SW 280 McSolarWorld				36		
SCE-INT-SCE-59123		Interconne SCE	ONTARIO 91764	San Bernar Solar PV		4.082653	4.001				24	270	Rooftop	Fixed	Residential	4/19/2016	5/31/2016	6/1/2016	No	Ground Up 818-849-65	Upland	CA		91785	911849	No	No	No	No	No	No	34200	8.547863	1	NEM	None	No	NEMPV	SW 285 McSolarWorld				6			
SCE-INT-SCE-59199		Interconne SCE	ONTARIO 91762	San Bernar Solar PV		3.669388	3.596				18	249	Rooftop	Fixed	Residential	4/19/2016	4/19/2016	4/20/2016	No	SunPower 800-786-7E	Roseville	CA		95661	909085	No	No	No	No	No	17750	4.93604	1	NEM	None	No	NEMPV	SPR-X20-25 SunPower				16				
SCE-INT-SCE-59260		Interconne SCE	ONTARIO 91761	San Bernar Solar PV		6.295918	6.17				17	180	Rooftop	Fixed	Residential	4/19/2016	4/19/2016	4/20/2016	No	Future Ene 800-985-07	Rancho Cu	CA		91730	463720	No	No	No	No	No	52235	8.465964	1	NEM	None	No	NEMPV	Protect SW SolarWorld				26				
SCE-INT-SCE-59459		Decommis: SCE	ONTARIO 91764	San Bernar Solar PV		3.530612	3.46				20	270	Rooftop	Fixed	Residential	4/20/2016	4/20/2016	4/21/2016	#####	Suncrest Sc 385-235-5	Salt Lake CI	UT		84111	987868	Yes	PPA	Suncrest Sc No	No	No	Yes	Yes	1	0.000289	1	NEM	None	No	NEMPV	Q.PRO BFR Hanwha Q-				26		
SCE-INT-SCE-59508		Interconne SCE	ONTARIO 91764	San Bernar Solar PV		6.529592	6.399				25	180	Rooftop	Fixed	Residential	4/21/2016	4/22/2016	4/25/2016	No	Restart Sol-909-981-7	Upland	CA		91786	0	Yes	Lease	SunPower I No	No	No	No	25000	3.90686	1	NEM	None	No	NEMPV	SPR-E20-32 SunPower				6			
SCE-INT-SCE-59734		Interconne SCE	ONTARIO 91754	San Bernar Solar PV		3.862004	3.783				23	279	Rooftop	Fixed	Residential	4/22/2016	4/22/2016	4/25/2016	No	SolarCity C 888-765-2	Las Vegas NV			89119	888104	Yes	PPA	SolarCity C No	No	No	Yes	Yes	21504	5.684377	1	NEM	None	No	NEMPV	Triex U300 Silevo				8		
SCE-INT-SCE-59799		Interconne SCE	ONTARIO 91761	San Bernar Solar PV		5.073469	4.972				17	180	Rooftop	Fixed	Residential	4/22/2016	4/22/2016	4/25/2016	No	Future Ene 800-985-07	Rancho Cu	CA		91730	463720	No	No	No	No	24150	4.8572	1	NEM	None	No	NEMPV	HIS-M260RHyundai Hc				22					
SCE-INT-SCE-59813		Interconne SCE	ONTARIO 91762	San Bernar Solar PV		3.343878	3.277				14	90	Rooftop	Fixed	Residential	4/22/2016	4/22/2016	4/25/2016	No	Sunrun Inst 805-540-5	San Luis O	CA		93401	750184	Yes	PPA	Sunrun Inc No	No	No	Yes	Yes	11075	3.379615	1	NEM	None	No	NEMPV	Q.PRO BFR Hanwha Q-				8		
SCE-INT-SCE-60033		Interconne SCE	ONTARIO 91764	San Bernar Solar PV		4.172449	4.089				20	180	Rooftop	Fixed	Residential	4/25/2016	5/2/2016	5/3/2016	No	Uptown So 866-391-5	Houston TX			77032	0	No	Lease	HERO No	No	No	26910	6.581071	1	NEM	None	No	NEMPV	LE-6M260 Lefline Ene				5				
SCE-INT-SCE-60141		Interconne SCE	ONTARIO 91761	San Bernar Solar PV		2.218367	2.174				24	180	Rooftop	Fixed	Residential	4/26/2016	4/26/2016	5/2/2016	No	Verengo 310-803-9C	Torrance	CA		90501	935263	Yes	PPA	Clean Powe No	No	No	No	9640	4.434222	1	NEM	None	No	NEMPV	HIS-M250RHyundai Hc				7			
SCE-INT-SCE-60442		Interconne SCE	ONTARIO 91761	San Bernar Solar PV		3.342857	3.276				22	145	Rooftop	Fixed	Residential	4/27/2016	4/27/2016	4/28/2016	No	Verengo 310-803-9C	Torrance	CA		90501	935263	No	No	No	No	18225	5.563186	1	NEM	None	No	NEMPV	TSM-250P/Trina Solar				5					
SCE-INT-SCE-60492		Interconne SCE	ONTARIO 91761	San Bernar Solar PV		5.861224	5.744				20	140	Rooftop	Fixed	Residential	4/27/2016	4/27/2016	4/28/2016	No	SolarCity C 888-765-2	Las Vegas NV			89119	888104	Yes	PPA	SolarCity No	No	No	No	30720	5.348189	1	NEM	None	No	NEMPV	KU265-62P Kyocera So				25			
SCE-INT-SCE-60562		Interconne SCE	ONTARIO 91761	San Bernar Solar PV		7.39898	7.251				14	270	Rooftop	Fixed	Residential	4/28/2016	7/11/2016	7/12/2016	No	Suncrest Sc 385-235-5	SLC	UT		84111	987868	Yes	PPA	Suncrest Sc No	No	No	Yes	Yes	1	0.000137	1	NEM	None	No	NEMPV	Q.PRO BFR Hanwha Q-				19		
SCE-INT-SCE-60568		Interconne SCE	ONTARIO 91761	San Bernar Solar PV		4.720408	4.626				28	90	Rooftop	Fixed	Residential	4/28/2016	4/28/2016	4/29/2016	No	Petersen D 510-371-6	Fremont	CA		94538	468117	No	No	No	No	24057.33	5.20046	1	NEM	None	No	NEMPV	SW 280 McSolarWorld				19					
SCE-INT-SCE-60618		Interconne SCE	ONTARIO 91762	San Bernar Solar PV		4.444898	7.296				22	179	Rooftop	Fixed	Residential	4/28/2016	4/28/2016	4/29/2016	No	SolarCity C 888-765-2	Las Vegas NV			89119	888104	Yes	Lease	SolarCity No	No	No	Yes	Yes	41472	5.68421	1	NEM	None	No	NEMPV	Triex U300 Silevo				13		
SCE-INT-SCE-60744		Interconne SCE	ONTARIO 91761	San Bernar Solar PV		4.471429	4.382				16	148	Rooftop	Fixed	Residential	4/28/2016	5/2/2016	5/3/2016	No	Petersen D 510-371-6	Fremont	CA		94538	468117	No	No	No	No	19543	4.459835	1	NEM	None	No	NEMPV	SW 280 McSolarWorld				15					
SCE-INT-SCE-60842		Interconne SCE	ONTARIO 91761	San Bernar Solar PV		3.619388	3.547				20	90	Rooftop	Fixed	Residential	4/29/2016	4/29/2016	5/2/2016	No	SolarCity C 888-765-2	Las Vegas NV			89119	888104	Yes	PPA	SolarCity No	No	No	Yes	Yes	21222.4	5.983197	1	NEM	None	No	NEMPV	KU265-62P Kyocera So				9		
SCE-INT-SCE-61004		Interconne SCE	ONTARIO 91761	San Bernar Solar PV		8.431633	8.263				18	90	Rooftop	Fixed	Residential	4/29/2016	5/25/2016	5/26/2016	No	SolarCity C 888-765-2	Las Vegas NV			89119	888104	Yes	PPA	SolarCity C No	No	No	Yes	Yes	47923.2	5.799733	1	NEM	None	No	NEMPV	CS6P-260P Canadian S				15		
SCE-INT-SCE-61097		Interconne SCE	ONTARIO 91764	San Bernar Solar PV		4.107143	4.025				28	180	Rooftop	Fixed	Residential	4/29/2016	5/13/2016	5/16/2016	No	SolarCity C 888-765-2	Las Vegas NV			89119	888104	Yes	PPA	SolarCity No	No	No	No	21021	5.222608	1	NEM	None	No	NEMPV	KU260-6XP Kyocera So				18			
SCE-INT-SCE-61173		Interconne SCE	ONTARIO 91764	San Bernar Solar PV		3.044898	2.984				21	123	Rooftop	Fixed	Residential	4/30/2016	4/30/2016	5/2/2016	No	SolarCity C 888-765-2	Las Vegas NV			89119	888104	Yes	PPA	SolarCity No	No	No	17520	5.817313	1	NEM	None	No	NEMPV	CS6P-260P Canadian S				13				
SCE-INT-SCE-61180		Interconne SCE	ONTARIO 91762	San Bernar Solar PV		5.625531	5.514				19	Multiple	Rooftop	Fixed	Residential	5/1/2016	5/10/2016	5/11/2016	No	SolarCity C 888-765-2	Las Vegas NV			89119	888104	Yes	No	No	No	Yes	Yes	SolarCity	32563.2	5.905549	1	NEM	None	No	NEMPV	KU265-62P Kyocera So				7		
SCE-INT-SCE-61470		Interconne SCE	ONTARIO 91761	San Bernar Solar PV		6.296939	6.171				20	135	Rooftop	Fixed	Residential	5/3/2016	7/28/2016	7/29/2016	No	LA Solar Gr 818-666-3	Van Nuys CA			91406	974115	No	No	No	No	20542	3.328795	1	NEM	None	No	NEMPV	OPT335-72 Suniva				15					
SCE-INT-SCE-61878		Interconne SCE	ONTARIO 91761	San Bernar Solar PV		8.479592	8.31				30	284	Rooftop	Fixed	Residential	5/5/2016	8/12/2016	8/16/2016	No	Horizon So 909-253-01	hemet	CA		92545	1004233	Yes	Other	Sunrun, Inc No	No	No	Yes	Yes	Sunrun, Inc	33571.13	4.039847	1	NEM	None	No	NEMPV	LG315M1C-LG Elector				3	
SCE-INT-SCE-62145		Interconne SCE	ONTARIO 91761	San Bernar Solar PV		4.749184	7.31				26	90	Rooftop	Fixed	Residential	5/7/2016	8/3/2016	8/4/2016	No	Horizon So 951-537-6	HEMET	CA		92545	1004233	Yes	PPA	SUNRUN, II No	No	No	Yes	Yes	SUNRUN, INC.	29220	3.997264	1	NEM	None	No	NEMPV	CS6P-255P Canadian S				12	
SCE-INT-SCE-62146		Interconne SCE	ONTARIO 91761	San Bernar Solar PV		3.672449	3.599				33	225	Rooftop	Fixed	Residential	5/7/2016	6/16/2016	6/17/2016	No	Horizon So 951-438-21	HEMET	CA		92545	1004233	No	No	No	No	22440	6.235065	1	NEM	None	No	NEMPV	CS6P-255P Canadian S				5					
SCE-INT-SCE-62499		Interconne SCE	ONTARIO 91761	San Bernar Solar PV		269.3755	263.988				10	Multiple	Rooftop	Fixed	Industrial	5/10/2016	6/8/2016	6/21/2016	No	Gregg Elect 909-983-1	ONTARIO	CA		91762	201042	No	No	No	No	20000	0.57561	1	NEM	None	No	NEMPV	CS6X-320P Canadian S				800					
SCE-INT-SCE-62566		Interconne SCE	ONTARIO 91764	San Bernar Solar PV		5.282653	5.177				20	270	Rooftop	Fixed	Residential	5/11/2016	7/19/2016	7/21/2016	No	Suncrest Sc 385-235-5	Salt Lake CI	UT		84111	987868	Yes	PPA																			

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Application Preceding 1 Supercedin Matched C Application Utility	Service City Service Zip Service Cot Technology System Siz System Siz Storage Ca Storage Siz Inverter Siz Tilt	Service City Service Zip Service Cot Technology System Siz System Siz Storage Ca Storage Siz Inverter Siz Tilt	Azimuth	Mounting	Tracking	Customer 5 App Received	App Complete	App Approved	EDecommis	Self Install	Installer Na	Installer Ph	Installer Ct	Installer St	Installer Zi	CSLB Numt	Third Party	Third Party	Third Party	Face Fin	Face Fin	Electric Vel	Electric Vel	System Out	System Out	System Out	Total System Itc	Cost Bas	Cost/Watt	NEM Tariff	Interconne	VNEM	NEF Project	V NEMPV or	Generator	Generator	Generator
SCE-INT-SCE-68673	Interconne SCE	ONTARIO	91762	San Bernar Solar PV	4.334694	4.248	12	179	Rooftop	Fixed	Residential	6/23/2016	7/5/2016	7/6/2016	No	SolarCity C888-765-2 Las Vegas NV	89119	888104	Yes	PPA	SolarCity	No	No	No	Yes	Yes	SolarCity	19036	25293	5.954096	1 NEM	None	No	NEMPV	KU260-6PX Kyocera So	10	
SCE-INT-SCE-68804	Interconne SCE	ONTARIO	91761	San Bernar Solar PV	5.192857	5.089	5	180	Rooftop	Fixed	Residential	6/23/2016	6/28/2016	6/30/2016	No	SolarGem E909-980-1F Rancho Cu CA	91730	929565	No	PPA	SolarCity	No	No	No	Yes	Yes	SolarCity	19036	25293	5.954096	1 NEM	None	No	NEMPV	SW 290 McSolarWorld	20	
SCE-INT-SCE-68809	Interconne SCE	ONTARIO	91762	San Bernar Solar PV	3.165	3.577	18	180	Rooftop	Fixed	Residential	6/24/2016	6/24/2016	6/27/2016	No	SolarCity C888-765-2 Las Vegas NV	89119	888104	Yes	PPA	SolarCity	No	No	No	Yes	Yes	SolarCity	27136	21299	5.954431	1 NEM	None	No	NEMPV	KU260-6PX Kyocera So	11	
SCE-INT-SCE-68815	Interconne SCE	ONTARIO	91762	San Bernar Solar PV	4.762245	4.667	22	180	Rooftop	Fixed	Residential	6/24/2016	6/24/2016	6/27/2016	No	SolarCity C888-765-2 Las Vegas NV	89119	888104	No	PPA	SolarCity	No	No	No	Yes	Yes	SolarCity	27136	17638.4	5.936856	1 NEM	None	No	NEMPV	KU265-6ZP Kyocera So	6	
SCE-INT-SCE-68923	Interconne SCE	ONTARIO	91762	San Bernar Solar PV	3.031633	3.971	18	180	Rooftop	Fixed	Residential	6/24/2016	7/6/2016	7/7/2016	No	SolarCity C888-765-2 Las Vegas NV	89119	888104	Yes	PPA	SolarCity	No	No	No	Yes	Yes	SolarCity	27136	13312	5.710853	1 NEM	None	No	NEMPV	CS6P-260P Canadian S	5	
SCE-INT-SCE-69007	Interconne SCE	ONTARIO	91761	San Bernar Solar PV	2.378571	2.331	27	90	Rooftop	Fixed	Residential	6/24/2016	7/5/2016	7/6/2016	No	SolarCity C888-765-2 Las Vegas NV	89119	888104	Yes	PPA	SolarCity	No	No	No	Yes	No	SolarCity	27136	37273.6	5.954249	1 NEM	None	No	NEMPV	KU260-6PX Kyocera So	6	
SCE-INT-SCE-69072	Interconne SCE	ONTARIO	91761	San Bernar Solar PV	6.387755	6.26	23	Multiple	Rooftop	Fixed	Residential	6/24/2016	6/24/2016	6/27/2016	No	SolarCity C888-765-2 Las Vegas NV	89119	888104	Yes	PPA	SolarCity	No	No	No	Yes	Yes	SolarCity	27136	13312	5.710853	1 NEM	None	No	NEMPV	HIS-M260R Hyundai H	21	
SCE-INT-SCE-69173	Interconne SCE	ONTARIO	91764	San Bernar Solar PV	4.842857	4.746	26	240	Rooftop	Fixed	Residential	6/24/2016	7/5/2016	7/6/2016	No	Future Ener 800-985-07 Rancho Cu CA	91730	0	No	PPA	SolarCity	No	No	No	Yes	No	SolarCity	26650	5.6152254	1 NEM	None	No	NEMPV	CS6P-260P Canadian S	5		
SCE-INT-SCE-69180	Interconne SCE	ONTARIO	91764	San Bernar Solar PV	5.65102	5.538	18	180	Rooftop	Fixed	Residential	6/25/2016	6/25/2016	6/27/2016	No	SolarCity C888-765-2 Las Vegas NV	89119	888104	Yes	Lease	SolarCity	No	No	No	Yes	Yes	SolarCity	31949	5.76905	1 NEM	None	No	NEMPV	CS6P-260P Canadian S	24		
SCE-INT-SCE-69188	Interconne SCE	ONTARIO	91764	San Bernar Solar PV	3.407143	3.339	18	270	Rooftop	Fixed	Residential	6/25/2016	6/30/2016	7/1/2016	No	SolarCity C888-765-2 Las Vegas NV	89119	888104	Yes	Lease	SolarCity	No	No	No	Yes	No	SolarCity	31949	5.855229	1 NEM	None	No	NEMPV	KU255-6PX Kyocera So	5		
SCE-INT-SCE-69495	Interconne SCE	ONTARIO	91762	San Bernar Solar PV	4.564286	4.433	14	180	Rooftop	Fixed	Residential	6/28/2016	7/1/2016	7/5/2016	No	SolarCity C650-953-51 Las Vegas NV	89119	888104	Yes	PPA	SolarCity	No	No	No	Yes	Yes	SolarCity	37990.4	5.905549	1 NEM	None	No	NEMPV	KU265-6ZP Kyocera So	12		
SCE-INT-SCE-69529	Interconne SCE	ONTARIO	91761	San Bernar Solar PV	4.562365	4.472	20	90	Rooftop	Fixed	Residential	6/28/2016	6/28/2016	6/29/2016	No	SolarCity C888-765-2 Las Vegas NV	89119	888104	Yes	PPA	SolarCity C No	No	No	No	Yes	Yes	SolarCity Corporation	26624	5.953848	1 NEM	None	No	NEMPV	KU260-6PX Kyocera So	8		
SCE-INT-SCE-69592	Interconne SCE	ONTARIO	91762	San Bernar Solar PV	8.27449	8.109	22	180	Rooftop	Fixed	Residential	6/28/2016	7/1/2016	7/1/2016	No	SolarMax R951-300-07 Riverside CA	92507	972048	Yes	Lease	SolarMax	No	No	No	Yes	No	SolarCity Corporation	30514.75	3.763071	1 NEM	None	No	NEMPV	Q.PRO BFR Hanwha Q-	35		
SCE-INT-SCE-69704	Interconne SCE	ONTARIO	91761	San Bernar Solar PV	4.942857	4.844	20	180	Rooftop	Fixed	Residential	6/29/2016	6/29/2016	6/30/2016	No	Petersen D 510-371-65 Fremont CA	94538	468117	No	PPA	SolarCity C No	No	No	No	Yes	No	20874.54	4.30936	1 NEM	None	No	NEMPV	SW 280 McSolarWorld	20			
SCE-INT-SCE-69717	Interconne SCE	ONTARIO	91762	San Bernar Solar PV	7.133673	6.991	23	180	Rooftop	Fixed	Residential	6/29/2016	6/29/2016	6/30/2016	No	SolarCity C888-765-2 Las Vegas NV	89119	888104	Yes	PPA	SolarCity C No	No	No	No	Yes	Yes	SolarCity Corporation	40704	5.822343	1 NEM	None	No	NEMPV	KU265-6ZP Kyocera So	15		
SCE-INT-SCE-69730	Interconne SCE	ONTARIO	91762	San Bernar Solar PV	3.631633	3.559	17	180	Rooftop	Fixed	Residential	6/29/2016	6/30/2016	7/1/2016	No	Future Ener 800-985-07 Rancho Cu CA	91730	0	No	PPA	SolarCity	No	No	No	Yes	No	28350	7.96572	1 NEM	None	No	NEMPV	Protect SW SolarWorld	15			
SCE-INT-SCE-69766	Interconne SCE	ONTARIO	91762	San Bernar Solar PV	3.193878	3.13	18	270	Rooftop	Fixed	Residential	6/29/2016	6/29/2016	6/30/2016	No	SolarCity C888-765-2 Las Vegas NV	89119	888104	Yes	Lease	SolarCity C No	No	No	No	Yes	Yes	SolarCity Corporation	18637	5.954313	1 NEM	None	No	NEMPV	KU260-6PX Kyocera So	14		
SCE-INT-SCE-69824	Interconne SCE	ONTARIO	91764	San Bernar Solar PV	5.534694	5.424	20	180	Rooftop	Fixed	Residential	6/29/2016	6/30/2016	7/1/2016	No	DRH Electri 909-217-8 Rancho Cu CA	91730	868037	No	PPA	SolarCity	No	No	No	Yes	No	39312	7.247787	1 NEM	None	No	NEMPV	HIS-M260R Hyundai H	24			
SCE-INT-SCE-70189	Interconne SCE	ONTARIO	91762	San Bernar Solar PV	7.715306	7.561	20	180	Rooftop	Fixed	Residential	7/1/2016	7/1/2016	7/5/2016	No	Vivint Solar 801-229-65 Lehi UT	84043	973756	Yes	PPA	Vivint Solar	No	No	No	Yes	Yes	SolarEdge Technology	37494.6	4.958947	1 NEM	None	No	NEMPV	YL260P-29I Yingli Ener	9		
SCE-INT-SCE-70227	Interconne SCE	ONTARIO	91761	San Bernar Solar PV	3.994898	3.915	24	90	Rooftop	Fixed	Residential	7/1/2016	7/1/2016	7/5/2016	No	Vivint Solar 801-229-65 Lehi UT	84043	973756	Yes	PPA	Vivint Solar	No	No	No	Yes	Yes	SolarEdge Technology	19315.4	4.93369	1 NEM	None	No	NEMPV	YL260P-29I Yingli Ener	9		
SCE-INT-SCE-70324	Interconne SCE	ONTARIO	91761	San Bernar Solar PV	4.485714	4.396	18	180	Rooftop	Fixed	Residential	7/5/2016	8/24/2016	8/27/2016	No	HoSoPo Co 951-428-21 Hemet CA	92545	1004233	Yes	PPA	SunRun Inc No	No	No	No	Yes	Yes	SunRun	20151.45	5.584042	1 NEM	None	No	NEMPV	CS6K-275M Canadian S	18		
SCE-INT-SCE-70417	Interconne SCE	ONTARIO	91761	San Bernar Solar PV	4.631633	4.539	28	270	Rooftop	Fixed	Residential	7/5/2016	7/5/2016	7/7/2016	No	Galkos Con 800-998-15 HUNTINGT CA	92649	1004645	No	PPA	SolarCity	No	No	No	Yes	No	19500	4.2961	1 NEM	None	No	NEMPV	LG28051C-LG Electror	12			
SCE-INT-SCE-70429	Interconne SCE	ONTARIO	91764	San Bernar Solar PV	1.653061	1.62	23	267	Rooftop	Fixed	Residential	7/6/2016	7/6/2016	9/20/2016	No	SunPower I877-344-61 Roseville CA	95661	890895	No	PPA	SolarCity	No	No	No	Yes	No	7820	4.82716	1 NEM	None	No	NEMPV	SPR-230NE SunPower	8			
SCE-INT-SCE-70457	Interconne SCE	ONTARIO	91761	San Bernar Solar PV	3.407143	3.339	25	181	Rooftop	Fixed	Residential	7/6/2016	9/19/2016	9/26/2016	No	SolarCity C888-765-2 Las Vegas NV	89119	888104	Yes	Lease	SolarCity	No	No	No	Yes	Yes	SolarCity	19584	5.855229	1 NEM	None	No	NEMPV	KU255-6PX Kyocera So	28		
SCE-INT-SCE-70481	Interconne SCE	ONTARIO	91764	San Bernar Solar PV	6.316327	6.19	18	180	Rooftop	Fixed	Residential	7/6/2016	7/6/2016	7/7/2016	No	Sungevity I 510-740-21 Oakland CA	94607	909236	Yes	PPA	Sungevity Inc	No	No	No	Yes	Yes	Sungevity	15642.55	2.527067	1 NEM	None	No	NEMPV	TSM-250P Trina Solar	15		
SCE-INT-SCE-70576	Interconne SCE	ONTARIO	91764	San Bernar Solar PV	4.191837	4.108	23	90	Rooftop	Fixed	Residential	7/6/2016	7/6/2016	7/7/2016	No	Grid Altern 951-228-93 Riverside CA	92507	867533	Yes	PPA	Kilowatt Sys No	No	No	No	Yes	Yes	Kilowatt Systems LLC	10915.07	2.657027	1 NEM-SASH	None	No	NEMPV	Q.PRO BFR Hanwha Q-	6		
SCE-INT-SCE-70713	Interconne SCE	ONTARIO	91762	San Bernar Solar PV	4.236735	4.152	18	179	Rooftop	Fixed	Residential	7/7/2016	8/17/2016	8/19/2016	No	HoSoPo Co 951-438-21 Hemet CA	92545	1004233	Yes	PPA	SunRun	No	No	No	Yes	Yes	SunRun	16413.93	3.953258	1 NEM	None	No	NEMPV	CS6K-275M Canadian S	6		
SCE-INT-SCE-70797	Interconne SCE	ONTARIO	91762	San Bernar Solar PV	2.030612	1.99	35	270	Rooftop	Fixed	Residential	7/7/2016	7/19/2016	7/22/2016	No	SEC 909-320-97 Upland CA	91786	922959	No	PPA	SolarCity	No	No	No	Yes	No	10000	5.025125	1 NEM	None	No	NEMPV	SW 285 McSolarWorld	8			
SCE-INT-SCE-70872	Interconne SCE	ONTARIO	91761	San Bernar Solar PV	4.788772	4.753	18	270	Rooftop	Fixed	Residential	7/8/2016	7/8/2016	7/11/2016	No	SolarCity C888-765-2 Las Vegas NV	89119	888104	Yes	PPA	SolarCity	No	No	No	Yes	Yes	SolarCity	10444.8	5.958243	1 NEM	None	No	NEMPV	KD2556X-K Kyocera So	8		
SCE-INT-SCE-71210	Interconne SCE	ONTARIO	91764	San Bernar Solar PV	3.306122	3.24	18	180	Rooftop	Fixed	Residential	7/12/2016	8/8/2016	8/9/2016	No	Pure Solar 951-258-11 Corona CA	92879	0	No	PPA	SolarCity	No	No	No	Yes	No	18095	5.58476	1 NEM	None	No	NEMPV	SW 275 McSolarWorld	14			
SCE-INT-SCE-71274	Interconne SCE	ONTARIO	91764	San Bernar Solar PV	3.041837	4.941	19	180	Rooftop	Fixed	Residential	7/12/2016	7/12/2016	7/13/2016	No	Suncrest Sc 385-235-5 Salt Lake CI UT	84111	987868	Yes	PPA	Suncrest Sc No	No	No	No	Yes	Yes	Suncrest Solar	1	0.000202	1 NEM	None	No	NEMPV	Q.PRO BFR Hanwha Q-	21		
SCE-INT-SCE-71300	Interconne SCE	ONTARIO	91761	San Bernar Solar PV	4.02551	3.945	17	269	Rooftop	Fixed	Residential	7/12/2016	7/14/2016	7/15/2016	No	SolarCity C888-765-2 Las Vegas NV	89119	888104	Yes	Lease	SolarCity	No	No	No	Yes	Yes	SolarCity	23500.8	5.95711	1 NEM	None	No	NEMPV	KU255-6PX Kyocera So	18		
SCE-INT-SCE-71397	Interconne SCE	ONTARIO	91764	San Bernar Solar PV	3.892857	3.815	11	90	Rooftop	Fixed	Residential	7/13/2016	7/13/2016	7/14/2016	No	Vivint Solar 801-229-65 Lehi UT																					

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Application Preceding 1 Supercedin Matched C Application Utility	Service City Service Zip Service Cot Technology System Siz System Siz Storage Ca Storage Siz Inverter Siz Tilt	Service City Service Zip Service Cot Technology System Siz System Siz Storage Ca Storage Siz Inverter Siz Tilt	Azimuth	Mounting	Tracking	Customer 5 App Received	App Complete	App Approved	EDecommis	Self Install	Installer Na	Installer Ph	Installer Cil	Installer St	Installer Zi	CSLB Numt	Third Party	Third Party	Third Party	Face Financ	Face Financ	Electric Vel	Electric Vel	System Out	System Out	System Out	Total System	Itc Cost	Cost/Watt	NEM Tariff	Interconne	VNEM	NEF Project	V NEMPV or	Generator	Generator	Generator	
SCE-INT-SCE-87260	Interconne SCE	ONTARIO	91764	San Bernar Solar PV	3.732653	3.658	11	180	RoofTop	Fixed	Residential	10/24/2016	10/24/2016	10/25/2016	No	Grid Altern 951-228-9: Riverside CA	92507	867533	Yes	PPA	Kilowatt Sy No	No	Yes	Yes	Kilowatt Systems LLC	18054.16	4.935527	1	NEM-SASH	None	No	NEMPV	TSM-260PF Trinla Solar	16				
SCE-INT-SCE-87299	Interconne SCE	ONTARIO	91764	San Bernar Solar PV	3.664286	3.591	2	180	RoofTop	Fixed	Residential	10/24/2016	10/24/2016	10/25/2016	No	Vivint Solar 801-229-6: Lehi UT	84043	973756	Yes	PPA	Vivint Solar No	No	Yes	Yes	Fronius USA	19344	5.38688	1	NEM	None	No	NEMPV	YL260P-29I Yingli Ener	16				
SCE-INT-SCE-87301	Decommiss: SCE	ONTARIO	91761	San Bernar Solar PV	6.097959	5.976	19	180	RoofTop	Fixed	Residential	10/24/2016	10/24/2016	10/25/2016	7/31/2020	No	SolarCity G 888-765-4: Las Vegas NV	89119	888104	No	PPA	LENNAR HC No	No	Yes	Yes	SolarCity	35276.8	5.903078	1	NEM	None	No	NEMPV	SC265 SolarCity	9			
SCE-INT-SCE-87412	Interconne SCE	ONTARIO	91761	San Bernar Solar PV	6.790816	6.655	18	180	RoofTop	Fixed	Residential	10/24/2016	11/3/2016	11/4/2016	No	Sempra Sol 619-559-7: ALBINE CA	91733	910748	Yes	Lease	NA No	No	Yes	Yes		1	0.000123	1	NEM	None	No	NEMPV	SPR-E20-3: SunPower	28				
SCE-INT-SCE-87503	Interconne SCE	ONTARIO	91761	San Bernar Solar PV	6.567347	6.436	19	248	RoofTop	Fixed	Residential	10/25/2016	2/27/2017	2/28/2017	No	SolarCity G 888-765-2: Las Vegas NV	89119	888104	Yes	Lease	Solarcity No	No	Yes	Yes	Solarcity	44386	5.902796	1	NEM	None	No	NEMPV	SC265 SolarCity	8				
SCE-INT-SCE-87644	Interconne SCE	ONTARIO	91762	San Bernar Solar PV	3.896939	3.819	14	90	RoofTop	Fixed	Residential	10/26/2016	11/9/2016	11/10/2016	No	Elite Electri 951-681-5: Riverside CA	92509	418242	Yes	Lease	Sunlux No	No	Yes	Yes	Sunlux	37990.4	0.825098	1	NEM	None	No	NEMPV	HIS-S260R HyundaI H	6				
SCE-INT-SCE-87836	Interconne SCE	ONTARIO	91761	San Bernar Solar PV	12.1949	11.951	19	90	RoofTop	Fixed	Residential	10/27/2016	11/16/2016	11/17/2016	No	NP Contract 951-319-3: Murrieta CA	92562	101385	No	Lease	Sunlux No	No	Yes	No		74828.7	6.261291	1	NEM	None	No	NEMPV	HIS-S290R HyundaI H	34				
SCE-INT-SCE-87910	Decommiss: SCE	ONTARIO	91762	San Bernar Solar PV	7.827551	7.671	18	90	RoofTop	Fixed	Residential	10/27/2016	10/28/2016	10/31/2016	#####	No	American 5424-214-6: Anaheim CA	92802	941069	No	Lease	NA No	No	Yes	No		40360.32	5.261415	1	NEM	None	No	NEMPV	SLA280M Silfab	5			
SCE-INT-SCE-88189	Interconne SCE	ONTARIO	91762	San Bernar Solar PV	7.460204	7.311	16	180	RoofTop	Fixed	Residential	10/31/2016	11/19/2016	11/21/2016	No	CA Home 5 818-650-8: Encino CA	91316	998940	No	Lease	NA No	No	Yes	No		42000	5.471207	1	NEM	None	No	NEMPV	SW 285 McSolarWorld	8				
SCE-INT-SCE-88244	Interconne SCE	ONTARIO	91764	San Bernar Solar PV	5.147959	5.045	10	180	RoofTop	Fixed	Residential	10/31/2016	11/3/2016	11/4/2016	No	Enver Ener 714-640-2: Tustin CA	92780	987021	No	Lease	NA No	No	Yes	No		34000	6.438057	1	NEM	None	No	NEMPV	SW 285 McSolarWorld	20				
SCE-INT-SCE-88246	Interconne SCE	ONTARIO	91762	San Bernar Solar PV	3.266327	3.201	20	90	RoofTop	Fixed	Residential	10/31/2016	2/27/2017	2/28/2017	No	SolarCity G 888-765-2: Las Vegas NV	89119	888104	No	Lease	NA No	No	Yes	Yes	SolarCity	18995.2	5.934145	1	NEM	None	No	NEMPV	SC265 SolarCity	14				
SCE-INT-SCE-88576	Interconne SCE	ONTARIO	91761	San Bernar Solar PV	3.802041	3.726	23	269	RoofTop	Fixed	Residential	11/2/2016	11/2/2016	11/3/2016	No	SolarCity G 888-765-4: Las Vegas NV	89119	888104	No	Lease	NA No	No	Yes	Yes	SolarCity	22195.2	5.956843	1	NEM	None	No	NEMPV	KU255-6PX Kycocera So	17				
SCE-INT-SCE-88690	Interconne SCE	ONTARIO	91762	San Bernar Solar PV	5.447959	5.339	20	270	RoofTop	Fixed	Residential	11/3/2016	11/3/2016	11/4/2016	No	SolarCity G 888-765-2: Las Vegas NV	89119	888104	No	Lease	NA No	No	Yes	Yes	SolarCity	30643	5.739464	1	NEM	None	No	NEMPV	LG315M1C-LG Electr	19				
SCE-INT-SCE-88728	Interconne SCE	ONTARIO	91761	San Bernar Solar PV	3.282653	3.217	18	90	RoofTop	Fixed	Residential	11/3/2016	11/3/2016	11/4/2016	No	SunStreet 1949-450-5: IRVINE CA	92618	1001133	Yes	PPA	LENNAR HC No	No	Yes	Yes		15582	4.843643	1	NEM	None	No	NEMPV	HIS-S265R HyundaI H	14				
SCE-INT-SCE-88730	Interconne SCE	ONTARIO	91761	San Bernar Solar PV	3.516327	3.446	23	90	RoofTop	Fixed	Residential	11/3/2016	11/3/2016	11/4/2016	No	SunStreet 1949-450-5: IRVINE CA	92618	1001133	Yes	PPA	LENNAR HC No	No	Yes	Yes		16716	4.850841	1	NEM	None	No	NEMPV	HIS-S265R HyundaI H	14				
SCE-INT-SCE-88733	Interconne SCE	ONTARIO	91761	San Bernar Solar PV	3.282653	3.217	18	180	RoofTop	Fixed	Residential	11/3/2016	11/3/2016	11/4/2016	No	SunStreet 1949-450-5: IRVINE CA	92618	1001133	Yes	PPA	LENNAR HC No	No	Yes	Yes		15582	4.843643	1	NEM	None	No	NEMPV	HIS-S265R HyundaI H	15				
SCE-INT-SCE-88737	Interconne SCE	ONTARIO	91761	San Bernar Solar PV	2.578571	2.527	23	180	RoofTop	Fixed	Residential	11/3/2016	11/3/2016	11/7/2016	No	SunStreet 1949-450-5: IRVINE CA	92618	1001133	Yes	PPA	LENNAR HC No	No	Yes	Yes		12264	4.853185	1	NEM	None	No	NEMPV	HIS-S265R HyundaI H	11				
SCE-INT-SCE-88738	Interconne SCE	ONTARIO	91761	San Bernar Solar PV	80.31327	78.707	Multiple	180	RoofTop	Fixed	Commercial	11/3/2016	1/4/2017	1/5/2017	No	Rightway 5 661-305-1: Lake Hugh CA	93532	995398	No	Lease	NA No	No	Yes	No		238992	3.036477	1	NEM	None	No	NEMPV	Solaria 220 Solaria	104				
SCE-INT-SCE-88746	Interconne SCE	ONTARIO	91761	San Bernar Solar PV	2.578571	2.527	27	180	RoofTop	Fixed	Residential	11/3/2016	11/3/2016	11/7/2016	No	SunStreet 1949-450-5: IRVINE CA	92618	1001133	Yes	PPA	LENNAR HC No	No	Yes	Yes		12264	4.853185	1	NEM	None	No	NEMPV	HIS-S265R HyundaI H	11				
SCE-INT-SCE-88748	Interconne SCE	ONTARIO	91761	San Bernar Solar PV	3.282653	3.217	27	180	RoofTop	Fixed	Residential	11/3/2016	11/3/2016	11/7/2016	No	SunStreet 1949-450-5: IRVINE CA	92618	1001133	Yes	PPA	LENNAR HC No	No	Yes	Yes		15582	4.843643	1	NEM	None	No	NEMPV	HIS-S265R HyundaI H	14				
SCE-INT-SCE-88750	Interconne SCE	ONTARIO	91761	San Bernar Solar PV	3.516327	3.446	23	270	RoofTop	Fixed	Residential	11/3/2016	11/3/2016	11/7/2016	No	SunStreet 1949-450-5: IRVINE CA	92618	1001133	Yes	PPA	LENNAR HC No	No	Yes	Yes		16716	4.850841	1	NEM	None	No	NEMPV	HIS-S265R HyundaI H	11				
SCE-INT-SCE-88754	Interconne SCE	ONTARIO	91761	San Bernar Solar PV	2.578571	2.527	23	180	RoofTop	Fixed	Residential	11/3/2016	11/3/2016	11/4/2016	No	SunStreet 1949-450-5: IRVINE CA	92618	1001133	Yes	PPA	LENNAR HC No	No	Yes	Yes		12264	4.853185	1	NEM	None	No	NEMPV	HIS-S265R HyundaI H	15				
SCE-INT-SCE-88808	Interconne SCE	ONTARIO	91761	San Bernar Solar PV	4.74898	4.654	22	186	RoofTop	Fixed	Residential	11/3/2016	11/8/2016	11/10/2016	No	Sunpro Sol 951-678-7: Wildomar CA	92595	830451	Yes	Lease	SunPower I No	No	Yes	Yes	SunPower	6120	1.314997	1	NEM	None	No	NEMPV	SPR-327NE SunPower	6				
SCE-INT-SCE-88871	Decommiss: SCE	ONTARIO	91761	San Bernar Solar PV	4.806122	4.71	15	180	RoofTop	Fixed	Residential	11/4/2016	11/9/2016	11/10/2016	10/4/2021	No	Sun-Brite E 805-765-2: Murrieta CA	92562	956224	No	Lease	NA No	No	Yes	No		20000	4.246284	1	NEM	None	No	NEMPV	CS6P-260P Canadian S	20			
SCE-INT-SCE-89125	Interconne SCE	ONTARIO	91762	San Bernar Solar PV	2.368367	2.321	20	155	RoofTop	Fixed	Residential	11/7/2016	11/7/2016	11/8/2016	No	SolarCity G 888-765-2: Las Vegas NV	89119	888104	No	Lease	NA No	No	Yes	No		13568	5.845756	1	NEM	None	No	NEMPV	KU265-6ZP Kycocera So	10				
SCE-INT-SCE-89188	Interconne SCE	ONTARIO	91761	San Bernar Solar PV	2.737755	2.683	18	234	RoofTop	Fixed	Residential	11/7/2016	11/7/2016	11/8/2016	No	SunPower 1877-344-6: Roseville CA	95661	890895	No	Lease	NA No	No	Yes	No		11402	4.24972	1	NEM	None	No	NEMPV	SPR-X20-2: SunPower	12				
SCE-INT-SCE-89199	Interconne SCE	ONTARIO	91761	San Bernar Solar PV	4.31002	4.215	18	178	RoofTop	Fixed	Residential	11/7/2016	3/4/2017	3/6/2017	No	SolarCity G 888-765-2: Las Vegas NV	89119	888104	No	Lease	NA No	No	Yes	Yes	SolarCity	16301	3.867378	1	NEM	None	No	NEMPV	LG315M1C-LG Electr	8				
SCE-INT-SCE-89345	Interconne SCE	ONTARIO	91761	San Bernar Solar PV	5.833673	5.717	23	151	RoofTop	Fixed	Residential	11/8/2016	11/8/2016	11/9/2016	No	SolarCity G 888-765-2: Las Vegas NV	89119	888104	Yes	PPA	SolarCity No	No	Yes	Yes		33920	5.933181	1	NEM	None	No	NEMPV	SC265 SolarCity	13				
SCE-INT-SCE-90059	Interconne SCE	ONTARIO	91761	San Bernar Solar PV	6.069388	5.948	25	180	RoofTop	Fixed	Residential	11/11/2016	11/11/2016	11/14/2016	No	SolarCity G 888-765-2: San Mateo CA	94402	888104	No	Lease	SolarCity No	No	Yes	Yes	SolarCity	32521.2	5.926563	1	NEM	None	No	NEMPV	KD2556K-Kycocera So	27				
SCE-INT-SCE-90106	Interconne SCE	ONTARIO	91761	San Bernar Solar PV	5.331633	5.225	22	174	RoofTop	Fixed	Residential	11/11/2016	12/7/2016	12/10/2016	No	HOSOPO C 951-438-2: HEMET CA	92545	1004233	Yes	PPA	SUNRUN, I No	No	Yes	Yes	SUNRUN, INC	20850.48	3.990522	1	NEM	None	No	NEMPV	CS6K-280M Canadian S	15				
SCE-INT-SCE-90148	Interconne SCE	ONTARIO	91762	San Bernar Solar PV	6.519388	6.389	18	140	RoofTop	Fixed	Residential	11/12/2016	11/12/2016	11/14/2016	No	SolarCity G 888-765-2: Las Vegas NV	89119	888104	Yes	PPA	SolarCity No	No	Yes	No		38503	6.026451	1	NEM	None	No	NEMPV	KU255-6PX Kycocera So	29				
SCE-INT-SCE-90186	Interconne SCE	ONTARIO	91762	San Bernar Solar PV	3.406122	3.338	12	200	RoofTop	Fixed	Residential	11/14/2016	11/14/2016	11/15/2016	No	Peak Powe 714-258-3: Tustin CA</																						

Instructions

These tables summarize the forecasted effects of the Title 24 standards, including pending ZNE policies, on community emissions. There is no need to do anything on this tab, although the percent reductions before ZNE implementation can be modified as circumstances demand. Note that standards go into effect on January 1 the year after the year that they are named after.

Emission savings	2030	2050
Residential electricity	13,400	0
Residential natural gas	10,230	79,910
Nonresidential electricity	31,690	0
Nonresidential natural gas	13,540	118,300
Total	68,860	198,210

These emission savings are calculated using RPS coefficients. There is no double counting with RPS reductions

Energy use (no Title 24)	2019	2030	2050
Single-family electricity (kWh)	239,036,521	330,166,116	615,872,823
Single-family natural gas (therms)	13,539,630	18,701,442	34,884,584
Multifamily electricity (kWh)	63,445,042	87,632,647	163,464,884
Multifamily natural gas (therms)	2,285,639	2,653,682	3,665,364
Other residential electricity (kWh)	14,048,187	19,403,877	36,194,873
Other residential natural gas (therms)	1,120,111	2,050,467	5,109,481
Nonresidential electricity	1,242,306,720	1,637,865,370	2,858,631,210
Nonresidential natural gas	26,168,160	34,500,270	60,214,690

<< Not affected by Title 24
<< Not affected by Title 24

Change in energy use per block (no Title 24)	2019	2030	2050
Single-family electricity (kWh)		91,129,595	285,706,707
Single-family natural gas (therms)		5,161,811	16,183,143
Multifamily electricity (kWh)		24,187,605	75,832,237
Multifamily natural gas (therms)		368,043	1,011,682
Nonresidential electricity		395,558,650	1,220,765,840
Nonresidential natural gas		8,332,110	25,714,420

Change in energy use per block (with Title 24)	2030	2050
Single-family electricity (kWh)	21,928,490	103,914,520
Single-family natural gas (therms)	3,283,750	3,431,650
Multifamily electricity (kWh)	3,510,010	3,333,180
Multifamily natural gas (therms)	305,300	547,880
Nonresidential electricity	183,075,590	12,692,560
Nonresidential natural gas	5,764,800	5,842,500

Low-rise single-family estimates are based on 117,069 housing starts each year, and low-rise family estimates are based on 30,067 dwelling units. Energy savings for low-rise residential were calculated using the prototype approach similar to the method used for previous standards and savings for each prototype in each climate were weighted by estimated annual housing start climate to yield an estimate of statewide savings.

Statewide single family units constructed annually 117069
Statewide multi-family units constructed annually 30067

Table 2 – Summary of First-Year Electricity Savings (GWh)

	2016	2019	Savings	Percent of	
				Percent Savings	Total Savings
Single-Family Newly Constructed & Alterations	754	158	595.7	79.0%	42.0%
Low-rise Multi-Family Newly Constructed & Alterations	115	25	90.6	78.7%	6.4%

Table 4 – Summary of First-Year Gas Savings (millions Therms)

	2016	2019	Savings	Percent
				Savings
Single-Family Newly Constructed & Alterations	46.97	43	4.42	9.4%
Low-rise Multi-Family Newly Constructed & Alterations	5.29	5	0.25	4.7%

[Impact Analy](#)

1.2 Non-residential Newly Constructed Buildings

The first-year savings for newly constructed non-residential buildings are 197 GWh of electricity, 76.6 MW of demand, and 0.27 million therms of gas, representing reductions from the 2016 Standard of 10.7%, 9%, and 1%, respectively. The savings for non-residential buildings were calculated using the

Energy use (with Title 24)	2019	2030	2050
Single-family electricity (kWh)	239,036,521	260,965,010	364,879,530
Single-family natural gas (therms)	13,539,630	16,823,380	20,255,030
Multifamily electricity (kWh)	63,445,042	66,955,050	70,288,230
Multifamily natural gas (therms)	2,285,639	2,590,940	3,138,820
Other residential electricity (kWh)	14,048,187	19,403,877	36,194,873
Other residential natural gas (therms)	1,120,111	2,050,467	5,109,481
Nonresidential electricity	1,242,306,720	1,425,382,310	1,438,074,870
Nonresidential natural gas	26,168,160	31,932,960	37,775,460

<< Not affected by Title 24
<< Not affected by Title 24

Energy savings from Title 24	2030	2050
Single-family electricity (kWh)	69,201,110	250,993,290
Single-family natural gas (therms)	1,878,060	14,629,550
Multifamily electricity (kWh)	20,677,600	93,176,650
Multifamily natural gas (therms)	62,740	526,540
Nonresidential electricity	212,483,060	1,420,556,340
Nonresidential natural gas	2,567,310	22,439,230

Reductions in energy use per standard	2013	2016	2019	2022	2025	2028	2031	2034	2037	2040	2043	2046	2049
Single-family residential electricity	37.00%	28.00%	79.00%	-12.21%	-8.14%	-8.14%	-8.14%	-8.14%	-8.14%	-8.14%	-8.14%	-8.14%	-8.14%
Single-family residential natural gas	13.00%	28.00%	9.40%	28.20%	18.80%	18.80%	18.80%	18.80%	18.80%	18.80%	18.80%	18.80%	18.80%
Multi-family residential electricity	37.00%	28.00%	78.70%	30.38%	20.25%	20.25%	20.25%	20.25%	20.25%	20.25%	20.25%	20.25%	20.25%
Multi-family residential natural gas	13.00%	28.00%	4.70%	11.66%	7.77%	7.77%	7.77%	7.77%	7.77%	7.77%	7.77%	7.77%	7.77%
Nonresidential electricity	9.00%	5.00%	10.70%	48.67%	32.45%	32.45%	79.00%	52.67%	52.67%	52.67%	52.67%	52.67%	52.67%
Nonresidential natural gas	5.00%	5.00%	1.00%	28.54%	19.03%	19.03%	19.03%	19.03%	19.03%	19.03%	19.03%	19.03%	19.03%

For future updates to Title 24, it is assumed that they are two-thirds as effective as the last adopted or in-process update. 2019 and future standards assume homes install PV.

Residential reductions are adjusted to climate zone.

Note that electricity use is projected to go up in some cases due to electrification.

It is assumed that "zero net energy" for nonresidential buildings begins in 2029 and will have the same proportional decrease in energy use as the implementation of "zero net energy" for residential buildings in 2020.

Sources: <https://www.lgc.org/wordpress/wp-content/uploads/2016/02/2016-Energy-Standards-Overview-California-Energy-Commission.pdf>, https://ww2.energy.ca.gov/title24/2019standards/post_adoption/documents/2019_Impact_Analysis_Final_Report_2018-06-29.pdf, and <https://efiling.energy.ca.gov/Lists/DocketLog.aspx?docketnumber=21-BSTD-02>.

Savings from 2013 standard	2030	2050	#REF!
Single-family residential electricity	0	0	#REF!
Single-family residential natural gas	0	0	#REF!
Multi-family residential electricity	0	0	#REF!
Multi-family residential natural gas	0	0	#REF!
Nonresidential electricity	0	0	#REF!
Nonresidential natural gas	0	0	#REF!

Savings from 2016 standard	2030	2050	#REF!
Single-family residential electricity	0	0	#REF!
Single-family residential natural gas	0	0	#REF!
Multi-family residential electricity	0	0	#REF!
Multi-family residential natural gas	0	0	#REF!
Nonresidential electricity	0	0	#REF!
Nonresidential natural gas	0	0	#REF!

Savings from 2019 standard	2030	2050	#REF!
Single-family residential electricity	71,992,380	225,708,299	#REF!
Single-family residential natural gas	485,210	1,521,215	#REF!
Multi-family residential electricity	19,035,645	59,679,971	#REF!
Multi-family residential natural gas	17,298	47,549	#REF!
Nonresidential electricity	42,324,776	130,621,945	#REF!
Nonresidential natural gas	83,321	257,144	#REF!

Savings from 2022 standard	2030	2050	#REF!
Single-family residential electricity	-1,700,055	-7,328,695	#REF!
Single-family residential natural gas	959,008	4,134,143	#REF!
Multi-family residential electricity	1,138,265	4,906,897	#REF!
Multi-family residential natural gas	29,733	112,378	#REF!
Nonresidential electricity	125,025,845	530,547,141	#REF!
Nonresidential natural gas	1,712,106	7,265,327	#REF!

Savings from 2025 standard	2030	2050	#REF!
Single-family residential electricity	-771,283	-5,482,588	#REF!
Single-family residential natural gas	317,645	1,978,974	#REF!
Multi-family residential electricity	369,491	2,277,487	#REF!
Multi-family residential natural gas	11,338	66,186	#REF!
Nonresidential electricity	33,655,584	181,561,633	#REF!
Nonresidential natural gas	565,310	3,461,236	#REF!

Savings from 2028 standard	2030	2050	#REF!
Single-family residential electricity	-319,933	-5,929,047	#REF!
Single-family residential natural gas	116,202	1,606,974	#REF!
Multi-family residential electricity	134,191	1,816,235	#REF!
Multi-family residential natural gas	4,375	61,043	#REF!
Nonresidential electricity	11,476,855	122,653,810	#REF!
Nonresidential natural gas	206,568	2,802,694	#REF!

Savings from 2031 standard	2030	2050	#REF!
Single-family residential electricity	0	-6,091,268	#REF!
Single-family residential natural gas	0	1,239,656	#REF!
Multi-family residential electricity	0	1,375,979	#REF!
Multi-family residential natural gas	0	53,485	#REF!
Nonresidential electricity	0	191,663,674	#REF!
Nonresidential natural gas	0	2,155,976	#REF!

Savings from 2034 standard	2030	2050	#REF!
Single-family residential electricity	0	-5,526,309	#REF!
Single-family residential natural gas	0	857,500	#REF!
Multi-family residential electricity	0	935,781	#REF!
Multi-family residential natural gas	0	41,715	#REF!
Nonresidential electricity	0	26,846,364	#REF!
Nonresidential natural gas	0	1,487,398	#REF!

Savings from 2037 standard	2030	2050	#REF!
Single-family residential electricity	0	-4,782,638	#REF!
Single-family residential natural gas	0	591,945	#REF!
Multi-family residential electricity	0	637,134	#REF!
Multi-family residential natural gas	0	31,786	#REF!
Nonresidential electricity	0	12,622,266	#REF!
Nonresidential natural gas	0	1,024,564	#REF!

Savings from 2040 standard	2030	2050	#REF!
Single-family residential electricity	0	-3,873,683	#REF!
Single-family residential natural gas	0	399,707	#REF!
Multi-family residential electricity	0	425,585	#REF!
Multi-family residential natural gas	0	23,216	#REF!
Nonresidential electricity	0	6,385,572	#REF!
Nonresidential natural gas	0	690,659	#REF!

Savings from 2043 standard	2030	2050	#REF!
Single-family residential electricity	0	-2,821,983	#REF!
Single-family residential natural gas	0	253,497	#REF!
Multi-family residential electricity	0	267,742	#REF!
Multi-family residential natural gas	0	15,620	#REF!
Nonresidential electricity	0	3,292,827	#REF!
Nonresidential natural gas	0	437,469	#REF!

Savings from 2046 standard	2030	2050	#REF!
Single-family residential electricity	0	-1,658,522	#REF!
Single-family residential natural gas	0	135,325	#REF!
Multi-family residential electricity	0	142,150	#REF!
Multi-family residential natural gas	0	8,683	#REF!
Nonresidential electricity	0	1,534,771	#REF!
Nonresidential natural gas	0	233,335	#REF!

Savings from 2049 standard	2030	2050	#REF!
Single-family residential electricity	0	-421,383	#REF!
Single-family residential natural gas	0	32,559	#REF!
Multi-family residential electricity	0	34,098	#REF!
Multi-family residential natural gas	0	2,137	#REF!
Nonresidential electricity	0	343,277	#REF!
Nonresidential natural gas	0	56,114	#REF!

family estimates are based on 30,067 dwelling units. Energy savings for low-rise residential were calculated using the prototype approach similar to the method used for previous standards updates. The savings for each prototype in each climate were weighted by estimated annual housing starts in each climate to yield an estimate of statewide savings.

Statewide single family units constructed annually 117069
 Statewide multi-family units constructed annually 30067

Table 2 – Summary of First-Year Electricity Savings (GWh)

	2016	2019	Savings	Percent Savings	Percent of Total Savings
Single-Family Newly Constructed & Alterations	754	158	595.7	79.0%	42.0%
Low-rise Multi-Family Newly Constructed & Alterations	115	25	90.6	78.7%	6.4%

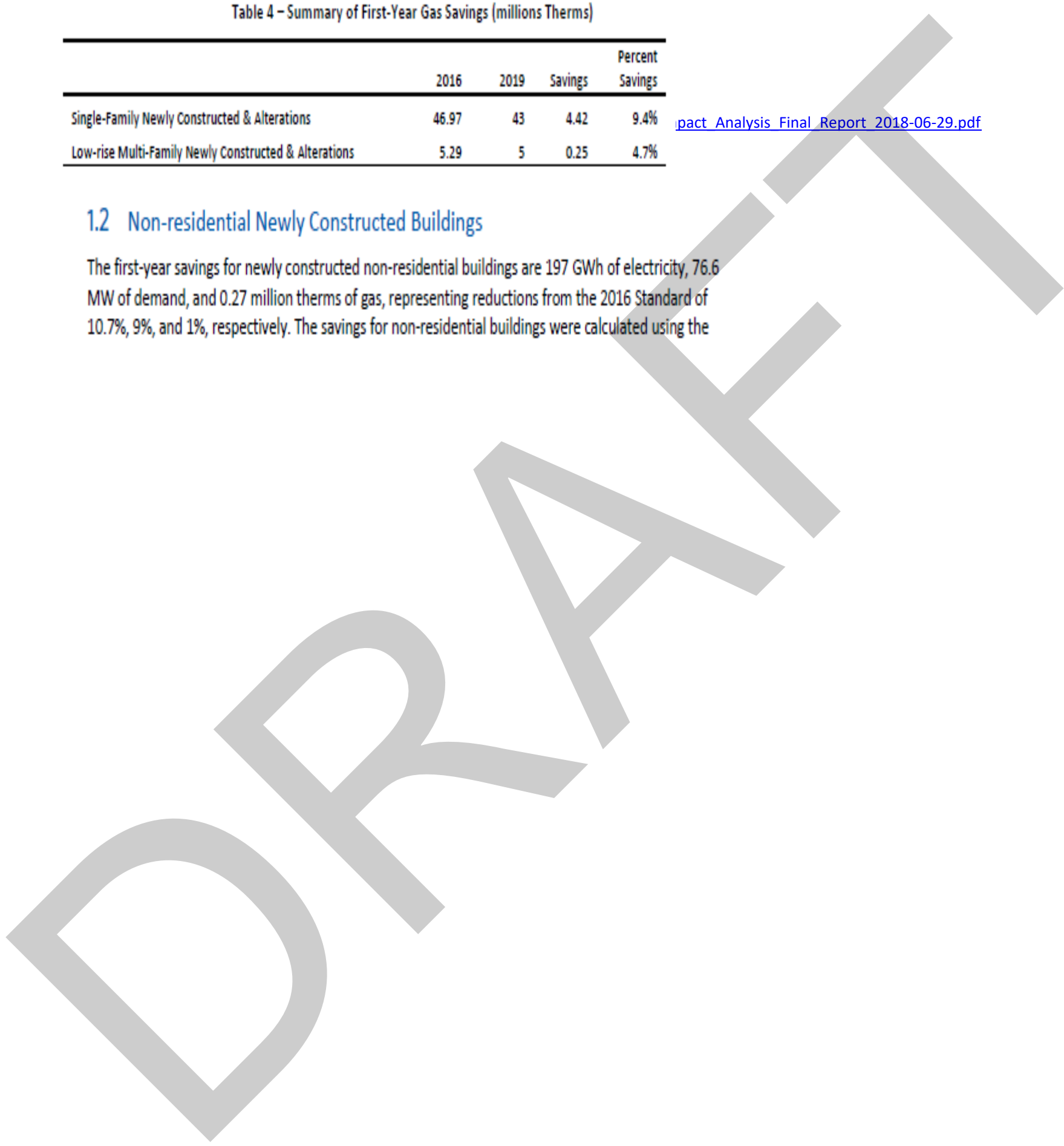
Table 4 – Summary of First-Year Gas Savings (millions Therms)

	2016	2019	Savings	Percent Savings
Single-Family Newly Constructed & Alterations	46.97	43	4.42	9.4%
Low-rise Multi-Family Newly Constructed & Alterations	5.29	5	0.25	4.7%

[pact Analysis Final Report 2018-06-29.pdf](#)

1.2 Non-residential Newly Constructed Buildings

The first-year savings for newly constructed non-residential buildings are 197 GWh of electricity, 76.6 MW of demand, and 0.27 million therms of gas, representing reductions from the 2016 Standard of 10.7%, 9%, and 1%, respectively. The savings for non-residential buildings were calculated using the



Statewide Annual Housing Construction and Energy Savings			
Units	SFR	MFR	Total
Number	117,069	30,067	147,136
Percent	80%	20%	

GWh			
	SFR	MFR	Total
Number	754	115	869
Percent	87%	13%	

MTherms			
	SFR	MFR	Total
Number	46.97	5.29	52.26
Percent	90%	10%	

Statewide Energy Savings Per Unit			
	SFR	MFR	Total
GWh/unit	0.00644	0.00382	0.00591
Relative to avg	109.05%	64.76%	

MTherms/unit			
	SFR	MFR	Total
MTherms/unit	0.0004	0.00018	0.00036
Relative to avg	112.96%	49.54%	

	Estimate	Percent
Total	52,927	100.00%
1, detached	31,328	59.19%
1, attached	3,627	6.85%
2	740	1.40%
3 or 4	4,020	7.60%
5 to 9	3,352	6.33%
10 to 19	1,931	3.65%
20 to 49	2,371	4.48%
50 or more	3,209	6.06%
Mobile Home	2,268	4.29%
Boat, RV, van, etc.	36	0.07%

Community-wide Energy Savings Per Unit			
	2019	2030	2050
SFR kWh	205,344,818	283,629,888	529,066,822
MFR kWh	54,502,595	75,281,008	140,424,847
Total	259,847,413	358,910,896	669,491,669
Average	5,633	5,633	5,633
Average SFR	6,441	6,441	6,441
Average MFR	3,825	3,825	3,825

	2019	2030	2050
SFR therms	12,791,838	17,668,562	32,957,916
MFR therms	2,507,119	3,462,926	6,459,543
Total	15,298,958	21,131,488	39,417,459
Average	332	332	332
Average SFR	401	401	401
Average MFR	176	176	176

UNITS IN STRUCTURE		
Survey/Program: American Community Survey		Product: 2019: ACS 5-Year E
TableID: B25024		Universe: Housing units
Ontario city, California		
Label	Estimate	Margin of Error
▼ Total:	52,927	±714
1, detached	31,328	±759
1, attached	3,672	±404
2	740	±145
3 or 4	4,020	±399
5 to 9	3,352	±444
10 to 19	1,931	±340
20 to 49	2,371	±325
50 or more	3,209	±366
Mobile home	2,268	±241
Boat, RV, van, etc.	36	±37

<https://data.census.gov/cedsci/all?q=&text=B25024>



Single Family Electricity Use	2019	2030	2050
Single-family homes	31,883	44,037	82,145

SCE electricity use in single-family homes (not adjusted)	209,048,263	288,745,220	538,608,675
Ratio of SCE electricity use, single-family homes to all homes	114.35%	114.35%	114.35%
SCE electricity use in single-family homes (adjusted)	239,036,521	330,166,116	615,872,823
Average SCE electricity per single-family home	7,497	7,497	7,497

Multi-Family Electricity Use	2019	2030	2050
Multi-family homes	14,250	19,682	36,714

SCE electricity use in multi-family homes (not adjusted)	93,433,300	129,053,543	240,729,032
Ratio of SCE electricity use, multi-family homes to all homes	67.90%	67.90%	67.90%
SCE electricity use in multi-family homes (adjusted)	63,445,042	87,632,647	163,464,884
Average SCE electricity per multi-family home	4,452	4,452	4,452

Single Family and Multi-family Natural Gas Use	2019	2030	2050
Single-family homes	31,883	44,037	82,145
Multi-family homes	14,250	19,682	36,714
Natural gas use in single-family homes (not adjusted)	11,191,372	15,457,940	28,834,345
Ratio of natural gas use, single-family homes to all homes	120.98%	120.98%	120.98%
Natural gas use in single-family homes (adjusted)	13,539,630	18,701,442	34,884,584
Average natural gas use per single-family home	425	425	425
Natural gas use in multi-family homes (not adjusted)	4,308,213	5,001,940	6,908,866
Ratio of natural gas use, multi-family homes to all homes	53.05%	53.05%	53.05%
Natural gas use in multi-family homes (adjusted)	2,285,639	2,653,682	3,665,364
Average natural gas use per multi-family home	160	135	100

Single-family heat pump analysis

Climate Zone	2019 Energy Code - Per Building				2022 Energy Code - Per Building				Savings (Increase)	
	Therms	kWh	TDV	CO ₂ Emissions, mTon/yr	Therms	kWh	TDV	CO ₂ Emissions, mTon/yr	Therms	kWh
1	533.7	4,486.1	104.0	3.7	397.2	6,132.6	102.2	3.2	136.5	(1,646.5)
2	371.6	4,493.7	85.7	2.8	246.9	5,886.2	81.2	2.3	124.6	(1,392.5)
3	284.1	4,374.6	64.8	2.2	172.5	5,465.4	61.2	1.9	111.6	(1,090.8)
4	266.7	4,599.6	68.6	2.2	164.4	5,605.3	65.3	1.8	102.3	(1,005.7)
5	258.4	4,357.4	60.3	2.1	133.2	5,699.2	56.4	1.5	125.1	(1,341.9)
6	197.6	4,464.2	54.3	1.7	84.7	5,482.9	48.0	1.2	112.9	(1,018.7)
7	182.1	4,465.3	50.1	1.6	69.5	5,463.7	43.8	1.1	112.7	(998.5)
8	176.6	5,046.7	53.4	1.7	67.5	5,973.1	46.3	1.2	109.1	(926.4)
9	195.3	5,026.0	58.5	1.8	85.2	5,995.3	51.4	1.3	110.1	(969.3)
10	216.9	5,343.2	67.2	2.0	155.8	6,013.6	66.1	1.8	61.1	(670.4)
11	339.1	5,888.5	96.8	2.8	227.5	7,046.6	92.0	2.3	111.6	(1,158.1)
12	330.4	4,877.3	86.9	2.6	213.3	6,116.2	82.2	2.1	117.1	(1,238.9)
13	277.1	6,376.0	88.6	2.5	155.1	7,619.3	85.1	2.1	122.0	(1,243.4)
14	318.8	5,727.8	82.5	2.6	160.0	7,594.0	80.7	2.2	158.9	(1,866.2)
15	141.0	8,947.8	79.1	1.9	53.4	9,570.4	72.2	1.5	87.6	(622.6)
16	542.2	4,731.6	106.3	3.8	405.5	6,064.6	103.4	3.2	136.7	(1,332.9)
Statewide Average	289	5,200	75.44	2.36	174	6,358	71.08	1.91	115	(1,158)

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- Per Building		Starts in Each CZ		Savings - Weighted Average				Percentages					
TDV	CO ₂ Emissions, mTon/yr	Numbers	Percent	Therms	kWh	TDV	CO ₂ Emissions, mTon/yr	2019 Standard Design Statewide - Therms	Therms Decrease	2019 Standard Design Statewide - kWh	kWh Increase	2019 Standard Design Statewide - TDV	TDV Decrease
1.8	0.56	267	0.46%	36,455	(439,682)	473	149	142,528	25.6%	1,197,969	-37%	27,772	1.7%
4.4	0.52	1,579	2.72%	196,785	(2,198,749)	7,020	826	586,699	33.5%	7,095,619	-31%	135,280	5.2%
3.6	0.36	6,072	10.46%	677,753	(6,623,360)	21,945	2,213	1,725,123	39.3%	26,563,828	-25%	393,357	5.6%
3.3	0.34	3,054	5.26%	312,392	(3,070,883)	10,191	1,047	814,469	38.4%	14,045,057	-22%	209,436	4.9%
3.9	0.53	615	1.06%	76,993	(825,723)	2,381	328	158,982	48.4%	2,681,306	-31%	37,078	6.4%
6.3	0.51	3,228	5.56%	364,245	(3,288,045)	20,247	1,638	637,776	57.1%	14,408,988	-23%	175,159	11.6%
6.3	0.51	2,583	4.45%	291,036	(2,579,316)	16,294	1,311	470,460	61.9%	11,535,251	-22%	129,398	12.6%
7.1	0.50	4,813	8.29%	524,925	(4,458,074)	34,342	2,421	849,793	61.8%	24,287,309	-18%	257,099	13.4%
7.1	0.50	6,641	11.44%	731,024	(6,437,214)	46,867	3,334	1,296,684	56.4%	33,378,242	-19%	388,444	12.1%
1.2	0.18	8,679	14.95%	530,403	(5,818,324)	10,185	1,540	1,882,556	28.2%	46,372,633	-13%	583,635	1.7%
4.8	0.47	2,508	4.32%	279,963	(2,904,226)	12,039	1,184	850,498	32.9%	14,767,486	-20%	242,790	5.0%
4.7	0.50	9,718	16.74%	1,137,821	(12,039,574)	45,703	4,835	3,210,553	35.4%	47,397,197	-25%	844,296	5.4%
3.5	0.39	4,284	7.38%	522,506	(5,326,854)	14,881	1,669	1,187,184	44.0%	27,316,151	-20%	379,404	3.9%
1.9	0.43	1,660	2.86%	263,786	(3,098,364)	3,106	721	529,374	49.8%	9,509,874	-33%	137,017	2.3%
7.0	0.42	1,654	2.85%	144,883	(1,030,090)	11,509	698	233,265	62.1%	14,803,984	-7%	130,886	8.8%
2.9	0.59	697	1.20%	95,208	(928,553)	2,014	410	377,678	25.2%	3,296,163	-28%	74,034	2.7%
4.4	0.46	58,052	100.00%	6,186,178	(61,067,031)	259,199	24,323	14,953,624	41.4%	298,657,056	-20.4%	4,145,084	6.3%



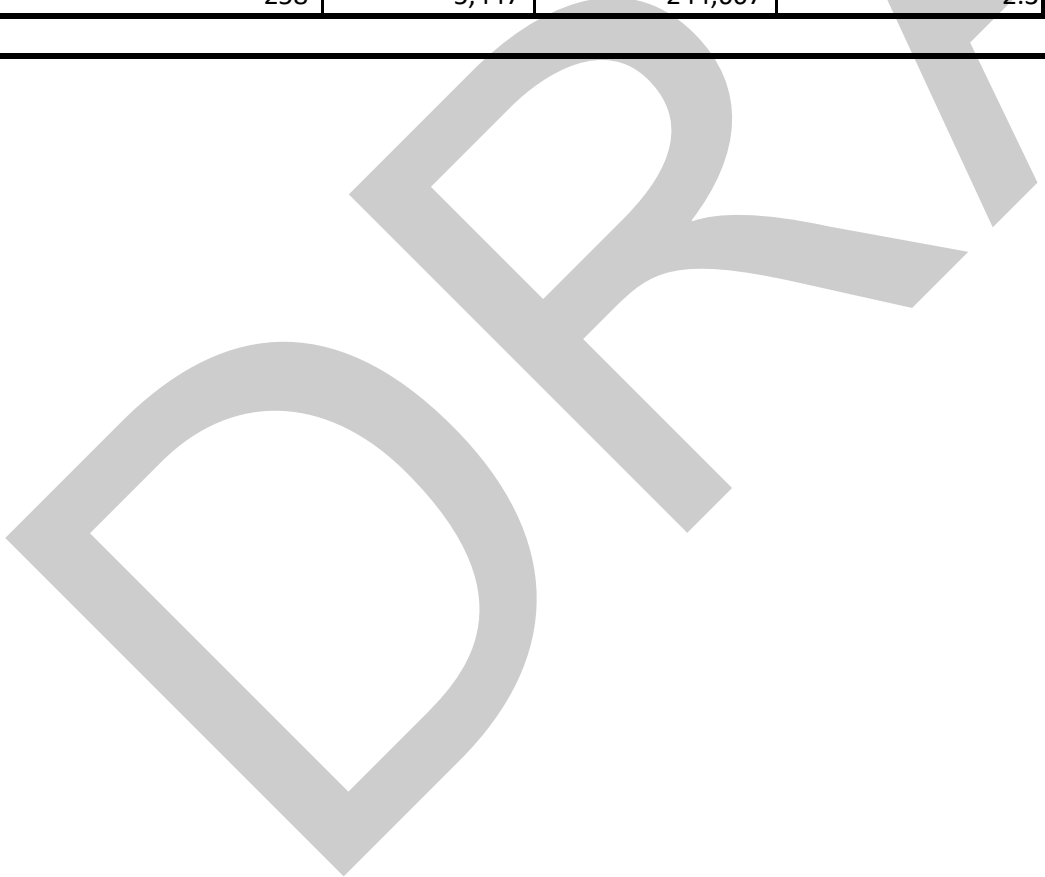


2019 CO ₂ Emissions - mTon/yr	CO ₂ Decrease
992	15.0%
4,379	18.9%
13,562	16.3%
6,638	15.8%
1,269	25.8%
5,526	29.6%
4,148	31.6%
8,051	30.1%
11,878	28.1%
16,967	9.1%
6,949	17.0%
25,247	19.1%
10,668	15.6%
4,332	16.6%
3,100	22.5%
2,638	15.5%
126,344	19.3%

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Multi-family heat pump analysis

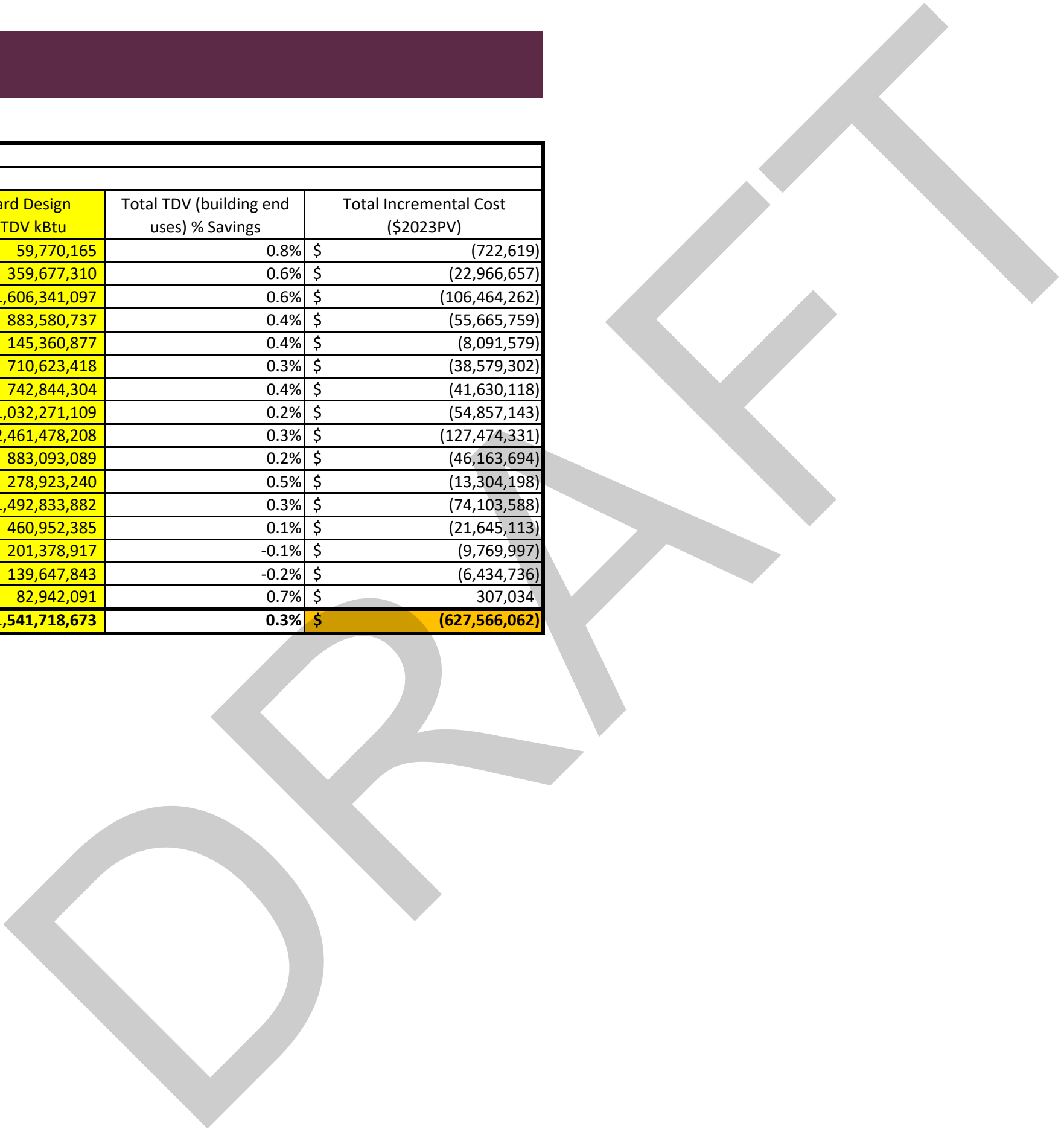
Climate Zone	Values per dwelling unit (weighted average)									
	2019 Energy Code				2022 Energy Code				Savin	
	Therms	kWh	TDV kBtu	CO ₂ Emissions (mTon/yr)	Therms	kWh	TDV kBtu	CO ₂ Emissions (mTon/yr)	Therms	TDV kBtu
CZ01	245	4,945	225,548	2.2	208	5,335	223,729	2.0	37.6	(390)
CZ02	199	5,314	228,657	1.9	168	5,662	227,310	1.8	31.5	(348)
CZ03	184	5,049	210,530	1.8	166	5,217	209,277	1.7	17.3	(167)
CZ04	171	5,454	222,284	1.8	156	5,582	221,482	1.7	14.5	(128)
CZ05	180	5,103	205,894	1.8	165	5,245	204,995	1.7	15.3	(142)
CZ06	151	5,510	210,867	1.6	147	5,523	210,158	1.6	3.8	(12)
CZ07	148	5,412	205,036	1.6	146	5,407	204,223	1.6	2.4	4
CZ08	146	5,776	217,871	1.6	143	5,788	217,392	1.6	3.3	(12)
CZ09	151	5,755	221,276	1.7	145	5,795	220,646	1.6	5.9	(40)
CZ10	150	5,940	224,706	1.7	139	6,038	224,315	1.7	10.0	(98)
CZ11	181	6,086	248,595	1.9	149	6,446	247,355	1.8	32.5	(361)
CZ12	183	5,675	235,649	1.9	154	5,994	235,006	1.8	29.1	(318)
CZ13	169	6,249	249,298	1.8	145	6,525	249,021	1.8	24.0	(276)
CZ14	174	6,068	239,737	1.9	147	6,381	239,972	1.8	27.1	(313)
CZ15	119	7,321	255,298	1.7	117	7,348	255,800	1.7	1.9	(27)
CZ16	258	5,447	244,667	2.3	242	5,606	243,066	2.2	15.8	(159)



		Statewide									
gs		Starts in Each CZ		Weighted Ave. Savings							
TDV	CO ₂ Emissions (mTon/yr)	Numbers	Percent	Therms	kWh	TDV kBtu	CO ₂ Emissions (mTon/yr)	2019 Standard Design Statewide - Therms	Therms savings	2019 Standard Design Statewide - kWh	kWh savings
1,819	0.14	265	1%	9,951	(103,260)	481,922	38	65,019	15%	1,310,411	-7.9%
1,347	0.11	1,573	3%	49,610	(547,016)	2,118,198	167	313,614	16%	8,359,110	-6.5%
1,252	0.06	7,630	15%	132,269	(1,277,867)	9,554,333	465	1,400,119	9%	38,525,218	-3.3%
802	0.05	3,975	8%	57,788	(509,180)	3,189,856	206	679,622	9%	21,677,675	-2.3%
899	0.05	706	1%	10,809	(100,531)	634,723	37	127,133	9%	3,602,761	-2.8%
710	0.02	3,370	6%	12,764	(41,233)	2,392,522	55	507,290	3%	18,569,785	-0.2%
813	0.01	3,623	7%	8,866	15,336	2,944,744	45	536,530	2%	19,606,304	0.1%
479	0.01	4,738	9%	15,500	(58,886)	2,268,293	64	691,615	2%	27,365,952	-0.2%
631	0.02	11,124	21%	65,449	(444,813)	7,016,727	245	1,679,880	4%	64,018,747	-0.7%
390	0.03	3,930	8%	39,492	(384,546)	1,534,377	123	587,701	7%	23,345,644	-1.6%
1,239	0.11	1,122	2%	36,484	(404,853)	1,390,387	118	203,497	18%	6,827,938	-5.9%
643	0.09	6,335	12%	184,182	(2,016,471)	4,072,303	600	1,159,931	16%	35,954,262	-5.6%
277	0.08	1,849	4%	44,432	(510,357)	512,532	140	313,044	14%	11,554,464	-4.4%
(236)	0.07	840	2%	22,800	(263,075)	(197,883)	61	146,175	16%	5,097,122	-5.2%
(502)	0.00	547	1%	1,053	(14,651)	(274,628)	3	65,146	2%	4,004,632	-0.4%
1,601	0.07	339	1%	5,370	(53,953)	542,865	22	87,556	6%	1,846,477	-2.9%
Total		51,966	100%	696,820	(6,715,355)	38,181,271	2,388	8,563,872	8%	291,666,502	-2.3%



Fun Stats				
2019 CO ₂ Emissions - mTon/yr	CO ₂ savings	2019 Standard Design Statewide - TDV kBtu	Total TDV (building end uses) % Savings	Total Incremental Cost (\$2023PV)
570	6.7%	59,770,165	0.8%	\$ (722,619)
3,000	5.6%	359,677,310	0.6%	\$ (22,966,657)
13,611	3.4%	1,606,341,097	0.6%	\$ (106,464,262)
6,976	2.9%	883,580,737	0.4%	\$ (55,665,759)
1,246	2.9%	145,360,877	0.4%	\$ (8,091,579)
5,502	1.0%	710,623,418	0.3%	\$ (38,579,302)
5,851	0.8%	742,844,304	0.4%	\$ (41,630,118)
7,773	0.8%	1,032,271,109	0.2%	\$ (54,857,143)
18,593	1.3%	2,461,478,208	0.3%	\$ (127,474,331)
6,617	1.9%	883,093,089	0.2%	\$ (46,163,694)
2,134	5.5%	278,923,240	0.5%	\$ (13,304,198)
11,765	5.1%	1,492,833,882	0.3%	\$ (74,103,588)
3,420	4.1%	460,952,385	0.1%	\$ (21,645,113)
1,555	3.9%	201,378,917	-0.1%	\$ (9,769,997)
911	0.3%	139,647,843	-0.2%	\$ (6,434,736)
776	2.9%	82,942,091	0.7%	\$ 307,034
90,299	2.6%	11,541,718,673	0.3%	\$ (627,566,062)



		2019 Standards Compliant Weighted Energy Usage and Emissions						202
Building Types & Measures:		2019 Code Statewide Therms	2019 Code Statewide kWh	2019 Energy Code Statewide TDV - kBtu	2019 Energy Code CO2e Emissions - mTon/yr	2019 Energy Code NOx lb/yr	2019 Energy Code SOx lb/yr	2022 Energy Code Statewide - Therms
Newly Constructed	Single Family Heat Pump Standard Design	14,953,624	298,657,056	4,145,084	170,759	112,871	88,242	8,767,446
	Multifamily Heat Pump Standard Design	8,563,872	291,666,502	11,541,718,673	110,925	67,766	50,688	7,867,052
	Nonres Heat Pump Standard Design	Included in Nonres Efficiency New Construction Baseline below						-
	Multifamily PV/Battery	Included in Multifamily HP Baseline above						-
	Nonres PV/Battery	Included in Nonres Efficiency New Construction Baseline below						-
	Multifamily Efficiency-All Prototypes	Included in Multifamily HP Baseline above						-
	Nonres Efficiency-New Construction	14,761,982	1,125,623,493	32,808,758,312	387,784	132,115	88,119	13,140,192
Process	Covered Processes	148,893,314	4,389,205,644	168,525,641,326	1,863,742	1,083,761	876,669	143,707,314
Alterations	Single Family Alterations - Including All Ex	3,212,289,102	57,131,559,848	2,806,194,078,688	31,202,701	22,039,635	18,848,244	3,211,588,102
	Single Family Alterations - Altered Building	214,152,607	3,808,770,657	187,079,605,246	2,080,180	1,469,309	1,256,550	213,451,607
	Multifamily Alterations - Including All Exis	791,660,157	11,009,512,493	612,416,720,173	6,957,567	5,321,924	4,639,754	791,441,045
	MF Expected Alterations (3.6% of existing	28,273,577	393,196,875	21,872,025,720	248,485	190,069	165,705	28,054,465
	Nonres Alterations - Including All Existing Buil	1,959,768,061	124,965,440,732	4,453,476,550,689	40,642,011	16,665,112	11,655,919	1,949,998,766
	Nonres Alterations - Altered Buildings Onl	130,651,204	8,331,029,382	296,898,436,713	2,709,467	1,111,007	777,061	120,881,909

All data from <https://efiling.energy.ca.gov/Lists/DocketLog.aspx?doctetnumber=21-BSTD-02>, Appendix B: Combined Emissions and Energy Savings (TN-239152)



2022 Standards Compliant Weighted Energy Usage and Emissions			2022 Compliant Standards Statewide Savings - Weighted Totals							
2022 Energy Code Statewide - kWh	2022 Energy Code - TDV, kBTU	2022 Energy Code CO2e Emissions - mTon/yr	Therms	kWh	TDV, kBTU	CO2e Emissions, mTon/yr - Shortterm, E-Grid	Direct CO2e Emissions, mTon/yr - Longrun, CBECC	HP Refrigerant CO2e GWP Impact, mTons/yr	Net CO2e Emissions Savings Including GWP, mTons/yr	NOx lbs/yr
359,724,088	3,885,885	146,436	6,186,178	(61,067,031)	259,199		24,323	(8,094)	16,230	35,670
298,381,857	11,503,537,402	108,537	696,820	(6,715,355)	38,181,271		2,388	(2,139)	249	3,934
-	-	-	2,003,424	(15,451,367)	90,885,902		7,164	(1,831)	5,333	11,382
-	-	-	0	89,670,588	2,067,940,104		6,757	-	6,757	1,608
-	-	-	0	363,116,456	8,398,509,628		29,208	-	29,208	6,951
-	-	-	420,348	3,393,407	276,449,300	3,108	2,974	-	2,974	2,738
1,018,241,991	30,704,146,866	316,050	1,621,790	107,381,502	2,104,611,447	34,617	25,626	-	25,626	13,933
4,040,867,644	158,256,886,480	1,753,645	5,186,000	348,338,000	10,268,754,846	111,888	82,691	-	82,691	44,730
56,941,839,848	2,798,825,178,688	31,183,328	701,000	189,720,000	7,368,900,000	49,356	32,587	-	32,587	11,142
3,619,050,657	179,710,705,246	2,032,823	701,000	189,720,000	7,368,900,000	49,356	32,587	-	32,587	11,142
10,996,464,965	611,905,741,258	6,959,922	219,112	13,047,528	510,978,915		4,331	-	4,331	1,830
380,149,347	21,361,046,805	244,392	219,112	13,047,528	510,978,915		4,331	-	4,331	1,830
124,584,044,522	4,439,524,155,333	40,536,244	9,769,295	381,396,210	13,952,395,356	144,826	114,525	-	114,525	74,445
7,949,633,172	282,946,041,357	2,567,250	9,769,295	381,396,210	13,952,395,356	144,821	114,525	-	114,525	74,445



Satewide Savings Weighted Percentages							
SO2 lbs/yr	Therms Decrease	kWh Decrease (Increase)	TDV Decrease	CO2e Decrease	NOx Decrease	SOx Decrease	Percent Net CO2e Savings By Building Type
35,968	41.4%	-20.4%	6.3%	9.5%	32%	41%	5.1%
4,047	8.1%	-2.3%	0.3%	0.2%	6%	8%	0.1%
11,640	13.6%	-1.4%	0.3%	1.4%	9%	13%	1.7%
78	0.0%	30.7%	17.9%	6.1%	2%	0.2%	2.1%
339	0.0%	32.3%	25.6%	7.5%	5%	0.4%	9.1%
2,459	4.9%	1.2%	2.4%	2.8%	4%	5%	0.9%
9,653	11.0%	9.5%	6.4%	8.9%	11%	11%	8.0%
30,875	3.5%	7.9%	6.1%	6.0%	4.1%	3.5%	25.8%
4,422	0.02%	0.33%	0.26%	0.16%	0.05%	0.02%	10.2%
4,422	0.33%	4.98%	3.94%	2.37%	0.76%	0.35%	10.2%
1,302	0.03%	0.12%	0.08%	0.00%	0.03%	0.03%	1.4%
1,302	0.77%	3.32%	2.34%	0.00%	0.96%	0.79%	1.4%
57,683	0.5%	0.3%	0.3%	0.4%	0.45%	0.49%	35.7%
57,683	7.5%	4.6%	4.7%	5.3%	7%	7%	35.7%

DRAFT

Instructions

Populate activity data, GHG emissions, and miscellaneous data needs for the inventory and forecast years

Sector	Subsector	Units	Activity Data					Metric
			2008	2016	2019	2030	2050	
Residential Energy	Residential electricity	kWh	317,534,340	313,059,680	316,529,750	437,202,640	815,532,580	Household
	Residential natural gas	Therms	1,783,940	1,495,200	1,694,380	23,405,590	43,659,430	Household
Nonresidential Energy	Nonresidential electricity	kWh	1,273,004,280	1,540,464,030	1,242,306,720	1,637,865,370	2,858,631,210	Jobs
	Nonresidential natural gas	Therms	6,895,270	21,861,030	26,168,160	34,500,270	60,214,690	Jobs
Transportation	Light-duty vehicles	VMT	1,767,683,550	1,843,389,270	1,945,876,580	2,380,798,400	3,171,565,080	VMT projections
	Heavy-duty vehicles	VMT	202,102,900	152,010,400	205,547,010	250,670,370	332,711,410	VMT projections
Off-Road Equipment	Agricultural Equipment	None	-	-	-	-	-	Acres of ag land
	Airport Ground Support	None	-	-	-	-	-	Service population
	Construction and Mining	None	-	-	-	-	-	Service population
	Industrial	None	-	-	-	-	-	Jobs
	Lawn and Garden	None	-	-	-	-	-	Households
	Light Commercial	None	-	-	-	-	-	Jobs
	Pleasure Craft	None	-	-	-	-	-	Population
	Portable Equipment	None	-	-	-	-	-	Service population
	Recreational	None	-	-	-	-	-	Population
	Transportation Refrigeration Units	None	-	-	-	-	-	Service population
Solid Waste	Municipal solid waste	Tons	291,680	220,370	287,980	376,530	662,210	Service population
	Alternative daily cover	Tons	0	0	2,670	3,490	6,140	Service population
	Transform waste	Tons	0	0	1,030	2,370	3,670	Service population
Waste and Wastewater	Indirect water energy	kWh	139,120,870	63,020,780	61,387,950	80,264,120	141,159,360	Service population
	Indirect wastewater energy	kWh	9,735,890	6,806,891	7,672,160	10,031,270	17,641,850	Service population
	Direct wastewater plant emissions	None	0	0	0	0	0	Service population
Sequestration	Development activities	Acres	3,520	0	1,700	950	2,070	Urban development
	Street tree sequestration	Acres lost	740	0	760	800	870	Greenfield development
Agriculture	Enteric fermentation	Head of livestock	53,240	126,350	10,890	7,030	0	Service population
	Fertilizer application	Tons applied	3,070	1,150	204	130	0	Service population
	Manure management	Head of livestock	53,240	42,270	10,890	7,026	0	Service population
Stationary Sources	Stationary sources							

Metric	Source	2008	2016	2019	2021	2030	2050
Population	Dept of Finance/SBCTA	163,951	172,249	178,606	179,597	232,121	410,492
Households	Dept of Finance/SBCTA	44,673	46,001	48,275	50,367	66,679	124,380
Jobs	US Census/SBCTA	104,233	113,859	128,637	131,999	169,598	296,002
Service population	Dept of Finance/US Census/BCAG	268,184	286,108	307,243	311,596	401,717	706,494
Nonresidential square footage		0	142,547,458	150510825.8	156,065,382	183,176,951	261,491,779
Residents per household	Dept of Finance/SBCTA	3.67	3.74	3.70	3.57	3.48	3.30
Indirect water (MG)		2008	2016	2019	2030	2050	
		17315	9757	10463	13680	24060	

Demographic Forecast

	2008	2016	2019	2021	2030	2050
Population	163951	172249	178606	179597	232121	410491
Households	44673	46001	48275	50367	66679	124379
Jobs	104233	113859	128637	131998	169598	296002
Service population	268184	286108	307243	311595	401717	706494
Nonresidential square footage		142547458	150510825.8	156065382	183176951	261491778.8
Residents per household	3.6700244	3.744462077	3.699761781	3.565745797	3.481162812	3.300314671

Nonresidential square footage growth rate, 2021-2030
0.01795683

Vehicle type	MTCO ₂ e/VMT
All other buses	0.001153
LDA	0.000300
LDT1	0.000369
LDT2	0.000390
LHD1	0.000633
LHD2	0.000683
MCY	0.000208
MDV	0.000470
MH	0.001586
Motor coach	0.001825
OBUS	0.001724
PTO	0.002291
SBUS	0.001331
T6	0.001209
T7	0.001709
UBUS	0.001814
Total	0.000438

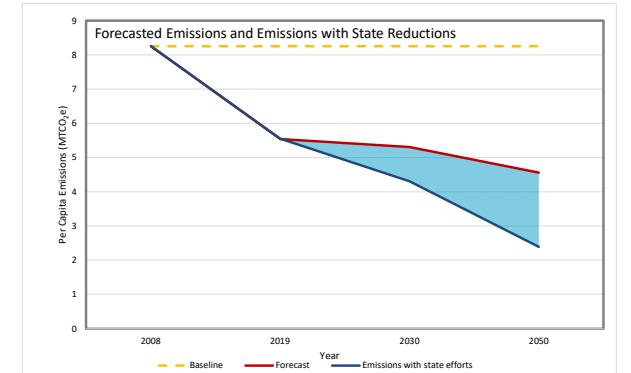
Sector	Subsector	2008	2016	2019	2030	2050
Residential Energy	Residential electricity	93,670	79,180	65,690	90,730	169,250
	Residential natural gas	98,620	79,220	89,340	123,400	230,180
Nonresidential Energy	Nonresidential electricity	375,340	326,030	257,820	339,910	593,360
	Nonresidential natural gas	368,460	188,410	137,960	181,890	317,460
Transportation	Light-duty vehicles	744,250	668,870	676,420	827,610	1,102,490
	Heavy-duty vehicles	197,770	189,690	258,170	314,850	417,890
Off-Road Equipment	Agricultural Equipment	10	970	60	40	0
	Airport Ground Support	8,500	0	9,650	12,620	22,190
	Construction and Mining	13,180	10,230	23,060	30,150	53,030
	Industrial	6,920	870	7,990	10,530	18,390
	Lawn and Garden	200	580	210	290	540
	Light Commercial	2,020	930	2,340	3,090	5,380
	Pleasure Craft	160	6,160	240	310	550
	Portable Equipment	14,260	0	18,090	23,850	41,630
	Recreational	1,860	420	1,200	1,560	2,760
	Transportation Refrigeration Units	190	1,730	2,640	3,450	6,070
Solid Waste	Municipal solid waste	75,930	63,040	82,380	107,210	189,430
	Alternative daily cover	0	0	660	860	1,520
	Transform Waste	0	0	360	470	830
Waste and Wastewater	Indirect water energy	29,040	13,880	13,410	17,530	30,840
	Indirect wastewater energy	6,590	5,400	1,960	2,560	4,510
	Direct wastewater plant emissions	4,220	4,340	4,530	5,920	10,420
Sequestration	Development activities	3,250	1,390	1,390	870	2,120
	Street tree sequestration	710	730	730	770	-830
Agriculture	Enteric fermentation	126,350	44,850	36,290	23,430	0
	Fertilizer application	1,150	890	850	540	0
	Manure management	42,270	14,680	11,400	7,350	0
Total		2,212,900	1,701,030	1,703,380	2,130,750	3,219,910
Stationary Sources	Stationary sources	401,902	70,952	322,610		

	2008	2016	2019	2030	2050
Residential Energy	192,290	158,400	155,030	214,130	399,430
Nonresidential Energy	744,800	514,440	395,780	521,800	910,720
Transportation	942,020	858,560	934,590	1,142,460	1,520,380
Off-Road Equipment	46,500	21,890	65,480	85,890	150,540
Solid Waste	75,930	63,040	83,400	109,040	191,280
Waste and Wastewater	39,850	23,620	19,900	26,010	45,770
Agriculture	169,770	60,420	48,540	31,320	0
Sequestration	2,540	660	660	100	1,290
Total	2,212,900	1,701,030	1,703,380	2,130,750	3,219,910

	2019 MTCO ₂ e	2030 MTCO ₂ e	2050 MTCO ₂ e	Percent Change 2019 to 2050
State Reductions				
Forecasted emissions without state actions	1,703,380	2,130,750	3,219,910	89%
Reductions from RPS		127,800	797,860	
Reductions from Clean Car standards		214,030	475,320	
Reductions from Title 24		68,860	198,210	
Reductions from LCFS (off-road only)		3,460	4,210	
SB 1383		25,360	44,610	
Reductions from all state actions		439,510	1,520,210	
Emissions with state actions	1,703,500	1,730,470	1,689,220	-1%

	2019 MTCO ₂ e	2030 MTCO ₂ e	2050 MTCO ₂ e	Percent Change 2019 to 2050
Per Capita Emissions of State Reductions				
Forecasted per capita emissions with state actions	5.54	5.30	4.56	-18%
Per capita emissions reductions from RPS		0.32	1.13	
Per capita emissions reductions from Clean Car standards		0.53	0.67	
Per capita emissions reductions from Title 24		0.17	0.28	
Per capita emissions reductions from LCFS (off-road only)		0.01	0.01	
Per capita emissions reductions from SB 1383		0.06	0.06	
Per capita emission reductions from all state actions		1.09	2.15	
Per capita emissions with state actions	5.54	4.31	2.39	-57%

	2008	2019	2030	2050
Baseline	8.25142	8.25142	8.25142	8.25142
Forecast	8.25142	5.54	5.30	4.56
Emissions w/ state actions	8.25142	5.54	4.31	2.39
Blank wedg	8.25142	5.54	4.31	2.39
Reduction v	0	0.00	1.00	2.17



Instructions

Populate activity data, GHG emissions, and miscellaneous data needs for the inventory and forecast years

Sector	Subsector	Units	Activity Data					Metric
			2008	2016	2019	2030	2050	
Residential Energy	Residential electricity	kWh	317,534,340	313,059,680	316,529,750	437,202,640	815,532,580	Household
	Residential natural gas	Therms	1,783,940	1,495,200	1,694,380	23,405,590	43,659,430	Household
Nonresidential Energy	Nonresidential electricity	kWh	1,273,004,280	1,540,464,030	1,242,306,720	1,637,865,370	2,858,631,210	Jobs
	Nonresidential natural gas	Therms	6,895,270	21,861,030	26,168,160	34,500,270	60,214,690	Jobs
Transportation	Light-duty vehicles	VMT	1,767,683,550	1,843,389,270	1,945,876,580	2,380,798,400	3,171,565,080	VMT projections
	Heavy-duty vehicles	VMT	202,102,900	152,010,400	205,547,010	250,670,370	332,711,410	VMT projections
Off-Road Equipment	Agricultural Equipment	None	-	-	-	-	-	Acres of ag land
	Airport Ground Support	None	-	-	-	-	-	Service population
	Construction and Mining	None	-	-	-	-	-	Service population
	Industrial	None	-	-	-	-	-	Jobs
	Lawn and Garden	None	-	-	-	-	-	Households
	Light Commercial	None	-	-	-	-	-	Jobs
	Pleasure Craft	None	-	-	-	-	-	Population
	Portable Equipment	None	-	-	-	-	-	Service population
	Recreational	None	-	-	-	-	-	Population
	Transportation Refrigeration Units	None	-	-	-	-	-	Service population
Solid Waste	Municipal solid waste	Tons	291,680	220,370	287,980	376,530	662,210	Service population
	Alternative daily cover	Tons	0	0	2,670	3,490	6,140	Service population
	Transform waste	Tons	0	0	1,030	2,370	3,370	Service population
Waste and Wastewater	Indirect water energy	kWh	139,120,870	63,020,780	61,387,950	80,264,120	141,159,360	Service population
	Indirect wastewater energy	kWh	9,735,890	6,806,891	7,672,160	10,031,270	17,641,850	Service population
	Direct wastewater plant emissions	None	0	0	0	0	0	Service population
Sequestration	Development activities	Acres	3,520	0	1,700	950	2,070	Urban development
	Street tree sequestration	Acres lost	740	0	760	800	870	Greenfield development
Agriculture	Enteric fermentation	Head of livestock	53,240	126,350	10,890	7,030	0	Service population
	Fertilizer application	Tons applied	3,070	1,150	204	130	0	Service population
	Manure management	Head of livestock	53,240	42,270	10,890	7,026	0	Service population
Stationary Sources	Stationary sources							

Metric	Source	2008	2016	2019	2021	2030	2050
Population	Dept of Finance/SBCTA	163,951	172,249	178,606	179,597	232,121	410,492
Households	Dept of Finance/SBCTA	44,673	46,001	48,275	50,367	66,679	124,380
Jobs	US Census/SBCTA	104,233	113,859	128,637	131,999	169,598	296,002
Service population	Dept of Finance/US Census/BCAG	268,184	286,108	307,243	311,596	401,717	706,494
Nonresidential square footage		0	142,547,458	150510825.8	156065382	183,176,951	261,491,779
Residents per household	Dept of Finance/SBCTA	3.67	3.74	3.70	3.57	3.48	3.30
Indirect water (MG)		2008	2016	2019	2030	2050	
		17315	9757	10463	13680	24060	

Demographic Forecast

	2008	2016	2019	2021	2030	2050
Population	163951	172249	178606	179597	232121	410491.298
Households	44673	46001	48275	50367	66679	124379.5731
Jobs	104233	113859	128637	131998	169598	296002.3773
Service population	268184	286108	307243	311595	401717	706494.1071
Nonresidential square footage		142547458	150510825.8	156065382	183176951	261491778.8
Residents per household	3.6700244	3.744462077	3.699761781	3.565745797	3.481162812	3.300314671

Nonresidential square footage growth rate, 2021-2030
0.01795683

Vehicle type	MTCO ₂ e/VMT
All other buses	0.001153
LDA	0.000300
LDT1	0.000369
LDT2	0.000390
LHD1	0.000633
LHD2	0.000683
MCY	0.000208
MDV	0.000470
MH	0.001586
Motor coach	0.001825
OBUS	0.001724
PTO	0.002291
SBUS	0.001331
T6	0.001209
T7	0.001709
UBUS	0.001814
Total	0.000438

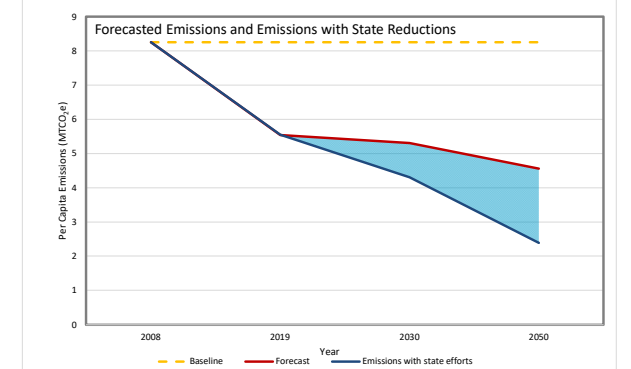
Sector	Subsector	2008	2016	2019	2030	2050
Residential Energy	Residential electricity	93,670	79,180	65,690	90,730	169,250
	Residential natural gas	98,620	79,220	89,340	123,400	230,180
Nonresidential Energy	Nonresidential electricity	375,540	326,030	257,820	339,910	593,360
	Nonresidential natural gas	368,460	188,410	137,960	181,890	317,460
Transportation	Light-duty vehicles	744,250	668,870	676,420	827,610	1,102,490
	Heavy-duty vehicles	197,770	189,690	258,170	314,850	417,890
Off-Road Equipment	Agricultural Equipment	10	970	60	40	0
	Airport Ground Support	8,500	0	9,650	12,620	22,190
	Construction and Mining	13,180	10,230	23,060	30,150	53,030
	Industrial	6,920	870	7,990	10,530	18,390
	Lawn and Garden	200	580	210	290	540
	Light Commercial	2,020	930	2,340	3,090	5,380
	Pleasure Craft	160	6,160	240	310	550
	Portable Equipment	14,260	0	18,090	23,850	41,630
	Recreational	1,860	420	1,200	1,560	2,760
	Transportation Refrigeration Units	190	1,730	2,640	3,450	6,070
Solid Waste	Municipal solid waste	75,930	63,040	82,380	107,210	189,430
	Alternative daily cover	0	0	660	860	1,520
	Transform Waste	0	0	360	470	830
Waste and Wastewater	Indirect water energy	29,040	13,880	13,410	17,530	30,840
	Indirect wastewater energy	6,590	5,400	1,960	2,560	4,510
	Direct wastewater plant emissions	4,220	4,340	4,530	5,920	10,420
Sequestration	Development activities	3,250	1,390	1,390	870	2,120
	Street tree sequestration	710	730	730	770	-830
Agriculture	Enteric fermentation	126,350	44,850	36,290	23,430	0
	Fertilizer application	1,150	890	850	540	0
	Manure management	42,270	14,680	11,400	7,350	0
Total		2,212,900	1,701,030	1,703,380	2,130,750	3,219,910
Stationary Sources	Stationary sources	401,902	70,952	322,610		

	2008	2016	2019	2030	2050
Residential Energy	192,290	158,400	155,030	214,130	399,430
Nonresidential Energy	744,800	514,440	395,780	521,800	910,720
Transportation	942,020	858,560	934,590	1,142,460	1,520,380
Off-Road Equipment	46,500	21,890	65,480	85,890	150,540
Solid Waste	75,930	63,040	83,400	109,040	191,280
Waste and Wastewater	39,850	23,620	19,900	26,010	45,770
Agriculture	169,770	60,420	48,540	31,320	0
Sequestration	2,540	660	660	100	1,290
Total	2,212,900	1,701,030	1,703,380	2,130,750	3,219,910

	2019 MTCO ₂ e	2030 MTCO ₂ e	2050 MTCO ₂ e	Percent Change 2019 to 2050
State Reductions				
Forecasted emissions without state actions	1,703,380	2,130,750	3,219,910	89%
Reductions from RPS		127,800	797,860	
Reductions from Clean Car standards		214,030	475,320	
Reductions from Title 24		68,860	198,210	
Reductions from LCFS (off-road only)		3,460	4,210	
SB 1383		25,360	44,610	
Reductions from all state actions		439,510	1,520,210	
Emissions with state actions	1,703,500	1,730,470	1,689,220	-1%

	2019 MTCO ₂ e	2030 MTCO ₂ e	2050 MTCO ₂ e	Percent Change 2019 to 2050
Per Capita Emissions of State Reductions				
Forecasted per capita emissions with state actions	5.54	5.30	4.56	-18%
Per capita emissions reductions from RPS		0.32	1.13	
Per capita emissions reductions from Clean Car standards		0.53	0.67	
Per capita emissions reductions from Title 24		0.17	0.28	
Per capita emissions reductions from LCFS (off-road only)		0.01	0.01	
Per capita emissions reductions from SB 1383		0.06	0.06	
Per capita emission reductions from all state actions		1.09	2.15	
Per capita emissions with state actions	5.54	4.31	2.39	-57%

	2008	2019	2030	2050
Baseline	8.25142	8.25142	8.25142	8.25142
Forecast	8.25142	5.54	5.30	4.56
Emissions w/ state actions	8.25142	5.54	4.31	2.39
Blank wedg	8.25142	5.54	4.31	2.39
Reduction v	0	0.00	1.00	2.17



Global warming potentials

	CO ₂	CH ₄	N ₂ O
AR2	1	21	310
AR4	1	25	298
AR5	1	28	265

CO ₂ to CO ₂ e	1.052631579	<< Use only for on-road vehicle calculations
Metric tons to grams, MMBTU to BTU	1,000,000	
MWh to kWh	1000	<< Also GWh to MWh
GWh to kWh	1,000,000	
Metric tons to pounds	2,204.6	
Metric tons to kg	1,000	<< Also kg to grams
kg to pounds	2.20462	
Acre foot to gallons	325,851.428	
Acre to square foot	43,560	
Year to months	12	
Year to days	365	<< Use except in circumstances below
Year to days	347	<< Use only for transportation emissions
Year to days	365.25	<< Use only for water and wastewater emissions
Ton to pounds	2,000	
Mile to feet	5,280	
Square mile to acres	640	
Million gallons to gallons	1,000,000	
Thousands gallons to gallons	1000	
BTU to kWh	0.0002931	
Therms to BTU	99976.1	
kW to Watts	1000	
Watts to kW	0.001	
BTU to therms	1.00024E-05	
kg to gallons	0.26	
Pounds to grams	454	
Horsepower to kWh	0.7457	
Cubic meter to Metric ton	0.984	

Yes	Pacific Gas & Electric	AR2
No	San Diego Gas & Electric	AR4
	Southern California Edison	AR5

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Quantification Workbook **Ontario**

Instructions
 Enter basic data about the project on this tab. This information will be used to set up tables and charts throughout the workbook.

Community Name
 The community for whom the project is for.

Project Name
 The name of the project.

Baseline Year
 The year against which all changes in GHGs will be measured.

Interim Year
 The year of the second inventory, more recent than the baseline year. Usually this will be the most recent year with available data.

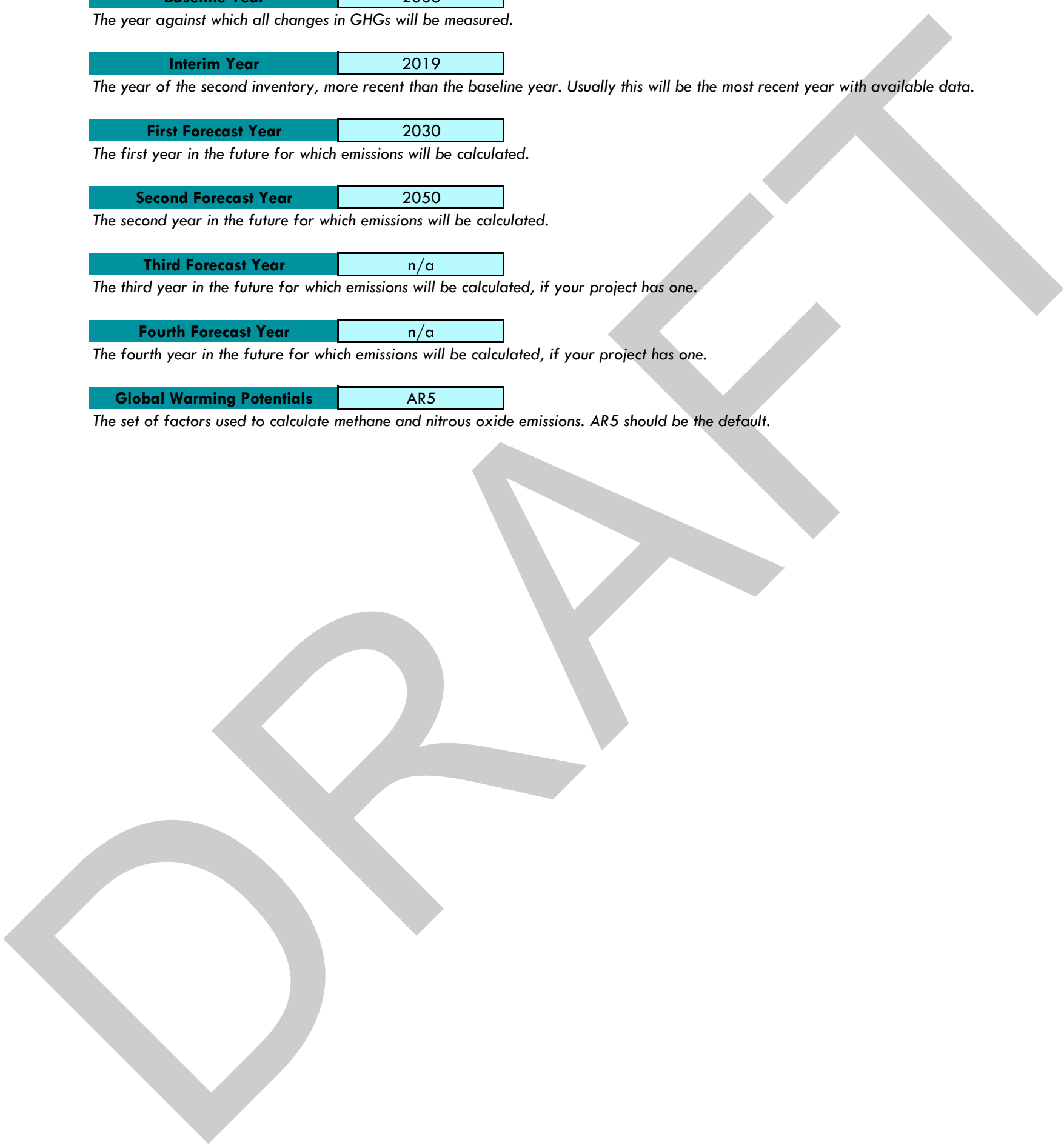
First Forecast Year
 The first year in the future for which emissions will be calculated.

Second Forecast Year
 The second year in the future for which emissions will be calculated.

Third Forecast Year
 The third year in the future for which emissions will be calculated, if your project has one.

Fourth Forecast Year
 The fourth year in the future for which emissions will be calculated, if your project has one.

Global Warming Potentials
 The set of factors used to calculate methane and nitrous oxide emissions. AR5 should be the default.

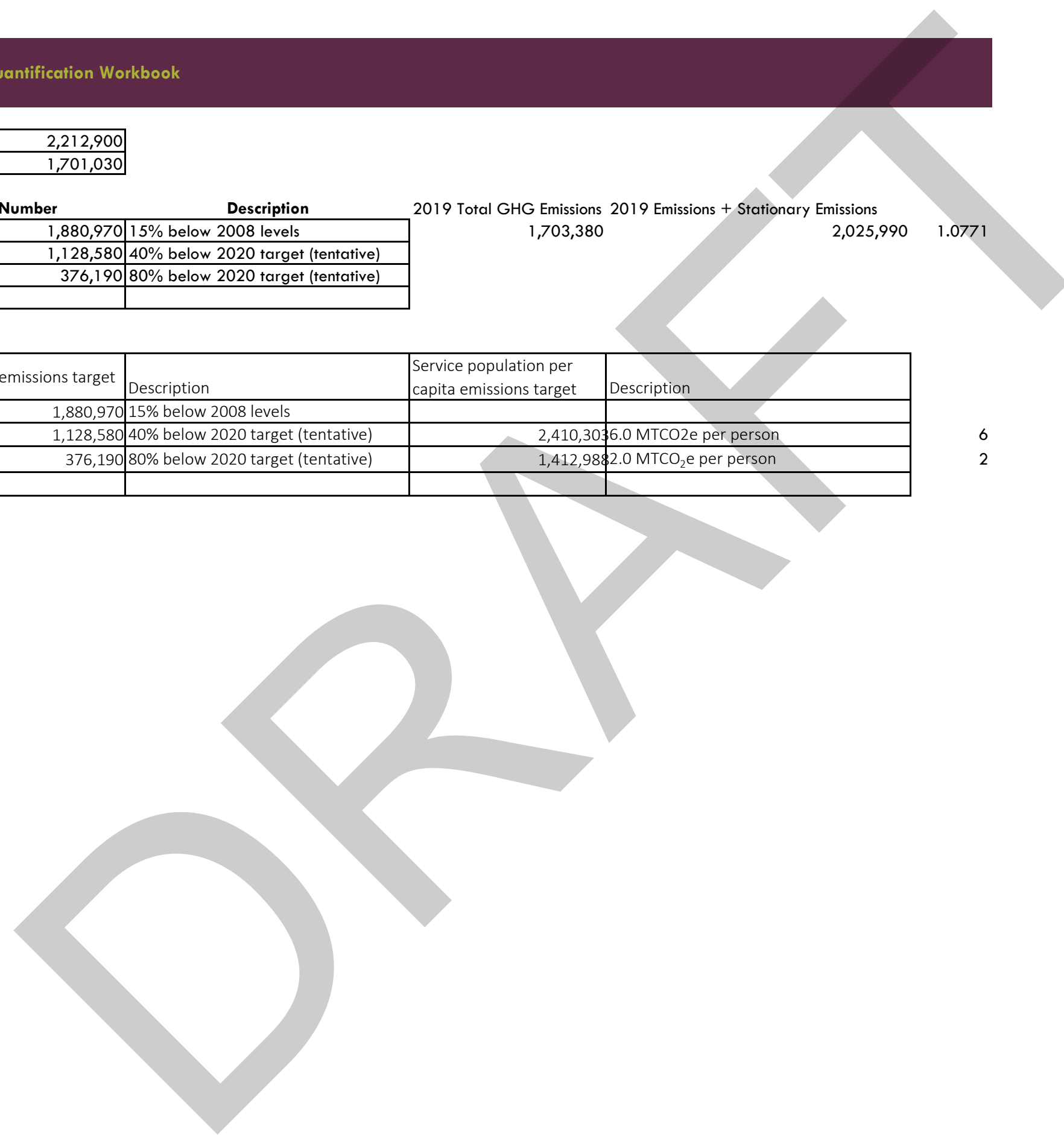


Quantification Workbook

Baseline emissions	2,212,900
Interim year emissions	1,701,030

	Number	Description	2019 Total GHG Emissions	2019 Emissions + Stationary Emissions	
2020 target	1,880,970	15% below 2008 levels	1,703,380	2,025,990	1.0771
2030 year target	1,128,580	40% below 2020 target (tentative)			
2050 year target	376,190	80% below 2020 target (tentative)			
n/a year target					

	Absolute emissions target	Description	Service population per capita emissions target	Description	
2020 target	1,880,970	15% below 2008 levels			
2030 year target	1,128,580	40% below 2020 target (tentative)	2,410,303	6.0 MTCO ₂ e per person	6
2050 year target	376,190	80% below 2020 target (tentative)	1,412,988	2.0 MTCO ₂ e per person	2



Appendix G Infrastructure Report

Appendices

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CITY OF ONTARIO

GENERAL PLAN UPDATE – THE ONTARIO PLAN

INFRASTRUCTURE REPORT FOR HYDROLOGY, SEWER, WATER, AND WATER QUALITY

CITY OF ONTARIO
SAN BERNARDINO COUNTY, CALIFORNIA

PREPARED FOR:

PLACEWORKS
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Santa Ana, CA 92707

PREPARED BY:

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- Attachment A** – Sewer Flow Calculations
- Attachment B** – Water Demand Calculations and Supporting Documentation
- Attachment C** – Chino Basin Groundwater Plume Map

1. INTRODUCTION & BACKGROUND

The City of Ontario (“City”) is currently undergoing a General Plan Update (GPU) referred to as The Ontario Plan (TOP) which is intended to shape development in the City over the next 30-plus years. A General Plan is the principal long-range policy and planning document for guiding the physical development, conservation, and enhancement of California cities and counties. As part of the California Environmental Quality Act (CEQA) process associated with General Plan Updates, infrastructure such as drainage, sewer, water systems and water quality that support the existing and proposed land uses will be analyzed at a level consistent with the city-wide program-level planning of an EIR. This report summarizes the findings of this effort by comparing the Current General Plan (Current TOP) approved in 2010 to the Proposed GPU or “Proposed TOP” as referenced for the remainder of the report.

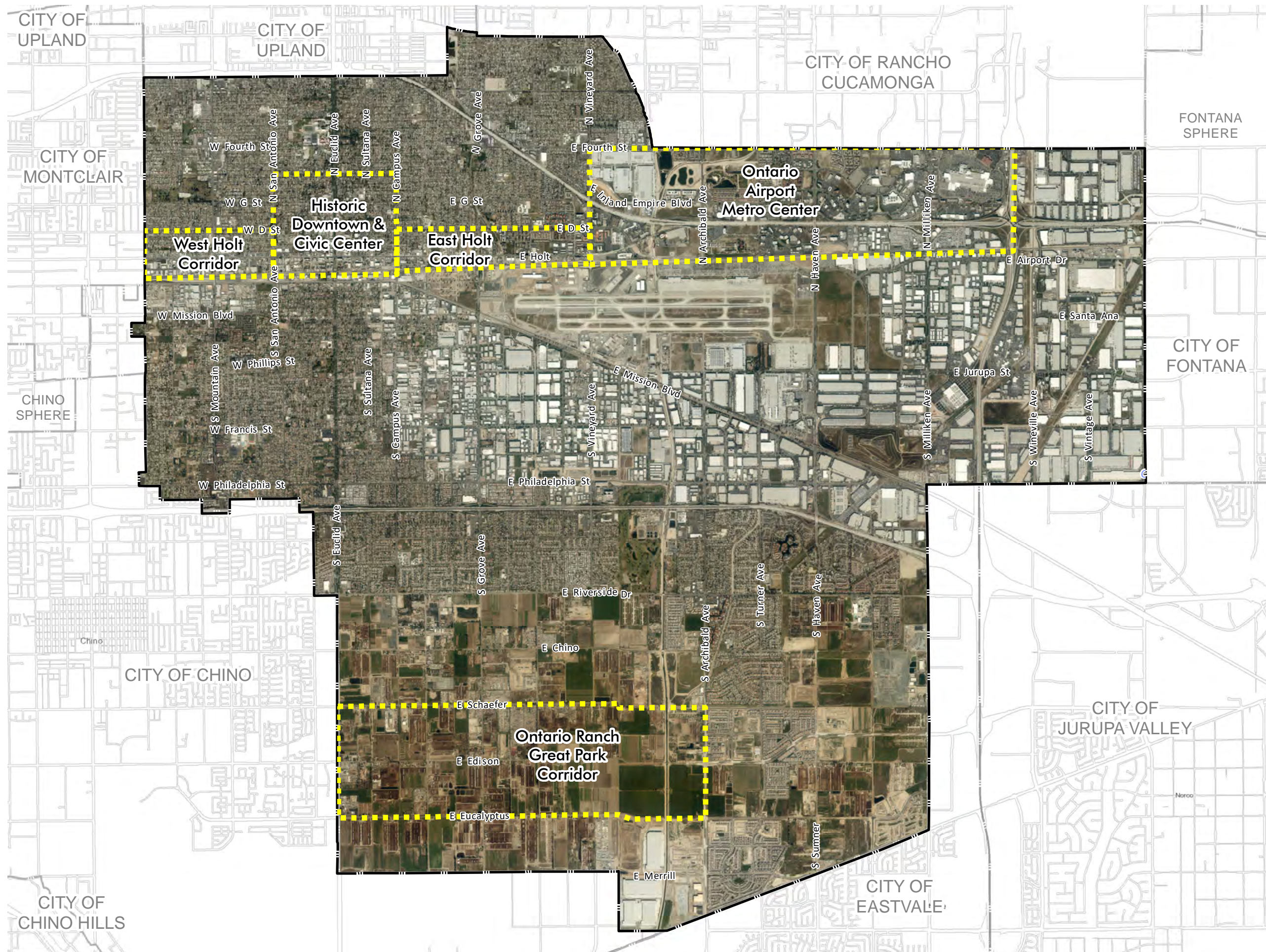
The City is adjacent to the cities of Chino and Montclair to the west, the cities of Upland and Rancho Cucamonga to the north, the Cities of Fontana and Jurupa Valley to the east, and the Cities of Chino and Eastvale to the south. In the south and east, the City is bordered by portions of unincorporated Riverside County. Regional access to the City is provided by Interstate 10 (San Bernardino Freeway) that runs east-west through the northern portion of the City as well as by Interstate 15 (Corona Freeway) that runs north-south through the eastern portion of the City. The City is divided into two portions, one in the north called Old Model Colony (OMC) and one to the south called Ontario Ranch (OR).

Under the Proposed TOP, residential dwelling units will increase by up to 25,399 DUs and non-residential square footage will increase by approximately 1.1 million square feet (sf). The Proposed TOP includes five “Growth Areas” throughout the City as listed below and shown in Figure 1.

- West Holt Corridor
- Historic Downtown & Civic Center
- East Holt Corridor
- Ontario Airport Metro Center
- Ontario Ranch Great Park Corridor

This report analyzes the infrastructure systems that serve the City and the Growth Areas. The analysis includes a review and summary of the baseline conditions of the storm drain system, water and wastewater systems, and existing water quality regulations currently in place, and provides a comparison between the Current and Proposed TOP. Any significant impacts will be identified by analyzing the CEQA thresholds of significance as they relate to storm drain, water, sewer and water quality. The analysis also includes the utilization of GIS tools and data and ongoing communication with City staff.

City of Ontario Aerial Extent and Growth Areas



- Proposed Growth Areas
- Ontario City Boundary

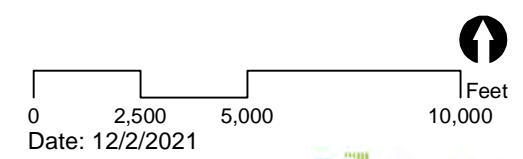


Figure 1



2. ENVIRONMENTAL SETTING

2.1 DRAINAGE

2.1.1 Watershed Setting and Existing Drainage Facilities

The City is within the Santa Ana River Watershed which is monitored by the Santa Ana Regional Water Quality Board (RWQCB) and covers portions of the Counties of San Bernardino, Orange, and Riverside. The City lies primarily within the Chino Creek sub-watershed, and is further subdivided into the Upper Cucamonga Creek and Lower Cucamonga Creek sub-watersheds.

The City is mostly built-out in the OMC and stormwater runoff connects to a series of storm drain lines throughout the City which include both City and San Bernardino County Public Works (SBCPW) drainage facilities. The City is relatively undeveloped within the OR, where stormwater flows either infiltrate into the soil or drain to SBCPW storm drain lines. Most of the smaller underground lines are under jurisdiction of the City and all the larger underground lines as well as flood control channels and detention basins are maintained by SBCPW.

City of Ontario Existing Storm Drain Facilities

The City and State-owned (Caltrans) storm drain infrastructure feeds to a series of SBCPW regional flood control channels, storm drains, and detention basins. The major regional channel systems that convey the City's stormwater runoff include San Antonio Channel, Cucamonga Channel, and the Day Creek Channel. Areas located in the southwest portion of the City that do not drain to the three major channel systems above, drain to the Prado Flood Control Basin via other regional and/or backbone facilities in the City of Chino, which include the following:

- SBCFCD's Cypress Channel system including Magnolia Storm Drain and Sultana-Cypress Storm Drain, which drains south through the City of Chino to the Prado Flood Control Basin.
- Airport Channel (City of Chino's master planned Euclid Avenue Storm Drain – Line I), which drains along the easterly side of Euclid Avenue, from Merrill Avenue to Prado Flood Control Basin. This system conveys runoff generated in the cities of Ontario and Chino.
- Grove Avenue Storm Drain (City of Chino's master planned storm drain- Line J), which drains south from Merrill Avenue to an existing RCB under the runway in Chino Airport; thence, through the City of Chino to Prado Flood Control Basin. This system conveys runoff generated in the cities of Ontario and Chino.

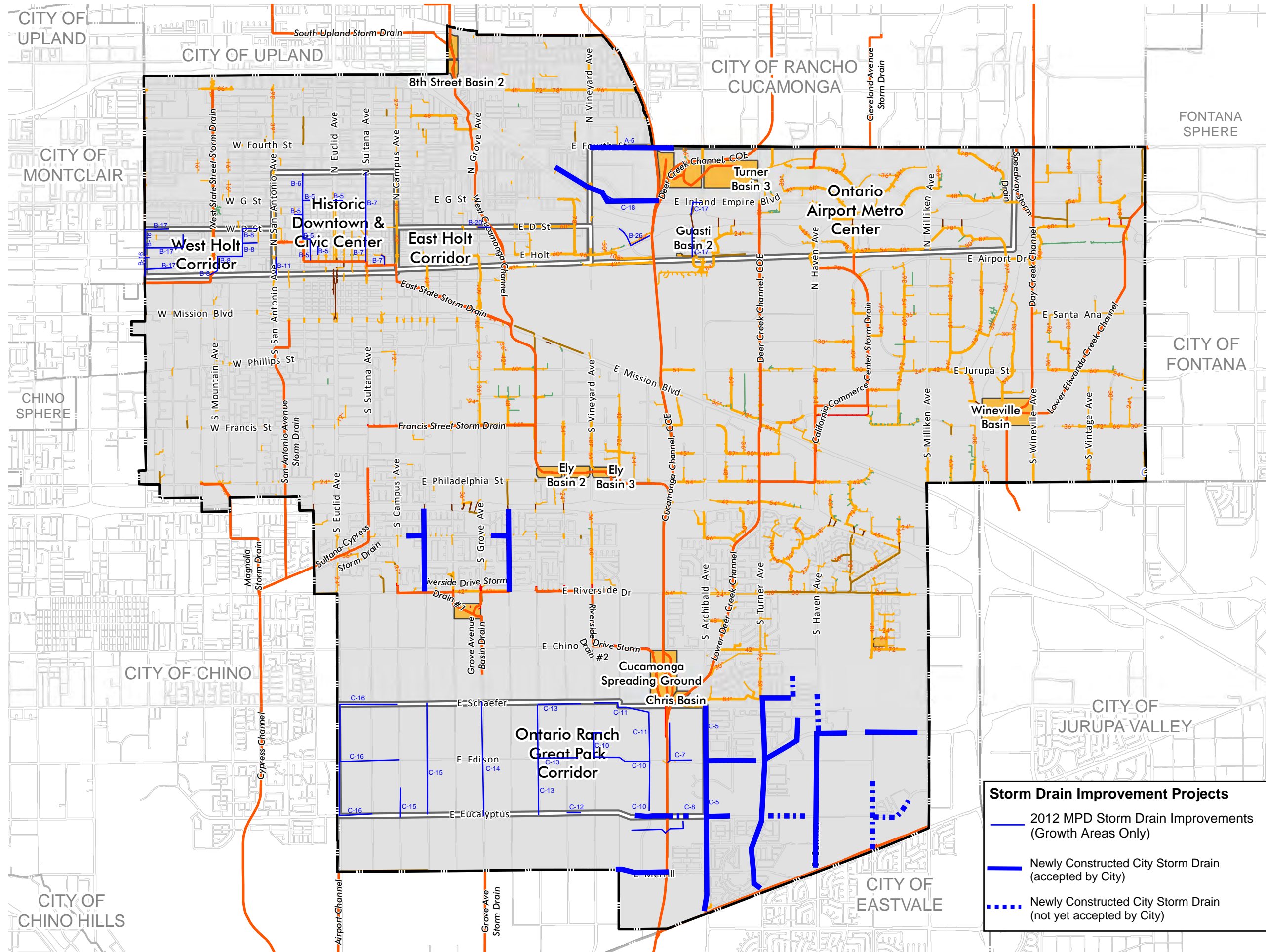
Additional major drainage features within the City include trunk lines that outlet to the larger flood control channels. Storm drain facilities serving the Growth Areas are summarized below:

Table 1 Existing Drainage Facilities within Growth Areas

Growth Area	Primary Drainage Facilities
West Holt Corridor	33"-60" City Storm Drain Lines SBCPW Storm Drain Line
Historic Downtown & Civic Center	16"-54" City Storm Drain Lines SBCPW Drainage Channels and Storm Drain Lines
East Holt Corridor	18"-96" City Storm Drain Lines SBCPW Drainage Channels and Storm Drain Lines
Ontario Airport Metro Center	24"-114" City Storm Drain Lines Caltrans Storm Drain Lines SBCPW Drainage Channels, Storm Drain Lines, and Detention Basins
Ontario Ranch Great Park Corridor	60" City Storm Drain Lines OCFCD Drainage Channel

See Figure 2 that shows existing storm drain system throughout the City and the Growth Areas.

City of Ontario Existing Storm Drain Facilities



- City Drainage Facilities**
- 12" - 42" Storm Drain Lines
 - 42" - 120" Storm Drain Lines
 - Detention Basins
 - Open Channel
- Other Jurisdiction Drainage Facilities**
- Caltrans Storm Drain Lines
 - Private Storm Drain Lines
 - SB County Storm Drain Lines
 - SB County Flood Control Channel
- Storm Drain Improvement Projects**
- Ontario City Boundary
 - Proposed Growth Areas
 - 2012 MPD Storm Drain Improvements (Growth Areas Only)
 - Newly Constructed City Storm Drain (accepted by City)
 - Newly Constructed City Storm Drain (not yet accepted by City)

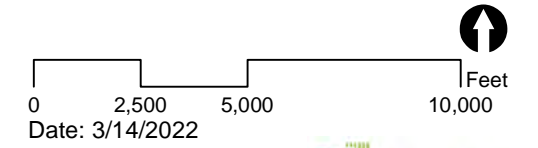


Figure 2

2.1.2 Storm Drain Master Plan

City of Ontario Master Plan of Drainage

The City of Ontario's Master Plan of Drainage (MPD) was prepared in March 2012 by Hunsaker and Associates Irvine, Inc. The purpose of the MPD is to analyze existing storm drain infrastructure capacity and provide recommendations on any flooding issues for all lines throughout the City.

City Storm Drain Assessment

The study presents preliminary sizes, alignments and construction cost estimates for recommended City-owned backbone storm drain facilities needed to upgrade the existing systems to provide adequate flood protection and support future built-out conditions. All existing infrastructure was modeled, with the exception of lines that are private or belong to outside agencies.

Assessment Parameters and Buildout Assumptions

Proposed flows were modeled based on a combination of land use information, including the existing General Plan, as-built drawings, previous development and drainage studies, design drawings, and the City's GIS files. When as-builts were not available the study estimated capacities using 80% of the general ground surface slope as the gradient of the mainline Hydraulic Grade Line. For surface flows on City streets, the Street Capacity Curves from "The Ontario Plan" was used for hydraulic modeling of storm drain infrastructure.

In addition, hydrology calculations for the entire City were conducted using Land Use Plan 2010 data for runoff coefficients as well as utilizing AES 2011 software. Flooding results for the 10-, 25-, and 100-year storm conditions were determined using rational method or unit hydrograph method.

Deficiency Criteria and CIP

Deficiencies were identified based on flow tributary to the master-planned storm drain. Recommended improvement priority categories were based on level of existing deficiency; impact to the public; proximity to schools, public and emergency facilities; and anticipated patterns of future development.

Project priorities were determined within three categories ("A through C"). Category "A" corresponds to master-planned storm drains to service and/or relieve flooding in areas without current storm drain facilities. Category "B" corresponds to master-planned storm drains that will mitigate impacts of additional development. Category "C" corresponds to master-planned storm drains to service future development. Recommended improvements by Growth Area are shown in Table 2 below. This also shows the status of these projects based on communication with City staff.¹

¹ Email correspondence with City staff in March 2022.

Table 2 City of Ontario Proposed Storm Drain Improvements

Growth Areas	Improvement Number	Improvement	Status	
West Holt Corridor	B-8	Improve City system along Mountain Ave, Boulder Ave, and I St	Not yet constructed.	
	B16	Improve City system along Benson Ave between I St and State St		
	B-17	Improve City system along I St, G St, D St, Stoneridge Ct, and Brooks St		
Historic Downtown & Civic Center	B-5	Improve City system along Vine Ave, Laurel Ave, and G St		
	B-6	Improve City system along Vine Ave between G St and 6 th St		
	B-7	Improve City system along Sultana Ave and Melrose Ave		
	B-11	Improve the City system along Oakland Ave, Palm Ave, Francis St, and Fern Ave		
East Holt Corridor	B-20	Improve City system along I St and D St		
Ontario Airport Metro Center	A-5	Add to City system along 4 th St and 5 th St		Constructed.
	B-26	Improve City system along Convention Center Way and Holt Blvd		
	C-17	Add to City system along Archibald Ave between Inland Empire Blvd and Airport Dr		
	C-18	Add to City system along Inland Empire Blvd and Plaza Serena		
Ontario Ranch Great Park Corridor	C-5	Add to City system along Archibald Ave between County Line Channel and Schaefer Ave	Not yet constructed.	
	C-7	Add to City system along Edison Ave east of Cucamonga Channel and extend north of Edison along the Cucamonga Channel		
	C-8	Add to City system along Eucalyptus Ave east of Cucamonga Channel and extend north of Eucalyptus along the Cucamonga Channel	Constructed.	
	C-10	Add to City system along Hellman Ave and Edison Ave		
	C-11	Add to City system along Hellman Ave and Schaefer Ave	Not yet constructed.	
	C-12	Add to City system along Merrill Ave west of Cucamonga Channel to Eucalyptus Ave		
	C-13	Add to City system along Walker Ave between Cucamonga Creek and Chino Ave		
	C-14	Add to City system along Grove Ave between Merrill Ave and Chino Ave		
	C-15	Add to City system along Merrill Ave and Bon View Ave		
	C-16	Add to City system along Euclid Ave between Merrill Ave and Riverside Dr		

Source: 2012 City of Ontario Master Plan of Drainage and communication with City staff (March 2022)

City of Ontario Capital Improvements Program

As shown above, the City utilizes the MPD to determine improvements to the storm drain system. These improvements are managed by the City's Capital Improvement Program (CIP) process. The City's Engineering Department regularly updates the CIP project list to prepare and budget for upcoming infrastructure improvements across a 5-year planning horizon. The storm drain infrastructure project below (San Antonio Avenue Storm Drain) has been prioritized within the City's current 2021/22 budget book. The list also includes three recent storm drain improvements.

- **In Design:** San Antonio Avenue Storm Drain – Estimated Project Completion December 2025
- **Completed:** Bon View Avenue New Storm Drain
- **Completed:** Parco Avenue New Storm Drain
- **Completed:** Francis Storm Drain & Ely Basin (new pipe and upsized pipe)

In addition, several proposed storm drain facilities identified in the MPD have since been constructed. These are shown in Figure 2.

2.1.3 San Bernardino County 2020-21 CIP

The San Bernardino County Public Works Flood Control Planning Division is mainly responsible for long range advance planning and for coordinating flood control project development and funding with other agencies:²

- Long Range Planning involves planning investigations and project studies; project prioritization; preparing annual capital improvement reports, special reports and studies; preparing and updating Master Plans of Drainage; documenting flooding events and damages; developing and processing funding agreements; preparing and tracking grant applications; Aerial photos and Historic information archiving and updating District's maps, exhibits, and displays.
- The Division conducts meetings with City Engineers in the respective Flood Zones. The meetings are designed to familiarize the City Engineers with flood control projects in planning, development and construction phases. District budget studies are also discussed.
- The Federal Projects Section of the Division is responsible for coordinating the development of federally sponsored flood control projects with the U.S. Army Corps of Engineers. Some of the past federally sponsored projects in our County included the construction of the Seven Oaks Dam and the San Timoteo Creek Basins and Channel.
- The Division coordinates Water Spreading Activities with local water agencies that use District facilities to recharge underground aquifers.

The following County projects are within the City's boundary include one completed project (Francis Street storm drain) and the other two currently in design³:

² San Bernardino County Public Works website. Accessed 3-21-2022 here:
<https://cms.sbcounty.gov/dpw/FloodControl/Planning.aspx>

³ Call with San Bernardino County Public Works staff; November 23, 2021.

- In Design: West State Street Storm Drain – Segment 3B
- In Design: Grove Basin Outlet Storm Drain

2.1.4 Existing Floodplain Mapping

The National Flood Insurance Act (1968) established the National Flood Insurance Program, which is based on the minimal requirements for flood plain management and is designed to minimize flood damage within Special Flood Hazard Areas. The Federal Emergency Management Agency (FEMA) is the agency that administrates the National Flood Insurance Program. Special Flood Hazard Areas (SFHA) are defined as areas that have a 1 percent chance of flooding within a given year, also referred to as the 100-year flood. Flood Insurance Rate Maps (FIRMs) were developed to identify areas of flood hazards within a community.

According to the Flood Zone determination covering the City, the majority of the City lies within Zone X (unshaded). Zone X (unshaded) is designated as an area determined to be either outside the 500-year flood plain (0.2%), or protected by levee from 100-year flood(1%). Zone X (shaded) are “Areas with a 0.2% Chance of Flooding”, areas adjacent to flood control channels and creeks or ‘Areas with Levee Protection’ (areas immediately east of Cucamonga Channel). The western portion of the Ontario Ranch area is designated as Zone D, Areas of Undetermined Flood Hazard. No flood hazard analysis has yet been conducted for this area.

Special Flood Hazard Areas Within the City

FEMA Special Flood Hazard Areas (SFHAs) are high risk areas, requiring mandatory flood insurance purchase for existing developments. Limited residential development or additional coordination with City planning and engineering staff for planned developments are recommended for SFHAs.

Zone A areas have a 1% annual chance of flooding and a 26% chance of flooding over the life of a 30-year mortgage. Zone A areas within the City are confined to flood control channels, creeks, and detention basins and areas immediately adjacent to them

Zone AH areas feature a 1% annual chance of shallow flooding and 26% chance of shallow flooding over a 30-year mortgage, generally in the form of a 1 to 3 foot pond. There are two small areas designated as Zone AH within the City, making up the southeastern and southwestern corners of the West Holt Corridor and Historic Downtown & Civic Center Growth Areas, respectively, and a small portion of the Ontario Airport Metro Center Growth Area, immediately south of the Toyota Arena.

Portions of the City along Mission Blvd and in the southern portion of the Ontario Airport Metro Center Growth Area are designated as Zone AO. Zone AO corresponds to river or stream flood hazard areas with a 1% or greater chance of shallow flooding, typically in the form of sheet flow.

Finally, a small portion of the City south of Philadelphia Street and west of S Euclid Avenue is designated as Zone AE. Zone AE areas are those with a 1% annual chance of flooding due to being located at base floodplain elevation.

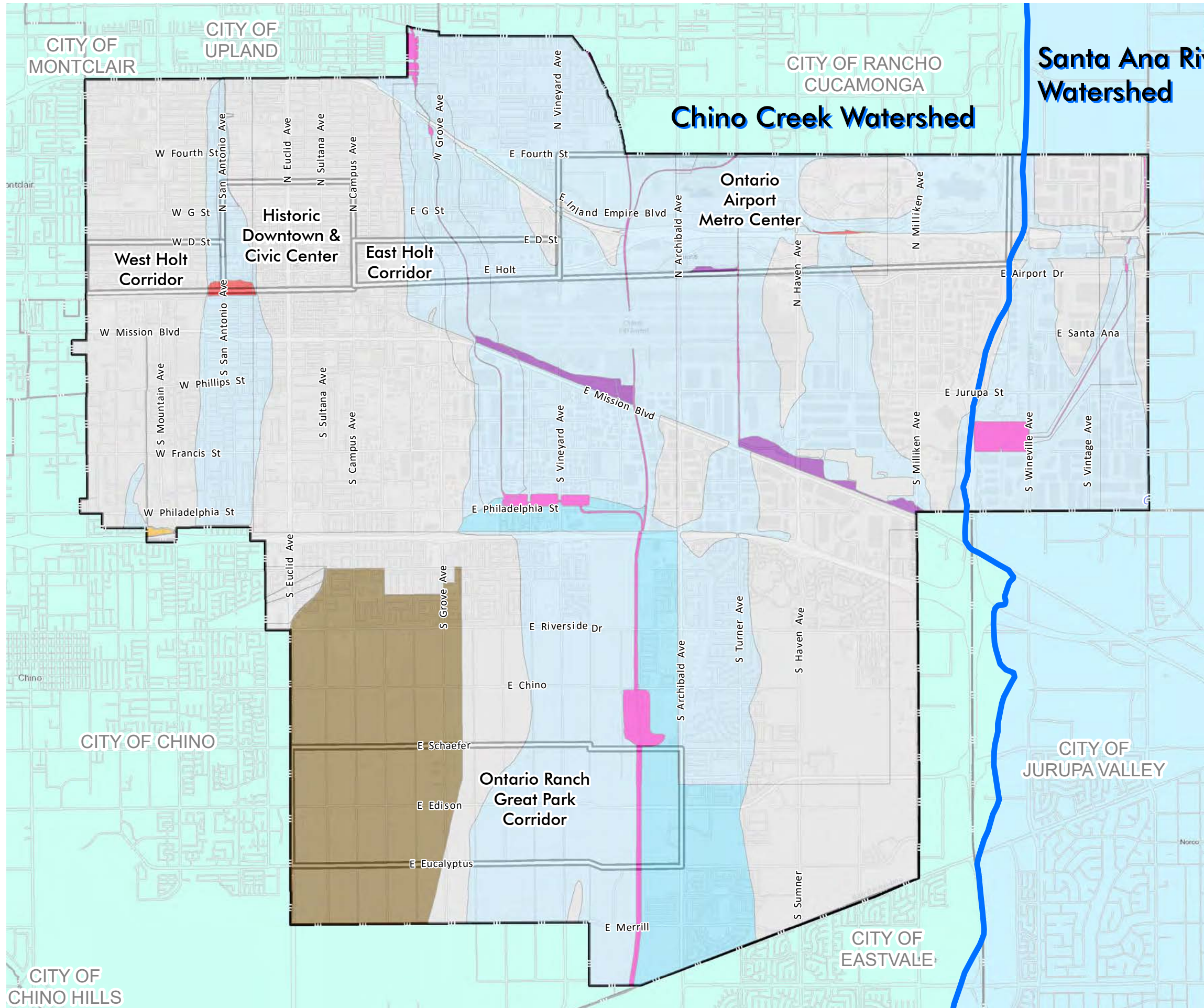
Table 4 below contains an overview of Growth Areas and associated FEMA Flood Zone designations.

Table 3 Growth Area Flood Zone Designations

Focus Area	FEMA Flood Designations and Approximate Areas
West Holt Corridor	Zone X (shaded), 0.2% Chance of Annual Flood, 28 acres in eastern Growth Area Zone AH, 4.7 acres in southeastern corner
Historic Downtown & Civic Center	Zone X (shaded), 0.2% Chance of Annual Flood, 106 acres in western Growth Area Zone AH, 12.3 acres in southwestern corner of Growth Area
East Holt Corridor	Zone X (shaded), 0.2% Chance of Annual Flood, 288 acres in western Growth Area Zone A, 1.3 acres in and around W Cucamonga Channel
Ontario Airport Metro Center	Zone X (shaded), 0.2% Chance of Annual Flood, 1,665 acres throughout Growth Area Zone AH, 5.3 acres south of Toyota Arena Zone AO, 7.9 acres at Guasti Rd Zone A, 21 Acres in and around Deer Creek Channel and Cucamonga Channel
Ontario Ranch Great Park Corridor	Zone D, 867 acres in western Growth Area Zone X (shaded), 0.2% Chance of Annual Flood, 788 acres in central/eastern Growth Area Zone A, 25 acres in and around Cucamonga Creek Zone X, Reduced Flood Risk Due to Levee, 199 acres in eastern Growth Area
<i>Bolded zones represent FEMA Special Flood Hazard Areas</i>	

See Figure 3 below for a map of the FEMA flood zones within the City in addition to the watershed boundaries.

City of Ontario Watershed and FEMA Areas



**Santa Ana River
Watershed**

Chino Creek Watershed

FEMA Flood Zones
FEMA Floodzone and Subtype Designation

- A
- AE
- AE, COLORADO RIVER FLOODWAY
- AE, FLOODWAY
- AE, FLOODWAY CONTAINED IN CHANNEL
- AH,
- AO,
- D,
- X, 0.2 -1.0 PCT ANNUAL CHANGE FLOOD HAZARD
- X, OUTSIDE 0.2 PCT ANNUAL CHANGE FLOOD HAZARD
- X, 0.2 – 1.0 PCT ANNUAL CHANGE FLOOD HAZARD DUE TO LEVEE
- Ontario City Boundary
- Proposed Growth Areas

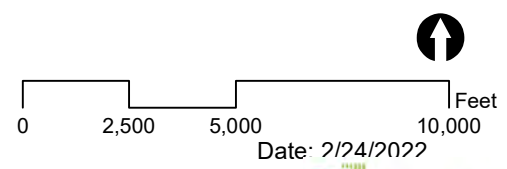


Figure 3



2.2 SEWER INFRASTRUCTURE

2.2.1 Existing Sewer System and Facilities

The City operates and maintains the City’s sewer system, which currently serves the Ontario Model Colony area and will serve the Ontario Ranch area upon buildout. The City’s sewer collection system consists of approximately 425 miles of sewer mains. The system operates largely by gravity but also features four primary pump stations and approximately 11,000 feet of associated force mains. Existing sewer load is approximately 10.4 million gallons per day (MGD).

The sewer system ranges in size from 4” to 48” diameter lines. See below for summary of sewer facilities within the Growth Areas.

Table 4 Existing Sewer Facilities within the Growth Areas

Growth Area	Primary Sewer System Facilities
West Holt Corridor	8”-15” City Lines
Historic Downtown & Civic Center	8”-27” City Lines
East Holt Corridor	8”-30” City Lines 21”-33” IEUA Lines
Ontario Airport Metro Center	8”-24” City Lines 24”-30” IEUA Lines
Ontario Ranch Great Park Corridor	Limited Existing Infrastructure

Inland Empire Utilities Agency Existing Sewer System

IEUA is a regional provider of wholesale, imported water and wastewater services in San Bernardino County. Its service area ranges from Chino Hills in the southwest to Rancho Cucamonga and Fontana in the northeast. IEUA operates four wastewater treatment plants (WWTPs) that provide recycled water to the western part of San Bernardino County. IEUA also maintains a series of regional trunk lines that transport wastewater flows from Ontario to one of IEUA’s regional treatment plants, described here. IEUA maintains and is responsible for a series of trunk lines that transport flows from the City to one of IEUA’s regional treatment plants. The wastewater treatment plants are described in more detail below.

- **Regional Water Recycling Plant #1 (RP-1).** This WWTP serves the cities of Ontario, Chino, Fontana, Montclair, Rancho Cucamonga, and Upland. It features two separate treatment sections, one for liquids and one for solids, and has a treatment capacity of 44 mgd. The wastewater flows are treated to Drinking Water Title 22 standards; therefore, the recycled water from the plant is suitable for distribution and use for landscape irrigation and industrial processes. The plant is in the City of Ontario at 2662 East Walnut Street.⁴

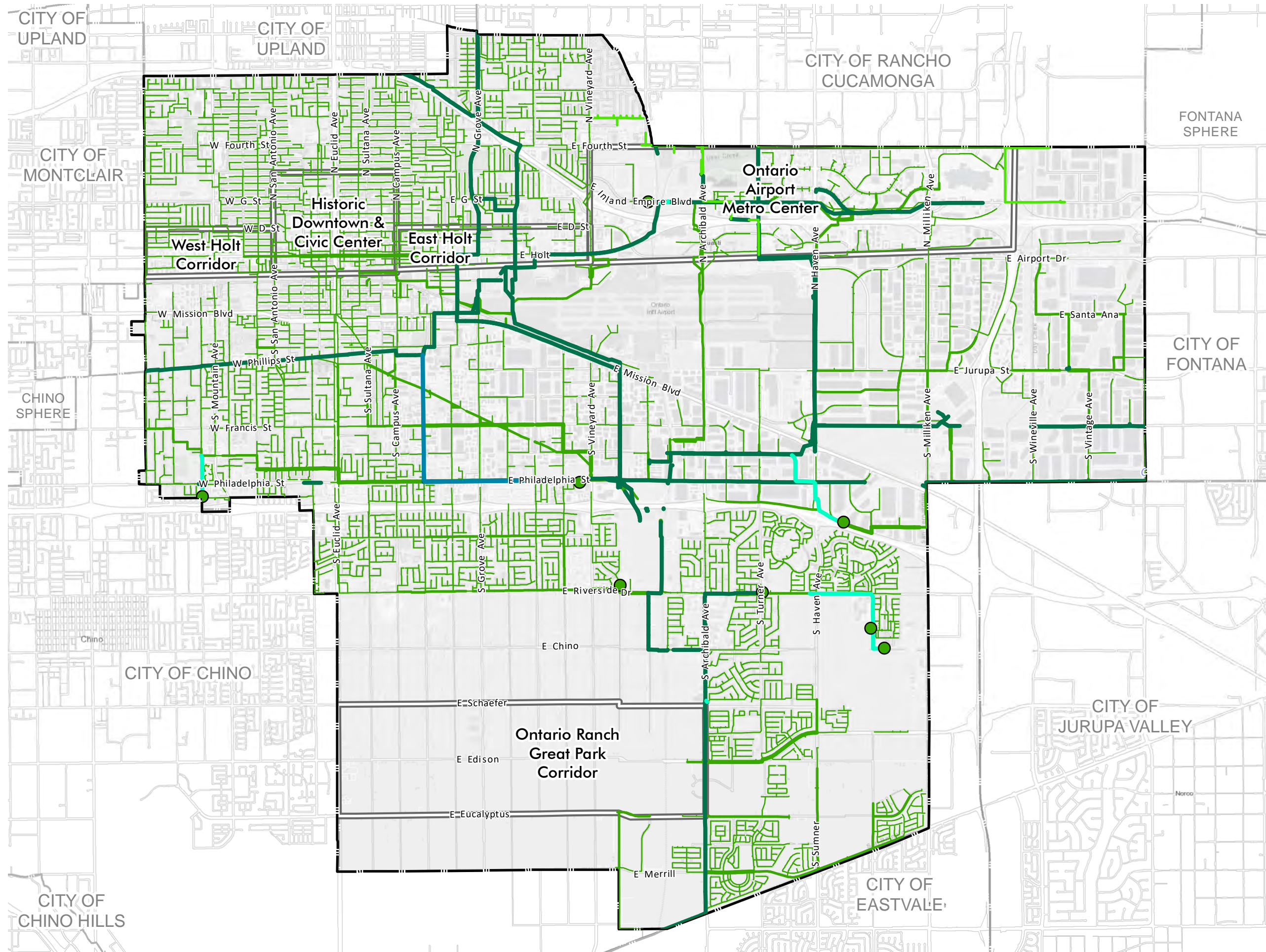
⁴ IEUA Website, accessed 3-22-2022. Found here: <https://www.ieua.org/regional-water-recycling-plant-no-1/>

- **Regional Water Recycling Plant #5 (RP-5).** This WWTP is in Chino and serves Chino, Chino Hills, and Ontario. The plant has a current capacity of 16.3 mgd, which will increase to 22.5 mgd with its planned expansion project. Wastewater treatment by this facility is either discharged to Chino Creek, delivered to industrial users, or pumped to basins for groundwater recharge.⁵

IEUA also operates a system for non-reclaimable wastewater (NRW) that consists of industrial waste, groundwater treatment, and other high-strength wastewaters and brines. This system enables IEUA to prevent high-strength wastewater from entering the water-recycling facilities so that they can meet their NPDES permit limits and wastewater quality goals. IEUA operates three trunk lines that are part of the NRW system, one of which passes through Ontario. The NRW system conveys wastewater to large-scale treatment facilities in Los Angeles under the jurisdiction of the Sanitation Districts of Los Angeles County, where it is treated and ultimately discharged into the Pacific Ocean.

⁵ IEUA Website, accessed 3-22-2022. Found here: <https://www.ieua.org/regional-water-recycling-plant-no-5-expansion-project/>

City of Ontario Existing Sewer Facilities



- City Sewer Facilities**
- 8" - 12" Gravity Main
 - 12" - 24" Gravity Main
 - 27" - 48" Gravity Main
 - Force Main
 - Sewer Lift Station
- Other Jurisdiction Sewer Facilities**
- IEUA Force Main
 - CVWD Gravity Main
 - IEUA Gravity Main
- Ontario City Boundary
 Proposed Growth Areas

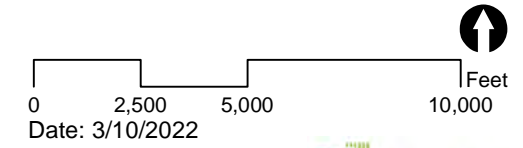


Figure 4



2.2.2 Sewer Capacity Assessments

City of Ontario 2020 Draft Sewer Master Plan

The City's most recent Sewer Master Plan update occurred in June 2020 and is currently in a provisional draft form. The 2020 Draft Sewer Master Plan Update ("2020 SMP") was an update to a sewer capacity analysis performed in 2012. The 2020 SMP analyzed the age and status of the sewer infrastructure, and the capacity of the City's sewer collection system for existing and future peak flow conditions under both dry and wet weather conditions. In addition, the Ontario Ranch area was reassessed for consistency with available planning documents. The results of the performance evaluation are below.

City Sewer Capacity Assessment

The capacity of the City's sewer system was assessed through use of the InfoSewer model, an ArcGIS based computer modeling program. All existing infrastructure was modeled, with the exception of laterals, and lines that are private or belong to outside agencies.

Assessment Parameters and Buildout Assumptions

Existing flows were modeled based on available billing data and sewer flow monitoring information, while proposed flows were modeled based on a combination of land use information, including the existing General Plan, specific plans, previous sewer studies, and a City buildout table completed in 2015. Ultimate buildout conditions modeled include a total of 107,221 DUs and corresponding population of 371,979 and citywide commercial square footage of 246,573,632. Modeled flows increased from 10.4 MGD under existing conditions to 29.4 MGD under proposed conditions.

Deficiency Criteria and CIP

Hydraulic deficiency (pipes in need of upsizing) was based on the peak dry weather depth over diameter (d/D) ratio. Any segment with a modeled d/D > 0.64 was considered deficient. Under existing condition analysis, a total length of 2,410 feet of deficient sewer pipes were identified, representing 0.12 percent of the total City system. Under proposed buildout conditions, an additional 7,372 feet of sewer was estimated to become deficient. No deficiencies were found under existing or future buildout conditions for all pump stations within the City.

From the modeled deficiencies, capacity improvement projects were prioritized for inclusion in future planning documents and City CIPs. Deficient infrastructure under existing conditions was prioritized over infrastructure with proposed deficiencies, with site-specific flow monitoring recommended for both types of projects. A total of 8 capacity improvement projects were listed for the Ontario Model Colony area, with proposed Ontario Ranch infrastructure projects addressed separately.

Table 5 Ontario SMP Capacity Improvement Projects

Project No.	Location	Description
1	Riverside Dr. east of Lower Creek	City staff to update hydraulic model and rerun site-specific analysis; potential upsizing required for existing 15" pipe pending field verification
2	Holt Blvd at Grove Ave, East Holt Corridor Growth Area	Replace existing pipes with 12" and 15" diameter pipes
3	Mountain Ave south of I St	Replace existing pipe with 8" diameter pipes
4	Hellman Ave and Philadelphia St area north of RP-1	Upsize existing 18" pipes to 24" diameter pipes
5	South of I-10 Fwy, west of Archibald Ave, Ontario Airport Metro Corridor Growth Area	Upsize existing 8" pipes to 12" diameter pipes
6	Old Guasti Rd, from Turner Ave to Archibald Ave, Ontario Airport Metro Corridor Growth Area	Upsize existing 8" pipes to 12" diameter pipes
7	Airport Dr & Grove Ave	Replace existing pipes with 8" and 21" diameter pipes
8	5 th Street and Euclid Ave	Replace existing pipe with 8" diameter pipes
15	Holt Blvd to Grove Ave	Replace existing pipe with 21" diameter pipes

City of Ontario FY 2020-21 through FY 2024-25 Capital Improvements Program

The OMUC regularly updates its Capital Improvements Program project list to prepare and budget for upcoming infrastructure improvements across a 5-year planning horizon. The sewer infrastructure projects below have been prioritized within the City's current 2020/21 CIP.

- **G Street Sanitary Sewer Main**– Improvement located within the Ontario Airport Metro Corridor Growth Area
- **Vineyard Sewer Project (Project 15 from 2012 SMP)** – Improvement located on Holt Blvd and Grove Ave to replace 18" pipe with 21" pipe
- **Holt Blvd at Grove Ave Project 2 (2020 SMP)** – Improvement project aimed to alleviate the existing capacity deficiency in the 10-inch sewer in Holt Blvd.

City of Ontario 2020 Sewer System Management Plan

The City of Ontario's draft 2020 Sewer System Management Plan ("2020 SSMP") was written to comply with the State Water Resources Control Board's Order No. 2006- 0003- DWQ (as amended by WQ2008- 002-EXEC and WQ2013-0058EXEC), Statewide General Waste Discharge Requirements for Wastewater Collection Agencies (WDR). A SSMP is a document that describes the activities that an agency uses to manage their wastewater collection system effectively. The state describes effective management of a wastewater collection system as

including: 1) Maintaining or improving the condition of the collection system infrastructure in order to provide reliable services into the future; 2) Cost-effectively minimizing infiltration/inflow (I/I) and providing adequate sewer capacity to accommodate design flows; and 3) Minimizing the number and impact of sanitary sewer system overflows (SSOs) that occur.

The 2020 SSMP is a draft update to the 2012 SSMP. The 2020 SSMP demonstrates the City's ability to comply with WDR's requirements through collection system use ordinances, service agreements, or other legally binding procedures. It possesses the necessary legal authority to prevent illicit discharges into its wastewater collection system, (examples may include infiltration and inflow (I/I), storm water, chemical dumping, unauthorized debris and cut roots, etc.); require sewers and connections be properly designed and constructed; ensure access for maintenance, inspection, or repairs for portions of the lateral owned or maintained by the Public Agency; limit the discharge of fats, oils, and grease and other debris that may cause blockages, and enforce any violation of its sewer ordinances.

Inland Empire Utilities Agency Sewer System Management Plan

IEUA maintains and regularly updates its Sewer System Management Plan ("SSMP") in order to properly assess infrastructure capacity and condition and plan for necessary capacity increases as a result of modeled flow increases through its planning horizon. The SSMP was most recently updated in April 2019.

A key element of the SSMP is the System Evaluation and Capacity Assurance Plan ("SECAP"), which provides an opportunity to update the Agency's CIP in response to modeled increases in flows. The most recently calibrated capacity assessment was completed as part of a technical Memo for the 2015 Wastewater Facilities Master Plan (TM3 – Regional Trunk Sewer Analysis) and modeled flows through 2035 based on available planning documents and growth projections.

The Technical Memo analyzed capacities for different wastewater pipes in IEUA's conveyance system. Dry weather peak flows were used to determine deficient line segments. For the purpose of the study, any existing line with a d/D ratio of greater than 0.92 would be identified as deficient. For new lines, a d/D ratio greater than 0.75 will qualify the segment as deficient.

While the majority of wastewater infrastructure utilized by IEUA was determined to be sufficient, there were significant capacity limitations noted for the 30" pipeline that conveys flows from the Montclair diversion structure to RP-1. It was determined that the pipeline would need to be upsized to a 36-inch diameter sewer to convey peak buildout flows. Further flow monitoring for the segment was recommended by the study in order to determine the extent of deficiency and the corrections necessary.

The analysis introduced a series of 4 alternatives and 5 sub-alternatives to promote system reliability and effective wastewater treatment for all communities served by RP-1 and RP-5. After a cost-benefit analysis including life cycle assessment, environmental impact analysis, and life cycle budgeting, it was determined that Alternative 2 was the preferred alternative presented. Alternative 2 estimated wastewater influent through a 2060 buildout (estimated increase of 9.6 MGD for RP-1 and 22.5 MGD for RP-5). Elements of Alternative 2 will include:

- Expanding RP-1 capacity by 5.0 MGD.
- Expanding RP-5 capacity by 7.5 MGD
- Upgrading the Whispering Lakes Pump Station to a capacity of 4.7 MGD.
- Constructing improvements to mitigate the deficiencies in the Montclair pipeline.

The improvements to the Montclair pipeline will involve resizing the line from 21” and 30” to 36” in diameter throughout, which will address existing and buildout condition capacity issues. Proposed capacity expansions to RP-1 and RP-5 are anticipated to meet all modeled flow increases.

In response, the 2019 SSMP update features 7 major capital projects to meet the projected capacity goals through 2035, primarily related to Alternative 2 identified in the Wastewater Facilities Plan Technical Memo. Of these 7 projects, 6 impact City of Ontario conveyance and treatment. 4 are located within the City and 2 are located outside of the City. Of the 4 located within the City, 2 of the projects related to expanded capacity for RP-1, 1 expands existing conveyance pipelines to RP-1, and the remaining project proposes upgrading an existing pump station’s capacity to convey additional flows to RP-1. Both projects outside the City limit are to upgrade the treatment capacity of RP-5. Additional CIP projects include manhole upgrades throughout the IEUA service area and various minor improvements. No IEUA capital projects occur within growth areas.

Table 6 IEUA Major Capital Projects

Project	Purpose
Montclair Pipeline Upgrades Project	Upsize four pipeline segments from 21-inch and 30-inch diameter to 36-inch diameter to mitigate deficiencies in the conveyance system, reliably accommodate future growth, and convey peak buildout flow.
Whispering Lakes Pump Station Expansion Project	Increased pumping capacity to meet projected future flows Ability to send more flows to RP-1 for treatment
RP-1 Solids Treatment Expansion Project	Increased solids treatment capacity to meet existing and projected future flows.
RP-1 Liquid Treatment Expansion and Primary Effluent Equalization Elimination Project	Increased liquid treatment capacity to meet projected future flows. Eliminating primary flow equalization and converting ponds for other uses.
RP-5 Solids Handling Facilities Project (RP-2 Relocation)	Relocation of RP-2 solids handling operations to RP-5. Increased solids treatment capacity to meet existing and projected future flows. Relocation of RP-2 Lift Station to above the flood elevation. Demolition of RP-2 facilities.
RP-5 Liquid Treatment Expansion Project	Increased liquid treatment capacity to meet projected future flows.

See Section 4.3 for a map of the current improvement projects throughout the City.

2.3 WATER DISTRIBUTION SYSTEM AND SUPPLY

2.3.1 Existing Water System

The City of Ontario provides water service within a 37.2-square mile service area. The service area includes most of the City of Ontario. However, there are also Cucamonga Valley Water District (CVWD) water lines that serve two areas of the City: 1) east of Vineyard Avenue and north of 4th Street and 2) east of I-15 and north of I-10. Neither of these areas are within the Growth Areas associated with the Proposed TOP. In addition, Inland Empire Utility Agency (IEUA) provides wholesale, recycled water supply to the City for distribution to retail customers. Metropolitan Water District of Southern California (MWD) also has delivery/conveyance lines that run through the City.

The City’s distribution system consists of approximately 584 miles of water mains, between 4 and 42 inches in diameter. There are twelve (12) active reservoirs, combined for a total capacity of 75 million gallons (MG). Additionally, the City has six (6) pump booster stations and 17 groundwater wells, with a total production capacity of approximately 56 million gallons per day (MGD). The City provides an average supply of 33.14 MGD of water to its service area. See Figure 5 for a map of the existing water system within the City. Table 7 summarizes the water infrastructure per Growth Area.

Table 7 Existing Water System within Growth Areas

Focus Area	Pressure Zone (Potable/Recycled)	Primary Water Facilities
West Holt Corridor	1212/1299	4" - 14" City water lines
Historic Downtown & Civic Center	1212/1299	4" – 16" City water lines City Well #45 8" City recycled water line
East Holt Corridor	1212/1299	4" - 12" City water lines City Well #40 8"-12" City recycled water lines
Ontario Airport Metro Center	1212/1299 & 1158	4" - 36" City water lines 36" IEUA recycled water line 6"-12" City recycled water lines City Wells #24, 25, 29, 37-39, 47
Ontario Ranch Great Park Corridor	925/930	Limited Existing City Infrastructure 30" IEUA recycled water line

The City receives its water from three sources: groundwater sources; imported water from the Water Facilities Authority (WFA), Chino Basin Desalter Authority (CDA), and the San Antonio Water Company (SAWCo); and recycled water from IEUA. Of these sources, the majority of the water supply comes from groundwater (~50% of total supply) and imported state water (~30% of supply). Groundwater supplies are from the Chino Groundwater Basin, which is adjudicated and managed by the Chino Basin Watermaster. The City maintains base water rights to 8,470 AFY and receives additional annual water rights from reallocations of unused agricultural water rights and credit for stormwater recharge and recycled water use. The City

has 3,461 AF in storage pursuant to Overlying Non-Agricultural rights. The City has expanded its production of groundwater (96,554 AF total storage pursuant to Appropriative rights capacity), which allows it to rely less on imported water supplies.

The remaining 20% of water supplies for the City come from recycled water. Recycled water is received from IEUA's water recycling plants and is then distributed through the City's purple pipe system to 343 meters for non-agricultural landscaping use and 20 meters for agricultural use. IEUA recycled water delivery lines exist within the northeastern, southwestern, and western portions of the City. There are 22 connected distribution points for IEUA water to the City's purple pipe system of which half are within the 1158 Pressure Zone.

City of Ontario 2020 Urban Water Management Plan

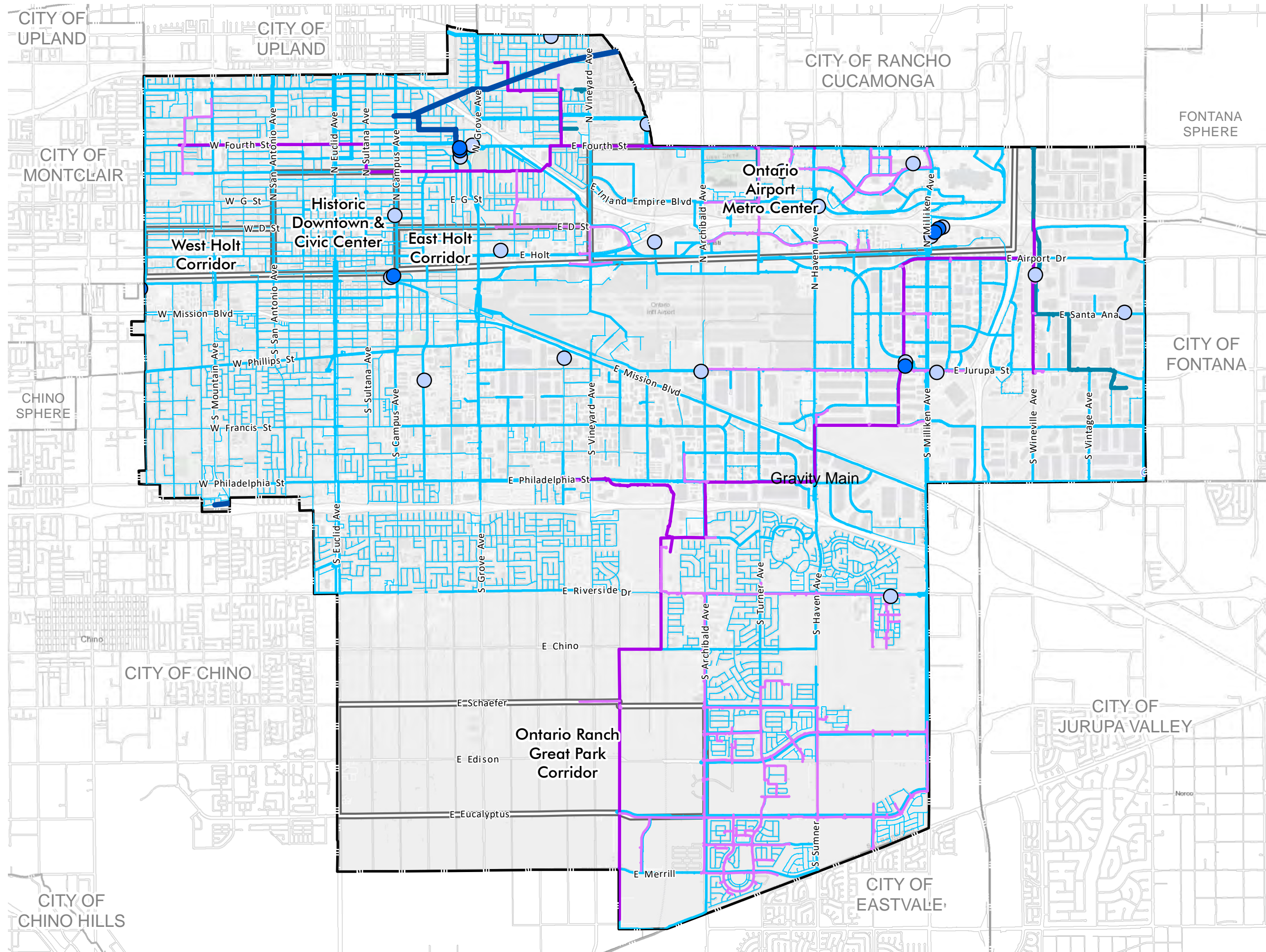
The 2020 City of Ontario Urban Water Management Plan (UWMP) was created to identify and plan for water customers and demands within the City. The 2020 UWMP requires analyses of management tools and options to maximize local resources and to minimize the need to import water from other regions. An analysis of total projected water use compared to water supply sources over the next 25 years in five-year increments was conducted. Water quality was also considered in the 2020 UWMP. Water demand and supply information was compared for normal single dry year and multiple dry year scenarios. The 2020 UWMP was developed in part with information from City's 2020 WMP, the City's 2018 Hazard Mitigation Plan, and San Bernardino County's 2017 San Bernardino County Multi-Jurisdictional Hazard Mitigation Plan. Additionally, as part of the 2020 UWMP, the City has included a 2020 Water Shortage Contingency Plan (2020 WSCP) and augmented the dry-year water reliability assessment. The 2020 WSCP serves as the operating manual to prevent catastrophic service disruptions through proactive, rather than reactive, management. The 2020 WSCP allows real-time water supply availability assessment and structured steps designed to respond to actual conditions, to allow for efficient management of any shortage with predictability and accountability.

The 2020 UWMP reported the City's daily per capita water demand as 161 gallons per capita per day (GPCD) in 2020. This water demand is well below the minimum water use reduction target of 196 GPCD as required by the Water Conservation Bill of 2009 (SBx 7-7)⁶. Therefore, the City's plan to maintain the current level per capita water use is in compliance with SBx 7-7.

According to the 2020 UWMP, the City will be increasing local groundwater production, Chino Basin Desalter and imported surface water purchases, and use of recycled water from Inland Empire Utilities Agency (IEUA) to meet all future water supply needs. The supply capacity from additional storage upgrades will add 2,000 – 5,000 AFY for groundwater sources. Increases in demand were calculated using best available Ontario General Plan buildout estimates at the time of plan creation. Overall, the City plans on increasing its total water supply from 39,921 AFY, in 2020 to 73,668 AFY in 2045.

⁶ Ontario Municipal Utilities Company. City of Ontario 2020 Urban Water Management Plan – Report (Updated June 2021). Retrieved August 2021.

City of Ontario Existing Water Facilities



- City Water Facilities**
- 4" - 10" Water Main
 - 12"-20" Water Main
 - 24" + Water Main
 - City of Ontario Recycled Water
 - Water Supply Reservoir
 - Active Water Supply Wells
- Other Jurisdiction Water Facilities**
- MWD Water Main
 - IEUA Recycled Water Line
 - CVWD Water Main
 - Ontario City Boundary
 - Proposed Growth Areas

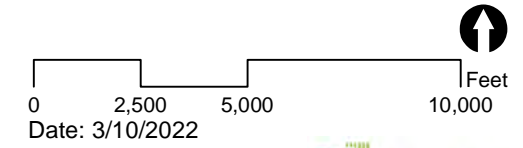


Figure 5



2.3.2 Existing Water Capacity Assessment

The City of Ontario's 2020 draft Ontario Water Master Plan (WMP) was prepared by AKM Consulting Engineers to document a multi-year capital improvement program to maintain the City's water utility infrastructure systems in sound operable condition and to meet the level of service expectations of the City over the proposed planning period from 2020 through 2035. The goal of the 2020 WMP was to describe the water distribution system in the City of Ontario, identify system deficiencies, and recommend improvements.

City Water Capacity Assessment

The capacity of the City's potable water system was assessed through an initial survey of the City's existing water supply, pumping, and storage facilities in March 2019. Subsequently, Innovyze Infowater, an ArcGIS-based computer modeling program was used to model existing infrastructure, with the exception of laterals, and lines that are private or belong to outside agencies.

Assessment Parameters and Buildout Assumptions

Existing flows were modeled using diameter, length, roughness factor, year of installation, pressure zone, and pipe material information for pipelines. Modeling information for junctions included ground elevation, water demand, and diurnal pattern of demand. The system model was then calibrated using available SCADA information and temporary pressure measuring equipment. Additionally, a mass balance analysis was performed for each hydraulic zone.

As described in Table 4-2 in the 2020 WMP, the average day demand is based on the City's average daily production and purchase data between September 2018 and August 2019. As shown in Table 4-5 of the 2020 WMP, the average day demand is 31,153 AFY (19,280 gpm).

Proposed flows were modeled based on a combination of land use information, including the existing 2010 General Plan, specific plans, previous water studies and plans, and a City buildout table completed in 2015. Ultimate buildout conditions modeled include a total of 101,181 DUs and corresponding population of 350,025 and citywide non-residential square footage of 246,573,632. Modeled flows increased from 27.76 MGD under existing conditions to 51.43 MGD under proposed conditions.

As described in the 2020 WMP, the total average day demand and the total water maximum day demand for the future system were estimated to be 57,610 AFY (35,716 gpm) and 88,357 AFY (54,778 gpm), respectively. The process of determining the future system demands for the areas that are going to be developed or redeveloped and distributing the demands in the hydraulic model. The existing demands remained the same unless an area was going to be redeveloped. In summary, the following steps were used to estimate the future demands:

1. Existing meter data was used for existing uses.
2. Used Water Demand Factors included in Table 4-7 in the 2020 WMP to estimate demand for the vacant and future densification areas. In areas of redevelopment the existing demands were updated with the estimated flows for the future development.
3. A "City Buildout Table" approved in April 2015 (in Appendix 4-1 of the 2020 WMP) provided the population and job estimates for all future mixed-use areas as defined by the 2010 General Plan. The unit flow factors provided in Table 4-7 in the 2020 WMP

were used to estimate the total average day water demand for mixed use areas. Any existing water demands were deducted from the total future average water demand estimate. If the existing demands were greater than the calculated future demands, the existing water demand was maintained in the hydraulic model. The difference was then applied to the hydraulic model in the specific mixed-use area.

4. In the OMC, future average water demands were calculated for currently vacant parcels, assuming that they will be developed in the future per the land use designated in the 2010 General Plan. The parcel acreage and the water demand factors provided in Table 4-7 of the 2020 WMP were utilized to estimate the total water demand.
5. All available specific plans and other more current planning information were utilized for OR. The specific plan areas are shown on Figure 4-6 in the 2020 WMP. The City compiled the information and provided table specifying the proposed land uses (Appendix 4-1 of the 2020 WMP). The detailed land use information and the water demand factors provided in Table 4-7 in the 2020 WMP were utilized for calculating the future water demands. Demands were applied to the nearest model junction. If less than 50 percent of a specific plan area was constructed at the time of this study, all existing water demand was removed and replaced with the projected future water demand. If a specific plan area was mostly constructed, the difference in existing and future water demand was added to the model in that particular area.
6. On the west side of OR, where no specific plans yet exist, the future water demands were calculated utilizing the 2010 General Plan land uses, parcel acreages, and the water demand factors provided in Table 4-7 in the 2020 WMP. Demands were applied to the nearest model junction.

Deficiency Criteria and CIP

Using a hydraulic model analysis combined with useful life evaluation, minimum pipe sizing, and other capacity evaluations, a series of deficient water segments were identified throughout the City’s service area. Non-fire flow pipelines with a diameter of less than 8”, fire flow pipelines with a diameter of less than 6”, and any pipelines constructed before the year 1970 were labeled as deficient for the purpose of analysis.

A total length of 1,083,284 feet of deficient pipeline was identified, ranging in diameter from 2” to 42”. The WMP noted that the primary causes of deficiency were either undersized pipelines, or aging, rough pipelines. Table 8 below provides a summary of deficient pipeline lengths identified by analysis in the WMP.

Table 8 City of Ontario Deficient Pipeline Summary

Pipeline Diameter (in)	Length (ft)
4 and less and exceeding useful life	105,077
4 and less diameter deficiency	23,736
6 and exceeding useful life	340,904
6 diameter deficiency	375,483
8 exceeding useful life	65,855
10 exceeding useful life	38,295

Pipeline Diameter (in)	Length (ft)
12 exceeding useful life	50,985
14 exceeding useful life	5,472
16 exceeding useful life	14,460
16.5 exceeding useful life	52
18 exceeding useful life	50,159
19 exceeding useful life	2,073
20 exceeding useful life	2,170
24 exceeding useful life	8,275
42 exceeding useful life	289
Total	1,083,284

The 2020 WMP recommended implementing a replacement/rehabilitation program for deficient line segments. Capital Improvement Program project categories included Existing System Improvement Projects, Annual Improvement Projects, Condition Projects – Mainline Replacement Program, Condition Projects – Facility Improvement Program, or Future System Development Projects. Additionally, the 2020 WMP identified a series of projects to be included across the City’s service area and recommended that 9 new groundwater wells, 2 renovated groundwater wells, 5 new reservoirs, 1 new booster pump station, and 3 new pressure reducing station be incorporated into the District’s future water supply planning efforts.

Existing System Improvement Projects have been allocated the largest CIP budget through 2040. Mainline Replacement Program projects are the second largest CIP budget allocation. The remaining budget is for Facility Improvements Program projects and Future System Development projects. Additional detail on these projects and the locations can be found in Section 4.4.

City of Ontario Capital Improvement Program Process

The City’s Water Master Plan (WMP) identifies the new infrastructure projects required to support the water use demands for the growth of the City as well as recommends replacement, upsizing, and rehabilitation of existing infrastructure required for service reliability to existing and new water use demands. Select projects to be implemented by the City are included in the Capital Improvement Program (CIP). The City regularly updates its (CIP) project list to prepare for upcoming infrastructure improvements across a 5-year planning horizon. Projects from the WMP are prioritized throughout CIP periods and are selected on an annual basis during Citywide budget planning. The projects selected each year to be added to the budget are driven by the economy and progress of new developments as well as routine maintenance and rehabilitation needed throughout the water system. Once a project is added to the budget list for the City, it is typically implemented within 2-5 years. Projects directly required for new developments are also constructed by developers separate from the City’s CIP program. The water infrastructure projects below are currently listed within the City’s infrastructure budget and should be constructed in the near future:

New infrastructure projects planned and underway for Ontario Ranch include:

- 24" to 42" Potable Water Transmission Main for the 925' Pressure Zone
- 9 Million Gallon Potable Water Reservoir for the 925' Pressure Zone
- Two New Groundwater Wells Nos. 43 and 53
- Wellhead Treatment Facility for Well No. 50

Replacement infrastructure projects planned and underway for the Old Model Colony developments include:

- **Airport Drive 16" Water Main** (Developer-constructed) – Improvement located within the Ontario Airport Metro Corridor Growth Area
- **G Street 8" Recycled Water and 18" Potable Water Mains** (Developer constructed) – Improvement located within the Ontario Airport Metro Corridor Growth Area
- **Palmetto Avenue 12" Water Main** (Developer constructed) – Improvement located along Palmetto Avenue (not with Growth Area)

Additional water projects including expansion, replacement, and update projects include:

- Ongoing 8" and 12" Potable Water Distribution Main Replacements
- 1348' Zone Reservoir Structural Retrofit
- Emergency Water Interconnections with adjacent water systems
- 30" Potable Water Transmission Main for 1212' Pressure Zone in San Antonio Ave
- Euclid Ave Recycled Water System
- Automated Metering Infrastructure (AMI) Antenna Towers
- Well House Roof Replacements
- Rehabilitate 5 Pressure Reducing Stations
- Haven Recycled Water & Pressure Reducing Station
- Onsite Chlorine Generator Replacements
- Groundwater Well Nos 37 and 39 Wellhead Treatment Facility

City of Ontario Recycled Water Master Plan

The draft 2020 City of Ontario Recycled Water Master Plan update (RWMP) was created to identify and plan for future recycled water customers and demands. The 2020 RWMP includes an assessment of existing demands, and future demands for both Near-Term and Future buildout horizons. In conjunction with each demand scenario, a hydraulic model analysis was conducted for 24-hour maximum day demands.

No deficiencies were identified in the model under existing conditions. Near-Term and Future Analysis returned recommendations for incorporation of additional pressure reducing valves and an additional pump station, in addition to 9.84 miles and 52.19 miles of proposed pipeline for each respective scenario⁷. Assuming incorporation of recommended projects, no design criteria deficiencies were modeled for Near-Term and Future phases. Recommended projects and distribution lines were incorporated into a recycled water CIP.

⁷ Recycled Water Master Plan. City of Ontario Municipal Water Utilities Company. Draft June 2020. Sections and 10.1 and 10.2.

The majority of the recommended improvements are within or adjacent to the Ontario Ranch area and the associated Ontario Ranch Great Park Corridor. However, a number of CIP projects are listed in additional growth areas. It is not anticipated that recycled water conveyance infrastructure will be a constraining factor on growth.

Table 9 2020 RWMP CIP Projects

Growth Area	RWMP CIP Project
West Holt Corridor	No projects
Historic Downtown & Civic Center	FUT-276
East Holt Corridor	No projects
Ontario Airport Metro Center	NT-124, FUT-257, FUT-258
Ontario Ranch Great Park Corridor	New Infrastructure Throughout
<i>NT – Near Term Project FUT- Future Project</i>	

2.4 WATER QUALITY

2.4.1 Existing Regulations

See primary water quality regulations summarized below that apply to the City and associated new development and redevelopment associated with this general plan update.

Basin Plan for the Santa Ana Region

The State Water Resources Control Board (SWRCB), through its nine Regional Water Quality Control Boards (RWQCBs), developed Regional Water Quality Control Plans (or Basin Plans) that designate beneficial uses and water quality objectives for California’s surface waters and groundwater basins, as mandated by both the CWA and the state’s Porter-Cologne Water Quality Control Act. Water quality standards are thus established in these Basin Plans and provide the foundation for the regulatory programs implemented by the state. The Santa Ana RWQCB’s Basin Plan, which covers the City, specifically (i) designates beneficial uses for surface waters and ground waters, (ii) sets narrative and numerical objectives that must be met in order to protect the beneficial uses and conform to the state’s antidegradation policy, and (iii) describes implementation programs to protect all waters in the Region. In other words, the Santa Ana RWQCB Basin Plan provides all relevant information necessary to carry out federal mandates for the antidegradation policy, 303(d) listing of impaired waters, and related Total Maximum Daily Loads (TMDLs), and provides information relative to National Pollutant Discharge Elimination System (NPDES) and Waste Discharge Requirement (WDR) permit limits.

Total Maximum Daily Loads (TMDLs)

Once a water body has been listed as impaired on the 303(d) list, a TMDL for the constituent of concern (pollutant) must be developed for that water body. A TMDL is an estimate of the daily load of pollutants that a water body may receive from point sources, non-point sources, and natural background conditions (including an appropriate margin of safety), without exceeding its water quality standard. Those facilities and activities that are discharging into the water body, collectively, must not exceed the TMDL. In general terms, Municipal Separate Storm Sewer System (MS4) and other dischargers within each watershed are collectively responsible for meeting the required reductions and other TMDL requirements by the assigned deadline.

TMDLs have been established for pathogens for the Santa Ana River, Reach 3; Chino Creek, Reach 2, and Chino Creek, Reach 1B; Mill Creek (Prado Area); and the Prado Basin Management Zone. The remaining 303(d) listed impairments shown in Table 10 have not yet been established and are pending approval for TMDL establishments for 2019 to 2021.

Table 10 List of 303(d) Impairments and TMDLs

Water Body/Channel	List of 303(d) Impairments ¹	TMDL
San Antonio Creek	pH	Pending 2021 TMDL Approval for pH
Chino Creek Reach 2	Indicator Bacteria, pH	Approved TMDL for Indicator Bacteria Pending 2021 TMDL Approval for pH

Chino Creek Reach 1B	COD, Indicator Bacteria, Nutrients	Approved TMDL for Indicator Bacteria Pending 2021 TMDL Approval for COD Pending 2019 TMDL Approval for Nutrients
Chino Creek Reach 1A	Indicator Bacteria, Nutrients,	Approved TMDL for Indicator Bacteria Pending 2019 TMDL Approval for Nutrients
Cucamonga Creek Reach 1	Cadmium, Copper, Lead, Zinc	Pending 2021 TMDL Approval for Cadmium, Copper, and Lead Pending 2019 TMDL Approval for Zinc
Mill Creek (Prado Area)	Indicator Bacteria, Nutrients, Total Suspended Solids (TSS)	Approved TMDL for Indicator Bacteria Pending 2019 TMDL Approval for Nutrients and TSS
Santa Ana River, Reach 3	Copper, Lead, Indicator Bacteria	Approved TMDL for Indicator Bacteria. Pending 2021 TMDL Approval for Copper and Lead.
Prado Basin Management Zone	pH	Approved TMDL for pH

Notes:

Source:

2014-2016 California 303(d) List of Water Quality Limited Segments. Retrieved October 2020:
http://www.waterboards.ca.gov/water_issues/programs/tmdl/integrated2014_2016.shtml

In addition, the California State Water Resources Control Board (State Board) has adopted the statewide Trash Provisions that requires implementation of Best Management Practices (BMPs) that mitigate or abate trash within Priority Land Use Areas (PLUs). PLUs are defined as, "high density residential, industrial, commercial, mixed urban, and public transportation stations." The purpose of the Trash Provisions is to establish a statewide water quality objective that ensures the quality of surface waters that enter storm drains and eventually lead out to major water ways are free of trash. The City is currently undergoing the process to comply with these new Trash Provisions.

County of San Bernardino MS4 Permit, Drainage Area Management Plan (DAMP) & Local Implementation Plans (LIP)

In January 2010, the Santa Ana RWQCB re-issued the San Bernardino County MS4 Storm Water Permit as WDR Order R8-2010-0036 (NPDES Permit No. CAS618036) to the County of San Bernardino, the incorporated cities of San Bernardino County, and the San Bernardino County Flood Control District within the Santa Ana Region. Pursuant to the 2010 MS4 Permit, the co-permittees were required to update and implement a Drainage Area Management Plan

(DAMP) for its jurisdiction, as well as Local Implementation Plans (LIPs), which describe the Co-permittees’ urban runoff management programs for their local jurisdictions.

Under the City’s LIP, land development policies pertaining to hydromodification and low impact development (LID) are regulated for new developments and significant redevelopment projects. The use of LID Best Management Practices (BMPs) in project planning and design is to preserve a site’s predevelopment hydrology by minimizing the loss of natural hydrologic processes such as infiltration, evapotranspiration, and runoff detention. These land development requirements are detailed in the San Bernardino County Technical Guidance Document (TGD), effective September 2013, which cities have incorporated into their discretionary approval processes for new development and redevelopment projects. Within the City’s built out system, all runoff ultimately discharges into water storage areas that are used as control/release points. Projects are required to comply with the LID requirements in accordance with the LID hierarchy.

The LID hierarchy requires new developments and re-developments to implement BMPs under the LID hierarchy as described in the TGD. The LID hierarchy requires new projects to first infiltrate, then harvest and reuse, then biofilter stormwater runoff from their project site. In the City of Ontario, infiltration will likely be incorporated for new projects throughout the City as it is comprised of mostly Type A and B soils which typically have high infiltration rates. Groundwater levels throughout the City are below 100 feet below ground surface which is also beneficial for infiltration BMP implementation. In areas where infiltration is determined to be infeasible, either through infiltration testing or groundwater concerns, harvest and reuse BMPs may prove feasible for projects that incorporate ample landscaping and/or have high indoor toilet flushing demands (i.e. hotels). For areas that cannot infiltrate or utilize harvest and reuse systems, projects will be able to biofilter stormwater through biofiltration BMPs such as vegetated swales and bioretention basins.

2.4.2 Existing Surface Water Conditions

According to the Santa Ana River Basin Plan (Basin Plan), the channels with existing beneficial uses that serve the City include San Antonio Creek and Chino Creek Reaches 1A, 1B and 2, Cucamonga Creek Reach 1, Day Creek, and Santa Ana River Reach 3.

Table 11 List of Receiving Waters and Beneficial Uses

Upper Santa Ana River Basin – San Antonio Creek	
MUN – Municipal and Domestic Supply	WILD – Wildlife Habitat
AGR – Agricultural Supply	PROC – Industrial Process Supply
GWR – Groundwater Recharge	IND – Industrial Service Supply
REC 1 – Water Contact Recreation	POW – Hydropower Generation
REC 2 – Non-Contact Water Recreation	RARE – Rare, Threatened, or Endangered Species
COLD – Cold Freshwater Habitat	
Upper Santa Ana River Basin – Chino Creek Reach 2	
REC 1 – Water Contact Recreation	WILD – Wildlife Habitat
REC 2 – Non-Contact Water Recreation	RARE – Rare, Threatened, or Endangered Species
	WARM – Warm Freshwater Habitat

Upper Santa Ana River Basin – Chino Creek Reach 1B

REC 1 – Water Contact Recreation	WARM – Warm Freshwater Habitat
REC 2 – Non-Contact Water Recreation	WILD – Wildlife Habitat

Upper Santa Ana River Basin – Chino Creek Reach 1A

REC 1 – Water Contact Recreation	WARM – Warm Freshwater Habitat
REC 2 – Non-Contact Water Recreation	WILD – Wildlife Habitat

Upper Santa Ana River Basin – Cucamonga Creek Reach 1

GWR – Groundwater Recharge	WARM – Warm Freshwater Habitat
REC 2 – Non-Contact Water Recreation	LWRM – Limited Warm Freshwater Habitat

Upper Santa Ana River Basin – Mill Creek

REC 1 – Water Contact Recreation	WARM – Warm Freshwater Habitat
REC 2 – Non-Contact Water Recreation	WILD – Wildlife Habitat
	RARE – Rare, Threatened, or Endangered Species

Upper Santa Ana River Basin – Day Creek

MUN – Municipal and Domestic Supply	REC 2 – Non-Contact Water Recreation
GWR – Groundwater Recharge	COLD – Cold Freshwater Habitat
REC 1 – Water Contact Recreation	WILD – Wildlife Habitat
	PROC – Industrial Process Supply

Upper Santa Ana River Basin – Santa Ana River Reach 3

AGR – Agricultural Supply	WARM – Warm Freshwater Habitat
GWR – Groundwater Recharge	WILD – Wildlife Habitat
REC 1 – Water Contact Recreation	RARE – Rare, Threatened, or Endangered Species
REC 2 – Non-Contact Water Recreation	SPWN – Spawning, Reproduction and Development

Notes:

Sources:

-California Regional Water Quality Control Board, Santa Ana Region. 1995 Water Quality Control Plan for the Santa Ana River Basin (Updated 2016). Retrieved October 2020 from https://www.waterboards.ca.gov/santaana/water_issues/programs/basin_plan/docs/2016/Chapter_3_Feb_2016.pdf

General water quality objectives have been prescribed in the Basin Plan for all surface waters within the Santa Ana River Region. In order to maintain the beneficial uses listed in the previous section, inland surface waters must achieve these water quality objectives. Numeric objectives have been established by the Basin Plan for the following surface streams within the City of Ontario, for San Antonio Creek and Day Creek. These water quality objectives are based on the groundwater management zones that exist across the Upper Santa Ana River Subwatershed. See Section 2.4.3 for more details.

In addition to specific numeric water quality objectives, narrative objectives for all surface waters in the Upper Santa Ana River Basin also apply to all surface waters within the City. Narrative objectives have been established for the following constituents⁸:

Inland Surface Waters

- Algae
- Ammonia, un-ionized
- Boron
- Chemical Oxygen Demand (COD)
- Chloride
- Chlorine, residual
- Color
- Dissolved Solids, total
- Filtrable Residue, total
- Floatables
- Fluoride
- Hardness (as CaCO₃)
- Inorganic Nitrogen, total
- Metals
- Methylene Blue-Activated Substances (MBAS)
- Nitrate
- Nitrogen, total inorganic
- Oil and Grease
- Oxygen, dissolved
- Oxygen, dissolved
- Pathogen Indicator Bacteria
- pH
- Radioactivity
- Sodium
- Sulfate
- Sulfides
- Surfactants (surface-active agents)
- Taste and Odor
- Temperature
- Total Dissolved Solids
- Total Filtrable Residue
- Total Inorganic Nitrogen
- Toxic Substances
- Turbidity

2.4.3 Existing Groundwater Conditions

Regional Groundwater Conditions

The City lies within the Chino Groundwater Basin (“Chino Basin” or “Basin”). The Chino Basin serves as the primary water source for the City as well as numerous other water suppliers and individual water users. The Chino Basin extends 220 square miles across Los Angeles, San Bernardino, and Riverside counties. The basin contains an estimated 5 million acre-feet of groundwater and has a storage capacity of approximately 1 million acre-feet. The principal surface water body in the Chino Basin is the Santa Ana River, which flows include snowmelt, discharges from recycled water facilities, groundwater, and urban runoff. Tributaries include the San Antonio Creek, Day Creek, and Cucamonga Creek.

The Chino Basin, although considered a single groundwater basin, is divided into five distinct areas, termed “antidegradation” Management Zones (MZs). “Antidegradation” MZ designation is based upon similar hydrologic conditions. The Chino Basin is also divided into three sub-basins based on the Optimum Basin Management Program. These sub-basins, Chino North, East, and South, are considered “maximum benefit” management zones. “Maximum benefit” management zones feature less stringent objectives for Total Dissolved Solids and nitrate and enable the reuse and recharge of recycled water throughout the basin. These “maximum benefit” sub-basins and associated water quality objectives and management apply unless the Regional Board determines that lowering of water quality is not of maximum benefit to the people of the state. In this case, “antidegradation” MZ designation takes priority, as well as their more stringent water quality objectives and use designations.

⁸ California Regional Water Quality Control Board, Santa Ana Region. 1995 Water Quality Control Plan for the Santa Ana River Basin (Updated 2016). Retrieved October 2020, from http://www.swrcb.ca.gov/santaana/water_issues/programs/basin_plan/index.shtml

1978 Chino Basin Judgement

Pursuant to the terms of the 1978 California Superior Court ruling on *Chino Basin Municipal Water District v. City of Chino, et. al*, the Chino Basin Watermaster (Watermaster) was formed and a 140,000 acre-feet per year (AFY) safe yield and annual production rights for the Chino Basin were created.

The 1978 Chino Basin Judgement (Judgement) created three groundwater pool committees:

- The Overlying Agricultural Pool, including non-producing water districts, non-industrial or commercial water producers, and the State of California.
- The Overlying Non-Agricultural Pool, including commercial and industrial water producers
- The Appropriative Pool, including cities, water districts, and other public and private utilities and water suppliers.

Representatives from each pool serve as an advisory committee to the Chino Basin Watermaster Board, which in turn serves as an arm of the Superior Court in managing the Chino Basin. The Judgement also created a mechanism for unproduced water rights from the Agricultural Pool to be transferred to the Appropriative pool as land is developed and the Basin area transitions from agricultural to urban land uses.

The Judgement has been amended in 2000 and 2007 through agreements that preserve and enhance basin yield and water quality and improve the mechanism for transferring unproduced groundwater rights. A 2015 Safe Yield Reset Agreement reduced safe yield from 140,000 AFY to 135,000 AFY and reallocated the water rights of the basin. In 2020, the Safe Yield was recalculated to 131,000 AFY through June 30, 2030.

Local Groundwater Conditions

The City is located in the Chino North “maximum benefit” MZ under the less stringent requirements implemented by the RWQCB. If the RWQCB determines that the lowering of water quality is no longer of maximum benefit, the City is located in the Chino 1 “antidegradation” MZ.

As noted in Section 2.1.1, the City has six basins used for detention and groundwater recharge within its jurisdiction. These basins range in capacity from 200 to 2000 acre-feet and are fed either via gates in the Cucamonga and Day Creeks or passive overflow from adjacent basins. These basins are designed to replenish Chino North, Chino 1, Chino 2, and Chino 3.

Chino Basin Watermaster 2020 State of the Basin Report

As part of the reporting process, West Yost prepared a *2020 State of the Basin Report* (SOTBR) for Chino Basin Watermaster. The SOTBR addressed trends in groundwater supply and demand across the basin from 2000 to 2020 and assessed the existing conditions of the Basin.

The SOTBR noted that groundwater levels increased by approximately 10 feet in the western portion of the City and decreased by approximately 10 to 30 feet in the eastern portion of the City from 2000 to 2020. These changes in groundwater levels are a result of effective basin

management and changes in groundwater basin flows over time⁹. The SOTBR made note that a number of trends indicated improved groundwater management and more secure supplies into the future, including groundwater levels, groundwater recharge quantity and sources, and increased use of recycled water and alternative water sources throughout the Basin.

Concentrations of total dissolved solids, nitrate, perchlorate, chromium, arsenic and TCE from 2015 to 2020 monitoring events remained within acceptable ranges for most of the City, and concentrations were often significantly smaller than other basin MZs. However, the southern portion of the City (primarily the Ontario Ranch area) saw concentrations of total dissolved solids, nitrate, and 1,2,3-TCP that exceeded acceptable monitoring level thresholds. Total chromium, hexavalent chromium and PCE levels also exceeded acceptable monitoring level thresholds in the western and northern portions of the City. TCE had exceedances in four regions of the City. Additionally, there are five VOC plumes that fall within the City: General Electric Flatiron, Alger Manufacturing Inc., General Electric Test Cell Plume, Milliken Landfill, and South Archibald. See Attachment C for a map of these plumes.

Sustainable Groundwater Management Act

The California Sustainable Groundwater Management Act (“SGMA”), a three-bill package signed into law in 2014, creates a framework for the management of groundwater sources throughout the state. Under SGMA, local agencies form Groundwater Sustainability Agencies (“GSAs”) and create Groundwater Sustainability Plans. Timelines and requirements are based upon basin priority. As Chino Basin is an adjudicated groundwater basin and presided over by the Chino Basin Watermaster, traditional SGMA planning and the creation of a Groundwater Sustainability Plan are not required¹⁰. However, the Chino Basin Watermaster is required to annually submit the following¹¹:

- Groundwater elevation data
- Groundwater extraction data for the previous year
- Surface water supply used for or available for groundwater recharge
- Total water use
- Change in groundwater storage

Beneficial Uses

The Basin Plan identifies the Chino Basin groundwater management zone as having four beneficial uses as shown below¹² as outlined in the Water Quality Control Plan for the Santa Ana River Basin:

- MUN – Municipal and Domestic Supply;

⁹ Chino Basin Watermaster. 2021. *2020 State of the Basin Report*. Prepared by West Yost. Retrieved here: http://www.cbwm.org/docs/engdocs/State_of_the_Basin_Reports/SOB%202020/2020%20State%20of%20the%20Basin%20Report.pdf

¹⁰ California Department of Water Resources. *Adjudicated Areas*. Retrieved November 2018 from <https://water.ca.gov/Programs/Groundwater-Management/SGMA-Groundwater-Management/Adjudicated-Areas>

¹¹ California Water Code Section 10720.8

¹² California Regional Water Quality Control Board, Santa Ana Region. 1995 Water Quality Control Plan for the Santa Ana River Basin (Updated 2016). Retrieved October 2020, from http://www.swrcb.ca.gov/santaana/water_issues/programs/basin_plan/index.shtml

- AGR – Agricultural Supply;
- IND – Industrial Service Supply; and
- PROC – Industrial Process Supply.

Water Quality Objectives

Specific water quality numeric objectives have been established for the San Bernardino County groundwater management zones that include the City. In the Chino Basin, four separate management zone designations can apply to the City, each with their own water quality objectives. As noted above, the Chino North “maximum benefit” MZ water quality objectives apply. However, if the RWQCB determines that the lowering of water quality is not of maximum benefit to the people of the State, the Chino 1, Chino 2, and Chino 3 “antidegradation” MZ water quality objectives would apply to the City and surrounding areas¹³.

Table 12 Groundwater Basin Water Quality Objectives

Groundwater Management Zone	Total Dissolved Solids Objective (mg/L)	Nitrate (as N) Objective (mg/L)
Chino North	420	5
Chino 1	280	5
Chino 2	250	2.9
Chino 3	260	3.5

Source:
Santa Ana RWQCB. Region 8 Basin Plan Map- Chino Area Groundwater Management Zones. Retrieved October 2020.

In addition to specific numeric water quality objectives, narrative objectives for all groundwater basins in the Upper Santa Ana River Basin also apply to the Chino Basin management zone. Narrative objectives have been established for the following constituents:

- Arsenic
- Boron
- Total Dissolved Solids
- Hardness as CaCO₃
- Oil and Grease
- Sodium
- Total Inorganic Nitrogen
- Bacteria, Coliform
- Chloride
- Total Filtrable Residue
- Metals
- pH
- Sulfate
- Toxic Substances
- Barium
- Color
- Fluoride
- Nitrate
- Radioactivity
- Taste and Odor

¹³ California Regional Water Quality Control Board, Santa Ana Region. Region 8 Basin Plan Map – Chino Area Groundwater Management Zones. Retrieved October 2020 from https://www.waterboards.ca.gov/santaana/water_issues/programs/basin_plan/docs/maps/RWQCB_BMap_CHINOareaGWMGMTZNS_Updated.pdf

3. THRESHOLDS OF SIGNIFICANCE

California Environmental Quality Act (CEQA) significance criteria are used to evaluate the degree of impact caused by a development project on environmental resources such as hydrology and water quality. According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project would impact any of the items listed below.

3.1 HYDROLOGY & WATER QUALITY THRESHOLDS (CEQA CHECKLIST SECTION X)

Would the Project:

- A. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?
- B. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin.
- C. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:
 - (i) Result in a substantial erosion or siltation on- or off-site;
 - (ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;
 - (iii) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or
 - (iv) Impede or redirect flood flows?
- D. In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?
- E. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

3.2 UTILITIES AND SERVICE SYSTEMS THRESHOLDS (CEQA CHECKLIST SECTION XIX)

Would the Project:

- A. Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?
- B. Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?
- C. Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

Should the answers to these environmental factors prove to be a potentially significant impact, mitigation measures would be required to reduce those impacts to a less-than-significant threshold.

4. ENVIRONMENTAL IMPACTS

The purpose of the proposed conditions evaluation is to determine potential infrastructure impacts associated with the Proposed TOP as compared to the Current TOP associated with drainage, sewer and water systems.

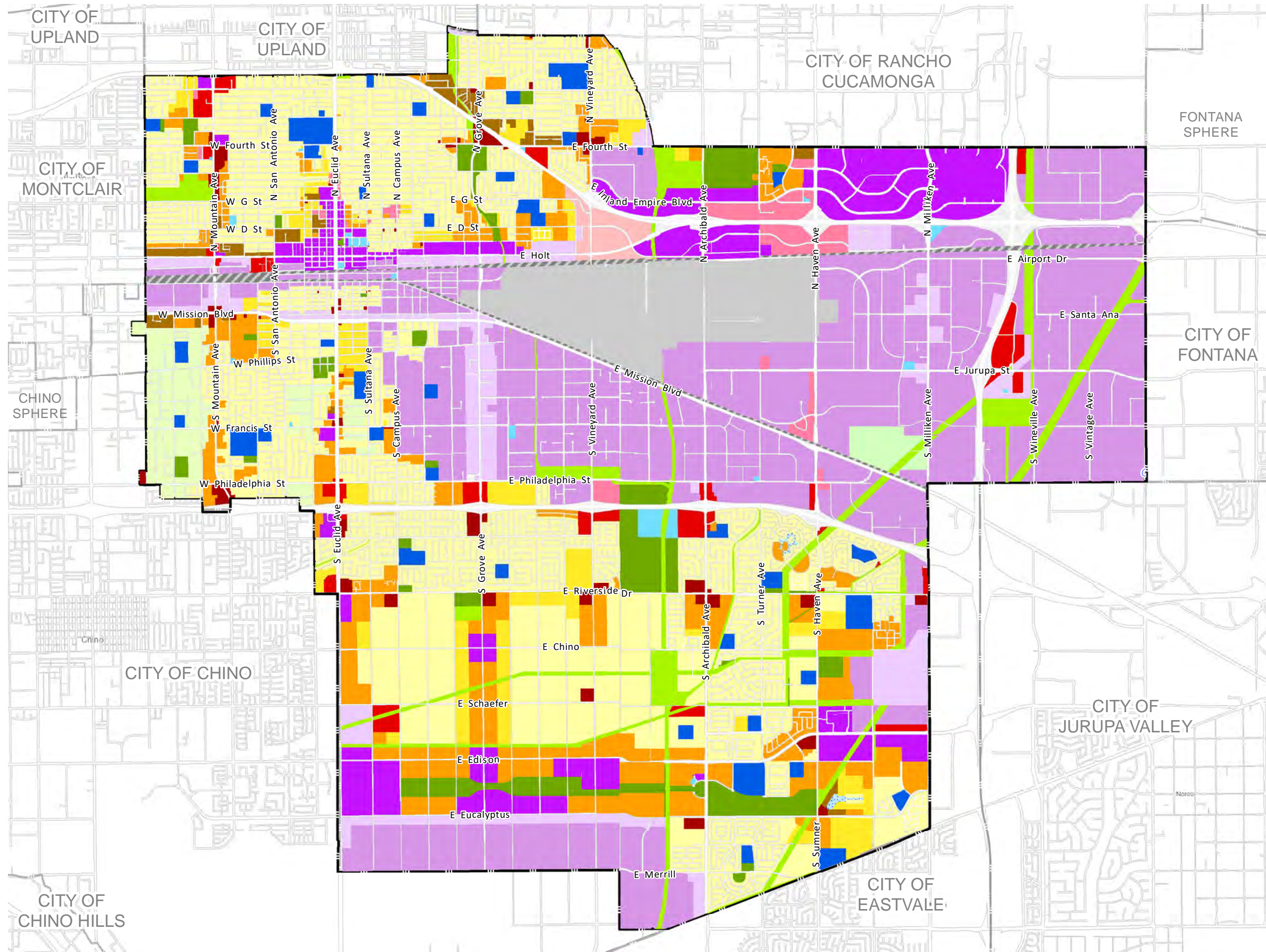
4.1 PROPOSED LAND USE CHANGES AND IMPACT ASSESSMENT APPROACH

As noted in Section 1, under the Proposed TOP, residential dwelling units will increase by 25,399 DUs and non-residential square footage will increase by approximately 1.1 million square feet (sf). See summary below for the methodology to assess the infrastructure systems between Current and Proposed TOP:

- **Water and Sewer Assessments:** Based on the land uses associated with the Proposed TOP, sewer and water flows are anticipated to change as compared to the Current TOP. The Current TOP was utilized in both the SMP and WMP infrastructure planning as well as the 2020 UWMP; therefore, the comparison of Current TOP to Proposed TOP will assist in determining any impacts to existing and proposed sewer and water infrastructure in addition to water supply.
- **Drainage Assessment:** Identification of drainage impacts from Current to Proposed TOP compares land use designations between the two plans and the impervious values associated with each land use. Where those scenarios result in an increase in impervious conditions and an associated peak flow runoff condition, impacts to the storm drain system will be evaluated.

Additional details are provided below for drainage, sewer and water and the anticipated impacts on infrastructure.

Proposed Land Use



- Residential**
 - RR Rural Residential
 - LDR Low Density Residential
 - LMDR Low Medium Density Residential
 - MDR Medium Density Residential
 - HDR High Density Residential
- Mixed-Use**
 - MU Mixed Use
- Commercial**
 - NC Neighborhood Commercial
 - GC General Commercial
 - OC Office Commercial
 - HOS Hospitality
- Employment**
 - BP Business Park
 - IND Industrial
- Other**
 - OS-NR Open Space - Non-Rec
 - OS-R Open Space - Recreation
 - OS-W Open Space - Water
 - PF Public Facility
 - PS Public School
 - ARPT Airport
 - LF Landfill
 - Rail
 - ROW Right of Way

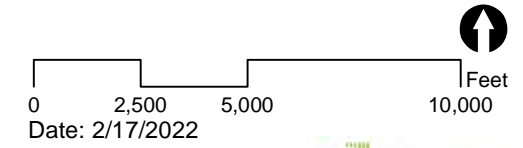


Figure 6



4.2 PROPOSED DRAINAGE CONDITION

The purpose of the proposed conditions evaluation is to identify any areas of deficient storm drain systems as well as where peak flow runoff may increase between Current and Proposed TOP.

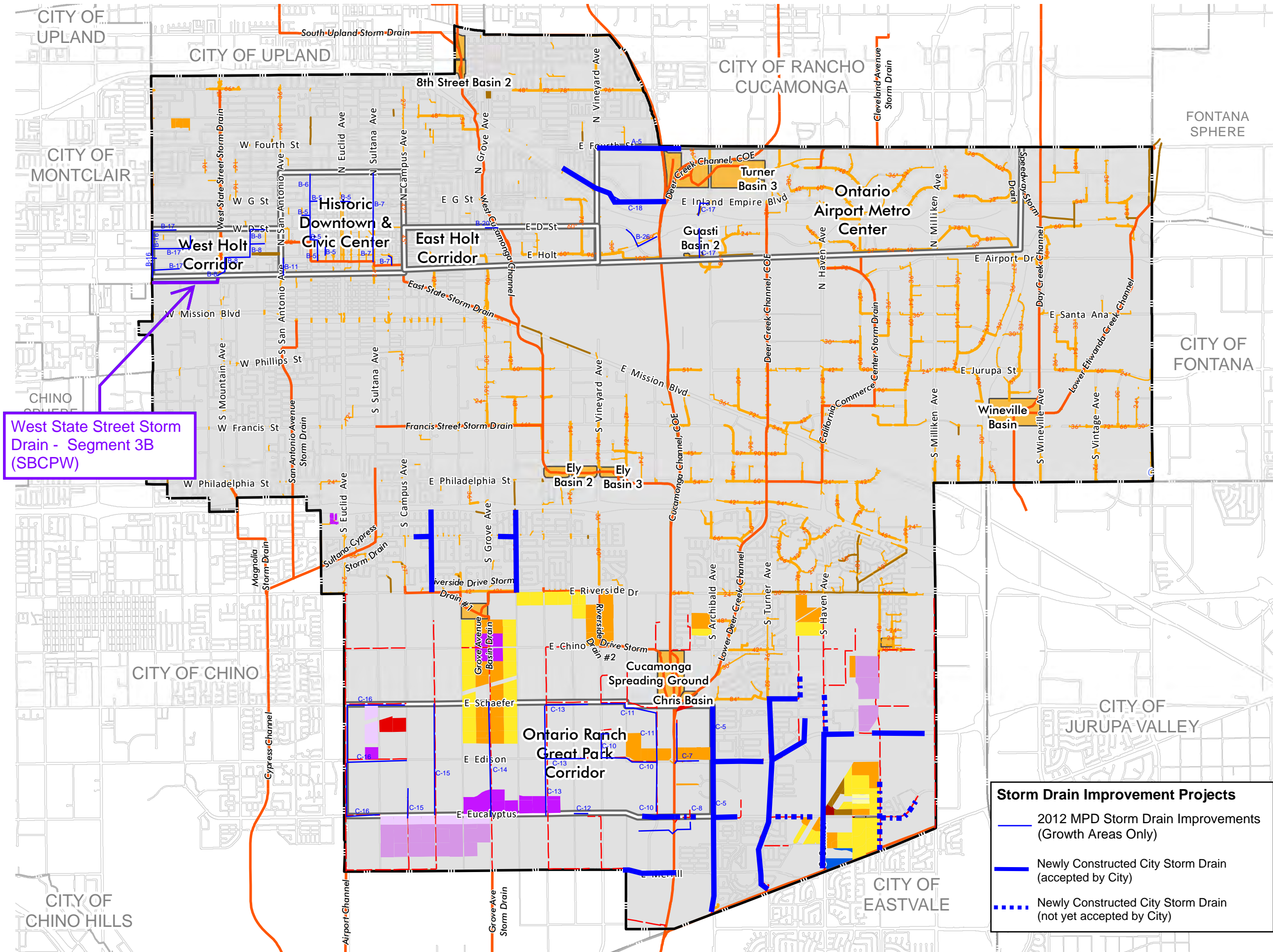
4.2.1 Proposed Hydrology Conditions

As shown by Figure 6, the land uses changes from Current to Proposed TOP may result in an increased imperviousness value for certain parcels. There are no significant changes in land use that would impact imperviousness and peak flow runoff within the northerly Growth Areas (West Holt, Historic Downtown, East Holt, and OAMC).

Most of the changes in land use that may impact peak flow runoff are primarily in the southern part of the City and within the Ontario Ranch Growth Area. However, several of the proposed storm drain lines have not yet been constructed (red-dashed line) and will be designed to convey the ultimate buildout condition. These proposed lines will convey drainage appropriately as new developments come online. For the lines that are already built, the City and County have policies in place to require detention systems to mitigate peak flows if downstream drainage facilities ever become deficient.

In addition, the majority of streams and channels that collect runoff within northerly Growth Areas are concrete lined and not susceptible to scour or erosion (Hydrologic Conditions of Concern Exempt). Therefore, drainage impacts from the Proposed TOP are not anticipated to have any negative impacts of flooding or erosion/siltation.

Proposed Condition Storm Drain System and Imperviousness Impact Areas



West State Street Storm Drain - Segment 3B (SBCPW)

Land Use Parcels Imperviousness Condition Change

- Residential**
 - LDR Low Density Residential
 - LMDR Low Medium Density Residential
 - MDR Medium Density Residential
 - HDR High Density Residential
- Mixed-Use**
 - MU Mixed Use
- Commercial**
 - NC Neighborhood Commercial
 - GC General Commercial
- Employment**
 - BP Business Park
 - IND Industrial
- Other**
 - PS Public School
 - ROW Right of Way

- City Drainage Facilities**
 - 12" - 42" Storm Drain Lines
 - 42" - 120" Storm Drain Lines
 - Detention Basins
 - Open Channel
 - Proposed Storm Drain
- Other Jurisdiction Drainage Facilities**
 - Caltrans Storm Drain Lines
 - Private Storm Drain Lines
 - SB County Storm Drain Lines
 - SB County Flood Control Channel

- Ontario City Boundary
- Proposed Growth Areas

- ### Storm Drain Improvement Projects
- 2012 MPD Storm Drain Improvements (Growth Areas Only)
 - Newly Constructed City Storm Drain (accepted by City)
 - Newly Constructed City Storm Drain (not yet accepted by City)

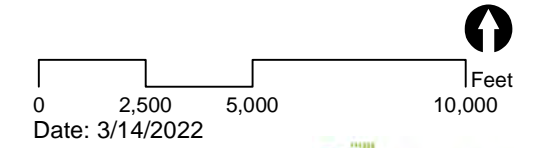


Figure 7

4.2.2 Hydrology Impacts

The following impact assessments are based on the significance criteria established in Section 3.1 for hydrology.

Impact B: *Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin.*

Impact Analysis: As noted above, the City's groundwater supplies are from the Chino Groundwater Basin, which is adjudicated and managed by the Chino Basin Watermaster. The City maintains base water rights to 16,337 AFY and receives additional annual water rights from reallocations of unused agricultural water rights and credit for stormwater recharge and recycled water use. As described in the 2020 UWMP, although the Chino Groundwater Basin is a very low-priority basin, the Chino Basin Watermaster has taken proactive actions to sustainably manage the groundwater basin. These actions will enable the City to rely on the Chino Basin as a reliable source of supply.

The Proposed TOP will not impact any groundwater recharge areas throughout the City. New development and redevelopment under the Proposed TOP may allow for increased recharge of groundwater through the implementation of infiltration BMPs associated with the MS4 permit. Therefore, no impacts to groundwater supplies, recharge or sustainable groundwater management are anticipated.

Impact C: *Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:*

- (i) Result in a substantial erosion or siltation on- or off-site;*
- (ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;*
- (iii) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or*
- (iv) Impede or redirect flood flows?*

Impact Analysis: Drainage patterns from Current TOP to Proposed TOP will largely be maintained, especially for the northerly Growth Areas. In these areas, current runoff is captured and conveyed by existing storm drain infrastructure throughout the City before discharging to County drainage channels and to the Pacific Ocean. As noted above, the City and County have policies in place to require detention systems to mitigate peak flows if downstream drainage facilities ever become deficient. In addition, the majority of streams and channels that collect runoff within northerly Growth Areas are concrete lined and not susceptible to scour or erosion (HCOC Exempt). Erosion or siltation, increased runoff rates, and undersized storm drain lines are not considered to be impacted by the Proposed TOP for the northerly Growth Areas.

The Ontario Ranch Growth Area is one portion of the City, however, that is not exempt from Hydrologic Conditions of Concern.¹⁴ For those areas that are tributary to streams that may be susceptible to scour, hydromodification requirements as part of the regional MS4 permit will ensure these impacts are minimized. In addition, the Proposed TOP modified land use from the Current TOP may increase imperviousness and peak flow runoff. However, many of the storm drain lines that have been designed, or are in design, are sized to accommodate these minor differences in imperviousness between the Current and Proposed TOP. In addition, the City has policies in place to require detention systems associated with new development and redevelopment projects to mitigate against any flooding concerns. Overall impacts to erosion and siltation, peak flow runoff and flooding, and storm drain capacity are anticipated to be less than significant.

4.3 SEWER INFRASTRUCTURE

4.3.1 Proposed Sewer Flows

As noted above, there will be an overall increase in residential DUs throughout the Growth Areas and remainder of the City. Growth Area non-residential SF will decrease while on a Citywide scale, non-residential SF will increase. This impacts sewer flows within the Growth Areas as well as the City. A breakdown of increases in sewer flows can be found in Table 13, in Attachment A and is shown in Figure 8.

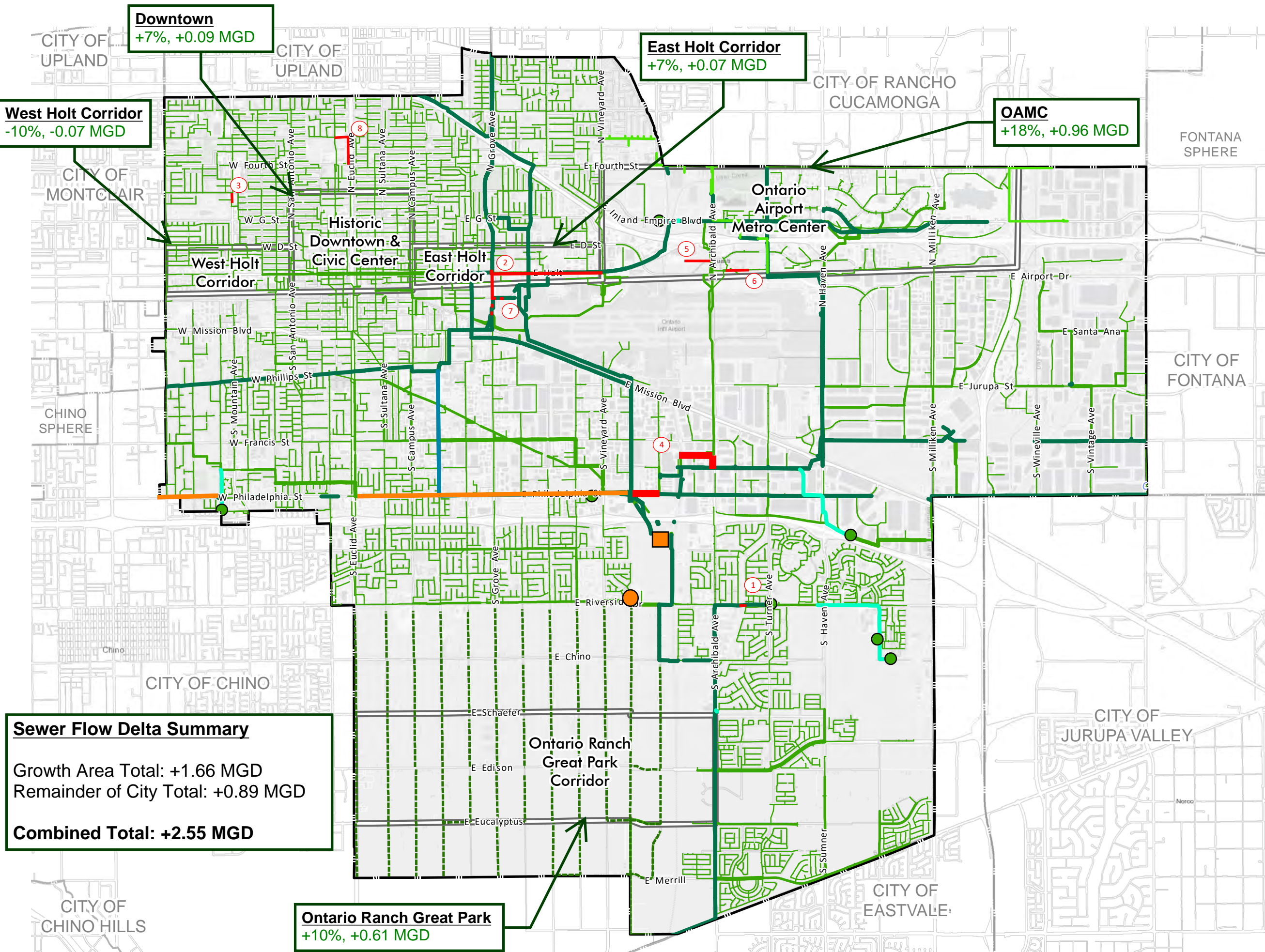
Table 13 – Proposed Sewer Flows

Growth Area	Current TOP Flows	Proposed TOP Flows	Percent Change from Current to Proposed TOP	Change in Sewer Flow (MGD)
Historic Downtown & Civic Center	0.915	1.01	+7%	+0.09
West Holt Corridor	0.521	0.451	-10%	-0.07
East Holt Corridor	0.754	0.827	+7%	+0.07
Ontario Airport Metro Center	4.50	5.46	+18%	+0.96
Ontario Ranch Great Park Corridor	4.03	4.64	+10%	+0.61
Remainder of City	23.8	24.7	+2%	+0.90
Total Growth Areas				+1.66
Total Citywide				+2.55

Full implementation of the proposed land use changes associated with the Proposed TOP has the potential to increase sewer flows by 2.55 MGD within the City overall and by 1.66 MGD throughout the Growth Areas. The Growth Areas represent approximately 65% of the proposed increases in water flows throughout the City. These flow estimates are for infrastructure planning purposes only and are considered conservative.

¹⁴ San Bernardino Stormwater Facility Mapping Tool. Found here: <http://permitrack.sbcounty.gov/WAP/>

Proposed Sewer Flows and Improvement Projects



- City Improvement Projects**
- ① 2020 City SMP Capacity Improvement Project
 - Completed 2020 SMP project
- IEUA Improvement Projects**
- IEUA 2019 SSMP Major Capital Project (Whispering Lakes Pump Station Improvements)
 - IEUA 2019 SSMP Major Capital Project (RP-1 Improvements)
 - IEUA 2019 SSMP Major Capital Project (Montclair Pipeline)
- Existing Sewer Infrastructure**
- City Sewer Facilities**
- 8" - 12" Gravity Main
 - 12" - 24" Gravity Main
 - 27" - 48" Gravity Main
 - Force Main
 - Sewer Lift Station
 - Proposed Trunk Sewer
- Other Jurisdiction Sewer Facilities**
- IEUA Force Main
 - CVWD Gravity Main
 - IEUA Gravity Main
- Ontario City Boundary
 Proposed Growth Areas

Sewer Flow Delta Summary

Growth Area Total: +1.66 MGD
 Remainder of City Total: +0.89 MGD
Combined Total: +2.55 MGD

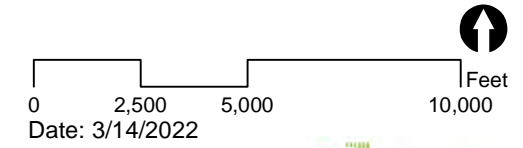


Figure 8

4.3.2 Proposed Sewer/Wastewater System

As shown above, sewer flows are anticipated to increase from the Current TOP to the Proposed TOP land use throughout the City. Figure 9 identified several sewer pipes that are in need of improvement. The largest increase in sewer flows from Current to Proposed TOP is within the OAMC area which may experience an 18% increase in wastewater flows.

There are four CIP projects planned within two of the Growth Areas. These CIP project locations and extents have changed slightly since the SMP per City planning efforts (see Figure 8).¹⁵ See below for a summary of proposed sewer improvements within Growth Areas that are experiencing an increase in sewer flows from Current to Proposed TOP.

- **East Holt** – There are two proposed CIP project in the East Holt Growth Area. Project No. 2 at the intersection of Holt Blvd and Grove Ave consists of replacing existing pipe with 12" and 15" pipe. In addition, a new 21" sewer main pipe is proposed to divert flow from Vineyard Ave.
- **OAMC** – There are two proposed CIP projects in the OAMC Growth Area. Project No. 5 is located south of the I-10 Fwy and west of Archibald Ave and proposes to upsize existing 8" pipes to 12" diameter pipes. Project No. 6 is located along Old Guasti Road between Turner Ave and Archibald Ave and proposes to upsize existing 8" pipes to 12" diameter pipes.

For the Ontario Ranch Growth Area, sewer flows are anticipated to increase 10% from Current TOP to Proposed TOP. It has been confirmed by the City that the sewer infrastructure throughout this Growth Area has been sized to accommodate sewer flows associated with the Proposed TOP. Therefore, there are no impacts from the Proposed TOP on sewer infrastructure within the Great Park Growth Area.

The City has policies in place to require improvements to sewer infrastructure as part of new development and redevelopment in addition to their CIP process. The City has the discretion to require additional sewer capacity studies associated with new and redevelopments and is currently performing site specific studies of certain areas of the sewer system. Based on the results of these studies, the City has policies to require development fees to help support infrastructure improvements required for the sewer system.

With respect to wastewater treatment, IEUA has two facilities that serve the City of Ontario: RP-1 and RP-5 as discussed in Section 2.2. The current combined capacity of these two facilities is 60.3 mgd and would increase to 66.5 mgd once the expansion project at RP-5 is completed. IEUA can route flows to either of the two facilities as needed. In 2020, RP-1 treats an average wastewater flow of 25 mgd, and RP-2 treats an average wastewater flow of 8 mgd. Therefore, these two WWTPs have a current combined treatment rate of 33 mgd.

The excess capacity for the two facilities is 27.3 mgd under current conditions. After the expansion project at RP-5 is complete in 2025, excess capacity would increase to 33.5 mgd.

¹⁵ Call with City staff on November 24, 2021.

There are additional plans to increase the treatment capacity of RP-5 to 30 mgd by 2040; the combined treatment capacity of both WWTPs would be 74 mgd.¹⁶

The 2021 wastewater flow rate for Ontario is estimated to be 10.39 mgd, and the wastewater flow rate for the TOP 2050 buildout is estimated to be 37.31 mgd. The additional flow with implementation of the Proposed Project would be 26.92 mgd (37.31 – 10.39). Since the excess capacity of the two WWTPs in 2025 is 33.5 mgd, the additional flow rate from the Proposed Project of 26.92 mgd would not exceed the capacity of the wastewater treatment providers.

In addition, IEUA has seen a decrease in the volume of sewage flows of approximately 10 percent since 2013, even as the population has increased.¹⁷ This is a result of a decrease in indoor water consumption with the installation of more efficient plumbing fixtures and compliance with California Green Building Standards Code for new developments. IEUA anticipates a significant increase in the growth of its service area in the next ten years, with 40 percent of the growth resulting from new development in Ontario. The projected increase in population growth rates and corresponding increase in wastewater flows have been accounted for in IEUA's capital improvement projects, with expansions of both RP-1 and RP-5 scheduled for completion by 2035.

4.3.3 Sewer/Wastewater Impacts

The following impact assessments are based on the significance criteria established in Section 3.2 for wastewater.

Impact A. *Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?*

Impact Analysis: The estimated increase of 2.55 MGD in sewer flows under the Proposed TOP is not anticipated to exceed the projected future capacity of the City of Ontario's wastewater infrastructure or IEUA's regional infrastructure. As noted above, there are two Growth Areas that have CIP projects that will experience an increase in sewer flows under the Proposed TOP. However, the City has processes in place to ensure these improvement projects get implemented prior to or during new development.

The City maintains a regularly updated Sewer Master Plan and CIP and has a process in place to assess local sewer impacts on a project-by-project basis. The City's most recent Sewer Master Plan update occurred in June 2020. The 2020 SMP was a draft update to a sewer capacity analysis performed in 2012. This updated SMP will continue to serve as a sewer infrastructure planning tool to make informed decisions about when CIP projects are warranted. As noted above, the OMUC department regularly updates its CIP project list to prepare and budget for upcoming infrastructure improvements across a 5-year planning horizon as well as ensure the

¹⁶ IEUA Website, accessed 3-22-2022. Found here: <https://www.ieua.org/regional-water-recycling-plant-no-5-expansion-project/>

¹⁷ IEUA Fiscal Year 2015/16 Ten-Year Capital Improvement Plan

sewer system is functioning effectively. Therefore, at a citywide scale, the City's Sewer Master Plan and CIP process adequately prioritizes necessary projects as developments under The Ontario Plan come online. IEUA similarly regularly updates long-term planning documents which include provisions for improving regional treatment plant and conveyance infrastructure capacity and works closely with the City on improvement projects within the City's boundary.

In addition, there are several new sewer infrastructure projects proposed throughout the Ontario Ranch Growth Area. Construction impacts associated with sewer infrastructure to support development within the Growth Areas and throughout the City would primarily be confined to trenching for utility lines and connections to public infrastructure. A Construction Management Plan, which would ensure safe pedestrian access as well as emergency vehicle access and safe vehicle travel in general, will be implemented to reduce any temporary pedestrian and traffic impacts occurring as a result of construction activities. Moreover, when considering impacts resulting from the installation of any required sewer infrastructure, all impacts are of a relatively short-term duration and would cease to occur once the installation is complete. In addition, see Section 4.5.3 for additional requirements during construction that would prevent against water quality impacts. Therefore, impacts from installation of new sewer infrastructure lines would be less than significant.

Impact C. *Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?*

Impact Analysis: As described above, since the excess capacity of the two WWTPs in 2025 is 33.5 mgd, and the additional flow rate from the Proposed TOP is 26.92 mgd (Proposed TOP of 37.31 mgd minus 2021 flows of 10.39 mgd)., it can be concluded that IEUA has adequate capacity within the system to accommodate the Proposed TOP increase in sewer flows. IEUA utilizes a robust CIP process and relies on internal capacity modeling, population projects and land use projections, independent of The Ontario Plan update buildout estimates. As referenced in Section 4.3.2, these lines will be able to handle the increase of 2.55 MGD proposed under the Proposed TOP. Through updating appropriate master plans, long-term capital improvement budgets, and plant capacity assessments, it is anticipated IEUA will be able to receive increases in flows consistent with the buildout proposed under implementation of the TOP. No impacts are anticipated to service provider capacities.

4.4 WATER INFRASTRUCTURE & SUPPLY

4.4.1 Proposed Water Flows

As noted above, there will be an overall increase in residential DUs throughout the Growth Areas and remainder of City. Growth Area non-residential SF will decrease while on a Citywide scale, non-residential SF will increase. This impacts water demands within the Growth Areas as well as the City. A breakdown of increases in water demands can be found in in Table 14, Attachment B and are shown in Figure 9.

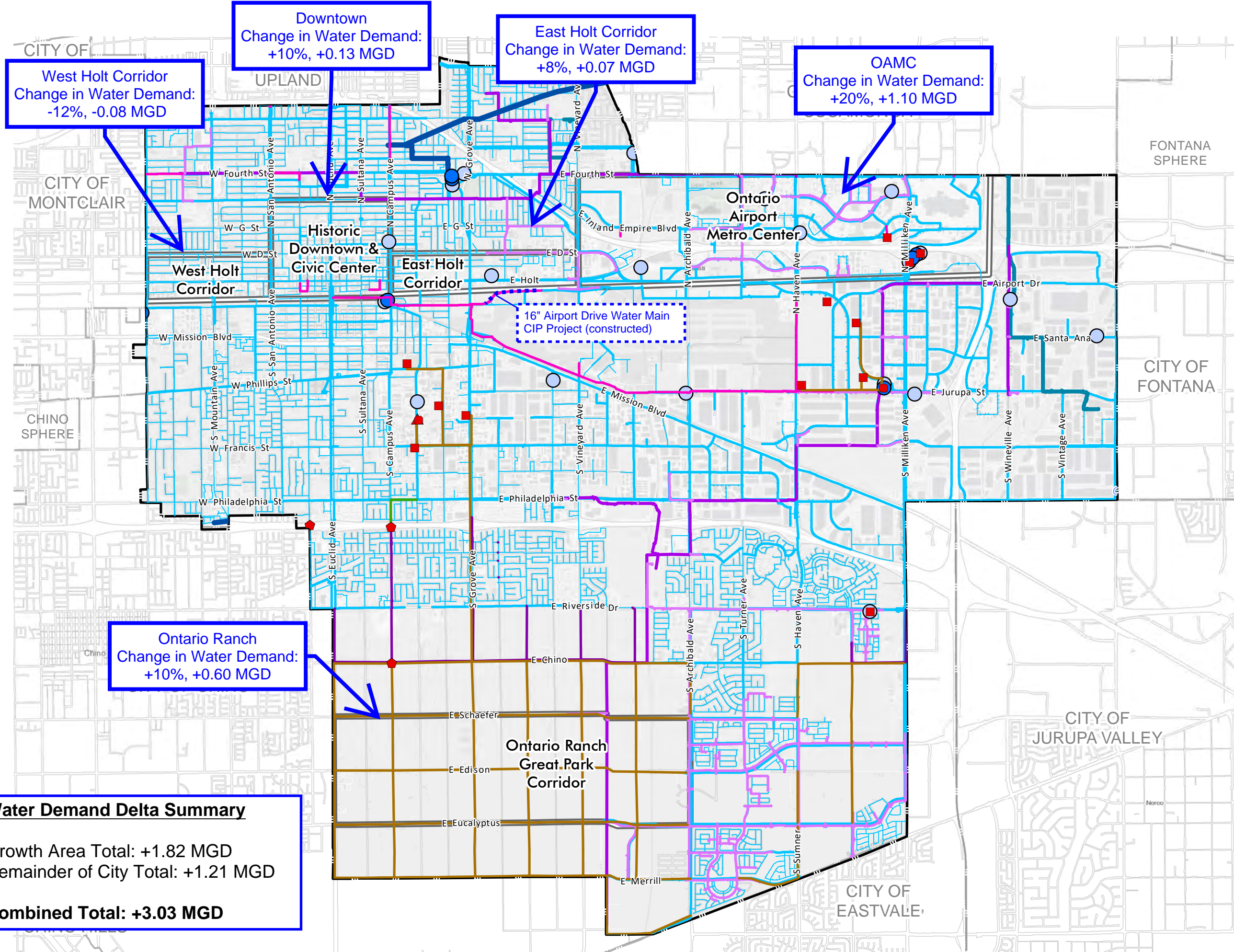
Table 14 – Proposed Water Flows

Growth Area	Current TOP Water Demand	Proposed TOP Water Demand	Percent Change from Current to Proposed TOP	Change in Water Demand (MGD)
Historic Downtown & Civic Center	1.22	1.35	+10%	+0.13
West Holt Corridor	0.677	0.598	-12%	-0.08
East Holt Corridor	0.975	1.05	+8%	+0.07
Ontario Airport Metro Center	5.46	6.56	+20%	+1.10
Ontario Ranch Great Park Corridor	6.22	6.82	+10%	+0.60
Remainder of City	37.3	38.5	+3%	+1.21
Total Growth Areas				+1.82
Total Citywide				+3.03

Full implementation of the proposed land use changes associated with the Proposed TOP has the potential to increase water demands by 3 MGD within the City overall and by 1.8 MGD throughout the Growth Areas. The Growth Areas represent approximately 60% of the proposed increases in water demand throughout the City between the two plans.

Proposed Water Demands and Improvement Projects

*See Attachment B for additional CIP projects



West Holt Corridor
Change in Water Demand:
-12%, -0.08 MGD

Downtown
Change in Water Demand:
+10%, +0.13 MGD

East Holt Corridor
Change in Water Demand:
+8%, +0.07 MGD

OAMC
Change in Water Demand:
+20%, +1.10 MGD

16" Airport Drive Water Main
CIP Project (constructed)

Ontario Ranch
Change in Water Demand:
+10%, +0.60 MGD

Water Demand Delta Summary

Growth Area Total: +1.82 MGD
Remainder of City Total: +1.21 MGD

Combined Total: +3.03 MGD

- City Water Facilities**
- 4" - 10" Water Main
 - 12"-20" Water Main
 - 24" + Water Main
 - City of Ontario Recycled Water
 - Water Supply Reservoir
 - Active Water Supply Wells
 - Future PRS
 - Future Reservoirs
 - Future Wells
 - Future Booster Pump Stations
 - Future DIF Pipes for 925 Zone
 - Future DIF Pipes for 1010 Zone
 - Future DIF Pipes for 1074 Zone
 - Future DIF Pipes for 1212 Zone
- Other Jurisdiction Water Facilities**
- MWD Water Main
 - IEUA Recycled Water Line
 - CVWD Water Main
 - Ontario City Boundary
 - Proposed Growth Areas

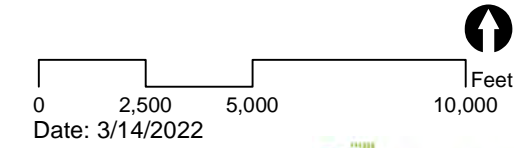


Figure 9

4.4.2 Proposed Water System & Supply

Water Infrastructure

As shown above, water demands are anticipated to increase from the Current TOP to the Proposed TOP land use throughout the City. The CIP figure from the WMP identified several water lines that are in need of improvement that are shown in Attachment B. The largest increase in water demands from Current to Proposed TOP is within the OAMC area which may experience a 20% increase in water demands. There are some improvements and CIP projects within this area, as well as the other three northerly Growth Areas.

For the Ontario Ranch Growth Area, water demands are anticipated to increase 10% from Current TOP to Proposed TOP. Some of the proposed water lines throughout this Growth Area have already been constructed or are currently in design/ under construction. These water lines are conservatively sized for fire flow requirements that exceed average daily demand calculated in this analysis. Therefore, it is anticipated these water lines can accommodate a 10% increase in average daily flows as confirmed by OMUC.

The City has policies in place to require improvements to water infrastructure as part of new development and redevelopment in addition to their CIP process described in more detail in Section 2.3.2. The City has the discretion to require additional water hydraulic capacity studies associated with new and redevelopments and it currently requires site specific studies to determine a project's impact throughout the water system. Based on the results of these studies, the City has policies to require development fees to help support infrastructure improvements required for the water system.

Water Supply

As noted above, the City's 2020 UWMP estimated demands to increase from 39,921 AFY in 2020 to 73,668 AFY in 2045. The Proposed TOP yields a total water demand of 78,128 AFY which is greater than the 2045 UWMP total water demand. However, this methodology is considered conservative as the unit water demand factors implemented are based on past or historical water uses for the purpose of sizing water pipes to convey average and peak daily water flows, not to accurately estimate actual water use within the City.

The following state laws, changes in the building code, and water service costs are anticipated to substantially lower water demand rates throughout the state:

- SB 606 and AB 1668, which establish indoor water use standards (55 gallons/person/day until 2025 and then drops to 50 gpcd), outdoor water standards, and water loss standards that water suppliers must meet by 2025
- New construction is subject to CalGreen Code requirements, which results in a typical 20% reduction in indoor water use
- SB 407, which requires all buildings in California to meet current plumbing fixture standards within this decade, which will require retrofitting of existing homes and businesses
- Increases in water service costs, which will provide an incentive for additional water-saving practices

If applying these requirements to the Proposed TOP land use and implementing 50 gpd/person for all residential uses (SB 606 and AB 1668) and a 20% reduction in non-residential uses (CalGreen and new building code requirements), actual water demands in 2045 are estimated to fall well below the 2045 UWMP estimate of 73,668 AFY to an approximate 60,000 AFY (see Attachment B for reduced water demand calculations). In addition, in instances where CEQA-threshold project categories are triggered, the City is able to track water supply on a project by project level via Water Supply Assessments (SB 610) to ensure adequate supplies exist to support new development.

4.4.3 Water System Impacts

The following impact assessments are based on the significance criteria established in Section 3.2 for water systems.

Impact A **Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?**

Impact Analysis:

The City maintains a regularly updated Water Master Plan (WMP) that identifies deficiencies and necessary improvement projects throughout its service area. Improvement projects are regularly incorporated into the City's CIP based on priority. There are several lines identified as needing upsizing for fire flow or replacement due to age. As noted above, the City has the discretion to require additional water hydraulic capacity studies associated with new and redevelopments to confirm if deficiencies exist as new development comes online. Based on the results of these studies, the City has policies to require development fees to help support infrastructure improvements required for the water system.

In addition, there are several new water infrastructure lines proposed throughout the Ontario Ranch Growth Area. Construction impacts associated with water infrastructure to support development within the Growth Areas and throughout the City would primarily be confined to trenching for utility lines and connections to public infrastructure. A Construction Management Plan, which would ensure safe pedestrian access as well as emergency vehicle access and safe vehicle travel in general, will be implemented to reduce any temporary pedestrian and traffic impacts occurring as a result of construction activities. Moreover, when considering impacts resulting from the installation of any required water infrastructure, all impacts are of a relatively short-term duration and would cease to occur once the installation is complete. In addition, see Section 4.5.3 for additional requirements during construction that would prevent against water quality impacts. Therefore, impacts from installation of new water lines would be less than significant.

Impact B **Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?**

Impact Analysis:

As noted above, the City's 2020 Draft UWMP highlighted sufficient surface, imported and groundwater supplies through 2045 to meet projected demands in normal, dry and multiple dry years. Although the Proposed TOP is estimated to generate a higher water demand using conservative water demand factors, new state and federal requirements (SB 606 and AB 1668, SB 407) will require enhanced water efficiency and conservation. Applying these components to water demand estimates here bring total water use below projections within the 2045 UWMP. As mentioned, in instances where CEQA-threshold project categories are triggered, the City is also able to track water supply on a project by project level via Water Supply Assessments (SB 610) to ensure adequate supplies exist to support new development. Impacts to water supply from the Current to Proposed TOP are not anticipated to be significant.

4.5 WATER QUALITY

4.5.1 Construction Activities

Clearing, grading, excavation and construction activities associated with the proposed project may impact water quality due to sheet erosion of exposed soils and subsequent deposition of particulates in local drainages. Grading activities, in particular, lead to exposed areas of loose soil, as well as sediment stockpiles, that are susceptible to uncontrolled sheet flow. Although erosion occurs naturally in the environment, primarily from weathering by water and wind action, improperly managed construction activities can lead to substantially accelerated rates of erosion that are considered detrimental to the environment.

Construction General Permit

Prior to the issuance of grading permits, the project applicants shall provide evidence that the development of projects with one acre or greater of soil disturbance shall comply with the most current Construction General Permit (CGP) and associated local National Pollutant Discharge Elimination System (NPDES) regulations to ensure that the potential for soil erosion is minimized on a project-by-project basis. In accordance with the updated CGP (Order No. 2009-0009-DWQ, as amended by 2010-0014-DWQ and 2012-0006-DWQ), the following Permit Registration Documents are required to be submitted to the SWRCB prior to commencement of construction activities:

- Notice of Intent (NOI)
- Risk Assessment (Standard or Site-Specific)
- Particle Size Analysis (if alternative risk assessment is performed)
- Site Map
- SWPPP
- Active Treatment System (ATS) Design Documentation (if ATS is determined necessary)
- Annual Fee & Certification

In accordance with the existing and updated CGP, a construction SWPPP must be prepared and implemented at all construction projects with 1 acre or greater of soil disturbance, and revised as necessary, as administrative or physical conditions change. The SWPPP must be made

available for review upon request, shall describe construction BMPs that address pollutant source reduction, and provide measures/controls necessary to mitigate potential pollutant sources. These include, but are not limited to: erosion controls, sediment controls, tracking controls, non-storm water management, materials & waste management, and good housekeeping practices.¹⁸

Prior to commencement of construction activities throughout the City, the project-specific SWPPP(s) will be prepared in accordance with the site specific sediment risk analyses based on the grading plans, with erosion and sediment controls proposed for each phase of construction for the individual project. The phases of construction will define the maximum amount of soil disturbed, the appropriately sized sediment basins and other control measures to accommodate all active soil disturbance areas and the appropriate monitoring and sampling plans.

4.5.2 Post-Construction Activities

With the proposed land use changes, development resulting from the Proposed TOP may result in long-term impacts to the quality of storm water and urban runoff, subsequently impacting downstream water quality. Developments can potentially create new sources for runoff contamination through changing land uses. As a consequence, developments within individual Growth Areas and the City as a whole may have the potential to increase the post-construction pollutant loadings of certain constituent pollutants associated with the proposed land uses and their associated features, such as landscaping and plaza areas.

To help prevent long-term impacts associated with land use changes and in accordance with the requirements of the City and consistency with San Bernardino MS4 permit (ORDER NO. R8-2010-0036, NPDES NO. CAS618036), new development and significant redevelopment projects must incorporate LID/site design and source control BMPs to address post-construction storm water runoff management.

Since the TOP does not include a specific or detailed development plan, project specific WQMP(s) will not be required at this time. Future project specific WQMPs, preliminary and/or final, will be prepared consistent with the prevailing terms and conditions of the City's requirements and San Bernardino County Public Works templates and forms¹⁹, OC DAMP, and Model WQMP at the time of project application. Moreover, LID and water quality treatment solutions prescribed in project specific WQMPs shall be designed to support or enhance the regional BMPs and efforts implemented by the City as part of their City-wide efforts to improve water quality.

Consistency with the State-wide Trash TMDL

As part of the state-wide mandate to reduce trash within receiving waters, the City is required to adhere to the requirements of the amended CA Trash Total Maximum Daily Load (TMDL) from July 2016 onwards. The requirements will include the installation and maintenance of trash screening devices at all public curb inlets, grate inlets and catch basin inlets. The trash screening

¹⁸ California Stormwater Quality Association. (2003, January). *Stormwater Best Management Practices Handbook for New Development and Redevelopment*. Retrieved March 20, 2020, from <http://www.cabmphandbooks.com>

¹⁹ San Bernardino County Department of Public Works WQMP Templates and Forms. Found here: <http://cms.sbcounty.gov/dpw/Land/WQMPTemplatesandForms.aspx>

devices must be approved by the local agency and consistent with the minimum standards of the Trash TMDL.

Each of these opportunities should be evaluated to determine feasibility and appropriateness for the proposed development and redevelopment projects within the City.

4.5.3 Water Quality Impacts

The impact assessments are based on the significance criteria established in Section 3.2 for water quality.

Impact A *Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?*

Impact Analysis:

The Construction General Permit (statewide regulation) and the San Bernardino MS4 permit (regional permit as required under NPDES) are designed to protect receiving water quality standards. Waste discharge requirements (WDR's) are defined for specific individual developments/entities that are required to comply with additional regulations (e.g. the industrial general permit) prior to occupancy. Through compliance with State and Local regulations covering construction and post-construction activities, storm water runoff impacts to local receiving waters will be effectively mitigated. Construction sites of 1 acre or larger will be required to prepare and implement a Storm Water Pollution Prevention Plan (SWPPP) in accordance with the requirements of the Statewide CGP and subject to the oversight of the Santa Ana Regional Water Quality Control Board. The SWPPP must include BMPs to reduce or eliminate erosion and sedimentation from soil disturbing activities, as well as proper materials and waste management to reduce the potential for pollutants to enter receiving waters. Monitoring and reporting on SMARTS are also required compliance measures within the CGP. In terms of post-construction related impacts, the incorporation of site design, LID features and BMPs as required under the San Bernardino MS4 Permit are designed to remove pollutants of concern up to specific size storm events related to land development and designed to protect water quality. Therefore, impacts to surface water and groundwater quality are considered less than significant.

Impact D *In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?*

Impact Analysis: The City has a policy to avoid placing new housing within 100-year flood hazard areas based on FEMA's floodplain maps. All existing housing within Flood Zone A's and AE's require flood insurance. As noted in Impact Analysis C in Section 4.2.2, the City and County regularly maintain and improve storm drain and flood control infrastructure based on priority which can reduce the threat of flooding over time. New developments will comply with all pertinent flood control regulations.

Impact E *Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?*

Impact Analysis: As noted above, the City's groundwater supplies are from the Chino Groundwater Basin, which is adjudicated and managed by the Chino Basin Watermaster. As described in the 2020 UWMP, the Chino Basin Watermaster has taken proactive actions to sustainably manage the groundwater basin. These actions will enable the City to rely on the Chino Basin as a reliable source of supply.

The Proposed TOP will not impact groundwater management within the Chino Groundwater Basin from a water supply or quality perspective. New development and redevelopment under the Proposed TOP may allow for increased recharge of groundwater through the implementation of infiltration BMPs associated with the MS4 permit. In addition, through this BMP selection process under MS4 requirements, groundwater quality will also be protected to ensure no high pollutant land uses infiltrate that would negatively impact groundwater quality, beneficial uses or water quality objectives as stated in the Water Quality Control Plan. Therefore, no impacts to sustainable groundwater management are anticipated.

5. CONCLUSION

The City of Ontario utilizes a robust master planning and capital improvement system to ensure that deficiencies are identified and addressed in a timely manner. No major infrastructure-related constraints to growth throughout the City or within the Growth Areas have been identified.

6. TECHNICAL ATTACHMENTS

Attachment A – Sewer Flow Calculations

Attachment B – Water Demand Calculations and Supporting Documentation

Attachment C – Chino Basin Groundwater Plume Map

ATTACHMENT A

SEWER FLOW CALCULATIONS

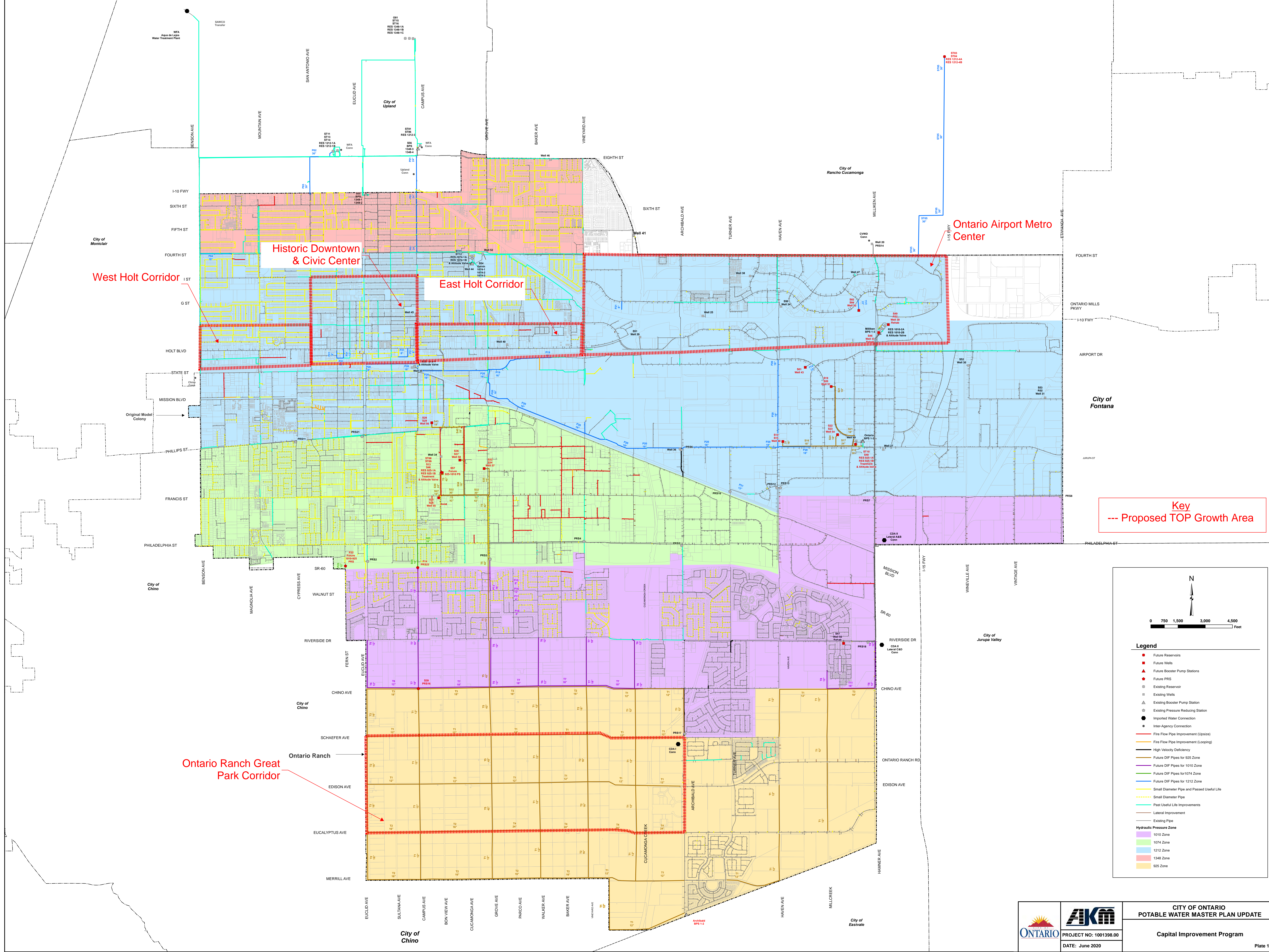
Growth Area	Proposed TOP Land Use	Overlay / Mixed-Use Area / Other Notes	Projected Buildout of Proposed TOP						Projected Buildout of Current TOP						Difference Sewer		
			2050 Future Projections (Proposed TOP)				Sewer Flow Factors		2050 Future Projections (Current TOP)				Sewer Flow Factors				
			Acres	Population (Pop)	Non-Res Bldg. Capacity (Sq.Ft.)	Office Jobs	Total Jobs (including office)	GPD (flow factor from 2020 SMP)	Units	Sewer Flow Calculation	Acres	Population (Pop)	Non-Res Bldg. Capacity (Sq.Ft.)	Office Jobs		Total Jobs (including office)	GPD (flow factor from 2020 SMP)	Units	Sewer Flow Calculation
Downtown	LDR	-	168.77	3,638	-	-	-	52 GPD/person	189,187	168.77	2,698	-	-	-	52 GPD/person	140,311	48,875
	LMDR	-	44.94	1,292	-	-	-	52 GPD/person	67,167	44.94	1,527	-	-	-	52 GPD/person	79,401	(12,234)
	MDR ¹	-	12.82	747	-	-	-	52 GPD/person	38,867	12.82	881	-	-	-	52 GPD/person	45,819	(6,952)
	HDR	-	28.50	1,826	-	-	-	52 GPD/person	94,929	28.50	3,339	-	-	-	52 GPD/person	173,605	(78,676)
	MU	Downtown Mixed Use Area	127.52	6,892	1,777,586	3,232	3,973	52 GPD/person 31 GPD/job (Office) 91 GPD/job (Non-Office)	524,400	112.17	4,711	1,563,627	2,236	2,797	52 GPD/person 31 GPD/job (Office) 91 GPD/job (Non-Office)	965,379	159,021
	NC	-	1.58	-	20,698	15	56	51 GPD/job	2,879	9.98	-	130,371	75	315	51 GPD/job	16,088	(13,209)
	OC	-	16.89	-	551,802	1,405	1,543	31 GPD/job	47,819	22.67	-	740,555	1,483	1,642	31 GPD/job	50,904	(3,086)
	IND	-	23.41	-	560,940	204	466	31 GPD/job	23,753	23.41	-	560,940	160	488	31 GPD/job	24,923	(1,169)
	OS-R	-	8.33	-	950	-	-	200 GPD/ac	1,266	8.33	-	950	-	-	200 GPD/ac	1,266	-
	PF	-	9.54	-	378,813	1,377	1,377	1,450 GPD/ac	13,838	10.72	-	378,813	1,377	1,377	1,450 GPD/ac	15,548	(1,710)
	PS	-	4.44	-	46,965	-	55	8 GPD/student	1,774	4.44	-	46,965	-	55	8 GPD/student	1,774	-
	Rail	-	11.56	-	-	-	3	n/a	-	11.56	-	-	-	3	n/a	-	-
ROW	-	n/a	-	-	-	-	n/a	-	na	-	-	-	-	n/a	-	-	
Downtown TOTAL	-	-	n/a	14,366	3,337,754	6,232	7,472	-	1,066,878	69.75	1,115	-	-	-	-	916,017	90,861
West Holt	LDR	-	69.75	1,504	-	-	-	52 GPD/person	78,183	69.75	1,115	-	-	-	52 GPD/person	57,985	20,198
	MDR ¹	-	20.38	1,188	-	-	-	52 GPD/person	61,757	24.97	1,715	-	-	-	52 GPD/person	89,199	(27,442)
	HDR	-	44.12	2,826	-	-	-	52 GPD/person	146,959	39.53	4,631	-	-	-	52 GPD/person	240,803	(93,844)
	MU	West Holt	1.46	84	12,678	-	11	52 GPD/person 31 GPD/job (Office) 91 GPD/job (Non-Office)	5,320	-	-	-	-	-	31 GPD/job (Office) 91 GPD/job (Non-Office)	-	5,320
	GC	-	21.51	-	281,119	102	313	132 GPD/job	41,325	22.97	-	300,136	86	280	132 GPD/job	36,927	4,397
	BP	-	36.68	-	798,917	1,162	1,562	53 GPD/job	82,761	36.68	-	639,134	914	1,122	53 GPD/job	59,452	23,308
	IND	-	34.84	-	834,683	304	693	51 GPD/job	35,345	34.84	-	834,683	239	727	51 GPD/job	37,085	(1,740)
	Rail	-	14.87	-	-	-	4	n/a	-	14.87	-	-	-	4	n/a	-	-
ROW	-	na	-	-	-	-	n/a	-	na	-	-	-	-	n/a	-	-	
West Holt TOTAL	-	-	n/a	5,601	1,927,397	1,568	2,582	-	451,653	22.77	364	-	-	-	52 GPD/person	18,934	6,595
East Holt	LDR	-	22.77	491	-	-	-	52 GPD/person	25,529	32.66	1,110	-	-	-	52 GPD/person	57,704	(8,891)
	LMDR	-	32.66	939	-	-	-	52 GPD/person	48,813	49.99	2,914	-	-	-	52 GPD/person	178,624	(27,102)
	MDR ¹	-	49.99	2,914	-	-	-	52 GPD/person	151,522	57.28	859	1,746,572	3,568	3,926	52 GPD/person 31 GPD/job (Office) 91 GPD/job (Non-Office)	187,885	51,543
	MU	East Holt	65.44	3,773	570,156	-	475	52 GPD/person 31 GPD/job (Office) 91 GPD/job (Non-Office)	239,429	0.55	-	7,147	5	19	51 GPD/job	882	112
	NC	-	0.55	-	7,147	5	19	51 GPD/job	994	17.37	-	756,423	433	867	116 GPD/room	132,947	-
	HOS	-	17.37	-	756,423	550	1,020	116 GPD/room	132,947	108.82	-	1,896,116	2,711	3,328	53 GPD/job	176,377	50,726
	BP	-	100.66	-	2,192,308	3,189	4,285	53 GPD/job	227,103	1.71	-	n/a	-	0	n/a	-	-
	OS-NR	-	1.71	-	n/a	-	0	n/a	-	5.05	-	16,489	-	-	200 GPD/ac	1,010	-
	OS-R	-	5.05	-	16,489	-	-	200 GPD/ac	1,010	32.73	-	-	-	8	n/a	-	-
	Rail	-	32.73	-	-	-	8	n/a	-	na	-	-	-	-	n/a	-	-
ROW	-	na	-	-	-	-	n/a	-	na	-	-	-	-	n/a	-	-	
East Holt TOTAL	-	-	n/a	8,116	3,542,522	3,744	5,809	-	827,348	9.54	324	-	-	-	52 GPD/person	16,847	(2,596)
OAMC	LDR	-	9.54	274	-	-	-	52 GPD/person	14,251	78.80	5,414	-	-	-	52 GPD/person	281,546	(42,717)
	LMDR	-	78.80	4,593	-	-	-	52 GPD/person	238,828	10.88	697	-	-	-	52 GPD/person	66,254	(30,026)
	MDR ¹	-	10.88	697	-	-	-	52 GPD/person	36,228	90.77	4,651	691,939	577	1,295	52 GPD/person 31 GPD/job (Office) 91 GPD/job (Non-Office)	235,907	58,442
	MU	Meredith	90.77	4,651	691,939	-	577	52 GPD/person 31 GPD/job (Office) 91 GPD/job (Non-Office)	294,349	72.56	1,673	2,449,557	5,172	5,993	52 GPD/person 31 GPD/job (Office) 91 GPD/job (Non-Office)	264,296	57,719
	MU	Multi-Modal	72.56	1,673	2,449,557	5,172	5,993	52 GPD/person 31 GPD/job (Office) 91 GPD/job (Non-Office)	322,016	36.61	789	100,455	-	84	52 GPD/person 31 GPD/job (Office) 91 GPD/job (Non-Office)	66,567	(18,954)
	MU	Inland Empire	36.61	789	100,455	-	84	52 GPD/person 31 GPD/job (Office) 91 GPD/job (Non-Office)	47,611	86.34	1,991	2,012,077	2,872	3,848	52 GPD/person 31 GPD/job (Office) 91 GPD/job (Non-Office)	227,435	53,977
	MU	Guasti	86.34	1,991	2,012,077	2,872	3,848	52 GPD/person 31 GPD/job (Office) 91 GPD/job (Non-Office)	281,412	186.43	9,553	3,329,507	5,906	7,327	52 GPD/person 31 GPD/job (Office) 91 GPD/job (Non-Office)	1,199,546	(390,366)
	MU	Ontario Center	186.43	9,553	3,329,507	5,906	7,327	52 GPD/person 31 GPD/job (Office) 91 GPD/job (Non-Office)	809,186	169.20	13,006	1,621,435	2,680	3,417	52 GPD/person 31 GPD/job (Office) 91 GPD/job (Non-Office)	-	826,441
	MU	Ontario Center-Arena	169.20	13,006	1,621,435	2,680	3,417	52 GPD/person 31 GPD/job (Office) 91 GPD/job (Non-Office)	826,441	249.38	10,223	3,394,666	1,481	3,971	52 GPD/person 31 GPD/job (Office) 91 GPD/job (Non-Office)	462,451	341,628
	MU	Ontario Mills	249.38	10,223	3,394,666	1,481	3,971	52 GPD/person 31 GPD/job (Office) 91 GPD/job (Non-Office)	804,079	210.97	-	6,892,451	17,544	19,268	31 GPD/job	508,013	69,280
	OC	-	210.97	-	6,892,451	17,544	19,268	31 GPD/job	597,294	103.54	-	4,510,221	3,280	6,085	116 GPD/room	792,706	-
	HOS	-	103.54	-	4,510,221	3,280	6,085	116 GPD/room	792,706	52.28	-	1,138,617	1,856	2,225	53 GPD/job	910,894	84,731
	BP	-	52.28	-	1,138,617	1,856	2,225	53 GPD/job	117,950	238.23	-	5,707,558	2,075	4,739	51 GPD/job	241,689	(11,897)
	IND	-	238.23	-	5,707,558	2,075	4,739	51 GPD/job	241,689	94.05	-	n/a	-	24	n/a	-	-
	OS-NR	-	94.05	-	n/a	-	24	n/a	-	117.29	-	7,932	-	1	200 GPD/ac	23,457	-
OS-R	-	117.29	-	7,932	-	1	200 GPD/ac	23,457	7.80	-	11,044	40	42	1,450 GPD/ac	11,315	-	
PF	-	7.80	-	11,044	40	42	1,450 GPD/ac	11,315									

OAMC	PS	-	9.01	-	-	-	-	8 GPD/ student	3,603	9.01	-	-	-	-	8 GPD/ student	3,603	-
OAMC	Rail	-	52.80	-	-	-	13	n/a	-	52.80	-	-	-	13	n/a	-	-
OAMC	ROW	-	na	-	-	-	-	n/a	-	na	-	-	-	-	n/a	-	-
OAMC TOTAL		-	n/a	47,431	31,867,459	42,708	57,613	-	5,462,414	-	-	-	-	-	-	4,498,260	964,154
Great Park Corridor		-	423.09	6,956	-	-	-	52 GPD/ person	361,732	542.06	9,750	-	-	-	52 GPD/ person	506,991	(145,259)
Great Park Corridor	LDR	-	62.65	1,946	-	-	-	52 GPD/ person	101,182	93.21	3,167	-	-	-	52 GPD/ person	164,665	(63,483)
Great Park Corridor	MDR ¹	-	631.66	44,998	-	-	-	52 GPD/ person	2,339,897	605.50	43,666	-	-	-	52 GPD/ person	2,270,628	69,269
Great Park Corridor	MDR	Great Park ²	304.91	19,141	2,789,181	3,381	4,930	52 GPD/ person 31 GPD/ job (Office) 91 GPD/ job (Non-Office)	1,241,123	296.65	6,230	6,331,794	15,522	16,171	52 GPD/ person 31 GPD/ job (Office) 91 GPD/ job (Non-Office)	864,212	376,913
Great Park Corridor	MU	Eucalyptus ²	81.71	2,931	1,601,747	2,589	3,117	52 GPD/ person 31 GPD/ job (Office) 91 GPD/ job (Non-Office)	280,717	-	-	-	-	-	52 GPD/ person 31 GPD/ job (Office) 91 GPD/ job (Non-Office)	-	280,717
Great Park Corridor	MU	Eucalyptus (area 2)	23.37	838	458,013	740	891	52 GPD/ person 31 GPD/ job (Office) 91 GPD/ job (Non-Office)	80,270	-	-	-	-	-	52 GPD/ person 31 GPD/ job (Office) 91 GPD/ job (Non-Office)	-	80,270
Great Park Corridor	MU	Parkside	2.95	132	51,440	-	129	52 GPD/ person 31 GPD/ job (Office) 91 GPD/ job (Non-Office)	18,586	-	-	-	-	-	52 GPD/ person 31 GPD/ job (Office) 91 GPD/ job (Non-Office)	-	18,586
Great Park Corridor	GC	-	47.59	-	621,906	226	693	132 GPD/ job	91,420	44.32	-	579,129	166	540	132 GPD/ job	71,253	20,167
Great Park Corridor	NC	-	-	-	-	-	-	51 GPD/ job	-	11.06	-	144,574	83	350	51 GPD/ job	17,840	(17,840)
Great Park Corridor	OC	-	-	-	-	-	-	31 GPD/ job	-	40.34	-	1,318,069	2,639	2,923	31 GPD/ job	90,602	(90,602)
Great Park Corridor	BP	-	53.14	-	1,157,404	1,052	1,525	53 GPD/ job	80,814	-	-	-	-	-	53 GPD/ job	-	80,814
Great Park Corridor	OS-NR	-	103.78	-	-	-	18	n/a	-	98.56	-	-	-	17	n/a	-	-
Great Park Corridor	OS-R	-	208.57	-	30,396	-	33	200 GPD/ ac	41,714	211.72	-	30,396	-	33	200 GPD/ ac	42,345	(630)
Great Park Corridor	PF	-	1.38	-	-	-	0	1,450 GPD/ ac	2,003	1.38	-	-	-	0	1,450 GPD/ ac	2,003	-
Great Park Corridor	PA	-	10.89	-	-	-	2	8 GPD/ student	4,354	10.89	-	-	-	2	8 GPD/ student	4,354	-
Great Park Corridor	ROW	-	na	-	-	-	-	n/a	-	na	-	-	-	-	n/a	-	-
Great Park TOTAL		-	n/a	76,943	6,710,087	7,988	11,337	-	4,643,815	-	-	-	-	-	-	4,034,893	608,922
na	RR	-	528.69	3,863	-	-	-	52 GPD/ person	200,898	528.69	4,226	-	-	-	52 GPD/ person	219,770	(18,873)
na	LDR	-	5,159.74	102,509	-	-	-	52 GPD/ person	5,330,450	5,625.31	94,252	-	-	-	52 GPD/ person	4,901,117	429,333
na	LDR	Countryside SP	132.56	2,992	-	-	-	52 GPD/ person	155,606	132.56	3,274	-	-	-	52 GPD/ person	170,224	(14,618)
na	LDR	Creekside SP	236.20	6,449	-	-	-	52 GPD/ person	335,342	236.20	7,055	-	-	-	52 GPD/ person	366,845	(31,503)
na	LDR	Subarea 29 SP	318.87	7,628	-	-	-	52 GPD/ person	396,632	343.72	9,665	-	-	-	52 GPD/ person	502,567	(105,935)
na	LMDR	-	732.14	21,913	-	-	-	52 GPD/ person	1,139,466	755.23	25,658	-	-	-	52 GPD/ person	1,334,238	(194,772)
na	MDR ¹	-	1,384.05	90,581	-	-	-	52 GPD/ person	4,710,235	1,152.78	81,058	-	-	-	52 GPD/ person	4,215,029	495,205
na	MDR	Creekside SP	43.21	2,212	-	-	-	52 GPD/ person	115,004	43.21	2,607	-	-	-	52 GPD/ person	135,573	(20,570)
na	HDR	-	122.92	8,228	-	-	-	52 GPD/ person	427,881	105.08	12,310	-	-	-	52 GPD/ person	640,119	(212,238)
na	MU	Euclid & Francis	12.68	487	220,912	-	552	52 GPD/ person 31 GPD/ job (Office) 91 GPD/ job (Non-Office)	75,598	10.45	313	182,045	-	420	52 GPD/ person 31 GPD/ job (Office) 91 GPD/ job (Non-Office)	54,558	21,038
na	MU	Mountain Village	7.81	350	136,070	-	340	52 GPD/ person 31 GPD/ job (Office) 91 GPD/ job (Non-Office)	49,165	-	-	-	-	-	52 GPD/ person 31 GPD/ job (Office) 91 GPD/ job (Non-Office)	-	49,165
na	MU	Euclid & Walnut	16.40	945	142,840	-	357	52 GPD/ person 31 GPD/ job (Office) 91 GPD/ job (Non-Office)	81,647	-	-	-	-	-	52 GPD/ person 31 GPD/ job (Office) 91 GPD/ job (Non-Office)	-	81,647
na	MU	Mountain & Fourth	7.17	643	75,008	-	188	52 GPD/ person 31 GPD/ job (Office) 91 GPD/ job (Non-Office)	50,522	-	-	-	-	-	52 GPD/ person 31 GPD/ job (Office) 91 GPD/ job (Non-Office)	-	50,522
na	MU	Rich-Haven	154.34	6,122	289,088	171	373	52 GPD/ person 31 GPD/ job (Office) 91 GPD/ job (Non-Office)	341,989	196.52	6,084	368,104	171	393	52 GPD/ person 31 GPD/ job (Office) 91 GPD/ job (Non-Office)	341,832	159
na	MU	Grove ²	36.10	2,104	385,285	400	630	52 GPD/ person 31 GPD/ job (Office) 91 GPD/ job (Non-Office)	142,708	-	-	-	-	-	52 GPD/ person 31 GPD/ job (Office) 91 GPD/ job (Non-Office)	-	142,708
na	MU	Euclid & Riverside ²	15.00	1,009	130,662	-	327	52 GPD/ person 31 GPD/ job (Office) 91 GPD/ job (Non-Office)	82,180	-	-	-	-	-	52 GPD/ person 31 GPD/ job (Office) 91 GPD/ job (Non-Office)	-	82,180
na	NC	-	245.68	-	3,210,523	2,335	8,756	51 GPD/ job	446,555	261.80	-	3,421,266	1,957	8,278	51 GPD/ job	422,178	24,376
na	GC	-	316.07	-	4,130,369	1,502	4,600	132 GPD/ job	607,164	370.71	-	4,844,384	1,385	4,515	132 GPD/ job	596,031	11,133
na	GC	LDR w/ Commercial Ovrly	-	-	-	-	-	132 GPD/ job	-	3.57	-	46,636	13	43	132 GPD/ job	5,738	(5,738)
na	OC	-	77.65	-	2,536,910	6,458	7,092	31 GPD/ job	219,846	77.65	-	2,536,910	5,079	5,625	31 GPD/ job	174,383	45,464
na	OC	Landfill Impact Area	3.69	-	120,570	307	337	31 GPD/ job	10,448	3.69	-	120,570	241	267	31 GPD/ job	8,288	2,161
na	HOS	-	21.71	-	945,853	688	1,276	116 GPD/ room	166,241	21.71	-	945,853	541	1,084	116 GPD/ room	166,241	-
na	BP	-	461.40	-	10,048,294	14,617	19,642	53 GPD/ job	1,041,015	851.23	-	14,831,785	21,209	26,031	53 GPD/ job	1,379,655	(338,640)
na	BP	(Ontario Ranch)	355.42	-	7,740,997	7,037	10,198	53 GPD/ job	540,503	-	-	-	-	-	53 GPD/ job	-	540,503
na	BP	LDR w/ Bus. Park Ovrly	82.11	-	1,788,263	2,601	3,495	53 GPD/ job	185,248	82.11	-	1,430,611	2,046	2,511	53 GPD/ job	133,076	52,172
na	BP	LMDR w/ Bus. Park Ovrly	4.82	-	104,964	153	205	53 GPD/ job	10,873	4.82	-	83,971	120	147	53 GPD/ job	7,811	3,062
na	BP	NC w/ Bus. Park Ovrly	2.67	-	58,171	85	114	53 GPD/ job	6,026	2.67	-	46,537	67	82	53 GPD/ job	4,329	1,697
na	IND	-	7,242.26	-	173,509,950	58,506	140,108	51 GPD/ job	7,145,503	6,904.17	-	165,410,001	47,307	144,101	51 GPD/ job	7,349,159	(203,656)
na	IND	LDR w/ Industrial Ovrly	59.45	-	1,424,236	518	1,183	51 GPD/ job	60,310	59.45	-	1,424,236	407	1,241	51 GPD/ job	63,279	(2,969)
na	IND	NC w/ Industrial Ovrly	0.71	-	17,021	6	14	51 GPD/ job	721	0.71	-	17,021	5	15	51 GPD/ job	756	(35)
na	IND	IND w/ Industrial Ovrly	1.01	-	24,187	9	20	51 GPD/ job	1,024	1.01	-	24,187	7	21	51 GPD/ job	1,075	(50)
na	IND	Landfill Impact Area	63.37	-	1,518,211	552	1,261	51 GPD/ job	64,289	63.37	-	1,518,211	434	1,323	51 GPD/ job	67,454	(3,165)
na	OS-NR	-	997.50	-	269,330	-	199	n/a	-	987.98	-	269,330	-	196	n/a	-	-
na	OS-NR	Landfill Impact Area	3.19	-	-	-	1	n/a	-	3.19	-	-	-	1	n/a	-	-
na	OS-R	-	562.73	-	122,457	-	23	200 GPD/ ac	112,546	544.54	-	122,457	-	21	200 GPD/ ac	108,908	3,638
na	OS-R	OS-R w/ Industrial Ovrly	12.77	-	15,231	-	-	200 GPD/ ac	2,555	12.77	-	15,231	-	-	200 GPD/ ac	2,555	-
na	OS-W	-	17.31	-	-	-	-	n/a	-	59.18	-	-	-	-	n/a	-	-
na	PF	-	70.93	-	105,831	356	388	1,450 GPD/ ac	102,853	70.93	-	105,831	356	388	1,450 GPD/ ac	102,853	-
na	PS	-	589.59	-	2,628,443	-	3,045	8 GPD/ student	235,835	587.23	-	2,628,443	-	3,045	8 GPD/ student	234,891	944

	ARPT	-	1,422.67	-	2,401,641	-	6,400	51	GPD/job	326,400	1,422.67	-	2,401,641	-	6,400	51	GPD/job	326,400	-
	LF	Landfill Impact Area	136.57	-	3,264	-	34	-	n/a	-	136.57	-	3,264	-	34	-	n/a	-	-
	Rail	-	127.80	-	978	-	32	-	n/a	-	127.80	-	978	-	32	-	n/a	-	-
	Rail	Landfill Impact Area	9.80	-	-	-	2	-	n/a	-	9.80	-	-	-	2	-	n/a	-	-
	ROW	-	n/a	-	-	-	-	-	n/a	-	na	-	-	-	-	-	n/a	-	-
Outside of Focus Area TOTAL	-	-	n/a	258,036	214,106,559	96,301	211,190	-	-	24,921,269	-	-	-	-	-	-	-	24,036,931	884,338
Citywide Total	-	-	32,022	410,492	261,491,779	158,541	296,002	-	-	37,312,378	104,163	260,399,271	168,833	313,067	-	-	-	34,760,916	2,551,462

ATTACHMENT B

WATER DEMAND CALCULATIONS & SUPPORTING INFORMATION



Key
 --- Proposed TOP Growth Area

Legend

- Future Reservoirs
- Future Wells
- ▲ Future Booster Pump Stations
- Future PRS
- Existing Reservoir
- Existing Wells
- ▲ Existing Booster Pump Station
- Existing Pressure Reducing Station
- Imported Water Connection
- Inter-Agency Connection
- Fire Flow Pipe Improvement (Upsize)
- Fire Flow Pipe Improvement (Looping)
- High Velocity Deficiency
- Future DIF Pipes for 925 Zone
- Future DIF Pipes for 1010 Zone
- Future DIF Pipes for 1074 Zone
- Future DIF Pipes for 1212 Zone
- Small Diameter Pipe and Passed Useful Life
- Small Diameter Pipe
- Past Useful Life Improvements
- Lateral Improvement
- Existing Pipe
- Hydraulic Pressure Zone
- 1010 Zone
- 1074 Zone
- 1212 Zone
- 1348 Zone
- 925 Zone

Growth Area	Proposed TOP Land Use	Overlay / Mixed-Use Area / Other Notes	Projected Buildout of Proposed TOP							Projected Buildout of Current TOP							Difference Water
			2050 Future Projections (Proposed TOP)				Potable Water Demand Factors			2050 Future Projections (Current TOP)				Potable Water Demand Factors			
			Acres	Population (Pop)	Non-Res Bldg. Capacity (Sq.Ft.)	Office Jobs	Total Jobs (including office)	GPD (RW rate from 2020 WMP)	Unit	Water Demand Calculation	Acres	Population (Pop)	Non-Res Bldg. Capacity (Sq.Ft.)	Office Jobs	Total Jobs (including office)	GPD (RW rate from 2020 WMP)		Unit	Water Demand Calculation
Downtown	LDR	-	168.77	3,638	-	-	-	95 GPD/person	345,630	168.77	2,698	-	-	-	95 GPD/person	258,338	89,292
	LMDR	-	44.94	1,292	-	-	-	90 GPD/person	116,251	44.94	1,527	-	-	-	90 GPD/person	137,425	(21,173)
	MDR	-	12.82	747	-	-	-	80 GPD/person	59,795	12.82	881	-	-	-	80 GPD/person	70,490	(10,695)
	HDR	-	28.50	1,826	-	-	-	60 GPD/person	109,533	28.50	3,339	-	-	-	60 GPD/person	200,313	(90,780)
	MU	Downtown Mixed Use Area	127.52	6,862	1,777,586	3,232	3,973	60 GPD/person 35 GPD/job (Office) 102 GPD/job (Non-Office)	600,369	112.17	4,711	1,563,627	2,236	2,797	60 GPD/person 35 GPD/job (Office) 102 GPD/job (Non-Office)	418,187	182,182
	NC	-	1.58	-	20,698	15	56	57 GPD/job	3,218	9.98	-	130,371	75	315	57 GPD/job	17,980	(14,763)
	OC	-	16.89	-	551,802	1,405	1,543	35 GPD/job	53,989	22.67	-	740,555	1,483	1,642	35 GPD/job	57,473	(3,484)
	IND	-	23.41	-	560,940	204	466	67 GPD/job	31,205	23.41	-	560,940	160	489	67 GPD/job	32,741	(1,536)
	OS-R	-	6.33	-	950	-	-	1,000 GPD/ac	6,330	6.33	-	950	-	-	1,000 GPD/ac	6,330	-
	PF	-	9.54	-	378,813	1,377	1,377	1,700 GPD/ac	16,224	10.72	-	378,813	1,377	1,377	1,700 GPD/ac	18,229	(2,005)
	PS	-	4.44	-	46,965	-	55	1,800 GPD/ac	7,983	4.44	-	46,965	-	55	1,800 GPD/ac	7,983	-
	Rail	-	11.56	-	-	-	3	-	-	11.56	-	-	-	3	-	-	-
	ROW	-	n/a	-	-	-	-	n/a	-	na	-	-	-	-	n/a	-	-
	Downtown TOTAL	-	-	n/a	14,365	3,337,784	6,232	7,472	-	1,350,527	-	-	-	-	-	-	1,223,489	127,037
West Holt	LDR	-	69.75	1,504	-	-	-	95 GPD/person	142,834	69.75	1,115	-	-	-	95 GPD/person	105,933	36,900
	LMDR	-	20.38	1,188	-	-	-	80 GPD/person	95,010	24.97	1,715	-	-	-	80 GPD/person	137,229	(42,219)
	HDR	-	44.12	2,826	-	-	-	60 GPD/person	169,568	39.53	4,631	-	-	-	60 GPD/person	277,850	(108,282)
	MU	West Holt	1.46	84	12,678	-	11	60 GPD/person 35 GPD/job (Office) 102 GPD/job (Non-Office)	6,111	-	-	-	-	-	60 GPD/person 35 GPD/job (Office) 102 GPD/job (Non-Office)	-	6,111
	GC	-	21.51	-	281,119	102	313	148 GPD/job	46,334	22.97	-	300,136	86	280	148 GPD/job	41,403	4,930
	BP	-	36.68	-	798,917	1,162	1,562	59 GPD/job	92,130	36.68	-	639,134	914	1,122	59 GPD/job	66,183	25,947
	IND	-	34.84	-	834,683	304	693	67 GPD/job	46,434	34.84	-	834,683	239	727	67 GPD/job	48,719	(2,286)
	Rail	-	14.87	-	-	-	4	-	-	14.87	-	-	-	4	-	-	-
	ROW	-	na	-	-	-	-	n/a	-	na	-	-	-	-	n/a	-	-
	West Holt TOTAL	-	-	n/a	5,601	1,927,397	1,568	2,582	-	598,421	-	-	-	-	-	-	677,318	(78,898)
East Holt	LDR	-	22.77	491	-	-	-	95 GPD/person	46,640	22.77	364	-	-	-	95 GPD/person	34,591	12,049
	LMDR	-	32.66	939	-	-	-	90 GPD/person	84,484	32.66	1,110	-	-	-	90 GPD/person	96,872	(15,388)
	MDR	-	49.99	2,914	-	-	-	80 GPD/person	233,112	49.99	3,435	-	-	-	80 GPD/person	274,806	(41,695)
	MU	East Holt	65.44	3,773	570,156	-	475	60 GPD/person 35 GPD/job (Office) 102 GPD/job (Non-Office)	274,839	57.28	859	1,746,572	3,568	3,926	60 GPD/person 35 GPD/job (Office) 102 GPD/job (Non-Office)	212,972	61,867
	NC	-	0.55	-	7,147	5	19	57 GPD/job	1,111	0.55	-	7,147	4	17	57 GPD/job	986	125
	HOS	-	17.37	-	756,423	550	1,020	130 GPD/room	148,992	17.37	-	756,423	433	867	130 GPD/room	148,992	-
	BP	-	100.66	-	2,192,308	3,189	4,285	59 GPD/job	252,813	108.82	-	1,896,116	2,711	3,328	59 GPD/job	196,344	56,469
	OS-NR	-	1.71	-	-	-	0	1,000 GPD/ac	1,711	1.71	-	-	-	0	1,000 GPD/ac	1,711	-
	OS-R	-	5.05	-	16,489	-	-	1,000 GPD/ac	5,049	5.05	-	16,489	-	-	1,000 GPD/ac	5,049	-
	Rail	-	32.73	-	-	-	8	-	-	32.73	-	-	-	8	-	-	-
ROW	-	na	-	-	-	-	n/a	-	na	-	-	-	-	n/a	-	-	
East Holt TOTAL	-	-	n/a	8,116	3,542,522	3,744	5,809	-	1,048,751	-	-	-	-	-	-	976,323	73,428
OAMC	LDR	-	9.54	274	-	-	-	90 GPD/person	24,666	9.54	324	-	-	-	90 GPD/person	29,158	(4,492)
	LMDR	-	78.80	4,593	-	-	-	80 GPD/person	367,428	78.80	5,414	-	-	-	80 GPD/person	433,147	(65,719)
	MDR	-	10.88	697	-	-	-	60 GPD/person	41,802	10.88	1,274	-	-	-	60 GPD/person	76,447	(34,645)
	MU	Meredith	90.77	4,651	691,939	-	577	60 GPD/person 35 GPD/job (Office) 102 GPD/job (Non-Office)	337,904	90.77	3,367	812,534	960	1,295	60 GPD/person 35 GPD/job (Office) 102 GPD/job (Non-Office)	270,435	67,469
	MU	Multi-Modal	72.56	1,673	2,449,557	5,172	5,993	60 GPD/person 35 GPD/job (Office) 102 GPD/job (Non-Office)	365,116	72.56	871	2,844,647	4,068	5,089	60 GPD/person 35 GPD/job (Office) 102 GPD/job (Non-Office)	298,765	66,351
	MU	Inland Empire	36.61	769	100,455	-	84	60 GPD/person 35 GPD/job (Office) 102 GPD/job (Non-Office)	54,684	36.61	732	350,796	684	764	60 GPD/person 35 GPD/job (Office) 102 GPD/job (Non-Office)	76,041	(21,357)
	MU	Guasti	86.34	1,991	2,012,077	2,872	3,848	60 GPD/person 35 GPD/job (Office) 102 GPD/job (Non-Office)	319,568	80.38	965	2,275,959	3,505	4,259	60 GPD/person 35 GPD/job (Office) 102 GPD/job (Non-Office)	257,467	62,101
	MU	Ontario Center	186.43	9,553	3,329,507	5,906	7,327	60 GPD/person 35 GPD/job (Office) 102 GPD/job (Non-Office)	924,869	346.33	8,312	9,051,718	21,573	22,656	60 GPD/person 35 GPD/job (Office) 102 GPD/job (Non-Office)	1,364,247	(439,378)
	MU	Ontario Center-Arena	169.20	13,006	1,621,435	2,680	3,417	60 GPD/person 35 GPD/job (Office) 102 GPD/job (Non-Office)	949,313	-	-	-	-	-	60 GPD/person 35 GPD/job (Office) 102 GPD/job (Non-Office)	-	949,313
	MU	Ontario Mills	249.38	10,223	3,394,666	1,481	3,971	60 GPD/person 35 GPD/job (Office) 102 GPD/job (Non-Office)	919,176	249.38	998	5,703,038	4,660	7,585	60 GPD/person 35 GPD/job (Office) 102 GPD/job (Non-Office)	521,240	397,936
	OC	-	210.97	-	6,892,451	17,544	19,268	35 GPD/job	674,364	226.22	-	7,390,546	14,796	16,388	35 GPD/job	573,563	100,800
	HOS	-	103.54	-	4,510,221	3,280	6,085	130 GPD/room	888,377	103.54	-	4,510,221	2,580	5,170	130 GPD/room	888,377	-
	BP	-	52.28	-	1,138,617	1,856	2,225	59 GPD/job	131,303	52.28	-	910,894	1,303	1,599	59 GPD/job	94,324	36,980
	IND	-	238.23	-	5,707,558	2,075	4,739	67 GPD/job	317,513	238.23	-	5,707,558	1,632	4,972	67 GPD/job	333,143	(15,630)
OS-NR	-	94.05	-	-	-	24	1,000 GPD/ac	94,046	94.05	-	-	-	24	1,000 GPD/ac	94,046	-	
OS-R	-	117.29	-	7,932	-	1	1,000 GPD/ac	117,285	117.29	-	7,932	-	1	1,000 GPD/ac	117,285	-	
PF	-	7.80	-	11,044	40	42	1,700 GPD/ac	13,266	7.80	-	11,044	40	42	1,700 GPD/ac	13,266	-	

OAMC	PS	-	9.01	-	-	-	-	1,800 GPD/ac	16,212	9.01	-	-	-	-	1,800 GPD/ac	16,212	-
OAMC	Rail	-	52.80	-	-	-	13	n/a	-	52.80	-	-	-	13	n/a	-	-
OAMC	ROW	-	na	-	-	-	-	n/a	-	na	-	-	-	-	n/a	-	-
OAMC TOTAL		-	na	47,431	31,867,459	42,708	57,613	-	6,556,892	-	-	-	-	-	-	5,457,163	1,099,728
Great Park Corridor	LDR	-	423.09	6,956	-	-	-	95 GPD/person	660,857	542.06	9,750	-	-	-	95 GPD/person	926,234	(265,377)
	MDR	-	62.65	1,946	-	-	-	90 GPD/person	175,123	93.21	3,167	-	-	-	90 GPD/person	284,997	(109,874)
	MDR ¹	-	631.66	44,998	-	-	-	80 GPD/person	3,599,842	605.50	43,666	-	-	-	80 GPD/person	3,493,274	106,568
	MDR	-	304.91	19,141	2,789,181	3,381	4,930	60 GPD/person 35 GPD/job (Office) 102 GPD/job (Non-Office)	1,424,818	296.65	6,230	6,331,794	15,522	16,171	60 GPD/person 35 GPD/job (Office) 102 GPD/job (Non-Office)	983,279	441,539
	MDR	-	81.71	2,931	1,601,747	2,589	3,117	60 GPD/person 35 GPD/job (Office) 102 GPD/job (Non-Office)	320,328	-	-	-	-	-	60 GPD/person 35 GPD/job (Office) 102 GPD/job (Non-Office)	-	320,328
	MDR	-	23.37	838	458,013	740	891	60 GPD/person 35 GPD/job (Office) 102 GPD/job (Non-Office)	91,597	-	-	-	-	-	60 GPD/person 35 GPD/job (Office) 102 GPD/job (Non-Office)	-	91,597
	MDR	-	2.95	132	51,440	-	129	60 GPD/person 35 GPD/job (Office) 102 GPD/job (Non-Office)	21,060	-	-	-	-	-	60 GPD/person 35 GPD/job (Office) 102 GPD/job (Non-Office)	-	21,060
	MDR	-	47.59	-	621,906	226	693	148 GPD/job	102,501	44.32	-	579,129	166	540	148 GPD/job	79,890	22,611
	MDR	-	-	-	-	-	-	57 GPD/job	-	11.06	-	144,574	83	350	57 GPD/job	19,939	(19,939)
	MDR	-	-	-	-	-	-	35 GPD/job	-	40.34	-	1,318,069	2,639	2,923	35 GPD/job	102,292	(102,292)
	MDR	-	53.14	-	1,157,404	1,052	1,525	59 GPD/job	89,963	-	-	-	-	-	59 GPD/job	-	89,963
	MDR	-	103.78	-	-	-	18	1,000 GPD/ac	103,776	98.56	-	-	-	17	1,000 GPD/ac	98,557	5,219
	MDR	-	208.57	-	30,396	-	33	1,000 GPD/ac	208,571	211.72	-	30,396	-	33	1,000 GPD/ac	211,723	(3,152)
	MDR	-	1.38	-	-	-	0	1,700 GPD/ac	2,349	1.38	-	-	-	0	1,700 GPD/ac	2,349	-
	MDR	-	10.89	-	-	-	2	1,800 GPD/ac	19,594	10.89	-	-	-	2	1,800 GPD/ac	19,594	-
	MDR	-	na	-	-	-	-	n/a	-	na	-	-	-	-	n/a	-	-
	MDR	ROW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Great Park TOTAL		-	na	76,943	6,710,087	7,988	11,337	-	6,820,379	-	-	-	-	-	-	6,222,128	598,251
na	RR	-	528.69	3,863	-	-	-	172 GPD/person	664,508	528.69	4,226	-	-	-	172 GPD/person	726,932	(62,425)
na	LDR	-	5,159.74	102,509	-	-	-	95 GPD/person	9,738,321	5,625.31	94,252	-	-	-	95 GPD/person	8,953,963	784,358
na	LDR	-	132.56	2,992	-	-	-	95 GPD/person	284,281	132.56	3,274	-	-	-	95 GPD/person	310,987	(26,706)
na	LDR	-	236.20	6,449	-	-	-	95 GPD/person	612,644	236.20	7,055	-	-	-	95 GPD/person	670,197	(57,553)
na	LDR	-	318.87	7,628	-	-	-	95 GPD/person	724,616	343.72	9,665	-	-	-	95 GPD/person	918,151	(193,535)
na	LMDR	-	732.14	21,913	-	-	-	90 GPD/person	1,972,153	755.23	25,658	-	-	-	90 GPD/person	2,309,259	(337,105)
na	MDR ¹	-	1,384.05	90,581	-	-	-	80 GPD/person	7,246,515	1,152.78	81,058	-	-	-	80 GPD/person	6,484,661	761,854
na	MDR	-	43.21	2,212	-	-	-	80 GPD/person	176,929	43.21	2,607	-	-	-	80 GPD/person	208,575	(31,646)
na	HDR	-	122.92	8,228	-	-	-	60 GPD/person	493,708	105.08	12,310	-	-	-	60 GPD/person	738,598	(244,891)
na	MDR	-	12.68	487	220,912	-	552	60 GPD/person 35 GPD/job (Office) 102 GPD/job (Non-Office)	85,570	10.45	313	182,045	-	420	60 GPD/person 35 GPD/job (Office) 102 GPD/job (Non-Office)	61,690	23,880
na	MDR	-	7.81	350	136,070	-	340	60 GPD/person 35 GPD/job (Office) 102 GPD/job (Non-Office)	55,708	-	-	-	-	-	60 GPD/person 35 GPD/job (Office) 102 GPD/job (Non-Office)	-	55,708
na	MDR	-	16.40	945	142,840	-	357	60 GPD/person 35 GPD/job (Office) 102 GPD/job (Non-Office)	93,137	-	-	-	-	-	60 GPD/person 35 GPD/job (Office) 102 GPD/job (Non-Office)	-	93,137
na	MDR	-	7.17	643	75,008	-	188	60 GPD/person 35 GPD/job (Office) 102 GPD/job (Non-Office)	57,733	-	-	-	-	-	60 GPD/person 35 GPD/job (Office) 102 GPD/job (Non-Office)	-	57,733
na	MDR	-	154.34	6,122	289,088	171	373	60 GPD/person 35 GPD/job (Office) 102 GPD/job (Non-Office)	393,857	196.52	6,084	368,104	171	393	60 GPD/person 35 GPD/job (Office) 102 GPD/job (Non-Office)	393,626	232
na	MDR	-	36.10	2,104	385,285	400	630	60 GPD/person 35 GPD/job (Office) 102 GPD/job (Non-Office)	163,667	-	-	-	-	-	60 GPD/person 35 GPD/job (Office) 102 GPD/job (Non-Office)	-	163,667
na	MDR	-	15.00	1,009	130,662	-	327	60 GPD/person 35 GPD/job (Office) 102 GPD/job (Non-Office)	93,843	-	-	-	-	-	60 GPD/person 35 GPD/job (Office) 102 GPD/job (Non-Office)	-	93,843
na	MDR	-	245.68	-	3,210,523	2,335	6,756	57 GPD/job	499,090	261.80	-	3,421,266	1,957	8,278	57 GPD/job	471,847	27,244
na	MDR	-	316.07	-	4,130,369	1,502	4,600	148 GPD/job	680,760	370.71	-	4,844,384	1,385	4,515	148 GPD/job	668,278	12,482
na	MDR	-	-	-	-	-	-	148 GPD/job	601,692	3.57	-	46,636	13	43	148 GPD/job	6,433	(6,433)
na	MDR	-	77.65	-	2,536,910	6,458	7,092	35 GPD/job	248,214	77.65	-	2,536,910	5,079	5,625	35 GPD/job	196,884	51,330
na	MDR	-	3.69	-	120,570	307	337	35 GPD/job	11,797	3.69	-	120,570	241	267	35 GPD/job	9,357	2,440
na	MDR	-	21.71	-	945,853	688	1,276	130 GPD/room	186,304	21.71	-	945,853	541	1,084	130 GPD/room	186,304	-
na	MDR	-	461.40	-	10,049,294	14,617	19,642	59 GPD/job	1,158,866	851.23	-	14,831,785	21,209	26,031	59 GPD/job	1,535,842	(376,976)
na	MDR	-	355.42	-	7,740,997	7,037	10,198	59 GPD/job	601,692	-	-	-	-	-	59 GPD/job	-	601,692
na	MDR	-	82.11	-	1,788,263	2,601	3,495	59 GPD/job	206,219	82.11	-	1,430,611	2,046	2,511	59 GPD/job	148,141	58,078
na	MDR	-	4.82	-	104,964	153	205	59 GPD/job	12,104	4.82	-	83,971	120	147	59 GPD/job	8,695	3,409
na	MDR	-	2.67	-	58,171	85	114	59 GPD/job	6,708	2.67	-	46,537	67	82	59 GPD/job	4,819	1,889
na	MDR	-	7,242.26	-	173,509,950	58,506	140,108	67 GPD/job	9,387,229	6,904.17	-	165,410,001	47,307	144,101	67 GPD/job	9,654,777	(267,548)
na	MDR	-	59.45	-	1,424,236	518	1,183	67 GPD/job	79,231	59.45	-	1,424,236	407	1,241	67 GPD/job	83,131	(3,900)
na	MDR	-	0.71	-	17,021	6	14	67 GPD/job	947	0.71	-	17,021	5	15	67 GPD/job	993	(47)
na	MDR	-	1.01	-	24,187	9	20	67 GPD/job	1,346	1.01	-	24,187	7	21	67 GPD/job	1,412	(66)
na	MDR	-	63.37	-	1,518,211	552	1,261	67 GPD/job	84,459	63.37	-	1,518,211	434	1,323	67 GPD/job	88,616	(4,158)
na	MDR	-	997.50	-	269,330	-	199	1,000 GPD/ac	997,496	987.98	-	269,330	-	196	1,000 GPD/ac	987,978	9,518
na	MDR	-	3.19	-	-	-	1	1,000 GPD/ac	3,189	3.19	-	-	-	1	1,000 GPD/ac	3,189	-
na	MDR	-	562.73	-	122,457	-	23	1,000 GPD/ac	562,728	544.54	-	122,457	-	21	1,000 GPD/ac	544,539	18,188
na	MDR	-	12.77	-	15,231	-	-	1,000 GPD/ac	12,775	12.77	-	15,231	-	-	1,000 GPD/ac	12,775	-
na	MDR	-	17.31	-	-	-	-	GPD/ac	-	59.18	-	-	-	-	GPD/ac	-	-
na	MDR	-	70.93	-	105,831	356	388	1,700 GPD/ac	120,586	70.93	-	105,831	356	388	1,700 GPD/ac	120,586	-
na	MDR	-	589.59	-	2,628,443	-	3,045	1,800 GPD/ac	1,061,259	587.23	-	2,628,443	-	3,045	1,800 GPD/ac	1,057,010	4,248

	ARPT	-	1,422.67	-	2,401,641	-	6,400	67 GPD/job	428,800	1,422.67	-	2,401,641	-	6,400	67 GPD/job	428,800	-
	LF Landfill Impact Area	-	136.57	-	3,264	-	34	n/a	-	136.57	-	3,264	-	34	n/a	-	-
	Rail	-	127.80	-	978	-	32	n/a	-	127.80	-	978	-	32	n/a	-	-
	Rail Landfill Impact Area	-	9.80	-	-	-	2	n/a	-	9.80	-	-	-	2	n/a	-	-
	ROW	-	n/a	-	-	-	-	n/a	-	na	-	-	-	-	n/a	-	-
Outside of Focus Area TOTAL	-	-	n/a	258,036	214,106,559	96,301	211,190	-	39,208,988	-	-	-	-	-	-	37,997,045	1,211,943
Citywide Total	-	-	32,022	410,492	261,491,779	158,541	296,002	-	55,583,957	104,163	260,399,271	168,833	313,067	-	-	52,552,467	3,031,490
								Total Potable Water AFY	61,142					Total Potable Water AFY	57,808	3,335	
								Total Recycled Water AFY	16,985					Total Recycled Water AFY	16,059	926	
								TOTAL WATER AFY	78,128					TOTAL WATER AFY	73,867	4,261	

Proposed TOP Reduced Water Demand Estimates

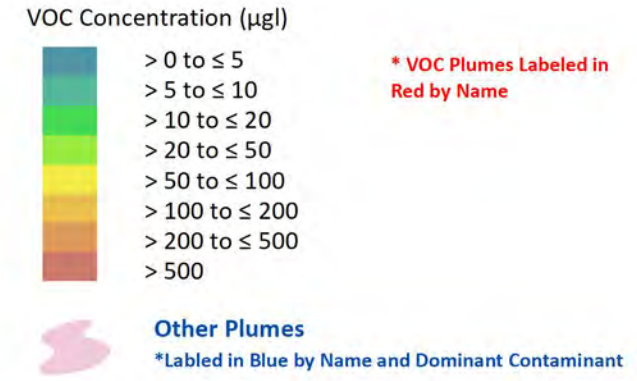
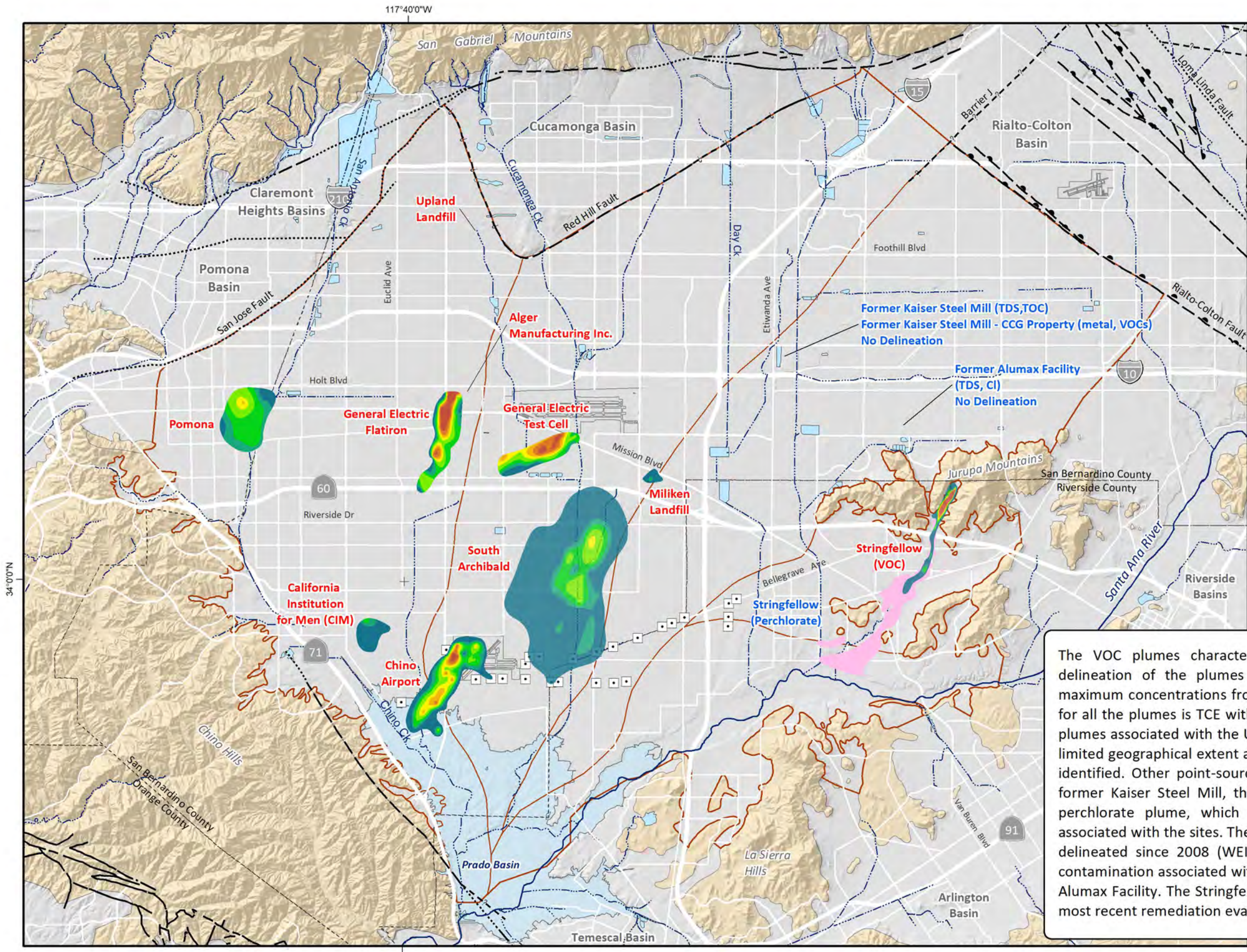
TOP Land Use		Overlay or Mixed-Use Subarea		Projected Buildout of Proposed TOP											Recycled Water Demand		Total Water Demand	
				2050 Future Projections (Proposed TOP)						Potable Water Demand (by LU)					AFY (projected - Citywide total only)	AFY (Citywide total only)		
				Acres	Housing Capacity (DU)	Lower Inc. Housing Capacity (DU)	Households (HH)	Population (Pop)	Non-Res Bldg Capacity (Sq.Ft.)	Jobs	GPD (RW rate from 2020 WWP with water reduction factors applied) ²	Units	GPD (calculated total)	AFY				
															AFY (projected - Citywide total only)		AFY (Citywide total only)	
RR	-	529	1,057	-	1,015	3,863	-	-	50	GPD/ person	193,171	212	-	-				
LDR	-	6,532	36,173	-	34,726	132,167	-	-	50	GPD/ person	6,608,328	7,269	-	-				
LMDR	-	882	7,496	-	7,197	26,363	-	-	50	GPD/ person	1,318,154	1,450	-	-				
MDR	-	2,221	45,469	5,291	43,650	147,233	-	-	50	GPD/ person	7,361,645	8,008	-	-				
HDR	-	206	5,299	275	5,087	13,577	-	-	50	GPD/ person	678,843	747	-	-				
MU	Downtown	128	2,678	20	2,571	6,862	1,777,586	3,973	50	GPD/ person 28 GPD/ job (Office) 82 GPD/ job (Non-Office)	494,315	544	-	-				
	East Holt	65	1,473	340	1,414	3,773	570,156	475	50	GPD/ person 28 GPD/ job (Office) 82 GPD/ job (Non-Office)	227,607	250	-	-				
	West Holt	1	33	16	31	84	12,678	11	50	GPD/ person 28 GPD/ job (Office) 82 GPD/ job (Non-Office)	5,061	6	-	-				
	Meredith	91	1,815	-	1,743	4,651	691,939	577	50	GPD/ person 28 GPD/ job (Office) 82 GPD/ job (Non-Office)	279,857	308	-	-				
	Multi-Modal	73	653	-	627	1,673	2,449,557	5,993	50	GPD/ person 28 GPD/ job (Office) 82 GPD/ job (Non-Office)	295,768	325	-	-				
	Inland Empire	37	300	-	288	769	100,455	84	50	GPD/ person 28 GPD/ job (Office) 82 GPD/ job (Non-Office)	45,319	50	-	-				
	Guast	86	777	-	746	1,991	2,012,077	3,848	50	GPD/ person 28 GPD/ job (Office) 82 GPD/ job (Non-Office)	260,027	286	-	-				
	Ontario Center	186	3,729	129	3,579	9,553	3,329,507	7,327	50	GPD/ person 28 GPD/ job (Office) 82 GPD/ job (Non-Office)	759,571	836	-	-				
	Ontario Center-Arena	169	5,076	55	4,873	13,006	1,621,435	3,417	50	GPD/ person 28 GPD/ job (Office) 82 GPD/ job (Non-Office)	785,756	864	-	-				
	Ontario Mills	249	3,990	1,577	3,830	10,223	3,394,666	3,971	50	GPD/ person 28 GPD/ job (Office) 82 GPD/ job (Non-Office)	756,783	832	-	-				
	Euclid & Francis	13	190	17	183	487	220,912	552	50	GPD/ person 28 GPD/ job (Office) 82 GPD/ job (Non-Office)	69,651	77	-	-				
	Mountain Village	8	137	-	131	350	136,070	340	50	GPD/ person 28 GPD/ job (Office) 82 GPD/ job (Non-Office)	45,403	50	-	-				
	Euclid & Walnut	16	369	-	354	945	142,840	357	50	GPD/ person 28 GPD/ job (Office) 82 GPD/ job (Non-Office)	76,543	84	-	-				
	Mountain & Fourth	7	251	-	241	643	75,008	188	50	GPD/ person 28 GPD/ job (Office) 82 GPD/ job (Non-Office)	47,548	52	-	-				
	Rich-Haven	154	2,389	-	2,294	6,122	289,088	373	50	GPD/ person 28 GPD/ job (Office) 82 GPD/ job (Non-Office)	327,410	360	-	-				
	Parkside	3	52	-	50	132	51,440	129	50	GPD/ person 28 GPD/ job (Office) 82 GPD/ job (Non-Office)	17,164	19	-	-				
	Eucalyptus	105	1,471	572	1,412	3,769	2,050,760	4,008	50	GPD/ person 28 GPD/ job (Office) 82 GPD/ job (Non-Office)	337,350	371	-	-				
	Grove	36	821	154	788	2,104	385,285	630	50	GPD/ person 28 GPD/ job (Office) 82 GPD/ job (Non-Office)	135,234	149	-	-				
	Great Park	305	7,470	2,713	7,171	19,141	2,789,181	4,930	50	GPD/ person 28 GPD/ job (Office) 82 GPD/ job (Non-Office)	1,178,755	1,297	-	-				
Euclid & Riverside	15	394	98	378	1,009	130,662	327	50	GPD/ person 28 GPD/ job (Office) 82 GPD/ job (Non-Office)	77,223	85	-	-					
NC	-	248	-	-	-	-	3,238,367	8,832	46	GPD/ job	402,735	443	-	-				
GC	-	385	-	-	-	-	5,033,395	5,605	118	GPD/ job	663,676	730	-	-				
	LDR w/ Commercial Ovrly	-	-	-	-	-	-	-	118	GPD/ job	-	-	-	-				
OC	-	306	-	-	-	-	9,981,163	27,902	28	GPD/ job	781,253	859	-	-				
	Landfill Impact Area	4	-	-	-	-	120,570	337	28	GPD/ job	9,437	10	-	-				
HOS	-	143	-	-	-	-	6,212,498	8,381	104	GPD/ room	978,939	1,077	-	-				
BP	-	1,080	-	-	-	-	23,077,537	39,437	47	GPD/ job	1,861,414	2,048	-	-				
	LDR w/ Bus. Park Ovrly	82	-	-	-	-	1,788,263	3,495	47	GPD/ job	164,975	181	-	-				
	LMDR w/ Bus. Park Ovrly	5	-	-	-	-	104,964	205	47	GPD/ job	9,683	11	-	-				
	NC w/ Bus. Park Ovrly	3	-	-	-	-	58,171	114	47	GPD/ job	5,367	6	-	-				
IND	-	7,539	-	-	-	-	180,613,131	146,006	54	GPD/ job	7,825,905	8,608	-	-				
	LDR w/ Industrial Ovrly	59	-	-	-	-	1,424,236	1,183	54	GPD/ job	63,385	70	-	-				
	NC w/ Industrial Ovrly	1	-	-	-	-	17,021	14	54	GPD/ job	758	1	-	-				
	IND w/ Industrial Ovrly	1	-	-	-	-	24,187	20	54	GPD/ job	1,076	1	-	-				
	Landfill Impact Area	63	-	-	-	-	1,518,211	1,261	54	GPD/ job	67,567	74	-	-				
OS-NR	-	1,197	-	-	-	-	269,330	241	800	GPD/ ac	957,623	1,053	-	-				
	Landfill Impact Area	3	-	-	-	-	-	1	800	GPD/ ac	2,551	3	-	-				
OS-R	-	900	-	-	-	-	178,224	57	800	GPD/ ac	719,970	792	-	-				

OS-R w/ Industrial Ovrly ²	13	-	-	-	-	15,231	-	800	GPD/ ac	10,220	11	-	-
OS-W	17	-	-	-	-	-	-	-	GPD/ ac	-	-	-	-
PF	90	-	-	-	-	495,688	1,806	1,360	GPD/ ac	121,940	134	-	-
PS	614	-	-	-	-	2,675,408	3,102	1,440	GPD/ ac	884,038	972	-	-
ARPT	1,423	-	-	-	-	2,401,641	6,400	54	GPD/job	343,040	377	-	-
LF	Landfill Impact Area	137	-	-	-	-	3,264	34	-	-	-	-	-
Rail	Landfill Impact Area	240	-	-	-	978	60	-	-	-	-	-	-
ROW	Landfill Impact Area	10	-	-	-	-	2	-	-	-	-	-	-
TOTAL		32,022	129,862	11,258	124,380	410,492	261,491,779	296,002		38,258,036	42,084	17,157	69,240

NOTES:
1. New Regulations. The following state laws, changes in the building code, and water service costs are anticipated to substantially lower water demand rates throughout the state:
• SB 606 and AB 1668, which establish indoor water use standards (55 gallons/person/day until 2025 and then drops to 50 gpcd), outdoor water standards, and water loss standards that water suppliers must meet by 2025
• New construction is subject to CalGreen Code requirements, which results in a typical 20% reduction in indoor water use
• SB 407, which requires all buildings in California to meet current plumbing fixture standards within this decade, which will require retrofitting of existing homes and businesses
• Increases in water service costs, which will provide an incentive for additional water-saving practices
2. Reduction in Water Demand Factors. To reflect the requirements listed in note 1, the following assumptions are included in this table:
• 50 gpd/person was assumed for all residential uses to account for requirements of SB 606 and AB 1668.
• A 20% reduction, compared to the rates published in the Draft WMP, was assumed for all non-residential uses to account for changes in CalGreen and new building code requirements listed in note 1.

ATTACHMENT C

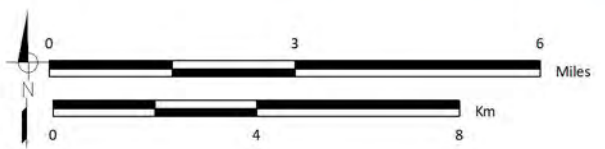
CHINO BASIN GROUNDWATER PLUME MAP



Other key map features are described in the legend of Exhibit 1-1.

The VOC plumes shown on this map are generalized illustrations of the estimated spatial extent of TCE or PCE, based on the maximum concentration measured at wells from July 2015 to June 2020. The estimated spatial distribution of VOC concentrations were generated by an ordinary kriging method performed using PyKriging, a kriging toolkit for Python. The experimental semivariograms were approximated using a spherical semivariogram whose parameters (range, sill and nugget) and anisotropy (ratio and angle) were chosen through trial and error, taking into account local groundwater flow directions predicted by the Chino Basin groundwater flow model. The plume extents were determined based on measured concentrations and local groundwater flow patterns.

The VOC plumes characterized by color ramp are Watermaster's most recent delineation of the plumes for the primary contaminant based on the five-year maximum concentrations from July 2015 to June 2020. The primary VOC contaminant for all the plumes is TCE with the exception of the CIM plume, which is PCE. The VOC plumes associated with the Upland Landfill and the Alger Manufacturing Facility are of limited geographical extent at the scale of this map, so only their general locations are identified. Other point-source contamination plumes in the Chino Basin include the former Kaiser Steel Mill, the former Alumas Facility, and the Stringfellow NPL Site perchlorate plume, which are labeled by name and the primary contaminants associated with the sites. The former Kaiser Steel Mill TDS and TOC plume has not been delineated since 2008 (WEI, 2008b), and there are no plume delineations for the contamination associated with the former Kaiser Steel Mill CCG Property or the former Alumas Facility. The Stringfellow perchlorate plume shown here was delineated in the most recent remediation evaluation report for the site (Kleinfelder, 2019).



Appendix H Noise Monitoring and Modeling

Appendices

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CHAPTER 29: NOISE

- 5-29.01 Declaration of findings and policy
- 5-29.02 Definitions
- 5-29.03 Designated noise zones
- 5-29.04 Exterior noise standards
- 5-29.05 Interior noise standards
- 5-29.06 Exemptions
- 5-29.07 Loud and disturbing noise
- 5-29.08 Real property maintenance noise regulations
- 5-29.09 Construction activity noise regulations
- 5-29.10 Other public agency exceptions
- 5-29.11 Schools, day care centers, churches, libraries, museums, health care institutions; Special provisions
- 5-29.12 Sound amplifying equipment
- 5-29.13 Amplified sound
- 5-29.14 Motor vehicles
- 5-29.15 Noise level measurement
- 5-29.16 Prima facie violation
- 5-29.17 Penalty
- 5-29.18 Enforcement and administration
- 5-29.19 City Manager waiver
- 5-29.20 Noise abatement program

Sec. 5-29.01. Declaration of findings and policy.

It is hereby found and declared that:

(a) The making and creation of excessive, unnecessary or unusually loud noises within the limits of the City is a condition that has existed for some time, however, the extent and volume of such noises is increasing;

(b) The making, creation or maintenance of such excessive, unnecessary, unnatural or unusually loud noises that are prolonged, unusual and unnatural in their time, place and use affect and are a detriment to public health, comfort, convenience, safety, welfare and prosperity of the residents of the City; and

(c) The necessity in the public interest for the provisions and prohibitions hereinafter contained and enacted, is declared as a matter of legislative determination and public policy, and it is further declared

that the provisions and prohibitions hereinafter contained and enacted are in pursuance of and for the purpose of securing and promoting the public health, comfort, convenience, safety, welfare and prosperity and the peace and quiet of the residents of the City.

(§ 2, Ord. 2888, eff. March 6, 2008)

Sec. 5-29.02. Definitions.

As used in this chapter, specific words and phrases are defined as follows:

(a) "Ambient noise level" shall mean the all-encompassing noise level associated with a given environment and is a composite of sounds from all sources, excluding the alleged offensive noise or excessive sound, at the location and approximate time at which a comparison with the alleged offensive noise is to be made.

(b) "Applicable (noise) zone" shall mean the noise zone category based on the actual use of the property, provided that the actual use is a legal use in the City.

(c) "A-weighted sound level" shall mean the sound pressure level in decibels (dBAs) as measured with a sound level meter using the A-weighted filter network (scale) at slow response and at a pressure of twenty (20) micropascals. The A-weighted filter de-emphasizes the very low and a very high frequency component of sound in a manner similar to the response of the human ear, and is a numerical method of rating human judgment of loudness.

(d) "Decibel (dBA)" shall mean a unit for measuring the amplitude of a sound, equal to twenty (20) times the logarithm to the base ten (10) of the ratio of pressure of the sound measured to the reference pressure of twenty (20) micropascals.

(e) "Equivalent sound or noise level (Leq)" shall mean the International Electrotechnical Commission (IEC) 60804 Standard for measurement, or the most recent revision thereof, for the sound level corresponding to a steady state noise level over a given sample period with the same amount of acoustic energy as the actual time varying noise level or the energy average noise level during the sample period. The measurement period for the purposes of this chapter is fifteen (15) minutes.

(f) "Impulsive noise" shall mean a noise of short duration usually less than one (1) second and of high intensity, with an abrupt onset and rapid decay. Such objectionable noises may also be repetitive.

(g) "Intrusive noise" shall mean that noise that intrudes over and above the ambient noise at a given location. The relative intrusiveness of a sound depends upon its amplitude, duration, frequency, time of occurrence and tonal information content, as well as the prevailing ambient noise level.

(h) "Maintenance" shall mean the upkeep, repair or preservation of existing property or structures.

(i) "Noise" shall mean any unwanted sound or sound that is undesirable because it interferes with speech and hearing, or is intense enough to damage hearing or is otherwise annoying.

(j) "Noise level (sound level)" shall mean the weighted sound pressure level obtained by use of a sound level meter having a standard frequency filter for attenuating part of the sound spectrum. For purposes of this chapter, all noise levels (sound levels) shall be A-weighted sound pressure level.

(k) "Noise (sound) level meter" shall mean an instrument, including a microphone, an amplifier, an output meter and frequency weighting networks for the measurement and determination of noise and sound levels. For the purposes of this chapter, the sound level meter must meet the International Electrotechnical Commission (IEC) 60651 and 60804 Standards, or the most recent revisions thereof, for Type 1 sound level meters or an instrument and the associated recording and analyzing equipment that will provide equivalent data.

(§ 2, Ord. 2888, eff. March 6, 2008)

Sec. 5-29.03. Designated noise zones.

The properties hereinafter described shall be assigned to the following noise zones:

Noise Zone I:	All single-family residential properties;
Noise Zone II:	All multi-family residential properties and mobile home parks;
Noise Zone III:	All commercial property;
Noise Zone IV:	The residential portion of mixed use properties;
Noise Zone V:	All manufacturing or industrial properties and all other uses.

The actual use of the property, and not necessarily its zoning designation, shall be the determining factor in establishing whether a property is in Noise Zone I, II, III, IV or V, provided that the actual use is a legal use within the applicable zone.

(§ 2, Ord. 2888, eff. March 6, 2008)

Sec. 5-29.04. Exterior noise standards.

(a) The following exterior noise standards, unless otherwise specifically indicated, shall apply to all properties within a designated noise zone.

<i>Allowable Exterior Noise Level (1)</i>		<i>Allowed Equivalent Noise Level, Leq. (2)</i>	
<i>Noise Zone</i>	<i>Type of Land Use</i>	<i>7 a.m. to 10 p.m.</i>	<i>10 p.m. to 7 a.m.</i>
I	Single-Family Residential	65 dBA	45 dBA
II	Multi-Family Residential, Mobile Home Parks	65 dBA	50 dBA
III	Commercial Property	65 dBA	60 dBA
IV	Residential Portion of Mixed Use	70 dBA	70 dBA
V	Manufacturing and Industrial, Other Uses	70 dBA	70 dBA

(1) If the ambient noise level exceeds the resulting standard, the ambient noise level shall be the standard.

(2) Measurements for compliance are made on the affected property pursuant to § 5-29.15.

(b) It is unlawful for any person at any location within the incorporated area of the City to create noise, or to allow the creation of any noise on property owned, leased, occupied or otherwise controlled by such person, which noise causes the noise level, when measured at any location on any other property, to exceed either of the following:

(1) The noise standard for the applicable zone for any fifteen-minute (15) period; and

(2) A maximum instantaneous (single instance) noise level equal to the value of the noise standard plus twenty (20) dBA for any period of time (measured using A-weighted slow response).

(c) In the event the ambient noise level exceeds the noise standard, the maximum allowable noise level under such category shall be increased to reflect the maximum ambient noise level.

(d) The Noise Zone IV standard shall apply to that portion of residential property falling within one hundred (100) feet of a commercial property or use, if the noise originates from that commercial property or use.

(e) If the measurement location is on a boundary between two (2) different noise zones, the lower noise level standard applicable to the noise zone shall apply.

(§ 2, Ord. 2888, eff. March 6, 2008)

Sec. 5-29.05. Interior noise standards.

(a) The following interior noise standards, unless otherwise specifically indicated, shall apply to all properties within a designated noise zone.

Allowable Interior Noise Level (1)		Allowed Equivalent Noise Level, Leq. (2)	
Noise Zone	Type of Land Use	7 a.m. to 10 p.m.	10 p.m. to 7 a.m.
I	Single-Family Residential	45 dBA	40 dBA
II	Multi-Family Residential, Mobile Home Parks	45 dBA	40 dBA
IV	Residential Portion of Mixed Use	45 dBA	40 dBA

(1) If the ambient noise level exceeds the resulting standard, the ambient noise level shall be the standard.

(2) Measurements for compliance are made on the affected property pursuant to § 5-29.15.

(b) It is unlawful for any person at any location within the incorporated area of the City to create noise, or to allow the creation of any noise on property owned, leased, occupied or otherwise controlled by such person, which noise causes the noise level, when measured at any location on any other property, to exceed either of the following:

(1) The noise standard for the applicable zone for any fifteen-minute (15) period;

(2) A maximum instantaneous (single instance) noise level equal to the value of the noise standard plus twenty (20) dBA for any period of time (measured using A-weighted slow response).

(c) In the event the ambient noise level exceeds the noise standard, the maximum allowable noise level under such category shall be increased to reflect the maximum ambient noise level.

(d) The Noise Zone IV standard shall apply to that portion of residential property falling within one hundred (100) feet of a commercial property or use, if the noise originates from that commercial property or use.

(e) If the measurement location is on a boundary between two (2) different noise zones, the lower noise level standard applicable to the noise zone shall apply.

(§ 2, Ord. 2888, eff. March 6, 2008)

Sec. 5-29.06. Exemptions.

The following activities shall be exempted from the provisions of this chapter:

(a) Any activity conducted on public property, or on private property with the consent of the owner, by any public entity or its officers, employees, representatives, agents, subcontractors, permittees, licensees or lessees that the public entity has authorized are exempt from the provisions of this chapter. This includes, without limitation, sporting and recreational activities that are sponsored, co-sponsored, permitted or allowed by the City or any school district within the City's jurisdictional boundaries. This also includes, without limitation, occasional outdoor gatherings, public dances, shows or sporting and entertainment events, provided such events are conducted pursuant to an approval, authorization, contract, lease, permit or sublease by the appropriate public entity, specifically the planning commission or City Council;

(b) Occasional outdoor gatherings, public dances, show, sporting and entertainment events, provided said events are conducted pursuant to a permit or license issued by the appropriate jurisdiction relative to the staging of said events;

(c) Any mechanical device, apparatus or equipment used, related to or connected with emergency machinery, vehicle, work or warning alarm or bell, provided the sounding of any bell or alarm on any building or motor vehicle shall terminate its operation within forty-five (45) minutes in any hour of its being activated;

(d) Noise sources associated with construction, repair, remodeling, demolition or grading of any real property. Such activities shall instead be subject to the provisions of § 5-29.09;

(e) Noise sources associated with construction, repair, remodeling, demolition or grading of public rights-of-way or during authorized seismic surveys;

(f) All mechanical devices, apparatus or equipment associated with agriculture operations provided that:

(1) Operations do not take place between 8:00 p.m. and 7:00 a.m.;

(2) Such operations and equipment are utilized for the protection or salvage of agricultural crops during periods of potential or actual frost damage or other adverse weather conditions; or

(3) Such operations and equipment are associated with agricultural pest control through pesticide application, provided the application is made in accordance with permits issued by or regulations enforced by the California Department of Agriculture;

(g) Noise sources associated with the maintenance of real property. Such activities shall instead be subject to the provisions of § 5-29.08;

(h) Any activity to the extent regulation thereof has been preempted by state or federal law;

(i) Any noise sources associated with people and/or music associated with a party at a residential property. Such noise shall be subject to the provisions of OMC § 5-29.07;

(j) Any noise source emanating from an ice cream truck within the City. Such noise shall be subject to the provisions of OMC § 4-18.04;

(k) Any noise sources associated with barking dogs or other intermittent noises made by animals on any property within the City. Such noise shall be subject to the provisions of OMC Chapter 1, Title 6;

(l) Noise sources related to uses approved by a permit or development agreement adopted prior to the date of adoption of this chapter and that contains acoustic or noise standard conditions of approval. This exemption shall only be applicable during the effective period of the City-approved permit or development agreement.

(§ 2, Ord. 2888, eff. March 6, 2008)

Sec. 5-29.07. Loud and disturbing noise.

(a) It is unlawful for any person or property owner within the City to make, cause or allow to be made any loud, excessive, impulsive or intrusive noise, disturbance or commotion that disturbs the peace or quiet of any area or that causes discomfort or annoyance to any reasonable person of normal sensitivities in the area, after a Police or Code Enforcement Officer has first requested that the person or property owner cease and desist from making such noise. The types of loud, disturbing, excessive, impulsive or intrusive noise may include, but shall not be limited to, yelling, shouting, hooting, whistling, singing, playing a musical instrument, or emitting or transmitting any loud music or noise from any mechanical or electrical sound making or sound-amplifying device.

(b) The factors, standards, and conditions that may be considered in determining whether a violation of the provisions of this section has been committed, included, but not limited to, the following:

- (1) The level of the noise;
- (2) The level and intensity of the background (ambient) noise, if any;
- (3) The proximity of the noise to residential or commercial sleeping areas;
- (4) The nature and zoning of the area within which the noise emanates;
- (5) The density of inhabitation of the area within which the noise emanates;
- (6) The time of day and night the noise occurs;
- (7) The duration of the noise;
- (8) Whether the noise is constant, recurrent or intermittent;
- (9) Whether the noise is produced by a commercial or noncommercial activity; and
- (10) Whether the use is lawful under the provisions of Title 5 of this Code and whether the noise is one that could reasonably be expected from the activity or allowed use.

(§ 2, Ord. 2888, eff. March 6, 2008)

Sec. 5-29.08. Real property maintenance noise regulations.

(a) No person, while engaged in maintenance of real property, shall operate any tool, equipment or machine in a manner that produces loud noise that disturbs a person of normal sensitivity who works or resides in the vicinity, or a Police or Code Enforcement Officer, except between the hours of 8:00 a.m. and 6:00 p.m.

(b) Trimming or pruning that requires the use of chainsaws or mulching machines shall only be allowed between the hours of 8:00 a.m. and 6:00 p.m. on a weekday and between the hours of 9:00 a.m. and 5:00 p.m. on Saturday or Sunday.

(c) The use of electrical or gasoline powered blowers, such as commonly used by gardeners or other persons for cleaning lawns, yards, driveways, gutters and other property shall only be allowed between the hours of 8:00 a.m. and 6:00 p.m. on a weekday and between the hours of 9:00 a.m. and 5:00 p.m. on Saturday or Sunday.

(d) No landowner, gardener, property maintenance service, contractor, subcontractor or employer shall permit or allow any person or persons working under his or her direction or control to operate any tool, equipment or machine in violation of the provisions of this section.

(e) Exceptions. The provisions of this section shall not apply to the following:

(1) Emergency property maintenance required by the building official;

(2) The maintenance, repair or improvement of any public work or facility by public employees, by any person or persons acting pursuant to a public works contract, or by any person or persons performing such work or pursuant to the direction of, or on behalf of, any public agency; provided, however, this exception shall not apply to the City, or its employees, contractors or agents, unless:

(i) The City Manager or department head determines that the maintenance, repair or improvement is immediately necessary to maintain public service,

(ii) The maintenance, repair or improvement is of a nature that cannot feasibly be conducted during normal business hours, or

(iii) The City Council has approved project specifications, contract provisions, or an environmental document that specifically authorizes maintenance during hours of the day that would otherwise be prohibited pursuant to this section; and

(3) Any maintenance that complies with the noise limits specified in § 5-29.04.

(§ 2, Ord. 2888, eff. March 6, 2008)

Sec. 5-29.09. Construction activity noise regulations.

(a) No person, while engaged in construction, remodeling, digging, grading, demolition or any other related building activity, shall operate any tool, equipment or machine in a manner that produces loud noise that disturbs a person of normal sensitivity who works or resides in the vicinity, or a Police or Code Enforcement Officer, on any weekday except between the hours of 7:00 a.m. and 6:00 p.m. or on Saturday or Sunday between the hours of 9:00 a.m. and 6:00 p.m.

(b) No landowner, construction company owner, contractor, subcontractor, or employer shall permit or allow any person or persons working under their direction and control to operate any tool, equipment or machine in violation of the provisions of this section.

(c) Exceptions.

(1) The provisions of this section shall not apply to emergency construction work performed by a private party when authorized by the City Manager or his or her designee;

(2) The maintenance, repair or improvement of any public work or facility by public employees, by any person or persons acting pursuant to a public works contract, or by any person or persons performing such work or pursuant to the direction of, or on behalf of, any public agency; provided, however, this exception shall not apply to the City, or its employees, contractors or agents, unless:

(i) The City Manager or a department head determines that the maintenance, repair or improvement is immediately necessary to maintain public services,

(ii) The maintenance, repair or improvement is of a nature that cannot feasibly be conducted during normal business hours, or

(iii) The City Council has approved project specifications, contract provisions, or an environmental document that specifically authorizes construction during hours of the day that would otherwise be prohibited pursuant to this section; and

(3) Any construction that complies with the noise limits specified in §§ 5-29.04 or 5-29.05.

(§ 2, Ord. 2888, eff. March 6, 2008)

Sec. 5-29.10. Other public agency exceptions.

The provisions of this chapter shall not be construed to prohibit any work at different hours by or under the direction of any other public agency or public or private utility companies in cases of necessity or emergency.

(§ 2, Ord. 2888, eff. March 6, 2008)

Sec. 5-29.11. Schools, day care centers, churches, libraries, museums, health care institutions; Special provisions.

It is unlawful for any person to create any noise that causes the outdoor noise level at any school, day care center, hospital or similar health care institution, church, library or museum while the same is in use, to exceed the noise standards specified in § 5-29.04 prescribed for the assigned Noise Zone I.

(§ 2, Ord. 2888, eff. March 6, 2008)

Sec. 5-29.12. Sound amplifying equipment.

Loudspeakers, sound amplifiers, public address systems or similar devices used to amplify sounds shall be subject to the provisions of § 5-29.13. Such sound amplifying equipment shall not be construed to include electronic devices, including but not limited to, radios, tape players, tape recorders, compact disc players, MP3 players, electric keyboards, music synthesizers, record players or televisions, which are designed and operated for personal use, or used entirely within a building and are not designed or used to convey the human voice, music or any other sound to an audience outside such building, or which are used in vehicles and heard only by occupants of the vehicle in which installed.

(§ 2, Ord. 2888, eff. March 6, 2008)

Sec. 5-29.13. Amplified sound.

(a) The City Council enacts the following legislation for the sole purpose of securing and promoting the public health, comfort, safety and welfare for its citizenry. While recognizing that the use of sound amplifying equipment may be entitled to certain protection by the constitutional rights of freedom of speech and assembly, the City Council finds that in order to protect the public safety and the correlative rights of the citizens of this community to privacy and freedom from public nuisance of loud and unnecessary noise, reasonable regulation of the time, place and manner of the use of amplifying equipment is necessary. In no event shall approval or authorization required herein be withheld by reason of the constitutionally protected content of any material proposed to be broadcast through amplifying equipment.

(b) It is unlawful for any person, other than personnel of law enforcement or governmental agencies, to install, use or operate a loudspeaker or sound amplifying device in a fixed or movable position or mounted upon any vehicle within the City for the purpose of giving instructions, directions, talks, addresses or lectures to any persons or assemblages of persons in or upon any street, alley, sidewalk, park, place or public property without a permit to do so from the Police Chief or his or her designee. Notwithstanding any other provision of this chapter, the provisions of this section shall also apply to the use of sound amplifying equipment upon public or private property when used in connection with outdoor or indoor public or private events, whether or not admission is charged or food or beverages are sold, when such activity is to be attended by more than one hundred (100) persons and the noise emanating from the event will be audible at the property plane, or in the case of a street dance or concert on the nearest residential property. Those activities listed in § 5-29.06(a) are exempt from the requirements of this section.

(c) The Police Chief or his or her designee is authorized to approve and issue permits under this section.

(d) An application for a permit required by this section shall be filed with the Police Chief at least sixteen (16) days and no more than one hundred twenty (120) days prior to the date on which the sound amplifying equipment is intended to be used. Applications for events covered by the First Amendment of the United States Constitution are exempt from the time requirements of this section if it is shown that circumstances require a shorter filing period and the event will not constitute an unsafe condition. The application shall contain the following information:

- (1) The name, address and telephone number of both the owner and the user of the sound amplifying equipment;
- (2) The license number, if a sound truck is to be used;
- (3) A general description of the sound amplifying equipment which is to be used;
- (4) Whether sound amplifying equipment will be used for commercial or noncommercial purpose;
- (5) The dates and times upon and within which, and the streets or property over or upon which, the equipment is proposed to be operated;
- (6) The name or names of one (1) or more persons who will be present during the conduct of any activities for which registration is sought and who will have authority to reduce the volume of any sound amplifying equipment during the course of the activities if required pursuant to this chapter and, otherwise, to insure compliance with the provisions of this chapter;
- (7) A statement by the applicant that he or she is willing and able to comply with the provisions of this chapter and the conditions of the permit; and
- (8) A sketch of the area or facilities within which the activities are to be conducted, with approximate dimensions and illustration of the location and orientation of all sound-amplifying equipment.

(e) The Police Chief shall deny the permit application or revoke any permit if the chief finds any of the following:

- (1) The application contains materially false or intentionally misleading information;
- (2) The use of sound amplifying equipment at an event or activity proposed will be located in or upon a premises, building or structure that is hazardous to the health or safety of the employees or patrons of the premises, business, activity, or event, or the general public, under the standards established by the Uniform Building or Fire Codes, or other applicable codes, as set forth in OMC Titles 4 and 8;
- (3) The use of sound amplifying equipment at an event or activity proposed in or upon a premises, building or structure that lacks adequate on-site parking for participants attending the proposed event or activity under the applicable standards set forth in OMC Title 9;
- (4) The conditions of any motor vehicle movement are such that, in his or her opinion, the use of the equipment would constitute an unreasonable interference with traffic safety;
- (5) The conditions of pedestrian movement are such that the use of the equipment would constitute a detriment to traffic safety;
- (6) The application submitted by the applicant reveals that the applicant would violate the provisions of this section or any other provision of federal, state and/or local law;
- (7) The applicant is unwilling or unable to comply with the provisions of this chapter or any conditions imposed upon any permit issued;

(8) There had already been a permitted event at the intended location, or within a two hundred (200) yard radius of the intended location and the prior permitted event was located on residentially zoned property or on a street, alley, public parking lot or neighborhood park within three (3) months prior to the intended event. Community parks are exempt from this subsection (8); or

(9) The applicant or location has had previous violations within the past calendar year, and in the judgment of the Police Chief, issuance would be contrary to the intent of this section.

(f) In determining whether the use of the equipment would constitute an unreasonable interference with or detriment to traffic safety, the Police Chief shall consider, but shall not necessarily be limited to:

(1) The volumes, patterns and speed of vehicular and pedestrian traffic in the proposed area of use;

(2) The relationship of the proposed use of equipment and potential impacts upon traffic patterns;

(3) Availability of sufficient room for the operation of the equipment without significantly interfering with the traffic patterns;

(4) Proximity to schools, playgrounds and similar facilities where use of such equipment might attract children into traffic patterns; or

(5) Proximity to busy intersections or other potentially hazardous conditions where use of such equipment might constitute a hazard by reason of its tendency to distract drivers of vehicles or pedestrians.

(g) Issuance or denial.

(1) If the application is approved, the Police Chief shall return an approved copy of the application to the applicant and shall issue a permit. The permit shall constitute permission for the use of the sound amplifying equipment as requested.

(2) Any application filed shall be either approved or disapproved within five (5) days of the filing thereof.

(3) If the application is disapproved, the Police Chief shall return a disapproved copy forthwith to the applicant with a written statement on the reason for disapproval.

(i) Any person aggrieved by a decision of the Police Chief or his or her designee may file an appeal to the City Manager. A complete and proper appeal shall be filed with the City Clerk within ten (10) calendar days of the action that is the subject of the appeal. If the applicant fails to file an appeal within the ten (10) day filing period provided herein, denial shall take effect immediately upon expiration of such filing period. All appeals shall be in writing and shall contain the following information: (a) name(s) of the person filing the appeal, (b) a brief statement in ordinary and concise language of the relief sought, and (c) the signatures of all parties named as appellants and their mailing addresses. After receiving the appeal, the City Clerk shall immediately forward the matter to the City Manager for handling.

(ii) The City Manager shall, upon receipt of the appeal, set the matter for hearing before the City Manager or a hearing officer. Any hearing officer shall be a licensed attorney or recognized mediator designated by the City Manager. The hearing shall be set for not more than ten (10) calendar days after the receipt of the appeal unless a longer time is requested or consented to by the appellant. Notice of such hearing shall be given in writing and mailed at least five (5) calendar days prior to the date of the hearing, by U.S. mail, with a proof of service attached, addressed to the address listed on the permit application, or the written appeal if different from the permit application. The notice shall state the grounds of the complaint or reason for the denial and shall state the time and place where such hearing will be held.

(iii) The City Manager or hearing officer shall, within ten (10) calendar days following the conclusion of the hearing, make a written finding and decision, which shall be delivered to the City and the appellant by first class mail. Notwithstanding any provision in this Code, the decision of the City Manager or hearing officer shall be the final administrative decision of the City. Any party dissatisfied with the decision of the City Manager or hearing officer may seek review of such decision under the provisions of Code Civil Procedure, §§ 1094.5 and 1094.8, as amended from time to time.

(h) In addition to any other provisions of this Code, the use of sound-amplifying equipment and sound trucks in the City shall be subject to the following regulations:

(1) The only sounds permitted are music and human speech;

(2) Sound shall not be emitted within one hundred (100) yards of hospitals, churches, schools and City Hall;

(3) The volume of sound shall be controlled so that it will not be audible for a distance in excess of one hundred (100) feet from the sound amplifying equipment or sound truck, and so that the volume is not unreasonably loud, raucous, jarring, disturbing or a nuisance to persons within the range of allowed audibility; or

(4) The sound amplifying equipment or sound truck shall not be used between the hours of 8:00 p.m. and 8:00 a.m.

(§ 2, Ord. 2888, eff. March 6, 2008)

Sec. 5-29.14. Motor vehicles.

The use of any motor vehicle in such a condition as to create excessive, impulsive or intrusive noises is prohibited. The discharge into the open air of the exhaust of any internal combustion engine, stationary or mounted on wheels, motorboat or motor vehicle, including motor cycle, whether or not discharged through a muffler or other similar device, which discharge creates excessive, unusual, impulsive or intrusive noise is prohibited. Motor vehicles shall comply with the noise regulations of the California Vehicle Code.

(§ 2, Ord. 2888, eff. March 6, 2008)

Sec. 5-29.15. Noise level measurement.

(a) The location selected for measuring exterior noise levels in a residential area shall be at any part of a private yard, patio, deck or balcony normally used for human activity and identified by the owner or, if occupied by someone other than the owner, the occupant of the affected property as suspected of exceeding the noise level standard. This location may be the closest point in the private yard or patio, or on the deck or balcony, to the noise source, but should not be located in nonhuman activity areas such as trash container storage areas, planter beds, above or contacting a property line fence, or other areas not normally used as part of the yard, patio, deck or balcony. The location selected for measuring exterior noise levels in a nonresidential area shall be at the closest point to the noise source. The measurement microphone height shall be five (5) feet above finish elevation or, in the case of a deck or balcony, the measurement microphone height shall be five (5) feet above the finished floor level.

(b) The location selected for measuring interior noise levels shall be made within the affected residential unit. The measurements shall be made at a point at least four (4) feet from the wall, ceiling or floor, or within the frame of a window opening, nearest the noise source. The measurements shall be made with windows in an open position.

(c) Any decibel measurement made pursuant to the provisions of this chapter shall be measured in decibels (dBAs) as measured with a sound level meter using the A-weighted sound pressure level.

(§ 2, Ord. 2888, eff. March 6, 2008)

Sec. 5-29.16. Prima facie violation.

Any noise exceeding the noise level standard as specified in §§ 5-29.04 and 5-29.05, shall be deemed to be prima facie evidence of a violation of the provisions of this chapter.

(§ 2, Ord. 2888, eff. March 6, 2008)

Sec. 5-29.17. Penalty.

(a) Any person who negligently or knowingly violates any provision of this chapter shall be guilty of an infraction and upon conviction shall be punishable by a fine specified in OMC § 1-2.01. Each day a violation occurs shall constitute a separate offense and shall be punishable as such.

(b) Any person who negligently or knowingly violates any provision of this chapter may also be subject to fine(s) specified in the administrative citation schedule of fines set forth in OMC § 1-5.04. The manner of issuing administrative citations shall comply with all the procedures specified in OMC Chapter 5, Title 1.

(c) As an additional remedy, the operation or maintenance of any device, instrument, vehicle or machinery in violation of any provisions of this chapter, which operation or maintenance causes or creates sound levels exceeding the allowable standards as specified in this chapter, shall be deemed and is declared to be a public nuisance and may be subject to abatement by a restraining order or injunction issued by a court of competent jurisdiction.

(d) Any violation of this chapter is declared to be a public nuisance and may be abated in accordance with law. The expense of enforcing this chapter is declared to be public nuisance and may be by resolution of the City Council declared to be a lien and special assessment against the property on which such nuisance is maintained, and any such charge shall also be a personal obligation of the property owner.

(§ 2, Ord. 2888, eff. March 6, 2008)

Sec. 5-29.18. Enforcement and administration.

(a) It shall be the responsibility of Police or Code Enforcement Officers to enforce the provisions of this chapter and to perform all other functions required by this chapter. Such duties shall include, but not be limited to investigating potential violations, issuing warning notices and citations, and providing evidence to the City prosecutor for legal action.

(b) For violations of § 5-29.07, Police or Code Enforcement Officers shall obtain a declaration under penalty of perjury from two (2) declarants living in separate households within a sixty (60) day period stating in detail all of the following:

(1) That the declarant is a resident of a residential neighborhood located within two hundred (200) yards of the noise source; and

(2) Within the past month declarant has heard noise for substantially long periods to the extreme annoyance of the declarant.

(3) Declarations from two (2) declarants are required to prove a violation of § 5-29.07, but are not required to prove that a person has violated any other provision of this chapter.

(§ 2, Ord. 2888, eff. March 6, 2008)

Sec. 5-29.19. City Manager waiver.

The City Manager is authorized to grant a temporary waiver to the provisions of this chapter for a period of time necessary to correct the violations of this chapter, if such temporary waiver would be in the public interest and there is no feasible and prudent alternative to the activity, or the method of conducting the activity, for which the temporary waiver is sought. This time period may include a commitment to a program that includes placing necessary orders and entering into necessary contracts within thirty (30) days for repair or installation.

(§ 2, Ord. 2888, eff. March 6, 2008)

Sec. 5-29.20. Noise abatement program.

(a) In circumstances where adopted community-wide noise standards and policies prove impractical in controlling noise generated from a specific source, the City Council may establish a noise abatement program that recognizes the characteristics of the noise source and affected property and that incorporates specialized mitigation measures.

(b) Noise abatement programs shall set forth in detail the approved terms, conditions and requirements for achieving maximum compliance with noise standards and policies. Said terms, conditions and requirements may include, but shall not be limited to, limitations, restrictions, or prohibitions on operating hours, location of operations, and the types of equipment.

(§ 2, Ord. 2888, eff. March 6, 2008)

TRAFFIC NOISE INCREASE CALCULATIONS

Traffic Noise Calculator: FHWA 77-108

Project Title: ONT-06 Existing

Output						Inputs													
dBA at 50 feet			Distance to CNEL Contour			Roadway	Segment	ADT	Posted Speed Limit	Grade	% Autos	% Med Trucks	% Heavy Trucks	% Daytime	% Evening	% Night	Number of Lanes	Site Condition	Distance to Receiver
L _{eq-24hr}	L _{dn}	CNEL	70 dBA	65 dBA	60 dBA														
58.8	61.6	62.3	15	33	71	Benson Ave South of fourth	4,490	35	0.0%	97.6%	0.9%	1.5%	75.0%	15.0%	10.0%	2	Soft	50	
55.9	58.7	59.4	10	21	45	D Street East of Benson	2,498	35	0.0%	98.2%	0.7%	1.1%	75.0%	15.0%	10.0%	2	Soft	50	
68.4	71.2	71.9	66	143	308	Holt Blvd E/o Benson	20,471	45	0.0%	97.0%	1.0%	2.0%	75.0%	15.0%	10.0%	4	Soft	50	
63.7	66.5	67.2	33	70	151	San Antonio Ave South of fourth	13,034	35	0.0%	97.4%	0.9%	1.6%	75.0%	15.0%	10.0%	4	Soft	50	
67.8	70.6	71.3	61	131	282	Mountain Ave s/o Fourth St	23,863	40	0.0%	97.2%	0.9%	1.9%	75.0%	15.0%	10.0%	4	Soft	50	
48.4	51.2	51.8	3	7	14	I St e/o Benson Ave	455	35	0.0%	98.3%	0.7%	1.0%	75.0%	15.0%	10.0%	2	Soft	50	
58.0	60.8	61.5	13	29	63	I St e/o Euclid Ave	3,784	35	0.0%	97.8%	0.9%	1.4%	75.0%	15.0%	10.0%	2	Soft	50	
57.6	60.4	61.1	13	28	59	G St e/o Benson Ave	3,063	40	0.0%	99.0%	0.5%	0.5%	75.0%	15.0%	10.0%	2	Soft	50	
57.9	60.7	61.4	13	29	62	G St e/o Euclid Ave	4,141	35	0.0%	98.5%	0.6%	0.9%	75.0%	15.0%	10.0%	2	Soft	50	
45.5	48.3	49.0	2	4	9	Sultana Ave S/O Fourth St	286	35	0.0%	99.4%	0.3%	0.3%	75.0%	15.0%	10.0%	2	Soft	50	
57.6	60.4	61.1	13	28	59	W G St e/o Benson	3,063	40	0.0%	99.0%	0.5%	0.5%	75.0%	15.0%	10.0%	2	Soft	50	
68.9	71.7	72.3	72	154	333	Euclid Ave s/o 4th St	30,861	40	0.0%	97.7%	0.8%	1.5%	75.0%	15.0%	10.0%	6	Soft	50	
58.3	61.1	61.8	14	30	66	Campus Ave South of I Street	4,464	35	0.0%	98.3%	0.7%	1.0%	75.0%	15.0%	10.0%	2	Soft	50	
67.5	70.3	71.0	58	125	270	Grove Ave s/o Fourth St	20,535	40	0.0%	96.5%	1.1%	2.4%	75.0%	15.0%	10.0%	4	Soft	50	
66.1	68.9	69.6	47	101	218	Holt Blvd e/o Euclid	17,596	35	0.0%	95.7%	1.3%	3.0%	75.0%	15.0%	10.0%	4	Soft	50	
70.9	73.7	74.4	98	210	453	Holt Blvd e/o Grove Ave	24,546	50	0.0%	95.9%	1.3%	2.8%	75.0%	15.0%	10.0%	6	Soft	50	
58.0	60.8	61.5	13	29	63	D Street e/o Euclid	4,116	35	0.0%	98.3%	0.7%	1.0%	75.0%	15.0%	10.0%	2	Soft	50	
72.4	75.2	75.9	124	266	574	Airport Dr e/o Grove	36,261	45	0.0%	93.8%	1.7%	4.6%	75.0%	15.0%	10.0%	6	Soft	50	
72.9	75.7	76.4	133	286	617	Vineyard Ave s/o Fourth St	35,795	50	0.0%	94.9%	1.4%	3.7%	75.0%	15.0%	10.0%	6	Soft	50	
71.1	73.9	74.6	101	217	467	Vineyard Ave s/o I-10	36,311	40	0.0%	94.7%	1.4%	3.8%	75.0%	15.0%	10.0%	6	Soft	50	
64.5	67.3	68.0	37	79	171	Guasti Rd e/o Holt Blvd	10,543	40	0.0%	96.7%	1.1%	2.2%	75.0%	15.0%	10.0%	4	Soft	50	
53.3	56.1	56.8	7	14	31	Guasti Rd e/o Archibald Ave	624	40	0.0%	93.7%	2.5%	3.8%	75.0%	15.0%	10.0%	4	Soft	50	
72.8	75.6	76.3	131	283	610	Holt Blvd e/o Vineyard	31,737	50	0.0%	93.7%	1.5%	4.8%	75.0%	15.0%	10.0%	6	Soft	50	
62.9	65.6	66.3	28	61	132	Convention Center Way e/o Vineyard	6,479	40	0.0%	95.9%	1.2%	2.9%	75.0%	15.0%	10.0%	4	Soft	50	
60.5	63.3	64.0	20	43	92	Inland Empire Blvd e/o Vineyard Ave	4,193	45	0.0%	98.8%	0.4%	0.8%	75.0%	15.0%	10.0%	2	Soft	50	
63.9	66.7	67.4	34	72	156	Inland Empire Blvd e/o Haven Ave	7,987	45	0.0%	97.8%	0.7%	1.5%	75.0%	15.0%	10.0%	4	Soft	50	
69.3	72.0	72.7	76	164	353	Ontario Mills Pwy e/o Milliken	13,373	45	0.0%	88.4%	2.9%	8.7%	75.0%	15.0%	10.0%	2	Soft	50	
62.0	64.8	65.4	25	53	115	Concourse St e/o Haven Ave	11,460	30	0.0%	97.6%	0.8%	1.6%	75.0%	15.0%	10.0%	6	Soft	50	
72.3	75.1	75.8	122	262	565	Fourth St e/o Vineyard Ave	27,937	50	0.0%	92.6%	1.8%	5.6%	75.0%	15.0%	10.0%	4	Soft	50	
70.8	73.5	74.2	96	206	444	Fourth St e/o Archibald Ave	20,589	50	0.0%	94.1%	1.6%	4.3%	75.0%	15.0%	10.0%	6	Soft	50	
70.3	73.1	73.8	90	193	416	Fourth St e/o Haven Ave	19,435	50	0.0%	94.5%	1.6%	3.8%	75.0%	15.0%	10.0%	6	Soft	50	
72.8	75.5	76.2	130	280	604	Fourth St e/o Milliken Ave	31,867	50	0.0%	93.8%	1.6%	4.6%	75.0%	15.0%	10.0%	6	Soft	50	
68.0	70.8	71.5	63	135	291	Archibald Ave s/o Fourth St	15,375	45	0.0%	95.6%	1.3%	3.1%	75.0%	15.0%	10.0%	6	Soft	50	
70.6	73.4	74.1	93	201	432	Archibald Ave s/o Inland Empire Blvd	29,888	45	0.0%	96.3%	1.1%	2.5%	75.0%	15.0%	10.0%	6	Soft	50	
57.6	60.4	61.1	13	28	59	Turner Ave s/o 4th St	2,139	45	0.0%	98.8%	0.6%	0.6%	75.0%	15.0%	10.0%	4	Soft	50	
72.1	74.9	75.6	118	255	549	Haven St s/o Fourth St	41,456	40	0.0%	93.7%	1.6%	4.8%	75.0%	15.0%	10.0%	6	Soft	50	
73.1	75.9	76.5	136	294	633	Haven St s/o I-10	51,281	40	0.0%	93.7%	1.5%	4.8%	75.0%	15.0%	10.0%	6	Soft	50	
73.5	76.3	77.0	146	315	678	Milliken Ave s/o Fourth St	32,727	50	0.0%	91.5%	2.3%	6.2%	75.0%	15.0%	10.0%	6	Soft	50	
73.9	76.6	77.3	154	332	714	Milliken Ave s/o I-10	34,028	45	0.0%	87.7%	3.0%	9.2%	75.0%	15.0%	10.0%	6	Soft	50	
68.2	71.0	71.7	64	139	299	Edison Ave e/o Euclid	12,979	50	0.0%	95.9%	1.1%	3.0%	75.0%	15.0%	10.0%	6	Soft	50	
62.3	65.1	65.8	26	56	121	Ecaluptus Ave e/o Euclid	3,816	50	0.0%	96.9%	0.7%	2.4%	75.0%	15.0%	10.0%	4	Soft	50	
49.7	52.5	53.1	4	8	17	Bon View Ave s/o Chino	244	45	0.0%	95.4%	1.5%	3.1%	75.0%	15.0%	10.0%	2	Soft	50	
60.4	63.1	63.8	19	42	90	Grove Ave s/o Chino Rd	2,273	45	0.0%	93.1%	2.0%	5.0%	75.0%	15.0%	10.0%	4	Soft	50	
60.9	63.7	64.3	21	45	97	Grove Ave s/o Edison Rd	2,211	45	0.0%	93.0%	2.4%	6.6%	75.0%	15.0%	10.0%	4	Soft	50	
64.8	67.6	68.3	38	83	179	Archibald Ave s/o Chino Rd	6,547	55	0.0%	99.6%	0.2%	0.2%	75.0%	15.0%	10.0%	6	Soft	50	
69.8	72.6	73.3	83	178	384	Archibald Ave s/o Ontario Ranch Rd	14,831	55	0.0%	95.4%	1.4%	3.2%	75.0%	15.0%	10.0%	6	Soft	50	
73.7	76.4	77.1	149	322	693	Euclid Ave s/o schaefer	32,112	55	0.0%	93.9%	1.5%	4.7%	75.0%	15.0%	10.0%	6	Soft	50	
57.4	60.2	60.9	12	26	57	State St e/o Benson Ave	1,607	45	0.0%	97.0%	0.9%	2.1%	75.0%	15.0%	10.0%	4	Soft	50	
59.2	62.0	62.7	16	35	76	State St e/o Mountain Ave	2,422	45	0.0%	96.7%	1.1%	2.2%	75.0%	15.0%	10.0%	4	Soft	50	
56.9	59.7	60.4	11	25	53	State St e/o San Antonio Ave	1,934	35	0.0%	94.9%	1.5%	3.6%	75.0%	15.0%	10.0%	4	Soft	50	
56.9	59.7	60.4	11	25	53	State St e/o Vine Ave	1,934	35	0.0%	94.9%	1.5%	3.6%	75.0%	15.0%	10.0%	4	Soft	50	

56.3	59.1	59.8	10	23	49	State St e/o Euclid Ave	1,662	35	0.0%	94.8%	1.5%	3.7%	75.0%	15.0%	10.0%	4	Soft	50
59.0	61.8	62.5	16	34	73	State St e/o Sultana Ave	3,303	35	0.0%	95.4%	1.4%	3.2%	75.0%	15.0%	10.0%	4	Soft	50
59.3	62.1	62.8	17	36	77	State St e/o Campus Ave	3,427	35	0.0%	95.1%	1.4%	3.5%	75.0%	15.0%	10.0%	4	Soft	50
62.5	65.3	66.0	27	58	125	State St e/o Bon View Ave	4,780	35	0.0%	90.9%	2.4%	6.7%	75.0%	15.0%	10.0%	4	Soft	50
57.9	60.6	61.3	13	28	61	Ontario Blvd e/o Campus Ave	3,204	35	0.0%	97.0%	1.0%	2.1%	75.0%	15.0%	10.0%	2	Soft	50
69.5	72.3	73.0	79	171	368	Mountain Ave s/o Holt Blvd	27,704	45	0.0%	97.4%	0.9%	1.7%	75.0%	15.0%	10.0%	4	Soft	50
61.9	64.7	65.3	24	53	113	San Antonio Ave s/o Holt Blvd	8,345	35	0.0%	97.3%	1.0%	1.7%	75.0%	15.0%	10.0%	4	Soft	50
53.2	55.9	56.6	6	14	30	Sultana Ave s/o Holt Blvd	1,349	35	0.0%	98.4%	0.6%	1.1%	75.0%	15.0%	10.0%	2	Soft	50
61.8	64.6	65.3	24	52	113	Campus Ave s/o Holt Blvd	8,001	35	0.0%	97.1%	1.0%	1.9%	75.0%	15.0%	10.0%	4	Soft	50
53.5	56.3	57.0	7	15	32	Bon View Ave s/o Holt Blvd	722	35	0.0%	92.7%	1.9%	5.4%	75.0%	15.0%	10.0%	2	Soft	50
68.2	71.0	71.7	65	140	301	Grove Ave s/o Holt Blvd	21,320	40	0.0%	95.9%	1.2%	2.9%	75.0%	15.0%	10.0%	6	Soft	50
72.5	75.3	76.0	125	269	579	Grove Ave s/o Airport Dr	55,507	35	0.0%	93.3%	1.8%	4.9%	75.0%	15.0%	10.0%	6	Soft	50
62.6	65.4	66.0	27	59	127	Fourth St e/o Benson Ave	8,746	40	0.0%	98.4%	0.6%	0.9%	75.0%	15.0%	10.0%	2	Soft	50
57.8	60.6	61.3	13	28	61	Fourth St e/o Euclid Ave	4,193	35	0.0%	98.6%	0.6%	0.8%	75.0%	15.0%	10.0%	2	Soft	50
66.1	68.9	69.6	47	101	218	Fourth St e/o Grove Ave	19,232	35	0.0%	96.5%	1.0%	2.5%	75.0%	15.0%	10.0%	4	Soft	50
60.6	63.4	64.0	20	43	93	G St e/o Grove Ave	7,430	35	0.0%	98.3%	0.7%	1.0%	75.0%	15.0%	10.0%	2	Soft	50
64.3	67.1	67.8	36	77	165	Campus Ave s/o Philadelphia	6,984	45	0.0%	95.6%	1.4%	3.0%	75.0%	15.0%	10.0%	4	Soft	50
58.5	61.3	62.0	15	31	68	Campus Ave South of Riverside Dr	1,782	45	0.0%	95.4%	1.4%	3.3%	75.0%	15.0%	10.0%	4	Soft	50
59.2	62.0	62.7	16	35	76	Sixth St e/o Grove Ave	4,434	40	0.0%	99.0%	0.4%	0.5%	75.0%	15.0%	10.0%	2	Soft	50
60.8	63.6	64.3	21	45	96	Francis e/o Euclid	4,984	35	0.0%	95.3%	1.3%	3.5%	75.0%	15.0%	10.0%	2	Soft	50
71.1	73.9	74.5	100	216	466	Mission Blvd e/o Benson	26,609	50	0.0%	95.8%	1.2%	3.0%	75.0%	15.0%	10.0%	4	Soft	50
71.1	73.9	74.6	101	217	468	Mission Blvd e/o Euclid	31,089	45	0.0%	94.9%	1.4%	3.7%	75.0%	15.0%	10.0%	4	Soft	50
66.2	68.9	69.6	47	102	219	Mission Blvd e/o Grove	10,584	45	0.0%	95.6%	1.2%	3.2%	75.0%	15.0%	10.0%	4	Soft	50
70.3	73.0	73.7	89	191	411	Mission e/o Archibald	12,047	55	0.0%	88.8%	3.3%	7.9%	75.0%	15.0%	10.0%	4	Soft	50
71.7	74.5	75.2	110	238	512	Mission e/o Haven	20,868	55	0.0%	93.1%	2.0%	5.0%	75.0%	15.0%	10.0%	4	Soft	50
57.5	60.2	60.9	12	27	58	Benson s/o Mission	2,389	40	0.0%	97.6%	0.9%	1.6%	75.0%	15.0%	10.0%	2	Soft	50
52.6	55.4	56.0	6	13	27	Benson s/o Francis	882	40	0.0%	98.5%	0.7%	0.9%	75.0%	15.0%	10.0%	2	Soft	50
63.1	65.9	66.6	29	64	137	Benson s/o I-10	8,769	40	0.0%	97.5%	1.0%	1.5%	75.0%	15.0%	10.0%	2	Soft	50
45.6	48.4	49.1	2	4	9	Philips e/o Benson	423	25	0.0%	97.6%	0.9%	1.5%	75.0%	15.0%	10.0%	2	Soft	50
61.4	64.2	64.8	23	49	105	Philips e/o Mountain	6,838	40	0.0%	98.6%	0.6%	0.8%	75.0%	15.0%	10.0%	2	Soft	50
57.9	60.7	61.4	13	29	62	Philips e/o San Antonio	3,025	40	0.0%	98.5%	0.6%	0.8%	75.0%	15.0%	10.0%	2	Soft	50
60.1	62.9	63.6	19	40	86	Philips e/o Euclid	4,558	40	0.0%	97.9%	0.8%	1.3%	75.0%	15.0%	10.0%	2	Soft	50
66.9	69.7	70.4	53	114	245	Vineyard Ave s/o SR-60	12,408	45	0.0%	95.0%	2.0%	3.0%	75.0%	15.0%	10.0%	4	Soft	50

Traffic Noise Calculator: FHWA 77-108

Project Title: ONT-06 Adopted

Output						Inputs													
dBA at 50 feet			Distance to CNEL Contour			Roadway	Segment	ADT	Posted Speed Limit	Grade	% Autos	% Med Trucks	% Heavy Trucks	% Daytime	% Evening	% Night	Number of Lanes	Site Condition	Distance to Receiver
L _{eq-24hr}	L _{dn}	CNEL	70 dBA	65 dBA	60 dBA														
61.9	64.7	65.4	25	53	114	Benson Ave South of fourth	8,494	35	0.0%	97.4%	1.0%	1.6%	75.0%	15.0%	10.0%	4	Soft	50	
56.0	58.8	59.5	10	22	46	D Street East of Benson	3,146	35	0.0%	99.3%	0.3%	0.4%	75.0%	15.0%	10.0%	2	Soft	50	
70.2	73.0	73.7	88	191	411	Holt Blvd E/o Benson	28,717	45	0.0%	96.7%	1.0%	2.3%	75.0%	15.0%	10.0%	6	Soft	50	
64.6	67.4	68.1	37	81	174	San Antonio Ave South of fourth	15,982	35	0.0%	97.5%	0.9%	1.7%	75.0%	15.0%	10.0%	4	Soft	50	
68.9	71.7	72.3	72	154	333	Mountain Ave s/o Fourth St	27,329	40	0.0%	96.8%	1.0%	2.2%	75.0%	15.0%	10.0%	6	Soft	50	
53.5	56.3	57.0	7	15	32	I St e/o Benson Ave	1,707	35	0.0%	99.1%	0.4%	0.5%	75.0%	15.0%	10.0%	2	Soft	50	
59.1	61.8	62.5	16	34	74	I St e/o Euclid Ave	5,288	35	0.0%	98.4%	0.6%	1.0%	75.0%	15.0%	10.0%	2	Soft	50	
58.3	61.1	61.8	14	30	65	G St e/o Benson Ave	3,567	40	0.0%	99.1%	0.4%	0.5%	75.0%	15.0%	10.0%	2	Soft	50	
57.7	60.5	61.2	13	28	60	G St e/o Euclid Ave	4,447	35	0.0%	99.1%	0.4%	0.5%	75.0%	15.0%	10.0%	2	Soft	50	
53.3	56.1	56.8	7	14	31	Sultana Ave S/O Fourth St	1,720	35	0.0%	99.4%	0.3%	0.3%	75.0%	15.0%	10.0%	2	Soft	50	
58.3	61.1	61.8	14	30	65	W G Street e/o Benson	3,567	40	0.0%	99.1%	0.4%	0.5%	75.0%	15.0%	10.0%	2	Soft	50	
69.8	72.6	73.3	82	178	383	Euclid Ave s/o 4th St	36,100	40	0.0%	97.3%	0.9%	1.8%	75.0%	15.0%	10.0%	6	Soft	50	
61.3	64.1	64.7	22	48	104	Campus Ave South of I Street	8,227	35	0.0%	97.9%	0.8%	1.3%	75.0%	15.0%	10.0%	2	Soft	50	
70.4	73.2	73.8	90	194	418	Grove Ave s/o Fourth St	34,873	40	0.0%	96.0%	1.0%	2.9%	75.0%	15.0%	10.0%	6	Soft	50	
68.3	71.0	71.7	65	140	303	Holt Blvd e/o Euclid	29,943	35	0.0%	96.5%	1.0%	2.5%	75.0%	15.0%	10.0%	6	Soft	50	
73.8	76.6	77.2	152	327	705	Holt Blvd e/o Grove Ave	48,293	50	0.0%	96.2%	1.1%	2.7%	75.0%	15.0%	10.0%	6	Soft	50	
58.9	61.7	62.4	16	33	72	D Street e/o Euclid	5,299	35	0.0%	98.6%	0.5%	0.9%	75.0%	15.0%	10.0%	2	Soft	50	
74.3	77.0	77.7	164	353	760	Airport Dr e/o Grove	51,825	45	0.0%	93.0%	1.7%	5.2%	75.0%	15.0%	10.0%	6	Soft	50	
74.2	77.0	77.6	162	348	750	Vineyard Ave s/o Fourth St	48,497	50	0.0%	95.1%	1.4%	3.6%	75.0%	15.0%	10.0%	6	Soft	50	
72.6	75.3	76.0	126	272	585	Vineyard Ave s/o I-10	55,684	40	0.0%	95.7%	1.2%	3.2%	75.0%	15.0%	10.0%	6	Soft	50	
66.7	69.5	70.1	51	110	237	Guasti Rd e/o Holt Blvd	20,828	40	0.0%	98.2%	0.6%	1.2%	75.0%	15.0%	10.0%	4	Soft	50	
53.4	56.2	56.8	7	14	31	Guasti Rd e/o Archibald Ave	801	40	0.0%	96.5%	1.2%	2.2%	75.0%	15.0%	10.0%	4	Soft	50	
73.2	76.0	76.7	140	302	650	Holt Blvd E/o Vineyard	36,880	50	0.0%	94.6%	1.1%	4.3%	75.0%	15.0%	10.0%	6	Soft	50	
64.4	67.2	67.9	36	77	167	Convention Center Way e/o Vineyard	12,613	40	0.0%	98.4%	0.5%	1.1%	75.0%	15.0%	10.0%	4	Soft	50	
63.0	65.8	66.5	29	63	136	Inland Empire Blvd e/o Vineyard Ave	6,171	45	0.0%	97.9%	0.6%	1.4%	75.0%	15.0%	10.0%	6	Soft	50	
66.7	69.5	70.2	51	111	239	Inland Empire Blvd e/o Haven Ave	15,919	45	0.0%	98.7%	0.5%	0.8%	75.0%	15.0%	10.0%	6	Soft	50	
71.9	74.7	75.4	114	245	528	Ontario Mills Pwy e/o Milliken	24,755	45	0.0%	90.1%	2.5%	7.4%	75.0%	15.0%	10.0%	6	Soft	50	
64.5	67.3	67.9	36	79	169	Concourse St e/o Haven Ave	23,592	30	0.0%	98.2%	0.7%	1.1%	75.0%	15.0%	10.0%	6	Soft	50	
74.7	77.5	78.2	175	377	813	Fourth St e/o Vineyard Ave	47,632	50	0.0%	93.3%	1.6%	5.1%	75.0%	15.0%	10.0%	6	Soft	50	
72.8	75.6	76.3	132	283	611	Fourth St e/o Archibald Ave	32,757	50	0.0%	94.0%	1.5%	4.5%	75.0%	15.0%	10.0%	6	Soft	50	
72.3	75.1	75.8	121	261	562	Fourth St e/o Haven Ave	28,435	50	0.0%	93.7%	1.6%	4.6%	75.0%	15.0%	10.0%	6	Soft	50	
74.0	76.8	77.5	158	341	734	Fourth St e/o Milliken Ave	43,179	50	0.0%	94.0%	1.6%	4.4%	75.0%	15.0%	10.0%	6	Soft	50	
69.1	71.9	72.5	74	159	343	Archibald Ave s/o Fourth St	19,814	45	0.0%	95.6%	1.4%	3.0%	75.0%	15.0%	10.0%	6	Soft	50	
71.5	74.2	74.9	106	229	494	Archibald Ave s/o Inland Empire Blvd	37,839	45	0.0%	96.7%	1.0%	2.3%	75.0%	15.0%	10.0%	6	Soft	50	
60.3	63.1	63.8	19	41	89	Turner Ave s/o 4th St	3,964	45	0.0%	98.9%	0.5%	0.6%	75.0%	15.0%	10.0%	4	Soft	50	
72.1	74.9	75.6	118	254	547	Haven St s/o Fourth St	48,060	40	0.0%	95.2%	1.3%	3.5%	75.0%	15.0%	10.0%	6	Soft	50	
74.3	77.1	77.8	166	358	771	Haven St s/o I-10	64,587	40	0.0%	93.0%	1.6%	5.4%	75.0%	15.0%	10.0%	6	Soft	50	
74.4	77.2	77.9	167	360	775	Milliken Ave s/o Fourth St	42,546	50	0.0%	92.5%	2.0%	5.5%	75.0%	15.0%	10.0%	6	Soft	50	
75.9	78.7	79.4	210	453	975	Milliken Ave s/o I-10	60,858	45	0.0%	89.8%	2.5%	7.7%	75.0%	15.0%	10.0%	6	Soft	50	
74.9	77.6	78.3	180	387	833	Edison Ave e/o Euclid	61,542	50	0.0%	96.1%	1.0%	2.8%	75.0%	15.0%	10.0%	6	Soft	50	
69.9	72.7	73.4	84	181	391	Ecaluptus Ave e/o Euclid	18,665	50	0.0%	94.7%	1.3%	3.9%	75.0%	15.0%	10.0%	4	Soft	50	
60.0	62.8	63.5	18	40	85	Bon View Ave s/o Chino	4,053	45	0.0%	99.4%	0.3%	0.3%	75.0%	15.0%	10.0%	2	Soft	50	
67.8	70.6	71.3	61	132	284	Grove Ave s/o Chino Rd	16,777	45	0.0%	96.3%	1.1%	2.6%	75.0%	15.0%	10.0%	4	Soft	50	
67.6	70.3	71.0	59	126	272	Grove Ave s/o Edison Rd	14,057	45	0.0%	95.1%	1.4%	3.5%	75.0%	15.0%	10.0%	4	Soft	50	
73.6	76.4	77.1	148	318	685	Archibald Ave s/o Chino Rd	36,917	55	0.0%	96.0%	1.2%	2.8%	75.0%	15.0%	10.0%	6	Soft	50	
73.3	76.1	76.8	142	305	657	Archibald Ave s/o Ontario Ranch Rd	38,961	55	0.0%	97.5%	0.9%	1.6%	75.0%	15.0%	10.0%	6	Soft	50	
76.6	79.4	80.1	236	508	1095	Euclid Ave s/o schaefer	67,096	55	0.0%	94.6%	1.4%	4.0%	75.0%	15.0%	10.0%	6	Soft	50	
60.5	63.3	64.0	20	43	93	State St e/o Benson Ave	3,138	45	0.0%	96.4%	1.0%	2.6%	75.0%	15.0%	10.0%	4	Soft	50	
62.5	65.3	65.9	27	58	125	State St e/o Mountain Ave	4,665	45	0.0%	95.9%	1.2%	2.9%	75.0%	15.0%	10.0%	4	Soft	50	
61.3	64.1	64.7	22	48	104	State St e/o San Antonio Ave	5,064	35	0.0%	94.6%	1.6%	3.9%	75.0%	15.0%	10.0%	4	Soft	50	
60.2	63.0	63.7	19	41	88	State St e/o Vine Ave	3,677	35	0.0%	93.8%	1.8%	4.4%	75.0%	15.0%	10.0%	4	Soft	50	

59.6	62.3	63.0	17	37	80	State St e/o Euclid Ave	3,264	35	0.0%	94.1%	1.7%	4.2%	75.0%	15.0%	10.0%	4	Soft	50
62.6	65.4	66.1	27	59	128	State St e/o Sultana Ave	7,079	35	0.0%	94.8%	1.5%	3.7%	75.0%	15.0%	10.0%	4	Soft	50
63.7	66.5	67.2	32	70	151	State St e/o Campus Ave	7,988	35	0.0%	93.6%	1.7%	4.7%	75.0%	15.0%	10.0%	4	Soft	50
68.9	71.7	72.4	72	156	336	State St e/o Bon View Ave	19,198	35	0.0%	89.7%	2.7%	7.7%	75.0%	15.0%	10.0%	4	Soft	50
61.1	63.9	64.5	22	47	100	Ontario Blvd e/o Campus Ave	6,890	35	0.0%	97.1%	1.0%	1.9%	75.0%	15.0%	10.0%	2	Soft	50
70.6	73.4	74.1	93	201	433	Mountain Ave s/o Holt Blvd	32,563	45	0.0%	96.6%	1.1%	2.3%	75.0%	15.0%	10.0%	4	Soft	50
61.6	64.4	65.1	24	51	109	San Antonio Ave s/o Holt Blvd	9,076	35	0.0%	98.2%	0.7%	1.1%	75.0%	15.0%	10.0%	4	Soft	50
56.8	59.6	60.3	11	24	52	Sultana Ave s/o Holt Blvd	2,976	35	0.0%	98.0%	0.7%	1.3%	75.0%	15.0%	10.0%	2	Soft	50
66.2	69.0	69.7	47	102	220	Campus Ave s/o Holt Blvd	20,098	35	0.0%	96.6%	1.0%	2.3%	75.0%	15.0%	10.0%	4	Soft	50
58.3	61.0	61.7	14	30	65	Bon View Ave s/o Holt Blvd	1,976	35	0.0%	92.2%	1.9%	5.9%	75.0%	15.0%	10.0%	4	Soft	50
71.2	73.9	74.6	102	219	472	Grove Ave s/o Holt Blvd	38,880	40	0.0%	95.4%	1.2%	3.5%	75.0%	15.0%	10.0%	6	Soft	50
73.6	76.4	77.1	149	321	691	Grove Ave s/o Airport Dr	75,768	35	0.0%	93.9%	1.6%	4.6%	75.0%	15.0%	10.0%	6	Soft	50
62.4	65.2	65.9	26	57	123	Fourth St e/o Benson Ave	8,356	40	0.0%	98.6%	0.5%	0.8%	75.0%	15.0%	10.0%	4	Soft	50
58.4	61.2	61.8	14	31	66	Fourth St e/o Euclid Ave	5,035	35	0.0%	99.0%	0.4%	0.6%	75.0%	15.0%	10.0%	2	Soft	50
63.9	66.6	67.3	33	72	154	Fourth St e/o Grove Ave	15,578	35	0.0%	98.7%	0.5%	0.8%	75.0%	15.0%	10.0%	6	Soft	50
60.6	63.4	64.1	20	43	93	G St e/o Grove Ave	8,889	35	0.0%	99.3%	0.3%	0.4%	75.0%	15.0%	10.0%	2	Soft	50
67.5	70.3	71.0	58	125	269	Campus Ave s/o Philadelphia	16,265	45	0.0%	96.9%	1.0%	2.2%	75.0%	15.0%	10.0%	4	Soft	50
65.7	68.5	69.1	44	95	204	Campus Ave South of Riverside Dr	12,892	45	0.0%	98.4%	0.6%	0.9%	75.0%	15.0%	10.0%	4	Soft	50
58.5	61.3	62.0	15	31	68	Sixth St e/o Grove Ave	3,492	40	0.0%	98.9%	0.4%	0.7%	75.0%	15.0%	10.0%	4	Soft	50
65.3	68.1	68.8	41	89	192	Francis e/o Euclid	11,381	35	0.0%	93.6%	1.5%	4.8%	75.0%	15.0%	10.0%	4	Soft	50
74.2	77.0	77.7	162	349	752	Mission Blvd e/o Benson	45,370	50	0.0%	94.1%	1.6%	4.3%	75.0%	15.0%	10.0%	6	Soft	50
74.2	77.0	77.7	163	351	757	Mission Blvd e/o Euclid	51,840	45	0.0%	93.1%	1.8%	5.2%	75.0%	15.0%	10.0%	6	Soft	50
75.2	78.0	78.7	191	411	885	Mission Blvd e/o Grove	57,490	45	0.0%	91.1%	2.4%	6.6%	75.0%	15.0%	10.0%	6	Soft	50
73.6	76.4	77.1	148	320	688	Mission e/o Archibald	24,554	55	0.0%	88.7%	3.3%	8.1%	75.0%	15.0%	10.0%	6	Soft	50
74.2	77.0	77.7	162	349	753	Mission e/o Haven	33,308	55	0.0%	92.1%	2.2%	5.6%	75.0%	15.0%	10.0%	6	Soft	50
59.3	62.1	62.8	17	36	77	Benson s/o Mission	3,258	40	0.0%	96.8%	1.1%	2.1%	75.0%	15.0%	10.0%	4	Soft	50
58.3	61.1	61.8	14	31	66	Benson s/o Francis	2,913	40	0.0%	97.7%	0.9%	1.4%	75.0%	15.0%	10.0%	4	Soft	50
63.0	65.8	66.4	29	62	134	Benson s/o I-10	8,001	40	0.0%	97.0%	1.1%	1.9%	75.0%	15.0%	10.0%	2	Soft	50
43.8	46.6	47.3	2	3	7	Philips e/o Benson	372	25	0.0%	98.7%	0.7%	0.6%	75.0%	15.0%	10.0%	4	Soft	50
62.3	65.1	65.8	26	56	121	Philips e/o Mountain	8,326	40	0.0%	98.7%	0.5%	0.7%	75.0%	15.0%	10.0%	4	Soft	50
59.6	62.4	63.1	17	37	81	Philips e/o San Antonio	4,441	40	0.0%	98.6%	0.5%	0.8%	75.0%	15.0%	10.0%	4	Soft	50
63.1	65.9	66.6	30	64	138	Philips e/o Euclid	7,448	40	0.0%	96.6%	1.0%	2.5%	75.0%	15.0%	10.0%	4	Soft	50
70.6	73.4	74.1	93	201	434	Vineyard Ave s/o SR-60	29,334	45	0.0%	96.1%	1.1%	2.7%	75.0%	15.0%	10.0%	6	Soft	50

Traffic Noise Calculator: FHWA 77-108

Project Title: ONT-06 Proposed

Output						Inputs													
dBA at 50 feet			Distance to CNEL Contour			Roadway	Segment	ADT	Posted Speed Limit	Grade	% Autos	% Med Trucks	% Heavy Trucks	% Daytime	% Evening	% Night	Number of Lanes	Site Condition	Distance to Receiver
L _{eq,24hr}	L _{dn}	CNEL	70 dBA	65 dBA	60 dBA														
60.5	63.3	64.0	20	43	92	Benson Ave South of fourth	6,295	35	0.0%	97.3%	1.0%	1.7%	75.0%	15.0%	10.0%	2	Soft	50	
55.5	58.3	59.0	9	20	43	D Street East of Benson	2,667	35	0.0%	99.1%	0.4%	0.5%	75.0%	15.0%	10.0%	2	Soft	50	
69.9	72.7	73.4	84	181	390	Holt Blvd E/o Benson	28,247	45	0.0%	96.8%	1.0%	2.2%	75.0%	15.0%	10.0%	4	Soft	50	
64.7	67.5	68.2	38	81	176	San Antonio Ave South of fourth	16,592	35	0.0%	97.6%	0.9%	1.6%	75.0%	15.0%	10.0%	4	Soft	50	
68.2	71.0	71.6	64	138	298	Mountain Ave s/o Fourth St	26,009	40	0.0%	97.2%	1.0%	1.8%	75.0%	15.0%	10.0%	4	Soft	50	
54.0	56.8	57.5	7	16	34	I St e/o Benson Ave	1,887	35	0.0%	99.1%	0.4%	0.5%	75.0%	15.0%	10.0%	2	Soft	50	
59.0	61.8	62.5	16	34	73	I St e/o Euclid Ave	5,184	35	0.0%	98.3%	0.7%	1.0%	75.0%	15.0%	10.0%	2	Soft	50	
58.8	61.6	62.3	15	33	71	G St e/o Benson Ave	4,012	40	0.0%	99.0%	0.4%	0.5%	75.0%	15.0%	10.0%	2	Soft	50	
59.0	61.8	62.5	16	34	73	G St e/o Euclid Ave	5,858	35	0.0%	99.0%	0.4%	0.6%	75.0%	15.0%	10.0%	2	Soft	50	
54.3	57.1	57.7	8	16	35	Sultana Ave S/O Fourth St	2,121	35	0.0%	99.3%	0.3%	0.3%	75.0%	15.0%	10.0%	2	Soft	50	
58.8	61.6	62.3	15	33	71	W G Street e/o Benson Ave	4,012	40	0.0%	99.0%	0.4%	0.5%	75.0%	15.0%	10.0%	2	Soft	50	
70.5	73.3	74.0	92	198	427	Euclid Ave s/o 4th St	41,167	40	0.0%	97.1%	0.9%	2.0%	75.0%	15.0%	10.0%	6	Soft	50	
61.7	64.5	65.2	24	51	110	Campus Ave South of I Street	9,110	35	0.0%	97.9%	0.8%	1.3%	75.0%	15.0%	10.0%	2	Soft	50	
69.7	72.5	73.2	82	176	379	Grove Ave s/o Fourth St	31,116	40	0.0%	95.8%	1.1%	3.1%	75.0%	15.0%	10.0%	4	Soft	50	
67.3	70.1	70.8	56	121	261	Holt Blvd e/o Euclid	25,227	35	0.0%	96.5%	1.0%	2.5%	75.0%	15.0%	10.0%	4	Soft	50	
73.8	76.6	77.3	153	330	711	Holt Blvd e/o Grove Ave	49,390	50	0.0%	96.3%	1.0%	2.7%	75.0%	15.0%	10.0%	6	Soft	50	
61.1	63.9	64.6	22	47	101	D Street e/o Euclid	7,266	35	0.0%	97.5%	0.7%	1.7%	75.0%	15.0%	10.0%	2	Soft	50	
74.1	76.9	77.6	161	347	747	Airport Dr e/o Grove	51,675	45	0.0%	93.3%	1.7%	5.0%	75.0%	15.0%	10.0%	6	Soft	50	
73.8	76.6	77.3	153	329	709	Vineyard Ave s/o Fourth St	46,001	50	0.0%	95.5%	1.3%	3.3%	75.0%	15.0%	10.0%	6	Soft	50	
72.3	75.1	75.8	121	261	563	Vineyard Ave s/o I-10	54,157	40	0.0%	96.0%	1.1%	2.9%	75.0%	15.0%	10.0%	6	Soft	50	
66.7	69.5	70.2	51	111	239	Guasti Rd e/o Holt Blvd	21,703	40	0.0%	98.4%	0.6%	1.0%	75.0%	15.0%	10.0%	4	Soft	50	
58.0	60.8	61.5	13	29	63	Guasti Rd e/o Archibald Ave	2,743	40	0.0%	97.8%	0.9%	1.3%	75.0%	15.0%	10.0%	4	Soft	50	
73.3	76.0	76.7	140	302	651	Holt Blvd e/o Vineyard	37,754	50	0.0%	94.8%	1.1%	4.1%	75.0%	15.0%	10.0%	6	Soft	50	
64.3	67.1	67.8	35	76	164	Convention Center Way e/o Vineyard	13,038	40	0.0%	98.8%	0.4%	0.8%	75.0%	15.0%	10.0%	4	Soft	50	
62.0	64.8	65.5	25	54	115	Inland Empire Blvd e/o Vineyard Ave	5,315	45	0.0%	98.0%	0.6%	1.4%	75.0%	15.0%	10.0%	2	Soft	50	
66.6	69.4	70.1	50	109	234	Inland Empire Blvd e/o Haven Ave	14,781	45	0.0%	97.8%	0.8%	1.4%	75.0%	15.0%	10.0%	4	Soft	50	
69.9	72.7	73.4	84	180	389	Ontario Mills Pwy e/o Milliken	16,554	45	0.0%	89.6%	2.6%	7.8%	75.0%	15.0%	10.0%	2	Soft	50	
64.8	67.5	68.2	38	82	177	Concourse St e/o Haven Ave	21,422	30	0.0%	97.3%	1.1%	1.6%	75.0%	15.0%	10.0%	6	Soft	50	
73.4	76.1	76.8	143	307	662	Fourth St e/o Vineyard Ave	37,438	50	0.0%	93.5%	1.5%	5.0%	75.0%	15.0%	10.0%	4	Soft	50	
72.3	75.1	75.8	122	262	564	Fourth St e/o Archibald Ave	30,290	50	0.0%	94.5%	1.5%	4.0%	75.0%	15.0%	10.0%	6	Soft	50	
72.2	75.0	75.7	120	259	558	Fourth St e/o Haven Ave	28,848	50	0.0%	94.0%	1.6%	4.3%	75.0%	15.0%	10.0%	6	Soft	50	
74.1	76.9	77.6	161	346	747	Fourth St e/o Milliken Ave	42,905	50	0.0%	93.5%	1.8%	4.8%	75.0%	15.0%	10.0%	6	Soft	50	
70.0	72.8	73.5	86	184	397	Archibald Ave s/o Fourth St	24,846	45	0.0%	95.7%	1.4%	3.0%	75.0%	15.0%	10.0%	6	Soft	50	
71.8	74.6	75.2	112	241	520	Archibald Ave s/o Inland Empire Blvd	39,639	45	0.0%	96.4%	1.1%	2.5%	75.0%	15.0%	10.0%	6	Soft	50	
61.0	63.8	64.5	21	46	99	Turner Ave s/o 4th St	4,464	45	0.0%	98.6%	0.6%	0.9%	75.0%	15.0%	10.0%	4	Soft	50	
72.2	75.0	75.7	120	258	556	Haven St s/o Fourth St	47,410	40	0.0%	94.8%	1.4%	3.8%	75.0%	15.0%	10.0%	6	Soft	50	
74.2	77.0	77.7	163	352	759	Haven St s/o I-10	67,268	40	0.0%	93.7%	1.5%	4.8%	75.0%	15.0%	10.0%	6	Soft	50	
74.5	77.3	78.0	171	368	794	Milliken Ave s/o Fourth St	44,471	50	0.0%	92.6%	2.0%	5.4%	75.0%	15.0%	10.0%	6	Soft	50	
75.7	78.5	79.2	205	442	951	Milliken Ave s/o I-10	63,778	45	0.0%	91.2%	2.2%	6.7%	75.0%	15.0%	10.0%	6	Soft	50	
75.0	77.8	78.5	184	396	853	Edison Ave e/o Euclid	62,307	50	0.0%	95.8%	1.1%	3.0%	75.0%	15.0%	10.0%	6	Soft	50	
70.9	73.7	74.4	98	212	456	Ecaluptus Ave e/o Euclid	18,338	50	0.0%	91.0%	2.1%	6.9%	75.0%	15.0%	10.0%	4	Soft	50	
60.6	63.4	64.0	20	43	93	Bon View Ave s/o Chino	4,632	45	0.0%	99.4%	0.3%	0.3%	75.0%	15.0%	10.0%	2	Soft	50	
69.0	71.8	72.5	73	157	339	Grove Ave s/o Chino Rd	18,548	45	0.0%	94.5%	1.6%	3.9%	75.0%	15.0%	10.0%	4	Soft	50	
69.1	71.9	72.6	74	159	344	Grove Ave s/o Edison Rd	13,579	45	0.0%	89.9%	2.5%	7.6%	75.0%	15.0%	10.0%	4	Soft	50	
73.7	76.5	77.2	151	324	699	Archibald Ave s/o Chino Rd	38,321	55	0.0%	96.1%	1.2%	2.7%	75.0%	15.0%	10.0%	6	Soft	50	
73.3	76.1	76.8	142	307	660	Archibald Ave s/o Ontario Ranch Rd	39,680	55	0.0%	97.6%	0.8%	1.5%	75.0%	15.0%	10.0%	6	Soft	50	
76.7	79.5	80.2	239	514	1108	Euclid Ave s/o schaefer	67,914	55	0.0%	94.5%	1.4%	4.1%	75.0%	15.0%	10.0%	6	Soft	50	
63.6	66.3	67.0	32	68	147	State St e/o Benson Ave	6,289	45	0.0%	96.4%	1.0%	2.6%	75.0%	15.0%	10.0%	4	Soft	50	
64.9	67.7	68.4	39	84	180	State St e/o Mountain Ave	8,407	45	0.0%	96.3%	1.1%	2.7%	75.0%	15.0%	10.0%	4	Soft	50	
64.3	67.0	67.7	35	76	164	State St e/o San Antonio Ave	11,073	35	0.0%	95.4%	1.3%	3.2%	75.0%	15.0%	10.0%	4	Soft	50	
63.5	66.3	67.0	31	68	146	State St e/o Vine Ave	9,009	35	0.0%	95.1%	1.4%	3.5%	75.0%	15.0%	10.0%	4	Soft	50	

63.2	66.0	66.6	30	64	139	State St e/o Euclid Ave	8,450	35	0.0%	95.3%	1.4%	3.4%	75.0%	15.0%	10.0%	4	Soft	50
65.1	67.9	68.6	40	87	188	State St e/o Sultana Ave	13,424	35	0.0%	95.3%	1.3%	3.3%	75.0%	15.0%	10.0%	4	Soft	50
66.0	68.8	69.5	46	99	214	State St e/o Campus Ave	14,940	35	0.0%	94.6%	1.5%	3.9%	75.0%	15.0%	10.0%	4	Soft	50
69.1	71.9	72.6	74	160	344	State St e/o Bon View Ave	22,871	35	0.0%	91.5%	2.3%	6.3%	75.0%	15.0%	10.0%	4	Soft	50
62.4	65.2	65.9	27	57	123	Ontario Blvd e/o Campus Ave	9,256	35	0.0%	97.1%	0.9%	2.0%	75.0%	15.0%	10.0%	2	Soft	50
70.3	73.1	73.8	90	193	415	Mountain Ave s/o Holt Blvd	32,136	45	0.0%	97.0%	1.0%	1.9%	75.0%	15.0%	10.0%	4	Soft	50
61.1	63.8	64.5	22	47	100	San Antonio Ave s/o Holt Blvd	7,949	35	0.0%	98.2%	0.7%	1.1%	75.0%	15.0%	10.0%	4	Soft	50
59.0	61.8	62.5	16	34	73	Sultana Ave s/o Holt Blvd	4,378	35	0.0%	97.4%	0.7%	1.8%	75.0%	15.0%	10.0%	2	Soft	50
65.5	68.3	69.0	43	92	199	Campus Ave s/o Holt Blvd	17,562	35	0.0%	96.8%	1.0%	2.3%	75.0%	15.0%	10.0%	4	Soft	50
58.1	60.9	61.6	14	30	64	Bon View Ave s/o Holt Blvd	2,383	35	0.0%	94.2%	1.5%	4.3%	75.0%	15.0%	10.0%	2	Soft	50
71.6	74.4	75.1	110	236	509	Grove Ave s/o Holt Blvd	44,522	40	0.0%	95.6%	1.2%	3.3%	75.0%	15.0%	10.0%	6	Soft	50
73.6	76.4	77.1	148	319	687	Grove Ave s/o Airport Dr	78,446	35	0.0%	94.3%	1.5%	4.2%	75.0%	15.0%	10.0%	6	Soft	50
61.9	64.7	65.4	25	53	114	Fourth St e/o Benson Ave	7,682	40	0.0%	98.6%	0.6%	0.8%	75.0%	15.0%	10.0%	2	Soft	50
59.4	62.2	62.9	17	36	78	Fourth St e/o Euclid Ave	6,160	35	0.0%	98.7%	0.5%	0.8%	75.0%	15.0%	10.0%	2	Soft	50
63.1	65.9	66.6	29	63	137	Fourth St e/o Grove Ave	13,714	35	0.0%	98.6%	0.6%	0.8%	75.0%	15.0%	10.0%	4	Soft	50
60.9	63.7	64.3	21	45	97	G St e/o Grove Ave	9,452	35	0.0%	99.2%	0.3%	0.4%	75.0%	15.0%	10.0%	2	Soft	50
68.3	71.1	71.8	65	141	304	Campus Ave s/o Philadelphia	18,985	45	0.0%	96.5%	1.1%	2.4%	75.0%	15.0%	10.0%	4	Soft	50
66.1	68.9	69.6	47	101	217	Campus Ave South of Riverside Dr	12,896	45	0.0%	97.6%	0.9%	1.5%	75.0%	15.0%	10.0%	4	Soft	50
58.6	61.4	62.1	15	32	69	Sixth St e/o Grove Ave	3,697	40	0.0%	98.8%	0.4%	0.8%	75.0%	15.0%	10.0%	2	Soft	50
64.4	67.2	67.8	36	77	167	Francis e/o Euclid	10,149	35	0.0%	94.3%	1.4%	4.3%	75.0%	15.0%	10.0%	2	Soft	50
72.9	75.7	76.4	134	288	620	Mission Blvd e/o Benson	36,290	50	0.0%	94.3%	1.5%	4.2%	75.0%	15.0%	10.0%	4	Soft	50
72.7	75.5	76.2	129	277	598	Mission Blvd e/o Euclid	38,832	45	0.0%	93.2%	1.8%	5.1%	75.0%	15.0%	10.0%	4	Soft	50
74.3	77.1	77.7	164	354	762	Mission Blvd e/o Grove	51,588	45	0.0%	92.0%	2.1%	5.9%	75.0%	15.0%	10.0%	4	Soft	50
72.4	75.2	75.9	123	265	572	Mission e/o Archibald	20,229	55	0.0%	89.3%	3.1%	7.6%	75.0%	15.0%	10.0%	4	Soft	50
73.0	75.8	76.5	135	290	625	Mission e/o Haven	27,212	55	0.0%	92.5%	2.1%	5.4%	75.0%	15.0%	10.0%	4	Soft	50
57.6	60.4	61.1	13	28	59	Benson s/o Mission	2,318	40	0.0%	97.0%	1.1%	2.0%	75.0%	15.0%	10.0%	2	Soft	50
54.9	57.6	58.3	8	18	39	Benson s/o Francis	1,331	40	0.0%	97.6%	1.0%	1.4%	75.0%	15.0%	10.0%	2	Soft	50
63.2	66.0	66.7	30	65	139	Benson s/o I-10	8,603	40	0.0%	97.2%	1.1%	1.8%	75.0%	15.0%	10.0%	2	Soft	50
47.7	50.5	51.2	3	6	13	Philips e/o Benson	800	25	0.0%	98.1%	0.8%	1.1%	75.0%	15.0%	10.0%	2	Soft	50
62.4	65.2	65.9	27	57	124	Philips e/o Mountain	8,377	40	0.0%	98.4%	0.7%	1.0%	75.0%	15.0%	10.0%	2	Soft	50
60.3	63.1	63.8	19	42	90	Philips e/o San Antonio	5,275	40	0.0%	98.5%	0.6%	0.9%	75.0%	15.0%	10.0%	2	Soft	50
63.4	66.2	66.9	31	67	144	Philips e/o Euclid	7,610	40	0.0%	95.9%	1.1%	2.9%	75.0%	15.0%	10.0%	2	Soft	50
70.9	73.7	74.4	98	212	456	Vineyard Ave s/o SR-60	28,510	45	0.0%	94.3%	1.6%	4.1%	75.0%	15.0%	10.0%	4	Soft	50

ONT-06

Traffic Noise Calculations

Roadway Segment	CNEL at 50 Feet		dBA CNEL Increase		
	Adopted Baseline(2040?)	Proposed/ Future (Year ?)	Adopted Minus Existing	Proposed Minus Existing	Net Change Between Adopted and Future
Benson Ave South of fourth	65.4	64.0	3.0	1.6	-1.4
D Street East of Benson	59.5	59.0	0.1	-0.4	-0.5
Holt Blvd E/o Benson	73.7	73.4	1.9	1.5	-0.3
San Antonio Ave South of fourth	68.1	68.2	0.9	1.0	0.1
Mountain Ave s/o Fourth St	72.3	71.6	1.1	0.4	-0.7
I St e/o Benson Ave	57.0	57.5	5.2	5.6	0.5
I St e/o Euclid Ave	62.5	62.5	1.1	1.0	-0.1
G St e/o Benson Ave	61.8	62.3	0.6	1.1	0.5
G St e/o Euclid Ave	61.2	62.5	-0.2	1.1	1.3
Sultana Ave S/O Fourth St	56.8	57.7	7.9	8.8	0.9
West G Street e/o Benson Avenue	61.8	62.3	0.6	1.1	0.5
Euclid Ave s/o 4th St	73.3	74.0	0.9	1.6	0.7
Campus Ave South of I Street	64.7	65.2	3.0	3.4	0.4
Grove Ave s/o Fourth St	73.8	73.2	2.8	2.2	-0.6
Holt Blvd e/o Euclid	71.7	70.8	2.1	1.2	-1.0
Holt Blvd e/o Grove Ave	77.2	77.3	2.9	2.9	0.1
D Street e/o Euclid	62.4	64.6	0.9	3.1	2.2
Airport Dr e/o Grove	77.7	77.6	1.8	1.7	-0.1
Vineyard Ave s/o Fourth St	77.6	77.3	1.3	0.9	-0.4
Vineyard Ave s/o I-10	76.0	75.8	1.5	1.2	-0.3
Guasti Rd e/o Holt Blvd	70.1	70.2	2.1	2.2	0.0
Guasti Rd e/o Archibald Ave	56.8	61.5	0.0	4.6	4.6
Holt Blvd E/o Vineyard	76.7	76.7	0.4	0.4	0.0
Convention Center Way e/o Vineyard	67.9	67.8	1.5	1.4	-0.1
Inland Empire Blvd e/o Vineyard Ave	66.5	65.5	2.5	1.5	-1.1
Inland Empire Blvd e/o Haven Ave	70.2	70.1	2.8	2.6	-0.1
Ontario Mills Pwy e/o Milliken	75.4	73.4	2.6	0.6	-2.0
Concourse St e/o Haven Ave	67.9	68.2	2.5	2.8	0.3
Fourth St e/o Vineyard Ave	78.2	76.8	2.4	1.0	-1.3
Fourth St e/o Archibald Ave	76.3	75.8	2.1	1.6	-0.5
Fourth St e/o Haven Ave	75.8	75.7	1.9	1.9	0.0
Fourth St e/o Miliken Ave	77.5	77.6	1.3	1.4	0.1
Archibald Ave s/o Fourth St	72.5	73.5	1.1	2.0	1.0
Archibald Ave s/o Inland Empire Blvd	74.9	75.2	0.9	1.2	0.3
Turner Ave s/o 4th St	63.8	64.5	2.6	3.4	0.7
Haven St s/o Fourth St	75.6	75.7	0.0	0.1	0.1
Haven St s/o I-10	77.8	77.7	1.3	1.2	-0.1
Miliken Ave s/o Fourth St	77.9	78.0	0.9	1.0	0.2
Miliken Ave s/o I-10	79.4	79.2	2.0	1.9	-0.2
Edison Ave e/o Euclid	78.3	78.5	6.7	6.8	0.2
Ecaluptus Ave e/o Euclid	73.4	74.4	7.6	8.6	1.0
Bon View Ave s/o Chino	63.5	64.0	10.3	10.9	0.6
Grove Ave s/o Chino Rd	71.3	72.5	7.5	8.6	1.2
Grove Ave s/o Edison Rd	71.0	72.6	6.7	8.2	1.5
Archibald Ave s/o Chino Rd	77.1	77.2	8.8	8.9	0.1

Archibald Ave s/o Ontario Ranch Rd	76.8	76.8	3.5	3.5	0.0
Euclid Ave s/o schaefer	80.1	80.2	3.0	3.1	0.1
State St e/o Benson Ave	64.0	67.0	3.2	6.2	3.0
State St e/o Mountain Ave	65.9	68.4	3.2	5.6	2.4
State St e/o San Antonio Ave	64.7	67.7	4.3	7.3	3.0
State St e/o Vine Ave	63.7	67.0	3.3	6.6	3.3
State St e/o Euclid Ave	63.0	66.6	3.2	6.8	3.6
State St e/o Sultana Ave	66.1	68.6	3.6	6.2	2.5
State St e/o Campus Ave	67.2	69.5	4.4	6.7	2.3
State St e/o Bon View Ave	72.4	72.6	6.4	6.6	0.2
Ontario Blvd e/o Campus Ave	64.5	65.9	3.2	4.5	1.3
Mountain Ave s/o Holt Blvd	74.1	73.8	1.1	0.8	-0.3
San Antonio Ave s/o Holt Blvd	65.1	64.5	-0.2	-0.8	-0.6
Sultana Ave s/o Holt Blvd	60.3	62.5	3.7	5.8	2.1
Campus Ave s/o Holt Blvd	69.7	69.0	4.4	3.7	-0.7
Bon View Ave s/o Holt Blvd	61.7	61.6	4.7	4.6	-0.2
Grove Ave s/o Holt Blvd	74.6	75.1	2.9	3.4	0.5
Grove Ave s/o Airport Dr	77.1	77.1	1.1	1.1	0.0
Fourth St e/o Benson Ave	65.9	65.4	-0.2	-0.7	-0.5
Fourth St e/o Euclid Ave	61.8	62.9	0.5	1.6	1.1
Fourth St e/o Grove Ave	67.3	66.6	-2.3	-3.0	-0.8
G St e/o Grove Ave	64.1	64.3	0.0	0.3	0.3
Campus Ave s/o Philadelphia	71.0	71.8	3.2	4.0	0.8
Campus Ave South of Riverside Dr	69.1	69.6	7.2	7.6	0.4
Sixth St e/o Grove Ave	62.0	62.1	-0.8	-0.6	0.2
Francis e/o Euclid	68.8	67.8	4.5	3.6	-0.9
Mission Blvd e/o Benson	77.7	76.4	3.1	1.9	-1.3
Mission Blvd e/o Euclid	77.7	76.2	3.1	1.6	-1.5
Mission Blvd e/o Grove	78.7	77.7	9.1	8.1	-1.0
Mission e/o Archibald	77.1	75.9	3.4	2.1	-1.2
Mission e/o Haven	77.7	76.5	2.5	1.3	-1.2
Benson s/o Mission	62.8	61.1	1.9	0.2	-1.7
Benson s/o Francis	61.8	58.3	5.8	2.3	-3.5
Benson s/o I-10	66.4	66.7	-0.1	0.1	0.2
Philips e/o Benson	47.3	51.2	-1.8	2.1	3.9
Philips e/o Mountain	65.8	65.9	0.9	1.1	0.1
Philips e/o San Antonio	63.1	63.8	1.8	2.4	0.7
Philips e/o Euclid	66.6	66.9	3.1	3.3	0.3
Vineyard Ave s/o SR-60	69.7	70.4	2.8	3.5	0.7

NOISE MONITORING LONG-TERM GRAPHS

To limit population exposure to physically and/or psychologically damaging, as well as intrusive noise levels, the State of California, counties and cities have established standards and ordinances to control noise. Following are state and local regulations that are applicable to the proposed project.

State Regulations

The State of California regulates freeway noise, sets standards for sound transmission, provides occupational noise control criteria, identifies noise standards, and provides guidance for local land use compatibility. State law requires that each county and city adopt a general plan that includes a noise element which is to be prepared according to guidelines adopted by the Governor's Office of Planning and Research. The purpose of the noise element is to "limit the exposure of the community to excessive noise levels."

The California Building Code (CBC), Title 24, Part 2, Volume 1, Chapter 12, Interior Environment, Section 1207.11.2, *Allowable Interior Noise Levels*, requires that interior noise levels attributable to exterior sources shall not exceed 45 dB in any habitable room. The noise metric is evaluated as either the day-night average sound level (L_{dn}) or the community noise equivalent level (CNEL), consistent with the noise element of the local general plan.

Local Regulations

City of Brea General Plan

The noise section of the City's General Plan provides goals and policies to protect local citizens from the harmful effects of excessive exposure to noise. The following policies are applicable to the proposed project:

Policy PS-9.1. Evaluate the need to require acoustical studies for development proposals that address both direct and indirect, particularly traffic, noise impacts, and require such studies, with appropriate mitigation included, as warranted.

Policy PS-3.3. Minimize stationary noise sources and noise emanating from construction activities and special events impact evaluation

Figure PS-6 illustrates the City's noise and land use compatibility guidelines.

City of Brea Municipal Code

The City of Brea Municipal Code designates the entire territory of The City of Brea as a Noise Zone 1. The following sections of the Code establish those limits and exemptions

Exterior Noise Standards

Table 3.12-1 Exterior Noise Standards

Noise Zone	Maximum Noise Level at Complaint Site of Receiving Property	
	Noise Level	Time Period
1	55 dBA	7:00 a.m. – 10:00 p.m.
1	50 dBA	10:00 p.m. – 7:00 a.m.

Note: In the event the alleged offensive noise consists entirely of impact noise, simple tone noise, speech, music, or any combination thereof, each of the above noise levels shall be reduced by 5 dBA.

It shall be unlawful for any person at any location within the city to create any noise on property owned, leased, occupied, or otherwise controlled by such person, when the foregoing causes the noise level, when measured on any other residential property, to exceed:

- The noise standard for a cumulative period of more than 30 minutes in any hour (L50); or
- The noise standard plus 5 dBA for a cumulative period of more than 15 minutes in any hour (L25); or
- The noise standard plus 10 dBA for a cumulative period of more than 5 minutes in any hour (L8); or
- The noise standards plus 15 dBA for a cumulative period of more than 1 minute in any hour (L2); or
- The noise standard plus 20 dBA for any period of time (Lmax).

In the event the ambient noise level exceeds any of the first four noise limit categories above, the cumulative period applicable to said category shall be increased to reflect said ambient noise level. In the event the ambient noise level exceeds the fifth noise limit category, the maximum allowable noise level under said category shall be increased to reflect the maximum ambient noise level.

Interior Noise Standards

Table 3.12-2 Interior Noise Standards

Noise Zone	Maximum Noise Level at Complaint Site of Receiving Property	
	Noise Level	Time Period
1	55 dBA	7:00 a.m. – 10:00 p.m.
1	45 dBA	10:00 p.m. – 7:00 a.m.

Note: In the event the alleged offensive noise consists entirely of impact noise, simple tone noise, speech, music, or any combination thereof, each of the above noise levels shall be reduced by 5 dBA.

It shall be unlawful for any person at any location within the city to create any noise, or to allow the creation of any noise on property owned, leased, occupied, or otherwise controlled by such person, when the foregoing causes the noise level, when measured on any other residential property, to exceed:

- The interior noise standard for a cumulative period of more than 5 minutes in any hour; or

- The interior noise standard plus 5 dBA for a cumulative period of more than 1 minute in any hour (L2); or
- The interior noise standard plus 10 dBA for any period of time (Lmax).

In the event the ambient noise level exceeds any of the first two noise limit categories above, the cumulative period applicable to said category shall be increased to reflect said ambient noise level. In the event the ambient noise level exceeds the third noise limit category the maximum allowable noise level under said category shall be increased to reflect the maximum ambient noise level.

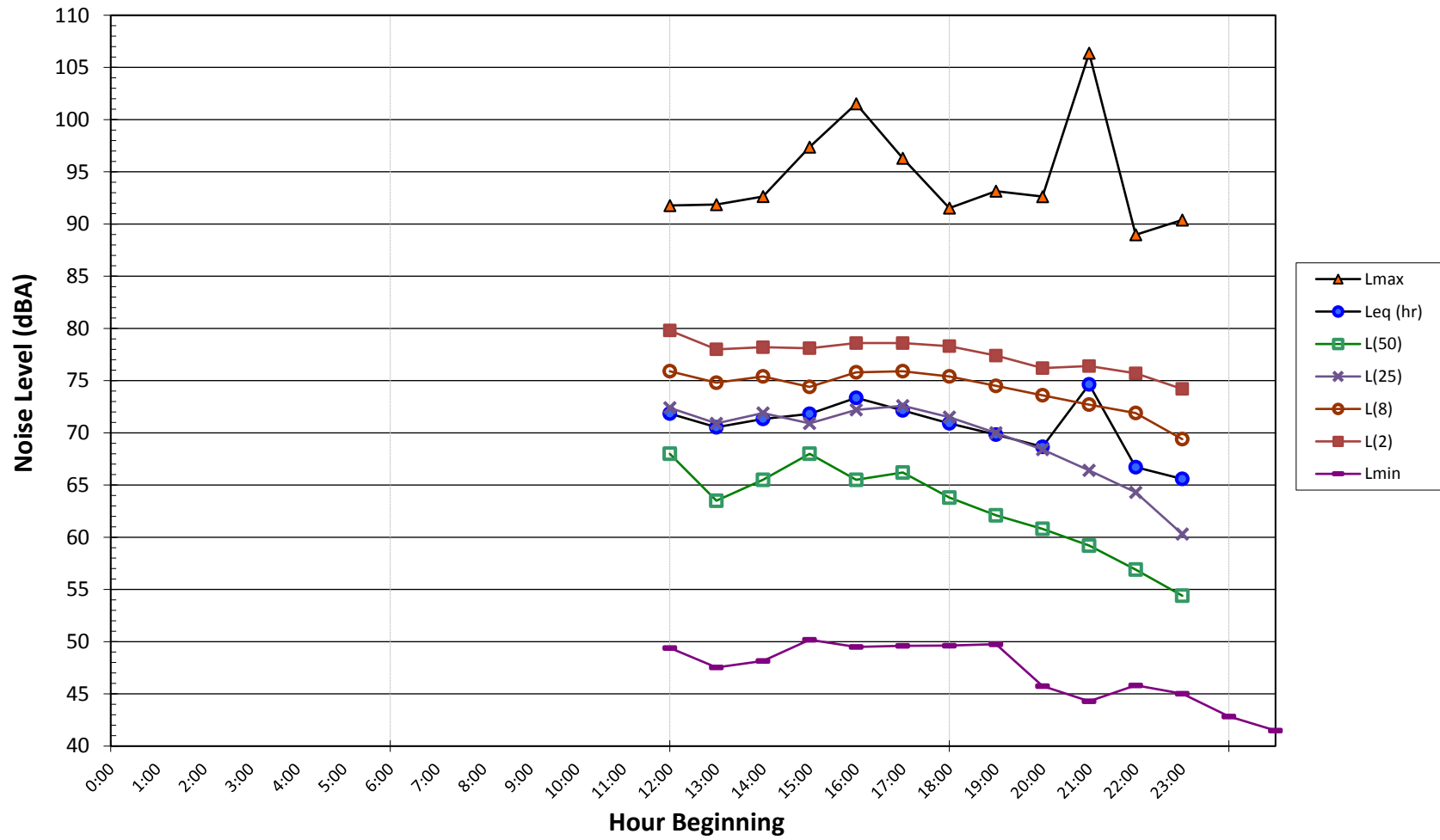
Special Provisions

The following activities directly relevant to the project are exempted from the provisions of the City Municipal Code:

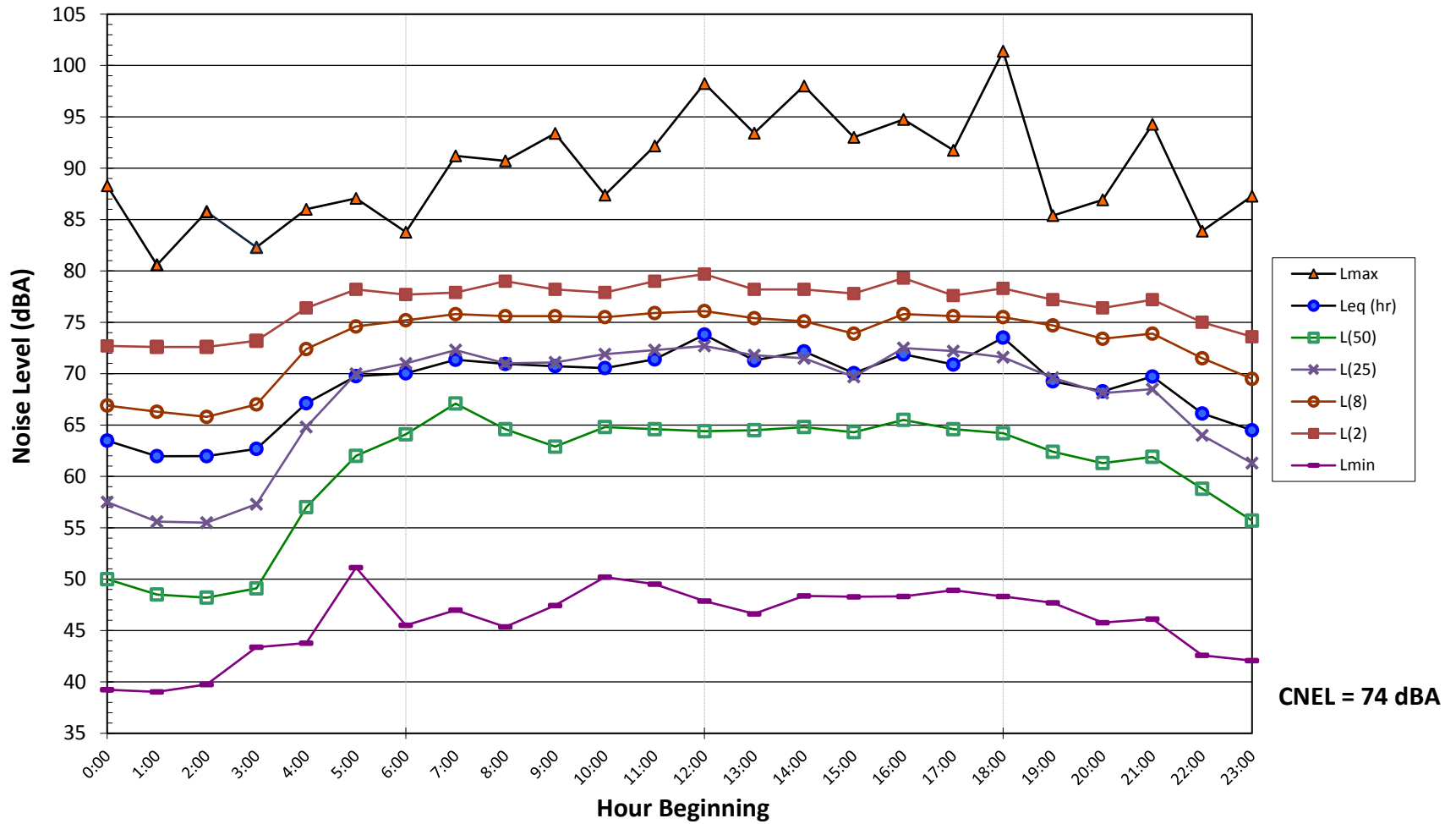
- Noise sources associated with construction, repair, remodeling, or grading of any real property, provided said activities do not take place between the hours of 7:00 p.m. and 7:00 a.m. on weekdays, including Saturday, or at any time on Sunday or a federal holiday.
- Noise sources, associated with the maintenance of real property, provided said activities take place between 7:00 a.m. and 7:00 p.m. on any day.

Any activity to the extent regulation thereof has been preempted by state or federal law.

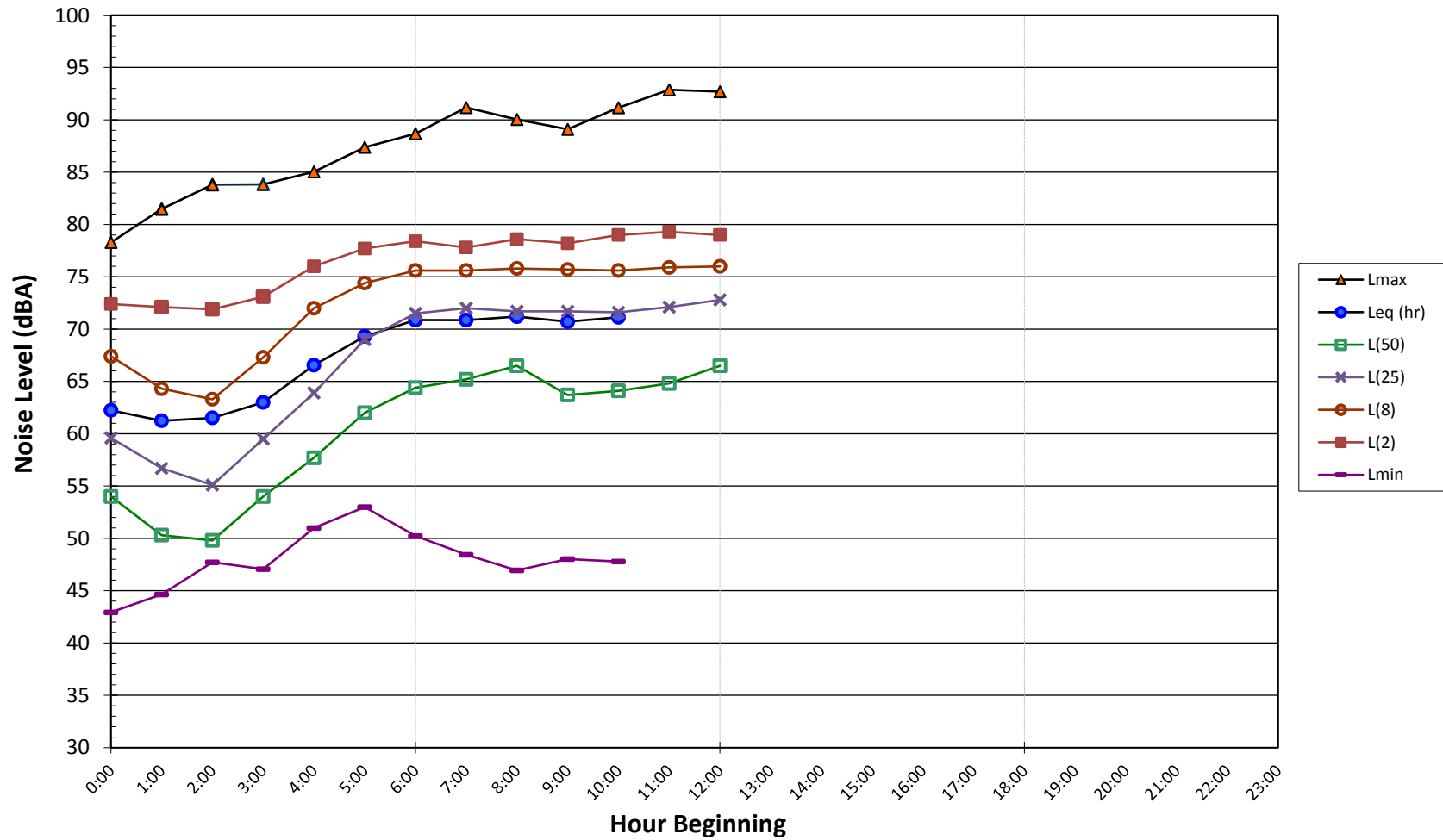
Noise Levels at LT-1
Euclid Avenue, north of East 4th Street, Ontario, CA
Tuesday, November 16, 2021



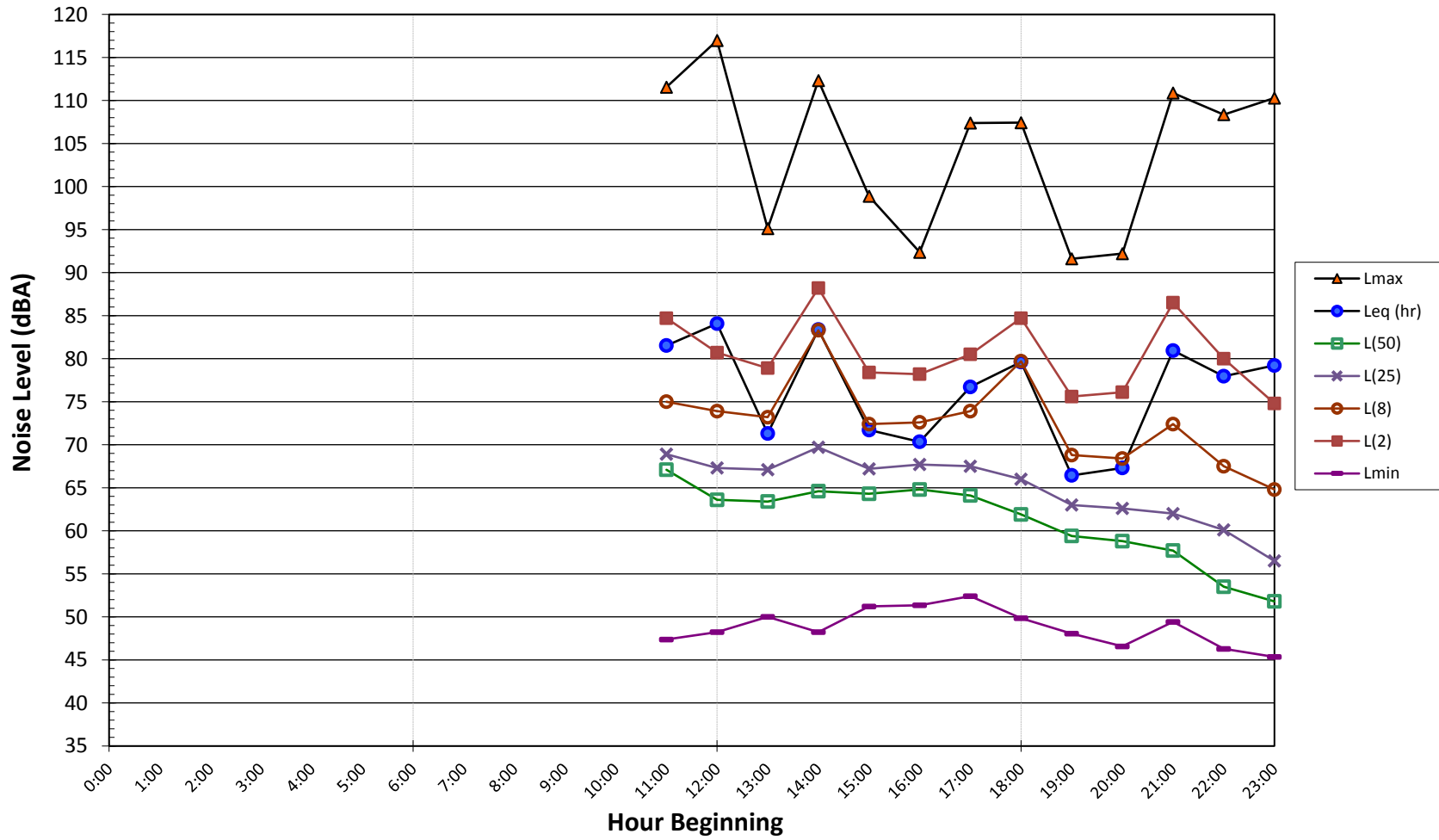
Noise Levels at LT-1
Euclid Avenue, north of East 4th Street, Ontario, CA
Wednesday, November 17, 2021



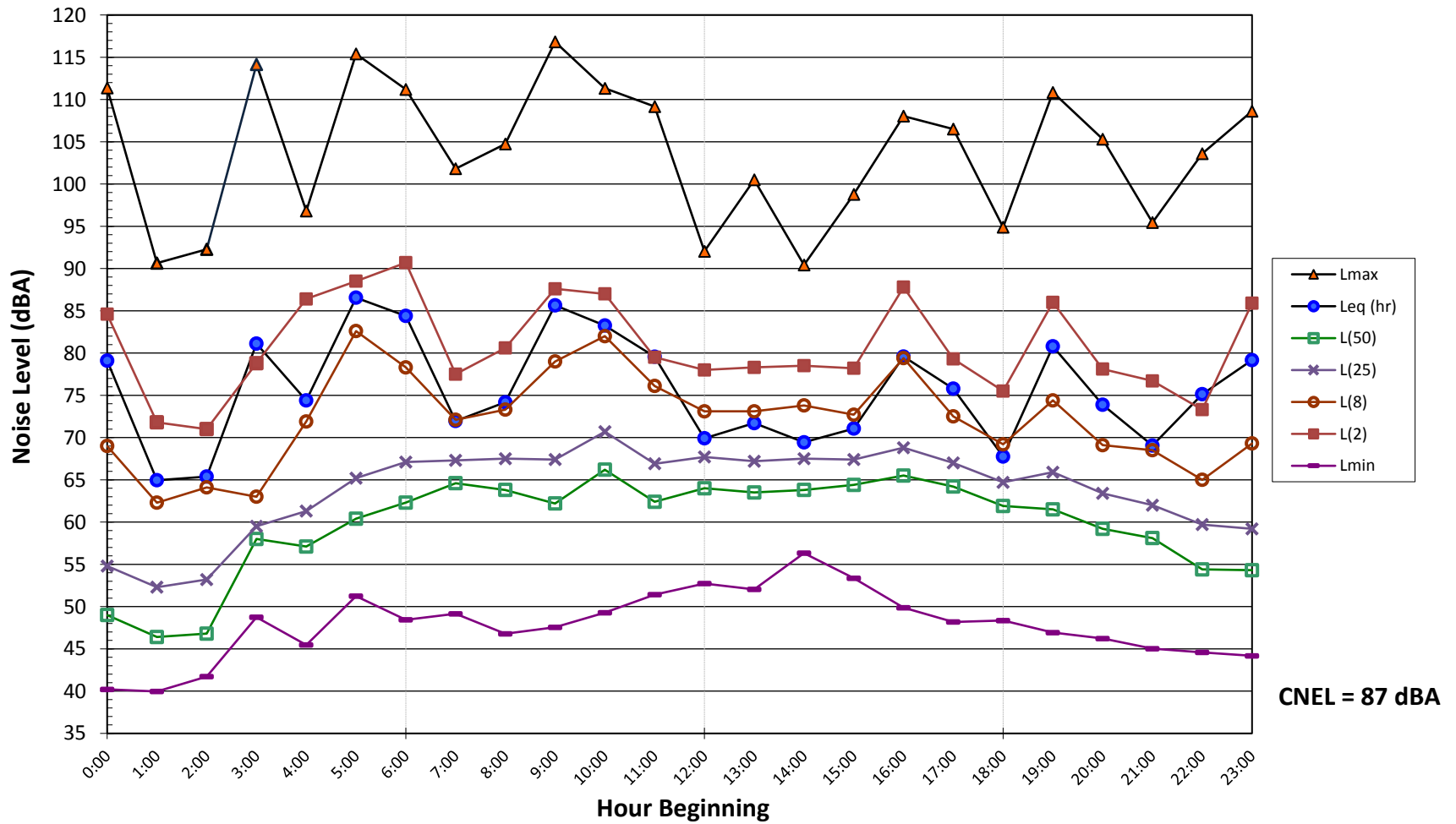
**Noise Levels at Noise Measurement Site LT-1
Euclid Avenue, north of East 4th Street, Ontario, CA
Thursday, November 18, 2021**



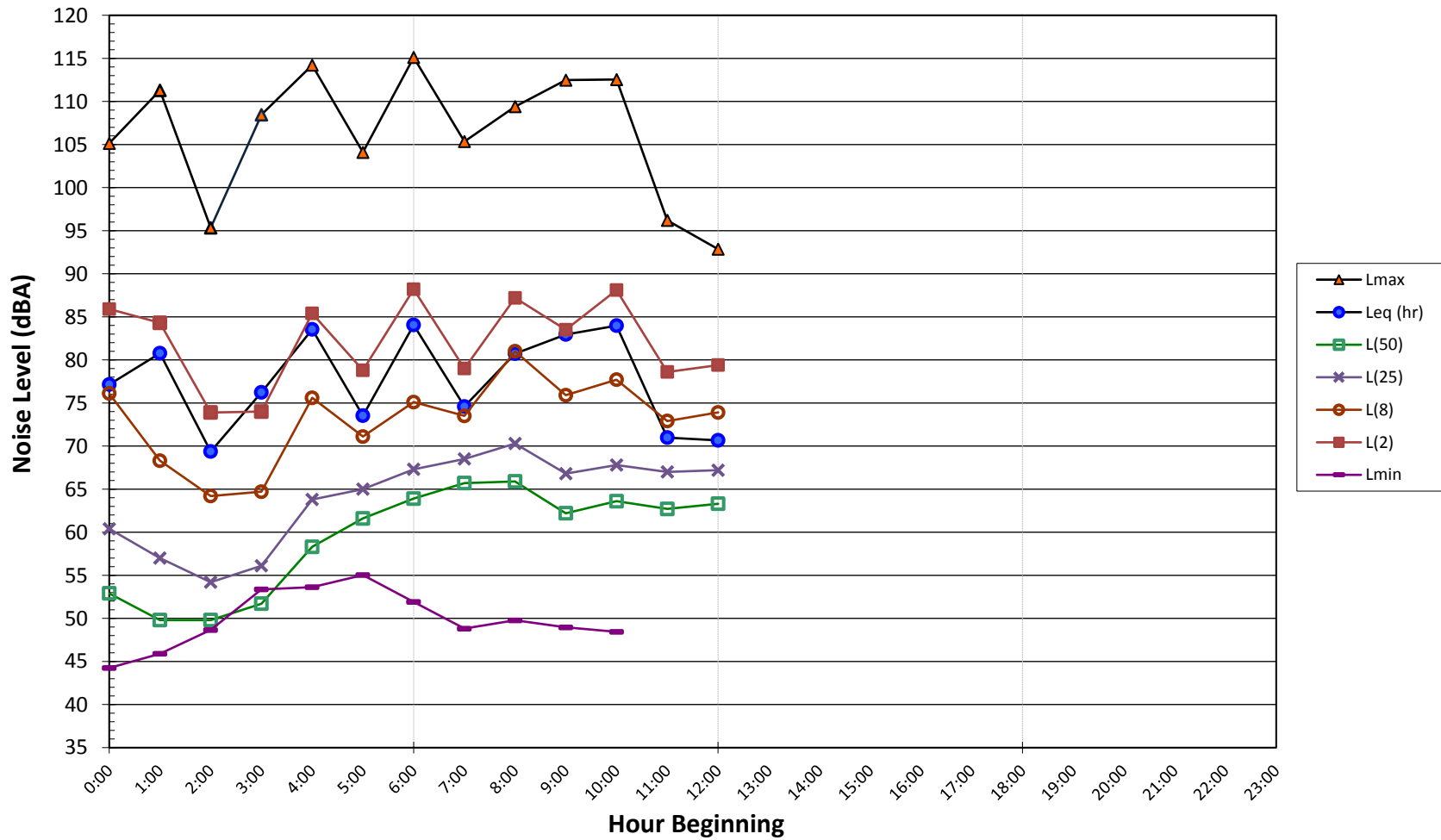
Noise Levels at LT-2
W State Street and Vine Street Near Railroad Crossings, Ontario, CA
Tuesday, November 16, 2021



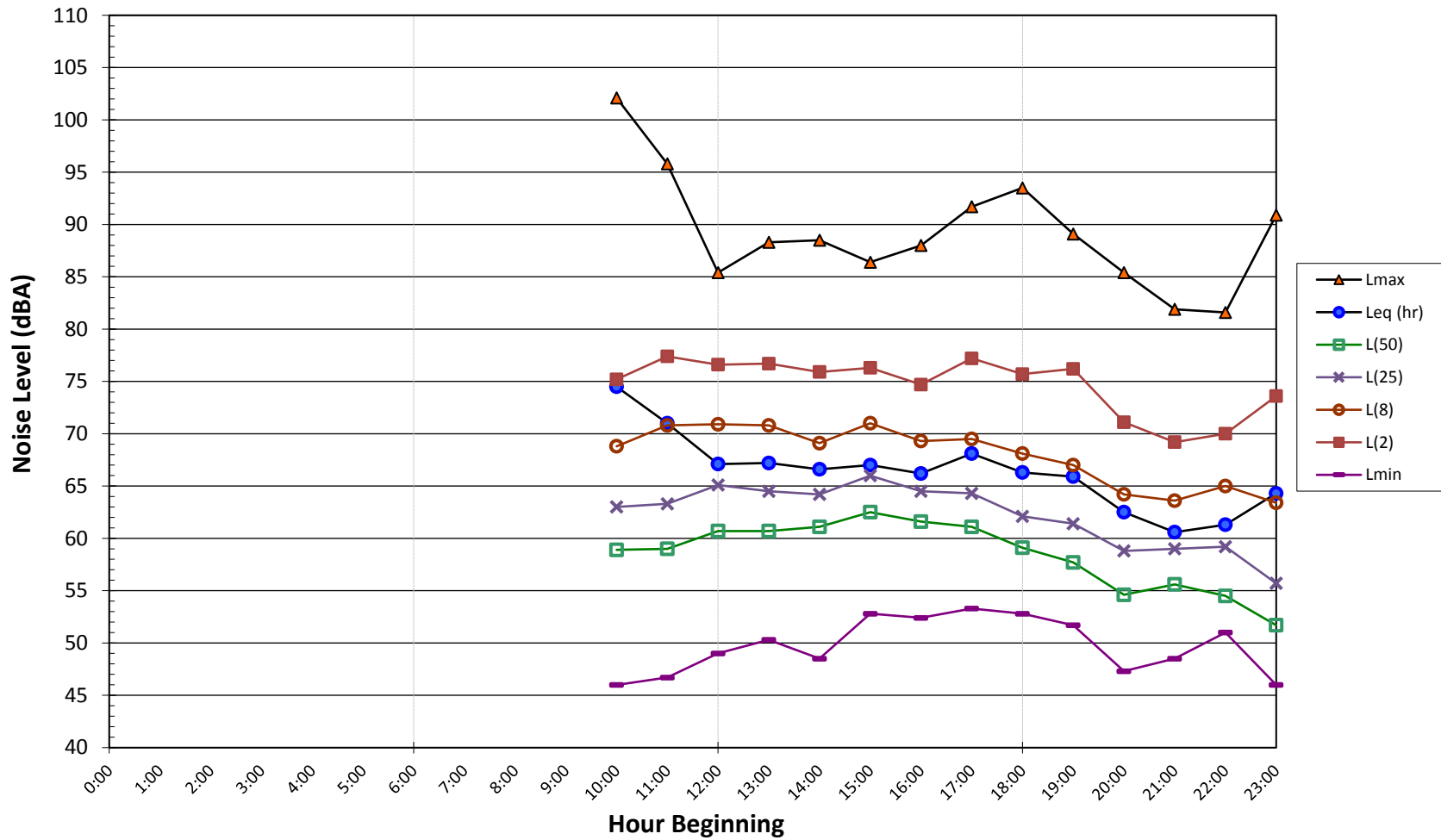
Noise Levels at LT-2
W State Street and Vine Street Near Railroad Crossings, Ontario, CA
Wednesday, November 17, 2021



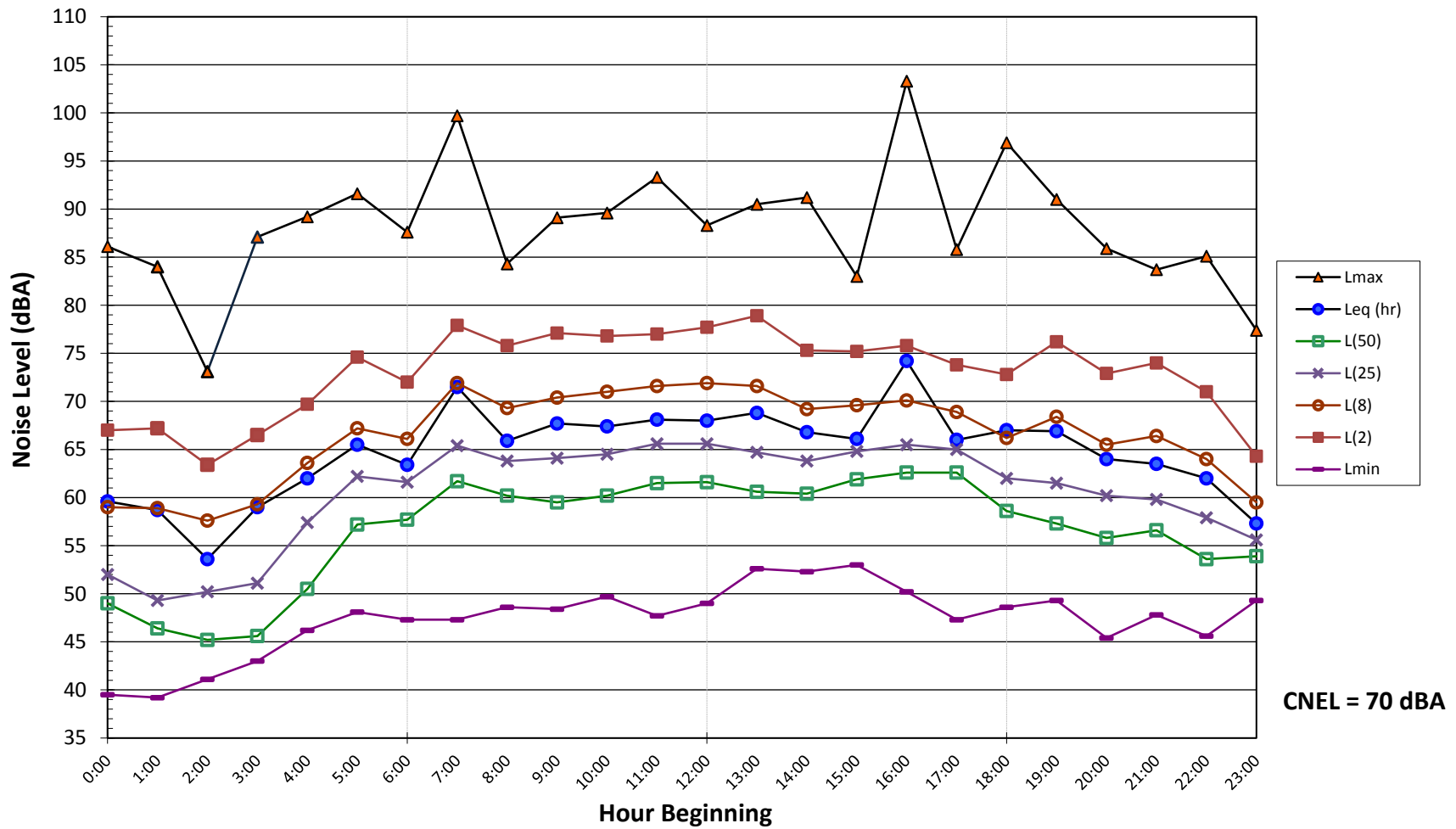
Noise Levels at Noise Measurement Site LT-2
W State Street and Vine Street Near Railroad Crossings, Ontario, CA
Thursday , November 18 , 2021



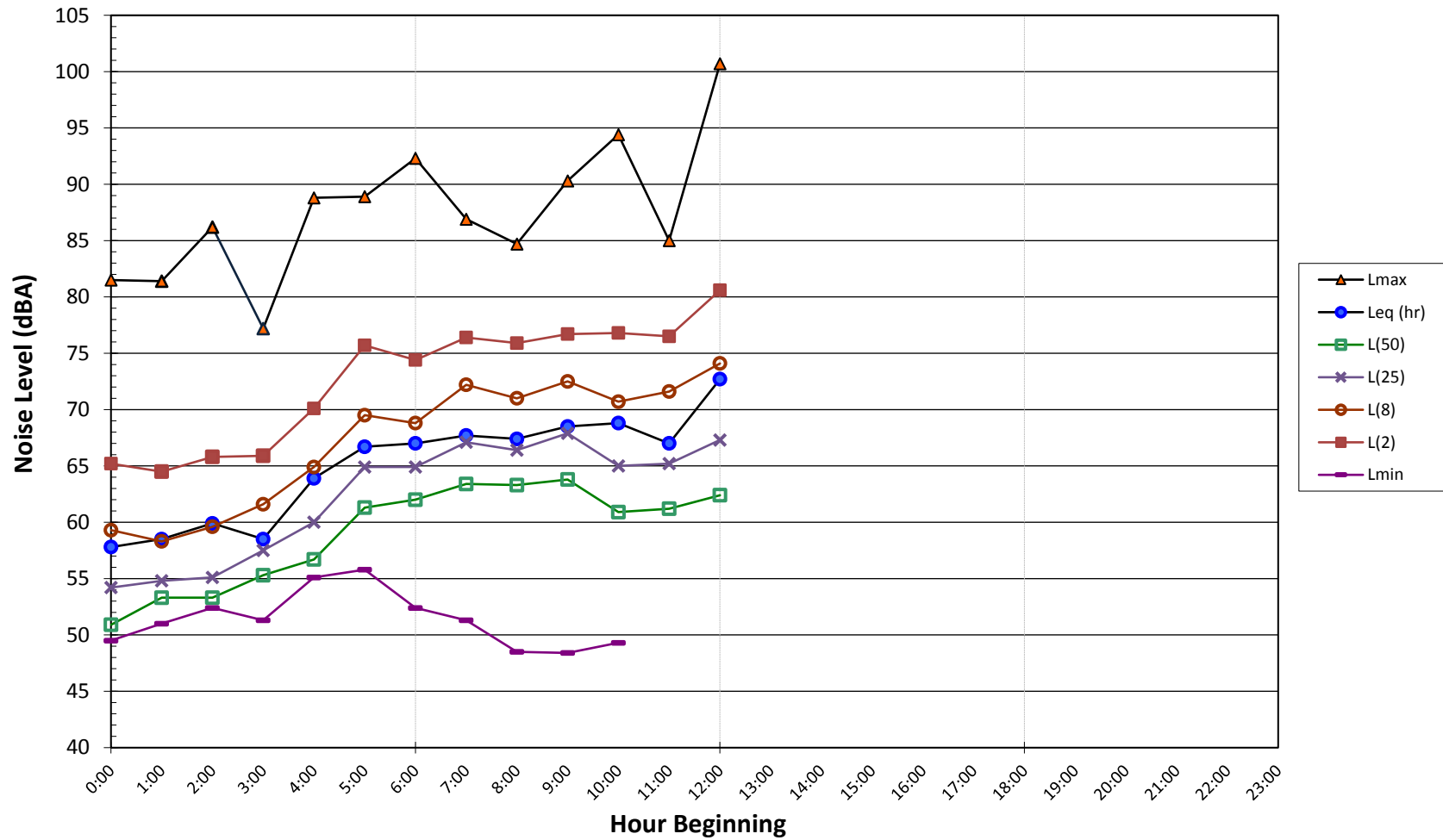
Noise Levels at LT-3
1759 East Francis Street, Ontario, CA
Tuesday, November 16, 2021



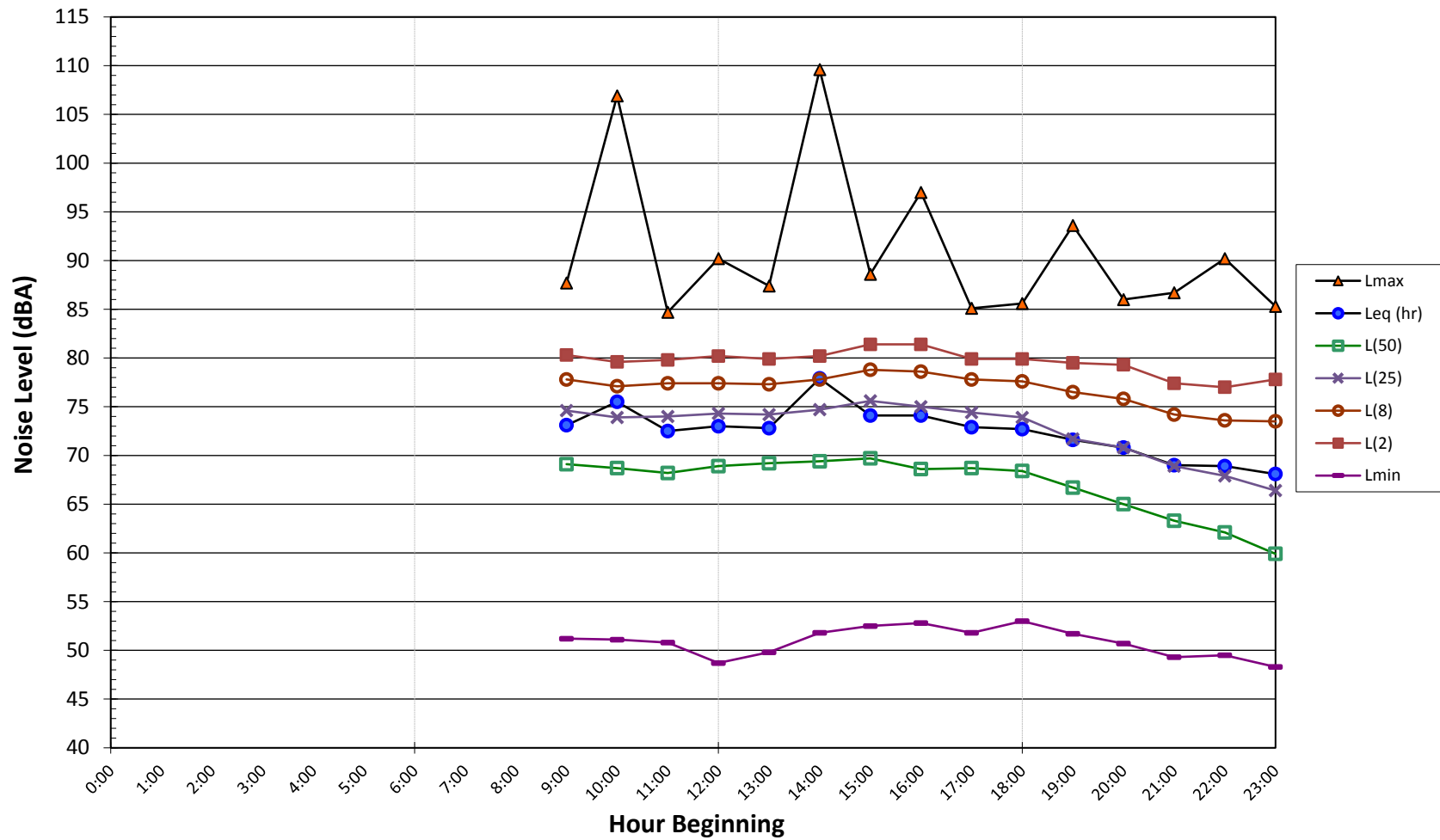
Noise Levels at LT-3
1759 East Francis Street, Ontario, CA
Wednesday, November 17, 2021



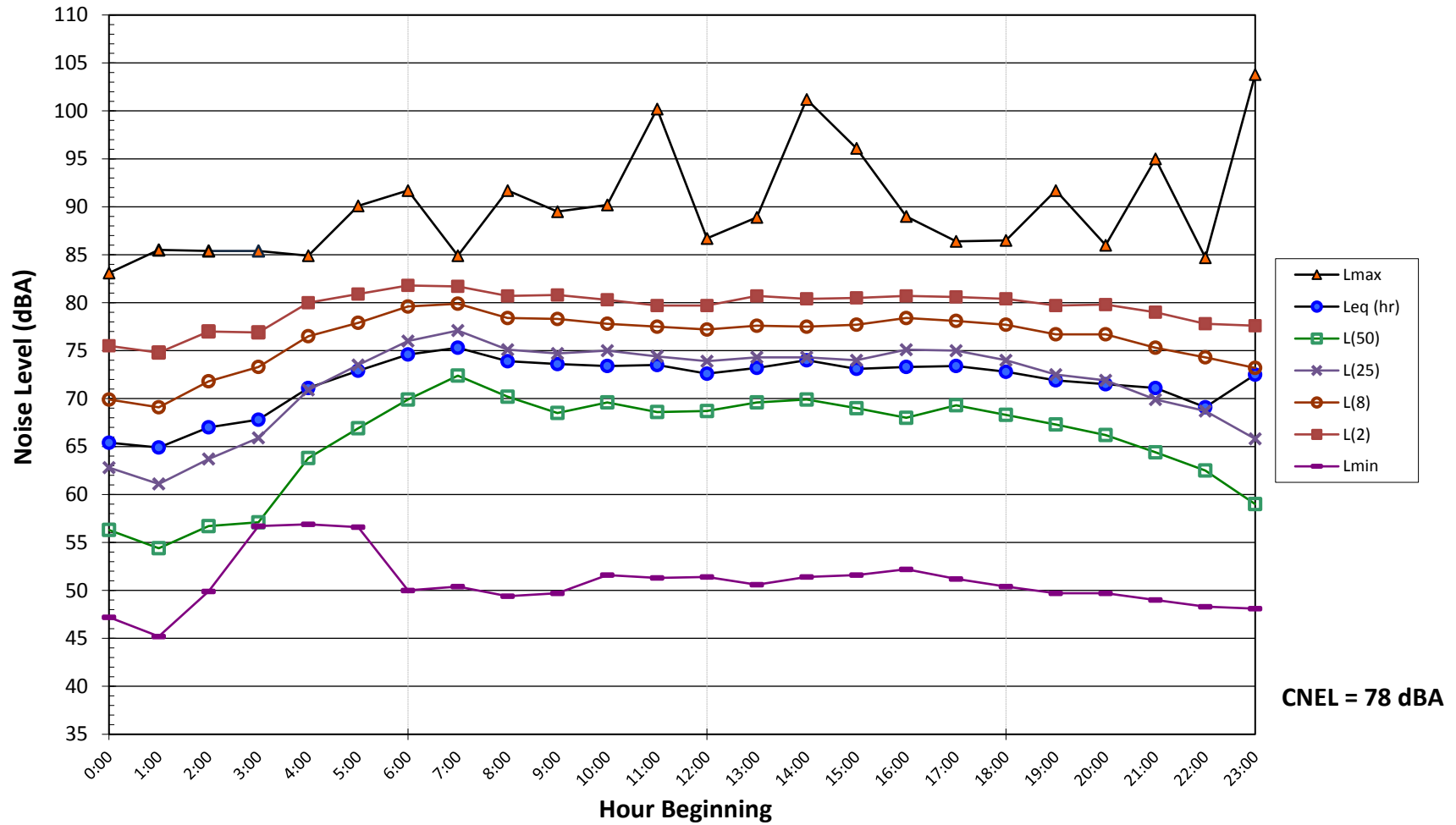
**Noise Levels at Noise Measurement Site LT-3
1759 East Francis Street, Ontario, CA
Thursday, November 18, 2021**



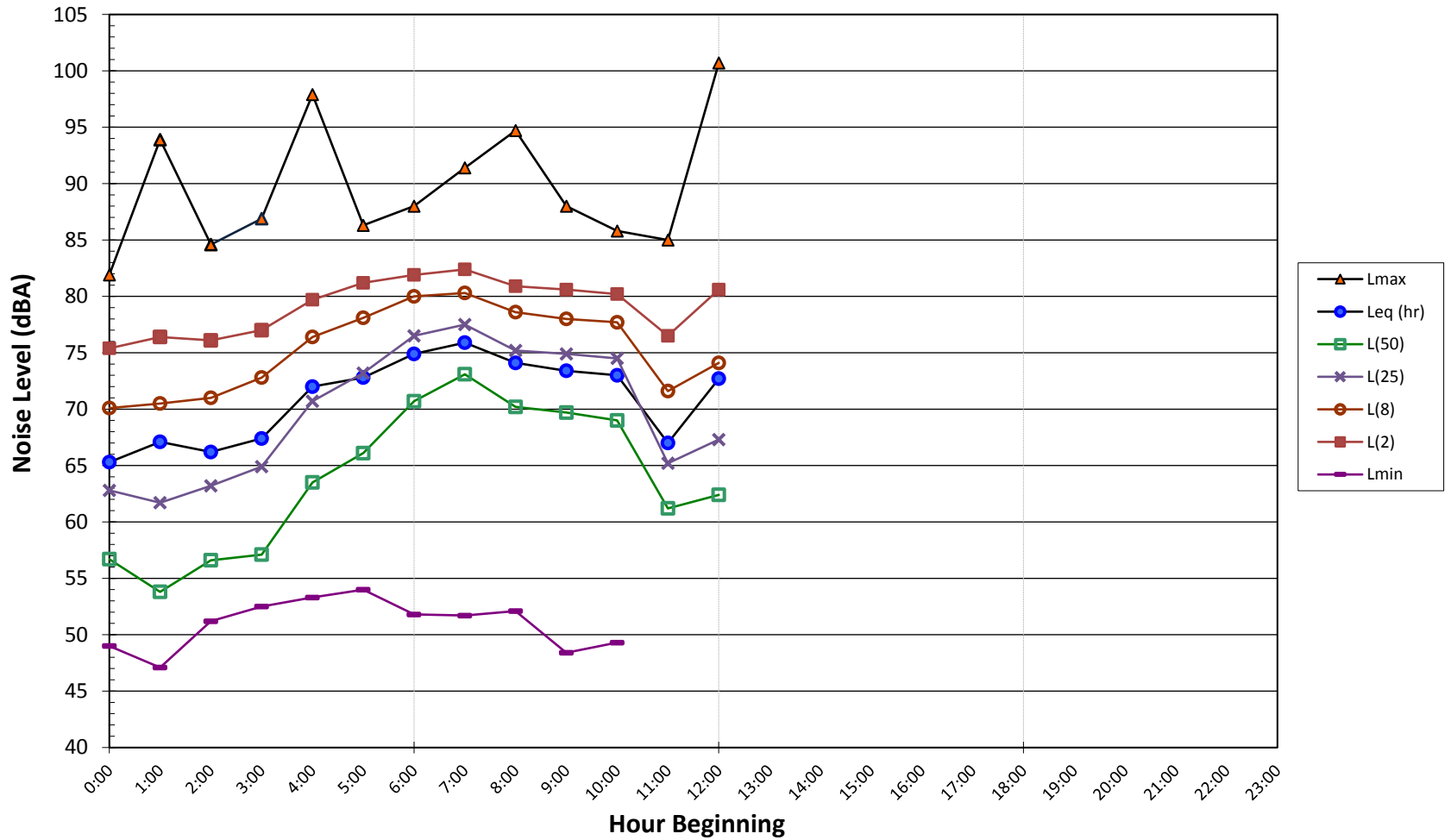
Noise Levels at LT-4
South Archibald Avenue, north of Schaefer Avenue, Ontario, CA
Tuesday, November 16, 2021



Noise Levels at LT-4
South Archibald Avenue, north of Schaefer Avenue, Ontario, CA
Wednesday, November 17, 2021



Noise Levels at Noise Measurement Site LT-4
South Archibald Avenue, north of Schaefer Avenue, Ontario, CA
Thursday, November 18, 2021



Appendix I Public Service Responses

Appendices

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The Ontario Plan 2050 Supplemental Environmental Impact Report: Information for Fire Protection Services

Questionnaire

- 1) Does Ontario Fire Department (OFD) have a minimum staffing level at either of its fire stations at any given time? Does the OFD currently meet that standard?
The OFD's minimum staffing level goes by apparatus type as opposed to fire station. OFD is bound by an MOU that mandates 4-person Engine Companies (2 of them being paramedics) and 4-person Truck Companies at all times.
- 2) Are the existing staff and equipment levels at the fire station(s) adequate to meet current demands for fire protection services in OFD service area? Would implementation of the proposed project impact service levels to drop below the projected future level?
They are not adequate to meet projected demands based on city boundaries, response times, and call volume. The recommendation is to build three additional fire stations in Ontario Ranch to meet the projected needs while retaining benchmark response times and level of care.
- 3) What are the average response times for fire and emergency services? What is the stated policy for each? Are these times considered acceptable? If not, what is the preferred response time?
OFD's benchmark is to be on scene within 9 mins 59 seconds 90% of the time for both Fire and EMS calls. In 2020, OFD met this goal 92% however, recently with the rapid expansion in Ontario Ranch those times have been tested and benchmarks should be retained. (Details and maps are within the Ontario Fire Department – Standards of Cover)
- 4) Are there any existing deficiencies, such as lack of staffing and/or facilities and equipment?
With the growth and future development in Ontario Ranch, the OFD will require the addition of three new fire stations at community build out. This will ensure adequate EMS and fire protections services to meet the needs of the community and supports the NFPA recommendations detailed within the Standards of Cover document.
- 5) Are there any existing plans for expansion or relocation of stations that would serve the project? If so, please described the expansion or relocation.
Yes, we have potential sites identified for the three additional fire station locations. Fire Administration is going to be moved to Fire Station 3 for growth due to Ontario Ranch and to be centrally located within the community.
- 6) Would the proposed project require the OFD to hire more staff?
Yes. Station 11 is the next proposed fire station and that would be staffed with 24 additional firefighters. Additional fire stations would be staffed with 4 firefighters for each engine or truck housed at each station.
- 7) Would the OFD need to construct new facilities or expand existing facilities to accommodate the proposed project's demand for fire protection services, based on the projected growth through 2050?
Yes, by three additional locations. (Proposed location map attached).
- 8) Does the OFD recommend standard criteria for assessing the significance of a proposed project's impacts in an EIR or other environmental impact documentation? If so, what are those criteria?
I am not sure if this applies to OFD or could you further clarify your questions. Thank you!
- 9) Does the OFD have identified Developer Impact Fees for new development? If so, please describe the fees.
Yes, we have used DIF fees for Fire Station 9 and are planning to do the same with the future proposed locations.
- 10) Please provide recommendations that could reduce the demand for fire protection services created by the proposed project.
A Community Risk Reduction (CRR) Program. One of OFD's ASO's this year is a Staff Study Report to review and consider a CRR program.
- 11) Please provide any current documents on fire protection services in the city including background reports, number of incidents, policy documents, and facility plans or reports that you think would help with preparing the environmental review analysis for impacts to fire services as a result of the proposed project.
 1. **Proposed future Ontario Ranch fire station locations.**
 2. **Standards of Cover**
 3. **Calls for service heatmaps**

Responses Prepared By:

Jordan Villwock (Fire Administrative Director) and Mike Gerken (Deputy Fire Chief)

Name	Title
Ontario Fire Department	2/15/2022

Agency	Date
---------------	-------------

**Ontario Fire Department
Run Numbers 2021**

Total Responses: 28,825

Battalion 1: 18,792

Station 1: 6,178

B1815: 530

N1850: 1,026

ME131: 3,368

T131: 1,254

Station 2: 3,229

ME132: 3,229

Station 3: 2,610

ME133: 2,610

Station 4: 2,553

ME134: 2,553

Station 5: 4,222

ME135: 4,222

Battalion 2: 10,033

Station 6: 2,876

ME136: 2,031

T139: 845

Station 7: 1,863

B1825: 457

ME137: 1,406

Station 8: 3,590

ME138: 2,627

T138: 963

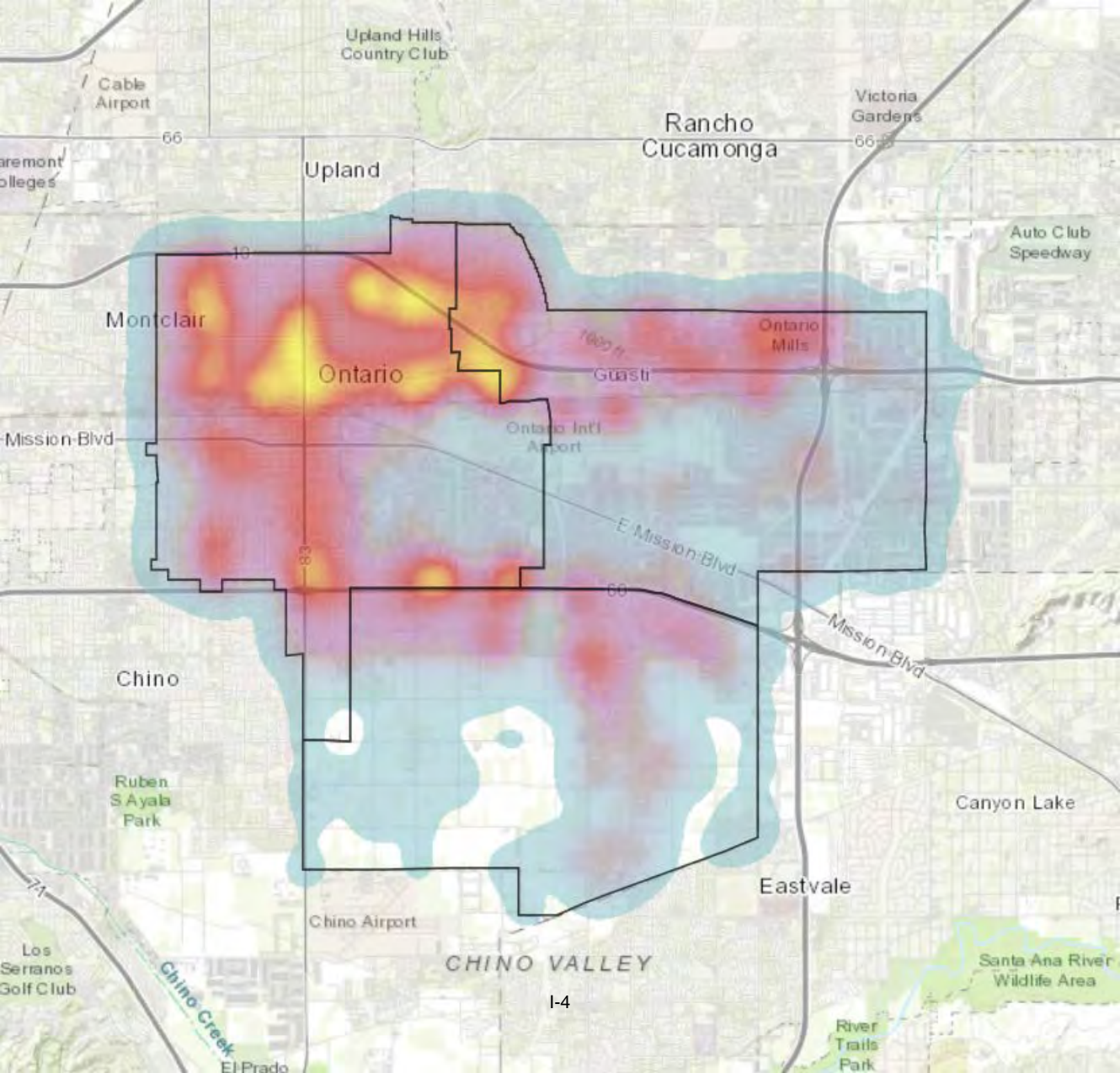
Station 9: 986

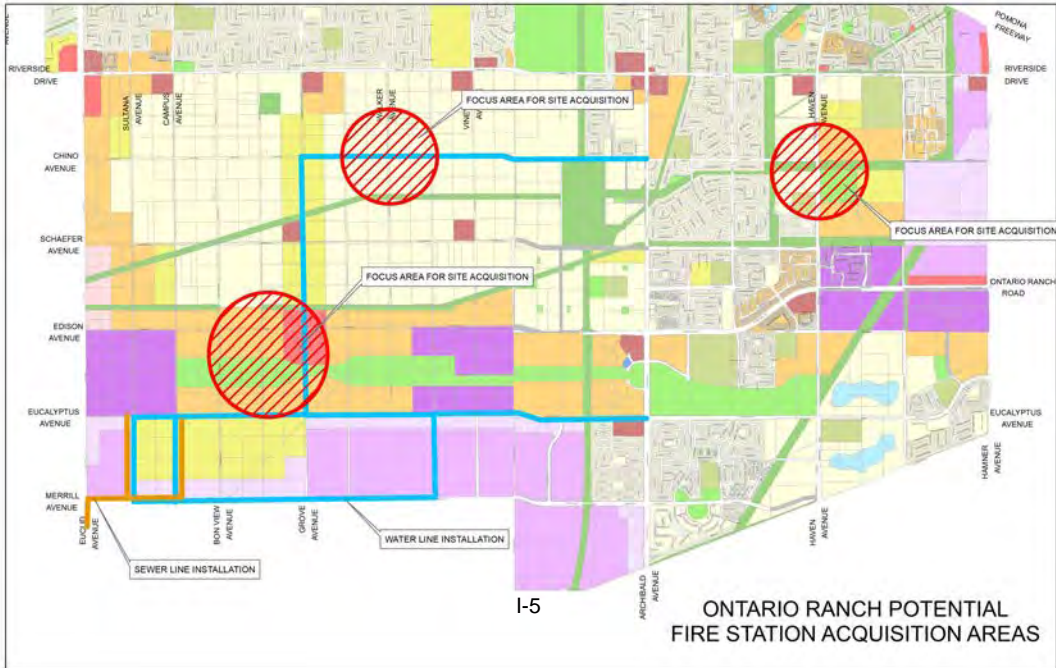
ME139: 986

Station 10: 718

CA1840: 362

MS140: 356





The Ontario Plan 2050 Supplemental Environmental Impact Report: Information for Police Services

Questionnaire

- 1) Is there a standard ratio of officers per number of population that the Ontario Police Department (OPD) wishes to maintain? Does the Department currently meet that standard?
The general rule is approximately 225 police officers, per 100,000 people. Currently we are allotted 300 police officers. We do meet this standard, but as Ontario Ranch populates, we will have to continue to hire.
- 2) Are the existing staff levels and equipment at the station(s) adequate to meet current demands for police services in the project area? Would implementation of the proposed project impact service levels such that they drop below the current level?
Staffing levels are adequate to meet the current demand, but as the project continues additional staff is needed. They will not be adequate to meet projected demands based on city boundaries, expedited response, and call volume. The recommendation is to hire additional staff to continue to meet the needs of the community.
- 3) Does the OPD have an established target response time for responding to calls? If so, is the OPD currently meeting those response times?
It is the goal of the Ontario Police Department to respond to calls for service in an expeditious manner. Response times may vary on available personnel. Officers are in the field conducting proactive enforcement or responding to calls for service as needed.
- 4) How many emergency incident calls does the OPD respond to per year? What is the response goal for an emergency incident?
OPD responds to an average of 200,000 calls for service per year. Depending on the emergency and available officers, we will always try to send the closest officers to each emergency.
- 5) Are there any existing deficiencies, such as lack of staffing and/or facilities and equipment?
With the growth and future development in Ontario Ranch, the OPD will require the addition personnel at community build out. This will ensure adequate police services to meet the needs of the community.
- 6) Are there any existing plans for expansion or relocation of stations that would serve the project? If so, please described the expansion or relocation.
There are current plans for a substation for the proposed Entertainment District. It has also been recommended to have a substation/multi use facility for OPD to utilize in Ontario Ranch.
- 7) Would the proposed project require the OPD to hire more staff?
Yes, as the project is being built out OPD would have to hire additional staff so we can continue to deliver exceptional police services.
- 8) Would the OPD need to construct new facilities or expand existing facilities in order to accommodate the proposed project's demand for police services, based on the projected growth through 2050?
There are current plans for a substation for the proposed Entertainment District. It has also been recommended to have a substation/multi use facility for OPD to utilize in Ontario Ranch.
- 9) Does the OPD recommend standard criteria for assessing the significance of a proposed project's impacts in an EIR or other environmental impact documentation? If so, what are those criteria?
OPD does have an officer that sits on the city Development Advisory Board. OPD requires standards of conditions of approval as it applies to safety (proper lighting/security cameras).
- 10) Does the OPD have identified Developer Impact Fees for new development? If so, please describe the fees.
There are city fees related to safety, but this is handled by the city. None of these fees are paid directly to OPD.
- 11) Please provide recommendations, if any, that could reduce the demand for police services created by the proposed project.
Following OPD's approval conditions is intended to deter criminal activity. At the same time police presence is a major deterrent, but that requires additional staffing.

- 12) Please provide any current documents on police services in the city including background reports, number of incidents, policy documents, and facility plans or reports that you think would help with preparing the environmental review analysis for impacts to police services as a result of the proposed project.
None at this time.

Responses Prepared By:

Joseph Estrada	Sergeant
Name	Title
Ontario Police Department	March 1, 2022
Agency	Date

**City of Ontario, The Ontario Plan 2050 DEIR
School District Questionnaire**

1. Please indicate which schools would likely serve the City of Ontario within the Chaffey Joint Union High School District.

**Chaffey High School
Colony High School
Ontario High School**

2. What is the capacity of each of the schools? What is the existing enrollment?

School Site:	Capacity:	Enrollment:
Chaffey High School	2,862	3,363
Colony High School	3,078	2,162
Ontario High School	3,267	2,322

3. What is the average enrollment (10-year average) of each school that would serve the project site?

School Site:	10-Yr Enrollment Average:
Chaffey High School	3,421.6
Colony High School	2,159.1
Ontario High School	2,506.7

4. Would these schools be able to accommodate a potential increase in enrollment?

While all three schools would be able to accommodate potential increases, Colony High School would provide the most availability.

**City of Ontario, The Ontario Plan 2050 DEIR
School District Questionnaire**

5. What impact would the proposed The Ontario Plan 2050, in combination with all the other projects planned in the area, have on the ability of the Chaffey Joint Union High School District to provide educational services in the area(s)?

The District anticipates, at a minimum, the need to accommodate additional students. Other direct or indirect impacts are unknown at this time.

6. Has the District adopted a fee program, pursuant to Senate Bill 50, that levies statutory school impact fees per residential or non-residential building square foot that may be levied for school construction? If yes, what is the current School Fee?

Yes. The breakdown is as follows:

Level 1 Developer Fees

Residential = \$1.26 / sq.ft. Commercial = \$0.20 / sq.ft.

7. What is the student growth rate (elementary, middle, high school) based on the number of residential units?

Student Yield Factors (Student Growth Rate) for our high schools are as follows:

**Single Family Dwellings = 0.094
Multi-Family Attached = 0.057
Apartments = 0.012**

8. Please add any comments you may wish to make regarding this matter.

N/A

Response Prepared By:

Richard G. Wiersma

Richard G. Wiersma

Assistant Superintendent of Business

Name

Title

Chaffey Joint Union High School District

September 2, 2021

Agency

Date

**City of Ontario, The Ontario Plan 2050 DEIR
School District Questionnaire**

1. Please indicate which schools would likely serve the City of Ontario within the Chino Valley Unified School District.

**Levi Dickey Elementary School
Liberty Elementary School
Woodcrest Junior High School**

2. What is the capacity of each of the schools? What is the existing enrollment?

**Levi Dickey Elementary School – capacity 800, existing enrollment 443
Liberty Elementary School – capacity 800, existing enrollment 509
Woodcrest Junior High School – capacity 1100, existing enrollment 341**

3. What is the average enrollment (10-year average) of each school that would serve the project site?

7-year average data provided

**Levi Dickey Elementary School - 591
Liberty Elementary School - 689
Woodcrest Junior High School - 461**

City of Ontario, The Ontario Plan 2050 DEIR
School District Questionnaire

4. Would these schools be able to accommodate a potential increase in enrollment?
Yes they would.

5. What impact would the proposed The Ontario Plan 2050, in combination with all the other projects planned in the area, have on the ability of the Chino Valley Unified School District to provide educational services in the area(s)?
The plan would have some impact in terms of increased enrollment to the three Chino Valley Unified School District (CVUSD) schools serving the area, but it is anticipated that the increased enrollment would be manageable. The majority of the plan is not within CVUSD boundaries.

6. Has the District adopted a fee program, pursuant to Senate Bill 50, that levies statutory school impact fees per residential or non-residential building square foot that may be levied for school construction? If yes, what is the current School Fee?
Yes, our current school fees are \$4.08 per square foot for residential and \$0.66 per square foot for commercial.

City of Ontario, The Ontario Plan 2050 DEIR
School District Questionnaire

7. What is the student growth rate (elementary, middle, high school) based on the number of residential units?

SFD - all grades is 0.5029 students per unit

MFA - all grades is 0.2006 students per unit

APT - all grades is 0.2701 students per unit

8. Please add any comments you may wish to make regarding this matter.

Response Prepared By:

Gregory Stachura, Assistant Superintendent, Facilities, Planning & Operations

Name	Title
Chino Valley Unified School District	3/2/2022
Agency	Date

**City of Ontario, The Ontario Plan 2050 DEIR
School District Questionnaire**

1. Please indicate which schools would likely serve the City of Ontario within the Mountain View School District.
 - Creek View Elementary School
 - Mountain View Elementary School
 - Park View Elementary School
 - Ranch View Elementary School
 - Grace Yokley Junior High School

2. What is the capacity of each of the schools? What is the existing enrollment?
 - Creek View Elementary School
 - Capacity: 850
 - Current Enrollment: 658
 - Mountain View Elementary School
 - Capacity: 775
 - Current Enrollment: 606
 - Park View Elementary School
 - Capacity: 825
 - Current Enrollment: Opens August 2022 – No Current Enrollment
 - Ranch View Elementary School
 - Capacity: 900
 - Current Enrollment: 838
 - Grace Yokley Junior High School
 - Capacity: 1500
 - Current Enrollment: 615

3. What is the average enrollment (10-year average) of each school that would serve the project site?

AVERAGE ENROLLMENT BASED ON 6-YEAR AVERAGE (only data that was available):

 - Creek View Elementary School - 593
 - Mountain View Elementary School - 517
 - Park View Elementary School – N/A...Opens August 2022
 - Ranch View Elementary School - 693
 - Grace Yokley Junior High School – 801

4. Would these schools be able to accommodate a potential increase in enrollment?

YES

5. What impact would the proposed The Ontario Plan 2050, in combination with all the other projects planned in the area, have on the ability of the Mountain View School District to provide educational services in the area(s)?
 - MVSD has plans to build additional schools throughout the Ontario Ranch development over the course of the next 20 years. We anticipate that the projected new campuses will sufficiently handle the increased need for educational services within the community.

**City of Ontario, The Ontario Plan 2050 DEIR
School District Questionnaire**

6. Has the District adopted a fee program, pursuant to Senate Bill 50, that levies statutory school impact fees per residential or non-residential building square foot that may be levied for school construction? If yes, what is the current School Fee?

Ontario Ranch Mitigation:

- Residential - \$2.87
- Commercial - \$0.66
- Senior - \$0.66

Non-Mitigation Area:

- Residential - \$2.82
- Commercial - \$ 0.455 (except self-storage)
- Senior - \$0.45

7. What is the student growth rate (elementary, middle, high school) based on the number of residential units?

Student Generation Rate for Ontario Ranch/New Model Colony Development:

- 0.16 students per household

8. Please add any comments you may wish to make regarding this matter.

Response Prepared By:

Jeremy Currier (Assistant Superintendent) & Steven Rollins (Chief Business Official)

Name	Title
Mountain View School District	March 3, 2022
Agency	Date

Ontario-Montclair School District

950 West D Street, Ontario, California 91762 • (909) 418-6366 FAX: (909) 459-2550

FACILITIES PLANNING & OPERATIONS

BOARD OF TRUSTEES

Sonia Alvarado
Kristen Brake
Sarah S. Galvez
Flora Martinez
Elvia M. Rivas

James Hammond, Ed.D.
Superintendent

Phil Hillman
Chief Business Official

Brooke Murray
Director, Facilities Planning & Operations

February 8, 2022

Sean Anaya
Associate II
Placeworks
2850 Inland Empire Blvd
Ontario, CA 91764

Re: The Ontario Plan (TOP) 2050
Supplemental Environmental Impact Report (SEIR) Response

Mr. Anaya,

Enclosed is Ontario Montclair School District's response to The Ontario Plan 2050 School District Questionnaire to the Draft Environmental Impact Report

If you have any questions, please contact me at (909) 418-6369.

Thank you.



Brooke Murray
Director Facilities Planning and Operations

1. Please indicate which school would likely serve the City of Ontario within the Ontario-Montclair School District?

Answer: See attached spreadsheet "School Name"

2. What is the capacity of each of the schools?

Answer: See attached spreadsheet "School Capacity"

What is the existing enrollment?

Answer: See attached spreadsheet "Enrollment Gen Ed 21/22"

3. What is the average enrollment (10 Year average) of each school that would serve the project site?

Answer: See attached spreadsheet "

4. Would these schools be able to accommodate a potential increase in enrollment?

Answer: See attached spreadsheet "Can this school accommodate increased enrollment"

5. What impact would the proposed The Ontario Plan 2050, in combination with all the other projects planned in the area, have on the ability of the Ontario-Montclair School District to provide education services in the areas?

Answer: The Ontario Plan Housing Element Technical Report proposes multiple residential opportunities to potentially provide high density and affordable housing in the Downtown Housing Opportunity section. Any increase in residential will result in an impact on our school facilities and further assessment will need to be made to ensure the neighboring school facilities can accommodate the increase.

6. Has the District adopted a few programs, pursuant to Senate Bill 50? That levies statutory school impact fees per residential or nonresidential building square foot that may be levied for school construction?

Answer: Yes

If Yes, what is the current School fee?

Answer: Effective 7/19/2021

Residential Level 1 \$2.82

Commercial \$0.46 sf

Self-Storage Facilities \$0.08

Parking Structures \$0.03 sf

New Construction Level 1 - Senior Housing \$0.46 sf

7. What is the student growth rate (elementary, middle, high school) based on the number of residential units?

Answer: Our student generation rates are based on our School Facilities Needs Analysis dated April 2017. The student generation rates pertain to our district boundaries which includes portions of Montclair, Ontario and Upland.

Elementary TK-6: Single Family Detached Units .2667 Multi Family Attached Units .0792

Middle School 7-8: Single Family Detached Units .0500 & Multi Family Attached Units .0180

Total: Single Family Detached Units .3167 and Multi Family Attached Units .0972

Residential Development we have identified is PDEV 16-023, Diamante Terrance, PEDEV 17-011, San Antonio Estates, PDEV 17-015, Villa Palmetto, PDEV 19-049, PDEV 16-044

8. Please add any comments you wish to make regarding this matter

Answer: See spreadsheet for “Universal Access to Transitional Kindergarten for all 5-year old’s”

This will impact our overall enrollment in the coming years as well impact the number classrooms needed.

Almost all of our elementary schools do offer TK for students whose birthdays are between September 2st – December 2nd of the school year.

School Name	Grade Level	Enrollment Gen Ed 21/22	Gen Ed Capacity @ 25 or 27 loading factor 21/22	Enrollment SDC 21/22	SDC Capacity S@ 9 or 13 loading factor 21/22	Total Classrooms Needed	# of Support Spaces	Total Classrooms Needed	School Capacity (Classrooms)	Average Enrollment (10 Year)	Can this school accommodate increased enrollment	Comments
Arroyo ES TK-7	TK, K-7	391	16	9	1	17	5	22	25	404	Y	* 2022/2023 School Year will be K-8
Corona ES K-5	TK, K-5	428	18	9	1	19	5	24	27	543	Y	
Berlyn ES K-6	TK, K-6	638	24	54	6	30	5	35	35	735	N	
Del Norte ES K-5	TK, K-5	415	17	17	2	19	5	24	34	538	Y	
Haynes ES K-6	TK, K-6	762	31	5	1	32	5	37	35	802	N	
Lincoln ES K-6	TK, K-6	549	20	78	9	29	5	34	33	596	Y	
Mariposa ES K-5	TK, K-5	602	23	20	2	25	5	30	36	682	Y	
Euclid ES K-6	TK, K-6	570	23	19	2	25	5	30	33	645	Y	
Bon View ES K-6	TK, K-6	591	25	13	1	26	5	31	32	683	Y	
Sultana K-5	TK, K-5	644	25	70	6	31	5	36	44	746	Y	
Vista Grande ES K-6	TK, K-6	410	16	0	0	16	5	21	24	472	Y	
Elderberry ES K-6	TK, K-6	632	25	11	1	26	5	31	35	765	Y	
El Camino K-6	TK, K-6	406	28	0	0	28	5	33	28	455	N	
Hawthorne ES K-6	TK, K-6	543	22	0	0	22	5	27	34	691	Y	
Bon View ES K-6	TK, K-6	591	25	13	1	26	5	31	32	682	Y	
Vineyard Stem Academy K-8	TK, K-8	543	27	0	0	27	8	35	32	738	N	
Central Language Academy K-8	K-8	712	30	0	0	30	8	38	30	698	N	
Edison Academy K-8	TK, K-8	665	27	0	0	27	8	35	30	788	N	
Wiltsey 6-8	6-8	882	33	12	1	34	8	42	46	983	Y	
De Anza MS 7-8	7-8	542	20	20	3	23	8	31	36	559	Y	
Oaks MS 7-8	7-8	811	30	22	2	32	8	40	37	851	N	
Vina Danks 7-8	7-8	637	22	54	6	28	8	36	42	730	Y	

* Universal Access to Transitional Kindergarten (TK) for all 5 year olds Districtwide
2022/2023 5th Birthday Sept 3rd - Feb 2nd
2023/2024 5th Birthday Sept 2nd - April 2nd
2024/2025 5th Birthday Sept 2nd - June 2nd

Appendix J VMT Memorandum

Appendices

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Draft Memorandum

Date: March 2, 2022
To: Jay Bautista, City of Ontario
From: Paul Herrmann, P.E.
Jolene Hayes, AICP
Subject: The Ontario Plan Transportation Impact Assessment

OC20-0741

Fehr & Peers has completed a Transportation Impact Assessment that analyzes Vehicle Miles Traveled (VMT) in support of the proposed update of The Ontario Plan (TOP) Environmental Impact Report (EIR). The assessment is consistent with Senate Bill 743 (SB 743) and the *City of Ontario Resolution Adopting Vehicle Miles Traveled Thresholds* (June 2020).

Transportation Impact Analysis

This assessment answers the following four questions from Appendix G. For purposes of this EIR, a project would normally have a significant effect on the environment if the project would:

- T-1 Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities.
- T-2 Conflict or be inconsistent with CEQA Guidelines § 15064.3, subdivision (b) regarding policies to reduce vehicle miles travelled (VMT).
- T-3 Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).
- T-4 Result in inadequate emergency access.

T-1 Assessment

The proposed project potentially creates an inconsistency with the adopted RTP/SCS which notes a future roadway widening and bridge on Schaefer Avenue. This inconsistency is considered **potentially significant**.

The proposed project provides extensive consistency related to regional active transportation plans, transit plans, and other mobility infrastructure. However, TOP proposes the following changes to the Circulation

Element, creating a potential inconsistency with the SCAG RTP/SCS:

- RTP ID 4A01203 – Widen Francis Street from Benson Avenue to Campus Avenue from two to four lanes.
 - TOP proposes to retain Francis Street as a two-lane facility
- RTP ID 4A 4A01210 – Widen Holt Boulevard from Benson Avenue to Vineyard Avenue from four to six lanes.
 - TOP proposes to retain Holt Boulevard as a four-lane facility
- RTP ID 4A04194 – Widen Chino Avenue from Euclid Avenue to Milliken Boulevard from two to four lanes.
 - TOP proposes to retain Chino Avenue from Archibald Avenue to Milliken Boulevard as a two-lane facility
- RTP ID 4A04216 – Widen Milliken Avenue (Hamner Avenue) from Riverside Avenue to Edison Avenue from one to four lanes (SB only)
 - TOP proposes to widen Milliken Avenue (Hamner Avenue) from Riverside Avenue to Edison Avenue from one to three lanes (SB only)
- RTP ID 4A04219 – Widen Riverside Drive from Euclid Avenue to Milliken Boulevard from two to four lanes.
 - TOP proposes to wide Riverside Drive to a six-lane facility
- RTP ID 4A04220 – Widen Schaefer Avenue from Euclid Avenue to Haven Avenue from zero to four lanes.
 - TOP proposes to eliminate the bridge connection on Schaefer Avenue between Ontario Avenue and Archibald Avenue
 - TOP proposes to widen Schaefer Avenue from Euclid Avenue to Grove Avenue and from Archibald Avenue to Haven Avenue from zero to four lanes, and widen Schaefer Avenue from Grove Avenue to Archibald Avenue from zero to two lanes
- RTP ID 4A07174 – Widen two-lane bridge on Eighth Street over Cucamonga Creek to four lanes.
 - TOP proposes to retain the bridge as a two-lane facility
- RTP ID 4120147 – Widen Mountain Avenue from Brooks Street to Sixth Street from four to six lanes.
 - TOP proposes to retain Mountain Avenue as a four-lane facility from Fourth Street to Holt Boulevard
- RTP ID 4160019 – Widen Eighth Street from West Cucamonga Channel to Grove Avenue from two to four lanes.
 - TOP proposes to retain Eighth Street as a two-lane facility east of Grove Avenue
- RTP ID 4160025 – Widen Bon View Avenue from Mission Boulevard to Belmont Avenue from two to four lanes.
 - TOP proposes to retain Bon View Avenue as a two-lane facility south of Mission Boulevard

- RTP ID 4160035 – Widen Guasti Road from Holt Boulevard to Archibald Avenue from two to four lanes.
 - TOP proposes to retain Guasti Road as a two-lane facility
- RTP ID 4160050 – Widen Phillips Street from Benson Avenue to Mountain Avenue from two to four lanes.
 - TOP proposes to retain Phillips Street as a two-lane facility
- RTP ID 4160060 – Widen San Antonio Avenue from Park Street to Phillips Street from two to four lanes.
 - TOP proposes to retain San Antonio Avenue as a two-lane facility
- RTP ID 4160066 – Spot widen Turner Avenue from Inland Empire Boulevard to Fourth Street from two to four lanes in southbound direction only.
 - TOP proposes to retain Turner Avenue as a two-lane facility
- RTP ID 4160070 – Widen Walker Avenue from Riverside Drive to Merrill from two to four lanes.
 - TOP proposes to retain Walker Avenue as a two-lane facility
- RTP ID 2002160-20150201 – Widen Grove Avenue between Fourth Street and State Street/Airport Drive from four to six lanes
 - TOP proposes to retain Holt Boulevard as a four-lane facility north of State Street

To determine the impact of these lane reductions and the Shaefer bridge deletion, Fehr & Peers completed VMT forecasting with and without these future projects to determine if removal would increase or decrease VMT. The VMT forecasting results, using the Boundary Method, indicated that VMT in the City of Ontario would decrease by 8,729 VMT per weekday within the City limits. This indicates that removing these projects will result in VMT reduction within the City, making the impact **less-than-significant** and no further mitigation would be required.

T-2 Assessment

The project may be inconsistent with CEQA Guidelines section 15064.3, subdivision (b) regarding policies to reduce VMT. This impact is considered **potentially significant**.

Approach & Traffic Modeling Methodology

The San Bernardino Traffic Analysis Model (SBTAM) was utilized to estimate VMT for the analysis scenarios. SBTAM began as the SCAG regional travel demand forecasting model and underwent a subarea model development to add detail and refinement within San Bernardino County. SBTAM was originally developed in 2012 and has continued to undergo updates to the land use and transportation network to reflect the most recent SCAG RTP/SCS program. The SBTAM model used for this effort has an updated base year land use that reflects a 2016 base year and a 2040 future year, consistent with the 2020 SCAG RTP/SCS. Fehr &

Peers updated the base year land uses within the City of Ontario to reflect the land use data inventory conducted in 2019 by PlaceWorks. The future year land use datasets and roadway network in Ontario were updated to be consistent with a 2050 future year that reflects the build out of the Approved TOP (2050) and the Proposed TOP (2050). The roadway networks for each scenario are provided as **Figures 1-3**, and for reference, the roadway names are provided in **Figure 4**. **Figure 5** presents the Adopted TOP (2050) Functional Roadway Classifications and **Figure 6** presents the Proposed TOP (2050) Functional Roadway Classifications. The model roadway networks reflect the full build out of the functional roadway classifications. The land use assumptions for each scenario are summarized in **Table 1**.

Table 1: Land Use Inputs for Ontario TOP Scenarios

Land Use	Existing 2019	Approved TOP 2050	Proposed TOP 2050
Households	50,367	104,163	124,380
Population	179,597	357,957	410,492
Total Employment	131,999	313,067	296,002
Commercial Employment	26,363	28,948	37,276
Office Employment	36,215	168,833	158,541
Hospitality Employment	606	3,228	4,277
Industrial Employment	63,515	108,881	92,730
Educational Employment	4,171	3,086	3,086
Other Employment	1,129	91	93

Source: Fehr & Peers

As shown in **Table 1**, the Proposed TOP (2050) results in a decrease in employment and an increase in households as compared to the Approved TOP (2050). Specifically, the Proposed TOP (2050) results in increases in commercial and hospitality employment and decreases in office and industrial employment.

VMT Impact Criteria

City of Ontario Resolution Adopting Vehicle Miles Traveled Thresholds (June 2020) outlines the methodology for VMT assessment for land use projects and defines adopted thresholds of significance for impact assessment, which are defined below. This transportation impact assessment compares VMT generated by the Proposed TOP (2050) to VMT generated by the Approved TOP (2050), reviewing total VMT and per capita VMT to provide a comprehensive assessment.

CEQA VMT Impact Thresholds

The Ontario thresholds of significance for use as part of the environmental review process under CEQA, as defined in the City's VMT Impact Thresholds, are defined for General Plans and Specific Plans. The thresholds

of significance are:

1. Any increase in the Citywide average VMT per Service Population of the Proposed General Plan compared to the General Plan Buildout Conditions would be considered a significant impact.
2. Any increase in the total Citywide daily VMT of the Proposed General Plan calculated using the Boundary Method compared to the General Plan Buildout Conditions would be considered a significant impact.

The VMT per Resident/Employee and Boundary VMT per service population are also presented in this assessment as reference. These methodologies and metrics are detailed below.

VMT Analysis Methodology

For all methodologies outlined, VMT can be presented as total VMT or as VMT per Service Population, Resident, or Employee. Total VMT represents all VMT generated in the City on a typical weekday. VMT per Service Population, Resident, or Employee is an efficiency metric which represents VMT generated on a typical weekday per person who lives and/or works in the City. VMT per person can be measured as VMT per Resident for residential only projects, VMT per Employee for employment only projects, and VMT per Service Population for projects and land use plans which include both residential and employment uses. Total VMT gives an estimate of the total travel, while VMT per person measures the efficiency of travel.

Total VMT and per person estimates were calculated using the three methodologies outlined below. Please note that there are multiple methods to estimate VMT, and there are limitations in the available VMT assessment tool, SBTAM, which is a typical four-step travel demand forecasting model. The model steps, which convert person trips to vehicle trips, limit the ability to separate trips by trip purpose (e.g., residential-based trips or work-based trips) while also accounting for all modal trips, as noted further below.

Production/Attraction VMT

The Production/Attraction (PA) method for calculating VMT sums all weekday VMT generated by trips with at least one trip end in the study area by trip purpose. The PA method tracks trips with at least one trip end in the analysis area to/from their ultimate destination unless that destination is outside of the model boundary area. Productions are land use types that generate trips (residences) and attractions are land use types that attract trips (employment). Productions and attractions are converted from person trips to vehicle trips for the purposes of calculating VMT.

The PA method allows project VMT to be evaluated based on trip purpose which is consistent with OPR recommendations in the Technical Advisory. For example, a single-use project such as an office building could be analyzed based only on the commute VMT, or home-based-work (HBW) attraction VMT per

employee; and a residential project could be analyzed based on the home-based (HB) production VMT per resident.

PA matrices do not include external trips that have one trip end outside of the model boundary (IX-XI trips) or truck trips, and therefore do not include those trips in the VMT estimates. This is not consistent with the OPR recommendations that suggest full accounting of VMT should be completed.

Origin/Destination VMT

The Origin/Destination (OD) method for calculating VMT sums all weekday VMT generated by trips with at least one trip end in the study area and tracks those trips to their estimated origins/destinations. The OD method is completed after the final loops of assignment in the travel demand model (after person trips have been converted to total vehicle trips). Origins are all vehicle trips that start in a specific traffic analysis zone, and destinations are all vehicle trips that end in a specific traffic analysis zone.

The OD method accounts for external and truck trips and therefore provides a more complete estimate of all VMT within the study area. This methodology also estimates VMT consistent with VMT estimates in Air Quality, Noise, and Energy sections of an EIR.

Unfortunately, OD trip matrices do not separate trips by trip purpose, and therefore VMT cannot be calculated by home-based-work (HBW) attraction VMT per employee or home-based (HB) production VMT per resident, but only by total VMT. It should also be noted that, although VMT includes trips to/from the City that originate or are destined to locations outside of the model area, those trip lengths are artificially truncated at the model boundary.

Boundary Method VMT

The boundary method is the sum of all weekday VMT on a roadway network within a designated boundary. Boundary method VMT estimates VMT by multiplying the number of trips on each roadway segment by the length of that segment. This approach includes all trips, including those trips that do not begin or end in the designated boundary and is another way to summarize VMT. This is the only VMT method that captures the effect of cut-through and/or displaced traffic. The boundary utilized in the assessment below is the Ontario City Limits Boundary.

VMT Estimates and Impact Assessment

The VMT estimates performed for each scenario are presented in **Table 2** and compared in **Exhibit 1**.

Table 2: VMT Summary

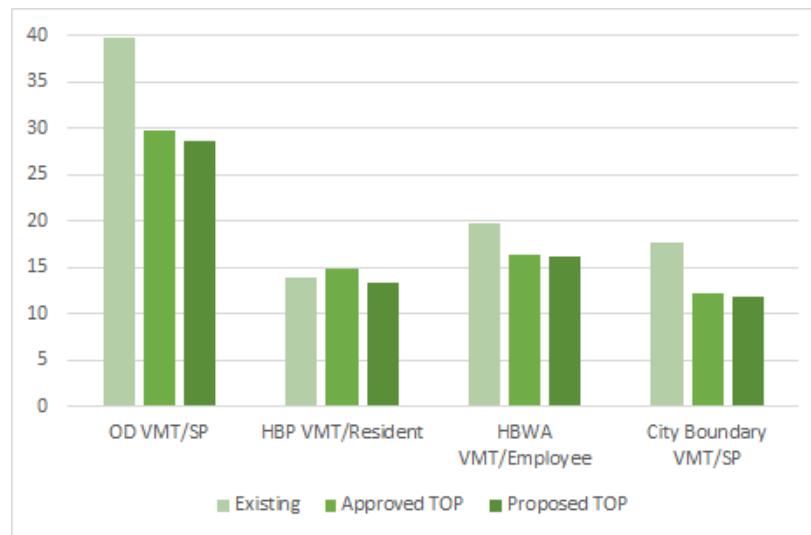
Land Use	Existing 2019	Approved TOP 2050	Proposed TOP 2050	Significant Impact
Population	179,597	357,957	410,492	N/A
Employment	131,999	313,067	296,002	N/A
Service Population	311,596	671,024	706,494	N/A
Total OD VMT	12,400,139	19,968,991	20,197,558	N/A
OD VMT/SP ³	39.80	29.76	28.59	No – Criterion #1
HBP VMT ¹	2,495,140	5,325,347	5,474,507	N/A
HBP VMT/Resident	13.89	14.88	13.34	N/A
HBWA VMT ²	2,605,193	5,112,536	4,802,799	N/A
HBWA VMT/Employee	19.74	16.33	16.23	N/A
City Boundary VMT	5,501,208	8,231,685	8,320,682	Yes – Criterion #2
City Boundary VMT/SP	17.65	12.27	11.78	N/A

Notes:

1. HBP VMT = Home-based production VMT; VMT generated by trips originating or ending at homes in Ontario.
2. HBWA VMT = Home-based-work attraction VMT; VMT generated by trips originating or ending at employment centers in Ontario.
3. SP = Service Population; the sum of population and employment.
4. Bold values represent VMT estimates that are above the threshold of significance.

Source: SBTAM, 2022

Exhibit 1: VMT Comparison



Notes:

1. HBP VMT = Home-based production VMT; VMT generated by trips originating or ending at homes in Ontario.
2. HBWA VMT = Home-based-work attraction VMT; VMT generated by trips originating or ending at employment centers in Ontario.
3. SP = Service Population; the sum of population and employment. GP = General Plan.

Notable takeaways from the VMT estimates include:

Proposed TOP (2050) compared to Existing Baseline (2019):

- OD VMT/SP, HBP VMT/Resident, HBWA VMT/Employee and Boundary VMT/SP are lower in the Proposed TOP (2050), indicating a more efficient land use plan in the Proposed TOP (2050).
- Consistent with the increase in population and employment in the City, total Citywide Boundary VMT increases from the Existing Baseline (2019) to the Proposed TOP (2050).

Proposed TOP (2050) compared to Approved TOP (2050):

- The total OD VMT and Home-Based Production (HBP) VMT are higher in the Proposed TOP (2050) than the Approved TOP (2050), while Home-Based-Work Attraction (HBWA) VMT generated is lower. This is consistent with the higher population and lower employment planned in the Proposed TOP (2050).
- VMT Impact Threshold Criterion #1 (per person VMT efficiency metric): OD VMT/SP, HBP VMT/Resident and HBWA VMT/Employee are lower in the Proposed TOP (2050) than the Approved TOP (2050), indicating a more efficient land use plan in the Proposed TOP (2050).

- VMT Impact Threshold Criterion #2 (increase in absolute/total VMT within the City Boundary): Boundary VMT is higher under the Proposed TOP (2050) than the Approved TOP (2050) within the Ontario City boundary. The Boundary VMT/SP is lower under the Proposed TOP (2050) indicating more efficient mix of land uses

Since there would be a net increase in total Citywide Boundary VMT from Approved TOP (2050) to the Proposed TOP (2050), the Proposed TOP (2050) is anticipated to result in a **significant transportation impact related to VMT**.

Analysis Limitations

This analysis was performed in September 2021 during the COVID-19 pandemic. The COVID-19 response has dramatically changed human activities and associated travel patterns. Performing more activities from home was already a trend due to the internet, but COVID-19 accelerated transitions to working and shopping from home. In addition, other disruptive trends related to demographic changes, new travel choices such as Uber and Lyft, and the potential for autonomous vehicle (AV) travel make predicting future travel demand and outcomes less certain. Given these limitations of modeling and forecasting, the general consistency of the project with the broader SB 743 objectives and the legislative intent of CEQA noted below may warrant greater emphasis in the VMT impact assessment.

Public Resources Code 21001. ADDITIONAL LEGISLATIVE INTENT

The Legislature further finds and declares that it is the policy of the state to:

(d) Ensure that the long-term protection of the environment, consistent with the provision of a decent home and suitable living environment for every Californian, shall be the guiding criterion in public decisions.

Ontario Goals, Policies, and Actions related to VMT Reduction

The following are relevant policies of the Ontario Plan Update, which may contribute to reducing potential transportation impacts as a result of implementation of the proposed project. VMT reducing policies, such as land use planning policies that shorten trips between where people live, work, shop and recreate, and bicycle, pedestrian, and transit policies that increase mobility options and reduce dependency on automobiles.

- LU 1-1 Strategic Growth. We concentrate growth in strategic locations that help create place and identify, maximize available and planned infrastructure, and foster the development of transit.
- LU 1-2 Sustainable Community Strategy. We integrate state, regional and local Sustainable

Community/Smart Growth principles into the development and entitlement process.

- LU 1-4 Mobility. We require development and urban design, where appropriate, that reduces reliance on the automobile and capitalizes on multi-modal transportation opportunities. (Refer to Mobility Element Policy M3-3)
- CD 2-5 Streetscapes. We design new and, when necessary, retrofit existing streets to improve walkability, bicycling, and transit integration, to strengthen connectivity, and enhance community identity through improvements to the public right of way such as sidewalks, street trees, parkways, curbs, street lighting, and street furniture.
- CD 2-6 Connectivity. We promote development of street patterns and pedestrian networks that create and unify neighborhoods, rather than divide them, and create cohesive and continuous corridors, rather than independent “islands” through the following means (Link to Mobility): 1) Local street patterns that provide access between subdivisions, within a neighborhood and discourage through traffic; 2) A local street system that is logical and understandable for the user. A grid system is preferred to avoid circuitous and confusing travel paths between internal neighborhood areas and adjacent arterials; and 3) Neighborhoods, centers, public schools, and parks that are linked by pedestrian greenways/open space networks. These may also be used to establish clear boundaries between distinct neighborhoods and/or centers.
- CD 3-1 Design. We require that pedestrian, vehicular, bicycle, and equestrian circulation on both public and private property be coordinated and designed to maximize safety, comfort, and aesthetics.
- CD 3-2 Connectivity Between Streets, Sidewalks, Walkways, and Plazas. We require landscaping and paving to be used to optimize visual connectivity between streets, sidewalks, walkways, and plazas for pedestrians.
- CD 3-4 Ground Floor Usage of Commercial Buildings. We create lively pedestrian streetscapes by requiring the location of uses, such as shopping, galleries, restaurants, etc., on ground floors adjacent to sidewalks.
- CD 3-7 Transit Stops. We require transit stops be well lit, safe, appealing to, and accessible by pedestrians.
- CE 1-12 Circulation. We continuously plan and improve public transit and non-vehicular circulation for the mobility of all, including those with limited or no access to private automobiles. (Refer to Mobility Public Transit)
- M 1-4 Complete Streets. We work to provide a balanced context sensitive, multimodal transportation network that meets the needs of all users of streets, roads, and highways, including motorists, pedestrians, bicyclists, children, persons with disabilities, seniors, movers of commercial goods and users of public transportation. We prioritize implementation of complete streets improvements in environmental justice areas to facilitate opportunities for residents to use active

transportation systems.

- M 1-6 Reduce Vehicle Miles Traveled. We will strive to reduce VMT through a combination of land use, transportation projects, and travel demand management strategies in coordination with development projects and public capital improvement projects.
- M 2-1 Active Transportation. We maintain our Active Transportation Master Plan to create a comprehensive system of on-and off-street bikeways and pedestrian facilities that is safe, comfortable, accessible, and connect residential areas, businesses, schools, parks, and other key destination points.
- M 2-2 Bicycle System. We provide off-street multipurpose trails and Class II bikeways as our primary paths of travel and use the Class III for connectivity in constrained circumstances. When truck routes and bicycle facilities share a right of way we prefer Class I or Class IV bicycle facilities. We require new development to include bicycle facilities, such as bicycle parking and secure storage areas.
- M 2-3 Pedestrian Walkways. We require streets to include sidewalks and visible crosswalks to promote safe and comfortable mobility between residential areas, businesses, schools, parks, recreation areas, and other key destination points. (Link to Community Design CD3-1)
- M 2-4 Network Opportunities. We use public rights of way and easements such as, utility easements, levees, drainage corridors, road rights-of-way, medians, and other potential options to maintain and expand our bicycle and pedestrian network.
- M 3-1 Transit Partners. We maintain a proactive working partnership with transit providers to ensure that adequate public transit service is available, cost-efficient, and convenient, particularly for residents in environmental justice areas.
- M 3-2 Alternative Transit Facilities at New Development. We require new development adjacent to an existing or planned transit stop to contribute to the creation of transit facilities, such as bus shelters, transit bays and turnouts, and bicycle facilities, such as secure storage areas.
- M 3-3 Transit-Oriented Development. We may provide additional development-related incentives to those inherent in the Land Use Plan for projects that promote transit use and reduce vehicle miles traveled.
- M 3-4 Bus Rapid Transit (BRT) Corridors. We work with regional transit agencies to implement BRT service and reduce vehicle miles traveled by targeting destinations and corridors with the highest number of potential riders.
- M 3-5 Light Rail. We support the extension of the Metro Rail Gold Line to Ontario and will work to secure station locations adjacent to the Meredith site and at the proposed multimodal transit center.
- M 3-6 Metrolink Expansion. We advocate expansion of Metrolink service to include the Downtown and the multimodal transit center.
- M 3-7 High-Speed Rail. We encourage the development of high-speed rail systems that would

enhance regional mobility in southern California and serve the City of Ontario.

- M 3-8 Feeder Systems. We work with regional transit agencies to secure convenient feeder service from the Metrolink station and the proposed multimodal transit center to employment centers in Ontario.
- M 3-9 Ontario Airport Metro Center Circulator. We will explore the development of a convenient mobility system, including but not limited to shuttle service, people mover, and shared car system for the Ontario Airport Metro Center.
- M 3-10 Multimodal Transit Center. We intend to ensure the development of a multimodal transit center near ONT airport to serve as a transit hub with amenities for transit riders, pedestrians, and bicyclists transitioning to local buses, BRT, the Gold Line, high-speed rail, the proposed Ontario Airport Metro Center circulator, and other future transit modes. We support locations for the multimodal transportation center that are within the Ontario Airport Metro Center Growth Area.
- M 3-11 Transit and Community Facilities. We require the future development of community-wide serving facilities to be sited in transit-ready areas that can be served and made accessible by public transit. Conversely, we plan (and coordinate with other transit agencies to plan) future transit routes to serve existing community facilities.

While these policies and measures could help reduce VMT in the City, the applicability of these mitigations would be dependent on the significance and context of the impact. Additional analysis would need to be conducted to determine how and where the mitigation measures would need to be implemented to mitigate the impact. As the VMT impact would be citywide, the mitigation measures would be focused on changing or improving the citywide travel patterns, transportation network, or infrastructure. The cost of implementing these measures is unknown and could vary substantially. Given the uncertainty of the effectiveness of implementing these mitigation measures at a citywide level and the cost associated with changing or improving travel patterns, the citywide transportation network, or infrastructure, the VMT impact is considered **significant and unavoidable**.

VMT Estimates for Greenhouse Gas Assessment

VMT estimates were performed for the project using the Recommendations of the Regional Targets Advisory Committee (RTAC) methodology to utilize in the Greenhouse Gas Assessment. The estimates were performed using the Origin-Destination approach. The RTAC Methodology specifies to apply 100 percent of internal-to-internal trips (ii trips) and 50 percent of internal-to-external or external-to-internal trips (ix & xi trips). These estimates for each scenario and by vehicle type (passenger car, light truck, medium truck and heavy truck) are provided as **Attachment A**. Please note that these estimates differ from **Table 2** as those estimates applied 100 percent of ix & xi trips, consistent with the transportation impact analysis.

T-3 Assessment

The project would not substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment). This impact is considered **less than significant**.

The City of Ontario has adopted engineering standards to ensure consistency in the geometric design of their mobility facilities. Additionally, all plans undergo an extensive review process at the City to ensure consistency with these adopted standards. Given that all future projects will be subject to these reviews, this impact is considered **less than significant** and no future mitigation is required.

T-4 Assessment

The project would not result in inadequate emergency access. This impact is considered **less than significant**.

The City of Ontario has adopted standards related to emergency accessibility. Additionally, the fire department reviews all development applications to ensure that adequate emergency accessibility is provided based on local and state guidance. Since all future projects will undergo such reviews and requirements, this impact is considered **less than significant** and no future mitigation is required.

Conclusion

The Proposed TOP has many advantages related to VMT as compared to the Approved TOP (2050), including in most cases a more efficient land use mix that results in less miles traveled per person (lower OD VMT/SP, HBP VMT/Resident and HBWA VMT/Employee), and therefore, no VMT impact for Threshold Criterion 1. However, due to the projected increase in housing and associated population based upon the Regional Housing Needs Assessment, it generates an increase in the total miles traveled within the City (Boundary VMT), which results in a significant transportation impact related to VMT. Even with the additional goals, policies and actions related to VMT reduction identified as part of the Proposed TOP, which are not reflected in the traffic modeling, the project is not anticipated to reduce the impact of increased total VMT to a less-than-significant level, resulting in a **significant and unavoidable transportation impact related to VMT**.

Attachments

Attachment A – Daily VMT by Vehicle Class (RTAC Methodology)

Figure 1 – Existing 2019 Roadway Network

Figure 2 – Adopted TOP 2050 Network

Figure 3 – Proposed TOP 2050 Network

Figure 4 – Model Road Names

Figure 5 – Adopted TOP 2050 Functional Roadway Classifications

Figure 6 – Proposed TOP 2050 Functional Roadway Classifications

Attachment A – Daily VMT by Vehicle Class (RTAC Methodology)

Year		Auto		Light-Heavy Trucks		Medium-Heavy Trucks		Heavy-Heavy Trucks		Total VMT		RTAC VMT
		i	x	i	x	i	x	i	x	i	x	100% ii +50% ix & xi
Existing (2019)	i	523,105	4,723,572	15,795	95,693	16,776	89,438	17,040	456,302	572,716	5,365,005	6,200,069
	x	5,216,406	-	101,956	-	94,978	-	476,361	-	5,889,701	-	
2030 Interpolation using Existing and Approved TOP	i	772,680	5,758,122	19,555	114,746	20,561	106,857	21,281	574,155	834,077	6,553,881	7,542,930
	x	6,045,617	-	119,016	-	110,622	-	588,572	-	6,863,826	-	
2030 Interpolation using Existing and Proposed TOP	i	807,285	5,774,749	18,958	114,638	19,752	106,040	20,206	567,581	866,201	6,563,008	7,583,483
	x	6,061,534	-	118,774	-	109,696	-	581,553	-	6,871,557	-	
Approved TOP (2050)	i	1,226,454	7,639,121	26,391	149,388	27,441	138,528	28,991	788,435	1,309,277	8,715,473	9,984,495
	x	7,553,273	-	150,033	-	139,065	-	792,593	-	8,634,964	-	
Proposed TOP (2050)	i	1,323,976	7,685,979	24,709	149,083	25,161	136,226	25,961	769,906	1,399,808	8,741,194	10,098,781
	x	7,598,132	-	149,350	-	136,456	-	772,813	-	8,656,751	-	

Source: Fehr & Peers, 2022

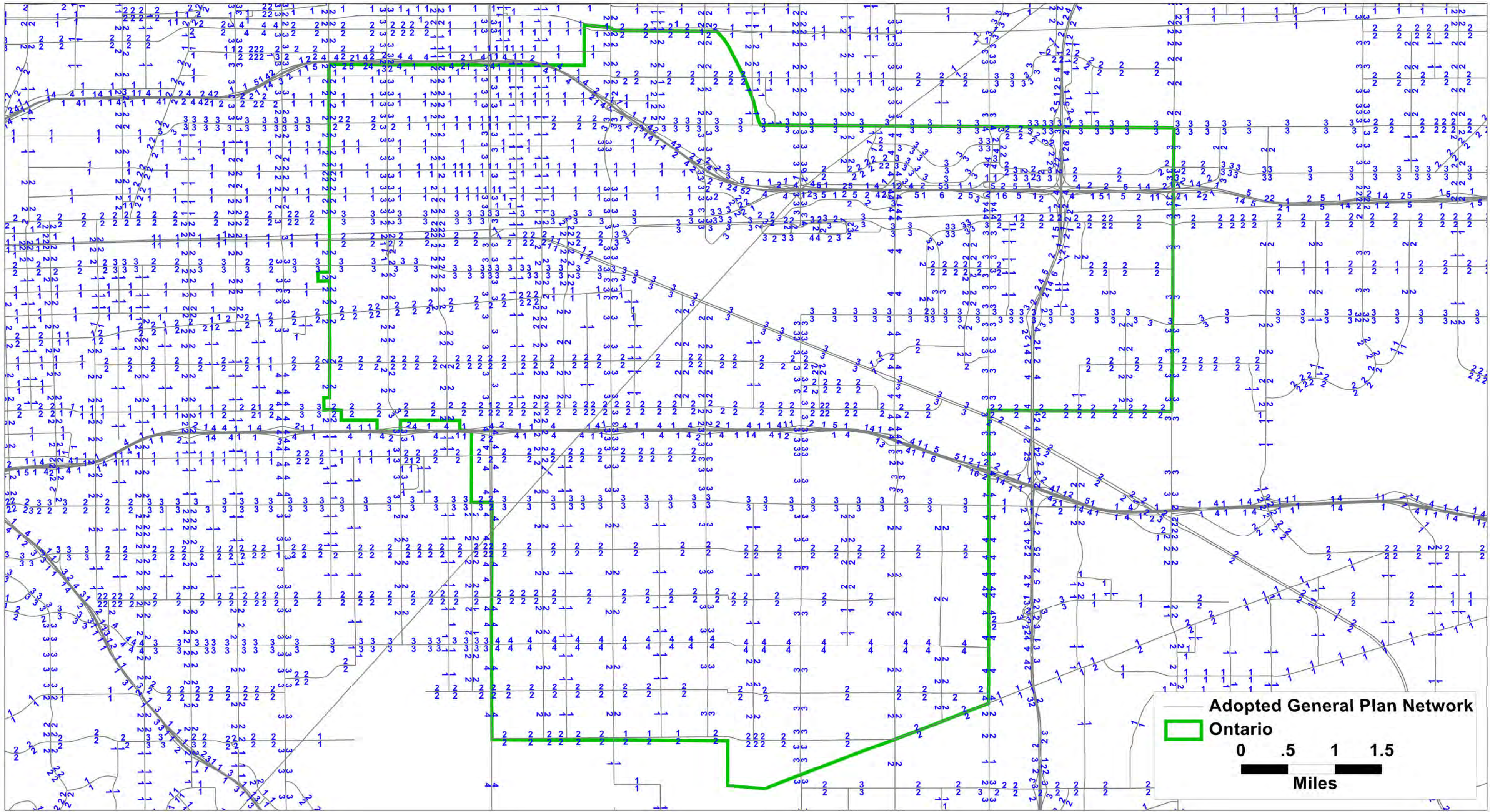


Figure 2
Adopted TOP 2050 Network



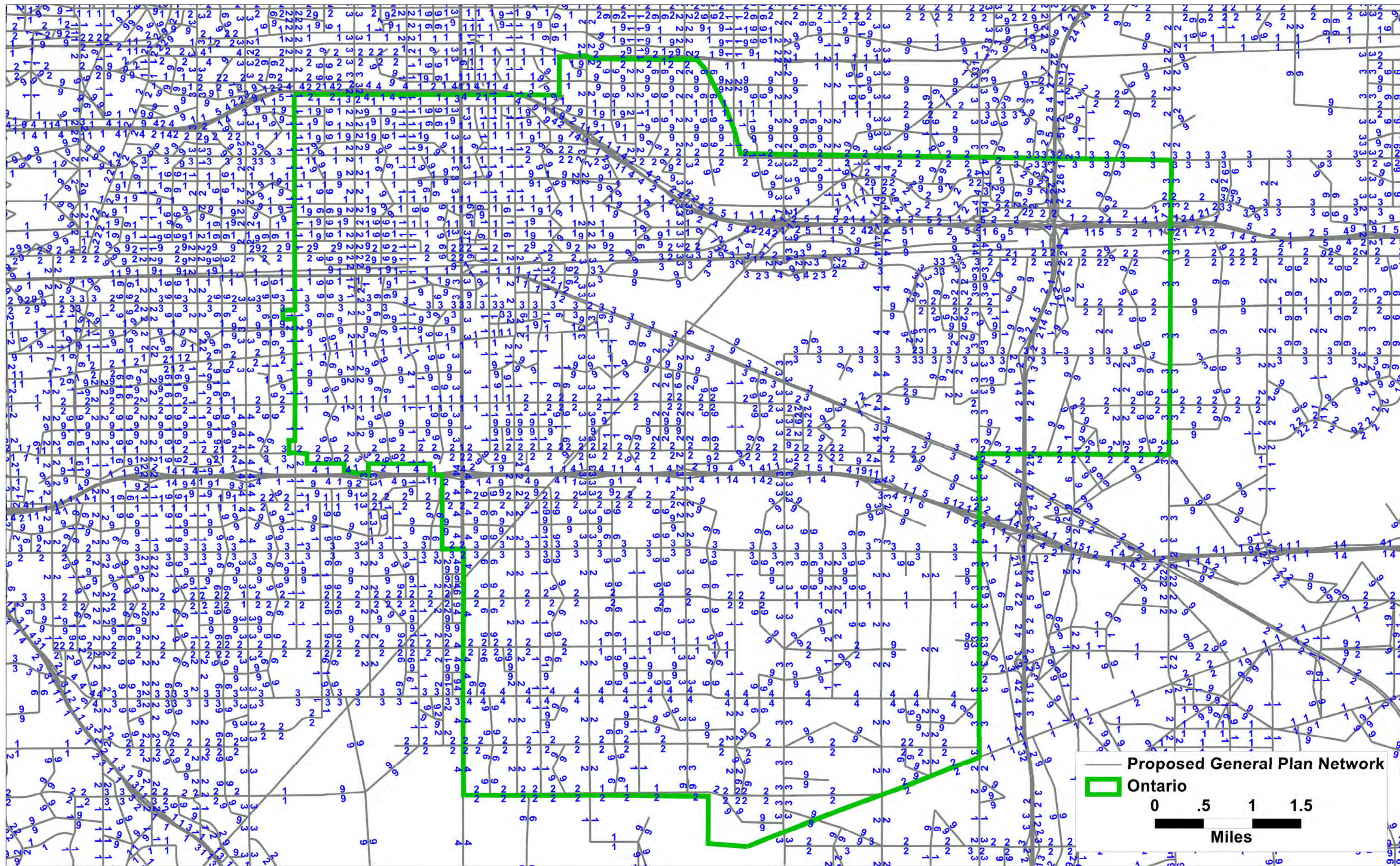
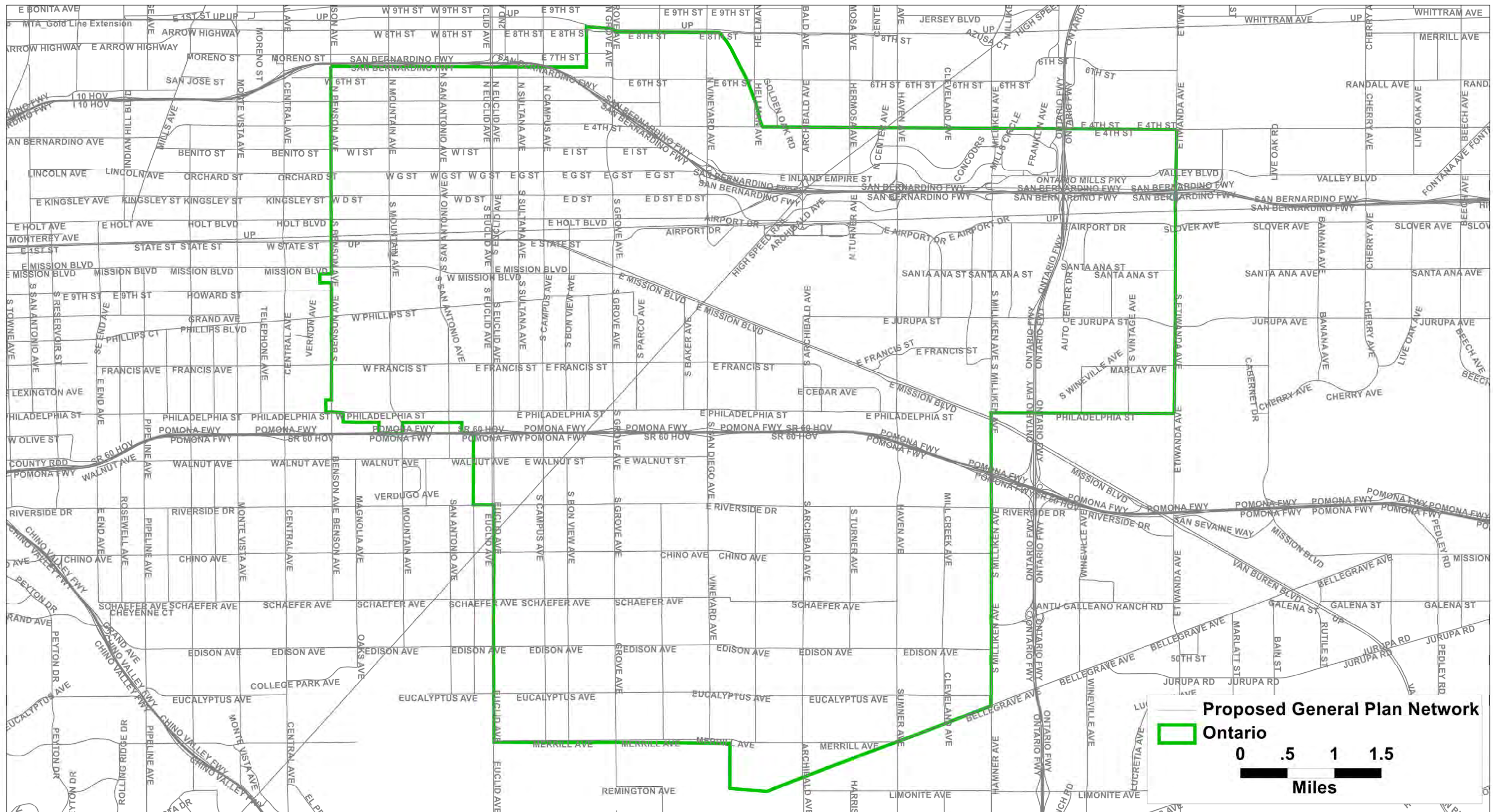


Figure 3
Proposed TOP 2050 Network



Proposed General Plan Network

Ontario

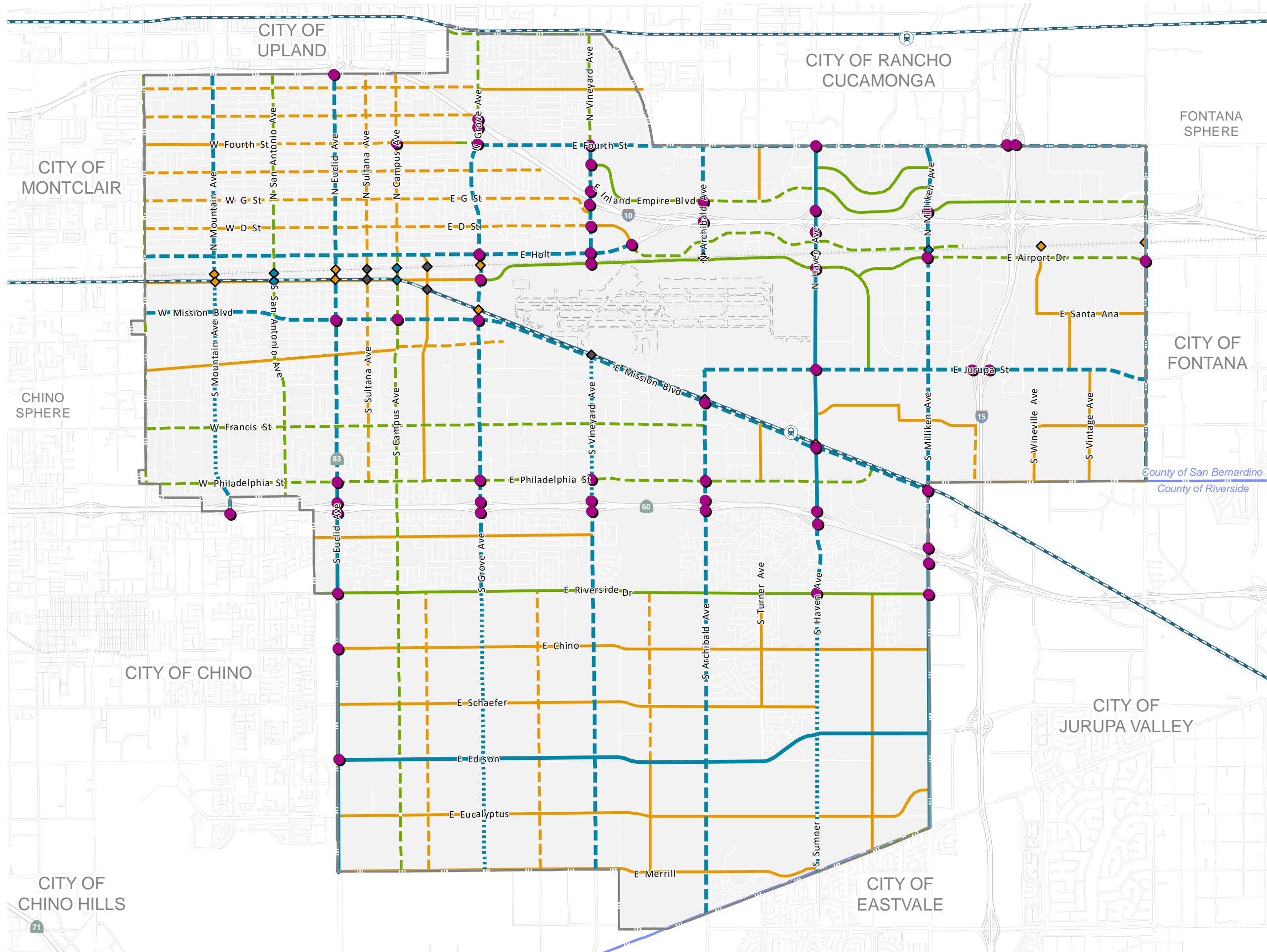
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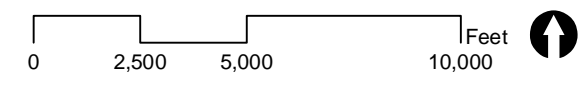


Figure 4
Model Road Names

Figure 5
 Adopted TOP 2050
 Functional
 Roadway
 Classifications

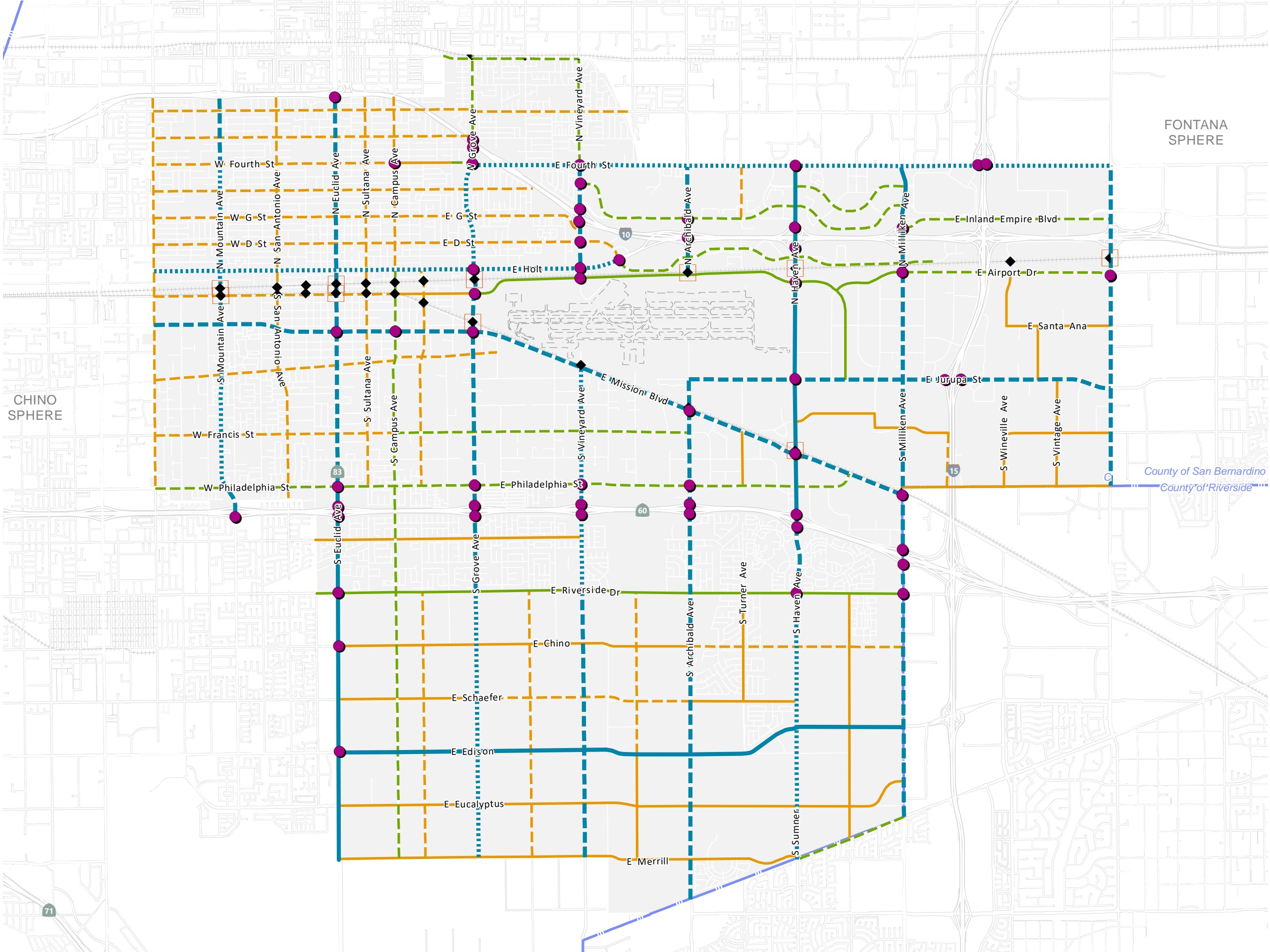


- Principal Arterial**
 - 8 Lanes
 - 6 Lanes
 - 4 Lanes
- Minor Arterial**
 - 6 Lanes
 - 4 Lanes
- Collector**
 - 4 Lanes
 - 2 Lanes
- Enhanced Intersections
- Rail Crossing**
 - At-Grade
 - Existing
 - Future
 - Metrolink
 - Metrolink Station
 - Railroad
 - Airport
- Ontario City Boundary
- County Boundary

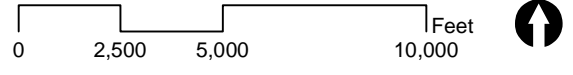


Date: 12/16/2020

Figure 6
Proposed TOP 2050
Functional
Roadway
Classifications



- Principal Arterial**
 - 8 Lanes
 - 6 Lanes
 - 4 Lanes
- Minor Arterial**
 - 6 Lanes
 - 4 Lanes
- Collector**
 - 4 Lanes
 - 2 Lanes
- Enhanced Intersections
- Future Grade-Separated Rail Crossings
- Grade-Separated Rail Crossings
- Metrolink
- Metrolink Station
- Railroad
- Airport
- Ontario City Boundary
- County Boundary



Date: 2/28/2022

Appendix K LOS Memorandum

Appendices

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Draft Memorandum

Date: March 3, 2022
To: Jay Bautista, City of Ontario
From: Paul Herrmann, P.E.
Jolene Hayes, AICP
Subject: City of Ontario TOP Circulation Element Traffic Analysis

OC20-0741

Fehr & Peers has completed traffic forecasting and analysis in support of The Ontario Plan (TOP) Circulation Element. This memorandum details the traffic modeling approach, traffic volume forecasting, and the Level of Service (LOS) calculations completed for the project.

Modeling Approach

The San Bernardino Traffic Analysis Model (SBTAM) was utilized to prepare the traffic forecasts for the TOP scenarios. SBTAM began as the SCAG regional travel demand forecasting model but underwent a subarea model development to add detail and refinement within San Bernardino County. SBTAM was originally developed in 2012 but has undergone updates to the land use dataset and transportation network to reflect the most recent SCAG RTP/SCS program. The SBTAM model used for this effort had an updated base year land use that reflected a 2016 base year and a 2040 future year, consistent with the 2020 SCAG RTP/SCS. Fehr & Peers updated the base year land uses to reflect the land use data inventory conducted in 2019 by PlaceWorks. The future year land use datasets and roadway network in Ontario were updated to be consistent with a 2050 future year that reflects the build out of the Adopted TOP (2050) Condition and the Proposed TOP (2050). The model roadway networks for each scenario are provided as **Figures 1-3**, and for reference, the roadway names are provided in **Figure 4**. **Figure 5** presents the Adopted TOP (2050) Functional Roadway Classifications and **Figure 6** presents the Proposed TOP (2050) Functional Roadway Classifications. The model roadway networks reflect the full build out of the functional roadway classifications. The land use assumptions for each scenario are summarized in **Table 1**.

Table 1: Land Use Inputs for Ontario TOP Scenarios

Land Use	Existing 2019	Adopted TOP 2050	Proposed TOP 2050
Households	50,367	104,163	124,380
Population	179,597	357,957	410,492
Total Employment	131,999	313,067	296,002
Commercial Employment	26,363	28,948	37,276
Office Employment	36,215	168,833	158,541
Hospitality Employment	606	3,228	4,277
Industrial Employment	63,515	108,881	92,730
Educational Employment	4,171	3,086	3,086
Other Employment	1,129	91	93

Source: Fehr & Peers

As shown in **Table 1**, the Proposed TOP results in a decrease in employment and an increase in households as compared to the Adopted TOP. Specifically, the Proposed Plan results in increases in Commercial Employment and Hospitality Employment and decreases in Office Employment and Industrial Employment.

Traffic Volume Forecasts

Traffic volume forecasts were prepared for 93 roadway segments for the Existing and Proposed TOP 2050 scenarios. The roadway segments cover major arterials throughout the City. Traffic growth between base and future years was reviewed and added to existing (2019) traffic counts to prepare the 2050 roadway segment forecasts. The traffic forecasts are provided as **Attachment A**.

Traffic Operations Analysis

Capacity assessment was performed based on the Highway Capacity Manual (HCM) 6th Edition methodology. This methodology determines the level-of-service (LOS) based on a Volume-to-Capacity (V/C) ratio, letter grade criteria LOS A through F. As shown in **Table 2**, these grades range from LOS A (minimal delay) to LOS F (congested conditions). LOS E represents at-capacity operations. For the City of Ontario, LOS D is the minimum acceptable standard for roadways.

Table 2: Level of Service Grades

Level of Service	V/C Ratio
A	0.000-0.600
B	0.601-0.700
C	0.701-0.800
D	0.801-0.900 (City Minimum Standard)
E	0.901-1.000
F	Greater than 1.000

Source: Highway Capacity Manual (Transportation Research Board, 2017)

Roadway capacities in future conditions reflect the full buildout of the TOP Circulation Element. The following study segments are forecast to be near or over capacity (LOS E or F) in 2050 under the Adopted TOP or the Proposed TOP conditions:

- Holt Boulevard east of Grove Avenue:
 - Proposed TOP: LOS F
- Haven Street south of I-10
 - Adopted TOP: LOS E
 - Proposed TOP: LOS E
- Milliken Avenue south of I-10
 - Proposed TOP: LOS E
- Archibald Avenue south of Chino Road
 - Proposed TOP: LOS E
- Mountain Avenue south of Holt Boulevard
 - Adopted TOP: LOS F
 - Proposed TOP: LOS F
- Grove Avenue south of Holt Boulevard
 - Proposed TOP: LOS E
- Grove Avenue south of Airport Drive
 - Proposed TOP: LOS E
- Mission Boulevard east of Grove Avenue
 - Adopted TOP: LOS F
 - Proposed TOP: LOS F

These roadways are forecast to operate below the adopted LOS standard, and these roadways are already built out within their right-of-way extents. It is not feasible, or in the City's best interest, to widen these roads given the adjacent land uses and capital improvement costs. The City should develop policies that promote reduction in traffic congestion such as Intelligent Transportation Systems (ITS) and Travel Demand Management (TDM) measures. Many effects of congestion can be reduced at the intersection level, as

opposed to widening streets. Major intersections along the roads noted above are classified as Enhanced Intersections, which allow flexibility from the standard intersection configuration to increase capacity, improve operation, and respond to local conditions. Enhancements may include additional lanes, reduced median width, increased right-of-way width, removal of on-street bike lanes, or reduction of parkway width. Detailed engineering studies are necessary to identify the most effective types of improvements.

Since the above roadway segments aren't anticipated to meet the adopted LOS standard, the City should develop policies to exempt them from the adopted LOS standard. We recommend the City keep a running list of the exempt roadways and intersections in the City's Traffic Study Guidelines that can be updated periodically, as needed, by the City's Traffic Engineer.

Recommendations

Based on the traffic forecasts and analysis above, Fehr & Peers recommends changes to the proposed TOP 2050 Circulation Element map, including lane reductions, changes to functional classifications and/or road diets as shown in **Figure 6**.

Many roadway segments are forecast to have excess capacity and operate at LOS A or B under future conditions at the full buildout of the Adopted TOP 2050 Circulation Element. Many of these roadways are classified as wider street cross sections than are currently built. The implementation of those full cross sections will be difficult to accomplish without significant redevelopment, and many of the segments abut established residential areas. These roadways are candidates for lane reductions and/or change in roadway classification in the Circulation Element that reflect the built environment.

Other roadways have already been widened to the full extent and are candidates for road diets¹. A well-designed, two-lane road should be able to accommodate approximately 20,000 vehicles per day, allowing for the remaining right-of-way to be repurposed for protected turn lanes, pedestrian facilities, bicycle facilities, or transit lane improvements.

Some roadways, such as Holt Boulevard east of Grove Avenue, are planned Bus Rapid Transit (BRT) routes that will dedicate right-of-way (ROW) for transit only lanes. These are forecast to operate below the City's standard with the recommended lane reduction (from proposed six lanes to maintain existing four lanes) in order to promote multi-modal benefits of improving public transit.

¹ A Road Diet is generally described as "removing travel lanes from a roadway and utilizing the space for other uses and travel modes." Refer to Federal Highway Administration's web site for more information at:

https://safety.fhwa.dot.gov/road_diets/guidance/info_guide/ch1.cfm#n4

Attachments

Attachment A – Roadway Segment Forecasts & LOS

Figure 1 – Existing 2019 Roadway Network

Figure 2 – Adopted TOP 2050 Network

Figure 3 – Proposed TOP 2050 Network

Figure 4 – Model Road Names

Figure 5 – Adopted TOP 2050 Functional Roadway Classifications

Figure 6 – Proposed TOP 2050 Functional Roadway Classifications

Appendix A: Ontario General Plan Roadway Segment Forecasts and Analysis

Growth Area	Roadway	Classification	Existing (2019) Conditions					Adopted General Plan (2050) Conditions					Proposed General Plan (2050) Conditions					
			Lanes	ADT	Capacity	V/C	LOS	Lanes	Capacity	ADT	V/C	LOS	LOS	Lanes	Capacity	ADT	V/C	LOS
West Holt Corridor	Benson Avenue South of Fourth Street	Minor Arterial	4	10,833	28,900	0.37	A	4	28,900	14,900	0.52	C or Better	A	2	18,700	12,700	0.68	B
	D Street East of Benson Avenue	Collector	2	3,784	17,400	0.22	A	2	17,400	4,500	0.26	C or Better	A	2	17,400	4,000	0.23	A
	Holt Boulevard East of Benson Avenue	Principal Arterial	4	16,333	37,400	0.44	A	6	56,000	24,600	0.44	C or Better	A	4	37,400	24,200	0.65	B
	San Antonio Avenue South of Fourth Street	Minor Arterial	4	11,944	28,900	0.41	A	4	28,900	14,900	0.52	C or Better	A	2	18,700	15,600	0.83	D
	Boulder Avenue South of Fourth Street	Local	2	1,471	12,500	0.12	A	2	12,500	1,500	0.12	C or Better	A	2	12,500	1,500	0.12	A
	Boulder Avenue South of G Street	Local	2	1,855	12,500	0.15	A	2	12,500	1,900	0.15	C or Better	A	2	12,500	1,900	0.15	A
	Boulder Avenue North of Holt Boulevard	Local	2	1,433	12,500	0.11	A	2	12,500	1,500	0.12	C or Better	A	2	12,500	1,500	0.12	A
	Mountain Avenue South of Fourth Street	Principal Arterial	4	29,657	37,400	0.79	C	6	56,000	33,200	0.59	D	A	4	37,400	31,900	0.85	D
	I Street East of Benson Avenue	Collector	2	5,101	17,400	0.29	A	2	17,400	6,400	0.37	C or Better	A	2	17,400	6,600	0.38	A
Historic Downtown and Civic Center	I Street East of Euclid Avenue	Collector	2	3,023	17,400	0.17	A	2	17,400	4,600	0.26	C or Better	A	2	17,400	4,500	0.26	A
	G Street East of Benson Avenue	Collector	2	4,726	17,400	0.27	A	2	17,400	5,300	0.30	C or Better	A	2	17,400	5,700	0.33	A
	G Street East of Euclid Avenue	Collector	2	6,863	17,400	0.39	A	2	17,400	7,200	0.41	D	A	2	17,400	8,600	0.49	A
	Sultana Avenue South of Fourth Street	Collector	2	3,671	17,400	0.21	A	2	17,400	5,200	0.30	C or Better	A	2	17,400	5,600	0.32	A
	Vine Avenue South of Fourth Street	Local	2	2,039	12,500	0.16	A	2	12,500	2,100	0.17	C or Better	A	2	12,500	2,100	0.17	A
	C Street East of Euclid Avenue	Local	2	1,187	12,500	0.09	A	2	12,500	1,200	0.10	C or Better	A	2	12,500	1,200	0.10	A
	E Street East of Euclid Avenue	Local	2	1,256	12,500	0.10	A	2	12,500	1,300	0.10	C or Better	A	2	12,500	1,300	0.10	A
	Lemon Avenue South of Hold Boulevard	Local	2	946	12,500	0.08	A	2	12,500	1,500	0.12	C or Better	A	2	12,500	1,900	0.15	A
	Euclid Avenue South of Fourth Street	Principal Arterial	6	32,600	56,000	0.58	A	6	56,000	36,700	0.66	D	B	6	56,000	39,000	0.70	B
	Campus Avenue South of I Street	Collector	2	8,766	17,400	0.50	A	2	17,400	12,600	0.72	D	C	2	17,400	13,500	0.78	C
East Holt Corridor	Allyn Avenue South of D Street	Collector	2	5,738	17,400	0.33	A	2	17,400	5,800	0.33	C or Better	A	2	17,400	5,800	0.33	A
	Grove Avenue South of Fourth Street	Principal Arterial	4	20,626	37,400	0.55	A	6	56,000	35,000	0.63	D	B	4	37,400	31,300	0.84	D
	Holt Boulevard East of Euclid Avenue	Principal Arterial	4	19,356	37,400	0.52	A	6	56,000	31,800	0.57	D	A	4	37,400	27,000	0.72	C
	Holt Boulevard East of Grove Avenue	Principal Arterial	4	24,290	37,400	0.65	B	6	56,000	48,100	0.86	D	D	4	37,400	49,200	1.32	F
	D Street East of Euclid Avenue	Collector	2	5,578	17,400	0.32	A	2	17,400	6,800	0.39	D	A	2	17,400	8,800	0.51	A
Ontario Airport Metro Center	Airport Drive East of Grove Avenue	Minor Arterial	6	23,168	43,300	0.54	A	6	43,300	38,800	0.90	D	D	6	43,300	38,800	0.89	D
	Vineyard Avenue South of Fourth Street	Principal Arterial	4	26,603	37,400	0.71	C	6	56,000	39,400	0.70	D	C	6	56,000	36,900	0.66	B
	Vineyard Avenue South of I-10	Principal Arterial	6	20,716	56,000	0.37	A	6	56,000	40,100	0.72	D	C	6	56,000	38,600	0.69	B
	Guasti Road East of Holt Boulevard	Minor Arterial	2	2,707	18,700	0.14	A	4	28,900	13,000	0.45	C or Better	A	2	18,700	13,900	0.74	C
	Guasti Road East of Archibald Avenue	Minor Arterial	4	4,875	28,900	0.17	A	4	28,900	5,100	0.18	C or Better	A	2	18,700	7,000	0.37	A
	Holt Boulevard East of Vineyard Avenue	Principal Arterial	4	26,142	37,400	0.70	B	6	56,000	31,300	0.56	D	A	4	37,400	32,200	0.86	D
	Convention Center Way East of Vineyard Avenue	Collector	4	4,537	28,900	0.16	A	4	28,900	10,700	0.37	C or Better	A	4	28,900	11,100	0.38	A
	Inland Empire Boulevard East of Vineyard Avenue	Minor Arterial	4	5,127	28,900	0.18	A	6	43,300	7,200	0.17	C or Better	A	4	28,900	6,300	0.22	A
	Inland Empire Boulevard East of Haven Avenue	Minor Arterial	6	15,676	43,300	0.36	A	6	43,300	23,700	0.55	C or Better	A	4	28,900	22,500	0.78	C
	Ontario Mills Parkway East of Milliken Avenue	Minor Arterial	4	3,910	28,900	0.14	A	6	43,300	15,300	0.35	C or Better	A	4	28,900	7,100	0.25	A
	Concourse Street East of Haven Avenue	Minor Arterial	6	6,418	43,300	0.15	A	6	43,300	18,600	0.43	C or Better	A	4	28,900	16,400	0.57	A
	Fourth Street East of Vineyard Avenue	Principal Arterial	4	15,308	37,400	0.41	A	6	56,000	35,100	0.63	D	B	4	37,400	24,900	0.67	B
	Fourth Street East of Archibald Avenue	Principal Arterial	6	16,347	56,000	0.29	A	6	56,000	28,600	0.51	D	A	4	37,400	26,100	0.70	B
	Fourth Street East of Haven Avenue	Principal Arterial	6	23,196	56,000	0.41	A	6	56,000	32,200	0.58	D	A	4	37,400	32,700	0.87	D
	Fourth Street East of Milliken Avenue	Principal Arterial	6	30,558	56,000	0.55	A	6	56,000	41,900	0.75	D	C	6	56,000	41,600	0.74	C
	Archibald Avenue South of Fourth Street	Principal Arterial	4	26,159	37,400	0.70	B	6	56,000	30,600	0.55	D	A	6	56,000	35,700	0.64	B
	Archibald Avenue South of Inland Empire Boulevard	Principal Arterial	6	22,965	56,000	0.41	A	6	56,000	31,000	0.55	D	A	6	56,000	32,800	0.59	A
	Turner Avenue South of Fourth Street	Collector	2	7,943	17,400	0.46	A	4	28,900	9,800	0.34	C or Better	A	2	17,400	10,300	0.59	A
Haven Street South of Fourth Street	Principal Arterial	8	42,534	74,700	0.57	A	8	74,700	49,200	0.66	D	B	8	74,700	48,500	0.65	B	
Haven Street South of I-10	Principal Arterial	8	54,802	74,700	0.73	C	8	74,700	68,200	0.91	D	E	8	74,700	70,800	0.95	E	
Milliken Avenue South of Fourth Street	Principal Arterial	8	35,467	74,700	0.47	A	8	74,700	45,300	0.61	D	B	8	74,700	47,300	0.63	B	
Milliken Avenue South of I-10	Principal Arterial	6	39,971	56,000	0.71	C	8	74,700	66,900	0.90	D	D	8	74,700	69,800	0.93	E	
Great Park Corridor	Edison Avenue East of Euclid Avenue	Principal Arterial	2	10,558	20,500	0.52	A	8	74,700	59,200	0.79	D	C	8	74,700	59,900	0.80	D
	Eucalyptus Avenue East of Euclid Avenue	Collector	2	3,434	17,400	0.20	A	4	28,900	18,300	0.63	D	B	4	28,900	18,800	0.62	B
	Bon View Avenue South of Chino Road	Collector	2	4,484	17,400	0.26	A	2	17,400	8,300	0.48	D	A	2	17,400	8,900	0.51	A
	Grove Avenue South of Chino Road	Principal Arterial	2	9,910	20,500	0.48	A	4	37,400	24,500	0.66	D	B	4	37,400	26,200	0.70	C
	Grove Avenue South of Edison Road	Principal Arterial	2	7,603	20,500	0.37	A	4	37,400	19,500	0.52	D	A	4	37,400	19,000	0.51	A
	Archibald Avenue South of Chino Road	Principal Arterial	4	19,325	37,400	0.52	A	6	56,000	49,700	0.89	D	D	6	56,000	51,100	0.91	E
	Archibald Avenue South of Ontario Ranch Road	Principal Arterial	4	24,616	37,400	0.66	B	6	56,000	48,800	0.87	D	D	6	56,000	49,500	0.88	D
	Euclid Avenue South of Schaefer Avenue	Principal Arterial	4	27,000	37,400	0.72	C	8	74,700	62,000	0.83	D	D	8	74,700	62,900	0.84	D
Outside Growth Areas	State Street East of Benson Avenue	Collector	2	7,059	17,400	0.41	A	4	28,900	8,600	0.30	C or Better	A	2	17,400	11,800	0.68	B
	State Street East of Mountain Avenue	Collector	2	9,179	17,400	0.53	A	4	28,900	11,500	0.40	C or Better	A	2	17,400	15,200	0.87	D
	State Street East of San Antonio Avenue	Collector	2	5,636	17,400	0.32	A	4	28,900	8,800	0.30	C or Better	A	2	17,400	14,800	0.85	D
	State Street East of Vine Avenue	Collector	2	6,899	17,400	0.40	A	4	28,900	8,700	0.30	C or Better	A	2	17,400	14,000	0.80	D
	State Street East of Euclid Avenue	Collector	2	6,390	17,400	0.37	A	4	28,900	8,000	0.28	C or Better	A	2	17,400	13,200	0.76	C
	State Street East of Sultana Avenue	Collector	2	4,016	17,400	0.23	A	4	28,900	7,800	0.27	C or Better	A	2	17,400	14,200	0.82	D
	State Street East of Campus Avenue	Collector	2	774	17,400	0.04	A	4	28,900	5,400	0.19	C or Better	A	2	17,400	12,300	0.71	C
	State Street East of Bon View Avenue	Collector	2	4,713	17,400	0.27	A	4	28,900	19,200	0.66	D	B	4	28,900	22,900	0.79	C
	Ontario Boulevard East of Campus Avenue	Local	2	2,916	12,500	0.23	A	2	12,500	6,700	0.54	C or Better	A	2	12,500	9,000	0.72	C
	Mountain Avenue South of Holt Boulevard	Principal Arterial	4	39,517	37,400	1.06	F	4	37,400	44,400	1.19	D	F	4	37,400	44,000	1.18	F
	San Antonio Avenue South of Holt Boulevard	Minor Arterial	4	11,012	28,900	0.38	A	4	28,900	11,800	0.41	C or Better	A	2	18,700	11,100	0.59	A
	Vine Avenue South of Holt Boulevard	Local	2	3,519	12,500	0.28	A	2	12,500	3,600	0.29	C or Better	A	2	12,500	3,600	0.29	A
	Sultana Avenue South of Holt Boulevard	Collector	2	5,594	17,400	0.32	A	2	17,400	7,300	0.42	D	A	2	17,400	8,700	0.50	A
	Campus Avenue South of Holt Boulevard	Minor Arterial	2	10,251	18,700	0.55	A	4	28,900	22,400	0.78	D	C	4	28,900	19,900	0.69	B
	Bon View Avenue South of Holt Boulevard	Collector	2	4,992	17,400	0.29												

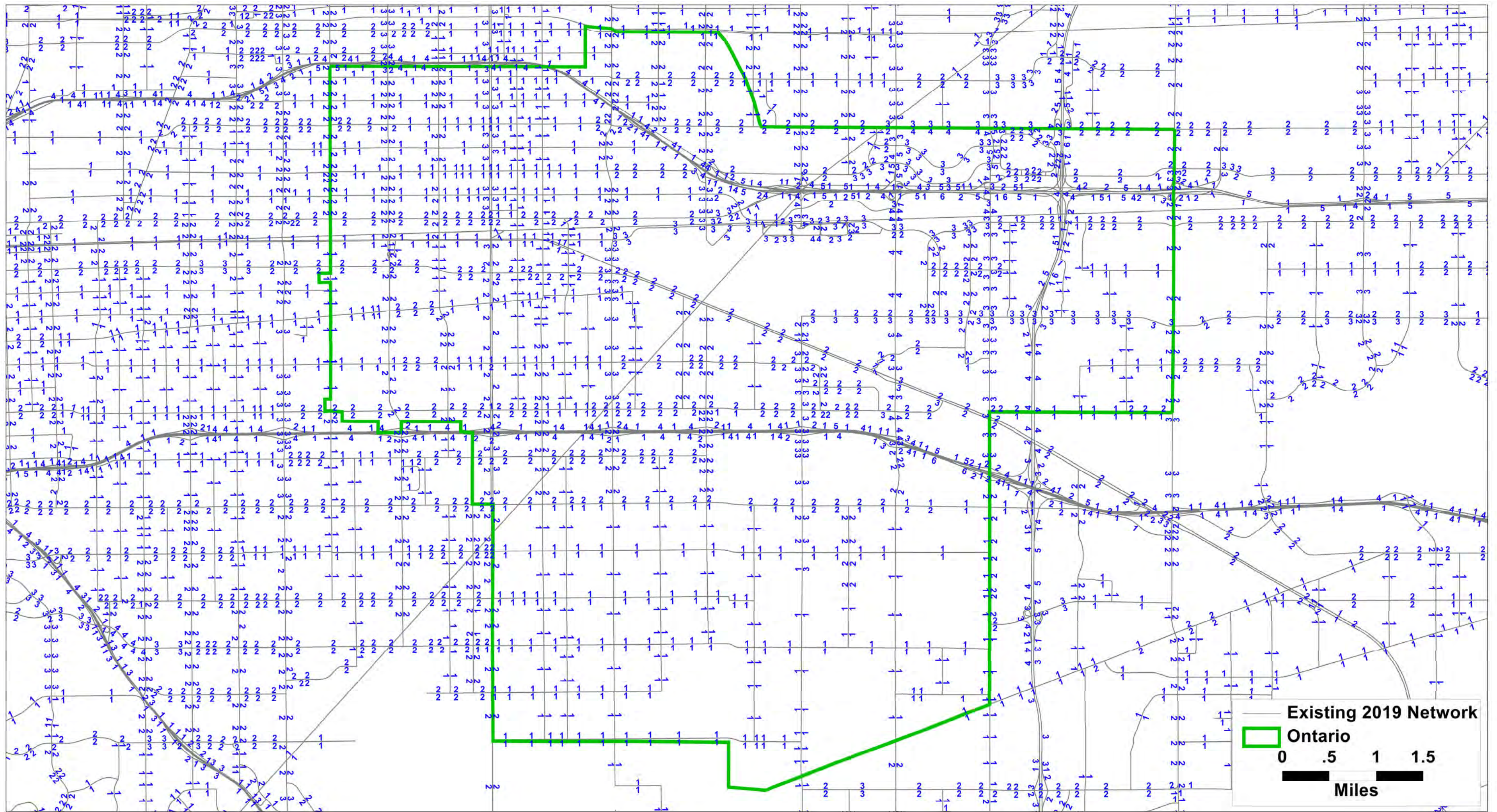


Figure 1
Existing 2019 Network

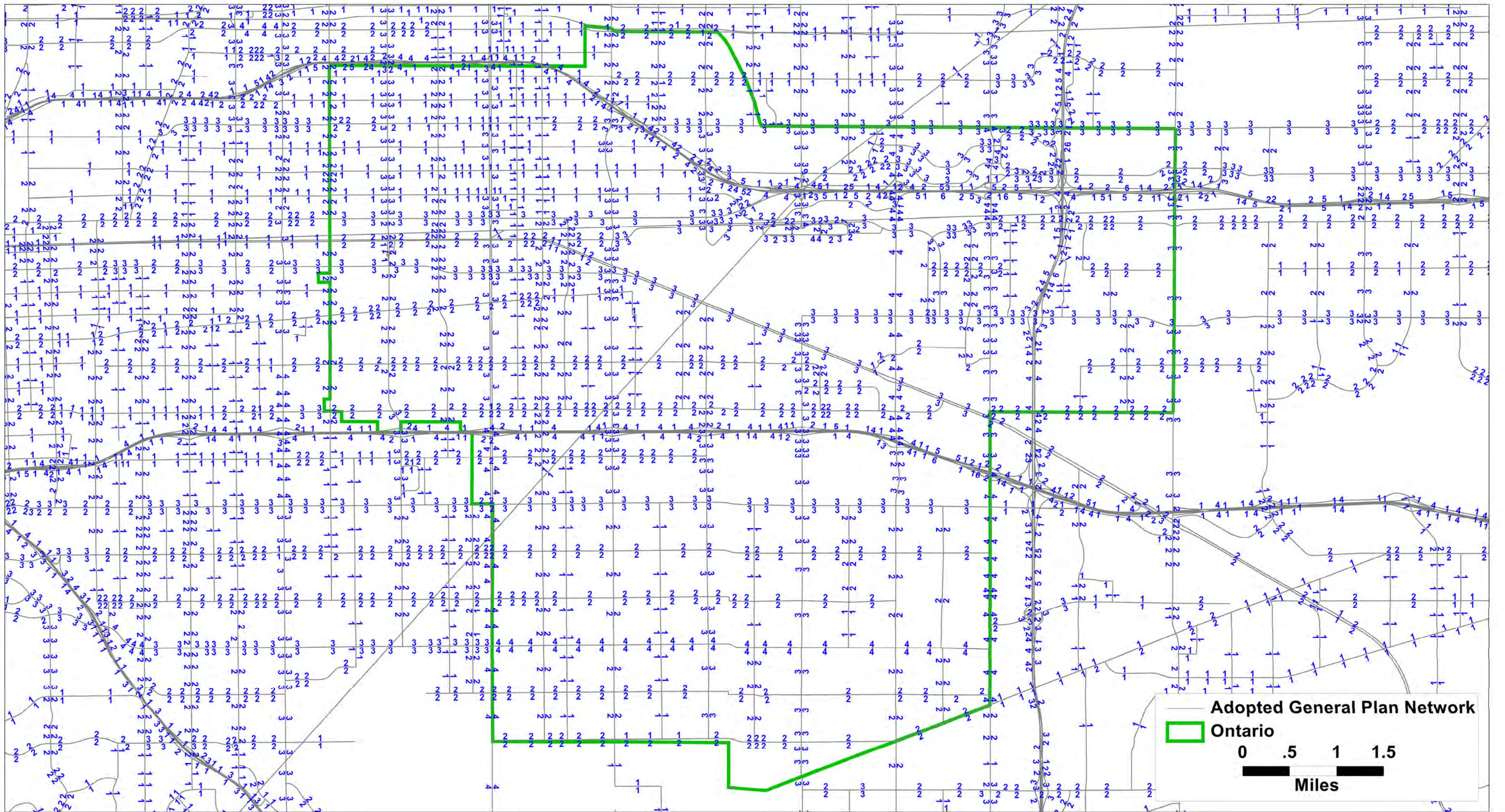


Figure 2
Adopted TOP 2050 Network

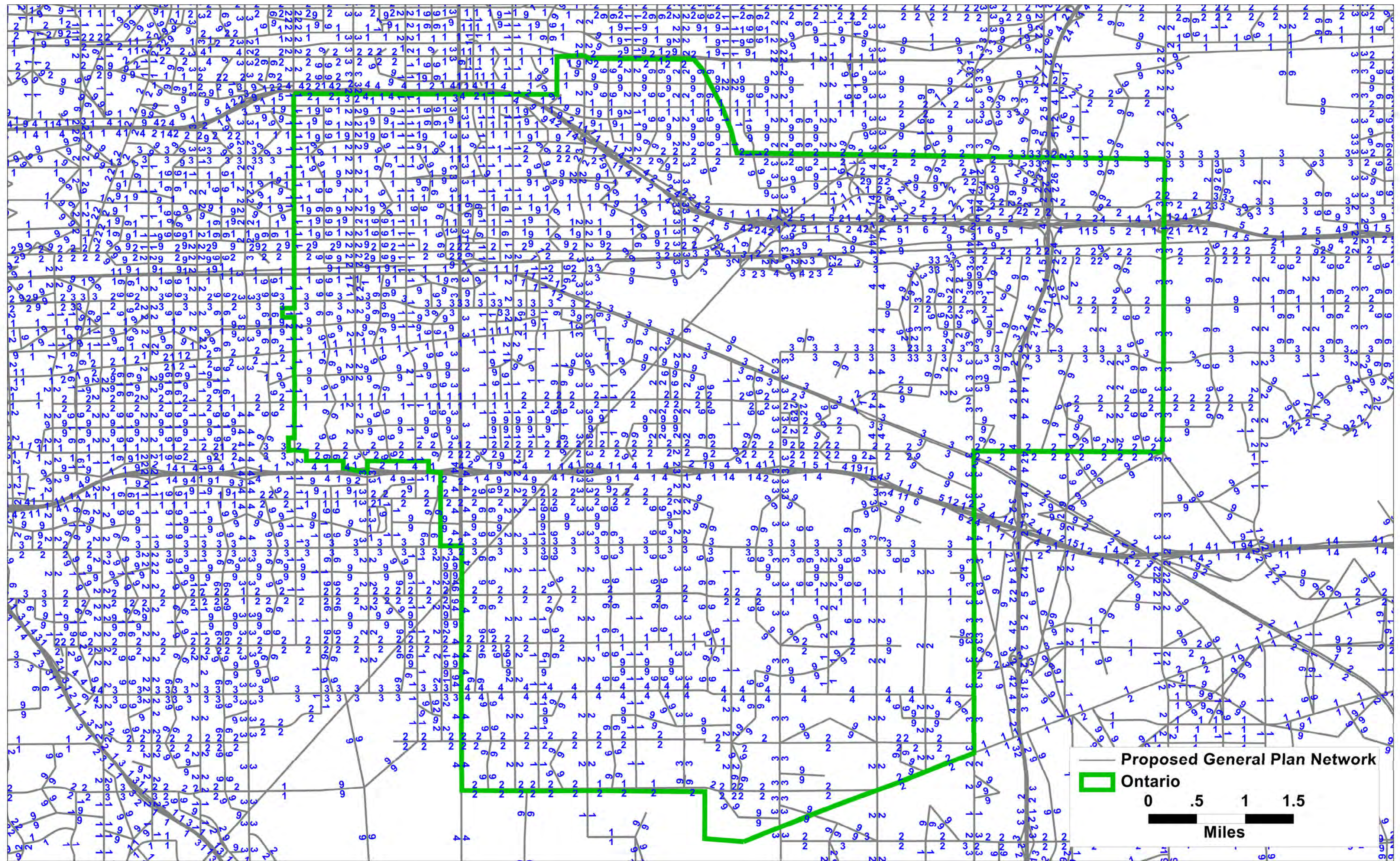
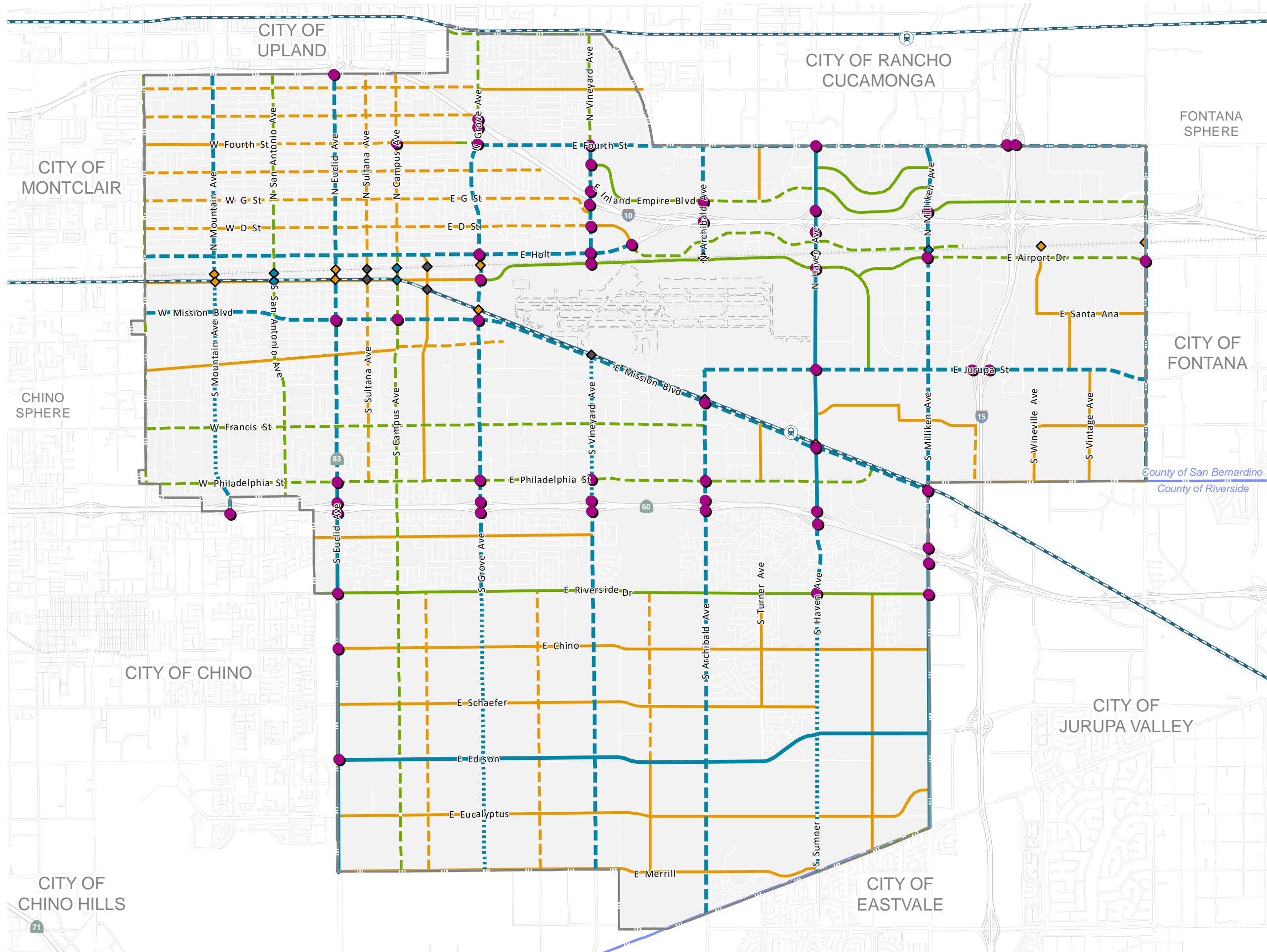
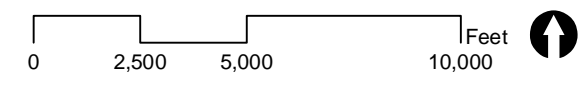


Figure 3
Proposed TOP 2050 Network

Figure 5
 Adopted TOP 2050
 Functional
 Roadway
 Classifications

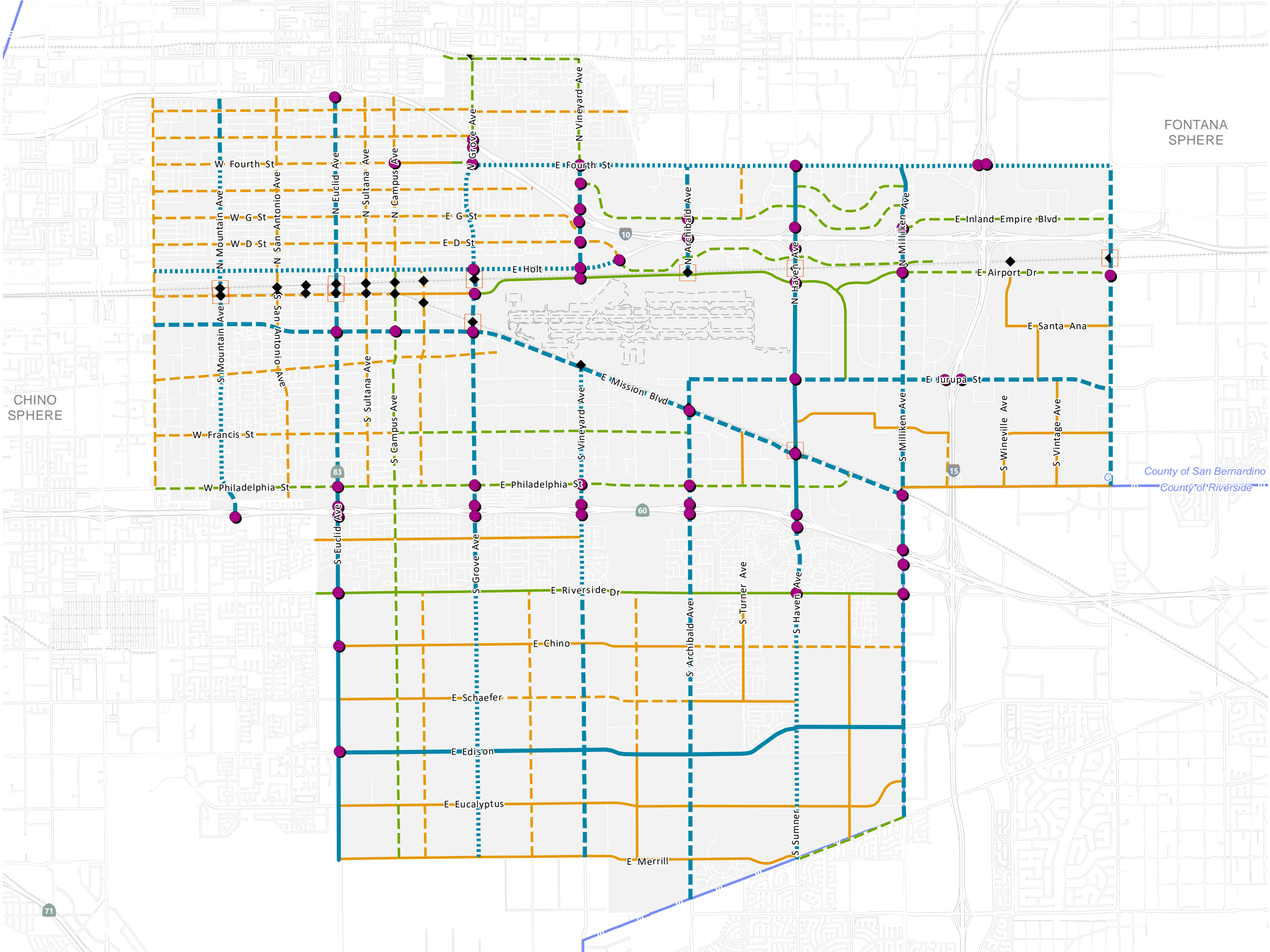


- Principal Arterial**
 - 8 Lanes
 - 6 Lanes
 - 4 Lanes
- Minor Arterial**
 - 6 Lanes
 - 4 Lanes
- Collector**
 - 4 Lanes
 - 2 Lanes
- Enhanced Intersections
- Rail Crossing**
 - At-Grade
 - Existing
 - Future
- Metrolink
- Metrolink Station
- Railroad
- Airport
- Ontario City Boundary
- County Boundary

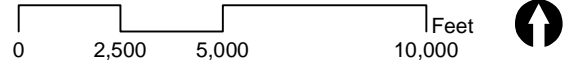


Date: 12/16/2020

Figure 6
Proposed TOP 2050
Functional
Roadway
Classifications



- Principal Arterial**
 - 8 Lanes
 - 6 Lanes
 - 4 Lanes
- Minor Arterial**
 - 6 Lanes
 - 4 Lanes
- Collector**
 - 4 Lanes
 - 2 Lanes
- Enhanced Intersections
- Future Grade-Separated Rail Crossings
- Grade-Separated Rail Crossings
- Metrolink
- Metrolink Station
- Railroad
- Airport
- Ontario City Boundary
- County Boundary



Date: 2/28/2022

Appendix L Tribal Consultation Responses

Appendices

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From: Gonzalez Romero, Arysa (TRBL) <aromero@aguacaliente.net>
Sent: Tuesday, August 3, 2021 4:27 PM
To: Thomas Grahn <TGrahn@ontarioca.gov>
Subject: The Ontario Plan 2050 Supplemental EIR

Greetings,

A records check of the Tribal Historic preservation office's cultural registry revealed that this project is not located within the Tribe's Traditional Use Area. Therefore, we defer to the other tribes in the area. This letter shall conclude our consultation efforts.

Thank you,

Arysa Gonzalez Romero, M.S., RPA.
Historic Preservation Technician
Agua Caliente Band of Cahuilla Indians
Tribal Historic Preservation Office
Main (760)-883-1327 | Cell (760)-831-2484



From: Gonzalez Romero, Arysa (TRBL) <aromero@aguacaliente.net>
Sent: Friday, July 9, 2021 10:23 AM
To: Thomas Grahn <TGrahn@ontarioca.gov>
Subject: City of Ontario General Plan, City of Ontario, San Bernardino County, CA

Greetings,

A records check of the Tribal Historic preservation office's cultural registry revealed that this project is not located within the Tribe's Traditional Use Area. Therefore, we defer to the other tribes in the area. This letter shall conclude our consultation efforts.

Thank you,

Arysa Gonzalez Romero, M.S., RPA.
Historic Preservation Technician
Agua Caliente Band of Cahuilla Indians
Tribal Historic Preservation Office
Main (760)-883-1327 | Cell (760)-831-2484



From: Gabrieleno Administration <admin@gabrielenoindians.org>
Sent: Tuesday, July 6, 2021 12:16 PM
To: Thomas Grahn <TGrahn@ontarioca.gov>
Subject: (Top 2050) City of Ontario General Plan, City of Ontario, San Bernardino County, California

Hello Thomas Grahn,

Thank you for your letter dated July 2,2021 regarding the general plan.Our tribal government concurs with the updated plan.However if you anticipate construction or any ground disturbance activities in the near future our tribal government would like to engage consultation with you the lead agency.Thank you for your time and consideration.

Sincerely,

Savannah Salas
Admin Specialist
Gabrieleno Band of Mission Indians - Kizh Nation
PO Box 393
Covina, CA 91723
Office: 844-390-0787
website: www.gabrielenoindians.org [gabrielenoindians.org]



The region where Gabrieleño culture thrived for more than eight centuries encompassed most of Los Angeles County, more than half of Orange County and portions of Riverside and San Bernardino counties. It was the labor of the Gabrieleño who built the missions, ranchos and the pueblos of Los Angeles. They were trained in the trades, and they did the construction and maintenance, as well as the farming and managing of herds of livestock. “The Gabrieleño are the ones who did all this work, and they really are the foundation of the early economy of the Los Angeles area “. “That’s a contribution that Los Angeles has not recognized--the fact that in its early decades, without the Gabrieleño, the community simply would not have survived.”


From: Quechan Historic Preservation Officer <historicpreservation@quechantribe.com>
Sent: Friday, July 9, 2021 9:55 AM
To: Thomas Grahn <TGrahn@ontarioca.gov>
Subject: City of Ontario General Plan, City of Ontario, San Bernardino County, CA

This email is to inform you that we have no comments on this project. We defer to the more local Tribes and support their decisions on the projects.

*Thank you,
H. Jill McCormick, M.A.*

Quechan Indian Tribe
Historic Preservation Officer
P.O. Box 1899
Yuma, AZ 85366-1899
Office: 760-572-2423
Cell: 928-261-0254
E-mail: historicpreservation@quechantribe.com



 Virus-free. www.avast.com [[avast.com](http://www.avast.com)]

Sean Anayah

From: Quechan Historic Preservation Officer <historicpreservation@quechantribe.com>
Sent: Wednesday, July 21, 2021 7:30 AM
To: Sean Anayah
Subject: RE: Notice of Preparation (NOP) for The Ontario Plan (TOP) 2050 Supplemental Environmental Impact Report (SEIR)

This email is to inform you that we have no comments on this project. We defer to the more local Tribes and support their decisions on the projects.

From: Sean Anayah [mailto:sanayah@placeworks.com]
Sent: Tuesday, July 20, 2021 2:37 PM
To: Thomas Grahn
Cc: Colin Drukker; Halley Grundy; Kimberly Ruddins
Subject: Notice of Preparation (NOP) for The Ontario Plan (TOP) 2050 Supplemental Environmental Impact Report (SEIR)

Please see the attached Notice of Preparation (NOP) for The Ontario Plan (TOP) 2050 Supplemental Environmental Impact Report (SEIR).

Reply to Thomas Grahn with any questions or comments at tgrahn@ontarioca.gov.

SEAN ANAYAH
ASSOCIATE

Pronouns: He/Him/His

[Why do pronouns matter?](#)

Berkeley, California 94709

Please note that at this time, all mail must be sent to: 3 MacArthur Place Suite 1100 Santa Ana, California 92707

510.848.3815 ext.3362 | cell: 916.220.4801 | sanayah@placeworks.com | placeworks.com



Virus-free. www.avast.com



From: Ryan Nordness <Ryan.Nordness@sanmanuel-nsn.gov>
Sent: Monday, August 2, 2021 1:51 PM
To: Thomas Grahn <TGrahn@ontarioca.gov>
Subject: RE: NOP/SEIR for the Ontario Plan 2050

Hello Thomas,

Thank you for contacting the San Manuel Band of Mission Indians (SMBMI) regarding the above referenced project. SMBMI appreciates the opportunity to review the project documentation, which was received by our Cultural Resources Management Department on July 28th. The project is located within Serrano ancestral territory, and the area for the project is of interest, but Tribe sees no conflicts with the zoning changes at this time. However, when specific projects are planned and implemented, SMBMI might have comments and/or request formal consultation with the Lead Agency pursuant to CEQA (as amended, 2015) and CA PRC 21080.3.1.

This communication concludes SMBMI's input on this project, at this time, and no additional consultation under SB18 is required. If you should have any further questions with regard to this matter, please do not hesitate to contact me at your convenience, as I will be your Point of Contact (POC) for SMBMI with respect to this project.

Respectfully,

Ryan Nordness

Ryan Nordness

CULTURAL RESOURCE ANALYST

Email: Ryan.Nordness@sanmanuel-nsn.gov

O: (909) 864-8933 Ext 50-2022

Internal: 50-2022

M: 909-838-4053

26569 Community Center Dr Highland California 92346

SAN MANUEL
BAND OF MISSION INDIANS [\[sanmanuel-nsn.gov\]](http://sanmanuel-nsn.gov)

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From: Thomas Grahn

Sent: Thursday, July 15, 2021 9:16 AM

To: Jamie Nord <Jamie.Nord@sanmanuel-nsn.gov>

Cc: Ryan Nordness <Ryan.Nordness@sanmanuel-nsn.gov>; Kimberly Ruddins <Kruddins@ontarioca.gov>; Helen McAlary <HMcAlary@ontarioca.gov>

Subject: RE: General Plan Update, Ontario, San Bernardino County, California

Jamie

Thank you for your response. The TOP 2050 Update is a technical update to the City's General Plan to address state mandates, primarily housing requirements of the Regional Housing Needs Assessment (RHNA). The Update does not include any plans for museums, cultural centers, or interpretative sites; however, the City recently completed a Parks Masterplan Update, which may address your concerns. I'm including the director of the City's Community Life & Culture Department in the reply. The CLC oversees the Ontario Museum of History & Art, and she may be able to address your concerns.

Please contact me should you have any further questions.

Thomas Grahn

Senior Planner
City of Ontario
303 East B Street
Ontario, CA 91764
(909) 395-2413

From: Jamie Nord <Jamie.Nord@sanmanuel-nsn.gov>

Sent: Tuesday, July 13, 2021 3:55 PM

To: Thomas Grahn <TGrahn@ontarioca.gov>

Cc: Ryan Nordness <Ryan.Nordness@sanmanuel-nsn.gov>

Subject: RE: General Plan Update, Ontario, San Bernardino County, California

Hello Thomas Grahn,

Thank you for contacting the San Manuel Band of Mission Indians (SMBMI) regarding the above referenced project. SMBMI appreciates the opportunity to review the project documentation, which

was received by our Cultural Resources Management Department on July 7th, 2021. This effort may impact projects located within Serrano ancestral territory, and therefore, is of interest to the Tribe. At this time, SMBMI is requesting additional information concerning whether the General Plan updates will include any plans for museums, cultural centers, or interpretive sites. If you should have any further questions with regard to this matter, please do not hesitate to contact me at your convenience.

Respectfully,

Jamie Nord

CULTURAL RESOURCES TECHNICIAN

Email: Jamie.Nord@SanManuel-NSN.Gov

O: (909) 864-8933 ext. 3421

M: (909) 649-1186

Internal ext.: 50-3421

26569 Community Center Dr Highland California 92346



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