IV.M.1 Utilities and Service Systems: Water Supply

1. Introduction

This section provides information regarding applicable regulations and describes existing and projected water supplies and related infrastructure. Impact analysis in regards to water resources is based on information and conclusions contained in the proposed Specific Plan, The Ontario Plan (TOP), TOP EIR, the City of Ontario (City) 2012 Water Master Plan (2012) and 2012 Recycled Water Master Plan (2012), and the Water Supply Assessment for the NMC (October 2004). The Water Master Plan and Recycled Master Plan are contained in Appendix L.

2. Environmental Setting

a) Regulatory Framework

The Urban Water Management Planning Act established under Section 10610 of the California Water Code addresses several state policies regarding water conservation and the development of water management plans to ensure the efficient use of available supplies. Specifically, municipal water suppliers are required to adopt an urban water management plan (UWMP) if the suppliers serve more than 3,000 customers or provide more than 3,000 acre-feet per year of water. The UWMP analyzes past, current, and projected future water supply and demand.

1) Regional Level

Senate Bill 610 and Senate Bill 221

State legislation addressing water supply, Senate Bill (SB) 610 (Costa) and SB 221 (Kuehl), became effective January 1, 2002 and include additional UWMP requirements, which are summarized below.

SB 610 was codified in the California Water Code, §10910 et seq. and describes the requirements for both water supply assessments and UWMPs applicable to the CEQA process. SB 610 states that specified projects subject to CEQA would require the urban water supplier to prepare a water supply assessment determining whether the projected water demand associated with a proposed project is included as part of the most recently adopted UWMP. Water supply assessment requirements include the identification of existing water supply entitlements, water rights, or water service contracts held by the public water system, and prior years' water deliveries received by the public water system. The water supply assessment is also required to address water supplies over a 20-year period and consider

average, dry, and multiple dry years. In accordance with SB 610 and Section 10912 of the Water Code projects subject to CEQA include:

- Proposed residential developments of more than 500 dwelling units; or
- Proposed shopping center or business establishment employing more than 1,000 persons or having more than 500,000 square feet of floor space; or
- Commercial office buildings employing more than 1,000 persons or having more than 250,000 square feet of floor space; or
- Hotels, motels, or both, having more than 500 rooms; or
- Industrial, manufacturing, or processing plants, or industrial parks planned to house more than 1,000 persons, occupying more than 40 acres of land, or having more than 650,000 square feet of floor area; or
- Mixed-use projects that includes one or more of the projects specified in this subdivision; or
- A project that would demand an amount of water equivalent to or greater than the amount of water required by a 500 dwelling unit project.

The water supply assessment must be approved by the public water system at a regular or special meeting and must be incorporated into the CEQA document. The lead agency must then make certain findings related to water supply based on the water supply assessment.

Under SB 610, an urban water supplier is also responsible for the preparation and periodic updating of an UWMP, which is required to describe the water supply projects and programs that may be undertaken to meet the total project water use of the service area. If groundwater is identified as a source of water available to the supplier, additional information must be included in the UWMP, including: (1) a groundwater management plan; (2) a description of the groundwater basin(s) to be used and the water use adjudication rights, if any; (3) a description and analysis of groundwater use in the past five years; and (4) a discussion of the sufficiency of the groundwater that is projected to be pumped by the supplier.

SB 221 focuses on water supply in the land use planning process and focuses on new large projects in non-urban areas. SB221 requires the water supplier to provide a written verification stating that there are sufficient water supplies available to serve a proposed subdivision or that the local agency is able to prove fact that sufficient water supplies are or will be available prior to project completion. Furthermore, SB 221 applies to any subdivision defined as a residential development of more than 500 units or proposed development that would need to increase water connections by 10 percent or more. However, Government Code Section 66473.7(i) exempts “any residential project proposed for a site that is within an urbanized area and has been previously developed for urban uses, or where the immediate contiguous properties surrounding the residential project site are, or previously have been,

developed for urban uses, or housing projects that are exclusively for very low and low-income households."

Assembly Bill 3030

Assembly Bill (AB) 3030, the Groundwater Management Act, is Section 10750 et seq. of the California Water Code. AB 3030 provides local water agencies with procedures to develop a voluntary groundwater management plan to manage their groundwater resources efficiently and safely while protecting the quality of supplies. Once a plan is adopted, the rules and regulations contained therein must also be adopted to implement the program outlined in the plan.

Efficiency Standards - Title 20 and 24 California Administrative Code

Title 24 of the California Administrative Code contains the California Building Standards, including the California Plumbing Code (Part 5) which promotes water conservation. Title 20 addresses Public Utilities and Energy and includes appliance efficiency standards that promote water conservation. In addition, many State laws require water-efficient plumbing fixtures in structures and are listed below:

- Title 24, California Administrative Code, Sections 25352(i) and (j) address pipe insulation requirements, which can reduce water used before hot water reaches equipment or fixtures. Insulation of water-heating systems is also required.
- Title 20, California Administrative Code, Section 1604(g) establishes efficiency standards that give the maximum flow rate of all new showerheads, lavatory faucets, sink faucets, and tub spout diverters.
- Title 20, California Administrative Code, Section 1606 prohibits the sale of fixtures that do not comply with established efficiency regulations.
- Health and Safety Code, Section 17921.3 requires low-flush toilets and urinals in virtually all buildings.
- Health and Safety Code, Section 116785 prohibits installation of residential water softening or conditioning appliances unless certain conditions are satisfied and includes the requirement that water conservation devices on fixtures using softened or conditioned water be installed.

2) Local Level

Water and Recycled Water Master Plan

The intent of the Water and Recycled Water Master Plan (WMP) is to provide the City a guideline document for future planning of its potable and recycled water systems. The WMP provides the City with an evaluation of its existing water and recycled water systems, the future system requirements through year 2030, and water supply strategies to meet the City's future system supply needs. The WMP also recommends system improvements to address

existing and future system requirements as well as a phasing plan to address necessary system improvements.

b) Environmental Setting

1) Water Supply

Water service for the City is provided by the Utilities Department of the City Public Works Agency. The City currently obtains water from four sources: Ontario wells and treatment in the Chino Groundwater Basin, the Chino Desalter Authority (CDA) wells and treatment in the Chino Groundwater Basin, treated State Water Project water from the Water Facility Authority (WFA) and recycled water from the Inland Empire Utilities Agency (TOP EIR).

The WFA treats State Water Project (SWP) water purchased from the Metropolitan Water District of Southern California (MWD) through IEUA and distributes the water to the Cities of Ontario, Upland, Chino, and Chino Hills, and the Monte Vista Water District. The WFA has a capacity of 81 mgd and the City currently contracts an allocation of 30 percent or approximately 25 mgd of the plant capacity. In addition, water services are also provided to the City through an inter-agency connection with the Cucamonga Valley Water District (CWDD) and from the Chino Basin Desalter Authority (CDA).

Per the June 2011 City Urban Water Management Plan, there are currently 28 groundwater wells located within the City's water system, 24 of which are currently used. Nine (9) more wells, capable of producing approximately 36,288 AFY, are planned for the future. The City's groundwater wells pump water from the Chino Groundwater Basin, which has an estimated storage capacity of five million acre-feet of water and an unused storage capacity of about one million acre-feet. The City has pumped an average of 29,315 AFY during the past ten years, with a high of 35,384 acre-feet in 2002, and a low of 21,997 acre-feet in 2010. The groundwater basin is an adjudicated basin and water rights are managed by the Chino Basin Watermaster that was created by the San Bernardino County Superior Court in January 1978, and is charged with administering adjudicated water rights and managing groundwater resources within the Chino Groundwater Basin. These rights are allocated into three "pools" known as the Overlying Agricultural Pool, the Overlying Non-Agricultural Pool, and the Appropriative Pool.

2) Water Demand

According to the 2012 Water Master Plan, seasonal variations in temperature, humidity, and precipitation affect yearly water demands. The customer base and the daily lifestyles affect system demand variations throughout a given day. In primarily residential areas, the peak demands within a day typically occur in the morning hours between 6:00 am and 9:00 am, when customers wake to begin their daily routine. In areas developed with commercial and industrial land uses, the peaks may occur mid-day or the demand may even remain relatively constant throughout the day.

The Water Master Plan calculated the Citywide yearly water demand was 43,032 AF in 2000 and 37,040 AF in 2009 and is estimated to be 74,735 at ultimate build-out approximately Year 2035.

According to the City's Recycled Master Plan, it was determined that total recycled water demand would not exceed 18,385 AFY for the entire City at build-out. Through the City's development policies, development is required to maximize the use of recycled water within the NMC, and therefore will be the most efficient and cost effective use of recycled water in the City and will be allocated water supply for this use as a first priority. The NMC has a recycled water demand of 11,487 AFY.

The project site contains approximately 320 acres and currently utilized for dairy farms, agricultural fields, and rural residences. The current water consumption rates have not been calculated for the existing onsite land uses. As stated in TOP EIR, the City receives an additional 2 af of water rights for each acre converted from agricultural to urban uses in the New Model Colony (NMC). The existing agricultural land uses on the project site have an extensive non-potable/recycled water demand, which are currently being served from private groundwater wells, and thus do not have a demand for recycled water provided by IEUA.

3) Water Infrastructure

The project area is located within the City NMC, which has been used for agricultural, dairy, and rural residential uses. The project site does not currently have a water distribution system and water demand on the project site is currently supplied by private water wells. Per TOP EIR, the City has a direct-use recycled water master plan to bring recycled water to non-potable uses in developed portions of the existing City, as well as a requirement for new development to install a recycled water system for non-potable uses in the NMC area.

According to the Water and Recycled Water Master Plan (WMP), NMC buildout would increase the demand for water by approximately 20,951 AFY. The City currently serves an estimated population of 166,134 residents (Department of Finance, 2012). Per the WMP, population build-out of the NMC is estimated to approximately 162,518. Further, the WMP estimates the ultimate City population at 358,270, resulting in an increase of approximately 192,136 residents.

The existing City water system and facilities consist of 12 storage reservoirs with an aggregate volume of 75 MG), four active and one inactive booster pumping stations, 23 active and five inactive groundwater wells, 16 pressure reducing stations, and approximately 546 miles of transmission and distribution pipelines. This water system is divided into five pressure zones (Zones 925, 1010, 1074, 1212, and 1348) that serve the serve the City. Pressure Zone 925' Zone serves the NMC. The 925' Zone, or Francis Street Zone, is approximately 10.5 square miles that would attend to the majority of the NMC. The 925' Zone would provide static pressure range of 54-126 psi.

c) Project Impacts

1) Methodology

A comparative analysis of the average water demand associated with the proposed project was conducted to determine if sufficient water supply is available as provided by the City. To analyze the water infrastructure of the project area, the anticipated increase in water demand resulting from project implementation was compared with the water supply and infrastructure for the NMC area.

2) Significance Threshold

Appendix G of the CEQA Guidelines provides a checklist of questions to assist in determining whether a proposed project would have a significant impact related to various environmental issues. Based on the following issue areas identified in Appendix G of the CEQA Guidelines, a significant impact to water supply would occur if the project would:

Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?

The project would require or result in the construction of new water facilities, or expansion of existing facilities, the construction of which could cause significant environmental effects.

The Initial Study concluded that impacts related to the significance thresholds listed above were potentially significant and would be evaluated in this Draft EIR. Refer to Appendix A-2 for a discussion related to these two thresholds.

3) Analysis of Project Impacts

As previously stated, the project site is currently used for agricultural, dairy, and rural residential uses. The project would update the current uses to urban uses including residential uses, park and recreation, and school uses. This would result in an additional demand for potable water in excess of the existing agricultural usage.

Water Demand

Water services would be provided to the project site by the Utilities Department of the City. As previously discussed, new water service facilities would be developed within the project site, including one reservoir, three groundwater wells, and portable and reclaimed transmission lines.

The project would include new residential uses, the Grand Park, and two new school facilities to be used by the residents of the project area and surrounding communities within the NMC. Table IV.M.1-1presents the potable water supply generation factors provided in the 2012 WMP and the 2012 Recycled Water Master Plan to estimate the water demand required for each developmental use.

Table IV.M.1-1: Water Demand Generation Factors

Land Use	Potable Water Generation Factor [a] (AFY)	Recycled Water Generation Factor [b] (AFY)
Residential [c]		
Low-Density Residential (2-5 units/acre)	0.61	1.00
Medium-Density Residential (11-25 units/acre)	0.36	1.25
High-Density Residential (25-45 units/acre)	0.17	1.50
Public School [d]	2.02	1.73
Open Space/Recreation	1.12	1.50

[a] Table 4-8, City of Ontario, Water Master Plan, April 2012. Residential land uses were based on gallons-per-day/dwelling unit and converted to AFY/dwelling unit. The public school and open space land use categories were based on gallons-per-day/acre and converted to AFY/acre.
[b] The Recycled Water Master Plan, April 2012, only provides factors for the Low-Density Residential land use category. Generation factors were created for the Medium- and High-Density land use categories. All land use categories represent AFY/acre.
[c] The generation factors for Medium- and High-Density Residential are specific to the New Model Colony.
[d] The school generation factor includes an allowance for irrigation. If irrigation will be supplied by recycled water, then a factor of 1,800 gpd/ac is recommended.
Source: Michael Brandman Associates, 2013

Utilizing the water demand generation factors as provided, the project is estimated to have a total water service demand of approximately 1,164 acre feet per year (AFY). The residential uses would have a total water demand of approximately 596 AFY, schools would have a water demand of approximately 226 AFY, and the Grand Park would have a water use demand of approximately 342 AFY. Table IV.M.1-2 fully summarizes the project's potable and recycled water use demand.

The WMP has accounted for the development of the Grand Park project included as part of the NMC. The land use designations on the TOP land use plan, if developed, would result in a demand of approximately 1,190 AFY, which is greater than the proposed project. Therefore, the proposed project's potable water demand is within the projected potable water demand for the Grand Park and the entire NMC as estimated by the WMP. Furthermore, adequate water supply would be provided to the project site through the implementation of and addition of water supply infrastructure and water supply and recycled water services, as further discussed below. As such, impacts to the potable water and recycled water supply would be less than significant.

The highest fire flow demand would occur in the residential areas of the project site. Per Table 6-1 in the WMP, the fire flow requirements for the high-density residential area would be 3,500 gpm for four hours. The project would be in compliance with the City Public

Works Department and the Ontario Fire Prevention Bureau. Further discussion of fire flow is discussed in Section IV.K.2 Fire, of this Draft EIR.

Table IV.M.1-2: Potable and Recycled Water Demand Estimates

Land Use	Proposed Development (Units/Acres) [a]	Total Projected Water Demand (AFY) [b]	Potable Water Demand (AFY)	Recycled Water Demand (AFY) [c]
Low-Density Residential	484 Units	348.13	295.24	52.89
Medium-Density Residential	256 Units	110.94	92.16	18.78
High-Density Residential	587 Units	137.41	99.79	37.62
Residential Subtotal	***1,327 Units***	***596.48***	***487.19***	***109.29***
Schools	60.27 (Ac.)	225.79	121.52	104.27
Open Space/Recreation	130.52 (Ac.)	341.96	146.18	195.78
Non-Residential Subtotal	***190.79 (Ac.)***	***567.75***	***267.70***	***300.05***
Total	**1,327 Units 1,90.70 (Ac.)**	**1,164.23**	**754.89**	**409.34**

[a] Net acres
[b] One AFY is equivalent to 325,851 gallons
[C] Recycled water demand for residential land uses are based on net acreages and not on unit counts.
Source: Michael Brandman Associates, 2013

Water Infrastructure

Potable water supply to the project site would be provided by the new NMC Phase I Water System, which includes one reservoir, three groundwater wells, and potable and reclaimed transmission water lines. As previously stated, a 12-inch water main exists within Archibald Avenue along the western boundary of the specific plan area.

The NMC Phase I Water System, which specifically includes the following: a 42-inch line from the new Jurupa Reservoir along the Milliken Avenue southward to Riverside Drive; a 30-inch line along the same Milliken Avenue alignment carries the water further south to Merrill Avenue; a 24-inch line along Merrill Avenue, which then carries the water westward to the project site. A pressure reducing station would be located at the intersection of Archibald Avenue and Schaefer Avenue. In addition, an on-site loop system comprised

mostly of 8-inch mains is proposed. The project site lies within the 925' pressure zone. New water mains proposed as part of the project include a 12-inch Master Plan water main in Edison Avenue, from Archibald Avenue to Haven Avenue, and a 12-inch water main in Haven Avenue, from Edison Avenue to Merrill Avenue.

The Jurupa Avenue Reservoir would be fed by three new groundwater wells with a 2,000 gpm capacity. It is anticipated that the 2,000 gpm reservoir capacity would be sufficient for the project's estimated peak hour water demand of 1,863 gpm. The Chino Desalter Authority No. 2 Connection has a capacity of 2,170 gpm. In total, the 4,000 gpm capacity would adequately serve the 3,500 gpm fire flow and the maximum day demand of 904 gpm.

The project site is also currently served by private wells. A well use/destruction plan and schedule for all existing private or agricultural wells will be submitted prior to the issuance of permits for any construction activity. In regards to private wells actively used for water supply, the developer would be required to submit a plan to abandon the well and to connect residential users to the City's water system and agricultural users to the recycled water system, when available. Well destruction requires permitting from the County Health Department. Copies of required County Health Department permits would be required to be provided to the City Engineering Department and Public Works Agency prior to the issuance of grading and building permits. If the developer proposes temporary use of an existing agricultural well for purposes other than agricultural use, such as grading or dust control, the developer will be required to make a formal request to the City for such use prior to issuance of permits for any construction activity. Upon approval, the developer and the City will enter into an agreement and the developer will pay any applicable fees as established in the agreement.

The IEUA would provide recycled water services through IEAU's PR-1 and PR-1 outfall parallel located in Carpenter Avenue and via City recycled water mains as presented in the NMP WMP. As previously discussed, the project site is located within the 930' Zone. The construction phasing source of recycled water mains to the project site would be conveyed to the 930' Zone from the 1050' Zone via a master planned pressure reducing station located in Archibald Avenue, north of Chino Avenue. The master planned recycled water mains proposed under development of the Grand Park would include the following:

- 12-inch recycled water line in Eucalyptus Avenue, from Archibald Avenue to Haven Avenue
- 16-inch recycled water line in Haven Avenue, from Eucalyptus Avenue to Edison Avenue
- 16-inch recycled water line in Eucalyptus Avenue, from Haven Avenue to Archibald Avenue
- 16-inch recycled water line in Archibald Avenue from Eucalyptus Avenue to Edison Avenue
- 20-inch and 24-inch recycled water lines in Archibald Avenue, from Edison Avenue to Chino Avenue and connecting to RP1 per the approved recycled water master plan.

The Grand Park would also utilize an existing 10-inch recycled water main that extends from the IEUA facility adjacent to Westwind Park to the intersection of Archibald Avenue and Schaefer Avenue.

Within the entire project area, an 8-inch recycled water main is proposed.

4) Consistency with Applicable Regulations

The proposed project complies with SB 221 and SB 610. As the proposed NMC would include the development of various uses, which are subject to Water Code Section 10912, the City prepared a Water Supply Assessment (WSA) in 2004. The WSA serves as written verification for all future development within the NMC. The City reviewed the 2004 WSA and determined the data used to create the assessment is still accurate and the assessment found sufficient water for the proposed project. This is consistent with Water Code Section 10912 that allows a proposed project to rely on a previously prepared WSA if the proposed project is part of a larger project for which an assessment was prepared. As the proposed project meets all three criteria, the WSA prepared for the NMC is adequate for this project, and thus complies with SB 221 and SB 610. The 2004 WSA is provided in Appendix M.

The project would comply with City Ordinance 2689 and would provide recycled water for all approved uses, including but not limited to the irrigation of parks, schools, street landscaping, recreational trails, and HOA maintained common areas.

3. Cumulative Impacts

Project development and the build out of the entire NMC as proposed would significantly increase potable and recycled water demands. The Chino Basin MWD has plans for future construction of various improvement projects to the water supply system for the area. In addition, the CBMWD has stated that water supply for the region would be adequate to serve the project and the surrounding City area. Although demands for water supply would significantly increase, the WSA prepared for the NMC has stated that adequate water supply would be available for the NMC. Furthermore, the WSA and NMC WMP have already assessed and planned for additional water supplies or facilities to adequately serve the entire NMC. The project and cumulative projects would not generate excess water demands not already accounted for. As such, cumulative impacts to the water supply would be less than significant and no mitigation measures are required.

4. Mitigation Measures

Water supply impacts would be less than significant. As such, no mitigation measures are required.

5. Level of Significance After Mitigation.

All impacts related to water supply would be less than significant. As such, no significant unavoidable impacts would result from implementation of the proposed Specific Plan.