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W.O. No. 2015-0243

August 24, 2015

Mr. Ryan Shaw
Water Resources Manager
Ontario Municipal Utilities Company
1425 S. Bon View Avenue
Ontario, CA 91761

Re: Water Supply Assessment
Armstrong Ranch Specific Plan

Dear Mr. Shaw,

Pursuant to your Notice to Proceed on July 20, 2015 and our proposal dated March 11, 2015 transmitted herewith is the Water Supply Assessment of the subject project pursuant to SB610.

Sincerely,

ALBERT A. WEBB ASSOCIATES

Sam I. Gershon, RCE
Senior Vice President

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C. City of Ontario's Water Master Plan by AKM Consulting Engineers, April 2012

D. Technical Memorandum "Ultimate Citywide Water Demand Estimate" by AKM Consulting Engineers, August 2011

E. "Local Agency Agreement" dated April 15, 2003 by and Among Inland Empire Utilities Agency and the City of Ontario

F. "Installment Purchase Agreement Relating to Water Facilities Authority Water Treatment Plant" By and Between Water Facilities Authority, as Seller and the City of Ontario, as Purchaser Dated as of October 1, 1985

G. California Department of Health Services Letter of August 16, 1999 Pertaining to "Permit Amendment – Increased Filtration Rate" (System No. 3610006)

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SECTION 1 - INTRODUCTION

1.1 Introduction and Purpose

In October of 2001, Senate Bill (SB) 610 was signed into California state law with an effective date of January 1, 2002. SB 610 serves to amend existing legal requirements for confirmation of water supply sufficiency as a condition of approval for development projects. The confirmation of water supply sufficiency is achieved through an analysis of the water purveyor's existing and future water sources and existing and projected water demand in relation to a "project" as defined by SB 610, resulting in the production of a project-specific Water Supply Assessment (WSA). The WSA also requires additional analysis if any portion of the water purveyor's water supplies include groundwater.

Law

10910. (a) Any city or county that determines that a project, as defined in Section 10912, is subject to the California Environmental Quality Act (Division13 (commencing with Section 21000) of the Public Resources Code) under Section 21080 of the Public Resources Code shall comply with this part.

10912. For the purpose of this part, the following terms have the following meanings:

(a) "Project means any of the following:

(1) A proposed residential development of more than 500 dwelling units.

(2) A proposed shopping center or business establishment employing more than 1,000 persons or having more than 500,000 square feet of floor space.

(3) A proposed commercial office building employing more than 1,000 persons or having more than 250,000 square feet of floor space.

(4) A proposed hotel or motel, or both, having more than 500 rooms.

(5) A proposed industrial, manufacturing, or processing plant, or industrial park 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.

(6) A mixed-use project that includes one or more of the projects specified in this subdivision.

(7) 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 project proponents of the Armstrong Ranch Specific Plan (Armstrong Ranch) propose to develop a 199 acre planned residential community of 994 residential units within the New Model Colony portion of the City of

Ontario. As a result of the size of this development the requirements of SB 610 apply to this “Project”.

The requirements of SB 610 are triggered for projects going through the California Environmental Quality Act (CEQA) process. During the CEQA process, the City or County processing the project is required to request a Water Supply Assessment from the identified water purveyor for any "project," as defined by SB 610. Pursuant to the above Senate Bill, the Ontario Municipal Utilities Company commissioned (July 20, 2015) this study to address the “Water Supply Assessment” per Senate Bill 610 for the Armstrong Ranch.

1.2 Project

Project Location

The Armstrong Ranch (Project) encompasses approximately 199 acres, located in the City of Ontario, in San Bernardino County. The project site is located in the southern portion of the City, near the City of Ontario/City of Chino boundary. The project site is generally located north of Chino Avenue, south of Riverside Drive, east of Vineyard Avenue and west of the Cucamonga Creek Flood Control Channel. Please refer to Figure 1-1, “Regional Location” and Figure 1-2, “Project Vicinity.”

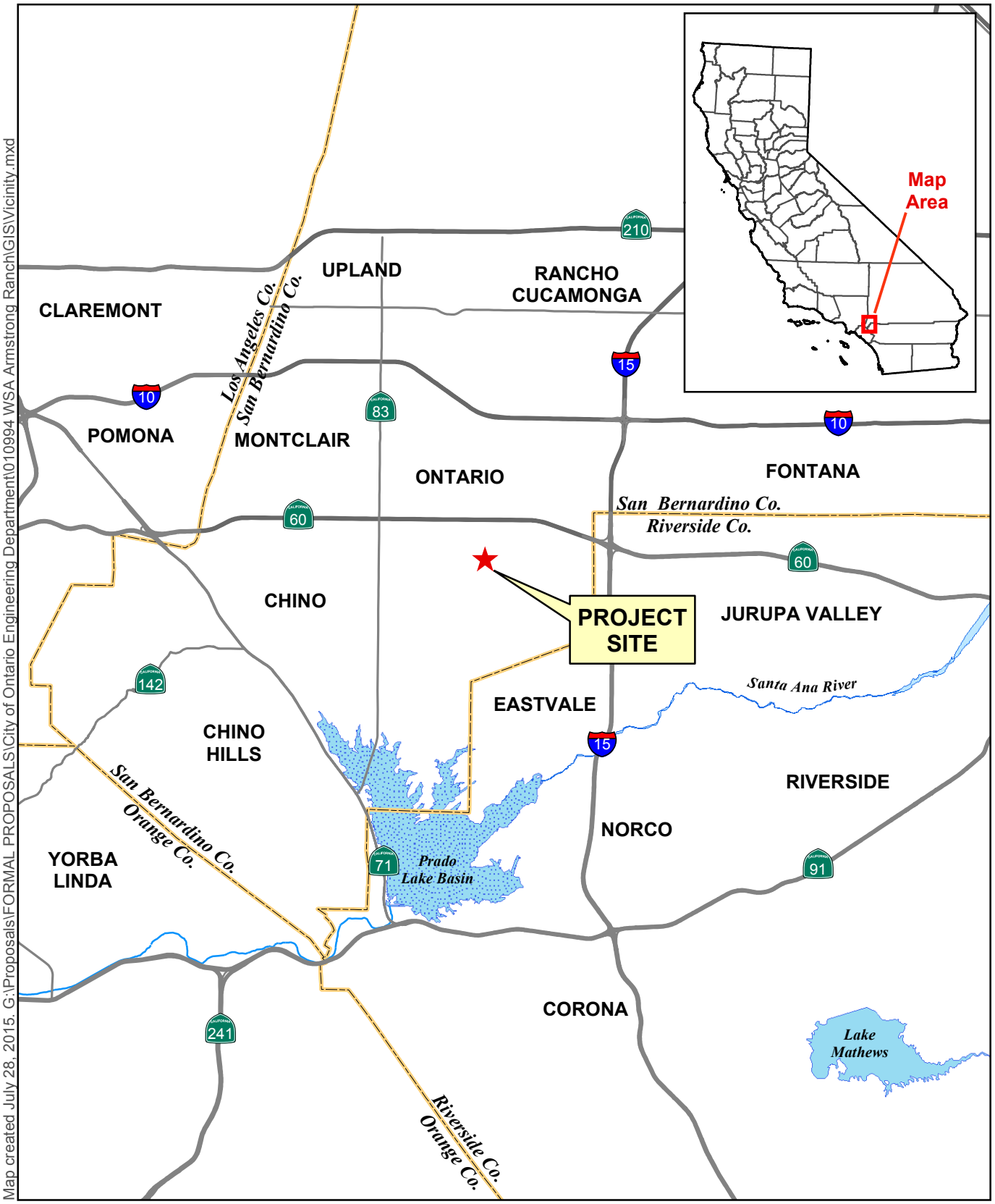

Figure 1-1 – Regional Vicinity Map

Armstrong Ranch

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Source: San Bernardino Co. GIS, 2014 (imagery) and 2015.

0 500 1,000 1,500 2,000 Feet

Figure 1-2 - Project Vicinity

Armstrong Ranch

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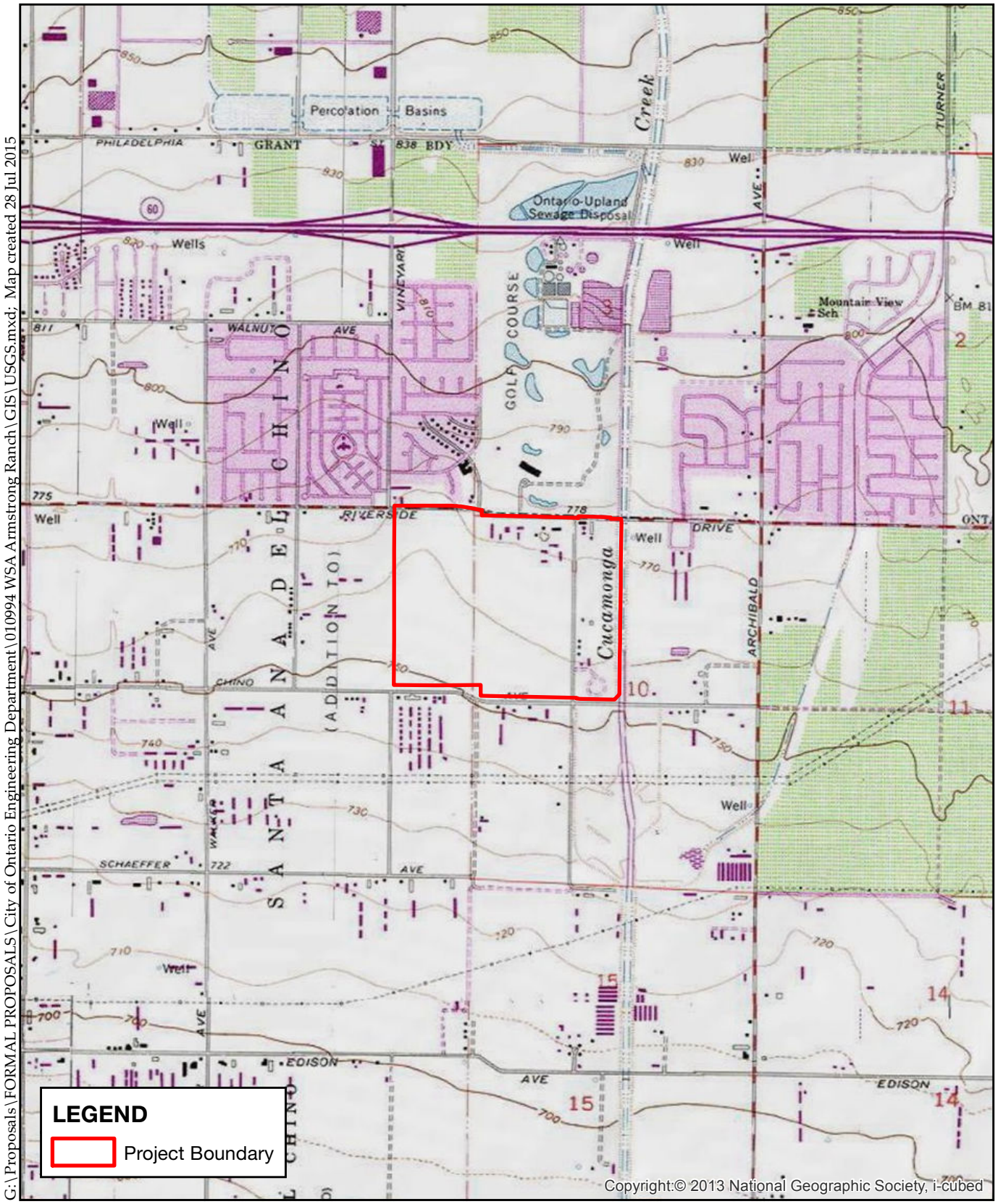
Site Description

The Project site consists of 199 acres which has historically been used for agricultural purposes, primarily for dairy and field crop farming. The topography of the project site is generally flat with an elevation ranging from approximately 775-feet to 755-feet above mean sea level (Figure 1-3). Existing land uses are depicted in Figure 1-4. As shown, the site is generally undeveloped with existing agricultural operations and rural residences scattered throughout the area. Rural residential housing, farm buildings and other ancillary facilities occupy those areas not in active agricultural production.

Cucamonga Creek Channel, a concrete-lined flood control channel, borders the eastern side of the site.



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Sources: ESRI/USGS 7.5min Quad
DRGs: GUASTI / CORONA NORTH

0 1,000 2,000 3,000 Feet

Figure 1-3 - Site Topography
Armstrong Ranch

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G:\Proposals\FORMAL PROPOSALS\City of Ontario Engineering Department\010994 WSA Armstrong Ranch\GIS\Ex_LandUse.mxd; Map created 28 Jul 2015

Source: San Bernardino Co. GIS, 2014 (imagery) and 2015.

0 400 800 1,200 1,600 Feet

Figure 1-4 - Existing Land Use

Armstrong Ranch

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Land Uses

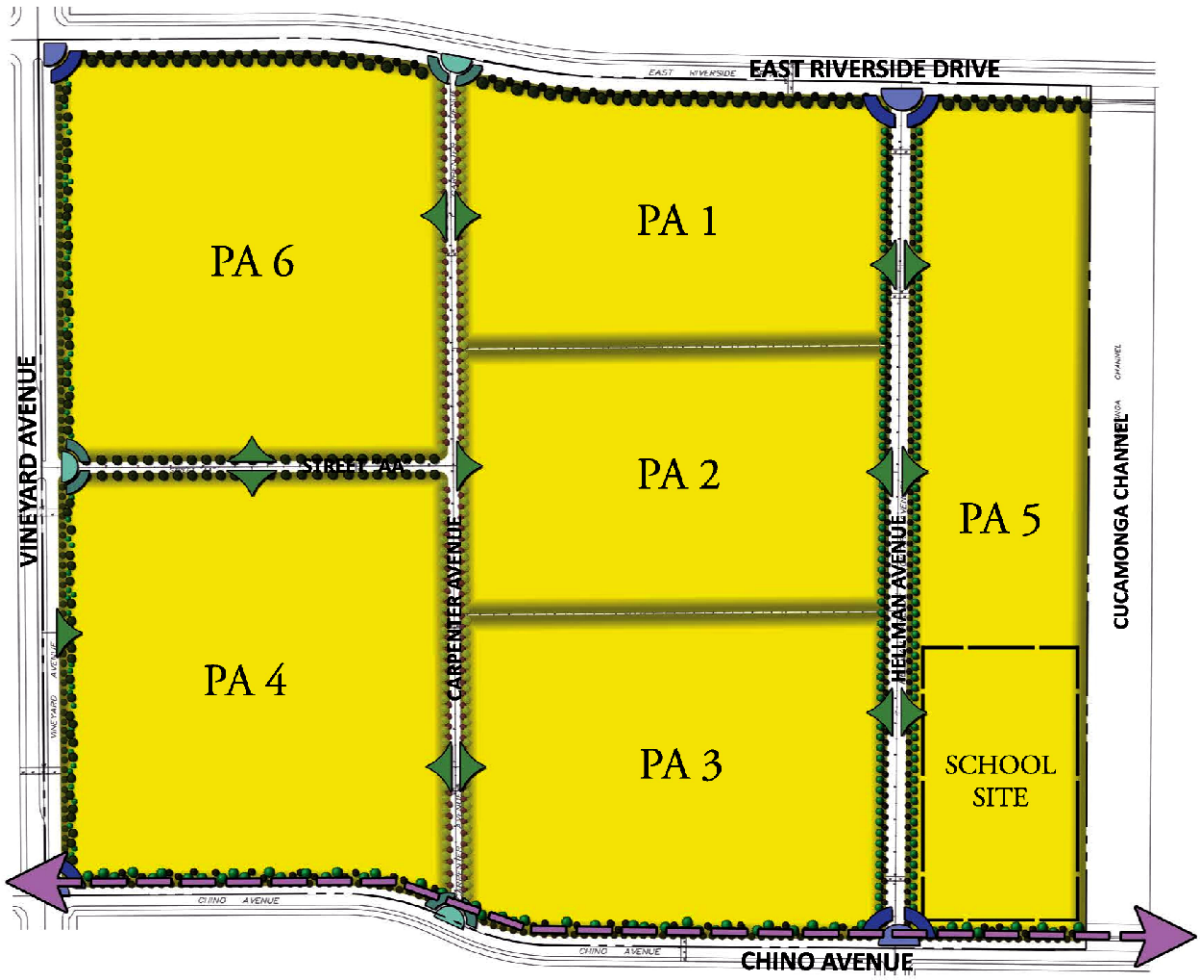
The Planning Areas and associated land uses listed in Table 1-1 are graphically shown in Figure 1-5.

Table 1-1[1]: Armstrong Ranch Land Use Summary

Land Use	Gross Acres	Net Acres	Dwelling Units	Gross Density	Net Density
Residential Single Family					
Planning Area 1	26.6	23.5	160	6.0	6.8
Planning Area 2	26.1	24.6	152	5.8	6.2
Planning Area 3	32.3	29.2	161	5.0	5.5
Planning Area 4	39.1	33.6	168	4.3	5.0
Planning Area 5*	36.1	32.2	160	4.4	5.0
Planning Area 6	38.6	33.0	193	5.0	5.9
Roadways		15.1			
Enhanced Neighborhood Edges		7.6			
Total	**198.8 AC**	**198.8 AC**	**994**	**5.0 DU/AC**	**5.6 DU/AC**

*This parcel contains a 10 AC school site overlay. The residential units within the school overlay are included in residential Planning Area 5.

[1] From Table 4.1 of Armstrong Ranch Specific Plan, January 2015.



Source: Armstrong Ranch Draft SP, Jan. 2015,
CVRC Ontario/MDS Consulting/The Galloway Group

Figure 1-5 - Land Use Plan
Armstrong Ranch

N.T.S

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1.3 Proposed Project Relation to 2010 Urban Water Management Plan Law

10910. (c) (1) The city or county, at the time it makes the determination required under Section 21080.1 of the Public Resources Code, shall request each public water system identified pursuant to subdivision (b) to determine whether the projected water demand associated with a proposed project was included as part of the most recently adopted urban water management plan adopted pursuant to Part 2.6 (commencing with Section 10610).

(2) If the projected water demand associated with the proposed project was accounted for in the most recently adopted urban water management plan, the public water system may incorporate the requested information from the urban water management plan in preparing the elements of the assessment required to comply with subdivisions (d), (e), (f), and (g).

(3) If the projected water demand associated with the proposed project was not accounted for in the most recently adopted urban water management plan, or the public water system has no urban water management plan, the water supply assessment for the project shall include a discussion with regard to whether the public water system's total projected water supplies available during normal, single dry, and multiple dry water years during a 20-year projection will meet the projected water demand associated with the

proposed project, in addition to the public water system's existing and planned future uses, including agricultural and manufacturing uses.

(4) If the city or county is required to comply with this part pursuant to subdivision (b), the water supply assessment for the project shall include a discussion with regard to whether the total projected water supplies, determined to be available by the city or county for the project during normal, single dry, and multiple dry water years during a 20-year projection, will meet the projected water demand associated with the proposed project, in addition to existing and planned future uses, including agricultural and manufacturing uses.

The City's General Plan, referred to as "The Ontario Plan" (TOP), adopted January 27, 2010 was utilized to determine the ultimate City of Ontario water demand. The City of Ontario's 2010 Urban Water Management Plan projected water deliveries for 2015; 2020; 2025; 2030; and 2035 were based upon current land use projections.

The Policy Plan (General Plan) component of The Ontario Plan (TOP) currently designates the Project site as "residential". TOP envisions the site as Low Density (2.1 – 5 dwelling units per acre). Specifically the General Plan will allow up to 994 dwelling unit.

The projected water demand for the project site, classified as “residential” in the Ontario plan, was considered in the City’s 2010 Urban Water Management Plan (UWMP) (Appendix A). Pursuant to Water Code Section 10910, Section C3 as amended by SB 610, “the water supply assessment for the project shall include a discussion with regard to whether the public water system’s total projected water supplies available during normal, single dry, and multiple dry water years during a 20-year projection will meet the projected water demand associated with the proposed project, in addition to the public water system’s existing and planned future uses, including agricultural and manufacturing uses.”

The projected water demand for the Armstrong Ranch plan is 606 acre-feet per year (Table 1-2) which is accounted for in City’s 2010 Urban Water Management Plan.

City of Ontario’s total annual water supply (Table 4-1 of the UWMP, Appendix A) is projected to be 86,301 acre-feet by the year 2035, while the projected annual deliveries will be 67,916 acre-feet in 2035 (Table 3-9 of the UWMP). In addition, the City of Ontario has additional water uses and losses totaling 18,385 acre-feet per year. Section 3 of this WSA provides a detailed discussion of City of Ontario’s projected water supply.

Table 1-2: Projected Water Demand of the "Armstrong Ranch" Based Upon "The Ontario Plan"

Armstrong Ranch Project		Unit Water Use[2]	Daily Water Demand (gpd)
Low Density Residential	994 DU	544 gpd/DU	540,736
Total Annual Demand			540,736 gpd or 606 Acre-Feet per Year

The City of Ontario's City Council adopted the 2010 "Urban Water Management Plan" (Appendix A) by Resolution 2011-039 on June 21, 2011 (Appendix B). The Urban Water Management Plan is consistent with the City of Ontario's Water Master Plan (April 2012) (Appendix C).

The proposed Armstrong Ranch project consists of 994 residential units dedicated for residential use (Table 1-1). The proposed Armstrong Ranch is consistent with the City of Ontario's "Ultimate Land Use Map" shown on Figure 3-5 of Appendix C.

The projected water demand associated with the Armstrong Ranch is 606 acre-feet per year (Table 1-2) out of the City of Ontario's total projected water deliveries (2035), of 67,916 acre-feet per year. The Armstrong Ranch Water demand was accounted for in the above referenced Urban Water Management Plan which is incorporated into this Water Supply Assessment (Appendix A).

[2] From Table 1-4, City of Ontario, Water Master Plan by AKM Consulting Engineers, April 2012 (Appendix C)

1.4 Statewide Mandatory Water Conservation Requirements

On April 1, 2015, in response to extended statewide drought conditions, Governor Brown issued an Executive Order (B-29-15) that required the State Water Resources Control Board to adopt statewide mandatory water conservation requirements to reduce urban potable water usage through February 2016. Pursuant to the Executive Order, the State Board adopted emergency water conservation regulations on May 5, 2015 which remain in effect until February 13, 2016. While such statewide requirements have never been implemented before, the City of Ontario is prepared to meet the new emergency conservation standards employing existing and additional measures as needed in accordance with its current Urban Water Management Plan and Water Conservation Ordinance that describe specific actions to be taken that allow the City to adequately respond to these types of emergencies.

1.5 Methodologies of Analysis

The projected potable water demands published in the 2010 Urban Water Management Plan were determined based upon the existing demands, the land use planning adopted by the City (The Ontario Plan), and the unit demand factors developed for future development. Demands were calculated as described in the 2010 Urban Water Management Plan (Appendix A).

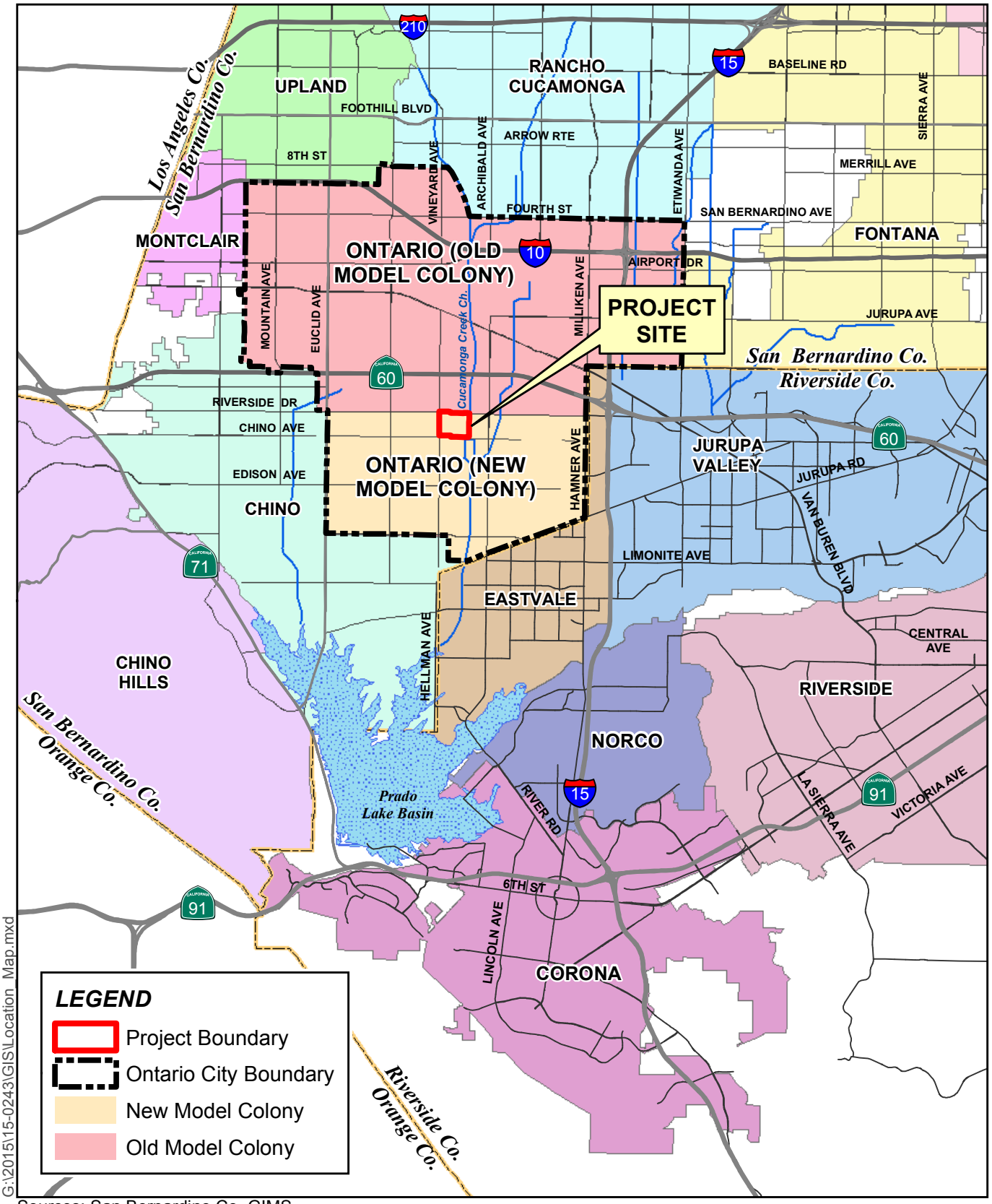
SECTION 2 - WATER DEMAND ANALYSIS

The purpose of this section is to evaluate whether the proposed project was considered in the water supplier's planning for water demand. This section will: 1) identify the various water use sectors, 2) identify water demand by those sectors for the next twenty years, and 3) project the Armstrong Ranch Project water demand and determine the water demand for the subject area that was included in Ontario Municipal Utilities Company *2010 Urban Water Management Plan* (Appendix A).

2.1 Location

The City of Ontario is a rapidly growing community located in the foothills of the San Gabriel Mountains in the western portion of San Bernardino County. The City is bounded by the City of Montclair on the northwest (Figure 2-1) the cities of Rancho Cucamonga and Upland on the north, the City of Fontana on the northeast, Jurupa Community Services District on the south and southeast, and the City of Chino on the south and southwest. In 1999, Ontario's southern boundaries were extended in order to annex 8,200 acres of unincorporated Agricultural Preserve. The City boundaries, prior to this annexation, are referred to as Old Model Colony (OMC) and encompass about 24,046[1] acres. The annexed area, which is referred to as the New Model Colony (NMC), consists of dairies and agricultural land uses.

[1] The Ontario Plan Draft EIR



Sources: San Bernardino Co. GIMS, 2015; Riverside Co, GIS, 2015.

Figure 2-1 – Location Map

Armstrong Ranch

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Including the NMC, the City boundaries now represent approximately 31,958[1] acres or approximately 50 square miles. Three (3) major freeways (Interstate 10, Interstate 15 and State Route 60), traversing the City of Ontario, serve as major transportation hubs for freeway commuters as well as industrial businesses. A major railway corridor also crosses the City's northerly sector. The City of Ontario is also home to the Ontario International Airport.

2.2 Pressure Zones

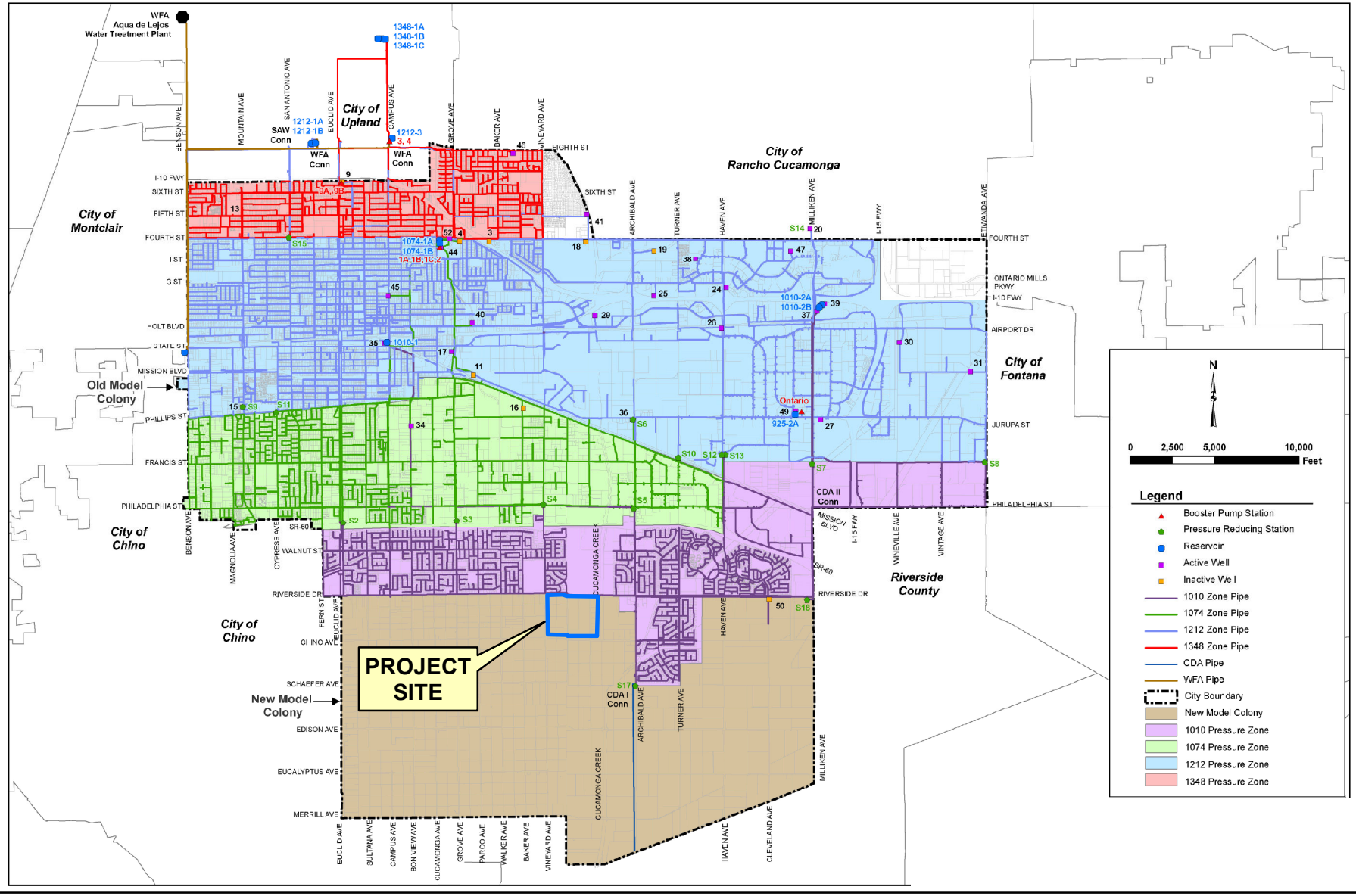
The City is situated in the foothills of the San Gabriel Mountains but on relatively flat terrain with elevations ranging from about 635 feet above mean sea level (msl) at its southerly boundary to about 1180 feet above msl at its northerly boundary. Currently, the City's domestic water system is divided into five pressure zones as follows: 925 Zone, 1010 Zone, 1074 Zone, 1212 Zone, and 1348 Zone. The largest pressure zone in the system is the 1212 Zone, which covers about 38 percent of the existing water service area. Details of each pressure zone are shown in Table 2-1. The general boundaries and the service elevation ranges for the pressure zones are indicated in Table 2-1 and Figure 2-2. Each zone has its own storage that provides not only control of maximum pressures but also satisfies minimum required pressures. Table 2-1 also provides a breakdown of acreage by pressure zone. The Armstrong Ranch Project is within the 925 Pressure Zone.

[1] The Ontario Plan Draft EIR

Table 2-1
City of Ontario Pressure Zones

Pressure Zone Name[1]	Pressure Zone Name[2]	Area (sq. mi.)	Area (AC)	Pipe Length (ft)	Hydraulic Grade Line (ft)	Ground Elevation Range (ft)	Static Pressure Range[3] (psi)
1348	13th Street	3.1	1,954	370,591	1,348	1,020-1,180	73-142
1212	8th Street	18.7	11,957	1,285,311	1,212	865-1,095	51-150
1074	4th Street	7.5	4,780	596,218	1,074	825-930	62-108
1010	Phillips Street	9.0	5,783	615,906	1,010	735-880	56-119
925	Francis Street	10.5	6,733	15,341	925	635-800	54-126
	Total	**48.8**	**31,206**	**2,883,366**			

[1]Nomenclature used in this report.
[2]Nomenclature used in previous Water Master Plan.
[3]Calculated based on HGL and ground elevation range.



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Source: City of Ontario/AKM
2011 Water Master Plan

Figure 2-2 - City of Ontario Pressure Zone Boundaries

Armstrong Ranch

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2.3 Land Use

The following discussion of Land Use is from the City of Ontario's 2010 Urban Water Management Plan (Appendix A).

Existing Land Use

The City is a well-planned urban community with a balance of residential, commercial, and industrial land uses. Within the service area, the primary land use in the City is residential (8,762 ac or 28.0%). Industrial use also makes up a significant portion of the total existing land use (4,671 ac or 14.9%). Approximately 3,290 acres or 10.5% of the total is currently undeveloped. Table 2-2[1] provides a summary of the existing land uses. The existing land uses within the City are shown on Figure 2-3[2].

[1] Table 2-1 of the 2010 Urban Water Management Plan (Appendix A).
[2] Figure 2-4 of the 2010 Urban Water Management Plan (Appendix A).

Table 2-2: City of Ontario
Existing Land Uses

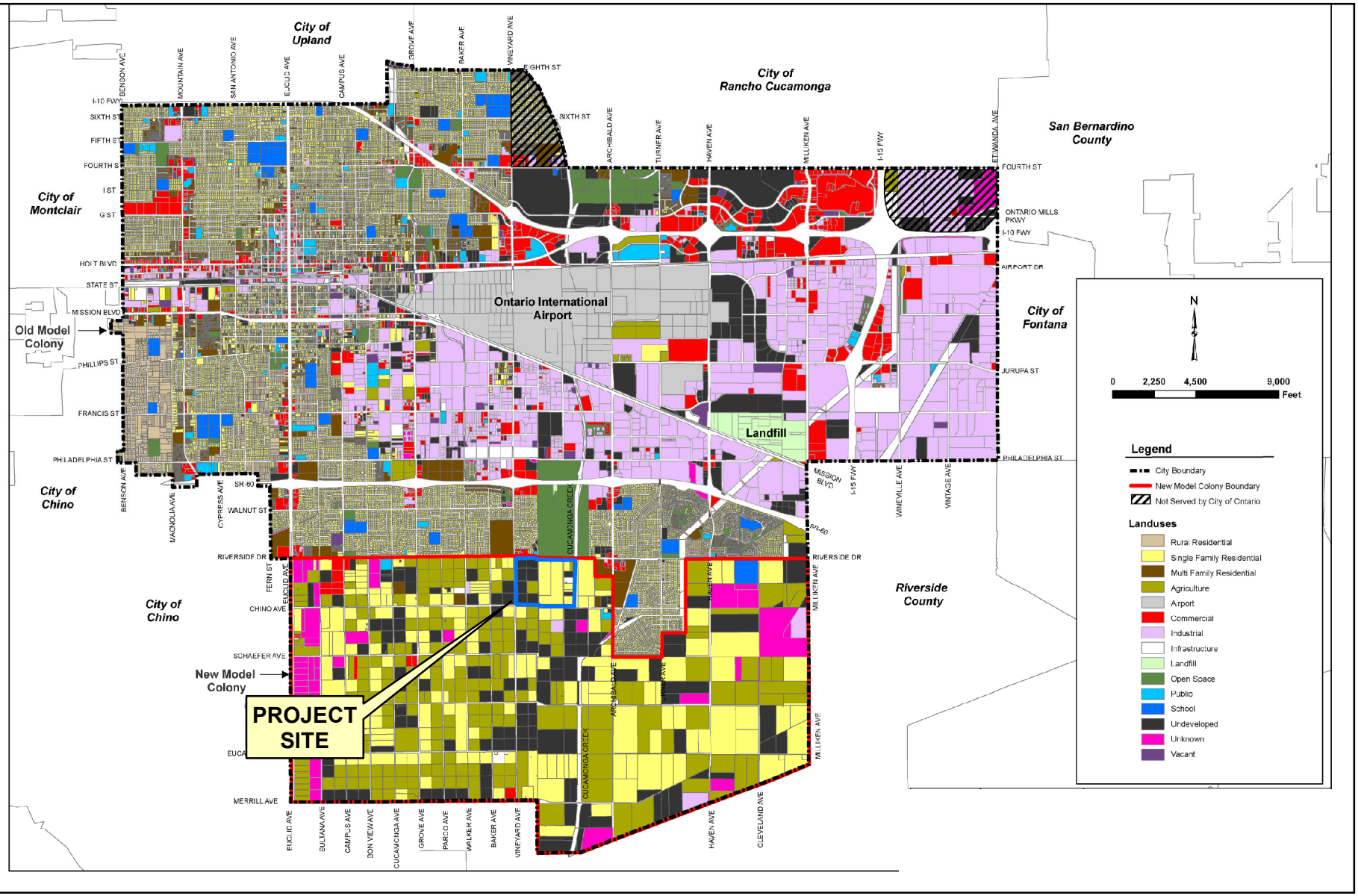
Landuse Description		Service Area				Outside Service Area		Total City			
		OMC (Ac)	NMC (Ac)	Total (Ac)	% of Total	OMC (Ac)	% of Total	OMC (Ac)	NMC (Ac)	Total (Ac)	% of Total
RR	Rural Residential	566		566	1.8			566		566	1.8
SFR	Single Family Residential	4,489	2,585	7,074	22.6	115	18.8	4,604	2,585	7,189	22.5
MFR	Multiple Family Residential	1,099	23	1,122	3.6	44	7.2	1,143	23	1,166	3.6
Total Residential		**6,154**	**2,608**	**8,762**	**28.0**	**159**	**26.0**	**6,313**	**2,608**	**8,921**	**27.9**
COM	Commercial	1,745	76	1,821	5.8	14	2.3	1,759	76	1,835	5.7
IND	Industrial	4,606	65	4,671	14.9	227	37.0	4,833	65	4,898	15.3
OPEN	Open Space	725	9	734	2.3			725	9	734	2.3
PUBLIC	Public	326	15	341	1.1			326	15	341	1.1
SCHL	Schools	419	38	457	1.5			419	38	457	1.4
ARPT	Airport	1,500		1,500	4.8			1,500		1,500	4.7
LF	Landfill	209		209	0.7			209		209	0.7
AGR	Agricultural	206	2,733	2,939	9.4	20	3.2	226	2,733	2,959	9.3
INF	Infrastructure	869	85	954	3.0	35	5.7	904	85	989	3.1
ROW	Right-of-Ways	4,362	372	4,734	15.1			4,632	372	4,734	14.8
UND	Undeveloped	1,767	1.532	3,290	10.5	79	12.9	1,846	1,523	3,369	10.5
UNK	Unknown	77	658	735	2.3	70	11.4	147	658	805	2.5
VAC	Vacant Buildings	198		198	0.6	9	1.5	207		207	0.6
Total Commercial, Industrial, & other		17,009	4,053	22,583		454		17,733	5,574	23,037	
Total*		**23,163**	**6,661**	**31,345**	**100.0**	**613**	**100.0**	**24,046**	**8,182**	**31,958**	**100.0**

*Due to rounding, sum of individual items may not equal total.

Ultimate Land Use

The ultimate land uses are based upon the City's latest general plan document entitled The Ontario Plan (2010). Table 2-3[3] provides a summary of the ultimate land uses. Shown on Figure 2-4[4] are the locations of these land uses. The industrial area increases to 6,747 acres from 4,898 acres (37.8 percent increase). The employment area, including business parks and industrial uses, is expected to cover about 8,103 acres (25.4 percent of total City area).

[3] From Table 2-2 of the 2010 Urban Water Management Plan (Appendix A).
[4] Figure 2-4 of the 2010 Urban Water Management Plan (Appendix A).



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Source: City of Ontario/AKM
2010 Urban Water Management Plan

Figure 2-3 - Existing Land Use Map
Armstrong Ranch

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Table 2-3:
City of Ontario Ultimate Study Area Land Uses

Land Use Category	Acres[2]	% of Total Area	Density (du/ac)[3]	Intensity (FAR)[3]	Units	Population[4]	Square Feet (Non-Office)	Square Feet (Office)	Total Square Feet	Jobs[5] (Non-Office)	Jobs[5] (Office)	Total Jobs[5]
Residential												
Rural Res	453	1.4	2.0		908	3,821						
LDR (OMC)	4,308	13.5	4.0		17,232	68,876						
LDR (NMC)	3,158	9.9	4.5		14,211	56,801						
LMDR (OMC)	295	0.9	8.5		2,508	10,026						
LMDR (NMC)	505	1.6	8.5		4,295	17,167						
MDR (OMC)	896	2.8	18.0		16,124	61,551						
MDR (NMC)	1,059	3.3	22.0		23,294	77,964						
HDR	241	0.8	35.0		8,421	28,185						
Subtotal	***10,915***	***34.2***			***86,991***	***324,192***						
Mixed Use												
Downtown	109	0.3	35.0		2,279	4,557	758,202	756,202	1,512,403	543	2,163	2,706
Euclid & Francis	10	0.0	30.0		156	312	181,210	0	181,210	419	0	419
Holt	55	0.2	30.0		412	824	478,289	1,195,722	1,674,011	343	3,420	3,763
Meredith	248	0.8	40.0		2,957	5,914	2,146,837	5,366,592	7,513,229	1,541	15,348	16,890
Hospitality	76	0.2	60.0		457	914	1,493,672	1,493,672	2,987,345	1,072	4,272	5,344
Ontario Festival (MxU in 14)	37	0.1	20.0		368	736	112,211	240,451	352,662	81	688	768
Guasti	83	0.3	30.0		500	1,001	1,089,871	1,271,516	2,361,388	783	3,637	4,419
Ontario Center (E. of Haven)	345	1.1	40.0		4,139	8,278	1,502,384	7,511,922	9,014,306	1,079	21,484	22,563
Mills	240	0.7	40.0		479	958	3,912,233	1,564,893	5,477,126	2,809	4,476	7,285
NMC south	316	1.0	35.0		3,315	6,630	982,832	5,775,795	6,758,427	891	16,519	17,210
NMC east	264	0.8	25.0		1,978	3,956	1,378,413	1,206,111	2,584,524	990	3,449	4,439
SR60 & Hamner	41	0.1	0.0		0	0	348,112	313,305	662,417	251	896	1,147
Subtotal	***1,822***	***5.7***			***17,039***	***34,078***	***14,382,865***	***26,696,182***	***41,059,046***	***10,601***	***76,351***	***86,952***
Retail/Service												
NC	277	0.9		0.30			2,896,914	724,229	3,621,143	8,692	2,071	8,763
CC	552	1.7		0.30			6,488,654	720,962	7,209,616	4,659	2,062	6,721
OC	528	1.6		0.75			5,151,408	12,019,946	17,171,352	3,699	34,377	38,076
HOS	145	0.5		1.00			5,049,475	1,262,369	6,311,844	3,626	3,610	7,236
Subtotal	***1,499***	***4.7***					***19,586,449***	***14,727,505***	***34,313,954***	***18,675***	***42,121***	***60,796***
Employment												
BP	1,357	4.2		0.40			11,821,313	11,821,313	23,642,626	7,684	33,809	41,493
IND	6,747	21.1		0.55			145,469,382	16,163,265	161,632,647	94,555	46,227	140,782
Subtotal	***8,103***	***25.4***					***157,290,695***	***27,984,578***	***185,275,273***	***102,239***	***80,036***	***182,275***
Other												
OS-NR	1,243	3.9										
OS-R	981	3.1										
OS-W	59	0.2										
PF	99	0.3										
PS	627	2.0										
ARPT	1,422	4.5										
Rail	247	0.8										
LF	137	0.4										
ROW	4,704	15.0										
Subtotal	***9,619***	***30.1***										
Total	***31,958***	***100.0***			***104,030***	***358,270***	***191,240,009***	***69,408,264***	***260,648,273***	***131,515***	***198,508***	***330,023***

Notes

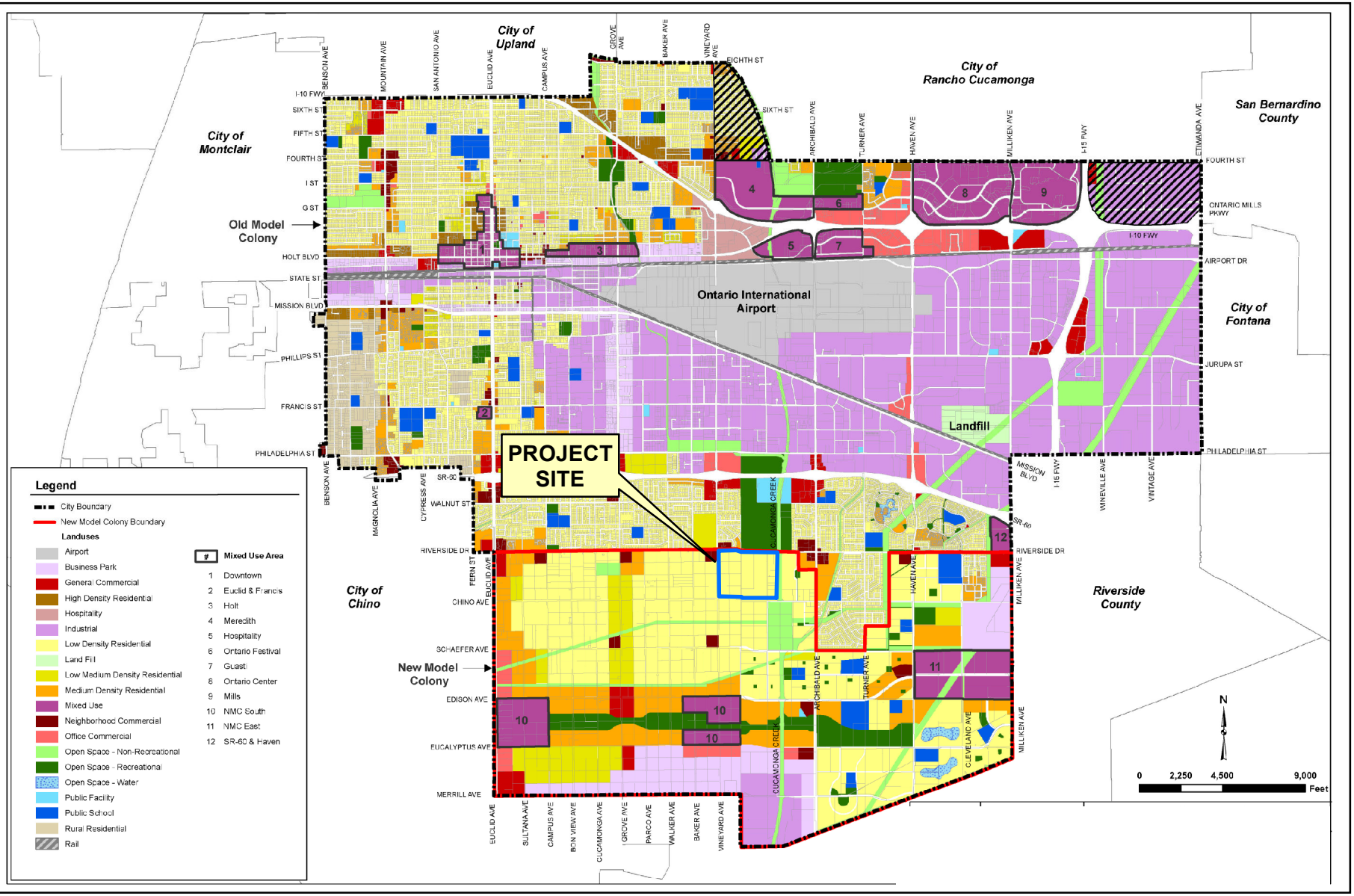
[1] Historically, citywide buildout levels do not achieve the maximum allowable density/ intensity on every parcel and are, on average, lower than allowed by the General Plan. Accordingly, the buildout estimates in this General Plan do not assume buildout at the maximum density or intensity and instead are adjusted downward to account for variations in buildout intensity. Buildout assumptions are as agreed upon on 2-4-08.

[2] Acres are given as adjusted gross acreages, which do not include the right-of-way for roadways, flood control facilities, or railroads.

[3] Density/ Intensity includes both residential density, expressed as units per acre, and non-residential intensity, expressed as floor area ratio (FAR), which is the amount of building square feet in relation to the size of the lot.

[4] Estimates of population by residential designation are based on a persons-per-household factor that varies by housing type. 3.347 pph for MF, 3.278 pph for sfa, and 3.997 pph for sfd.

[5] The factors used to generate the number of employees are 2.310 e/ 1000 sf of community commercial; 718 e/ 1000 sf of regional commercial; .650 e/ 1000 sf of industrial; and 2.86 e/ 1000 sf of office.



G:\2015\15-0243\GIS\UWMP_Ult_landuse.mxd; Map created 29 Jul 2015

Source: City of Ontario/AKM
2010 Urban Water Management Plan

Figure 2-4 - Ultimate Land Use Map
Armstrong Ranch

ALBERT A. WEBB ASSOCIATES

Residential Land Uses

The Ontario Plan defines five residential land use categories: Rural, Low Density, Low-Medium Density, Medium Density, and High Density. The densities for each of the residential land use categories are provided in Table 2-3.

Retail/Service

Four retail/service uses are defined: Neighborhood Commercial, General Commercial, Office Commercial, and Hospitality. The intensities (floor area ratios) for each commercial use are shown in Table 2-3.

Employment

The Ontario Plan has two employment uses: Business Park and Industrial. The intensities for each employment type commercial use are shown in Table 2-3.

Open Space

Open Space land use designations include Non-Recreational Open Space, Recreational Open Space and Water Open Space (i.e. lakes, ponds, etc.)

Public

Public land use designations include Public Facility and Public School.

Other

Other land use designations include the Ontario International Airport, Landfill, Railroad and Roadway.

2.4 Forecast of Ultimate Water Demand

The total recorded and projected water demand through year 2035 is presented in Section 3 of Appendix A (Table 3-6). The projected total water delivery in the year 2035 is 67,916 acre-feet.

To comply with Section 10910, subdivision (d), (e), (f), and (g), we have incorporated by reference, the requested information in the adopted 2010 Urban Water Management Plan which is bound herein (Appendix A).

2.5 Water Use Sectors

Water Use Sectors play the largest role in determining water supply within a given water service area. Examples of water use sectors are: residential, commercial, industrial, institutional and governmental, and landscape. City of Ontario's service area is comprised of all of these water use sectors. City of Ontario does not usually supply potable water for agricultural purposes, as these uses typically rely upon private wells. As development in the southern portion of City of Ontario continues, agricultural uses are being replaced by residential, commercial and industrial developments. City of Ontario is responsible for providing potable water to these emerging developments. The summary of future domestic water use factors are provided in Table 2-4.

Table 2-4**
City of Ontario Future Domestic Water Unit Demand Factors

Landuse		Density (du/ac)	Density (people/ du)	Unit Demand Factor (gpd/ person or gpd/job)	Unit Demand Factor (gpd/ac)	Unit Demand Factor (gpd/du)
Residential						
Rural Residential	RR	0 - 2	4.0	140	1,120	560
Low Density Residential	LDR	2 - 5	4.0	136	2,450	544
Low Medium Density Residential	LMDR	5 - 11	4.0	116	3,940	464
Medium Density Residential (OMC)	MDR	11 - 25	3.8	98	6,730	372
Medium Density Residential (NMC)	MDR	11 - 25	3.3	98	7,220	323
High Density Residential (OMC)	HDR	25 - 45	3.3	76	8,900	251
High Density Residential (NMC)	HDR	25 - 45	2.0	76	5,320	152
Commercial						
Business Park	BP	-	-	43	2,200	-
General Commercial	GC	-	-	180	2,200	-
Hospitality[1]	HOS	-	-		5,000	-
Neighborhood Commercial	NC	-	-	70	2,200	-
Office Commercial	OC	-	-	43	3,400	-
Industrial						
Industrial	IND	-	-	95	2,000	-
Mixed Use						
Mixed Use[2]	MU	-	-	Factors for residential, see above 43 for office 125 for non-office	N/A	-
Open Space						
Open Space Non-Recreational	OS-NR	-	-	-	1,000	-
Open Space Recreational	OS-R	-	-	-	1,000	-
Public						
Public Facility	PF	-	-	-	2,200	-
Public School[3]	PS	-	-	-	3,500	-

[1]If possible it is recommended to use 150 gpd/room on a case by case basis. It is difficult to estimate the number of rooms or square footage per acre.

[2]Mixed Use demands should be based on the types of landuse that make up the specific area and the unit demand factors provided above. The City's 2010 General Plan (The Ontario Plan) provides detailed information on the landuses that make up each mixed use area (See Table 3-2 of this report).

[3]The unit demand factor 3,500 gpd/ac include an allowance for irrigation. If irrigation will be supplied by recycled water, a factor of 1,800 gpd/ac is recommended. This reduced factor was used in the hydraulic model for NMC schools.

***From Table 1-4 of City of Ontario's Water Master Plan by AKM Consulting Engineers, April 2012 (Appendix C).*

Landscape

Landscape customer demand is expected to increase due to continued growth in visitor-serving facilities, proposed golf courses, and proposed neighborhood parks associated with additional residential development in the New Model Colony. Increased efficiency and landscape conversions at existing parks, golf courses, should help offset new demand resulting from projected increases in this Water Use Sector. The City is planning that the future water demand of this sector will be supplied from either reclaimed/recycled or non-potable groundwater sources, hence, avoiding the use of potable water. Shown in Table 4-1 of the 2010 Urban Water Management Plan (Appendix A) is the projected growth of the use of recycled water from 1,976 to 18,385 acre-feet between 2010 and 2035 respectively.

The number of past, current and future water connections for each Water Use Sector of the City of Ontario is shown in Tables 3-1 through 3-6 of the 2010 Urban Water Management Plan (Appendix A).

2.6 Project Water Demand

The projected water demand for the Armstrong Ranch Project[5] was incorporated in the 2010 UWMP. Shown on Table 1-2 is the project water demand which is projected to be 606 acre-feet per year.

[5] See Figure 2-4 "Ultimate Land Use Map which is from the City Of Ontario's "Urban Water Management Plan" (Appendix A)

SECTION 3 - WATER SUPPLY ANALYSIS

This section identifies the various sources of potable water utilized and available to the City of Ontario. The purpose of this section is to evaluate the water sources, or supplies, that will be utilized by the proposed project during normal, single-dry and multiple-dry water years during a 20-year projection.

Law

10910. (d) (1) The assessment required by this section shall include an identification of any exiting water supply entitlements, water rights, or water service contracts relevant to the identified water supply for the proposed project, and a description of the quantities of water received in prior years by the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), under the existing water supply entitlements, water rights, or water service contracts.

(2) An identification of existing water supply entitlements, water rights, or water service contracts held by the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), shall be demonstrated by providing information related to all of the following:

(A) Written contracts or other proof of entitlement to an identified water supply.

(B) Copies of a capital outlay program for financing the delivery of a water supply that has been adopted by the public water system.

(C) Federal, state, and local permits for construction of necessary infrastructure associated with delivering the water supply.

(D) Any necessary regulatory approvals that are required in order to be able to convey or deliver the water supply.

3.1. Current and Recorded Water Supply Sources

The proposed project represents about 0.89% (606 acre-feet per year divided by 67,916 acre-feet per year) of Ontario's potable water demand based upon the City's projected water supply in 2035. The City of Ontario has four sources of supply: groundwater from the Chino Basin; treated groundwater from the Chino Desalter Authority (CDA); recycled water from the Inland Empire Utilities Agency (IEUA); and imported water from the Water Facilities Authority (WFA)[1, 2]

Ontario's potable water supplies come from two major sources (2014): local groundwater (72%) and imported surface water (28%). By 2035 municipal water supply sources will consist predominantly of groundwater wells through direct use or treatment and use, and imported surface water from The Metropolitan Water District of Southern California (MWD) through IEUA to WFA. The reliability of MWD's water supplies is discussed in the Urban

[1] WFA purchases imported State Water Project water from MWD (through IEUA).
[2] Section 5 of the City of Ontario's Water Master Plan (Appendix C) provides a discussion of the City of Ontario's Water Supply.

Water Management Plan (Appendix A). Table 4-1 of the City of Ontario's Master Water Plan (Appendix C) list the total annual water production and purchases from each source from 2000 through 2009.

In 2014, the City of Ontario's total water production was 39,620 acre-feet, of which 20,273.84, was produced from their local groundwater supplies and 5,288.25 acre-feet from CDA. The City received 10,135 acre-feet from its WFA source and 3,923.05 acre-feet of recycled water.

Ontario's projected water demand will be met using four water supply sources; imported water (obtained through the WFA), local groundwater, treated groundwater (Chino Desalter Authority) and recycled water (obtained through IEUA). (Table 4-1 of Appendix A).

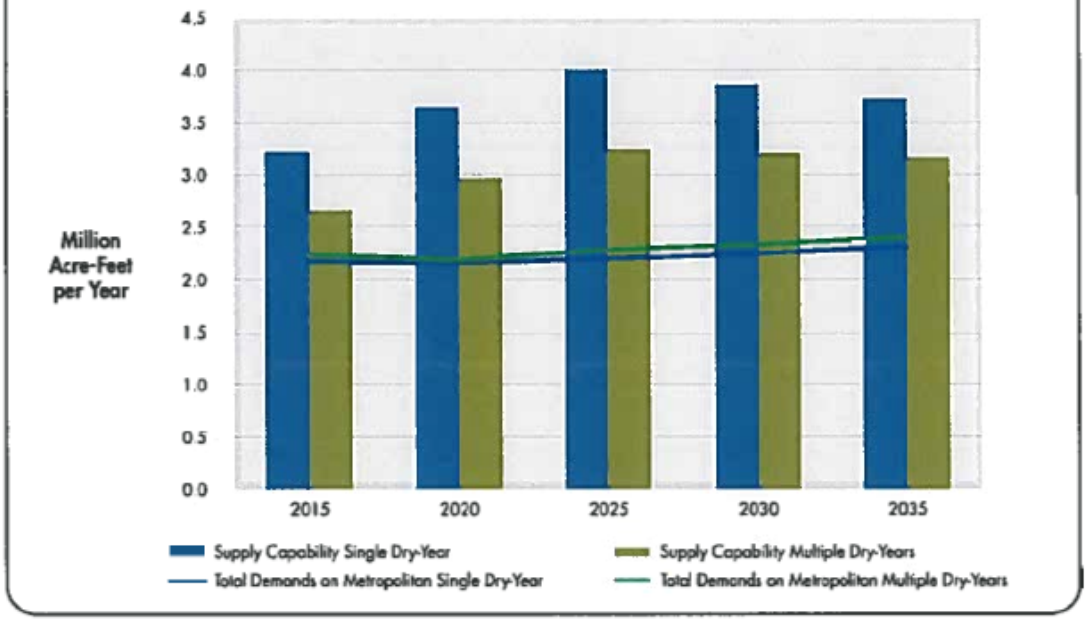
The City of Ontario is a Member Agency of Inland Empire Utility Agency (IEUA). IEUA was formed to become a Member Agency of The Metropolitan Water District of Southern California for the purpose of importing water. Metropolitan stated in their 2010 Regional Urban Water Management Plan (Pages ES-5 and ES-6) the following:

> *"The 2010 RUWMP satisfies all the reporting requirements mandated by the Act. The key reporting points of this report are as follows:*

- *Metropolitan has supply capabilities that would be sufficient to meet expected demands from 2015 through 2035 under the single dry-year and multiple dry-year conditions, as presented in Figure ES-1.*
- *Metropolitan has comprehensive plans for stages of actions it would undertake to address up to 50 percent reduction in its water supplies and a catastrophic interruption in water supplies through its Water Surplus and Drought Management and Water Supply Allocation Plans. Metropolitan also developed an Emergency Storage Requirement to mitigate against potential interruption in water supplies resulting from catastrophic occurrences within the Southern California region, including seismic events along the San Andreas fault. In addition, Metropolitan is working with the State to implement a comprehensive improvement plan to address catastrophic occurrences that could occur outside of the Southern California region, such as a maximum probable seismic event in the Delta that would cause levee failure and disruption of SWP deliveries.*
- *Metropolitan has plans for supply implementation and continued development of a diversified resource mix including programs in the CRA, SWP, Central Valley transfers, local resource projects, and 0n-region storage that enables the region to meet its water supply needs.*

- *Metropolitan has a collaborative process in its planning initiatives, including the preparation of the 2010 RUWMP."*

Figure ES-1 Supply Capabilities under Single Dry-Year and Multiple Dry-Year Hydrologies



Note:
1. Supply capabilities are derived using simulated median storage level going into each of five-year increments based on the balances of supplies and demands. Under the median storage condition, there is an estimated 50 percent probability that storage levels would be higher than the assumption used, and a 50 percent probability that storage levels would be lower than the assumption used.
2. Under some conditions, Metropolitan may choose to implement the WSAP in order to preserve storage reserves for a future year, instead of using the full supply capability. This can result in impacts at the retail level even under conditions where there may be adequate supply capabilities to meet firm demands.
3. All storage capability figures shown in the 2010 RUWMP reflect actual storage program conveyance constraints.

IEUA stated in their Urban Water Management Plan (Page 11-1) the following:

"The available supplies and water demands for IEUA's service area were analyzed to assess the region's ability to satisfy demands

during three scenarios: a normal water year, single dry year, and multiple dry years. The tables in this section present the supply-demand balance for the various drought scenarios for the twenty-five year planning period 2010-2035. It is expected that the region will be able to meet 100 percent of its dry year demand under every scenario. The following Table 11-1 presents the supply reliability, as percentages of normal water year supplies, for the IEUA service area during normal, single dry, and multiple dry water years.

Table 11-1

Supply Reliability as Percentage of Normal Water Year Supply

			Multiple Dry Water Years[2][3]		
	Normal Water Year	***Single Dry Water Year***	***Year 1***	***Year 2***	***Year 3***
Groundwater	*100%*	*115%*	*116%*	*115%*	*114%*
Recycled Water	*100%*	*100%*	*100%*	*105%*	*110%*
Surface Water[1]	*100%*	*31%*	*49%*	*84%*	*77%*
Imported Water	*100%*	*62%*	*60%*	*61%*	*62%*

Notes:
[1]Estimated decrease in surface water availability per Prado region 1970-2003 rainfall data. Surface water does not constitute a significant portion of the water supply.
[2]Chino Basin Dry-Year Yield (DYY) Program facilities provide for 100,000 AF of storage and 33,000 AFY of additional groundwater production for use in-lieu of Imported Water during dry years. The DYY Program is in effect during dry years between 2008 and 2023. Percentages reflect decrease in imported water and associated increase in groundwater production. From MWD's 2010 UWMP. Metropolitan has documented the capability to reliably meet 100 percent of projected supplemental water demands through 2035.
[3]MWD's 2010 UWMP, provides information for three consecutive dry years."

The California Department of Water Resources issued *"The Water Project, Final Delivery Reliability Report 2013" in December 2014. Based upon DWR's 2013 report the projected future conditions, the average annual delivery of Table A water was estimated at 2,400 taf/year. This was 3.5 percent less than what was*

projected in DWR's 2009 reliability report. Metropolitan Water District used DWR 2009 Reliability Report in its 2010 Regional Urban Water Management Plan."

The Department of Water Resources provides State Water Project water to its contractors. The Metropolitan Water District is one of the 29 contracting agencies of the State Water Project (SWP). In turn, MWD delivers SWP water to its member agencies, one of which is IEUA. The reliability results reported in the 2013 SWP Delivery Reliability Report in comparison to those in the 2009 Report support a conclusion that the changes would not appear to have a substantive effect on IEUA, WFA and the City. None of these agencies have sought to amend their UWMPs in response to the 2013 DWR Report, and none of the agencies have issued statements that the overall conclusions of their UWMPs have changed because of the 2013 DWR Report. The implication is that the slight variation in numbers/projections between the 2009 DWR Report and the 2013 DWR Report do not change the overall conclusions of water supply sufficiency for this region. Based upon the available information the impact upon the City of Ontario's imported water supply from the Water Facility Authority appears to be minimal because of City's existing groundwater pumping capability.

3.2. Description of All Water Supply Projects

Dry Year Yield Project*:*

The Dry Year Yield (DYY) Storage Program is a cooperative conjunctive use program involving MWD, IEUA, CBWM, Three Valleys Municipal Water District (TVMWD) and Chino Basin groundwater producers. Under the DYY Program, MWD is allowed to store up to 100,000 AFY of water in the Chino Basin when surplus water is available during wet years and to reduce imported water deliveries up to 33,000 AFY in dry, drought, or emergency periods.

The City of Ontario authorized execution of an agreement with IEUA to participate in the DYY program in 2003 (Appendix E). Participation obligates the City to reduce its use of imported water compared to the previous 3 years by a fixed amount, known as the "shift obligation". The City's shift obligation is 8,076 AFY. During years when MWD makes a "call" for the water in their storage account, the City's WFA production would be reduced by 8,076 AFY compared to the baseline years[1]. Because Jurupa Community Services District (JCSD) does not have an imported water connection, it has entered into an agreement with the City of Ontario for meeting its "call" obligation of 2000 AFY. The City of Ontario has the capability and infrastructure to increase imported water purchase from the Water Facilities Authority (WFA) treatment plant. See Appendix J for details

[1] Baseline years – any year, within the term of the DYY program, that is not considered a "call" year, and includes a 3-year rolling average analysis.

of the agreement between the City of Ontario and Jurupa Community Services District.

DYY funds were used for the construction of three groundwater wells (Wells 45, 46, and 47) and an ion-exchange facility located at John Galvin Park to treat water extracted from Well 44 and Well 52. When MWD makes a call for its stored water, the City can operate these facilities to meet its shift obligation. MWD will then pay for the cost of operations and the City would pay MWD (through IEUA) the full service water rate. The City can use the DYY facilities to meet its normal water demands during other periods but is responsible for the O&M costs.

The DYY program allows the City to be less reliant upon imported water supplies. The additional groundwater capacity allows the City to increase the percentage supply used to meet peak demands.

Water Facilities Authority:

The City of Ontario is a member of the Water Facilities Authority (WFA) that was created under the Joint Exercise of Powers Agreement (JPA) in 1985 (Appendix F). The other members of WFA are Monte Vista Water District and the Cities of Chino, Chino Hills, and Upland. The WFA's charter is to provide for the acquisition and construction of water supply facilities for its member agencies. The WFA purchases imported water from IEUA as a

member agency of MWD. The City of Ontario has capacity rights in WFA of up to 25.4 mgd or 28,500 AFY. Since 2000, the City has purchased an average of 10,309 AFY from WFA with a maximum of 15,143 AFY in 2004 and a low of 3,494 AFY in 2009. The rated capacity of the WFA treatment plant is 81 mgd (Appendix G). Per Ordinance No. 99-07-02, "Ordinance of the Water Facilities Authority – JPA: Repealing Ordinance 96-09-01", (Appendix H), notes that the City of Ontario has 31.4% of the design capacity of the treatment plant. The future reliability of WFA water was discussed in the Water Facilities Authority 2010 Urban Water Management Plan. The following discussion on "water reliability" is from Page ES-5 of that document:

*"**Water Reliability***

The available water supplies and water needs for WFA's service area were analyzed to assess the region's ability to meet demands for three scenarios: a normal water year, single dry year and multiple dry years. Key assumptions included:

- *Reliance on assurances provided by the Metropolitan Water District of Southern California in its 2010 Regional Urban Water Management Plan that it could meet 100% of projected supplemental full service water supply demands through 2035;*

- *Implementation of the Chino Basin Dry Year Yield Program consistent with the contractual shift obligations of the participating agencies of up to 33,000 acre-feet in a twelve month period; and*
- *A 10% conservation rate is achieved during drought scenarios.*

The conclusion of the 2010 UWMP is that WFA will be able to meet 100% of its retail agencies' imported water demand under every scenario."

Chino Basin Desalting Authority:

The City of Ontario is a member of the Chino Basin Desalter Authority (CDA), a joint exercise of powers agency created on September 25, 2001, along with Jurupa Community Services District, SARWC, IEUA and the Cities of Chino, Chino Hills, and Norco. Western Municipal Water District joined CDA on April 2, 2009. CDA's goals include:

- Achieve hydraulic control of the Chino Basin to prevent contaminated Chino Basin groundwater from entering Santa Ana River.

- Remove contamination (primarily nitrates, as well as TCE, PCE, and TCP) from groundwater in the southern portion of the Basin.

- Deliver the treated water to member agencies to offset the need for imported water.

As part of the Optimum Basin Management Plan for Chino Basin, the member agencies decided to extract and treat approximately 40,000 AFY of groundwater from the southern portion of the Basin, treat it to potable water standards, and deliver it to the member agencies.

Chino Basin Desalter Authority currently owns and operates two desalters that pump and treat approximately 28,000 acre-feet of groundwater per year. The Chino I Desalter, located at 6905 Kimball Avenue in Chino, was completed in 2000 by the Santa Ana Watershed Project Authority (SAWPA) as the first phase of groundwater management project. CDA took over Chino I Desalter from SAWPA in 2002, and expanded it to its current rated capacity of 14.2 mgd in August 2005. The Chino I Desalter cannot provide this rated capacity due to the high total dissolved solids in the raw water supply. The Chino II Desalter is located at 11202 Harrel Street in the City of Jurupa Valley. It was completed in 2006 as the Phase 2 Project. Its current rated capacity is 10 mgd (permitted capacity is 15 mgd), including 5 mgd raw water bypass. The plant has not achieved the permitted capacity as a result of insufficient raw water supply.

The Phase 3 project will increase the Chino II Desalter capacity to 22.7 mgd. Although Chino Desalter I capacity will not be increased, additional raw water capacity will be provided by five new wells in the Chino Creek Well Field. All five wells have been drilled and three have been equipped. CDA is currently (2015) equipping the last two Chino Creek Wells (I-20 and I-21). After all five wells are operational; the data will be evaluated to determine if hydraulic control of the basin is achieved

Treated water is sold to CDA members through “take or pay” contracts. Chino I and Chino II Desalters ancillary facilities include groundwater extraction wells, pumps and pipelines that extract and pump water to the desalter for pretreatment, filtration, air stripping of volatile organic compounds, ion exchange for nitrate removal, reverse osmosis for salt removal, and disinfection. The final product is a high quality drinking water, which is transported to member agencies through pipelines, pumps and reservoirs.

The City of Ontario has 1,500 AFY capacity rights in the Chino I Desalter. It is transmitted to the City’s 1010 Zone near the intersection of Archibald Avenue and the extension of Schaeffer Avenue. In addition, the City has 3,500 AFY capacity from the Chino II Desalter, which is delivered to the 1010 Zone and 925 Zone near the intersection of Philadelphia Street and Milliken Avenue. When the Phase 3 Project is completed, the City’s

capacity will increase to 8,533 AFY. In the future, supply from CDA-1 will remain at 1,500 AFY, and supply from CDA-2 will increase to 7,033 AFY following the expansion of Chino II Desalter.

City Well Production:

The City currently (2015) owns and operates 27 wells, 24 of which are active. Three wells (9, 11, and 15) are currently inactive. In addition to the nine (9) new wells proposed in the City's 2010 Water Master Plan, the City has also prepared a long range replacement plan for older wells that lose production and for wells that may have water quality concerns in the future. Replacement wells are expected to have higher flow capacities than the well they are replacing. The City of Ontario has pumped an average of 27,194 AFY during the past fifteen years (2000-2014), with a high of 36,842 acre-feet in 2000, and a low of 19,967 acre-feet in 2013. The City's existing well capacity is 50,333 gpm.

Recycled Water:

The City of Ontario has been using recycled water produced by IEUA since 1972. Recycled water was first used at the Whispering Lakes Golf Course and Westwind Park.

IEUA began its planning for a regional recycled water production and delivery program in the early 1990's, and completed the IEUA Regional

Recycled Water Program Feasibility Study in January 2002. This study formulated facilities to deliver over 70,000 AFY of recycled water to customers in its service area, and for groundwater recharge. IEUA then prepared a regional recycled water program implementation plan, which prioritized the recommendations of the 2002 Regional Recycled Water Program Feasibility Study. Continuing with its efforts to maximize the use of this resource, IEUA completed the 2005 Recycled Water Implementation Plan, which proposed projects to deliver 93,000 AFY of recycled water produced at its four water recycling facilities.

IEUA developed its Recycled Water Three Year Business Plan in 2007 to provide a road map for expansion of its system. The plan is intended to be updated annually, and focuses on the following three years. The current plan anticipates providing 50,000 AFY by 2012, and 104,000 AFY by 2025. During Fiscal Year 2013/14, IEUA produced 59,360 acre-feet of recycled water. Approximately 64 percent was used within its service area (38,251 acre-feet), and the remainder was discharged to the Santa Ana River for reuse in Orange County.

The City of Ontario prepared a Recycled Water Master Plan in 2006 to efficiently incorporate recycled water into its water supply portfolio. The 2006 Master Plan was fully coordinated with IEUA's recycled water planning efforts. The Recycled Water Master Plan was finalized in April 2012. The

total potential recycled water demand is 26,645 AFY, consisting of 15,159 AFY in OMC, and 11,487 AFY in the NMC.

The existing recycled water delivery to the City is for irrigation and industrial purposes. The existing recycled water use (2014) in OMC was approximately 3923 AFY. The 2012 Recycled Water Master Plan determined that service can be extended to existing customers to replace 3,047 AFY of potable water use. Additionally, 1,944 AFY can be served to currently vacant 813 acres of mixed use, commercial, industrial, and airport land uses in OMC. It may be possible to further extend the use of recycled water in the OMC by 5,230 AFY for irrigation, commercial, industrial, and multi-family residential customers.

Based upon the City Urban Water Management Plan it was determined that the total Recycled Water Demand would not exceed 18,385 AFY in its service area consisting of 6898 AFY in OMC and 11,487 AFY in the NMC.

The future demand of 18,385 AFY includes the following: 17,340 AFY for common area irrigation in residential neighborhoods and commercial areas; 597 AFY in golf courses; and 448 AFY at the airport. Shown in Table 4-6 of

the Urban Water Management Plan (Appendix A) is a list of the potential recycled water uses[1].

3.3. Comparison of Supply and Demand

Shown on Table 5-13 of the 2010 Urban Water Management Plan (Appendix A) is the "Supply and Demand Comparison-Normal Year" for the City of Ontario. Shown on Table 5-14 (2010 Urban Water Management Plan- Appendix A) is the "Supply and Demand Comparison- Single Dry Year" for the City. Shown on Table 5-25 (2010 Urban Water Management Plan- Appendix A) are the "Supply and Demand Comparison- Multiple Dry Year Events from 2015 through 2035" for the City.

As indicated previously, the Armstrong Ranch water demand is estimated at 606 acre-feet per year, which was included in the supply and demand comparison tables referenced above.

Water Code Section 10910 C2 states "If the project water demand associated with the proposed project was accounted for in the most recently adopted urban water management plan, the public water system may incorporate the requested information from the urban water management

[1] The Recycled Water Master Plan identifies more CIP projects/demands than are included in the UWMP. For this study we have relied upon the recycled water projections used in the Urban Water Management Plan.

plan in preparing the elements of the assessment required to comply with subdivisions (d), (e), (f), and (g)."

For the subject project, the water demand was accounted for in the 2010 Urban Water Management Plan (Appendix A).

Table 4-4 of the 2010 Urban Water Management Plan (Appendix A) projects the City of Ontario will increase its groundwater pumping from 20,373 to 39,383 acre-feet per year, from 2015 to 2035 respectively. This is an increase in groundwater production of 19,010 acre-feet per year between 2015 and 2035. Listed on Table 4-14 of the 2010 Urban Water Management Plan (Appendix A) are the City of Ontario Future Water Supply Projects. If you delete Chino II Desalter and Well 43 from the list, the City of Ontario's future groundwater production facilities total 32,256 acre-feet per year (Wells 42 through 58). If you deduct 19,010 acre-feet per year of the City of Ontario's future increase in groundwater production, between 2015 and 2035, from the future groundwater supply facilities (Table 4-14) 32,256 acre-feet per year, it results in the City of Ontario's having an excess groundwater production capacity of 13,246 acre-feet per year.

Shown on Table 5-13 (2010 Urban Water Management Plan- Appendix A) is the "Supply and Demand Comparison – Normal Year" from 2015 through 2035. The difference between supply and demand shown in Table 5-13

shows zero difference between demand and supply, but it does not reflect the City of Ontario potential excess groundwater production capacity reflected in Table 4-14 (Appendix A).

Shown on Table 5-14 is the “Supply and Demand Comparison- Single Dry Year” (Appendix A) from 2015 through 2035. The excess supply from 2015 through 2035 varies from 4,190 to 6,292 acre-feet per year. Shown on Table 5-25 “Supply and Demand Comparison – Multiple Dry Years” is the excess supply over demand from 2015 through 2035.

In conclusion the City of Ontario projected water supply available during normal, single dry and multiple dry water years during a 20 year projection will meet the projected water demand associated with the Armstrong Ranch in addition to the City’s existing and planned future uses including agricultural and manufacturing use.

SECTION 4 - GROUNDWATER ANALYSIS

Law

10910. (f) If a water supply for a proposed project includes groundwater, the following additional information shall be included in the water supply assessment.

(1) A review of any information contained in the urban water management plan relevant to the identified water supply for the proposed project.

(2) A description of any groundwater basin or basins from which the proposed project will be supplied. For those basins for which a court or the board has adjudicated the rights to pump groundwater, a copy of the order or decree adopted by the court or the board and a description of the amount of groundwater the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), has the legal right to pump under the order or decree. For basins that have not been adjudicated, information as to whether the department has identified the basin or basins as over drafted or has projected that the basin will become over drafted if present management conditions continue, in the most current bulletin of the department that characterizes the condition of the groundwater basin, and a detailed description by the public water system or the city or county if either is required to comply with this part pursuant to

subdivision (b), of the efforts being undertaken in the basin or basins to eliminate the long-term overdraft condition.

(3) A detailed description and analysis of the amount and location of groundwater pumped by the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), for the past five years from any groundwater basin from which the proposed project will be supplied. The description and analysis shall be based on information that is reasonably available, including, but not limited to, historic use records.

(4) A detailed description and analysis of the amount and location of groundwater that is projected to be pumped by the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), from any basin from which the proposed project will be supplied. The description and analysis shall be based on information that is reasonably available, including, but not limited to, historic use records.

(5) An analysis of the sufficiency of the groundwater from the basin or basins from which the proposed project will be supplied to meet the projected water demand associated with the proposed project. A water supply assessment shall not be required to include the information required by this paragraph if the public water system determines, as part of the review required by

paragraph (1), that the sufficiency of groundwater necessary to meet the initial and projected water demand associated with the project was addressed in the description and analysis required by paragraph (4) of subdivision (b) of Section 10631.

4.1 Introduction

Since the major source of potable water in the City of Ontario's service area is groundwater, SB 610 requires a groundwater analysis as part of the WSA. This section will include: 1) review of information contained in the urban water management plan relevant to the proposed project, 2) a description of the groundwater basin used to supply potable water to the proposed project and a review of the City of Ontario's legal right to pump from this basin, 3) historic (past 5 years) analysis of amount and location of groundwater pumped from the basin, 4) projected analysis of groundwater to be pumped from the basin, and 5) analysis of the sufficiency of the groundwater basin to meet the demands of the proposed project and the suppliers demands.

4.2. Review of Urban Water Management Plan (Section 10910 (f)(1))

The "2010 Urban Water Management Plan", prepared by AKM was adopted by the City of Ontario by Resolution 2010-039 on June 21, 2011 and is attached as Appendix B and is incorporated by reference herein. The Plan

includes information relevant to the identified water supply for the proposed project. This information includes: current and projected water supplies (*System Supplies*[1]) through Year 2035, a description of the Chino Groundwater Basin (*System Supplies*), the reliability of the water supply (*Water Supply Reliability & Water Shortage Contingency Planning*), historical, current and projected water use (*System Demands*), projected supply and demand comparisons (*Water Supply Reliability & Water Shortage Contingency Planning*), water demand management provisions (*Demand Management Measure*) and water shortage plans (*Water Supply Reliability & Water Shortage Contingency Plan*).

The Section of the UWMP entitled "*Water Supply Reliability and Water Shortage Contingency Planning*" includes tables identifying current supplies and projecting supply sources in five-year increments through the Year 2035. The conservative supply sources contemplated and included development projections through Year 2035, including a portion of the subject project in this WSA.

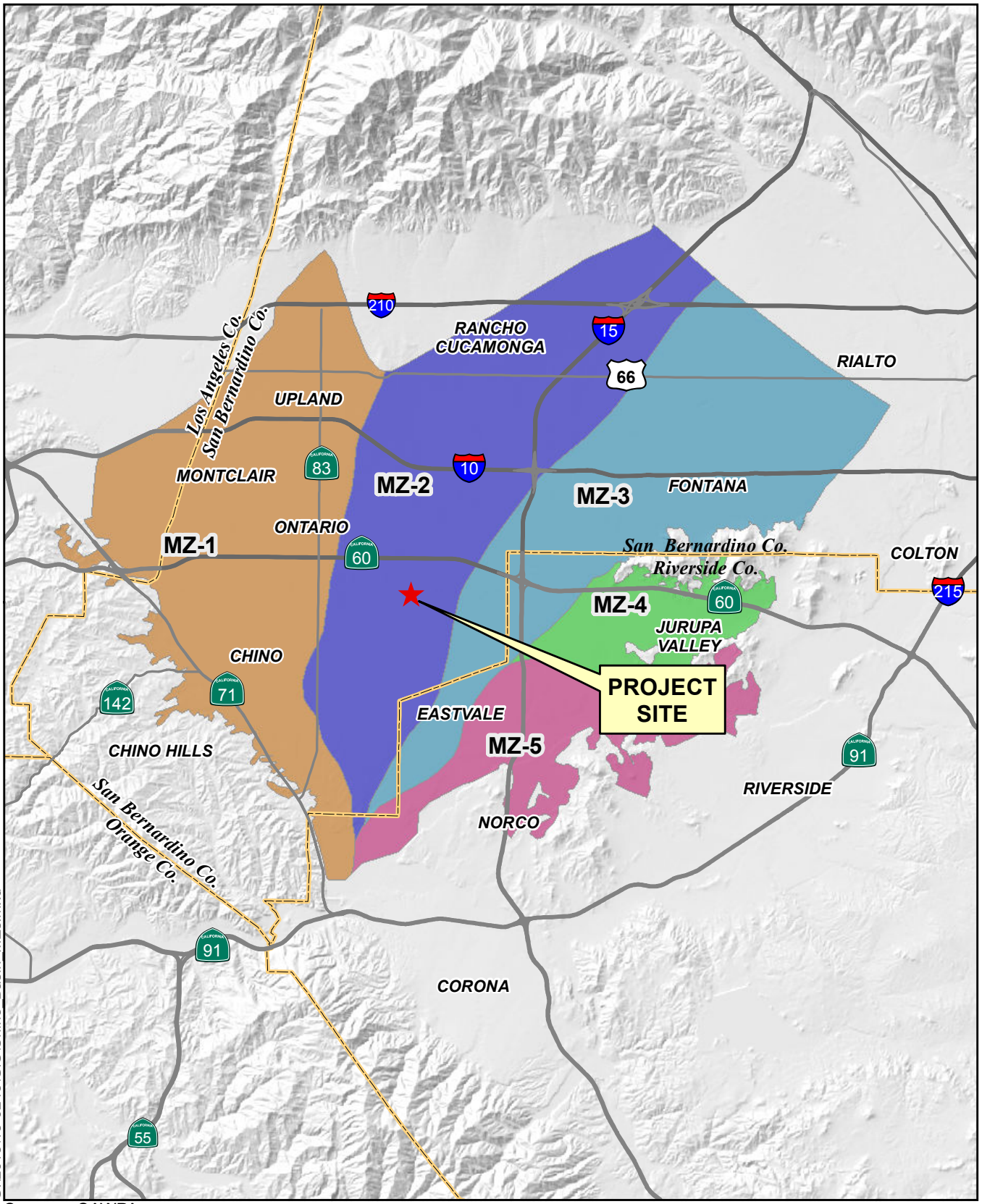
[1] Words and phrases italicized parenthetically are in reference to chapters so titled in the "2010 Urban Water Management Plan".

4.3. Description of Chino Groundwater Basin and Legal Right to Pump (Section 10910 (f)(2))

A. Description of Chino Groundwater Basin

The City of Ontario produces water from groundwater sources identified in this WSA located in the Chino Groundwater Basin ("the Basin"), which was adjudicated by the Superior Court of the State of California for the County of San Bernardino January 27, 1978 ("the Judgment"). A copy of the Judgment and Court-approved amendments thereto are attached as Appendix I.

Ontario's primary source for potable water comes from local groundwater sources located in the Chino Groundwater Basin (Basin). The Basin consists of approximately 235 square miles in the upper Santa Ana River Watershed that covers San Bernardino, Riverside and Orange Counties. While still considered a single basin for hydrologic purposes, the Basin is divided into five management zones (Figure 4-1), based on similar hydrologic conditions.



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Sources: SAWPA;
Thomas Harder & Co.

Figure 4-1 – Chino Basin Management Zones

Armstrong Ranch

0 2 4 6 Miles

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The Basin stores approximately five (5) million acre-feet of groundwater with the capability of storing additional one (1) million acre-feet. Geographically speaking, the City overlies the approximate center of the basin. Operation of the basin is governed by a 1978 court judgment and agreement among producers (Appendix I), whereby each is allotted a "base water right" to a certain percentage of the natural yield or "safe yield" of the basin. Under the judgment/agreement, entities (including the City of Ontario) can pump in excess of their allotted “base water right” but must pay a pump tax to cover the cost to replenish any overdraft caused by the excess pumping. The provisions of the judgment/agreement and the monitoring of the basin are carried out by a court appointed water-master. The watermaster files an annual report on pumping and replenishment.

B. Legal Right to Pump from the Chino Groundwater Basin

The Judgment represents a plenary adjudication of all water rights in the Basin and is currently administered under the authority of the Chino Basin Watermaster with continuing jurisdiction by the Court. The principal function of an adjudication generally is to control the use of a water source in order to ensure the source is utilized in an optimum

manner. For purposes of adjudication, a central feature is the determination of the safe yield of the Basin.

The safe yield of a groundwater basin has been defined as the amount of water that can be withdrawn annually without producing an undesirable result. Withdrawal in excess of safe yield is termed overdraft. The Judgment established the safe yield of the Basin in the amount of 140,000 acre-feet per year; however, Watermaster may determine that the operating safe yield can be higher from year-to-year depending on factors including favorable precipitation and management efforts that maximize the beneficial use of the groundwater Basin. These management efforts, which ensure the long-term sufficiency of groundwater from the Basin, including during dry years, are addressed in Subsection 5, which follows:

The Chino Basin Watermaster has been required by its Rules and Regulations to conduct a Safe Yield redetermination process. Watermaster has been conducting the Safe Yield redetermination process since 2013. It is expected that the Court will act on the Safe Yield reset in 2015.

Watermaster has preliminarily indicated the Safe Yield may be determined to be less than 140,000 acre-feet/year in the future, however, impacts on Judgment parties' share of Safe Yield and Operating Safe Yield from year-to-year will depend on potential Basin management projects and programs that may enable future Safe Yield production to remain in the range of 130,000-140,000 acre-feet/year. Consequently, subject to certain localized physical limitations or impacts, any potential reduction in Safe Yield with or without augmenting basin management measures affects the cost of groundwater production rather than the reliability of groundwater supplies. The Judgment does not limit a party's groundwater production to its share of Safe Yield.

The Judgment allocates safe yield of the Basin according to the three pools as described in Paragraph 13 of the Judgment. The members of each pool are then enjoined from producing water from the Basin in excess of such allocated amount "except pursuant to the provisions of the Physical Solution" (Judgment, Paragraph 13(a)-(c)).

The Physical Solution of the Judgment is described in broad terms by Paragraphs 39 through 57 of the Judgment. Paragraph 45 provides Watermaster with the authority to levy and collect assessments for the purchase of water necessary to balance the production by any party in excess of that party's allocated share of safe yield of the Basin.

Paragraphs 49 and 50 then describe the sources of water which are authorized to function as sources of replenishment water and methods by which water can be replenished to the Basin. Exhibit H, Paragraph 7, of the Judgment (Appendix I) describes the way in which costs for replenishment water will spread among the members of the Appropriative Pool, which includes the City of Ontario.

The afore-cited paragraphs of the Judgment evince a clear expectation that parties, including the City of Ontario, would produce water in excess of their adjudicated production rights. The injunction in Paragraph 13 of the Judgment should thus be interpreted to mean that parties are enjoined from producing water in excess of their adjudicated rights except to the extent that they will pay a replenishment assessment.

The ability to produce water from the Basin is accordingly not a matter of availability, as contemplated and sanctioned by the Judgment for the reasons discussed above, but rather a matter of cost. Water produced in excess of production rights will cost more than water produced within a party's production rights. Thus, the quantity and reliability of groundwater supplies under the Judgment for purposes of this WSA is a matter of cost of the water produced from the Basin rather than limitations on production which may otherwise operate to reduce the sufficiency of the groundwater supply.

The City of Ontario's Groundwater Rights in the Chino Basin are discussed in Section 4 of Appendix A.

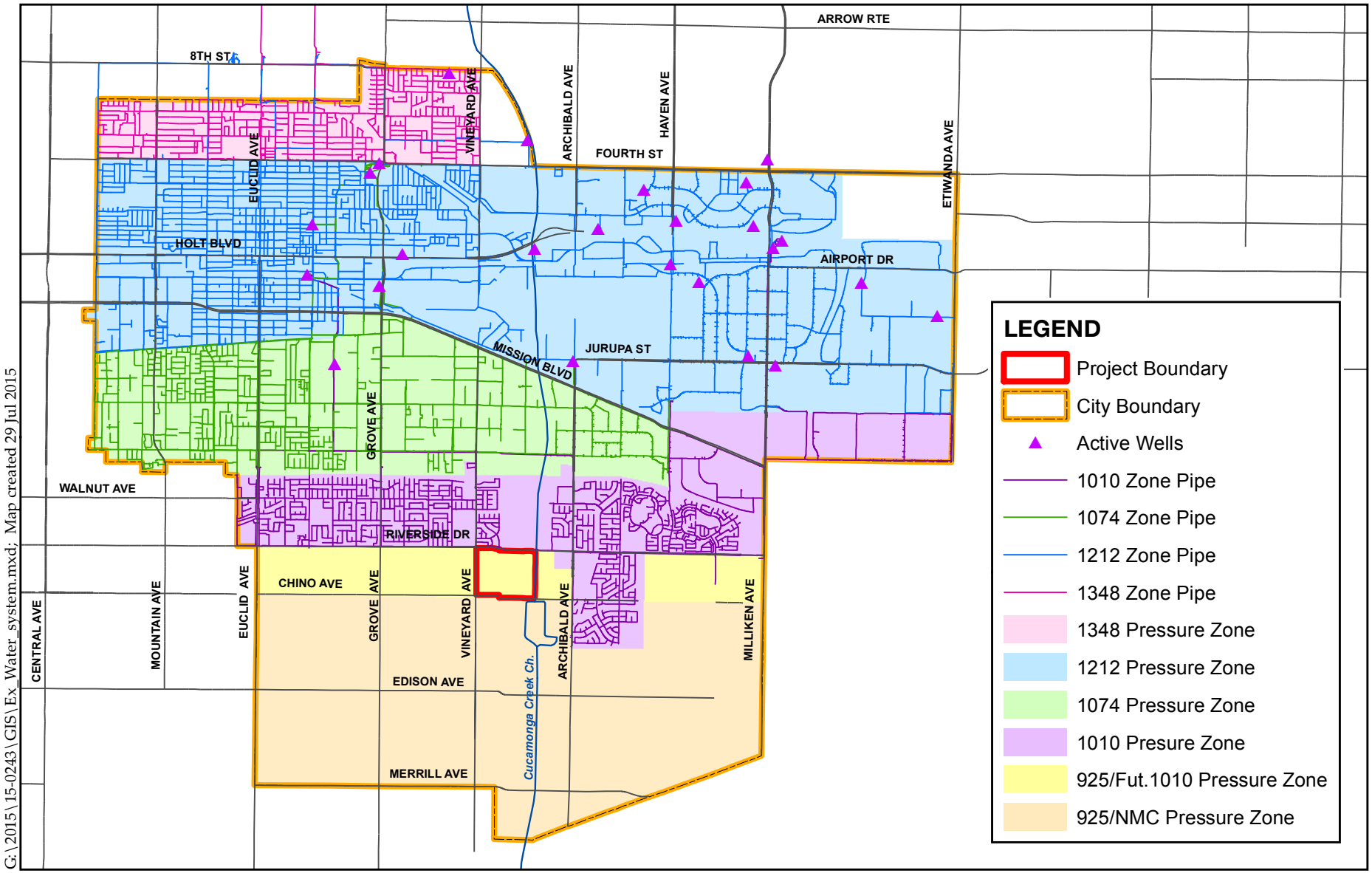
4.4. Historic Use of Groundwater by the City of Ontario (Section 10910(f)(3))

Ontario's groundwater supply comes from their twenty-four operational groundwater wells located throughout their service area. The City also has three inactive wells. The general location of these wells is shown on Figure 4-2 (Source Figure 1-2 of the City of Ontario's Water Master Plan, prepared by AKM April 2012), Appendix C. The amount of groundwater pumped by the City of Ontario since 2000 from the Chino Groundwater Basin is listed in Table 4-1.

Table 4-1
City of Ontario Historic Water Production

Calendar Year	Groundwater Production (AFY)
2000	36,842
2001	35,105
2002	35,444
2003	30,240
2004	27,824
2005	28,799
2006	28,793
2007	26,946
2008	27,064
2009	28,996
2010	20,955
2011	20,442
2012	20,226
2013	19,967
2014	20,274
Average	**27,194**

Groundwater production data from 2000-2009 was obtained from the City of Ontario's Water Master Plan. Data from 2010 and later came from City of Ontario's annual production reports.



G:\2015\15-0243\GIS\Ex_Water_system.mxd; Map created 29 Jul 2015

Source: City of Ontario OMUC, 2015

0 1 2 3 Miles

Figure 4-2 - Existing Water System

Armstrong Ranch

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4.5. Projected Use of Groundwater by the City of Ontario (Section 10910(f)(4))

The proposed project will receive water from the City of Ontario's groundwater sources, WFA, CDA, and recycled water (Table 4-1 of Appendix A).

The City of Ontario's projected groundwater use is dependent upon the cost of extracting, treating and transporting the water to its customers. Groundwater from the Chino Groundwater Basin will be utilized by the City of Ontario either directly by pumping into its distribution system or by treating the groundwater (Wells 44 and 52) at the John Galvin Ion Exchange Plant and then pumping the treated groundwater into the City of Ontario's distribution system. The capacity of the City of Ontario's existing and future wells will be about 73,593 gpm[2] (105.97 mgd)[2] (118,691 acre-feet per year)[3].

In addition to its well production, the City of Ontario will also utilize groundwater from the Chino Groundwater Basin from the Chino Desalter Authority's Chino Basin Desalters. As discussed previously, Ontario's contracted groundwater supply from the Chino Desalters, is 8,533 acre-feet/year.

[2] Table 9-3 of Appendix C.
[3] This assumes that the wells are operating on a 24 hour basis, seven days per week. Actual operation of wells is significantly less except for maximum water demand days.

The amount of water that the City of Ontario expects to withdraw from the Chino Basin via their well field or from the Chino Desalters is well within appropriate right pursuant to the Chino Basin Adjudication of 1978. Therefore, the projected supplies needed to meet future demands are easily met from the various sources discussed in this report.

4.6. Sufficiency of Groundwater Basin (Section 10910 (f)(5))

The City of Ontario's legal right to pump water in an amount necessary to meet all demands as sanctioned and protected by the Judgment as discussed above, is buttressed by a number of programs and projects directed to ensuring the sufficiency of groundwater supplies from the Basin, particularly during dry years. An adjudicated water right has perhaps the most substantial indicia of reliability of any water right that currently exists in California. An adjudicated right is based upon long-term studies whose purpose it is to protect the long-term functionality of the water source. These rights are coordinated in an established and binding manner with all the other users of the Basin and are overseen by Watermaster which has the authority to mandate and proscribe activities whose purpose is to protect the water source and maximize its long-term beneficial use.

Basin management activities include objectives, projects and programs identified in the Peace Agreement, entered into between Judgment parties on June 29, 2000, which are more specifically described in the Optimum

Basin Management Program (OBMP) that implements the provisions of the Peace Agreement. All Watermaster processes are governed by Rules and Regulations and receive active oversight from the Court which, as noted above, retains continuing jurisdiction over the administration of the Judgment. Consequently, the sufficiency of the groundwater is not only directed by rigorous Watermaster management processes, but validated and ensured by continuing Court oversight.

OBMP projects directed to ensuring the maximization of safe yield and operating safe yield of the Basin include: 1) a comprehensive monitoring program; 2) a comprehensive recharge program; 3) development and implementation of a water supply plan for impaired areas of the Basin; 4) development and implementation of a comprehensive groundwater management plan for Management Zone 1; 5) development and implementation of a regional supplemental water program; 6) development and implementation of cooperative programs with the California Regional Water Quality Control Board – Santa Ana Region and other agencies to improve Basin management; 7) development and implementation of a salt management program; 8) development and implementation of a groundwater storage program; and, 9) development and implementation of storage and recovery programs[1].

[1] In 2007 the parties to the Chino Basin Judgement approved the "Peace Agreement" which is a set of measures proposed by Chino Basin Watermaster to supplement the OBMP Implementation Plan. Focus for the measures were placed on achieving hydraulic control (reduction of groundwater discharge from the

As stated, the referenced elements of the OBMP collectively comprise a comprehensive regimen directed to ensuring and maximizing the long-term beneficial use of water in the Basin. In particular, and specific to the location of current and future groundwater production facilities upon which Ontario relies or will rely to provide water to meet all demands within its service area, OBMP Program Element No. 3-"Develop and Implement Water Supply Plan for the Impaired Areas of the Basin" and Program Element No. 5-"Develop and Implement Regional Supplemental Water Program", address the sufficiency of groundwater from the Basin.

Program Element Nos. 3 and 5 of the OBMP provides in part:

"AS URBANIZATION OF THE AGRICULTURAL AREAS OF SAN BERNARDINO AND RIVERSIDE COUNTIES IN THE SOUTHERN HALF OF THE BASIN OCCURS, THE AGRICULTURAL WATER DEMANDS WILL DECREASE AND URBAN WATER DEMANDS WILL INCREASE SIGNIFICANTLY. FUTURE DEVELOPMENT IN THESE AREAS IS EXPECTED TO BE A COMBINATION OF URBAN USES (RESIDENTIAL, COMMERCIAL, AND INDUSTRIAL). THE CITIES OF CHINO, CHINO HILLS, AND ONTARIO, AND THE JURUPA COMMUNITY SERVICES DISTRICT (JCSD) ARE EXPECTED TO EXPERIENCE SIGNIFICANT NEW DEMAND AS THESE PURVEYORS BEGIN SERVING URBAN CUSTOMERS IN THE FORMER AGRICULTURAL AREAS. BASED ON CURRENT ESTIMATES OF

Chino North Management Zone to the Santa Ana River). To achieve hydraulic control, re-operation (controlled overdraft) of the groundwater basin is proposed. Strategically placed wells would be constructed in the basin and the groundwater would be pumped to the Desalter to improve the long term reliability of the basin.

OVERLYING AGRICULTURAL POOL PRODUCTION, IT IS EXPECTED THAT AT LEAST 40,000 ACRE-FT/YR OF GROUNDWATER WILL NEED TO BE PRODUCED (SIC) IN THE SOUTHERN PART OF THE BASIN TO MAINTAIN THE SAFE YIELD.

BASED ON THE DATA PRESENTED IN *OPTIMUM BASIN MANAGEMENT PROGRAM, PHASE I REPORT* (AUGUST 1999), MUNICIPAL AND INDUSTRIAL DEMANDS ARE PROJECTED TO INCREASE 30 PERCENT BETWEEN 2000 AND ULTIMATE BUILD OUT (ASSUMED TO BE 2020 IN THE PHASE I REPORT). SEVERAL AGENCIES WILL EXPERIENCE INCREASES IN DEMAND EXCEEDING 30 PERCENT, INCLUDING THE CITIES OF CHINO, CHINO HILLS, NORCO, ONTARIO, CUCAMONGA COUNTY WATER DISTRICT (CCWD), FONTANA WATER COMPANY (FWC), JCSD, AND THE WEST SAN BERNARDINO COUNTY WATER DISTRICT (WSBCWD). FORECASTS FROM MUNICIPAL AND INDUSTRIAL ENTITIES INDICATE THAT MUNICIPAL WATER SUPPLY SOURCES FOR THE CHINO BASIN AT BUILD OUT WILL CONSIST PREDOMINANTLY OF CHINO BASIN WELLS THROUGH DIRECT USE OR TREATMENT AND USE, GROUNDWATER AND TREATED SURFACE WATER FROM OTHER BASIN, AND MWDSC SUPPLIES. THERE IS APPROXIMATELY 48,000 ACRE-FT/YR OF AGRICULTURAL PRODUCTION IN THE SOUTHERN PART OF THE CHINO BASIN IN THE YEAR 2000, AND THIS PRODUCTION WILL REDUCE TO ABOUT 10,000 ACRE-FT/YR IN THE YEAR 2020 AT BUILD OUT. THIS DECLINE IN AGRICULTURAL PRODUCTION MUST BE MATCHED BY NEW PRODUCTION IN THE SOUTHERN PART OF THE BASIN OR THE SAFE YIELD IN THE BASIN WILL BE REDUCED.

CONSIDERABLE DISCUSSION OF THE ALTERNATIVE WATER SUPPLY PLANS OCCURRED AT THE OBMP WORKSHOPS. THE DISCUSSIONS FOCUSED, IN PART, ON THE ASSUMPTION AND DETAILS OF EACH ALTERNATIVE AND COST. BASED ON TECHNICAL, ENVIRONMENTAL, AND COST CONSIDERATIONS, THE STAKEHOLDERS SELECTED THE WATER SUPPLY PLAN DESCRIBED IN TABLE 2. GROUNDWATER PRODUCTION FOR MUNICIPAL USE WILL BE INCREASED IN THE SOUTHERN PART OF THE BASIN TO: MEET THE EMERGING DEMAND FOR MUNICIPAL SUPPLIES IN THE CHINO BASIN, MAINTAIN SAFE YIELD, AND TO PROTECT WATER QUALITY IN THE SANTA ANA RIVER. A PRELIMINARY FACILITY PLAN (REVISED DRAFT WATER SUPPLY PLAN PHASE I DESALTING PROJECT FACILITIES REPORT) WAS PREPARED IN JUNE 2000, THAT DESCRIBES THE EXPANSION OF THE CHINO I DESALTER AND THE CONSTRUCTION OF THE CHINO II DESALTER TO BE BUILT IN THE JCSD SERVICE AREA (ATTACHMENT I).(UNDERLINING INCLUDED IN QUOTED TEXT). NEW SOUTHERN BASIN PRODUCTION FOR MUNICIPAL USE WILL REQUIRE DESALTING PRIOR TO USE. THE CITIES OF CHINO, CHINO HILLS, ONTARIO AND NORCO, AND THE JCSD WILL MAXIMIZE THEIR USE OF GROUNDWATER FROM THE SOUTHERN PART OF THE BASIN PRIOR TO USING OTHER SUPPLIES[3].

IMPORTED WATER USE WILL INCREASE TO MEET EMERGING DEMANDS FOR MUNICIPAL AND INDUSTRIAL SUPPLIES IN THE CHINO BASIN AREA, WATERMASTER REPLENISHMENT, AND STORAGE AND RECOVERY PROGRAMS OR CONJUNCTIVE USE.

[3]*Detailed discussion continues in this paragraph concerning the production capacity of the desalters and construction/expansion projections.*

EXPANDED USE OF IMPORTED WATER IN THE NORTHERN PART OF THE BASIN WILL HAVE A LOWER PRIORITY THAN MAINTAINING GROUNDWATER PRODUCTION IN THE SOUTHERN PART OF THE BASIN. RECYCLED WATER USE (DIRECT USE AND RECHARGE) WILL INCREASE TO MEET EMERGING DEMANDS FOR NON-POTABLE WATER AND ARTIFICIAL RECHARGE. UNDER THE CURRENT BASIN PLAN, ALL NEW RECYCLED WATER USE WILL REQUIRE MITIGATION FOR TDS AND NITROGEN IMPACTS. RECYCLED WATER USE WILL BE EXPANDED AS SOON AS PRACTICAL. THE TWO NEW DESALTERS DESCRIBED ABOVE AND THE INCREASE IN STORM WATER RECHARGE WILL PROVIDE MITIGATION FOR THE EXPANDED USE OF RECYCLED WATER."

As indicated in the foregoing quoted OBMP text, the City of Ontario overlies groundwater supplies in the southern part of the Basin which must be pumped for purposes of meeting new demands, maintain safe yield and to protect water quality in the Santa Ana River. As agricultural production in the southern part of the Basin declines, it will be necessary for these reasons to increase production for municipal uses. This will be achieved through the Chino I and Chino II Desalters, of which the City of Ontario has a contractual right to purchase 8,533 acre-ft/yr pursuant to the 2001 "Joint Exercise of Powers Agreement Creating the Chino Basin Desalter Authority" and subsequent agreements. Thus, not only was increased Basin water production by the City of Ontario foreseen in the OBMP, but actually sanctioned and encouraged for purposes of achieving OBMP objectives.

The sufficiency of the City of Ontario's groundwater supply is assured due to the abundance of groundwater which it overlies in the central and southern portion of the Basin, OBMP objectives that prioritize and assure production from the southern Basin, coupled with desalting and ion-exchange treatment facilities that enable the use of this abundant supply for municipal (potable) purposes. As indicated in the quoted text of the OBMP, southern basin production, where the City of Ontario is partially located, is the linchpin of several critical OBMP objectives. Thus the sufficiency of groundwater is heightened and prioritized by the necessity of continued pumping from the southern Basin under the OBMP which is administered by the Watermaster and ultimately enforced by continuing Court jurisdiction over the Judgment.

The other referenced OBMP Program Elements are collectively directed to ensuring the sufficiency of Basin groundwater supplies, particularly during dry years, and comprehensively address water quality and quantity, thus maximizing beneficial use over the long-term. Sufficiency of groundwater from the Basin is further assured for the following reasons.

Inland Empire Utilities Agency (IEUA) is a member agency of The Metropolitan Water District of Southern California (MWD), which provides imported water from the State Water Project for direct use by parties to the Judgment in the Basin and for Basin recharge purposes. IEUA has also reviewed the sufficiency of supplies for its service territory that includes the

Basin in connection with its Year 2010 Urban Water Management Plan (UWMP).

IEUA's UWMP is consistent with, and reiterative of, OBMP projects and programs. IEUA's UWMP projects increased requirements for imported water for direct and recharge use while noting reductions during dry years (due to increased reliance on groundwater from the Basin) and in the higher amount otherwise required in the absence of OBMP projects and programs. The UWMP also analyzes the sufficiency of water supplies for single and multiple year drought scenarios and concludes the region is expected to meet 100% of its dry year demand under every scenario.

The available water supplies and water needs for IEUA's service area were analyzed in their 2010 Urban Water Management Plan to assess the region's ability to meet demands for three scenarios: a normal water year, single dry year and multiple dry years. Key assumptions included:

- Reliance on assurances provided by The Metropolitan Water District of Southern California in its 2010 Regional Urban Water Management Plan that it could meet 100% of projected supplemental full service water supply demands through 2035;

- Implementation of the Chino Basin Dry Year Yield Program consistent with the contractual shift obligations of the participating agencies of up to 33,000 acre-feet in a twelve month period; and

- A 10% conservation rate is achieved during drought scenarios.

IEUA concluded in its 2010 UWMP is that the retail agencies within its service area will be able to meet 100% of their demand under every scenario.

California Water Code Section 10631(j) provides that urban water suppliers, such as IEUA, that rely upon a wholesale agency for a source of water may rely upon water supply information provided by the wholesale agency in fulfilling UWMP informational requirements.

IEUA's independent analysis of contemporary regional water conditions in conjunction with MWD's most recent report, provide additional and reliable assurances concerning the sufficiency of imported water supplies that comprise a portion of overall Basin supply sufficiency. As stated in the above-quoted OBMP text, however, "expanded use of imported water in the northern part of the Basin will have a lower priority than maintaining groundwater production in the southern part of the Basin".

IEUA's March 19, 2003 correspondence also references MWD's 100,000 acre-feet water storage and recovery program which, along with future storage and recovery projects will drought-proof the Basin and all other appropriative pool members (including the City of Ontario) from imported water shortages. Watermaster finalized an agreement for the MWD 100,000 acre-feet program that will include 8,076 acre-feet per year of participation by the City of Ontario and thus further enhancing the sufficiency of the City of Ontario's groundwater supply. This program is consistent with OBMP Program Element No. 9-Develop and Implement Storage and Recovery Program. Benefits to the Basin associated with this program include the construction of facilities to enhance imported water deliveries and the production of water from the Basin. Further demonstrating the sufficiency of Basin groundwater is MWD's program to use the Basin for dry year supply purposes, thus underscoring that sufficient Basin groundwater is available during dry years not only for local use by agencies such as the City of Ontario but also in connection with MWD's regional reliability programs.

In conclusion, the sufficiency of groundwater from the Basin is assured due to the City of Ontario's legal right to produce water necessary to meet ultimate demands in conjunction with OBMP objectives. These OBMP objectives overseen and administered by the Chino Basin Watermaster specifically direct and assure, under the auspices of continuing Court

jurisdiction, the long-term production of water from the southern part of the Basin where the City of Ontario is partially located.

SECTION 5 - Primary Issue for Assessment

Findings

Whereas:

1. The City of Ontario has been identified as the public water supplier for the Armstrong Ranch Project.

2. The projected water demand for the project is 606 acre-feet per year.

3. The water demand for this project was included in the "2010 Urban Water Management Plan" by AKM, June 2011, which was adopted by the City of Ontario by Resolution 2011-039 dated June 21, 2011.

4. The City of Ontario's water supply in 2011 was 103.04 mgd (71,554 gpm) (115,403 acre-feet per year)[1] while the maximum day demand was 53.87 mgd[2]. The City of Ontario's "Ultimate Source of Supply" is 138.59 mgd (96,245 gpm) (155,224 acre-feet per year)[3]. "...The City has the ability to pump more water if needed as the City's groundwater pumping capacity is greater than needed to meet the annual demands, as additional wells are used to meet the maximum day demand." (Section 5-1 of Appendix A)

[1] See Table 9-1 of Appendix C "City of Ontario's Water Master Plan" AKM Consulting Engineers, April 2012
[2] Based upon Section 9-2.1 of Appendix C
[3] See Table 9-3 of Appendix C

5. The City of Ontario has water rights in the Chino Groundwater Basin and capacity rights (25.4 mgd) in the WFA Treatment Plant. The City also has contracted for 8,533 acre-feet per year from the Chino Desalter Authority. The projected recycled water use within the City of Ontario is 18,385 acre-feet per year by 2035.

   The total projected water supplies available to the City of Ontario during normal, single dry, and multiple dry water years during a 20-year projection are sufficient to meet the projected water demand associated with the proposed project, in addition to the City's existing and planned future uses, including agricultural and manufacturing uses. See Tables 5-13, 5-14, and 5-25 of Appendix A of the City of Ontario 2010 Urban Water Management Plan.