Appendix M Water Supply Assessment

Appendices

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February 2024

Water Supply Assessment for the Ontario Regional Sports Complex

City of Ontario

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1.1 INTRODUCTION

This document, which is prepared for the City of Ontario, is a Water Supply Assessment (WSA) intended to meet the requirements of Senate Bill (SB) 610. The water demand for the Ontario Regional Sports Complex project ("proposed project or ORSC") is calculated and the adequacy of water supplies to meet the proposed land use changes is evaluated.

SB 610 established the primary legal standards for assessing the sufficiency of water supplies for new development projects. This statute requires a WSA to be conducted for any project subject to the California Environmental Quality Act (CEQA) that meets the criteria under SB 610. The public water supplier or land use agency – in this case the City of Ontario – must prepare a WSA that documents the availability and reliability of water supplies for the project, considering normal, single dry, and multiple dry years over a 20-year horizon. Since the proposed project would have a water demand equivalent to, or greater than, more than 500 dwelling units, it meets the definition of a project as defined by Government Code Section 10912(a)(1) and requires the preparation of a WSA.

References used in preparing this document include the following:

- City of Ontario, June 2021. *2020 Urban Water Management Plan (UWMP)*. Prepared by Stetson Engineering.
- AKM Consulting Engineers, June 2020. Draft City of Ontario Water Master Plan Update.
- Chino Basin Desalter Authority, June 2021. *2020 Urban Water Management Plan*. Prepared by Stetson Engineering.
- Inland Empire Utilities Agency, June 2021. *2020 Urban Water Management Plan*. Prepared by Kennedy Jenks.
- San Antonio Water Company, September 2021. *2020 Urban Water Management Plan*. Prepared by WSC.
- Water Facilities Authority, June 2021. *2020 Urban Water Management Plan*. Prepared by Stetson Engineering.
- City of Ontario, May 2022. *The Ontario Plan (TOP) 2050 Supplemental Environmental Impact Report*. Prepared by PlaceWorks.

1.2 SITE LOCATION AND EXISTING CONDITIONS

The Proposed Project would allow for development of a variety of recreational opportunities—from a semi-professional Minor League Baseball stadium, retail, and hospitality area to a new City recreation center and aquatics center surrounded by a variety of baseball/softball, soccer, and multiuse fields—on an approximately 199-gross-acre site in the city. The project site is in the southern portion of Ontario, which is known as the Ontario Ranch. The Proposed Project is on the southeast corner of Vineyard Avenue and Riverside Drive in the Armstrong Ranch Specific Plan area. The project site is bounded to the north by Riverside Drive, to the south by Chino Avenue, to the west by the unimproved right-of-way (ROW) for Vineyard Avenue, and to the

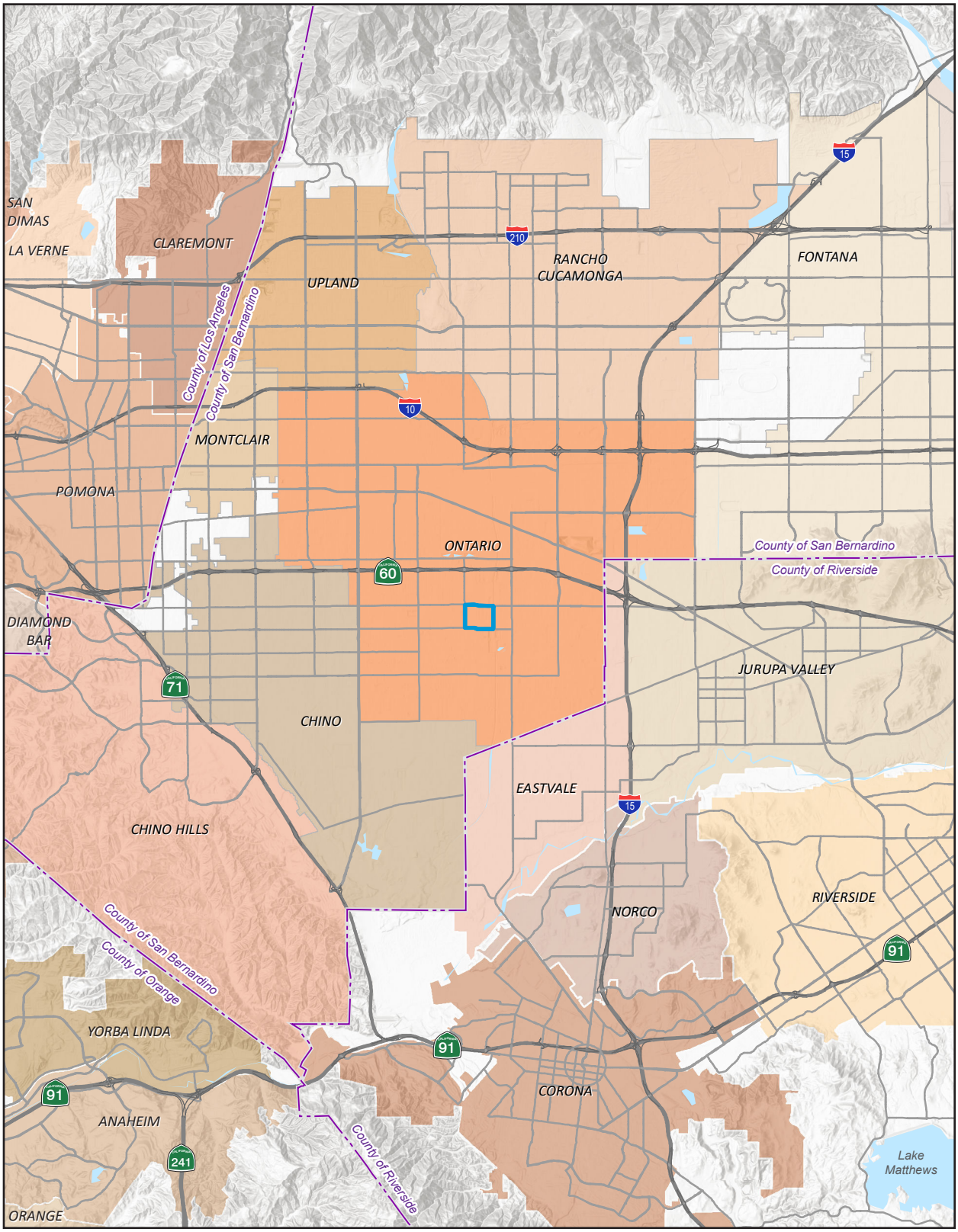
east by the Cucamonga Creek Flood Control Channel. Regional location is provided in Figure 1, *Regional Location Map*. The project site currently includes agricultural uses, including the raising of livestock and dairy farming, plant nursery, horse stables, and vacant land (see Figure 2, *Aerial Photograph*).

1.3 PROJECT DESCRIPTION AND HISTORY

The project site is in the Armstrong Ranch Specific Plan, which the City adopted in December 2017. As approved by the City, the Armstrong Ranch Specific Plan allowed for the development of up to 891 dwelling units with a variety of single-family detached and attached dwellings. In 2015, a WSA was prepared for the Armstrong Ranch Specific Plan that evaluated a larger number of residential units (994 units) than was included in the approved Specific Plan and Certified EIR. A total water demand of 606 acre-feet per year (AFY) was projected in the 2015 WSA, assuming 994 low-density residential units. The 2015 WSA concluded the City's available water supply would meet the projected water demand of the Armstrong Ranch Specific Plan during normal, single dry and multiple dry years.

The ORSC would provide a variety of experiences including a 6,000-seat capacity, semipro, Minor League Baseball stadium with supportive retail/hospitality uses and a new city regional park and community recreation facilities, including a new recreational center; aquatics center; and baseball, softball, and soccer fields. The land use plan under the Proposed Project comprises seven planning areas (PA)and include: Baseball Stadium (PA 1); Commercial Retail (PA 2); Baseball Stadium Retail-Hospitality (PA 3), Baseball Stadium Retail-Hospitality South (PA 4); City Park–Active Fields (PA 5); City Park–Indoor Athletic Facility (PA 6); and Community Recreation Center (PA 7), as shown in Figure 3, *Ontario Regional Sports Complex Planning Areas*. The amenities are shown in Table 1, *Ontario Regional Sport Complex Amenities Summary*, and Figure 4, *Conceptual Land Use Plan*.

Figure 1 - Regional Location



Project Boundary

Note: Unincorporated county areas are shown in white.

Source: Generated using ArcMap 2023.

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Scale (Miles)

PlaceWorks

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Figure 2 - Aerial Photograph

Project Boundary

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Scale (Feet)

Source: Nearmap 2023.

PlaceWorks

1. Introduction

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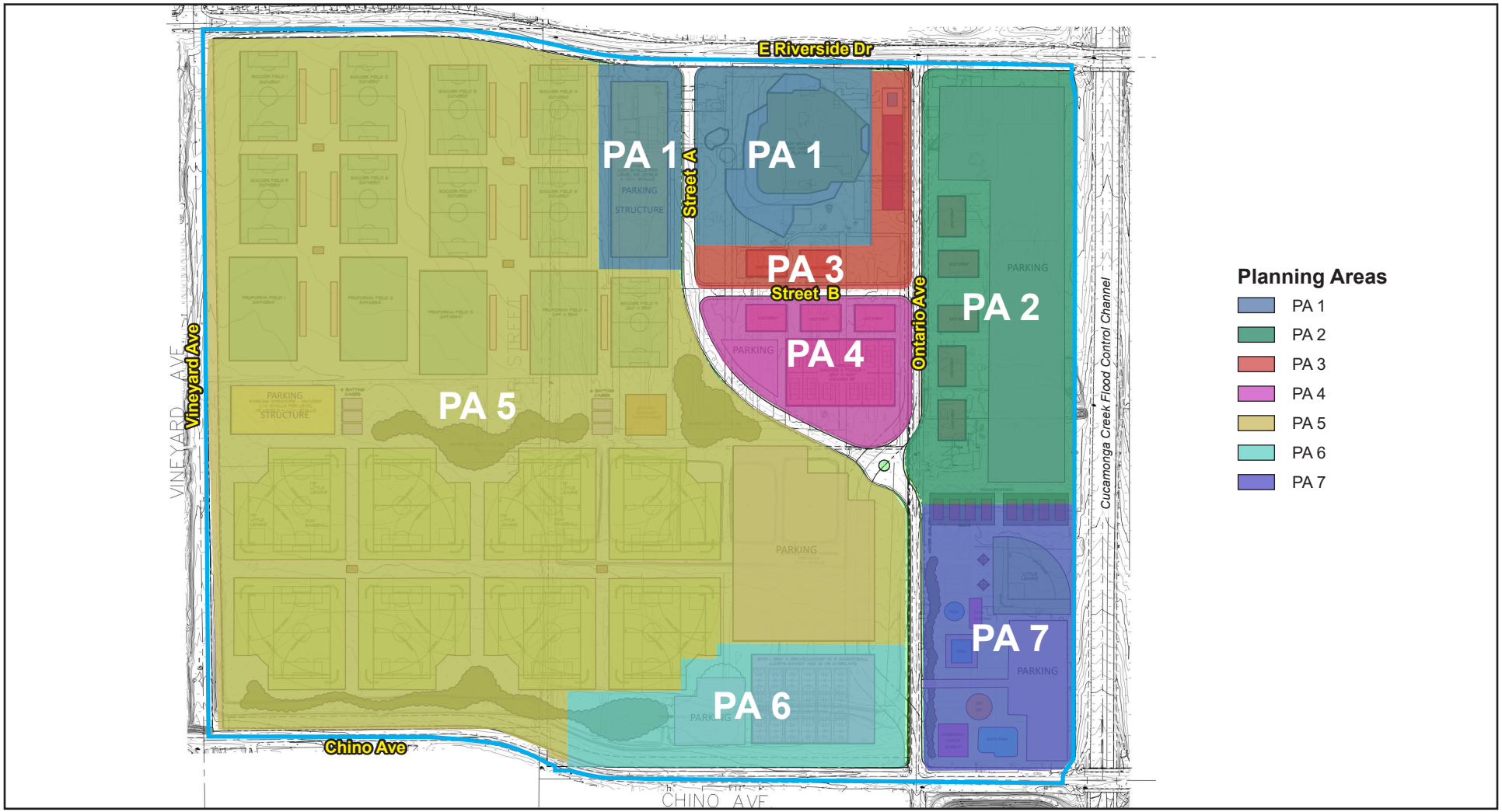
Figure 3 - Ontario Regional Sports Complex Planning Areas



Source: Ontario 2023.

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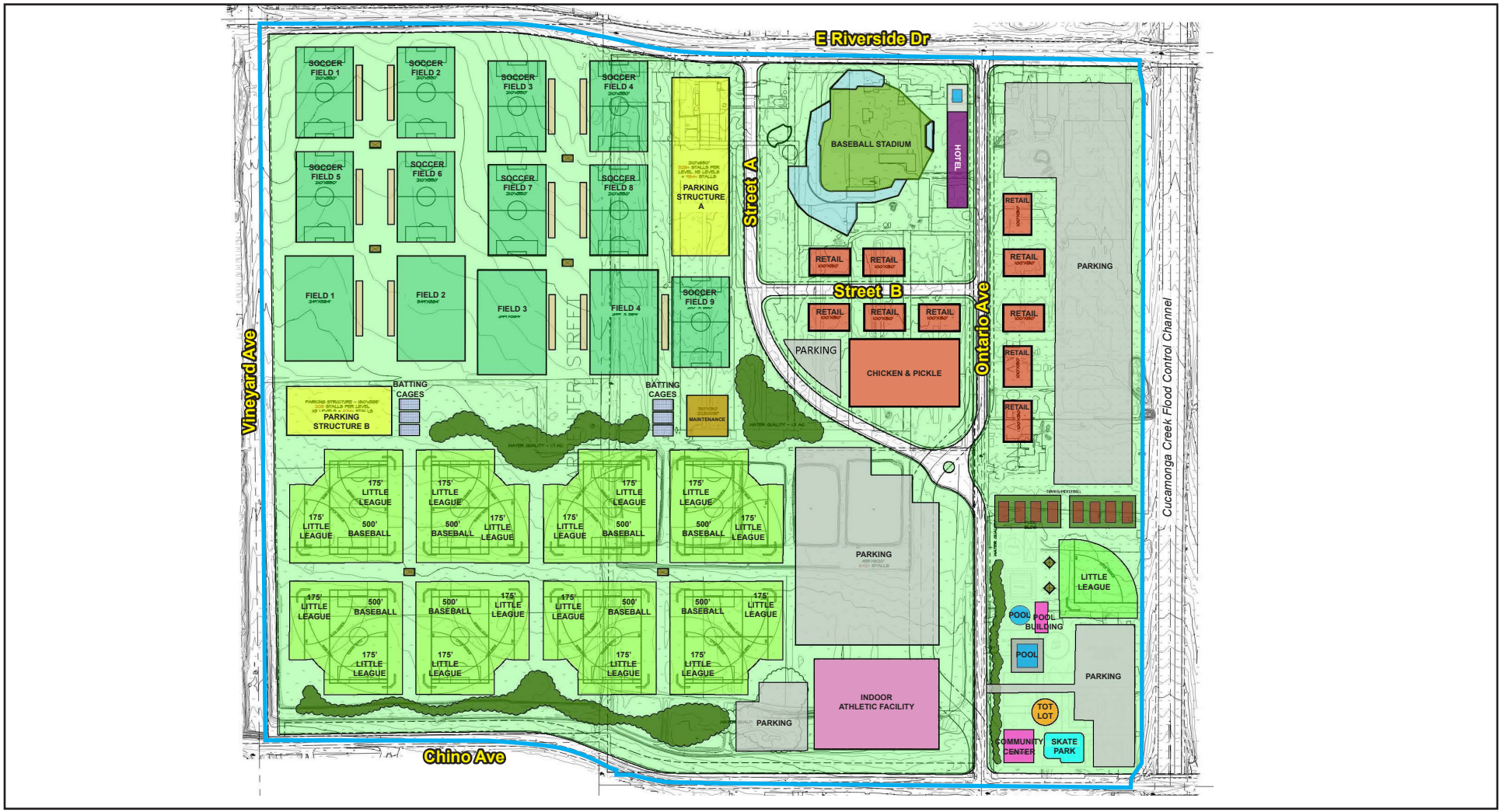
Figure 4 - Conceptual Land Use Plan



Project Boundary

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Scale (Feet)

Source: RUM Design Group 2023; Ontario 2023.

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Table 1 Proposed Project Amenities Summary

Land Use	Acres	Building Square Feet			Number of Amenities
		Commercial	Parking	Stadium	
PA 1 BASEBALL STADIUM	**16.01**	**—**	**185,000**	**450,000**	**6,000-Seat Capacity 1,600 Parking Spaces**
Baseball Field Facility	11.33	—	—	—	6,000-Seat Capacity
Conditioned Space	—	—	—	110,000	—
Unconditioned Space	—	—	—	340,000	—
Parking Structure A (4-stories)	4.68	—	185,000	—	1,600 parking spaces
PA 2 COMMERCIAL RETAIL	**19.62**	**45,000**	**—**	**—**	**1,500 Parking Spaces**
Retail/Commercial, East	5.06	45,000	—	—	—
Surface Parking, East	14.56	—	—	—	1,500 parking spaces
PA 3 BASEBALL STADIUM RETAIL Stadium Retail and Hospitality	**4.58**	**91,000**	**—**	**—**	**100 Rooms**
Retail/Commercial	2.17	21,000	—	—	—
Hotel	2.41	70,000	—	—	100 Rooms
PA 4 BASEBALL STADIUM RETAIL and Hospitality South	**8.54**	**114,000**	**—**	**—**	**250 Parking Spaces**
Retail/Commercial	6.54	114,000	—	—	—
Surface Parking, South	2.00	—	—	—	250 Parking Spaces
PA 5 CITY PARK, Active Fields	**110.90**	**23,300**		**—**	**2,000 Parking Spaces**
Multipurpose Fields (Soccer/Football)	41.13	—	—	—	13 Fields
Multiuse Fields (Baseball/Softball/Little League)	45.11	—	—	—	8 Fields
Park	10.87	23,000	—	—	—
Parking Structure B (3 stories)	3.59	—	87,000	—	1,000 Parking Spaces
Surface Parking, South	10.2	—	—	—	1,000 Parking Spaces
PA-6 CITY PARK, Indoor Athletic Facility	**7.58**	**159,450**	**—**	**—**	**388 Parking Spaces**
Indoor Athletic Facility	4.46	159,450	—	—	26 Courts
Surface Parking	3.12	—	—	—	388 Parking Spaces
PA-7 COMMUNITY RECREATION CENTER	**15.68**	**108,000**	**—**	**—**	**525 Parking Spaces**
Community Center/ Admin Building	3.46	70,000	—	—	—
Activity Area	8.05	38,000	—		1 Field/8 Courts
Recreation Surface Parking	4.17	—	—	—	525 parking spaces
Right-of-Way	*16.1*	—	—	—	**—**
TOTAL	**199**	**540,750**	**272,000**	**450,000**	**6,000-Seat Capacity 100 rooms 6,263 Parking Spaces**

1. Introduction

1.3.1 Planning Area 1: Baseball Stadium

The proposed project would create a 16-acre sports entertainment area with a semiprofessional Minor League Baseball stadium in PA 1. The baseball stadium would have a capacity of 6,000 seats with 4,500 fixed seats and 30,000 square feet of concession areas. Detailed programming for the baseball stadium is provided in Attachment A. For the California league, there would be up to 66 regular season home games and up to 5 postseason home games, for a total of 71 home games. The baseball games are expected to average 3,400 visitors. In addition to baseball games, the stadium could host other events, such as concerts with an average attendance of 2,942 visitors and 2,190 visitors for other events (i.e., baseball camps, high school and NCAA tournaments, etc.). A maximum of 46 events are assumed at the stadium other than Minor League Baseball.

The baseball stadium employment would fluctuate based on the season, but generally would be 43 combined full-time and part-time staff during the stadium offseason and a total of 346 combined employees for regular season games (i.e., full-time baseball and facilities staff, concession staff, part-time staff for game nights and concerts/other events). Employment for the 46 other events is assumed to be similar to employment during the regular season.

Landscaping Plans

The exterior of the stadium would provide landscaping in accordance with the City of Ontario landscape requirements. In addition, the interior of the stadium includes irrigation of natural grass turf in accordance with the Minor League Baseball requirements.

1.3.2 Planning Area 2: Commercial Retail

The 19.62-acre commercial retail area in PA 2 is east of Ontario Avenue and west of the Cucamonga Creek Flood Control Channel but excludes PA 7 at the southeast corner near Ontario Avenue and Chino Avenue, as shown in Figure 4. PA 2 includes 45,000 square feet of support retail/commercial uses on 5.06 acres (see Table 1).

1.3.3 Planning Area 3: Baseball Stadium Retail and Hospitality

The baseball stadium would be supported by ancillary retail buildings in both PA 3 and PA 4. PA 3 is a 4.58-acre site that would wrap around the southern and eastern portions of the baseball stadium (see Figure 4). PA 3 would allow for a 21,000-square-foot retail building on 2.17 acres and a hotel on the remaining 2.41 acres. The hotel would be 70,000 square feet and would include 100 rooms, meeting rooms, and a café.

1.3.4 Planning Area 4: Baseball Stadium Retail and Hospitality South

PA 4 is south of the baseball stadium and would include up to 114,000 square feet of retail/commercial uses on a 8.54 acre site.

1.3.5 Planning Area 5: City Park Active Fields

The western portion of the 199-acre project site west of Ontario Avenue would be dedicated for use as a regional sports park. PA 5 would encompass 110.90 acres and would have 13 lighted soccer fields, 8 lighted baseball/softball/Little League fields, and a central park and picnic area. The open space park would encompass approximately 10.87 acres near the middle of PA 5, between the multi-purpose fields to the north and little fields to the south.

Multipurpose Fields

As shown on Figure 4, the project site would include 13 multipurpose fields providing for soccer or football activities. For some of these fields, the City is considering the use of synthetic turf to allow year-round use. For this analysis, it is assumed that six fields would be natural grass turf and the remaining seven fields would be synthetic turf. All natural turf fields and landscaping would use recycled water. The primary users of the multipurpose fields would be the American Youth Soccer Organization, which typically plays a fall season from August to November and a spring season from February to May. The average daily attendance is estimated to be 4,118 visitors. More detailed programming for the multipurpose fields is provided in Attachment A.

Baseball/Softball Fields

As shown on Figure 4, the project site would include eight multiuse baseball/softball/Little League fields for youth sports that would either use natural grass turf or synthetic turf. Similar to the analysis of the multi-purpose fields, it is assumed that half (i.e., four baseball/softball/Little League fields) would be natural grass turf and the remaining four fields would be synthetic turf. All natural turf fields would use recycled water. The fall softball/baseball season is from August to November, and the spring season is from April to June. More detailed programming for the baseball and softball fields is provided in Attachment A.

1.3.6 Planning Area 6: City Park Indoor Athletic Facility

PA 6 is a 7.58-acre site in the central portion of the project site that would include a two-story, 159,450-square-foot indoor athletic facility on 4.46 acres and a 3.12-acre parking lot. The facility would include basketball and volleyball courts, multi-purpose spaces, offices, and a 1,200-square-foot kitchen. The indoor athletic facility would have a maximum of 1,960 daily visitors during a sports event and approximately 49 employees.

1.3.7 Planning Area 7: Community Recreation Center

The community recreation center is at the southeast corner of Ontario Avenue and Chino Avenue. It would be bounded by PA 2 to the north, the Cucamonga Creek Flood Control Channel to the east, Chino Avenue to the south, and Ontario Avenue to the west. The community recreation center would include a 70,000-square-foot community center/administration building, a 13,000-square-foot aquatics facility with outdoor pool, a Little League field, 25,000-square-foot operator facility, maintenance yard, picnic shelter, eight exercise stations, playground, outdoor skate park, and eight tennis and pickleball courts. More detailed programming for the Little League field is provided in Attachment A.

1. Introduction

1.3.8 Infrastructure Improvements

The ORSC requires various improvements to existing infrastructure, such as street widening, intersection improvements, and the extension of numerous utilities to the project site. The existing land uses within the project site are currently on well water and septic systems. Existing recycled water lines would be extended west along Riverside Drive to the project site, and new potable water and recycled water pipelines would be installed beneath future Vineyard Avenue to the west, Chino Avenue to the south and Ontario Avenue. Ontario Avenue would be reconstructed within the project site. The outdoor water demand would be provided by recycled water, including all natural turf fields, open space park areas, and landscape areas.

2. Water Supply Assessment

2.1 WATER PURVEYOR

The Ontario Municipal Utilities Company (OMUC) provides water service to residents, businesses, and other users in the City of Ontario, including areas surrounding the project site. As of 2020, OMUC provided water to a population of approximately 181,107 people. The primary source of water is groundwater from the Chino Groundwater Basin (Chino Basin). Other water supplies include treated groundwater from the Chino Basin Desalter Authority (CDA), recycled water from Inland Empire Utilities Agency (IEUA), imported water from the Water Facilities Authority (WFA), and purchased water from the San Antonio Water Company (SAWCo).

According to the City's 2020 Water Master Plan Update[1], the City's water system consists of the following:

- Five primary pressure zones (925, 1010, 1074, 1212, and 1348)
- Over 620 miles of water transmission and distribution pipelines ranging in size from 2 inches to 42 inches in diameter
- 7,277 fire hydrants
- 35,906 water meters
- 17 active wells
- Twelve reservoirs with a total volume of 75 million gallons
- Six active booster pump stations
- Fifteen pressure reducing stations
- Two connections to Water Facilities Authority
- Two connections to Chino Desalter Authority
- Five inter-agency connections
- Two ion exchange treatment facilities
- Four altitude valves

In 2022, potable water demands were 32,661 acre-feet per year (AFY) and recycled water demands were 10,066 AFY (including agricultural demands) for a total of 42,727 AFY.[2,3] The total demands in the year 2045 are projected to be 73,668 AFY. Potable water demands are projected to be 57,609 AFY and recycled water demands are projected to be 16,059 AFY (including agricultural demands).

[1] AKM Consulting Engineers, June 2020. *Draft City of Ontario Water Master Plan Update.*
[2] Ontario Municipal Utilities Company. April 12, 2023. *2022 Water Production Summary.*
[3] Inland Empire Utilities Agency. 2022. *FY 2020-21 Exhibit for Recycled Water Reconciliation.*

The passage of SB X7-7 (also known as the Water Conservation Act of 2009) resulted in increased efforts to reduce potable water usage by requiring all California urban water suppliers to achieve a 20 percent reduction in demands (from a historical baseline) by 2020. Using a 15-year base period of 1995 to 2004, the City's baseline water usage averaged 245 gallons per capita per day (GPCD). The City's per-capita water use during Fiscal Year 2019-20 was 161 GPCD, which is below the 2020 target of 196 GPCD.[4]

It is required that every urban water supplier assess the reliability to provide water service to its customers under normal, single dry, and multiple dry years. As discussed in the City's 2020 Urban Water Management Plan (UWMP), the City is capable of meeting the water demands of its customers in normal, single dry, and multiple dry years between 2020 and 2045.[5]

2.2 LEGAL REQUIREMENTS

SB 610 establishes the legal requirements for assessing the sufficiency of water supplies for new development projects that qualify as a project pursuant to CEQA. Affected land developments are those that meet certain size thresholds. The previously evaluated Armstrong Ranch Specific Plan met the threshold for preparation of a WSA because it was a proposed residential development of more than 500 dwelling units. The current project also meets the requirement for preparation of a WSA because the the water demand is estimated to be equal to, or greater than, the amount of water required by a 500 dwelling unit project.

The basic requirement is that a WSA must "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 water system's existing and planned future uses, including agricultural and manufacturing uses." If the water demand for a proposed project is accounted for in an adopted UWMP, the WSA preparer may incorporate that information into the WSA.

The WSA also requires additional analysis if any portion of the water purveyor's water supplies include groundwater. A description of any groundwater basin or basins from which the proposed project will be supplied in addition to a detailed description and analysis of the amount and location of groundwater pumped by the public water system for the past five years should be provided. The WSA should also include an analysis of the sufficiency of the groundwater from the basin or basins from which the proposed project will be supplied. For a basin for which a court or the State Water Resources Control Board has adjudicated the rights to pump groundwater, the order or decree adopted by the court, or the State Water Resources Control Board, should be included.

Upon adoption, the WSA is incorporated into the CEQA document being prepared for the project, and the lead agency must determine, based on the entire record, whether projected water supplies will be sufficient to satisfy demands for the project, in addition to existing and future uses.

[4] City of Ontario, 2021. *2020 Urban Water Management Plan.*
[5] City of Ontario, 2021. *2020 Urban Water Management Plan.*

2.3 WATER DEMAND ANALYSIS

This section provides the current and projected future water demands for the City of Ontario, the estimated water demand for the proposed project, and also assesses if the proposed project or previously proposed project was included in the projection of future water demands for the City of Ontario, as described in the 2020 UWMP. As per Section 10910 (c) (2) of the California Water Code:

> *"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)."*

2.3.1 City of Ontario Water Demands

The primary source of water for the proposed project would be existing water supplies used by the City to provide service to its customers. This section analyzes the water demands of existing and planned future City customers.

Current and projected potable and recycled water demands by customer class are presented in Table 2. The City's total 2020 demand was 39,921 AFY. Potable water demands were 32,109 AFY and recycled water demands were 7,812 AFY (including agricultural demands). The projected 2045 total demand is 73,668 AFY, with potable water demands projected to be 57,609 AFY and recycled water demands projected to be 16,059 AFY (including agricultural demands).

Table 2 Current and Projected Water Demands for the City of Ontario (AFY)

Use Type	2020	2025	2030	2035	2040	2045
Potable Water						
Single Family	12,502	15,723	17,540	19,109	22,431	22,431
Multi-Family	5,068	6,374	7,110	7,746	9,093	9,093
Commercial	5,359	6,740	7,519	8,191	9,615	9,615
Industrial	2,078	2,613	2,915	3,176	3,728	3,728
Institutional/Governmental	538	677	755	822	965	965
Landscape	4,631	5,824	6,497	7,078	8,309	8,309
Losses	1,565	1,968	2,196	2,392	2,808	2,808
Other	368	463	516	562	660	660
Sub Total	**32,109**	**40,382**	**45,058**	**49,076**	**57,609**	**57,609**
Recycled Water Demand						
Recycled Water Demand	7,812	12,168	13,465	14,762	16,059	16,059
Total	**39,921**	**52,550**	**58,513**	**63,838**	**73,668**	**73,668**

AFY = Acre-feet/year
Source: City of Ontario 2020 UWMP, 2021.

2. Water Supply Assessment

2.3.2 Proposed Project Water Demand

A description of the proposed project and buildout projections are provided in Table 1 above. The current land uses (livestock and dairy farming, plant nursery, and horse stables) use private groundwater wells for their water source. Therefore, the proposed development would require connections to the City's new or extended water mains for potable water use. Recycled water would be used for irrigating the natural turf Little League field, baseball/softball fields and multi-purpose fields, open space park areas and landscape areas. Potable water would be used for irrigating the Minor League Baseball Stadium field.

Table 3 provides the total water demand estimate for the proposed development and detailed calculations are provided in Attachment A. Indoor water demand was determined using potable water demand factors from the City's 2020 Water Master Plan and 2020 Recycled Water Master Plan. In addition, the City provided indoor water demands from metered data for similar athletic facilities (i.e., community centers and indoor athletic facilities) within the City. Outdoor water demand was determined using a combination of metered outdoor water demands provided by the City for existing multi-purpose fields and baseball and softball fields and the Maximum Allowable Water Allowance (MAWA) methodology was used to determine the water demand for open space park areas and landscaping.

Table 3 Water Demand Estimate for the Proposed Development

Land Use	Units	Water Demand Rate	Total Domestic Water Usage (gpd)
Potable Water			
Hotel	100 rooms	130 gpd/room [1]	13,000
Retail PA 2	5.06 acres	1,800 gpd/ac [1]	9,108
Retail PA 3	2.17 acres	1,800 gpd/ac [1]	3,906
Retail PA 4	6.54 acres	1,800 gpd/ac [1]	11,772
Baseball Stadium - Indoor	See Attachment A		5,033
Baseball Stadium - Field	390-ft Grass Field	5,028,056 gal/yr/field [2]	13,775
City Park	4,118 visitors (average)	3 gpcd [3]	12,354
Community Center	70,000 sf	11 gal/yr/sf [4]	2,110
Indoor Athletic Facility - building	159,450 sf	11 gal/yr/sf [4]	4,805
kitchen	1,200 sf	0.0685 gpd/sf [5]	82
Sub Total	**-**	**-**	**75,945 gpd (85.1 AFY)**
Recycled Water			
Little League Stadium	1 natural turf field	2,154,240 gal/yr/field [6]	5,902
Baseball/Softball Fields	4, 390-ft natural turf fields	5,028,056 gal/yr/field [2]	55,102
Multi-Purpose Fields	6 natural turf fields	3,900,072 gal/yr/field [7]	64,111
Open Space Park	236,749 sf [8]	---	8,420
Landscaping (hotel/retail)	704,801 sf [9]	**---**	6,267
Sub Total	**-**	**-**	**139,802 gpd (157 AFY)**
Total	**-**	**-**	**215,748 gpd (242 AFY)**

ac = acre; sf = square foot; gpd = gallons per day; gpd/ac = gallons per day per acre; gpcd = gallons per capita per day; gpd/sf = gallons per day per square foot; gal/yr/field = gallons per year per field.

[1] Source: AKM Consulting Engineers, June 2020. Draft City of Ontario Water Master Plan Update.

[2] Based on information provided by the City for 390-ft grass turf field.

[3] Conservatively used the same water demand (3 gpcd) as the baseball stadium. AECOM, 2015. Stadium Reconstruction Project – Water Utility Technical Memorandum.

[4] Based on information provided by the City for existing community centers (Westwind Community Center and Anthony Munoz Park; including restrooms, fountains, pool). See Attachment A for detailed calculation.

[5] Energy Information Administration, 2017. Daily water consumption in large commercial buildings - snack bar or concession stand.

[6] Based on information provided by the City for little league field.

[7] Based on information provided by the City for multi-purpose fields for sports complex.

[8] Assumes 50 percent of open space park is natural turf area. Water demand determined using Maximum Allowable Water Allowance (MAWA) from DWR Model Water Efficient Landscape Ordinance (MWELO) water budget workbook for nonresidential landscapes.

[9] Assumes 25 percent of hotel/retail acreage landscaped. Water demand determined using Maximum Allowable Water Allowance (MAWA) from DWR Model Water Efficient Landscape Ordinance (MWELO) water budget workbook for nonresidential landscapes.

As shown in Table 3, the total potable water demand is estimated to be 75,945 gallons per day (gpd) or 85.1 AFY. The total recycled water demand is estimated to be 139,802 gpd or 157 AFY. Therefore, the total water demand for the project would be 215,748 gpd or 242 AFY. Detailed water demand calculations are included in Attachment A.

2.3.3 Proposed Project with Respect to Approved Armstrong Ranch Specific Plan and 2020 UWMP

The original project proposed for the site was the Armstrong Ranch Specific Plan, which was approved by the City in December 2017. The Specific Plan provided for up to 891 dwelling units on approximately 189.8 acres. A WSA was prepared for the Armstrong Ranch Specific Plan that evaluated a larger number of residential units (994 units) than was included in the approved Specific Plan and Certified EIR. A total water demand of 606 acre-feet per year (AFY) was projected in the 2015 WSA. The 2015 WSA concluded the City's available water supply would meet the projected water demand of the Armstrong Ranch Specific Plan during normal, single dry and multiple dry years.

Based on the land use maps and future water demand and population projections provided in Appendix B of the 2015 UWMP and Appendix E of the 2020 UWMP, it appears that the original project (Armstrong Ranch Specific Plan) was included in both the 2015 and 2020 UWMP. The WSA for the Armstrong Ranch Specific Plan estimated a total water demand of 606 AFY. The 2015 and 2020 UWMPs stated that the City's available water supply would meet the projected water demands during normal, single dry and multiple dry years. The proposed project's total water demand of 242 AFY is less than the original project's water demand of 606 AFY. Therefore, the conclusions reached in the 2015 and 2020 UWMPs that the City can meet its future water demand during normal, single-dry, and multiple dry years over the next 25 year period is valid, including the water demand for the proposed project. Additionally, both the City's 2020 Water Master Plan and 2020 Recycled Water Master Plan accounted for the water demand of the Armstrong Ranch Specific Plan for future planning efforts.

2.4 WATER SUPPLY ANALYSIS

This section identifies the sources of water used by the City of Ontario and evaluates the water supplies that would be used by the City and the proposed project during normal, single-dry, and multiple-dry years through the year 2045. Water sources used by the City include groundwater from the Chino Basin, treated groundwater from CDA, recycled water from IEUA, imported water from WFA, and purchased water from SAWCo.

The City of Ontario extracts groundwater from 17 active wells within the Chino Basin. Groundwater from the Chino Basin is used by the City of Ontario either directly by pumping into its distribution system or by treating the groundwater at one of its two treatment plants and then pumping the treated groundwater into the City of Ontario's distribution system. The ultimate capacity of Ontario's existing and future wells is projected to be 98.5 million gallons per day (mgd) or 110,337 AFY. Additional information on the City's groundwater resources and groundwater rights is provided in Section 2.5.

In addition to its well production, the City of Ontario also purchases treated Chino Basin groundwater from the CDA. The CDA was formed in 2002 as a Joint Powers Authority consisting of Inland Empire Utilities Agency; Jurupa Community Services District; Cities of Chino, Chino Hills, Norco and Ontario, and Santa Ana River Water Company. Western Municipal Water District joined in 2010.

CDA can produce up to 40,000 AF from the Chino Basin every year for the purpose of groundwater cleanup and control of contaminant migration. The member agencies have contract entitlements to receive a total of 35,200 AFY of treated water from CDA. The City's current contract entitlement is 8,533 AFY; however, this may increase in years where the amount of water produced is greater than the projected amount of 40,000 AF. The CDA currently owns and operates two desalters (Chino I and Chino II Desalters) that consist of groundwater extraction wells connected to pumps and pipelines that direct water to advanced treatment facilities. The final product is a high-quality drinking water, which is sold to member agencies through "take or pay" contracts.[6]

Recycled water is provided to the City of Ontario by IEUA, which owns and operates four regional water recycling plants that produce disinfected and filtered tertiary treated recycled water in compliance with California Title 22 regulations. IEUA provides recycled water to the City of Ontario and their local agencies through a distribution system consisting of pipelines, booster pump stations, pressure regulating station, and reservoirs.[7]

The City has been obtaining recycled water from IEUA since 1972. Currently, recycled water is used in the City for agricultural irrigation, landscape irrigation, golf course irrigation, and industrial uses. As stated in the City's 2020 UWMP, the City has the right of first purchase of their Base Entitlement. Base Entitlement is defined as the total quantity of sewage delivered into the regional sewerage system by the City less normal processing losses resulting from the treatment of sewage. Based on the City's current Recycled Water Master Plan and the 2020 UWMP, the City has enough recycled water rights to meet future recycled water demands. IEUA estimated that the total amount of wastewater collected within the City's service area during FY 2022-23 was approximately 13,853 AFY. In the same fiscal year the City used 8,790 AF of recycled water for direct use and 3,517 AFY of recycled water for groundwater recharge.[8]

The City also obtains treated imported water from the WFA, which is a wholesale water supplier to the cities of Chino, Chino Hills, Ontario, Upland, and the Monte Vista Water District. The WFA purchases imported water from IEUA, which in turn purchases untreated water from the Metropolitan Water District (MWD).[9] The MWD obtains its water from the State Water Project (SWP) and has projected 100 percent water supply reliability over the next 20 years, as per its 2020 UWMP.[10]

WFA owns and operates the Agua de Lejos Treatment Plant located in the City of Upland. The Agua de Lejos Treatment Plant is a conventional surface water treatment facility that treats and disinfects imported water supplies from the SWP delivered by MWD through IEUA. The Agua de Lejos Treatment Plant began operating in 1988 and has a treatment capacity of 81 mgd.[11] The City owns 31.4 percent of the plant capacity (25.4 mgd,

[6] City of Ontario, 2021. *2020 Urban Water Management Plan.*
[7] Inland Empire Utilities Agency. 2021. *2020 Urban Water Management Plan.*
[8] Inland Empire Utilities Agency. 2023. *FY 2022-23 Exhibit for Recycled Water Reconciliation.*
[9] City of Ontario, 2021. *2020 Urban Water Management Plan.*
[10] Metropolitan Water District of Southern California. 2021. *2020 Urban Water Management Plan.*
[11] City of Ontario. 2021. *2020 Urban Water Management Plan.*

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28,500 AFY). The maximum capacity available to the City is 19,924 AFY, which equals the total capacity of 28,000 AFY less the Dry Year Yield shift obligation of 8,076 AFY.[12]

The City also purchases water from SAWCo which delivers potable and irrigation water to a variety of shareholders. These shareholders include most residents of San Antonio Heights (an unincorporated area of San Bernardino County), the Cities of Upland and Ontario, Monte Vista Water District, the United States Forest Service, the San Bernardino County Flood Control District, local golf courses, rock quarries, and grove irrigators. In 2020, SAWCo's total active share entitlement was 12,570 AF. The City has an entitlement of 600 AF. SAWCo's water supply sources include surface water obtained from the San Antonio Canyon, water from the San Antonio Tunnel, and groundwater sources from the Chino Basin, Six Basins, and Cucamonga Basin.[13]

Water supplies provided to the City for the year 2022 are summarized in Table 4.

Table 4 Water Supply Sources for the City of Ontario in 2022

Water Supplier	Water Source	Amount (AFY)
City of Ontario	Groundwater	18,967
Chino Basin Desalter Authority (CDA)	Purchased/Imported Water	9,083
Water Facilities Authority (WFA)	Purchased/Imported Water	4,235
San Antonio Water Company (SAWCo)	Purchased/Imported Water	376
Inland Empire Utilities Authority (IEUA)	Recycled Water	10,066
Total		**42,727**

Source: City of Ontario 2022 Water Production Summary, 2023; Inland Empire Utilities Agency FY 2021-22 Exhibit for Recycled Water Reconciliation, 2023.
AFY = Acre-feet per year

It is required that every urban water supplier assess the reliability to provide water service to its customers under normal, dry, and multiple dry water years. This evaluation from the 2020 UWMP is provided in Table 5. The City depends on a combination of imported and local supplies to meet its water demands and has taken numerous steps to ensure that it has adequate supplies. The City's projected water supplies are based on historical long-term averages and supplies during previous dry year conditions obtained from CDA, SAWCo, WFA and groundwater supplies from the Chino Basin. In the event that water from CDA, SAWCo, and WFA may be limited, the City has the flexibility to increase groundwater production from the Chino Basin. Consequently, water supplies available to the City are projected to meet demands for the next 25 years during normal years, single-dry years, and multiple-dry years, as shown in Table 5.[14]

[12] City of Ontario. 2016. *2015 Urban Water Management Plan.*
[13] City of Ontario. 2016. *2015 Urban Water Management Plan.*
[14] City of Ontario. 2021. *2020 Urban Water Management Plan.*

Table 5 Normal, Single Dry, and Multiple Dry Year Supply and Demand (AFY)

		2025	2030	2035	2040	2045
Normal Year						
Supply Totals		52,550	58,513	63,838	73,668	73,668
Demand Totals		52,550	58,513	63,838	73,668	73,668
Difference		0	0	0	0	0
Single Dry Year						
Supply Totals		57,058	63,534	68,847	79,989	79,989
Demand Totals		57,058	63,534	68,847	79,989	79,989
Difference		0	0	0	0	0
Multiple Dry Year						
First Year	Supply Totals	56,080	62,445	67,667	78,618	78,618
	Demand Totals	56,080	62,445	67,667	78,618	78,618
	Difference	0	0	0	0	0
Second Year	Supply Totals	56,248	62,632	67,870	78,853	78,853
	Demand Totals	56,248	62,632	67,870	78,853	78,853
	Difference	0	0	0	0	0
Third Year	Supply Totals	59,493	66,246	71,786	83,403	83,403
	Demand Totals	59,493	66,246	71,786	83,403	83,403
	Difference	0	0	0	0	0
Fourth Year	Supply Totals	54,628	60,428	65,481	76,078	76,078
	Demand Totals	54,628	60,428	65,481	76,078	76,078
	Difference	0	0	0	0	0
Fifth Year	Supply Totals	47,463	52,820	57,237	66,500	66,500
	Demand Totals	47,463	52,820	57,237	66,500	66,500
	Difference	0	0	0	0	0

Source: City of Ontario 2020 UWMP, 2021.
Notes: Supply and demand are equal for years 2040 and 2045 because the City anticipates buildout to occur in 2040.

The City will increase its total normal-year water supply from 39,921 AF of water delivered in 2020 to 73,668 AF in 2045. The increased water supply will come from full utilization of the City's groundwater rights in the Chino Basin (including increased groundwater recharge with recycled water). The Chino Basin was adjudicated under the Chino Basin Judgment in 1978. During drought cycles, the Chino Basin has been managed to maintain sustainable groundwater levels. Therefore, based on historical and on-going management practices, the City will be able to rely on the Chino Basin for adequate supply over the next 25 years under single dry years and drought periods of five consecutive years. [15]

Additionally, an increase in imported water is assumed to be available in wet and normal years. With the ability for the City to store water in the Chino Basin, in its local and supplemental storage accounts as well as the MWD's Dry-Year Yield (DDY) Program storage account, the City has the capability and water supply available to reduce imported water deliveries in dry years and increase groundwater production to meet future demands.

[15] City of Ontario. 2021. *2020 Urban Water Management Plan.*

2. Water Supply Assessment

Section 2.5 provides a description of the management of groundwater resources in the Chino Basin, as well as information on basin management.

2.5 GROUNDWATER ANALYSIS

Since most of the potable water supplied by the City of Ontario comes from groundwater, SB 610 requires a groundwater analysis to be included as part of the WSA. The Water Code requires that the WSA include:

- Groundwater information from the 2020 UWMP
- Groundwater basin description including the legal rights to pump
- Historic use of groundwater from the 2020 UWMP
- Projected use of groundwater
- Sufficiency of groundwater from the Chino Basin

The City of Ontario's legal right to pump water in an amount necessary to meet its demands has been adjudicated and the safe yield of the aquifer has been determined. The construction of Wells 45, 46, and 47, as part of the Dry Year Yield Storage Program, increases the City's groundwater pumping capacity to meet peak demands. The City also has stored water in the Chino Basin and participates in an ongoing groundwater recharge program, using stormwater, dry-weather runoff, and recycled water, that ensures the safe yield of the Chino Basin is not exceeded. In addition, the City participates in water conservation efforts, adopts ordinances pertaining to water shortage contingency planning and the prevention of water waste, conservation pricing, and various public outreach programs to encourage its customers to reduce their water consumption.

2.5.1 Groundwater Information from the 2020 UWMP

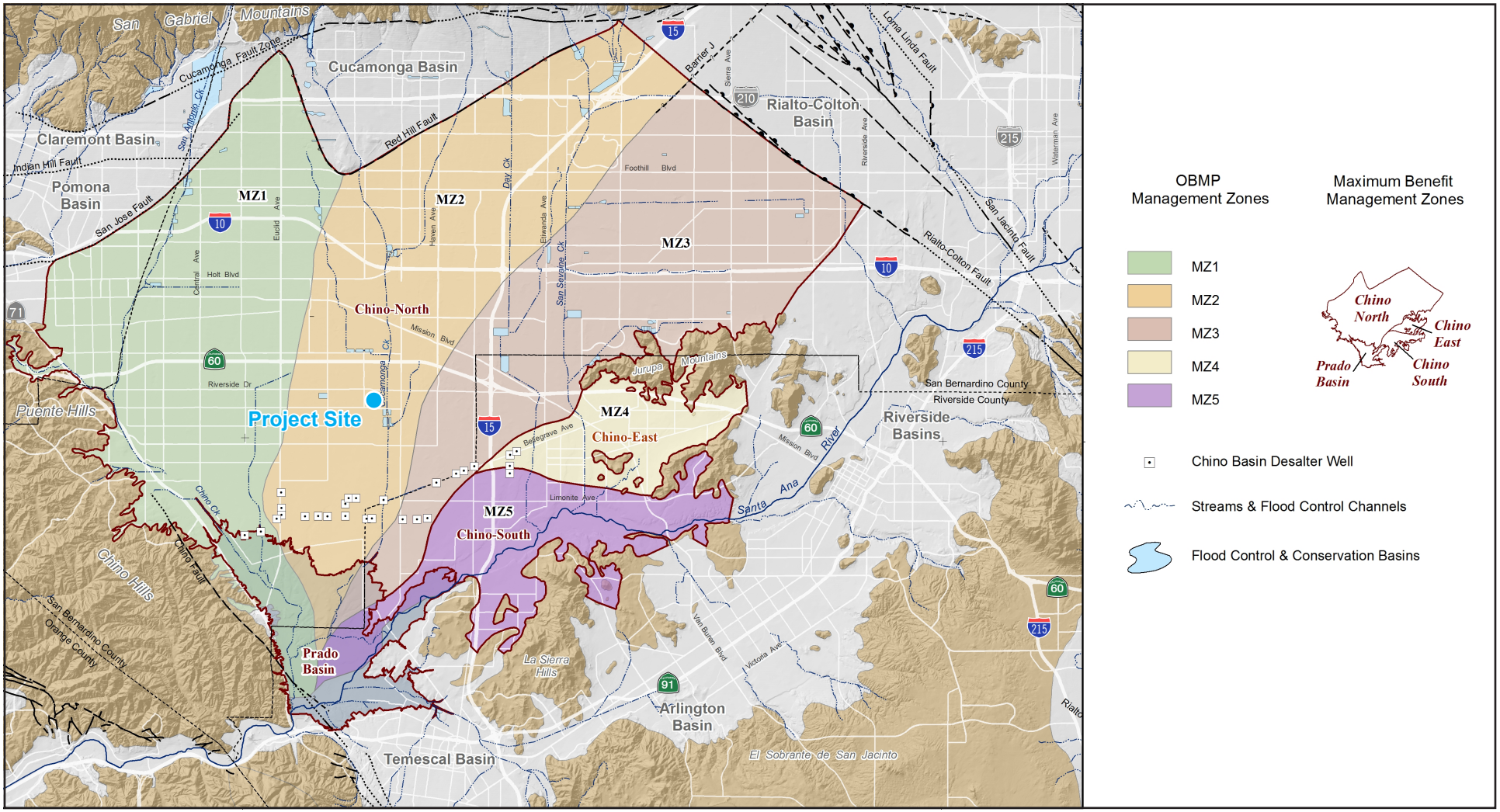
The 2020 UWMP adopted by the City in June 2021 contains a description of the Chino Groundwater Basin, the City's current and projected water supplies and demands, the reliability of the water supply, water shortage plans, the Optimum Basin Management Plan, and the adjudication judgment administered by the Chino Basin Watermaster. In addition, Appendix E of the UWMP explains the methods and calculations by which the future water demand of the City was estimated, based on the land use designations in the General Plan.

2.5.1.1 GROUNDWATER BASIN DESCRIPTION

The City of Ontario obtains its groundwater from the Chino Groundwater Basin. The Chino Basin encompasses about 235 square miles of the upper Santa Ana River watershed and lies within portions of San Bernardino, Riverside, and Los Angeles counties. The Chino Basin has approximately five to six million-acre feet of water in storage and an estimated one million acre-feet of storage capacity. The Chino Basin is divided into five management zones, based on similar hydrologic conditions, as shown in Figure 5, *Chino Groundwater Basin Management Zones*. The City of Ontario is located approximately in the center of the Chino Basin.

Groundwater quality in Chino Basin is generally good with better quality in the northern portion of the basin where recharge occurs. Salinity (TDS) and nitrate-nitrogen concentrations are higher in the southern portion of the basin. The Chino Basin has been extensively studied by the Chino Basin Watermaster. Reports are available at this website: http://www.cbwm.org/.

Figure 5 - Chino Groundwater Basin Management Zones



Source: Wildermuth International, 2017.

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The Chino Basin Watermaster began development of the Optimum Basin Management Program (OBMP) in 1998 and completed it in 2000. The OBMP was updated in 2020. The purpose of the program is to address both water quality and water supply considerations. The southern portion of the Chino Basin requires groundwater treatment to control the outflow of salts and nitrates into the Santa Ana River. As such, one of the main benefits of the CDA is to remove salts and nitrates to clean up the Chino Basin. CDA operates 22 groundwater extraction wells that prevent brackish groundwater from flowing into the Santa Ana River. CDA removes salts from brackish groundwater extracted from the lower Chino Basin through the Chino I and II Desalter facilities. The Chino I Desalter is in the City of Chino and has a total capacity of 14.2 MGD. The Chino II Desalter is in Jurupa Valley and was expanded in 2017 to have a total capacity of 33 MGD.[16]

The OBMP and its implementation agreement, the Peace Agreement, was approved by the Court in October 2000. One of the stipulations of the OBMP requires member agencies to extract approximately 40,000 AFY of groundwater from the southern portion of the Chino Basin, treat it to potable water standards, and then deliver it to the member agencies. Member agencies have contract entitlements to receive a total of 35,200 AFY of treated water from CDA. The City's current contract entitlement is 8,533 AFY.[17]

2.5.1.1 LEGAL RIGHT TO PUMP FROM THE CHINO BASIN

Water rights to the Chino Basin were adjudicated in 1978 by the Superior Court of the State of California for San Bernardino County. Since that time, the Chino Basin has been sustainably managed, as required by the Judgment, under the direction of the court-appointed Watermaster. The original Watermaster was the Chino Basin Municipal Water District (now IEUA). Since 1998, the Watermaster has been the Chino Basin Watermaster.

Multiple cities and water purveyors pump groundwater from the Chino Basin for all or part of their municipal and industrial water supplies. Agricultural users also pump groundwater from the Basin. The safe yield of the Chino Basin is 131,000 AFY as of 2020. The safe yield quantity is allocated among three pools of right holders as follows:

- Overlying Agricultural Pool (dairymen, farmers, and the State of California)
- Overlying Non-Agricultural Pool (businesses and industries)
- Appropriative Pool (local cities, public water districts, and private water companies)

The Operating Safe Yield (OSY) is defined as the annual amount of groundwater which the Watermaster determines can be produced from the Appropriative Pool parties without replenishment obligation. The City of Ontario is a member of both the Overlying Non-Agricultural Pool and the Appropriative Pool and is therefore subject to the regulations imposed by the Chino Basin Watermaster. The Judgment allocates a portion of the safe yield to the Overlying Non-Agricultural Pool and a portion of the OSY to the Appropriative Pool.

[16] City of Ontario. 2021. *2020 Urban Water Management Plan.*
[17] City of Ontario. 2021. *2020 Urban Water Management Plan.*

2. Water Supply Assessment

Pursuant to the Judgment, the City has appropriative rights to approximately 21 percent of the OSY allocated to the Appropriative Pool and 53 percent of the safe yield assigned to the Overlying Non-Agricultural Pool.[18] With an OSY of 40,834 AFY, the City's current appropriative right is approximately 8,470 AFY as of July 2021. As of July 2021, the safe yield is allocated at 82,800 AFY to the Overlying Agricultural Pool and 7,350 AFY to the Overlying Non-Agricultural Pool. The City has purchased and has rights to 3,921 AF of Overlying Non-Agricultural Pool water.[19]

The Judgment states that all Chino Basin users can pump enough water from the Basin to meet their requirements. If pumping by a party exceeds its share of the safe yield, assessments are levied by the Chino Basin Watermaster to replace overproduction. The Judgment also recognizes that there is a substantial amount of available unused groundwater storage capacity in the Chino Basin that can be used for storage and the conjunctive use of supplemental and basin waters.[20] The Chino Basin Watermaster has the authority to reallocate shares of unallocated safe yield water on an annual basis, as per the latest 2019 Watermaster Resolution No. 2019-03.[21] The Watermaster publishes an annual report that summarizes the status and management of the Chino Basin. A copy of the Chino Basin Judgment and latest Watermaster Annual Report can be found at www.cbwm.org.

The City of Ontario also participates in the Dry Year Yield (DYY) Storage Program, which is a cooperative conjunctive use program involving MWD, IEUA, Chino Basin Watermaster, Three Valleys Municipal Water District, and some of the Chino Basin groundwater producers. Under the DYY Program, MWD is allowed to store up to 100,000 AF of water in the Chino Basin when surplus water is available and the Chino Basin groundwater producers can extract 33,000 AFY for three years in dry, drought, or emergency periods. The City authorized execution of an agreement with IEUA to participate in the DYY program in 2003. Participation obligates the City to reduce its use of imported water compared to a baseline by a fixed amount, known as the "shift obligation." The City's shift obligation is 8,076 AFY. During years when MWD calls for extraction, the City's WFA purchases would be reduced by up to 8,076 AFY compared to the previous year. Because Jurupa Community Services District does not have an imported water connection, it has entered into an agreement with the City to meet its shift obligation. Under this agreement, Jurupa Community Services District conveys groundwater to the City in an amount equal to its shift obligation. This program allows the City to be less reliant upon imported water supplies and the additional groundwater capacity allows the City to increase the percentage of groundwater supply used to meet peak demands.[22,23]

In addition to the appropriative pool and overlying non-agricultural pool water rights, as well as the contract obligations through the DYY Program, the following is a summary of other groundwater rights for Chino Basin:

[18] City of Ontario. 2021. *2020 Urban Water Management Plan.*
[19] City of Ontario. 2021. *2020 Urban Water Management Plan.*
[20] Wildermuth Environmental, Inc. September 2018. *2018 Recharge Master Plan. Prepared for the Chino Basin Watermaster and the Inland Empire Utilities Agency.*
[21] Chino Basin Watermaster. 2019. *Watermaster Resolution No. 2019-03. Resolution of the Chino Basin Watermaster Regarding 2018 Appropriative Pool Pooling Plan and CAMA Amendments.*
[22] City of Ontario. 2021. 2020 *Urban Water Management Plan.*
[23] Chino Basin Watermaster. 2022. *2022-2023 Assessment Package.*

- **LAND USE CONVERSIONS**

  As of 2022, the City receives 5,575 AFY from the Chino Basin due to conversions from agricultural to non-agricultural land uses. The Chino Basin Watermaster reallocates the unused portion of the Chino Basin Safe Yield from the Overlying Agricultural Pool to the Appropriative Pool members as a supplement to the Appropriative Pool share of Operating Safe Yield rights in any year.[24,25]

- **FONTANA RECYCLED WATER RIGHTS**

  The City also has a long-term contract to purchase up to 3,000 AFY of recharged recycled water rights from the City of Fontana, which does not operate its own water system.[26]

- **CITY GROUNDWATER STORAGE**

  The City has rights to store water in the Chino Basin (Appropriative and Overlying Non- Agricultural) and has been increasing its various storage accounts in recent years. The City holds water in both local storage accounts and supplemental accounts. Local storage accounts hold unpumped OSY groundwater rights and stormwater that has been recharged into the Chino Basin. Supplemental accounts hold both imported water and recycled water that has been recharged into the Chino Basin. As of June 30, 2023, the City has 108,912 AF in storage pursuant to Appropriative rights and zero AF in storage pursuant to Overlying Non-Agricultural rights.[27,28]

- **INCREASED GROUNDWATER RECHARGE**

  The City is entitled to water rights due to groundwater recharge with stormwater and recycled water in the Chino Basin. The credited amount is based on the volume recharged and therefore varies annually but is projected to increase over time. In 2019, 2,544 AF of recycled water was recharged for the City. In 2021, no recharge credits were purchased by the City due to limitations on groundwater storage capacity. In 2022, 6,400 AF was recharged for the City including 3,000 AF from the city of Fontana. [29]

The various groundwater rights held by the City of Ontario are summarized in Table 6.

[24] City of Ontario. 2021. 2020 *Urban Water Management Plan.*
[25] Chino Basin Watermaster. 2022. *2022-2023 Assessment Package.*
[26] City of Ontario. 2021. 2020 *Urban Water Management Plan.*
[27] City of Ontario. 2021. 2020 *Urban Water Management Plan.*
[28] Chino Basin Watermaster. 2022. *2022-2023 Assessment Package.*
[29] Chino Basin Watermaster. 2022. *2022-2023 Assessment Package.*

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Table 6 City of Ontario Groundwater Rights Summary

	Current as of 2022 (AFY)
Dry Year Storage Program	0
Appropriative Pool	8,470
Overlying Non-Agricultural Pool	3,921
Land Use Conversions	5,575
Groundwater Recharge Credits	Varies
Fontana Recycled Water Rights	Max. 3,000
Groundwater Storage Accounts	Appropriative Pool: 108,912
	Overlying Non-Agricultural: 0

Source: Chino Basin Watermaster 2022-2023 Assessment Package, 2022 and City of Ontario 2020 UWMP, 2021.

2.5.2 Historic Use of Groundwater

The City owns and operates 17 active groundwater wells. The amount of groundwater pumped by the City of Ontario from the Chino Basin since 2000 is listed below in Table 7. A map of the location of the groundwater wells and pressure zones is shown on Figure 6, *Ontario Ultimate Water System.*

Table 7 Historic Groundwater Production

Calendar Year	Groundwater produced (AFY)
2016	22,751
2017	24,672
2018	26,109
2019	19,604
2020	18,295
2021	17,171
2022	18,967
Average	**21,081**

Source: Chino Basin Watermaster 2022-2023 Assessment Package, 2021 and City of Ontario 2020 UWMP, 2021.

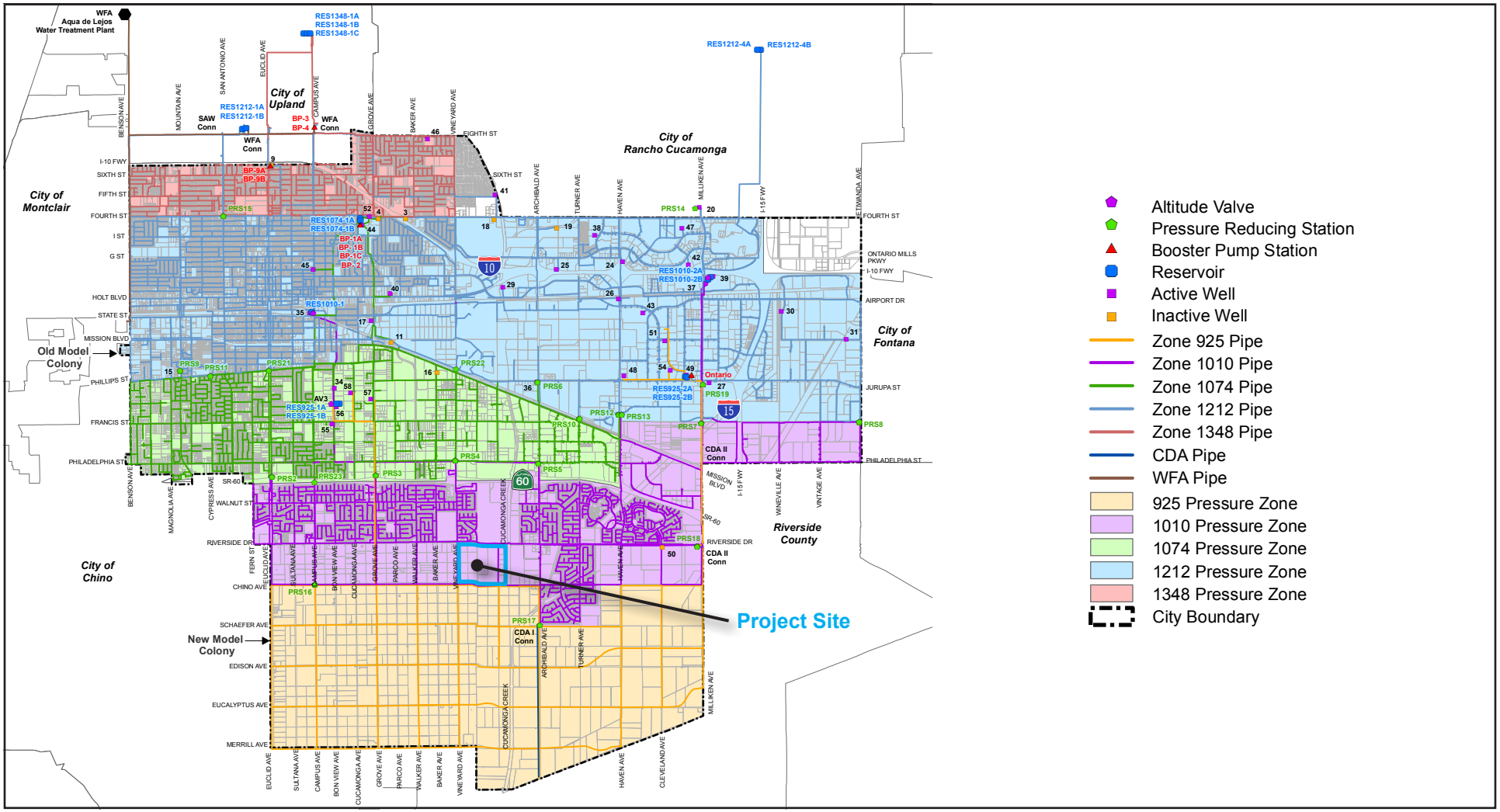
2.5.3 Projected Use of Groundwater

The proposed project will receive water from the City of Ontario, using groundwater extracted from the Chino Basin, treated groundwater from the CDA, recycled water from the IEUA, and imported water from the WFA.

Groundwater from the Chino Basin will be directly pumped by the City of Ontario into its distribution system or by treating the groundwater at the City's two ion-exchange facilities before pumping it into the distribution system. The City's current well capacity is 38,600 gallons per minute (gpm) or 55.6 mgd. The City's ultimate source of supply will be equal to or greater than 68,404 gpm, this includes the nine future wells.

The projected amount of groundwater pumped by the City of Ontario from the Chino Basin up to the year 2045 is listed below in Table 8.

Figure 6 - Ontario Ultimate Water System



Source: AKM, 2011.

2. Water Supply Assessment

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Table 8 Projected Groundwater Production

Calendar Year	Groundwater produced (AFY)
2025	20,249
2030	22,915
2035	24,943
2040	31,476
2045	31,476

Source: City of Ontario 2020 UWMP, 2021.

2.5.4 Sufficiency of Groundwater from Chino Basin

According to the 2020 UWMP, the City's water supply (including conservation measures) will be sufficient to supply all its needs to residential, commercial, and industrial customers through the year 2045 during normal, single dry, and multiple dry years. The City of Ontario's legal right to pump water in an amount necessary to meet its demands has been adjudicated and will ensure the long-term reliability of the groundwater source as the safe yield of the aquifer has been determined.

Approximately two-thirds of the City's water supply is groundwater pumped through its own wells located in the Chino Basin. The construction of Wells 45, 46, and 47, as part of the DYY Storage Program, increases the City's groundwater pumping capacity to meet peak demands. The City also has 108,912 AF of stored water in the Chino Basin as of 2022 and participates in an ongoing groundwater recharge program, using stormwater, dry-weather runoff, and recycled water, that ensures the safe yield of the Chino Basin is not exceeded. The expansion of the groundwater desalter program and ongoing expansion of the recycled water program will reduce the City's dependence on groundwater pumping. In addition, the City adopts ordinances pertaining to water shortage contingency planning and the prevention of water waste, conservation pricing, and various public outreach programs to encourage its customers to reduce their water consumption.[30]

2.6 WATER SHORTAGE CONTINGENCY PLANNING

To prepare for water shortages, the City adopted Ordinance No. 3027 on September 1, 2015, in response to the Emergency Conservation Regulations mandated by the State Water Resources Control Board. Under this ordinance, the Water Conservation Plan was updated with more stringent prohibitions and penalties. Ordinance 3027 updated the City's Water Conservation Plan that is codified in Chapter 8A, Title 6 of the City's Municipal Code ("Water Conservation Plan").

The City Council adopted its 2020 Water Shortage Contingency Plan in June 2021, which describes the methods to achieve and the implications of reducing water supplies to at least 50 percent. The City and OMUC implement various programs to reduce customer water consumption, including stringent use restrictions, actions, and penalties, as well as public outreach, education, and communication programs.

[30] City of Ontario. 2021. 2020 *Urban Water Management Plan.*

Depending on the initiative of the City's customers to voluntarily conserve water at times of crisis, the City can determine when and how quickly to implement the mandatory conservation phases. The severity of the water shortage will influence which methods will be implemented. The demand reduction stages that correspond to water shortage levels are as follows:

- Stage 1 – Water supply shortage of up to 10 percent or as otherwise directed by executive order or State agency regulation
- Stage 2 – Water supply shortage between 10 and 20 percent
- Stage 3 – Water supply shortage between 20 and 30 percent
- Stage 4 – Water supply shortage between 30 and 40 percent
- Stage 5 – Water supply shortage between 40 and 50 percent
- Stage 6 – Water supply shortage greater than 50 percent

As of May 2023, the City entered into a Voluntary Conservation Stage where the public is encouraged to voluntariy conserve water described in the Water Shortage Contingecy Plan.

2.7 WATER EFFICIENCY STRATEGIES

The City has implemented "Demand Management Measures" to reduce its water demands and achieve its water use targets. These measures include:

- Adoption of an ordinance to promote conservation and prevent water waste. The City adopted Ordinance No. 3027 in October 2015 to establish water conservation measures, staged water supply shortage demand management measures, and prevent water waste. The adoption of Ordinance No. 3027 was part of a comprehensive water shortage planning effort to manage the City's response to water supply challenges it may encounter.
- Metering of all customer connections, including separate metering for single-family residential, commercial, industrial, large landscape, and institutional/governmental facilities.
- Implementation of conservation pricing. The City's current water rate structure is tiered to promote water conservation by customers. In the event the customer uses more than the amount of water allotted for the budgeted allocation, a Drought Surcharge rate would apply.
- Development of public education and outreach programs regarding water conservation. The City developed a public information program to educate the public on the benefits of water conservation. The program involves the dissemination of information through literature provided at City Hall and other City of Ontario facilities and articles in the City of Ontario newsletter. The City includes periodic information flyers with the water bills to address water conservation and other important matters. The City also periodically holds public seminars and workshops with other local agencies to promote water conservation.
- Implementation of actions to assess and manage water distribution system losses. The City has water conservation literature that alerts customers to be on the lookout for water system leaks and to correct them promptly. As part of normal operation and maintenance of the water system, City staff performs preventive maintenance. This includes regular checks on valves and meters and pipeline maintenance. If leaks are encountered or suspected during routine inspection of the system, further evaluation is conducted

and leaks are subsequently repaired. The City also monitors the water system for loss by comparing water production to water sales.

- Provision of rebate programs. The City routinely hosts seminars and workshops in the community to promote landscape and offers a rebate program for the purchase of landscape-related items to both residential and commercial customers to promote water conservation. The City also offers a rebate program for the purchase of high-efficiency washing machines, high-efficiency toilets, and weather-based irrigation controllers. [31]

Furthermore, the City along with other IEUA member agencies implement a Regional Water Use Efficiency Business Plan. The Business Plan references SB X7-7 and the State Water Resources Control Board's Emergency Conservation Regulations that help guide the development of water reduction goals. The Business Plan describes in detail how the region and the City will achieve the water reduction goals. In addition, the City participates in water conservation efforts through the California Urban Water Conservation Council committing to implement Best Management Practices for more efficient use or conservation of water.[32]

2.8 SUMMARY

A WSA was prepared to assess the water demand and supply conditions with implementation of the proposed project. As shown in Table 3, the total indoor/potable water demand for the proposed project is conservatively estimated to be 75,945 gpd or 85.1 AFY. The total recycled water demand is conservatively estimated to be 139,802 gpd or 157 AFY. Therefore, the total water demand for the project will be 215,748 gpd or 242 AFY.

According to the City's 2020 UWMP, the City has adequate supplies to serve 100 percent of its customers during normal, dry year, and multiple dry year demand through 2045 with projected population increases and future development projects. Additionally, the original Armstrong Ranch Specific Plan projected a water demand of 606 AFY, which was incorporated into the 2015 and 2020 UWMPs as well as the 2020 Water Master Plan and the 2020 Recycled Water Master Plan. The projected total water demand for the current project is 242 AFY, or approximately 40 percent of the previously projected water demand. Therefore, implementation of the proposed project will not interfere with the City's ability to meet all existing and future water demands of its customers in normal, single-dry, and multiple-dry years.

This WSA concludes that the City will have sufficient water supplies available during normal, single dry, and multiple dry years through the year 2045 to meet all projected water demands associated with its existing and future customers, including the proposed project. In the unlikely event of a water shortage, implementation of the City's Water Conservation Plan and water efficiency strategies would ensure that sufficient water supplies were available to serve its customers, including the project and existing and future users.

[31] City of Ontario. 2021. *2020 Urban Water Management Plan.*
[32] Inland Empire Utilities Agency. 2022. Regional *Water Use Efficiency Business Plan FY 2022-24.*

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Attachment A – Detailed Water Demand Calculations

Attachment A – Detailed Water Demand Calculations

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ONTARIO SPORTS COMPLEX - Water Demand Summary

Potable Water Demand	Recycled Water Demand	Total Water Demand
27,720,104 gal/yr	51,027,744 gal/yr	78,747,848 gal/yr
85.1 afy	157 afy	242 AFY
75,945 gpd	139,802 gpd	215,748 gpd

Land Uses

City Park/Recreation			gal/yr	
Oudoor	Natural Turf/Park Areas	48,740,336	Pot. Fraction	0.35
Potable Water		4,509,210	RW Fraction	0.65
Indoor Athletic Facility		1,783,953		
Community Rec		770,000		
Stadium (Minor League Baseball)				
Outdoor	Grass Turf	5,028,056		
Indoor		1,836,995		
Hotel		4,745,000		
Retail (PA3)		1,425,690		
Commercial Space				
Retail (PA2)		3,324,420		
Retail (PA4)		4,296,780		
Outdoor (landscaping)		2,287,408		

WSA Criteria

DU	Demand Factor	People Per Household	
500	380 gpd/du		190,000 GPD
	LDR		212.8 AFY

Approved Project - Armstrong Ranch SP

994	544 gpd/du	old 2015 rate	540,736 GPD
	LDR	in 2015 WSA	606 AFY

ONTARIO SPORTS COMPLEX - WATER DEMAND CALCULATIONS

City Park/Recreation

NATURAL TURF FIELDS WATER DEMAND				
	gal/yr/field	Fields	gal/yr	gpd
390ft Grass Turf	5,028,056	4	20,112,224	55,102
Little League Grass Turf	2,154,240	1	2,154,240	5,902
Multi-Purpose/Soccer Fields	3,900,072	6	23,400,432	64,111

OPEN SPACE PARK WATER DEMAND				
	acres	natural turf	acres	Turf Area sf
open space park area	10.87	~50%	5.435	236,749

MAWA		((ETo - Eppt) x0.62)*(0.45 x LA)	
Eto	49.2	inches/yr	Ontario 2020 UWMP
PPT	10.68	inches/yr	Ontario 2020 UWMP
Eppt	2.67	inches/yr	25% of PPT
Landscape Area (LA)	236,749	square feet of natural turf	
		Assumes 50% of fields natural turf	
	3,073,440	gal/yr	
	8,420	gpd	
Total Outdoor Water	48,740,336	gal/yr	
	149.6	AFY	

1 afy = 325,851 gal/yr

INDOOR/POTABLE WATER DEMAND		
Average Attendees	4,118	average daily attendance
	3	gpcd
	4,509,210	gal/yr
	12,354	gpd
	13.8	AFY

TOTAL WATER DEMAND		
	53,249,546	gal/yr
	163.4	AFY

ONTARIO SPORTS COMPLEX - WATER DEMAND CALCULATIONS

Stadium (Minor League Baseball)

INDOOR/POTABLE WATER DEMAND					
		OFFSEASON			
	Games	Concerts	Other	Remaining	Total
No. per year	71	26	20	248	365
Visitors	3400	2942	2190		
Employees	346	346	346	43	
Restrooms	724,200	229,500	131,400	0	1,085,100 gal/yr
Concessions	145,905	53,430	41,100	0	240,435 gal/yr
Employees	245,660	89,960	69,200	106,640	511,460 gal/yr

Potable Demand factors			
restrooms	3	gpcd	
concessions	0.0685	gal/sf	30,000 sf
employees	10	gpcd	

Total Indoor Stadium Water Demand

1,836,995 gal/yr 5.64 AFY 0.27

5,033 gpd

1 afy = 325,851 gal/yr

STADIUM FIELD WATER DEMAND			
	gal/yr/field	Fields	gal/yr
390ft Grass Turf	5,028,056	1	5,028,056

Total Outdor Stadium Water Demand - POTABLE WATER (per 1/5/24 email, Christy Stevens)

5,028,056 gal/yr 15.43 AFY 0.73

13,775 gpd

TOTAL WATER DEMAND		
6,865,051	gal/yr	21.1 AFY
18,808		

ONTARIO SPORTS COMPLEX - WATER DEMAND CALCULATIONS

Stadium Retail/Hospitality (PA 3)

INDOOR/POTABLE WATER DEMAND				
Hotel	70,000 SF			
	100 rooms	4,745,000 gal/yr	14.56 AFY	
		13,000 gpd		
Retail	21,000 SF			
	2.17 acre	1,425,690 gal/yr	4.38 AFY	
		3,906 gpd		
Total Indoor Stadium Hospitality Water Demand				
		6,170,690 gal/yr	18.94 AFY	
Commercial Retail (PA 2)				
Retail	45,000 SF			
	5.06 acre	3,324,420 gal/yr	10.20 AFY	
		9,108 gpd		
Commercial Retail (PA 4)				
Retail	114,000 SF			
	6.54 acre	4,296,780 gal/yr	13.19 AFY	
		11,772 gpd		

OUTDOOR LANDSCAPING - WATER DEMAND			
MAWA		((ETo - Eppt) x0.62)*(0.45 x LA)	
Eto	49.2	inches/yr	Ontario 2020 UWMP
PPT	10.68	inches/yr	Ontario 2020 UWMP
Eppt	2.67	inches/yr	25% of PPT
	2.4	Hotel acreage	
	13.8	Retail acreage (PA2, PA3, PA4)	
	704,801	total SF	
LA	176,200	assumed 25% of total hotel/retail area is landscaped	

Total Outdoor Water	2,287,408 gal/yr	7.02 AFY	
	6,267 gpd		

TOTAL WATER DEMAND		
16,088,406 gal/yr	49.4 AFY	

Potable Demand factors		
130 gpd/room	Water Master Plan, Hospitality	
1,800 gpd/ac	Water Master Plan, General Commercial	

1 afy = 325,851 gal/yr

ONTARIO SPORTS COMPLEX - WATER DEMAND CALCULATIONS

1 afy = 325,851 gal/yr

Indoor Athletic Facility

INDOOR/POTABLE WATER DEMAND		
Building	159,450	sf
Kitchen	1,200	sf

Potable Demand Factor		
kitchen	0.0685	gpd/SF

City provided:	sf	gal/yr	gal/yr/sf
Westwind Community Center	80,000	866,932	10.8
Anthony Munoz Park	60,000	744,634	12.4

avg potable water demand rate 11 gal/yr/sf

potable indoor water demand	11	gal/yr/sf	
(restrooms, fountains, pool)	1,753,950	gal/yr	
	4,805	gpd	
kitchen water demand	82	gpd	
	30,003	gal/yr	
	82	gpd	
TOTAL	1,783,953	gal/yr	5.5 AFY
	4,888	gpd	

ONTARIO SPORTS COMPLEX - WATER DEMAND CALCULATIONS

1 afy = 325,851 gal/yr

Community Center

INDOOR/POTABLE WATER DEMAND					
Building	70,000	sf			
	sf	gal/yr	gal/yr/sf		
Westwind Community Center	80,000	866,932	10.8		
Anthony Munoz Park	60,000	744,634	12.4		
avg potable water demand rate (restrooms, fountains, pool)			11	gal/yr/sf	(see Indoor Athletic Facility)
rec center water demand		770,000	gal/yr	2.4	AFY
		2,110	gpd		