ALBERT A. WEBB ASSOCIATES



WATER SUPPLY ASSESSMENT

ADELANTO GATEWAY LOGISTICS CENTER
CITY OF ADELANTO

City of Adelanto

Kavous Emami

APPROVED

Prepared for:

ADELANTO PUBLIC UTILITY AUTHORITY
11600 Air Expressway
Adelanto, CA 92301
(760) 246-2300

September 16, 2025

ALBERT A. WEBB ASSOCIATES

W.O.: 2024-0505

September 16, 2025

Richard Burgess
Engineering Services Manager
CITY OF ADELANTO
11600 Air Expressway
Adelanto, CA 92301

Re: Water Supply Assessment for Adelanto Gateway Logistics Center

Dear Mr. Burgess,
Pursuant to our agreement and notice to proceed dated March 4, 2025, transmitted herewith is the Water Supply Assessment (WSA) for the subject project prepared pursuant to Senate Bill 610.

Sincerely,

ALBERT A. WEBB ASSOCIATES

Autumn DeWoody
Senior Environmental Analyst

Sam I. Gershon, RCE
Senior Vice President

REGISTERED PROFESSIONAL ENGINEER
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Acronyms and Abbreviations	
Acronyms	**Abbreviations**
AB	Assembly Bill
ADD	Average Day Demand
AF	Acre-Feet
AFY	Acre Feet Per Year
APUA	Adelanto Public Utilities Authority
BAP	Base Annual Production
CEQA	California Environmental Quality Act
CWC	California Water Code
CY	Cubic Yards
FAR	Floor Area Ratio
FPA	Free Production Allowance
GPCD	Gallons Per Capita Per Day
MDD	Maximum Day Demand
MI	Manufacturing/Industrial
MWA	Mojave Water Agency
SF	Square Feet
SWP	State Water Project
UWMP	Urban Water Management Plan
VWD	Victorville Water District
WMP	Water Master Plan
WSA or Assessment	Water Supply Assessment
WSCP	Water Shortage Contingency Plan

SECTION 1 - INTRODUCTION

Senate Bill 610 (SB 610) was signed into California state law with an effective date of January 1, 2002. SB 610 amended 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 assessment of the water supplier's existing and future water sources, and existing and projected water demand in relation to a "project" as defined by California Water Code (CWC) section 10912, resulting in the production of a project-specific Water Supply Assessment ("WSA" or "Assessment"). Additional analysis is required in the WSA if any portion of the water supply includes groundwater. The WSA is prepared and adopted by the water supplier and included in the California Environmental Quality Act (CEQA) analysis for the project. The CEQA Lead Agency must then independently determine, based on the entire record, whether water supplies will be sufficient to satisfy the demands of the project, in addition to existing and planned future uses (CWC section 10911). The WSA is not a commitment by the water supplier to serve the proposed project.

Law

CWC section 10910:

> *(a) Any city or county that determines that a project, as defined in Section 10912, is subject to the California Environmental Quality Act (Division 13 (commencing with Section 21000) of the Public Resources Code) under Section 21080 of the Public Resources Code shall comply with this part.*

CWC section 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.

CWC section 10914:

(a) Nothing in this part is intended to create a right or entitlement to water service or any specific level of water service.

(b) Nothing in this part is intended to either impose, expand, or limit any duty concerning the obligation of a public water system to provide certain service to its existing customers or to any future potential customers.

(c) Nothing in this part is intended to modify or otherwise change existing law with respect to projects which are not subject to this part.

(d) This part applies only to a project for which a notice of preparation is submitted on or after January 1, 1996.

1.1. Purpose

The City of Adelanto (City) Water Department, through the Adelanto Public Utilities Authority (APUA) is the water supplier for the City (see **Figure 1 – Regional Map**). Pursuant to direction given by the City Engineering Department on July 10, 2024, Mileski Living Trust and Adelanto Industrial 1-7, LLC commissioned this Assessment from Albert A. Webb Associates (WEBB) on March 4, 2024, to answer the following key question pursuant to SB 610: whether the water supplier's projected supply for the next 20 years, based on normal, single dry and multiple dry years, will meet the demand projected for the project plus existing and planned future uses, including agricultural and manufacturing uses.

1.2. Background

The Adelanto Gateway Logistics Center ("Project") is located in the City of Adelanto along the eastern border of Adelanto and Victorville (**Figure 1 – Regional Map).** The Project site is near the southeast corner of Air Expressway and Adelanto Road and covers approximately 472-acres (**Figure 2 – Aerial View**). The City's Urban Water Management Plan (UWMP) that was used for this Assessment is dated 2020 and a copy is provided in Appendix A. Because WEBB is in the process of updating the City's Water Master Plan, which is based on customer consumption data from CY 2024, this Assessment includes water duty factors from CY 2024 data that will be published in the forthcoming Water Master Plan (cited herein as "WEBB(a)").

1.3. Proposed Project

The City is preparing a CEQA document for the Project, which proposes seven warehouse buildings with the land use designation of Manufacturing/Industrial (MI) (**Figure 3 - Proposed Land Use Plan**). This is consistent with the existing land use designation of the property. The proposed buildings range in size from 146,040 gross square feet (SF) of floor area to about 1,485,840 gross SF for a total of 8,190,130 SF. According to Table 30-1 of the City Municipal Code, the MI land use designation does not have a maximum floor area ratio (FAR). The Project is set to be completed in three phases: Buildings 2-4 during Phase 1 beginning in 2026, Buildings 5-7 during Phase 2

in 2027, and Building 1 during Phase 3 in 2046. Each of the buildings will consist of 80% High-Cube Transload and Short-Term Storage Warehouse (ITE 154) and 20% High-Cube Cold Storage Warehouse (ITE 157).[1] The applicant confirmed for this Assessment that cannabis is not one of the potential uses.

The Project is considered to be "subject to CEQA" pursuant to CWC section 10910. The Project is considered a "project" under SB 610 pursuant to the following CWC section 10912 definitions:

- *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.*

The Project land use plan that was provided for this analysis is reflected below in **Table 1-1**. This Assessment conservatively assumes that recycled water will not be available for the Project.

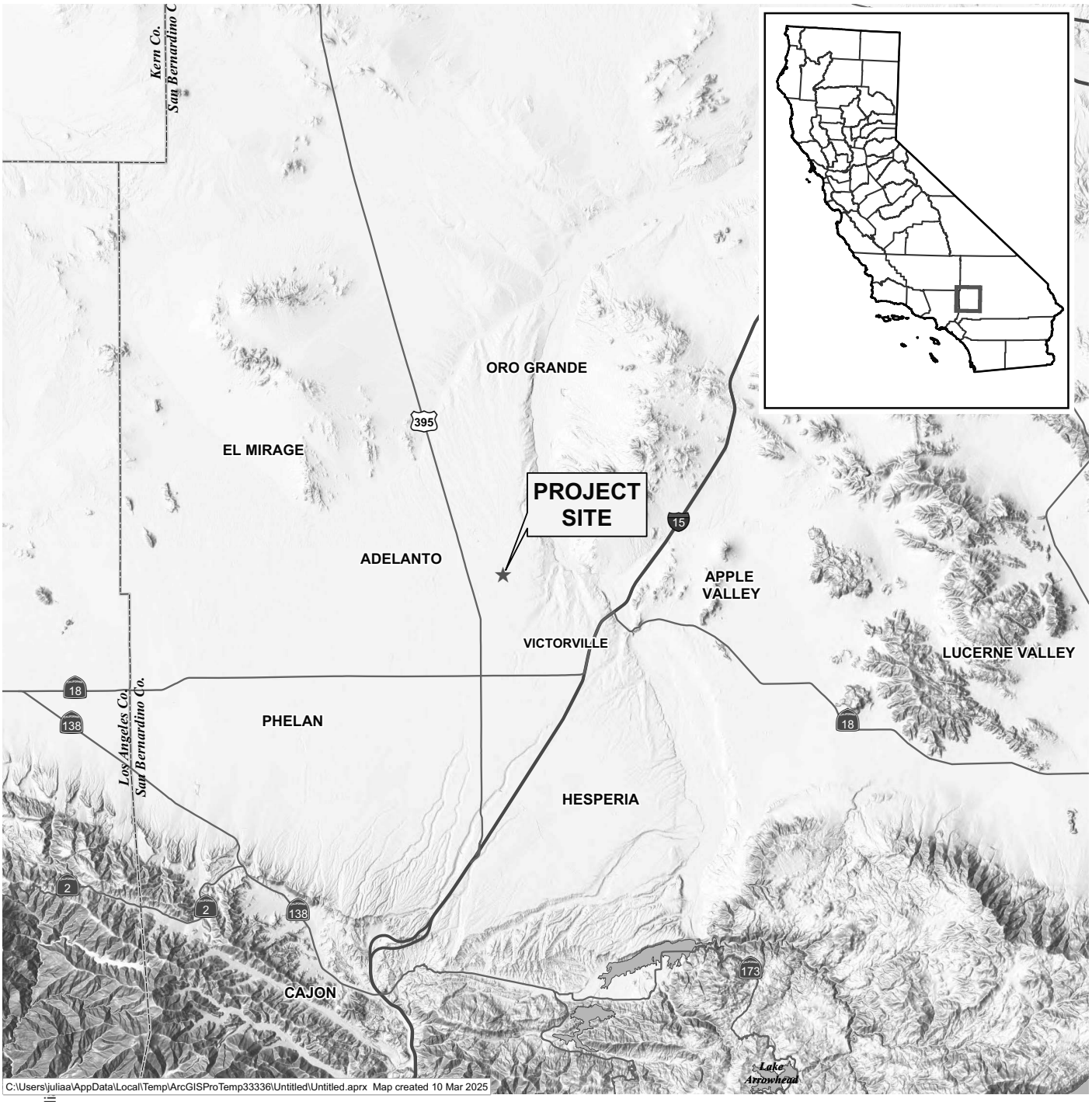
Table 1-1 Proposed Land Use Plan

Proposed Land Use	Area (ac)	Maximum Floor Space (SF)
Manufacturing/Industrial (MI)	471.61	8,190,130

Source: WEBB, "2.19.2025 - Adelanto Site Plan – Progress V2.pdf".

[1] Institute of Traffic Engineers (ITE) codes.

FIGURE 1 REGIONAL MAP



Sources: City of Adelanto, SB County 2019.

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FIGURE 2

AERIAL VIEW



LEGEND

- Project Site
- Parcels
- Proposed Buildings

N

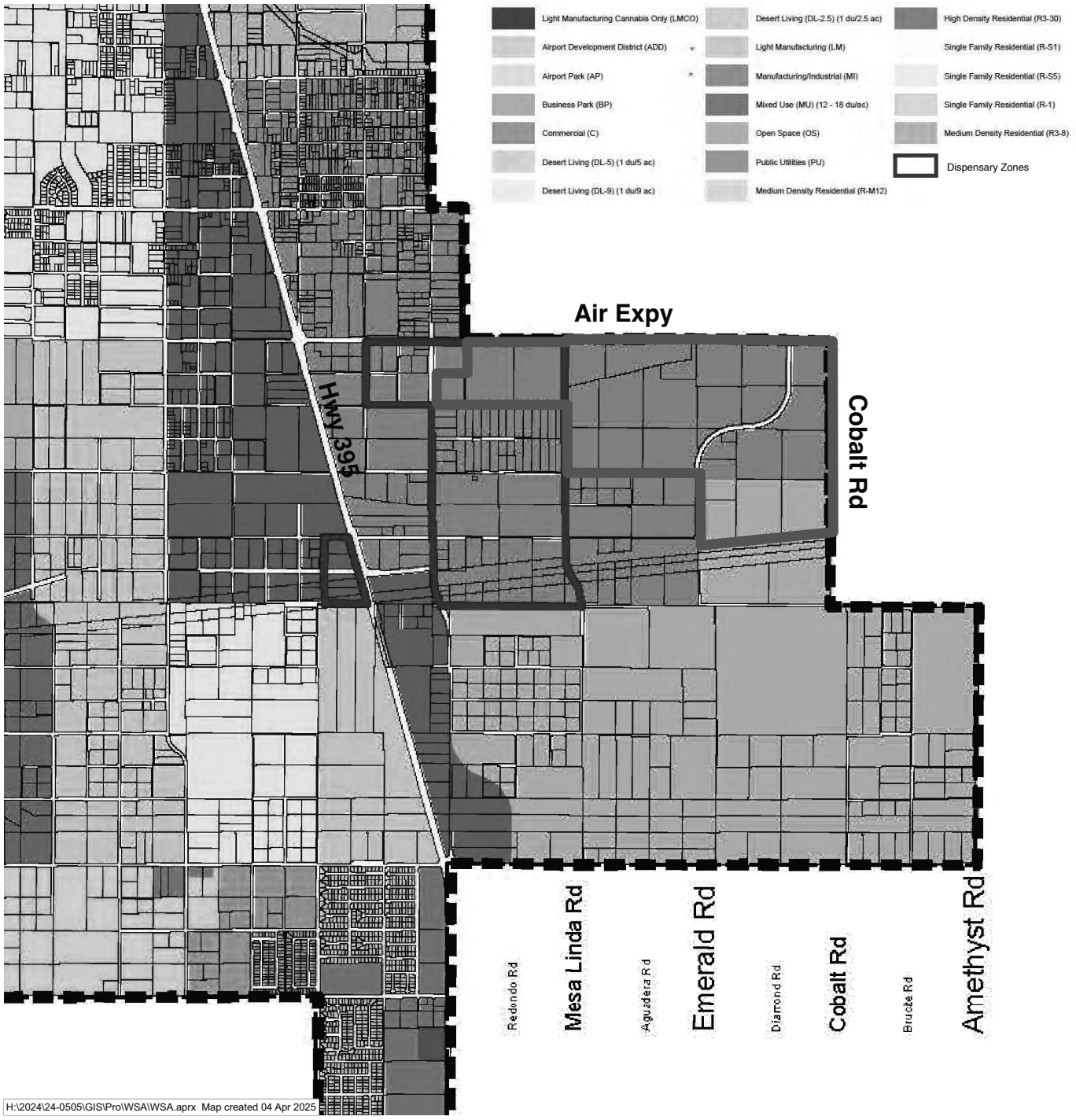
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Sources: City of Adelanto

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FIGURE 3

LAND USE PLAN
(Used in 2020 UWMP Projections)



LEGEND

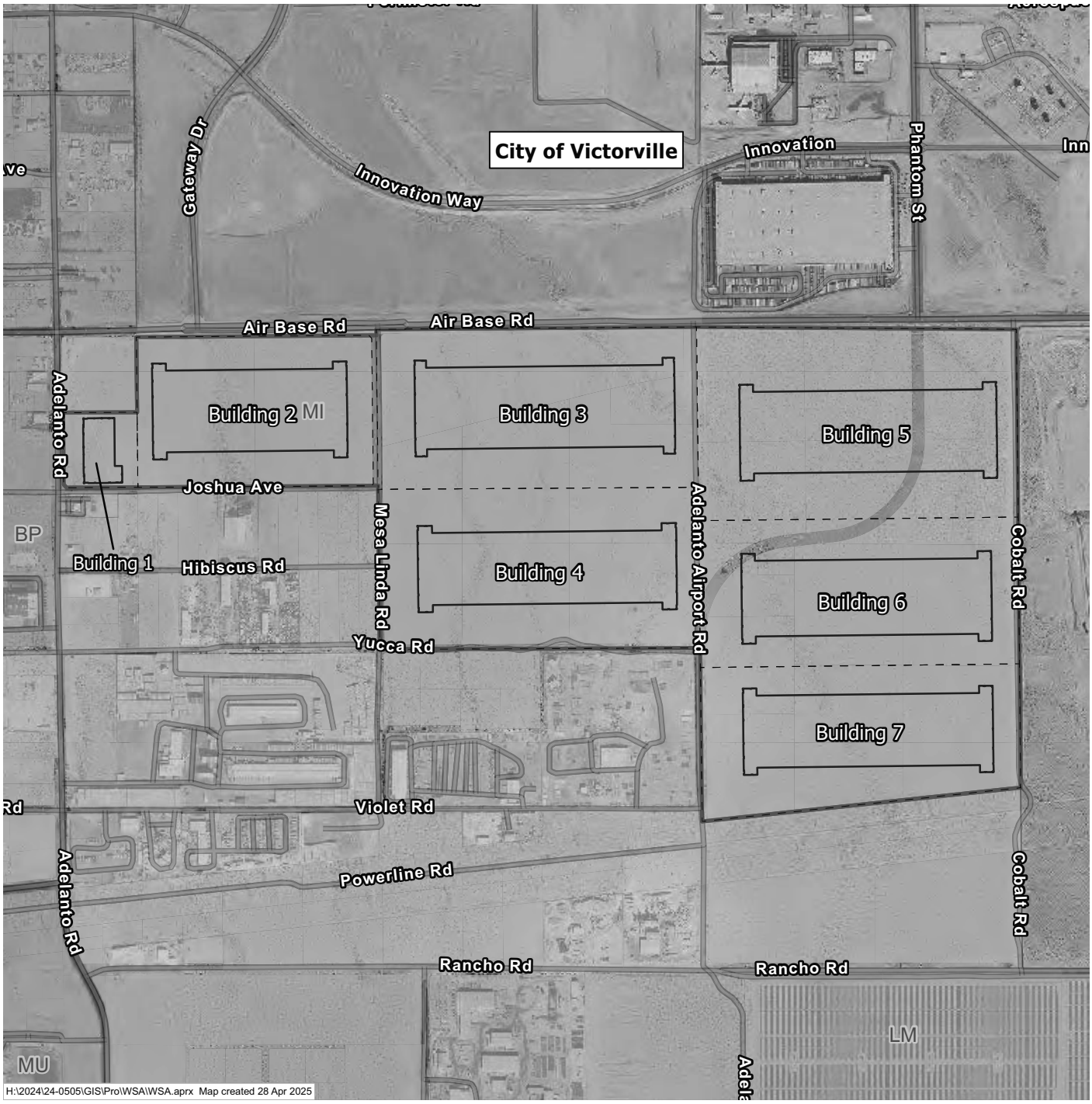
City Boundary

Project Site

Sources: City of Adelanto Land Use/Zoning last updated by the City in Sept. 2018; ESRI 2025

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FIGURE 4 LAND USE PLAN



LEGEND

- Project Site
- Parcels
- Proposed Buildings
- Business Park (BP)
- Light Manufacturing (LM)
- Manufacturing/Industrial (MI)
- Mixed Use (MU) (12-18 du/ac)

N

0 500 1,000 Ft

Sources: City of Adelanto Land Use/Zoning last updated by the City in Jan 2024; ESRI 2025

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1.4. Prior Water Supply Assessment

The City is unaware of any prior WSA prepared for the subject property.

Law

CWC Section 10910:

> *(h) Notwithstanding any other provision of this part, if a project has been the subject of a water supply assessment that complies with the requirements of this part, no additional water supply assessment shall be required for subsequent projects that were part of a larger project for which a water supply assessment was completed and that has complied with the requirements of this part and for which the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), has concluded that its water supplies are sufficient to meet the projected water demand associated with the proposed project, in addition to the existing and planned future uses, including, but not limited to, agricultural and industrial uses, unless one or more of the following changes occurs:*
>
> > *(1) Changes in the project that result in a substantial increase in water demand for the project.*
> >
> > *(2) Changes in the circumstances or conditions substantially affecting the ability of the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), to provide a sufficient supply of water for the project.*
> >
> > *(3) Significant new information becomes available that was not known and could not have been known at the time when the assessment was prepared.*

1.5. Project Relation to the Urban Water Management Plan

On August 25, 2021, the APUA adopted by APUA Resolution No. 21-05 its *2020 Urban Water Management Plan* (UWMP) and 2021 Water Shortage Contingency Plan (WSCP), a copy of which is located in Appendix A. The projected water demands of the 2020

UWMP "are based on the City's population projections in Table 3-3 of the UWMP as well as planned development" (UWMP, p. 4-2). "The projections show that population is anticipated to increase over the next five years by nearly 10% and then growth will decrease by percentage from approximately 7% to down to a 3.5% population increase through 2045" (UWMP, p. 3-16). This WSA will rely on the 2020 UWMP and more recent data provided by APUA for the forthcoming Water Master Plan, where noted.

Pursuant to Water Code section 10910(c)(2), if a project's water demand has been accounted for in the water supplier's most recent UWMP, then the WSA may use the UWMP as the source of the information required in the WSA. The determination as to whether the Project's water demand has been accounted for in the most recent UWMP is located in Section 2 – Water Demand Analysis.

Relation of Water Supplier to other Urban Water Management Plans

The City is located within the service area of Mojave Water Agency (MWA), a wholesale water supplier. A copy of MWA's 2020 UWMP is located in Appendix C. MWA documented coordination with the City, as well as the other 11 retail water suppliers within its service area for preparation of its UWMP, and included the City's projected water demands (2025-2065) into their UWMP (MWA, p. 4-7).

Law

CWC Section 10910:

> *(c) (1) The city or county, at the time it makes the determination required under Section 21080.1 of the Public Resources Code* [CEQA]*, 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.

1.6. Statewide and Local Water Conservation Efforts

The City's Mandatory Water Conservation Plan (codified in Municipal Code Chapter 8.20) and the City's Landscaping/Water Conservation Ordinance (codified in Municipal Code Chapter 17.60), provide a foundation of permanent water conservation best management practices to be implemented by water consumers at all times. These regulations also include operational best practices utilized by the City.

The 2021 Water Shortage Contingency Plan (WSCP) describes the methods to achieve and the implications of reducing water supplies to at least 50 percent (the plan is located in Chapter 8 of the 2020 UWMP). The City implements various programs to reduce customer water consumption, including stringent use restrictions, actions, and penalties, as well as public outreach, education, and communication programs.

With the signing of Assembly Bill (AB) 1668 and SB 606, the state has set an Indoor Residential Standard of 47 gallons per capita per day (GPCD) until January 1, 2030, which will decrease to 42 GPCD after 2030 (CWC section 10609.4(a)).

1.7. Methodology of Analysis

This Assessment follows DWR's *Guidebook for Implementation of Senate Bill 610 and Senate Bill 221 of 2001* (DWR 2003). Water Code citations contained herein are current through the 2024 Legislative Session. Section 1 of this Assessment describes the existing and proposed land use designations of the Project site, the proposed Project's relation to a previous WSA and the water supplier's most recent UWMP. Section 2 provides the water demand analysis of the Project; Section 3 reviews the projected water supplies for the Project; Section 4 contains the required discussion of the water supplier's groundwater supplies; and Section 5 concludes the Assessment by answering the primary question at hand.

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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) compare the calculated water demand of the proposed Project to the water demand assumed in the most recent UWMP for the same property.

Law

CWC Section 10910:

> *(c) (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.*

2.1. Citywide Factors

The UWMP Act lists several factors that affect water use to be detailed in UWMP's including climate, current and projected population, density, income, and the mix of

customer types (CWC sections 10631(e)(1)-(2)). As suggested by DWR, these data are provided herein and are taken generally from City's 2020 UWMP (Appendix A).

Climate

The City experiences, "a broad range of temperature fluctuations between summer and winter, as well as between day and night, characterize the high desert's climate. Average annual rainfall in Adelanto is just 5.52-inches that typically occur in late fall and winter, although the high desert does experience summer thunderstorms. Some snow also falls during winter months, averaging 1.4-inches annually. The average maximum and minimum temperatures are 77.5°F and 43.9°F, respectively" (UWMP, p. 3-3).

Population

Between 2000 to 2010, the City's annual average growth rate was 5.9%; however, between 2011 to 2019, the City's growth rate slowed to 1.1%. The University of California, Riverside, Center for Economic Forecasting and Development's MWA population update (the UCR Study) estimates the population of the entire MWA service area to increase by 39.2% between 2020 and 2060, compared to 21.1% for the entire county and 12.9% for the state at-large. The City's population makes up 7.26% of the MWA service area's 40-year growth. (UWMP, pp. 3-15 - 3-16.)

The current and projected populations of the City are summarized in **Table 2-1**. As of 2024, the City estimates its current population at approximately 39,000 people. Projections from the City's 2020 UWMP estimate the population to increase through 2045. (UWMP, p. 3-16.)

Table 2-1 APUA Service Area Population Estimates, 2020-2045

	2020	2025	2030	2035	2040[b]	2045
Population Served[a]	35,811	39,238	41,958	44,242	46,159	47,770
% of Mid-Range Density Buildout[b]	42%	46%	49%	52%	54%	58%

(a) UWMP, p. 3-17.

(b) WEBB(a), Table 2-3. A build-out year was not identified.

The City's Draft Water Master Plan developed for planning purposes two estimates of the City's buildout population based on the City's January 2024 land use plan and 3.90 persons per household: first, the mid-range density buildout population estimate is 84,875 persons, and second, the maximum density buildout population estimate is 134,011 persons (WEBB(a), Table 2-3). Table 2-1 shows the proportion of current population compared to the mid-range density buildout population.

The City has included future water savings in the water use projections as well as the water demands of lower income residents (UWMP, p. 4-5).

2.2. Adelanto's Current and Future Water Demand

As of CY 2024, APUA serves at least 8,425 potable water connections, of which 140 have the MI land use designation (WEBB(b), Table 3-1). The total potable water demand in CY 2024 in the APUA service area was 3,838 AF (3,426,178 gallons per day, [gpd]), of which MI land uses consumed 453 AF (404,726 gpd), or approximately 12% over the course of the year (Webb(b), Table 3-2).

The City does not currently deliver recycled water within its service area, does not export domestic water to another urban retail supplier, does not deliver water for agricultural use, and does not have a substantial percentage of industrial water use (UWMP, p. 5-3).

Table 2-2 Recorded and Current Citywide Water Demand

Customer Type	CY 2020[a]		CY 2024[b]	
	Volume (AF)	No. of Connections	Volume (AF)	No. of Connections
Single-Family Residential	2,606		2,376	7,701
Multi-Family Residential	162			
Commercial / Institutional	809		1,462	724
Industrial	0.35			
Landscape / Irrigation[c]	82			
Other	0.69			
Loss	987			
Total Potable	**4,647**	**8,228**	**3,838**	**8,425**

AF = acre feet

(a) Source: 2020 UWMP

(b) Source: Webb(a). Based on metered demands for CY 2024.

According to the data in Table 2-2, total water demand in 2020 was approximately 76% residential and 24% non-residential. According to the City's 2020 UWMP, "…it is expected that single family will continue to account for the majority of new growth during the planning horizon, with associated commercial/industrial developments. The City is currently approximately only 15 percent built out" (UWMP p. 3-2). The water demand projections of the 2020 UWMP are explained in Appendix B of the UWMP. The assumptions of the projections that pertain to non-residential (or, "Commercial, Industrial, Institutional" or "CII") water demand projections include the following:

- Non-residential water demands include Commercial, Industrial, Landscape, and Other Potable. Water loss is shared between residential and non-residential demands.
- For the year 2020, the non-residential water demand is approximately 30% (or, 36 GPCD) of the total gallons per capita per day (GPCD) of 116 GPCD.

- Non-residential water demands are the difference between current total GPCD and Residential-GPCD.
- Non-residential land uses are 25% of the City's land use plan.
- Projected non-residential water demand for the period of 2021 through 2065 is also approximately 30% of total demand (or 36 GPCD).
- Industrial water demands are projected to increase 329% from 0.35 AFY in 2020 to 1.5 AFY in 2025; and then another increase of 13% to 1.7 AFY by 2040.

The City's water demands from 2025 to 2045 as forecasted in the 2020 UWMP (UWMP, p. 4-2) are shown in **Table 2-3**. Water demand for

Table 2-3 Future Citywide Water Demand (AFY)

Customer Type	2025	2030	2035	2040	2045
Single Family Residential	3,360	3,656	3,744	3,853	3,979
Multifamily Residential	100	109	111	114	116
Commercial	874	894	950	977	1,009
Industrial	1.5	1.5	1.5	1.7	1.7
Landscape	100	105	109	112	115
Other Potable	0.5	0.5	0.5	0.6	0.6
Losses	560	494	510	526	544
Subtotal Potable Demand	4,996	5,260	5,426	5,584	5,766
Recycled Water Demand[(b)]	20	23	25	25	27
Total Water Demand	5,016	5,283	5,451	5,609	5,793

Notes: AFY = acre-feet per year.

(a) 2020 UWMP, p. 4-2.

(b) 2020 UWMP, p. 4-3. These are projections from 2020. The City does not currently use, produce, or distribute recycled water.

As shown in Tables 2-2 and 2-3, industrial water demands are projected to increase from an actual of 0.35 AF in 2020 to 1.5 AFY by 2025, which is an increase 329% from; and then another increase of 13% to 1.7 AFY by 2040.

Water use patterns change during dry years. The expected changes to water demand and water supply during dry years are provided in Section 3 – Water Supply Analysis.

2.3. Project Site Land Use Assumed in the UWMP

The City's General Plan land use plan (current as of September 2018) that was current when the 2020 UWMP was prepared, is shown in Figure 3. Using the unit water demand factors from the forthcoming Water Master Plan (WEBB(a)), the estimated potable water demands for the parcels within the Project limits that was presumably accounted for in the 2020 UWMP are shown in **Table 2-4**. Refer to **Spreadsheet 1** at the end of the report for detailed calculations.[2]

Table 2-4 Water Demand of the Project Site Land Uses Assumed in the UWMP

Land Use Designation[a]	Area (ac)	Potable Water Demand (AFY)[b] [c]
Business Park (BP)	401	449
Light Manufacturing (LM)	71	80
Total	**472**	**529**

Notes: AFY = acre feet per year. Refer to Spreadsheet 1. Values are rounded.

(a) Source: "Local Hazard Mitigation Plan" prepared by David J. Martinez, Adelanto Community Development Director, dated May 2020, located in Appendix J of 2020 Adelanto UWMP.

(b) Potable water cuty factors from WEBB(a).

(c) Excludes any system water loss.

2.4. Proposed Project Water Demand

The potable water demand of the proposed Project (Figure 4) using the unit water demand factors from the forthcoming Water Master Plan is detailed in **Spreadsheet 2** and summarized in **Table 2-5**. Notably, the land use designation of the Project site changed from BP and LM during the time the UWMP was prepared to MI. Because MI has a slightly higher unit water demand factor of 1,200 gpd/ac (as compared to the 1,000

[2] Spreadsheets 1 and 2 are located at the end of this report after Reference and before Appendices.

gpd/ac for BP and LM), the water demands of the Project are approximately 105 AFY greater with the MI designation.

Table 2-5 Proposed Project Water Demand

Land Use Designation[a]	Building No.	Construction Phase	Gross Acres	Potable Water Demand (AFY)[b] [c]
Manufacturing / Industrial (MI)	1	3	8.9	11.9
	2	1	220.1	295.9
	3			
	4			
	5	2	242.6	326.1
	6			
	7			
		Total	**472**	**634**

Notes: AFY = acre feet per year. Refer to Spreadsheet 2. Values are rounded.

(a) Source: Applicant.

(b) Potable unit water demand factors from WEBB(a).

(c) Excludes any system water loss.

Conclusion

The Project analyzed by this WSA is the proposed Adelanto Gateway Logistics Center (Figure 4). This WSA is prepared with the conservative assumption for planning purposes that all water supplied to the Project is potable. The estimated potable water demand of the Project as presented in the City's land use plan at the time the 2020 UWMP was prepared is approximately 529 AFY (Table 2-4). The estimated potable water demand of the Project as currently proposed in Figure 4 is approximately 634 AFY (Table 2-5), which is an increase of 105 AFY compared to what was assumed for the demand projections of the UWMP. Because the City's water demand projections in the 2020 UWMP were based on a land use scenario with a lower water demand than that which

is proposed by the Project, it can be deduced that the water demand for the proposed Project was not fully accounted for in the most recently adopted 2020 UWMP.

In regard to future agricultural water needs, the City does not have a land use designation strictly for traditional agricultural properties. Agricultural uses are permitted or conditionally permitted on most large residential and non-residential lots. In regard to future water demands for manufacturing, industrial land uses are planned by the City General Plan to increase (Table 2-3).

SECTION 3 - WATER SUPPLY ANALYSIS

This section identifies the sources of potable water that are available to the water supplier of the proposed Project. The purpose of this section is to evaluate the water supplies that could be used by the proposed Project during normal, single-dry, and multiple-dry water years during a 20-year projection.

The City's Water Department through the APUA is the City's water supplier and the water supplier for the proposed Project. The City has the following sources of water supply: City wells in the Alto Subarea of the Mojave Groundwater Basin; and purchased groundwater from MWA.

Law

CWC Section 10910:

> (d) (1) *The assessment required by this section shall include an identification of any existing water supply entitlements, water rights, or water service contracts relevant to the identified water supply for the proposed project, and a description of 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. Documenting Wholesale Water Supplies

Many retail water suppliers in California including the City, receive water supplies from one or more water wholesalers. SB 610 requires the WSA to document wholesale supplies by: 1) describing the quantities of water received from each wholesaler in prior years; 2) identifying existing entitlements, water rights, and/or water service contracts held by the City for the wholesale supply; 3) provide proof of entitlements, water rights, service contracts, relevant capital outlay programs, and construction permits for necessary infrastructure to deliver wholesale supplies, if any; and 4) regulatory approvals required to convey or deliver the wholesale supply.

Wholesale Supplies Received

The City purchases supplemental potable water from MWA via the Regional Recharge and Recovery ("R-Cubed") Project. MWA is a wholesale water provider and State Water Project (SWP) contractor for water that is imported from northern California via the SWP.[3] R-Cubed is a conjunctive use project that stores SWP deliveries in groundwater recharge sites along the Mojave River in Hesperia and southern Apple Valley. MWA's production wells, located just downstream from the MWA recharge sites, pump, and deliver the stored water through pipelines directly to water providers, including Liberty Utilities in Apple Valley, City of Adelanto, City of Hesperia, Golden State Water Company, San Bernardino County Service Area 64, and the Victorville Water District (MWA UWMP, p. 2-15). The R-Cubed Project can offset groundwater pumping by said retail water agencies. MWA provides this wholesale water delivery service to the City through a pipeline connection located at the City's reservoirs on

[3] MWA was created in 1960 to address declining regional groundwater levels and to ensure that sufficient water may be available to the people and land within its jurisdiction. MWA has five sources of water supply: natural surface water flows, wastewater imports from outside the MWA service area, SWP imports, agricultural depletion from storage, and return flow from pumped groundwater not consumptively used. (UWMP, p. 6-3.)

Olivine Road (aka R-Cubed Turnout #7). The R-Cubed connection to Adelanto was completed in June 2021 and became operational in late 2021. (WEBB(a), p. 4-6)

Imported water supplies to southern California including the supplies on which MWA relies can be highly variable; in December 2021 for example, the allocation of State Water Project water to all contractors was temporarily reduced to 0 percent due to persistent drought conditions.[4] And on April 20, 2023, DWR announced 100 percent of requested water supplies throughout the year would be available. The current SWP allocation for 2025 is 50 percent.[5] Nonetheless, MWA has projected 100 percent water supply reliability from 2020-2065) during average, single-dry, and multiple-dry years in its 2020 UWMP (MWA UWMP, p. 5-8).

As the local wholesaler, MWA is tasked with obtaining water to recharge groundwater basins. To do this, MWA diverts its SWP water from the East Branch of the California Aqueduct. MWA has six turnout locations on the East Branch which are used to deliver water to recharge facilities located throughout the MWA service area. The amount of imported water purchased by MWA from DWR is dictated by a contract that contains a "Table A" Annual Amount, which is the maximum amount of water MWA may receive pursuant to its contract. Since 2020, MWA's Table A Contract Allocation is 89,800 AF (MWA UWMP, p. 3-5).

According to MWA, the R-Cubed Project has a total delivery capacity of 15,000 AFY, of which 3,000 AFY (5.04 cfs or 1,860 gpm) is by-design available to the City of Adelanto, but on an interruptible basis (MWA Staff Report, 5/23/2019).[6] The minimum design flow rate is 750 gpm and the maximum design flow rate for Turnout 7 is 5,960 gpm (PDR, p. 3-14). This supply can be interrupted because the SWP supply is interruptible as

[4] Source: *State Water Project Historical Table A Allocations* (available at https://water.ca.gov/programs/state-water-project/management/swp-water-contractors)
[5] Department of Water Resources, *Notice to State Water Project Contractors No. 25-05*, April 29, 2025 https://water.ca.gov/-/media/DWR-Website/Web-Pages/Programs/State-Water-Project/Management/SWP-Water-Contractors/Files/25-05-042925.pdf.
[6] "Interruptible delivery could include such things as drought conditions which effect groundwater levels in the well extraction area, mechanical or electrical equipment failures or maintenance, or loss of use of facilities leased from the City of Victorville" (5/23/2019 MWA Staff Report to Board of Directors).

previously described, and interruptions can include maintenance or emergencies for up to several months (personal communication, MWA).

According to the Water Supply Connection Agreement between MWA and the City dated April 10, 2019 (a copy of which is located in Appendix D), "…the R-Cubed Project has been designed to deliver potable water at a reasonably constant minimum water pressure of approximately 40 psi [pounds per square inch]. There are no limits regarding time-of-use, either by time or year or time of day" (p. 4 of 10). Furthermore, "[City] should use caution in the issuance of can or will serve letters for any land use entitlement based upon State Water Project water" (p. 5 of 10). Finally, regarding billing and accounting for the water, MWA Resolution No. 1065-19 (a copy of which is located in Appendix E) approving the City's application for purchase of water from R-Cubed states, "All water delivered to Adelanto by MWA via R-Cubed will be considered Annual Production of Adelanto under the Judgment and will be subject to all assessments and provisions of the Judgment." In short, MWA will invoice the City monthly for R-Cubed water delivery charges and Watermaster will also invoice the City annually for Watermaster assessments if the combination of City wells and R-Cubed Project deliveries exceed the City's Free Production Allowance (FPA).

The MWA Board of Directors set the fee for local power costs of the R-Cubed pipeline at $171/AF for FY 2025-26 (MWA Resolution No. 1169-25). The R-Cubed system is currently in Phase 1. If Phase 2 of the R-Cubed project proceeds in the future by MWA to expand pumping capacity to 40,000 AFY, then MWA would need to construct more wells and a booster station. However, the R-Cubed pipeline to Adelanto is already sized for Phase 2 capacity (personal communication, MWA).

3.2. Documenting Water Supplies

The City obtains all of its water supply from local groundwater in the Mojave River Groundwater Basin, commonly referred to as the Mojave Basin Area. The City of Adelanto is one of ten major retail purveyors that provide the majority of water in the Mojave Basin Area under MWA's management.

The City has one emergency intertie with neighboring water agency Victorville Water District (VWD). The intertie is 12-inch diameter and allows water to flow either direction between agencies. The intertie agreement between the City and VWD was renewed July 1, 2024 and will expire June 30, 2029. Because the Agreement does not stipulate a maximum volume or flow rate for the City, this WSA assumes a supply equivalent to the amount conveyed in CY 2024, which was 629 AF (Table 3-1). A copy of the original agreement and subsequent amendments between the City and VWD is located in **Appendix G.**

The recorded water supplies available to Adelanto from CY 2010 through CY 2024 are provided in **Table 3-1** (next page) and the projected water supplies available to the City from 2025-2045 according to the 2020 UWMP are provided in **Table 3-2.** Each water supply source is identified as a water supply entitlement, water right, or water service contract per SB 610 guidance. Appropriative rights to groundwater are discussed in Chapter 4 – Groundwater Analysis.

Table 3-1 Recorded Adelanto Water Supplies (AFY)

Source	2010[a]	2015[b]	2016	2017	2018	2019	2020[c]	2021[e]	2022[e]	2023[e]	2024[e]	Form of Right	Amount of Right
City Wells	4,866	3787	4,181	3,599	3,963	3,631	3,785	3,423	3,080	2,579	2,750	Appro-priative	Varies
R-Cubed	--	--	--	--	--	--	--	666	1,457	1,763	1,870	Contract	3,000 AFY
VWD Emer-gency Intertie[d]		262	3	724	178	852	862	0	0	130	629	Contract	--
Total Supply	4,866	4,049	4,184	4,323	4,141	4,483	4,647	4,089	4,537	4,472	5,249	--	--

Notes: FY = fiscal year; AFY = acre-feet per year; mgd = million gallons per day; WY = water year (October 1 to September 30); CY = calendar year

(a) From City of Adelanto 2010 UWMP, p. 2-4 (CY)

(b) From City of Adelanto 2015 UWMP, p. 6-4 (CY).

(c) From City of Adelanto 2020 UWMP, p. 6-6 (CY).

(d) VWD Intertie refers to the City's connection with Victorville Water District (VWD). VWD can export water to the City but obtains this water from its local groundwater sources. (2020 UWMP, p. 6-5). This source is now considered an emergency intertie.

(e) From WEBB(a), Figure 4-3.

Table 3-2 Projected Adelanto Water Supplies (AFY)

Source	2025	2030	2035	2040	2045	Form of Right	Amount of Right
Wells[a]	2,851	2,851	2,851	2,851	2,851	Appropriative	Varies
Purchased MWA[b]	2,145	2,409	2,575	2,733	2,915	Contract	3,000 AFY
Potable	4,996	5,260	5,426	5,584	5,766	--	--
Recycled	20	23	25	25	27	Contract	
Total Supply	5,016	5,283	5,451	5,609	5,793	--	--

Note: AFY = acre feet per year; FY = fiscal year; mgd = million gallons per day.

Source: Adelanto 2020 UWMP, p. 6-28.

(a) Calculated as the Free Production Allowance in 2020, which was 55% of the BAP.

(b) Calculated as the difference between projected demands and the Free Production Allowance. Presumably met with R-Cubed project.

The City anticipates increasing its total water supply by pursuing: 1) full utilization of the City's groundwater rights in the Mojave Basin Area allowed under the Mojave Basin Area Groundwater Adjudication Judgment; 2) expanding use of recycled water; and 3) development of a new production well (UWMP, p. 6-26-6-27).

Water Supply Capacities

The capacity of the supply system refers to the maximum production or conveyance rate based on the pipe diameter and pump capacity infrastructure. For example, the capacity of groundwater wells often refers to a pumping rate based on running the pumps at full utilization, 24-hours a day, 7 days a week. Although this maximum rate of pumping is assumed in terms of comparing capacities, pumps are rarely used at more than two-thirds capacity. Although the infrastructure may allow for a certain flow rate, that rate may not be achieved due to a limitation in the supply itself and/or a limitation on the water right/contract/allocation. Nonetheless, knowing the system capacity is important to ensure the City can meet all demands imposed upon the system,

specifically meeting "average day demand" and "maximum day demand."[7] Demand can be met with multiple supply sources, storage, or a combination of both. The City's reservoirs are not discussed in this Assessment, however, they are used to regulate hourly fluctuations in demand, provide fire flow, and supplement supply during an extended outage of a source including emergency storage. According to the California Code of Regulations, the City is required to have enough source capacity to meet the MDD at all times. The MDD based on 2024 meter data is 4,759 gpm (WEBB(a), Table 6-6). The existing (2024) maximum capacities of the City's water supply infrastructure are provided in **Table 3-3**.

Table 3-3 Existing (2024) Supply Capacities

Source	Capacity (gpm)	Capacity (AFY)
Existing Wells[(a)]	1,315	2,121
R-Cubed Project[(b)]	5,960	9,614
VWD Emergency Intertie[(c)]	390	629
Total Existing Supply Capacity	7,665	12,993
Current MDD	4,759 (ADD = 2,379 gpm)	7,676 (21 AF/day)

Note: AFY = acre-feet per year; gpm = gallons per minute; VWD = Victorville Water District

Source: From WEBB(a), Table 4-2.

(a) Firm capacity assuming the largest well is out of service.

(b) Based on maximum design capacity of 5,960 gpm (PDR); however, the existing contract between City and MWA is limited to 3,000 AF per year.

(c) Agreement located in Appendix G does not stipulate a maximum volume or flowrate; therefore, the volume conveyed in CY 2024 is conservatively assumed to be the available capacity since this is an emergency supply source.

Because the current MDD is less than the total existing capacity, adequate water supply capacity exists to meet existing water demands.

[7] Maximum Day Demand (MDD) is the amount of water utilized by consumers during the highest day of use (midnight to midnight), excluding fire flow (CCR Title 22 Section 64554). Average Day Demand (ADD) is not defined in the CCR but is generally accepted in California as the total annual water usage divided by 365 days.

According to the forthcoming Water Master Plan, the estimated MDD for the next ±10 years (referred to as the "Mid-Term" condition) is estimated at 5,398 gpm (ADD = 2,669 gpm), which is still less than the existing supply capacity of 7,665 gpm shown in Table 3-3 (WEBB(a), p. 3-9).

According to the forthcoming Water Master Plan, the water supply capacity necessary for ultimate buildout of the City based on the current Land Use Plan, which is estimated to be enough demand to generate an ADD of 25,474 gpm, is significantly more than the City's existing infrastructure can convey (WEBB(a), p. 3-9). The additional water supply, water rights/entitlements/contracts, and water supply capacity required to meet the difference between mid-term condition and ultimate buildout are not currently known, but could include one or more of the following:

- Drill and equip more City groundwater wells and pay the replenishment fee to Watermaster.
- Fully utilize the R-Cubed project water and support a future Phase 2 capacity expansion by MWA to 40,000 AFY of groundwater, as needed.
- Expand groundwater recharge projects within the City, upstream of existing or future well sites.

The City does not have demonstrable commitments at this time for these conceptual projects to support ultimate buildout (WEBB(a)). However, buildout is expected to occur more than 20 years into the future based on the current rate of growth (Table 2-1).

3.3. Descriptions of All Water Supply Projects

City Well Production

The City currently has nine active groundwater wells, one inactive well, 11 abandoned wells, and three destroyed wells (WEBB(a), p. 4-1). Some of the current inactive wells may be returned to service in future years, although most may be abandoned or become monitoring wells. All wells are located within the City of Adelanto accessing

the Mojave River Groundwater Basin (also referred to as the Mojave Basin Area), Alto Subarea. (UWMP, p. 7-2.) The Mojave Basin Area is within the South Lahontan Hydrologic Region. The Mojave Basin covers an area of approximately 1,400 square miles and has an estimated total water storage capacity of an estimated 5 million AF (UWMP, p. 6-6).

During CY 2024, City wells produced 2,750 AF from the Alto Subarea (WEBB(a), Figure 4-3). The City's existing firm well capacity is 1,315 gpm based on the average production during CY 2024 with the largest well out of service (Table 3-3).[8] The recorded extractions from City wells between CY 2016 and 2024 are shown in **Table 3-6.**

Table 3-4 Recorded City Groundwater Production, CY 2016-2024 (AFY)

Supply	2016	2017	2018	2019	2020	2021	2022	2023	2024
City wells in Alto Subarea	4,181	3,599	3,963	3,631	3,785	3,423	3,080	2,579	2,750

Note: AFY = acre feet per year.
Source: For 2016-2020 from UWMP, p. 6-6 and for 2021-2024 from WEBB(a), Figure 4-3.

In 2020, approximately 82 percent of the City's water supply came from groundwater pumped by City wells in the Alto Subarea (UWMP, p. 6-5). The City is in the process of preparing an updated Water Master Plan with projects aimed at improving groundwater production capacity (WEBB(a)). A thorough description of the City's groundwater rights pursuant to SB 610 guidance is provided in Section 4 – Groundwater Analysis.

R-Cubed Project with Mojave Water Agency

The R-Cubed Project (Regional Rehabilitation and Recovery Project) is a conjunctive use project constructed by MWA as a basin management tool that imports and recharges SWP water to be stored underground in the local aquifer and later recovers

[8] Based on average production rates recorded over CY 2024.

and distributes water to local retail water purveyors in lieu of pumping water from production wells. MWA maintains three Mojave River recharge sites in the upper Alto Subarea, all upstream of the six R-Cubed Wells that were constructed by MWA for the project. The MWA-owned production wells are on either side of the Mojave River located immediately downstream of the recharge area recover and deliver the water through pipelines directly to retail water agencies in lieu of retail agencies utilizing some of their own production wells, which allows the pumping depressions some recovery. (UWMP, p. 6-14.)

Water pumped by MWA for the City's allocation of R-Cubed water is billed through the Watermaster and any water pumped in excess of the retailers' Free Production Allowance is billed as Replacement Obligation and met through MWA's groundwater storage account. This method of water basin management targets the specific local well pumping depressions for the wells the retail agencies would normally use so they can reduce or eliminate pumping from them while taking R-Cubed water. (UWMP, p. 6-15.)

In CY 2024, the City purchased approximately 1,870 AF from MWA for R-Cubed water (Table 3-1). As shown in Table 3-2, the water supply from MWA to the City is projected to stay within the City's current contract amount for R-Cubed of 3,000 AFY. The City's groundwater rights are described in Section 4 – Groundwater Analysis.

Recycled Water Supplies

The City is the sole agency for collecting, treating and discharging wastewater within its service area through the Adelanto Wastewater Treatment Facility. The City of Adelanto does not currently distribute recycled water. Although the facility produces treated effluent suitable for landscape irrigation and other beneficial uses, it is not fully complete and no transmission lines have been constructed. All treated effluent from the City's wastewater facility is therefore infiltrated into the ground adjacent to the facility. According to the terms of the Judgment, there are no credits to any Party for treated wastewater effluent infiltration (personal communication, Watermaster Services Manager, 5/12/25) According to the UWMP, the City's recycled water use was

expected to begin by 2025 and make small increases through 2045 for landscape irrigation purposes as shown in **Table 3-5**.

Table 3-5 Recorded and Future Recycled Water Supply (AFY)

Adelanto Wastewater Treatment Facility	Actual	Projected[a]				
	2020	2025	2030	2035	2040	2045
Est. Volume of Wastewater Collected	3,001	3,247	3,419	3,527	3,630	3,748
Est. Beneficial Uses for City-Owned Landscape Irrigation	0	20	23	25	25	27

Note: AFY = acre feet per year

Source: 2020 UWMP, p. 6-22. All treated effluent is discharged to the ground by infiltration ponds.

(a) Estimated wastewater collected at the City's wastewater treatment plant is calculated as 65% of potable water demand.

As shown in Table 3-5, landscape irrigation at City-owned properties is projected to have demand for recycled water within the APUA service area over the next 20 years.

3.4 Documenting Normal Year Water Supply and Demand

The City assumed in its 2020 UWMP, which was not prepared by WEBB, that the projected water supply available to the City is equivalent to the Production Safe Yield (PSY)[9] of the Alto Subarea, which was 64,406 AFY in 2020 (MWA 2019-20 Report, Table 5-1). This is significantly more than the projected water demands shown in Table 2-3 and projected water supplies shown in Table 3-2 (2020 UWMP, p. 7-8). And it is more than what can be conveyed with the City's existing infrastructure (Table 3-3). Furthermore, the Alto Subarea is also used by other retail water suppliers and private

[9] The Judgment defines Production Safe Yield as follows: *The highest average Annual Amount of water that can be produced from a Subarea: (1) over a sequence of years that is representative of long-term average annual natural water supply to the Subarea net of long-term average annual natural outflow from the Subarea, (2) under given patterns of Production, applied water, return flows and Consumptive Use, and (3) without resulting in a long-term net reduction of groundwater in storage in the Subarea.*
Consumption or Consumptive Use are defined as: *The permanent removal of water from the Mojave Basin Area through evaporation or evapo-transpiration.*

wells (e.g., Helendale Community Services District, Hesperia Water District, Victorville Water District, etc.). Nonetheless, the City's 2020 UWMP projects a water supply that exceeds projected demands during "normal" precipitation years occurring between 2025 and 2045.

Table 3-6 Projected Normal Year Supply and Demand (AFY)

Adelanto	2025	2030	2035	2040	2045
Supply[a]	64,426	64,429	64,155	64,431	64,433
Demand[a]	5,016	5,283	5,451	5,609	5,793
Difference	+59,410	+59,146	+58,704	+58,822	+58,640

Note: AFY = acre feet per year
Source: From 2020 UWMP, p. 7-8.
(a) Includes potable and recycled water supplies and demands.

Another way to consider the normal year supply and demand scenario is to use the more realistic projected water supplies from Table 3-2 instead of the Production Safe Yield of the Alto Subarea. Table 3-7 shows that supply equals demand. Note that actual CY 2024 supply was 5,249 AF (Table 3-1), of which 1,870 AF came from the R-Cubed project. The City can take up to 3,000 AFY of R-Cubed water supply, which would be 1,130 AF more than used in CY 2024. That would be a potential supply of 6,379 AFY (assuming no change in City well production).

Table 3-7 Alternative Projected Normal Year Supply and Demand (AFY)

Adelanto	2025	2030	2035	2040	2045
Supply[a]	5,016	5,283	5,451	5,609	5,793
Demand[b]	5,016	5,283	5,451	5,609	5,793
Difference	0	0	0	0	0

Note: AFY = acre feet per year
(a) From Table 3-2 (originates from Adelanto 2020 UWMP, p. 6-28). Includes potable and recycled water supplies.

(b) From Table 2-3 and Table 3-6 (originates from Adelanto 2020 UWMP, p. 4-2). Includes potable and recycled water demands.

3.5 Documenting Single Dry Year Water Supply and Demand

To calculate projected water supplies and water demands, the City's 2020 UWMP assumed a one percent increase to normal water demands, which is consistent with the estimated increase in demand that the City experienced in 2012 (the first year of a five-year drought) (UWMP, p. 7-8). The City has determined that the water demands during single dry years over the next 25 years will be met, based on a water supply that equals the Alto Subarea's Production Safe Yield as of 2020, as shown in **Table 3-8**.

Table 3-8 Projected Single Dry Year Supply and Demand (AFY)

Adelanto	2025	2030	2035	2040	2045
Supply[a]	64,426	64,429	64,155	64,431,	64,433
Demand[a]	5,066	5,336	5,505	5,665	5,824
Difference	+59,630	+59,093	+58,650	+58,766	+58,582

Note: AFY = acre feet per year
Source: From 2020 UWMP, p. 7-9.
(a) Includes potable and recycled water supplies and demands.

Another way to consider the single dry year supply and demand scenario is to use the more realistic projected water supplies from Table 3-2 instead of the Production Safe Yield of the Alto Subarea. The comparison in Table 3-9 suggests that water supplies would be less than water demands based on the City's assumption that demands for water would increase by 1 percent in a single dry year scenario. However, the City does not fully utilize its supply allotment available from the R-Cubed project, which is approximately 1,130 AF more and could more than adequately the one percent increase in demand shown in Table 3-9.

Table 3-9 Alternative Projected Single Dry Year Supply and Demand (AFY)

Adelanto	2025	2030	2035	2040	2045
Supply[a]	5,016	5,283	5,451	5,609	5,793
Demand[b]	5,066	5,336	5,505	5,665	5,824
Difference	(50)	(53)	(54)	(56)	(31)
Difference as % of Demand	1%	1%	1%	1%	0.5%

Note: AFY = acre feet per year
(a) Represents Normal Year Supply from Table 3-2 (originates from Adelanto 2020 UWMP, p. 6-28). Includes potable and recycled water supplies.
(b) From 2020 UWMP, p. 7-9. Includes potable and recycled water demands.

3.6 Documenting Multiple Dry Year Supply and Demand

To calculate projected water supplies and demands, the City's 2020 UWMP assumed a one percent increase in demand is used for the first year in this scenario. The subsequent years used a five percent annual decrease in demand. For projected water demands over a multiple (five-year) period, the drought experience of 2012–2016 was used to inform Table 3-10. A The projected water supply over the five-year dry period are equivalent to the water supply projected during a "normal" year and a single-dry year. (UWMP, p. 7-9.)

The City has projected there is a sufficient projected water supply to meet projected water demands during future five consecutive year drought periods, based on a water supply equal to the Alto Subarea's Production Safe Yield as of 2020, as shown in **Table 3-10** (next page).

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Table 3-10 Projected Multiple Dry Year Supply and Demand (AFY)

Adelanto		2025	2030	2035	2040	2045
First Year	Supply[a]	64,426	64,429	64,155	64,431	64,433
	Demand[a]	5,066	5,336	5,505	5,665	5,824
	Difference	+59,360	+59,093	+58,650	+58,766	+58,582
Second Year	Supply[a]	64,426	64,429	64,155	64,431	64,433
	Demand[a]	4,766	5,020	5,180	5,330	5,505
	Difference	+59,660	+59,409	+58,975	+59,101	+58,928
Third Year	Supply[a]	64,426	64,429	64,155	64,431	64,433
	Demand[a]	4,529	4,770	4,922	5,065	5,231
	Difference	+59,897	+59,659	+59,233	+59,366	+59,202
Fourth Year	Supply[a]	64,426	64,429	64,155	64,431	64,433
	Demand[a]	4,303	4,533	4,677	4,813	4,971
	Difference	+60,123	+59,896	+59,478	+59,618	+59,462
Fifth Year	Supply[a]	64,426	64,429	64,155	64,431	64,433
	Demand[a]	4,089	4,307	4,445	4,573	4,723
	Difference	+60,337	+60,122	+59,710	+59,858	+59,710

Note: AFY = acre-feet per year

From 2020 UWMP, p. 7-9.

(a) Includes potable and recycled water supplies and demands.

Instead of using the Production Safe Yield of the Alto Subarea as the available water supply, the normal year water supply has been used in Table 3-11 as an alternative and more realistic comparison of supply and demand. The fluctuations in multiple dry year water demands in Table 3-11 are based on what was observed during the 2012-2015 drought. Water demand in year one is projected to increase by about one percent followed by decreasing demands as a result of conservation efforts taking effect. "…the City experienced an actual decrease of between one and 14 percent (average 3.7% decrease) in demand during the subsequent years of the 2012-2015 drought…" (UWMP, p. 7-9).

Table 3-11 Alternative Projected Multiple Dry Year Supply and Demand (AFY)

Adelanto		2025	2030	2035	2040	2045
First Year	Supply[a]	5,016	5,283	5,451	5,609	5,793
	Demand[b]	5,066	5,336	5,505	5,665	5,824
	Difference	-50	-53	-54	-56	-31
Second Year	Supply[a]	5,016	5,283	5,451	5,609	5,793
	Demand[b]	4,766	5,020	5,180	5,330	5,505
	Difference	250	263	271	279	288
Third Year	Supply[a]	5,016	5,283	5,451	5,609	5,793
	Demand[b]	4,529	4,770	4,922	5,065	5,231
	Difference	487	513	529	544	562
Fourth Year	Supply[a]	5,016	5,283	5,451	5,609	5,793
	Demand[b]	4,303	4,533	4,677	4,813	4,971
	Difference	713	750	774	796	822
Fifth Year	Supply[a]	5,016	5,283	5,451	5,609	5,793
	Demand[b]	4,089	4,307	4,445	4,573	4,723
	Difference	927	976	1,006	1,036	927

Note: AFY = acre-feet per year
(a) Represents Normal Year Supply from Table 3-2 (originates from Adelanto 2020 UWMP, p. 6-28). Includes potable and recycled water supplies.
(b) Represents observed water demand pattern from 2012-2015 drought. From 2020 UWMP, p. 7-9. Includes potable and recycled water demands.

The multiple dry year scenario in Table 3-11 suggests that with implementation of conservation measures, water demands are projected to be met except in year one. However, with the additional available supply from R-Cubed project, the water demands in year one are anticipated to be met.

3.7 Comparison of Available Water Supply and Demand

Currently (2024), the City can pump from its own wells as much water as it can put to beneficial use as there is technically no hard cap to groundwater production according to the Mojave Basin Judgment. City wells produced 2,750 AF in CY 2024 with a pumping capacity of 1,705 gpm (Table 3-3). Pursuant to the Judgment, the City can produce up to 2,820 AFY from its wells and the R-Cubed Project (combined) without incurring a fee from Watermaster for replacement water. The City can purchase up to 3,000 AFY of supply through the R-Cubed Project; of which it has not fully utilized. Therefore, current water supplies meet current water demands and based on the projected growth rate of the City (Table 2-1), supplies will meet demand for at least the next 20 years combined with demand management measures such as conservation and water loss control. However, MWA's water supply for recharge in the Alto Subarea is limited by the available State Water Project water, and the City's pumping capacity of existing wells is limited.

As shown in Tables 3-6, 3-8, and 3-10, the future water supplies available to the City are projected to meet the projected water demands for the service area based on the City's adopted UWMP assumption that the Production Safe Yield of the Alto Subarea can be considered the City's projected reasonably available water supply. An alternative comparison was performed herein to develop a more realistic water supply scenario, as shown in Tables 3-7, 3-9, and 3-11. The alternative scenarios suggest that although water demands may increase in a single dry year, it is only by one percent, and with subsequent drought years, water demands have been observed to decrease in response to conservation efforts. Through full utilization of the R-Cubed project, the City should be able to meet projected water demands during normal, single dry, and multiple dry years.

Section 4 will discuss the City's water rights in light of this water supply and capacity analysis.

SECTION 4 - GROUNDWATER ANALYSIS

SB 610 requires specific groundwater information to be included in the WSA if groundwater will be a source of water for the proposed project. As discussed in Section 3, groundwater is the source of supply for the City and therefore makes up the water supply for the proposed Project.

Law

CWC Section 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) A description of any groundwater basin or basins from which the proposed project will be supplied.*
>
> *(B) 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 in 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.*
>
> *(C) For a basin that has not been adjudicated that is a basin designated as a high- or medium- priority pursuant to Section 10722.4, information regarding the following: (i) Whether the department has identified the basin as being subject to critical conditions of overdraft pursuant to Section 12924. (ii) If a groundwater sustainability agency has adopted a groundwater sustainability plan or has an approved alternative, a copy of that alternative or plan.*

(D) For a basin that has not been adjudicated that is a basin designated as low- or very low priority pursuant to Section 10722.4, information as to whether the department has identified the basin or basins as overdrafted or has projected that the basin will become overdrafted 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 subparagraph D, paragraph (4) of subdivision (b) of Section 10631.

4.1 Review of Urban Water Management Plan (CWC Section 10910(f)(1))

The City's 2020 UWMP was adopted by APUA Resolution No. 21-05 on August 25, 2021 (located in Appendix A). The UWMP includes information relevant to the identified water supply for the proposed Project and is incorporated herein. Relevant information includes: 1) current and projected water demands (*Water Use Characterization*) through year 2045; 2) a description of the Mojave Area Groundwater Basin (*Water Supply Characterization*); 3) the reliability of the water supply, projected supply and demand comparisons, and water shortage plans (*Water Service Reliability and Drought Risk Assessment and Water Shortage Contingency Plan*); and 4) water demand management efforts (*Demand Management Measures*).[10]

4.2 Groundwater Basin Descriptions (CWC Section 10910(f)(2))

The City obtains all of its water supply from the Alto Subarea of the Mojave Basin Area.

Mojave River Groundwater Basin

The Mojave River Groundwater Basin (also referred to as Mojave Basin Area[11]) covers approximately 1,400 square miles and has an estimated total water storage capacity of nearly 5 million acre-feet (AF). The Mojave Basin Area was the subject of a court ordered adjudication in 1993 due to rapid growth within the area, increased withdrawals, and lowered groundwater levels. The court's Judgment appointed Mojave Water Agency (MWA) as Watermaster of the Mojave Basin Area. For management purposes under the Mojave Basin Judgment, MWA subdivided the Mojave River watershed and associated groundwater basins into five subareas: Alto, Baja, Centro, Este, and Oeste. The subarea boundaries are generally based on hydrologic divisions defined in previous studies, evolving over time based on a combination of hydrologic,

[10] Words and phrases italicized in parentheses are in reference to chapters so titled in the 2020 UWMP.
[11] The Mojave Groundwater Basin is all or a portion of 36 groundwater basins and subbasins as defined by DWR Bulletin 118-03. Collectively, these basins and subbasins are broadly grouped into two larger hydrogeologically distinct areas. Basins along the Mojave River and adjacent areas are referred to as the Mojave River Groundwater Basin; the area is commonly referred to as the Mojave Basin Area. Source: MWA 2020 UWMP, Section 3.2.1.

geologic, engineering and political considerations. Also for the purposes of implementing the Judgment, the northern part of the Alto Subarea was defined as a sub-management unit – the Alto Transition Zone; this zone was created to acknowledge local geology and to better understand the water flow from Alto to Centro. The City of Adelanto lies within MWA's Alto Subarea. The State Department of Water Resources (DWR) identifies the Mojave Basin Area as nine sub-basins. Basin No. 6-42, Upper Mojave River Valley Basin underlies the City of Adelanto (Bulletin 118).[12] DWR Bulletin 118 (2003 update, p. 1) describes the Upper Mojave River Valley Basin as follows:

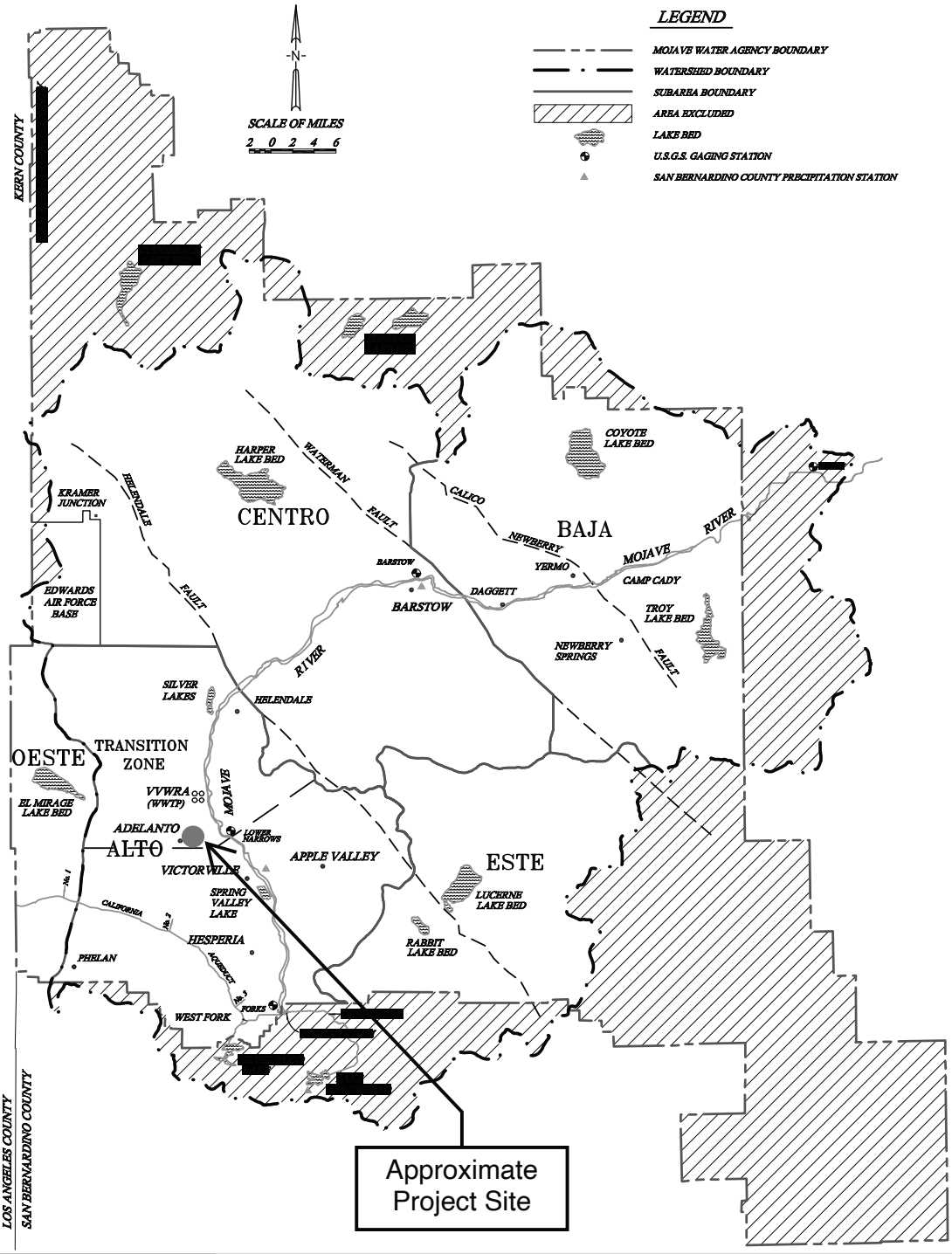
> *The groundwater basin is bounded on the north by a roughly east-west line from basement rock outcrops near Helendale to those in the Shadow Mountains. The southern boundary is the contact between Quarternary sedimentary deposits and unconsolidated basement rocks of the San Bernardino Mountains. The basin is bounded on the southeast by the Helendale fault and on the east by basement exposures of the mountains surrounding Apple Valley. In the west, the boundary is marked by a surface drainage divide between this basin and El Mirage Valley Basin, and a contact between alluvium and basement rocks that form the Shadow Mountains.*

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[12] DWR collects, summarizes, and evaluates groundwater data in the "Bulletin 118" series, which present the results of basin evaluations and defines the boundaries of California's 515 alluvial groundwater basins. An update was provided in 2016. In Bulletin 118, DWR identifies each basin and sub-basin with a number code.

FIGURE 5

MOJAVE RIVER GROUNDWATER BASIN AND SUB-AREAS



H:\2024\24-0505\GIS\Pro\WSA\WSA.aprx Map created 18 Apr 2025

Sources: 2023-24 Thirty-First Annual Report

ALBERT A. WEBB ASSOCIATES

The Mojave Basin Area is an adjudicated basin and has been studied extensively by the court-appointed Watermaster, with reports available at www.mojavewater.org. The following is an excerpt that describes the Mojave Basin Area geology and hydrogeology from MWA UWMP 2020 (pp. 3-14-3-15):

> *…a more refined examination of the hydrostratigraphy has allowed for differentiation between the more permeable Floodplain Aquifer that has a limited extent along the Mojave River and the more extensive but less permeable Regional Aquifer. In the Mojave Basin Area, Alto, Centro, and Baja Subareas contain both the Floodplain Aquifer and the Regional Aquifer while Oeste and Este Subareas only contain the Regional Aquifer. The Floodplain Aquifer is composed of sand and gravel weathered from metamorphic and granitic rocks of the San Gabriel and the San Bernardino Mountains, respectively, and deposited in a fluvial environment. The Floodplain Aquifer is directly recharged by infiltration of surface flows from the Mojave River during the winter rainy season. Recharge is greater near the mountain front where surface flows are more frequent. The Regional Aquifer underlies and surrounds the Floodplain Aquifer with interconnected alluvial fan and basin fill deposits. The Regional Aquifer is generally recharged by groundwater movement from the Floodplain Aquifer to the Regional Aquifer, infiltration of runoff from the higher altitudes of the San Gabriel and San Bernardino Mountains, and smaller amounts of runoff from local intermittent streams and washes.*

Legal Right to Pump from the Mojave Basin Area

Water rights to the Mojave Basin Area were adjudicated by the Superior Court of the State of California for the County of Riverside in 1996 (a copy of the Judgment documents are provided in Appendix F). The Mojave Basin Area Watermaster is

comprised of five Subarea Advisory Committees.[13] The Mojave Basin Area Watermaster carries out the provisions of the Judgment including monitoring of the Mojave Basin Area and files an annual report on pumping and replenishment.

The Mojave Basin Judgment assigned Base Annual Production (BAP) rights to each water supplier using 10 AF or more, based on historical groundwater production during the period 1986-1990. The City's BAP is 5,182 AF. The Judgment then allocates a Free Production Allowance (FPA), which is a percentage adjusted annually of the BAP and the limit that a supplier may pump without paying for replacement water. The City's FPA is 50.4% of the BAP, or 2,612 AF. "The Judgment's purpose is to balance supply and demand and allocate the cost to parties that over pump FPA" (MWA Draft 31st Annual Report, p. 38). The BAP for the whole Subarea is reduced or "ramped-down" over time until the Subarea FPA comes within 5 percent of the Subarea Production Safe Yield as defined by the Judgment (UWMP, p. ES-3). "The purpose of Rampdown is not to cause a reduction in pumping but a reduction in FPA to cause imported water supply to be purchased to offset deficits" (MWA Draft 31st Annual Report, p. 38).

According to Watermaster's Draft 31st Annual Report for WY 2023-2024, the BAP of the Alto Subarea is 116,412 AFY, with a Production Safe Yield for the entire subarea of 62,005 AFY. Verified production in Alto Subarea during WY 2023-2024 was 71,841 AFY. The Draft FPA for the Alto Subarea is planned to decrease further to 50.4% of Base Annual Production for WY 2025-26 (MWA Draft 31st Annual Report, p. 39).

Production Safe Yield is defined by the Judgment as the highest average annual amount of water that can be produced from a Subarea: (1) over a sequence of years that is representative of long-term average annual natural water supply to the Subarea net of long-term average annual natural outflow from the Subarea, (2) under given patterns of Production, applied water, return flows and Consumptive Use, and (3)

[13] Section V (D) of the Mojave Basin Area Judgment states, "Producers in each of the five Subareas are hereby authorized and directed to cause committees of Producer representatives to be organized and to act as Subarea Advisory Committees."

without resulting in a long-term net reduction of groundwater in storage in the Subarea (MWA Draft 31st Annual Report, p. 37).

The purpose of the Production Safe Yield calculation is to help set the FPA to allocate the cost of imported water to producers that over pump their FPA. In WY 2024-2025, an update to the Production Safe Yield and Consumptive Use, and Free Production Allowance for each subarea was completed at the court's request. The current Production Safe Yield was set by the Watermaster as of May 1, 2023.

Table 4-1 – PSY, BAP, and FPA for Alto Subarea and City

	Alto Subarea	City of Adelanto
2024 Production Safe Yield (PSY)	62,005	n/a
Base Annual Production (BAP)	116,412	5,182
2024-25 Free Production Allowance (FPA)	59,774	50.4% of BAP (2,612)
2023-24 Verified Production	71,841	4,248 (6% of Alto Subarea Verified Production)

Unless otherwise noted, all amounts shown are in acre-feet (AF).

Source: *Draft 31st Annual Report of the Mojave Basin Area Watermaster, Water Year 2023-2024, February 26, 2025, May 1, 2025.*

The Watermaster's 31st Annual Report, Water Year 2023-24 (May 1, 2025) states additional rampdown of the FPA in the Alto Subarea could be made if conditions warranted. The Watermaster monitoring wells in the vicinity of the City's municipal water supply well show seasonal variability but no long-term downward trend (MWA Draft 31st Annual Report, pp. 24-25). Conservation, importation of SWP water, the R-Cubed project, and implementation of the Judgment have resulted in hydrologic balance in the Alto Subarea (UWMP, p, 6-11).

Any Producer that pumps more than their FPA must purchase Replacement Water from the Watermaster equal to the amount of production in excess of their total available FPA, or transfer unused FPA from another party within their Subarea. Funds

collected for Replacement Water are then used by the MWA for purchase of SWP supplies are recharged into the Subarea they were produced from (UWMP, p. 6-11).

All Producers in each Subarea are allowed to produce as much water as they need annually to meet their requirements, subject to compliance with the Physical Solution set forth in the Judgment. An underlying assumption of the Judgment is that sufficient water will be made available to meet the needs of the Basin in the future from a combination of natural supply, imported water, water conservation, water reuse and transfers of FPA among Producers. Special provisions for environmental protection are included in the Judgment, including the creation of a Biological Resources Trust Fund. The funds are provided to secure a water supply in the event that groundwater levels within specific areas are not maintained sufficient to support existing riparian vegetation. (UWMP, pp. 6-11 – 6-12.)

The Physical Solution of the Judgment proposed in the Stipulated Judgment is defined as "an equitable remedy designed to alleviate overdrafts in a basin, consistent with the constitutional mandate to prevent waste and unreasonable water use and to maximize the beneficial use of the limited resource for water production by the remaining Producers." (UWMP, p. 6-8.)

The proposed Stipulated Judgment also created a class of minimal producers (that is, water producers using 10 AF of water per year or less) who were dismissed from the case. It directed that MWA create and administrate a procedure, acceptable to the Court, by which minimal producers could participate fairly in the physical solution. Final Judgment was entered on January 10, 1996, adopting the physical solution set forth in the Stipulated Judgment. (UWMP, p. 6-9.)

Transfers

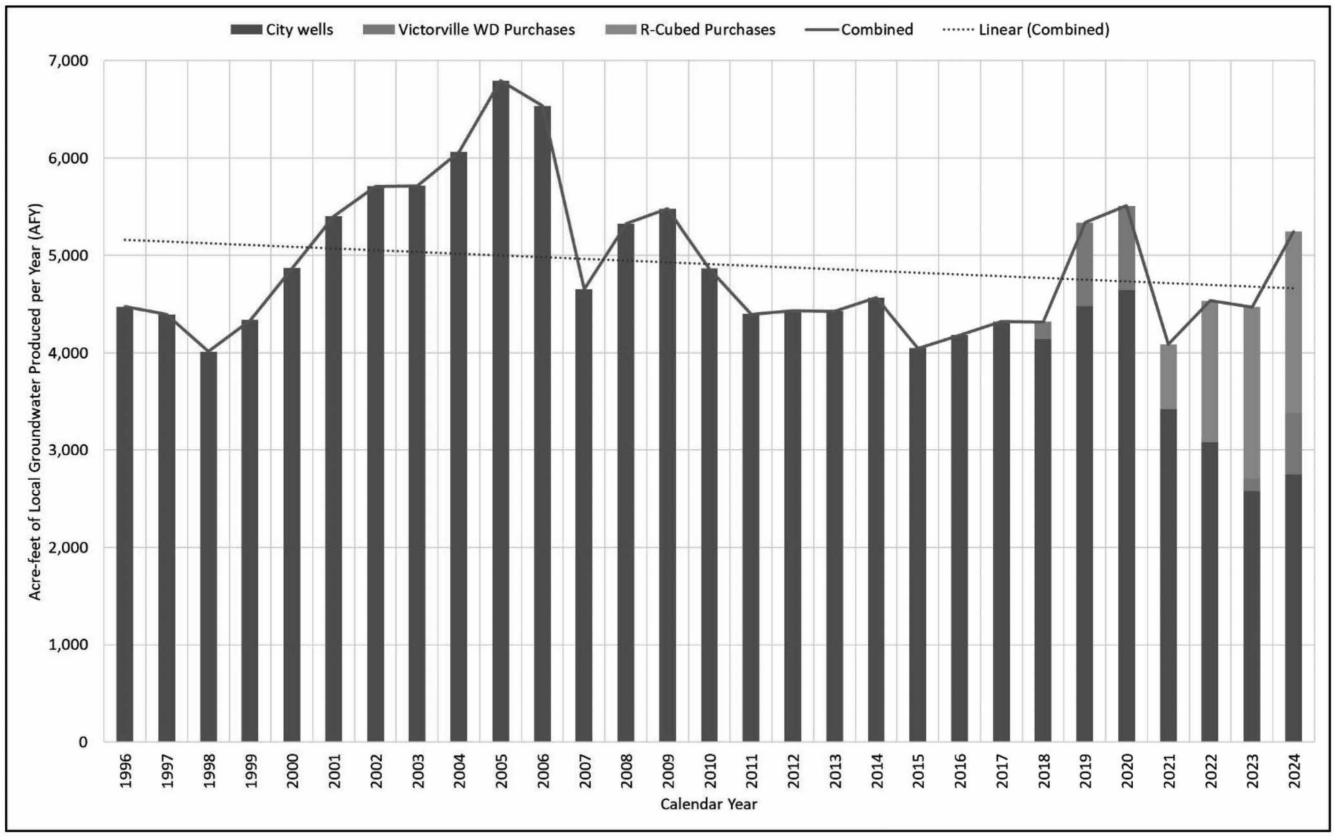
The Judgment also provides rules governing transfers of the BAP or FPA, which can be bought, sold, or leased within Subareas and between Subareas. The rules are designed to assure that the total consumptive use within a Subarea does not increase as a result of any transfer (MWA Draft 31st Annual Report, p. 7). This is reflected as

"Carryover in Lieu of Replacement" in Appendix E of the Watermaster's Annual Report. For example, the City was the transferee of 1,640 AF during 2022-23 from various private individuals, trusts, a ranch, and a community services district, which will go towards satisfying the City's replacement water obligations that incurred during 2022-23 (MWA Draft 31st Annual Report, Appendix E). Since the City's 2022-23 FPA was 2,820 AF, and the 2022-23 Verified Production by the City was 4,460 AF, the transfer of 1,640 AF resulted in zero replacement water fee due to Watermaster from the City (4,460 AF – 2,820 AF = 1,640 AF) (MWA Draft 31st Annual Report, Appendix I).

4.3. Recorded Use of Groundwater by the City (CWC Section 10910 (f)(3))

The City's groundwater supply currently comes from seven active groundwater wells located throughout the APUA service area within the Alto Subarea. The recorded groundwater production by City wells, R-Cubed deliveries, and Victorville Water District have a collective downward trendline, as shown in **Chart 4-1.** R-Cubed water supply deliveries to the City, also from local groundwater via MWA, began in 2021 and periodic purchases of local groundwater via Victorville Water District occurred as noted in Chart 4-1.

Chart 4-1 - Annual City Groundwater Production, CY 1996-2024 (AFY)



(Sources: 1996-2010 from the *2010 Adelanto UWMP;* 2011 -2015 from *2015 Adelanto UWMP; 2016-2020 from Adelanto 2020 UWMP;* 2021-2024 from WEBB(a), Figure 4-3.

4.4. Projected Use of Groundwater by the City of Adelanto (CWC Section 10910(f)(4))

The proposed Project will receive water from a combination of the City's supply sources, which consists of City groundwater wells and R-Cubed Project water through MWA.

Projected groundwater use by the City will continue as noted in Table 3-2. Groundwater from the Mojave Basin Area will be utilized by the City by directly pumping into its distribution system. The use of groundwater will continue to be dependent upon the cost of extracting, treating, and transporting the water to customers. The current production capacity of the City wells plus R-Cubed project

water is sufficient to meet current (2024) demands (Table 2-2), and based on the City growth rate (Table 2-1), these supply sources are sufficient to meet demands for the next 20 years (Table 2-3).

The amount of water that the City expects to withdraw from the Alto Subarea in the future (Tables 2-3 and 3-2) is within appropriated right pursuant to the Mojave Basin Area Adjudication of 1993 (Appendix F). However, projected City water demand and supply currently exceed the City's FPA and are projected to exceed the City's BAP of 5,182 AFY by 2030. The BAP may be exceeded according to the Judgment but the City will need to pay each year for replacement water equal to the difference between production and the FPA.

4.5. Sufficiency of Groundwater Basin (CWC Section 10910(f)(5))

The City'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 several programs and projects directed at ensuring the sufficiency of groundwater supplies from the Mojave Basin Area, 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 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 Mojave Basin Area and are overseen by Mojave Basin Area 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.

All Mojave Basin Area 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 Mojave Basin Area Watermaster management processes but validated and ensured by continuing Court oversight.

MWA prepared a Water Supply Reliability Analysis as part of the required elements of the Agency's 2020 UWMP, which states the following in regard to water supply sufficiency (MWA, p. 6-2):

> *Regional water supplies consist of naturally recharged groundwater, return flows, wastewater imports and imported State Water Project supplies…In short, the MWA service area demands are set to increase from 129,645 acre-feet per year in 2020 to over 142,000 acre-feet per year in 2045. Moreover, MWA's regional demands projection for 2065 exceed 150,000 acre-feet…MWA has sufficient available regional supplies to meet the regional demands through 2065. These supplies include not only the sources noted above, but also stored water within the SWP system and groundwater storage within the MWA service area. In concert with the supplies noted above, these stored supplies allow MWA to provide reliable water supplies to retail agencies in dry year conditions. Accordingly, as shown in Chapter 5, MWA has reliable water supplies available to meet normal, single dry, and five consecutive dry year water demands through 2065.*

Conclusion

City wells have had a progressive decline in production volumes (Table 4-2), which is being replaced with R-Cubed water and periodically with water from Victorville Water District. The City's water production capacity meets water demands and is projected to increase to meet future water demand over the next 20 years. The current (CY 2024) water supply utilized by the City totals approximately 5,249 AFY (potable) (Table 3-1). Currently, the City's water rights in the Alto Subarea as recorded by the Mojave Basin Watermaster total approximately 5,182 AF (Base Annual Production) of which 50.4% can be produced without paying for replacement water (Free Production Allowance) (Table 4-1). The City can exceed its Free Production Allowance as needed to serve customers but must pay for replacement water.

The water supplies available to the City currently meet and exceed citywide water demands. Groundwater production by the City is currently less than their existing rights. Production capacity through the combined supply sources of City wells and R-Cubed project currently meet water demands. Regardless, the City has the right to exceed their groundwater allocation when required to meet demand pursuant to the Judgment.

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SECTION 5 - PRIMARY ISSUE FOR ASSESSMENT

The lead agency for a proposed project …shall determine, based on the entire record, whether projected water supplies will be sufficient to satisfy demands of the project, in addition to existing and planned future uses (CWC section 10911). The lead agency is expected to approve or disapprove the project based on several factors, including but not limited to the WSA.

Law

CWC Section 10910:

> (g) (1) *Subject to paragraph (2), the governing body of each public water system shall submit the assessment to the city or county not later than 90 days from the date on which the request was received. The governing body of each public water system, or the city or county if either is required to comply with this act pursuant to subdivision (b), shall approve the assessment prepared pursuant to this section at a regular or special meeting.*
>
> *(2) Prior to the expiration of the 90-day period, if the public water system intends to request an extension of time to prepare and adopt the assessment, the public water system shall meet with the city or county to request an extension of time, which shall not exceed 30 days, to prepare and adopt the assessment.*
>
> *(3) If the public water system fails to request an extension of time, or fails to submit the assessment notwithstanding the extension of time granted pursuant to paragraph (2), the city or county may seek a writ of mandamus to compel the governing body of the public water system to comply with the requirements of this part relating to the submission of the water supply assessment.*

CWC Section 10911:

> (b) *The city or county shall include the water assessment provided pursuant to Section 10910, and any information provided pursuant to subdivision (a), in any*

environmental document prepared for the project pursuant to Division 13 (commencing with Section 21000) of the Public Resources Code.

(c) The city or county may include in any environmental document an evaluation of any information included in that environmental document provided pursuant to subdivision (b). The city or county shall determine, based on the entire record, whether projected water supplies will be sufficient to satisfy the demands of the project, in addition to existing and planned future uses. If the city or county determines that water supplies will not be sufficient, the city or county shall include that determination in its findings for the project.

The lead agency is expected to review the WSA and decide whether additional water supply information is needed for its consideration of the proposed Project.

5.1 Findings

Whereas:

1. The City of Adelanto (City) Water Department, through the Adelanto Public Utilities Authority (APUA) has been identified as the water supplier for the proposed *Adelanto Gateway Logistics Center* ("Project"). The Project proposes to develop up to 8,190,130 square feet (SF) of non-cannabis manufacturing/industrial warehouses on approximately 472 acres (Table 1-1).
2. A previous WSA has not been prepared for the Project or Project site.
3. The City's 2020 Urban Water Management Plan included projections of the water demand of the property according to the City's General Plan Land Use Plan approved at the time, which this report estimates as 529 AFY of potable water (Table 2-4).
4. The estimated potable water demand for the proposed Project is 634 AFY, which is 105 AFY more than accounted for in the most recent UWMP (Table 2-5).

5. Because the water demand of the Project is more than the water demand according to the prior land use plans for the site, it can be assumed the Project was not fully accounted for in the 2020 UWMP (Appendix A).
6. The City has a Base Annual Production (BAP) groundwater right of 5,182 AF, of which 50.4% of the BAP, or 2,612 AF may be produced without payment for replacement water to Watermaster (Table 4-1).
7. The City's existing water supply from City wells (2,750 AF), maximum contract amount from the R-Cubed project (3,000 AFY), and VWD Emergency Intertie (629 AF) is currently 6,379 AFY. The capacity of the R-Cubed infrastructure can increase up to 5,960 gpm; however, that would exceed the City's contractual amount of 3,000 AFY (Table 3-3).[14] The City could also install new wells and refurbish old wells to increase pumping capacity.
8. The estimated water demand of the City over the next ±10 years is 5,398 gpm, which is less than existing pumping capacity. However, ultimate demand at buildout cannot be met with existing water production facilities and purchase agreements; however, the timing of buildout is unknown but can be reasonably assumed to occur more than 20 years in the future based on the current growth rate of the City (Table 2-1).
9. The City is entitled to the effluent generated by the City's wastewater treatment plant. Upon construction and permitting of a recycled water distribution system, the City can offset some potable water use with recycled water. However, this Assessment conservatively assumes all water demands are met with potable water.
10. Citywide potable water demand during CY 2024 was less than the water demand of CY 2020 by 809 AF, but the number of metered water connections increased by 197 (Table 2-2).

[14] Based on average production rate over CY 2024.

11. With full utilization of the water supply available from the R-Cubed project (3,000 AFY), the City has forecasted excess water supplies will be available to meet citywide demand during single-dry and multiple dry water years over the next 20 years (Table 3-8 - Table 3-11).
12. Water demands for agricultural land uses in the City are expected to decline and water demands for industrial and manufacturing uses are expected to increase and partly replace former agricultural uses.
13. Based on the evidence provided herein, the total projected potable water supplies available to the City during normal, single dry, and multiple dry water years over a 20-year projection will be sufficient to meet the projected water demand associated with the proposed Project in addition to the water supplier's existing and planned future uses, including agricultural and manufacturing uses.

SECTION 6 - REFERENCES

Adelanto(a)	City of Adelanto Engineering Department. *Notice of Submittal Engineering Conditions for Mileski Holdings*. July 10, 2024.
APUA(a)	Adelanto Public Utility Authority, *Resolution No. 21-05 APPROVING THE 2020 URBAN WATER MANAGEMENT PLAN AND THE 2021 WATER SHORTAGE CONTINGENCY PLAN UPDATE ADOPTION AND ORDERING THE PLANS TO BE FILED WITH THE DEPARTMENT OF WATER RESOURCES.* August 25, 2021.
DWR 2003	California Department of Water Resources, *Guidebook for Implementation of Senate Bill 610 and Senate Bill 221 of 2001 to assist water suppliers, cities, and counties in integrating water and land use planning.* October 8, 2003.
Judgment	Judgment After Trial, *Mojave Basin Area Adjudication, City of Barstow et al V. City of Adelanto et al, Riverside County Superior Court Case No.* 208568 (January 10, 1996).
KEC Engineers	Personal communication with Kavous Emami, P.E., Principal, December 10, 2024.
MWA 2019-20 Report	Mojave Water Agency. *Watermaster Report Water Year 2019-20,* May 2021.
MWA Staff Report	Mojave Water Agency. Board of Directors meeting May 23, 2019 Staff Report RE: *Consider Adopting Resolution 1065-19 Approving Entering into a Connection Agreement and an Ordinance No. 9 Application with the City of Adelanto and Adelanto Public Utilities Authority (Adelanto) for Purchase of Water From the Regional Recharge and Recovery (R^3) Project.*
MWA Reso. 1065-19	Mojave Water Agency. *Resolution 1065-19 A Resolution of the Mojave Water Agency Board of Directors Approving an Ordinance No. 9 Application by the City of Adelanto and Adelanto Public Utility Authority (Adelanto) for Purchase of Water From the Regional Recharge and Recovery Project.* Signed May 23, 2019.
MWA Reso. 1169-25	Mojave Water Agency. *Resolution No. 1169-25 A Resolution of the Mojave Water Agency Board of Directors Establishing the Pricing of State Water Project Water for ID M, City of Victorville (HDPP), Antelope Valley-East Kern Water Agency (AVEK), and for Regional Recharge and Recovery Pipeline (R^3) Power Costs for the Period of July 1, 2025 through June 30, 2026.* Signed January 23, 2025.
MWA UWMP	Tully & Young, *2020 Urban Water Management Plan Mojave Water Agency.* Final – Adopted May 27, 2021.
Personal Communication MWA	Personal communication with Tony Winkel, Director of Water Resources, Mojave Water Agency. February 18, 2025.
Personal Communication	Personal communication with Jeff Ruesch, Watermaster Services Manager, Mojave Water Agency. May 12, 2025.
PDR	Kennedy Jenks. *Adelanto R^3 Extension Project Preliminary Design Report.* August 16, 2019.
R-Cubed Agreement	Water Supply Connection Agreement Regional Recharge and Recovery Project (R^3). April 10, 2019.
UWMP	City of Adelanto, *2020 Urban Water Management Plan*. August 25, 2021.
2015 UWMP	City of Adelanto, *2015 Urban Water Management Plan.* June 22, 2016.

2010 UWMP	Psomas. City of Adelanto *2010 Urban Water Management Plan*. June 2011.
Watermaster(a)	Mojave Basin Area Watermaster, *30th Annual Report*, May 1, 2024.
Watermaster(b)	Mojave Basin Area Watermaster, *29th Annual Report*, May 1, 2023.
Watermaster(c)	Mojave Basin Area Watermaster, *28th Annual Report*, May 1, 2022.
Watermaster (d)	Draft Mojave Basin Area Watermaster, *31st Annual Report*, February 26, 2025.
WEBB(a)	Albert A. Webb Associates. *Draft Water Master Plan, March 2025.*

SECTION 7 - SPREADSHEETS

General Plan Land Use & Zoning Map from Appendix J of 2020 UWMP [1]		Current Water Demand Factors [2]		Potable Water Demand (GPD and AFY)	
Land Use	**Estimated Gross Acres (AC)**	**Corresponding General Plan Land Use**	**Potable Water Demand Factor (GPD/AC)**	**Potable Water Demand (GPD)**	**Potable Water Demand (AFY)**
Business Park (BP)	401.0	Business Park	1,000	401,000	449.2
Light Manufacturing (LM)	71.0	Light Manufacturing [3]	1,000	71,000	79.5
Total	**472.0**	**-**	**-**	**472,000**	**528.7**

UWMP = Urban Water Management Plan; WMP = Water Master Plan; AC = acre; gpd = gallons per day; AFY = acre-feet per year.

1. Sources: "Local Hazard Mitigation Plan" prepared by David J. Martinez, Adelanto Community Development Director, dated May 2020, located in Appendix J of 2020 Adelanto UWMP.

2. Sources for Unit Water Demand Factors are Table 3-2 of the draft "Water Master Plan" prepared by Albert A. Webb Associates, forthcoming 2025.

3. The applicant confirmed for this Assessment that cannabis use is not proposed for this project; therefore, the water demand used reflects non-cannabis uses.

Proposed Adelanto Gateway Logistics Center[1]					Water Demand Factors[2]		Potable Water Demand (GPD and AFY)	
Proposed Building	**Construction Phase**	**Proposed Land Use[3]**	**Proposed Acres (AC)[4]**	**Proposed Maximum Non-Residential Square Footage (SF)**	**Corresponding General Plan Land Use**	**Adelanto Potable Water Demand Factor (GPD/AC)**	**Potable Water Demand (GPD)**	**Potable Water Demand (AFY)**
1	3 (Year 2046)	Manufacturing/Industrial (MI)	8.87	146,040	Manufacturing/Industrial (MI)	1,200	10,644	11.9
2	1 (Year 2026)	Manufacturing/Industrial (MI)	56.42	1,132,960	Manufacturing/Industrial (MI)	1,200	67,704	75.8
3		Manufacturing/Industrial (MI)	81.82	1,497,360	Manufacturing/Industrial (MI)	1,200	98,184	110.0
4		Manufacturing/Industrial (MI)	81.87	1,318,080	Manufacturing/Industrial (MI)	1,200	98,244	110.0
5	2 (Year 2027)	Manufacturing/Industrial (MI)	97.24	1,485,840	Manufacturing/Industrial (MI)	1,200	116,688	130.7
6		Manufacturing/Industrial (MI)	74.76	1,336,170	Manufacturing/Industrial (MI)	1,200	89,712	100.5
7		Manufacturing/Industrial (MI)	70.63	1,273,680	Manufacturing/Industrial (MI)	1,200	84,756	94.9
		Total	**471.61**	**8,190,130**	**-**	**-**	**565,932**	**633.9**

UWMP = Urban Water Management Plan; WMP = Water Master Plan; AC = acre; gpd = gallons per day; AFY = acre-feet per year.

[1.] Source: 2.19.2025 - Adelanto Site Plan - Progress V2.pdf. Each of the buildings are made up of 80% High-Cube Transload and Short-Term Storage Warehouse (ITE 154) and 20% High-Cube Cold Storage Warehouse (ITE 157). (David Evans & Assoc. Inc., p. 3) The Land Use Designation is from applicant.

[2.] Source for water duty factors is the draft "City of Adelanto Water Master Plan", prepared by Albert A. Webb Associates, Table 3-3, which is consistent with the MI duty factor in the 2024 Water Model Report, also prepared by Albert A. Webb Associates, 2024 but based on 2022 data.

[3.] The City of Adelanto permits and regulates medicinal and adult use cannabis activities in designated zones, including Manufacturing/Industrial (MI); however, the applicant confirmed for this Assessment that cannabis uses are not proposed and the factors used herein reflect as such.