Appendix N

Water Supply Assessment

for the

Thermal Ranch Specific Plan,

Prepared by

Terra Nova Planning & Research, Inc.

Approved by the Coachella Valley Water District, July 202

Water Supply Assessment

for the Proposed

Thermal Ranch Specific Plan

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June 2023

Approved: July 13, 2023

Table of Contents

List of Figures 4

List of Tables 4

1 Summary and Requirements 5

1.1 Regulatory Requirements 5

1.1.1 Senate Bill 610 6

1.1.2 Senate Bill 1262 7

1.2 Water Management Planning Documents 7

1.2.1 Urban Water Management Planning Act 7

1.2.2 Sustainable Groundwater Management Act 7

1.2.3 Groundwater Replenishment 9

2 Public Water System 9

2.1 Coachella Valley Water District 10

2.1.2 Coachella Valley Water District – Potable Water Distribution Systems 10

2.2 Coachella Valley Hydrology 12

3 Public Water System – Existing Supply and Demand 13

3.1 Groundwater 13

3.1.1 Coachella Valley Groundwater Basin 13

3.1.2 Groundwater Demand 15

3.1.3 Groundwater Sustainability 15

3.2 Imported Water 21

3.2.1 Colorado River Water 21

3.2.2 State Water Project 24

3.2.3 Other SWP Water 25

3.3 Surface Water 26

3.3.1 River/Stream Diversion 26

3.3.2 Stormwater Capture 26

3.4 Wastewater and Recycled Water 27

3.5 Conservation 28

3.6 Landscape Ordinance 28

3.7 Water Shortage Contingency Planning 28

4 Public Water System – Projected Supply and Demand 30

4.1 Projected Urban Demand and Supply 30

4.2 Normal, Single-Dry, Multiple-Dry Year Comparison 31
5 Project Description 34
6 Project Water Demands 40
6.1 Projected Indoor Residential Water Demand 40
6.2 Projected Indoor Commercial and Industrial Water Demand 40
6.3 Projected Outdoor Irrigation Water Demand 41
6.4 Projected Outdoor Water Features Demand 42
6.5 Projected Total Water Demand 42
6.6 Projected Water Sources 43
6.7 Conservation Measures 43
7 Availability of Sufficient Supplies 46
7.1 Water Supply Assessment 46
7.2 Requirement for Written Verification of Water Supply Availability 47
8 References 48

List of Figures

Figure 2-1: Coachella Valley Water District Boundary and Coachella Valley Cities 101
Figure 2-2: Coachella Valley Water District Domestic Water Service Areas 112
Figure 3-1: Coachella Valley Groundwater Basin and Subbasins 145
Figure 3-2: Water Level Monitoring Wells in the Indio Subbasin 145
Figure 3-3: Historical Annual Change in Groundwater Storage in the Indio Subbasin 178
Figure 3-4: Change in Groundwater Elevation from Water Year 2008-2009 through Water Year 2021-2022 in the Indio Subbasin 189
Figure 3-5: Water Level Monitoring Wells in the Mission Creek Subbasin 20
Figure 3-6: Historical Annual Change in Groundwater Storage in the Mission Creek Subbasin 21
Figure 3-7: Change in Groundwater Elevation from Water Year 2008-2009 through Water Year 2021-2022 in the Mission Creek Subbasin 22
Figure 5-1: Project Regional Location Map 34
Figure 5-2: Project Vicinity Map 36
Figure 5-3: Project Site Plan 37

List of Tables

Table 2-1: Current and Projected Population for CVWD's Service Area 11
Table 2-2: Monthly Average Climate Data for Palm Springs 123
Table 2-3: Monthly Average Climate Data for Thermal 123
Table 3-1: Groundwater Storage in the Coachella Valley Groundwater Basin 15
Table 3-2: CVWD Groundwater Demand in the Coachella Valley Groundwater Basin 15
Table 3-3: CVWD Colorado River Entitlements (AFY) 234
Table 3-4: Colorado River Deliveries to CVWD at the Imperial Dam/Coachella Canal 245
Table 3-5: CVWD Groundwater Recharge of Colorado River Water 245
Table 3-6: State Water Project Table A Allocations 256
Table 3-7: State Water Project Table A Percent Allocations 256
Table 3-8: CVWD and DWA Groundwater Recharge 276
Table 3-9: Wastewater Treated by CVWD 278
Table 3-10: Recycled Water Produced by CVWD 289
Table 3-11: Urban Water Shortage Contingency Plan Shortage Levels 30
Table 4-1: CVWD Projected Urban Retail Potable Demands 31
Table 4-2: CVWD Projected Urban Water Supplies 32
Table 4-3: Normal Year Supply and Demand Comparison 32
Table 4-4: Single-Dry Year Supply and Demand Comparison 33
Table 4-5: Multiple-Dry Years Supply and Demand Comparison 34
Table 5-1: Project Land Use Summary 375
Table 6-1: Projected Indoor Residential Water Demand 406
Table 6-2: Projected Indoor Commercial and Industrial Water Demand 41
Table 6-3: Projected Outdoor Irrigation Water Demand 417
Table 6-4: Projected Outdoor Water Feature Demand 428
Table 6-5: Projected Total Water Demand 428
Table 6-6: Projected Water Sources 439

1 Summary and Requirements

The environmental review of the Thermal Ranch Specific Plan (Project) is being prepared in compliance with the California Environmental Quality Act (CEQA) process. The County of Riverside (County) is the Lead Agency for the planning and environmental review of the proposed Project. The County has identified the Coachella Valley Water District (CVWD) as the Public Water System (PWS) that will supply water for the proposed Project, and has requested that CVWD assist in preparing a Water Supply Assessment (WSA) as part of the environmental review for the Project.

The Project is located in the southeast portion of the Coachella Valley within the unincorporated area of Thermal, Riverside County. The Project proposes a high-quality, master-planned equestrian lifestyle community within six (6) distinct Planning Areas centered around a world-class equestrian center on 619.1 acres of largely vacant farmland. The proposed Project includes up to 1,682 dwelling units (including 320 RV spaces for workforce housing), 285,000 square feet of commercial uses, a 150 key hotel (approximately 112,500 square feet), 17,789,468 square feet of landscaping/open space, and 463,520 square feet of outdoor water features.

This WSA determined that the total projected water demand for the Project 1,753.63 AFY, or 2.83 acre-feet per acre. This WSA demonstrates that sufficient water supplies exist, or will exist based on current water planning assumptions, to meet the projected demands of the Project, in addition to current and future projected water demands within CVWD's service area in normal, single-dry, and multiple-dry years over a 20-year projection. This WSA will be reviewed every five years, or in the event that the water planning assumptions have changed, until the Project begins construction on all planning areas to ensure it remains accurate and no significant changes to either the Project or available water supply has occurred. Consistent with the provisions of SB 610, neither this WSA nor its approval shall be construed to create a right or entitlement to water service or any specific level of water service, and shall not impose, expand, or limit any duty concerning the obligation of CVWD to provide certain service to its existing customers or to any future potential customers.

This WSA does not constitute an agreement to provide water service to the Project, and does not entitle the Project, Project Applicant, or any other person or entity to any right, priority or allocation in any supply, capacity, or facility. To receive water service, the Project will be subject to an agreement with CVWD, together with any and all applicable fees, charges, plans and specifications, conditions, and any and all other applicable CVWD requirements in place and as amended from time to time. Nor does anything in this WSA prevent or otherwise interfere with CVWD's discretionary authority to declare a water shortage emergency in accordance with the Water Code.

1.1 Regulatory Requirements

This WSA provides an assessment of the availability of sufficient water supplies during normal, single-dry, and multiple-dry years over a 20-year projection to meet the projected demands of

the Project, in addition to existing and planned future water demands of CVWD, as required by Senate Bill (SB) 610 and SB 1262. This WSA also includes identification of existing water supply entitlements, water rights, water service contracts, or agreements relevant to the identified water supply for the Project and quantities of water received in prior years pursuant to those entitlements, rights, contracts, and agreements.

This WSA has been prepared in compliance with the requirements under SB 610 and SB 1262 by Terra Nova Planning and Research in consultation with CVWD and the County of Riverside. This WSA does not relieve the Project from complying with all applicable state, county, city, and local ordinances or regulations, including the CVWD Landscape Ordinance and indoor water use performance standards provided in the California Water Code (CWC). This WSA will be reviewed every five years, or in the event that the water planning assumptions have changed, until the Project begins construction on all planning areas, to ensure it remains accurate and no significant changes to either the Project or available water supply has occurred. The Project applicant shall notify CVWD when construction of all planning areas begins.

1.1.1 Senate Bill 610

On January 1, 2002, Senate Bill 610 (SB 610) was enacted and codified in CWC Section 10910 et seq., requiring the preparation of a Water Supply Assessment (WSA) for certain new development projects. As stated in SB 610, the purpose of a WSA is to determine whether the PWS'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 PWS's existing and planned future uses, including agricultural and manufacturing uses."

CWC Section 10912 defines a "project" as any of the following:

- A proposed residential development of more than 500 dwelling units;
- A proposed shopping center or business establishment employing more than 1,000 persons or having more than 500,000 square feet of floor space;
- A proposed commercial office building employing more than 1,000 persons or having more than 250,000 square feet of floor space;
- A proposed hotel or motel, or both, having more than 500 rooms;
- 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 space;
- A mixed-use project that includes one or more of the projects specified in this subdivision; or
- A project that would demand an amount of water equivalent to, or greater than, the amount of water required by a 500 dwelling unit project (about 250 acre-feet per year).

The intent of SB 610 is to improve the link between information on water supply availability and certain land-use decisions made by cities and counties.

1.1.2 Senate Bill 1262

On January 1, 2017, Senate Bill 1262 (SB 1262) was enacted and amended CWC Section 10910, requiring that information regarding the Sustainable Groundwater Management Act (SGMA) be included in a WSA if the water supply for a proposed project includes groundwater from a basin that is not adjudicated and was designated medium- or high-priority by the California Department of Water Resources (DWR).

1.2 Water Management Planning Documents

CVWD has prepared long-term planning documents to project future was use and manage the water supplies within its service area. These planning documents can be used for compliance with SB 610 and SB 1262 and are discussed in further detail in the following sections.

1.2.1 Urban Water Management Planning Act

The Urban Water Management Planning Act (UWMPA) was established by Assembly Bill 797 (AB 797) on September 21, 1983, and passage of this law recognized that water is a limited resource and that efficient water use and conservation would be actively pursued throughout the State. The UWMPA requires that municipal water suppliers providing either directly or indirectly to more than 3,000 customers, or supplying more the 3,000 acre-feet per year (AFY), prepare and adopt an Urban Water Management Plan (UWMP) every five years which defines their current and future water use, source of supply, source reliability, and existing conservation measures.

1.2.1.1 Coachella Valley Water District Urban Water Management Plan

CVWD prepared and adopted its 2005, 2010, and 2015 UWMPs to document CVWD's projected water demands and plans for delivering water supplies to its water service area during normal, single-dry, and multiple-dry years over a 20-year projection.

The six urban water suppliers in the Coachella Valley (CVWD, Coachella Water Authority, Desert Water Agency (DWA), Indio Water Authority (IWA), Mission Springs Water District (MSWD), and Myoma Dunes Mutual Water Company) collaboratively prepared the 2020 Coachella Valley Regional UWMP, including regional and individual agency content and other necessary elements as set forth in DWR's 2020 UWMP Guidebook. The 2020 Coachella Valley Regional UWMP was submitted to DWR on July 1, 2021. DWR accepted CVWD's portion of the Regional UWMP on May 17, 2022.

1.2.2 Sustainable Groundwater Management Act

In September 2014, Governor Brown signed three bills into law: Assembly Bill 1739, Senate Bill 1319, and Senate Bill 1168, which became collectively known as the Sustainable Groundwater Management Act (SGMA), creating a framework for sustainable, local groundwater management for the first time in California history. DWR evaluated and prioritized the 515 groundwater basins identified in Bulletin 118, and 94 of these groundwater basins were designated as high- or

medium-priority basins, as of December 2019, requiring them to be sustainably managed within 20 years. SGMA required local authorities to form local Groundwater Sustainability Agencies (GSAs) by June 30, 2017 to evaluate conditions in their local groundwater basins and adopt locally-based Groundwater Sustainability Plans (GSPs), or Alternatives to a GSP (Alternative Plans), tailored to their regional economic and environmental needs.

As defined by DWR, the subbasins of the Coachella Valley Groundwater Basin are the Indio, Mission Creek, San Gorgonio Pass, and Desert Hot Springs Subbasins. CVWD's service area overlies the Indio, Mission Creek, and Desert Hot Springs Subbasins. The Indio and Mission Creek Subbasins have been designated medium-priority by DWR and are subject to the requirements of SGMA. The Desert Hot Springs Subbasin has been designated very low-priority by DWR and is not subject to the requirements of SGMA. The Project is located within the Indio Subbasin, which has been designated as a medium priority groundwater basin by DWR under SGMA.

1.2.2.1 Alternative Plan for the Indio Subbasin

Twenty years before the adoption of SGMA, CVWD began the development of the initial water management plan for the Coachella Valley in 1994 after recognizing the need to sustainably manage the Coachella Valley Groundwater Basin. The original planning document is the 2002 Coachella Valley Water Management Plan (CVWMP). The 2002 CVWMP was updated in 2010 and adopted in 2012.

CVWD, DWA, CWA, and IWA, are the Indio Subbasin GSAs designated by DWR for their respective service areas. On December 29, 2016, CVWD, DWA, CWA, and IWA collaboratively submitted the 2010 CVWMP Update as an Alternative Plan for the Indio Subbasin, with an associated Bridge Document and supporting documents, to DWR for review and evaluation. On July 17, 2019, DWR determined that the Alternative Plan for the Indio Subbasin satisfies the objectives of SGMA and notified the Indio Subbasin GSAs that the Alternative Plan was approved, and that they would be required to submit an assessment and update of the Alternative Plan pursuant to the SGMA by January 1, 2022 and every five years thereafter. The 2022 Alternative Plan Update for the Indio Subbasin was submitted to DWR on December 29, 2021.

On February 1, 2018, DWR notified all GSAs who submitted Alternative Plans that they would be required to submit annual reports pursuant to SGMA by April 1, 2018 and every year thereafter. CVWD, DWA, CWA, and IWA have collaboratively prepared and submitted the Indio Subbasin Annual Reports for Water Years 2016-2017 through 2021-2022.

1.2.2.2 Alternative Plan for the Mission Creek Subbasin

In 2004, CVWD, DWA, and MSWD reached an agreement and created the Mission Creek Subbasin Management Committee (Management Committee). The Management Committee jointly prepared the 2013 Mission Creek-Garnet Hill Subbasin Water Management Plan (2013 MC-GH WMP).

On December 29, 2016, CVWD, DWA, and MSWD collaboratively submitted the 2013 MC-GH WMP as an Alternative Plan for the Mission Creek Subbasin, with an associated Bridge Document

and supporting documents, to DWR for review and evaluation. On July 17, 2019, DWR determined that the Alternative Plan for the Mission Creek Subbasin satisfies the objectives of SGMA and notified the Management Committee that the Alternative Plan was approved, and that they would be required to submit an assessment and update of the Alternative Plan pursuant to SGMA by January 1, 2022 and every five years thereafter. The 2022 Alternative Plan Update for the Mission Creek Subbasin was submitted to DWR on December 30, 2021.

On February 1, 2018, DWR notified all GSAs who submitted Alternative Plans that they would be required to submit annual reports pursuant to SGMA by April 1, 2018 and every year thereafter. CVWD, DWA, and MSWD have collaboratively prepared and submitted the Mission Creek Subbasin Annual Reports for Water Years 2016-2017 through 2021-2022.

1.2.3 Groundwater Replenishment

State Water Code (SWC) 31630-31639 provides CVWD with the authority to levy and collect water replenishment assessments to implement groundwater replenishment programs (GRPs) within its jurisdictional boundary. Groundwater replenishment is necessary to mitigate overdraft of the groundwater basin and associated undesirable results. The jurisdictional areas that benefit from the GRPs, and where CVWD levies replenishment assessments on groundwater production, are termed Areas of Benefit (AOBs). There are three AOBs within CVWD's boundary: the Mission Creek Subbasin AOB, the West Whitewater River Subbasin AOB, and the East Whitewater River Subbasin AOB. The GRP for the West Whitewater River Subbasin AOB was formed in 1976, the GRP for the Mission Creek Subbasin AOB was formed in 2003, and the GRP for the East Whitewater River Subbasin AOB was formed in 2004. The Project is located within the East Whitewater River Subbasin AOB.

1.2.3.1 Annual Engineer's Reports

CVWD is required to prepare and present to its Board of Directors annually an Engineer's Report on Water Supply and Replenishment Assessment reporting on the conditions of the groundwater supplies and recommend Replenishment Assessment Charges (RACs) to be levied upon groundwater production greater than 25 AFY within each AOB in accordance with SWC 31630-31639. The Engineer's Report must include the following information: a summary of the conditions of groundwater supplies; the need for replenishment; a description of the replenishment programs, including the source and amount of replenishment waters, the costs associated with the GRP, the areas directly and indirectly benefited by the GRP, and the amount of groundwater produced in each area during the prior year; and a recommendation for the RAC to be levied on each AOB. The 2023-2024 Engineer's Report on Water Supply and Replenishment Assessment was prepared and presented to CVWD's Board of Directors on April 25, 2023.

2 Public Water System

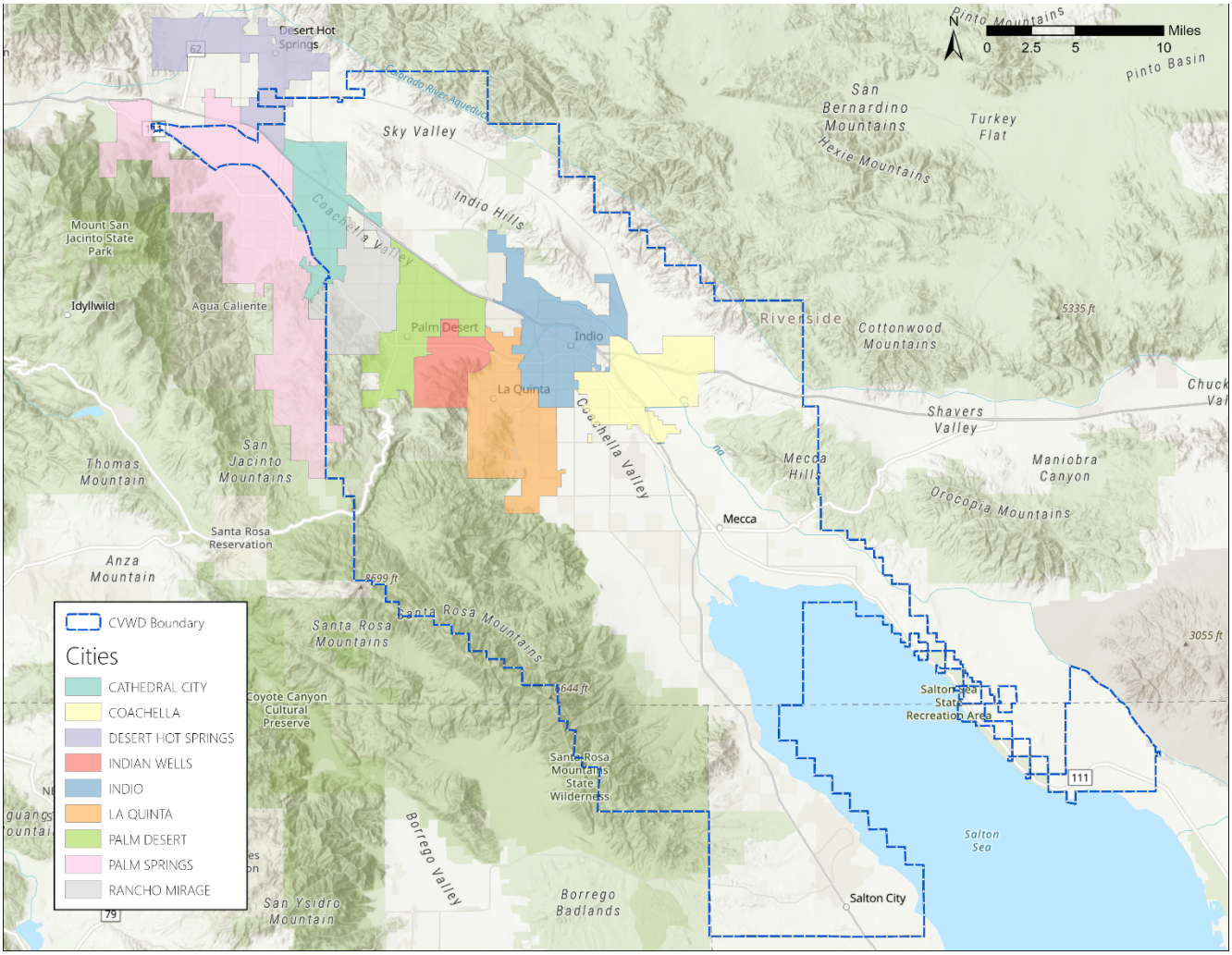
The County is the Lead Agency for the planning and environmental review of the proposed Thermal Ranch Specific Plan (Project). The County has identified the Coachella Valley Water District (CVWD) as the Public Water System (PWS) that will supply water for the proposed Project,

and has requested that CVWD assist in preparing a Water Supply Assessment (WSA) as part of the environmental review for the Project.

2.1 Coachella Valley Water District

CVWD was established in 1918 under the County Water District Act provisions of the California Water Code. CVWD provides water related services for domestic water, wastewater collection and treatment, recycled water, agricultural irrigation water, drainage management, imported water supply, groundwater replenishment, stormwater management, flood control, and water conservation. CVWD's boundary encompasses approximately 640,000 acres as shown in **Figure 2-1**, mostly within Riverside County, but also extending into northern Imperial and San Diego Counties.

Figure 2-1: Coachella Valley Water District Boundary and Coachella Valley Cities

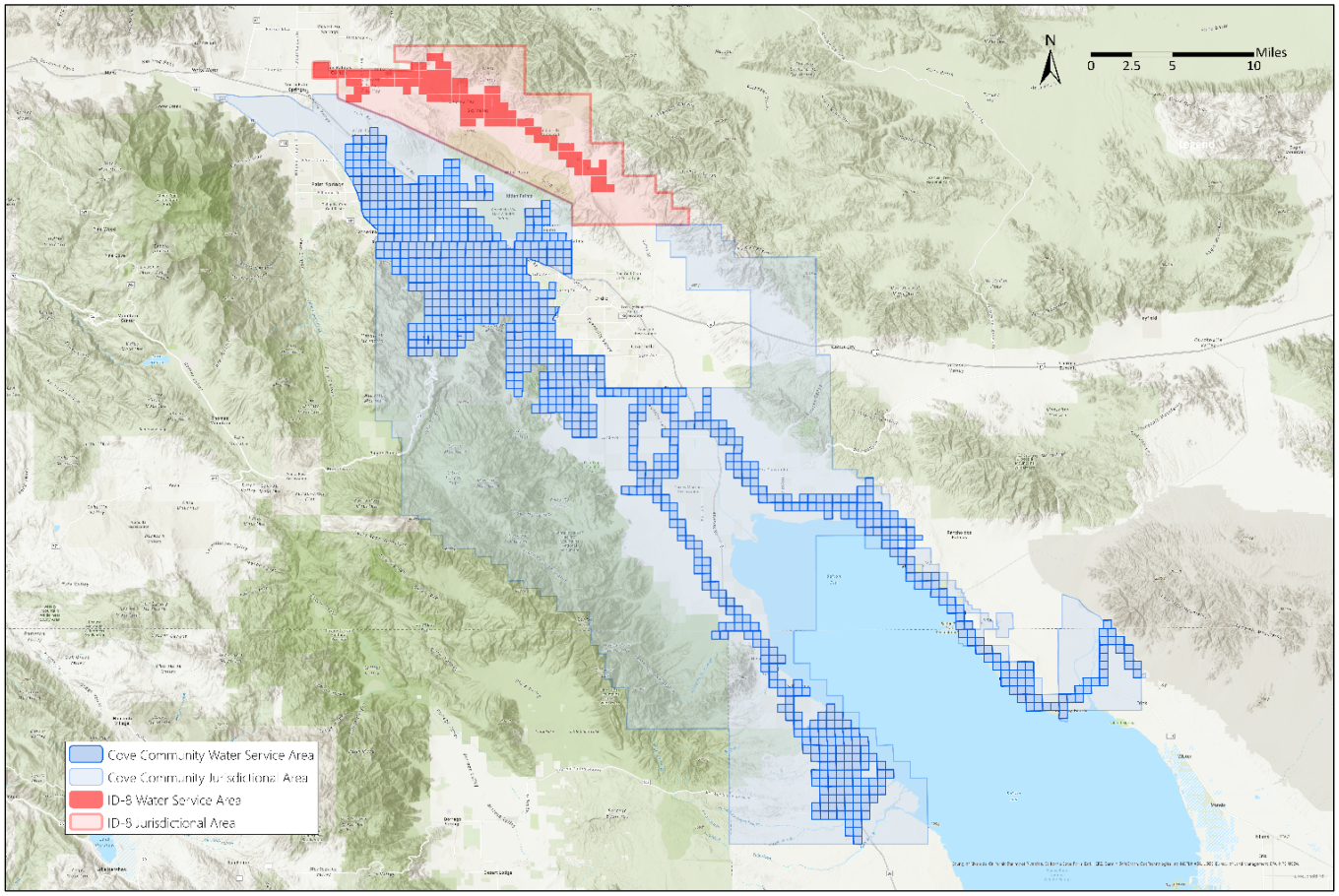


2.1.2 Coachella Valley Water District – Potable Water Distribution Systems

CVWD has two domestic water service areas that serve potable water to its local communities: the Cove Communities system and Improvement District No. 8 (ID-8) as shown in **Figure 2-2**.

CVWD previously had three water systems, but ID-11 was consolidated into the Cove Communities system in March 2021. CVWD had approximately 113,481 domestic water connections and served approximately 91,230acre-feet (AF) of water in 2022. CVWD serves all of the Cities of Rancho Mirage, Thousand Palms, Palm Desert, Indian Wells, and La Quinta, and a portion of Indio, Coachella, and Cathedral City. Other areas served with domestic water by CVWD include a portion of lands near Desert Hot Springs and the Indio Hills. CVWD also serves other unincorporated communities including Thermal, Mecca, Oasis, Desert Shores, Salton Sea Beach, Salton City, North Shore, Bombay Beach, Hot Mineral Springs, and other portions of unincorporated Riverside and Imperial Counties. The Project is located within CVWD's Cove Communities domestic water jurisdictional area.

Figure 2-2: Coachella Valley Water District Domestic Water Service Areas



The 2020 Regional UMWP projected that population in CVWD's urban water service area would increase as shown in **Table 2-1**.

Table 2-1: Current and Projected Population for CVWD's Service Area

Population Served	2020	2025	2030	2035	2040	2045
	268,952	292,077	315,202	338,274	360,813	383,300

Source: 2020 Coachella Valley Regional Urban Water Management Plan

2.2 Coachella Valley Hydrology

The bulk of natural groundwater replenishment comes from runoff from the adjacent mountains. Climate in the Coachella Valley is characterized by low humidity, high summer temperatures, and mild dry winters. Average annual precipitation varies from 3 to 6 inches of rain on the Coachella Valley floor to more than 30 inches in the surrounding mountains. Most of the precipitation occurs between December and February, except for summer thundershowers. Prevailing winds in the area are usually gentle, but occasionally increase to velocities as high as 30 miles per hour or more. Mid-summer temperatures commonly exceed 100 degrees Fahrenheit (°F), frequently reach 110 °F, and periodically reach or exceed 120 °F, and the average winter temperature is approximately 60 °F as shown in **Table 2-2** and **Table 2-3**.

Table 2-2: Monthly Average Climate Data for Palm Springs

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Max (°F)[1]	71	73	80	86	94	104	108	107	102	90	78	69	89
Min (°F)[1]	47	49	54	59	65	73	80	79	74	64	53	46	62
Rain (in)[1]	0.95	0.92	0.36	0.10	0.02	0.00	0.25	0.14	0.20	0.20	0.26	0.70	3.80
ETo (in)[2]	2.5	3.4	5.6	7.1	8.3	8.7	8.1	7.5	6.2	4.7	2.9	2.2	67.2

Source: 2020 Coachella Valley Regional Urban Water Management Plan

[1] National Weather Service Forecast, Station Palm Springs Airport, 1998-2020

[2] CIMIS Station 208 – La Quinta II, 2007-2020

Table 2-3: Monthly Average Climate Data for Thermal

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Max (°F) [1]	71	74	81	87	95	103	107	106	101	91	79	69	89
Min (°F) [1]	39	43	49	55	63	69	76	75	68	57	45	38	56
Rain (in)[1]	0.64	0.61	0.34	0.08	0.01	0.01	0.13	0.12	0.32	0.19	0.17	0.34	2.96
ETo (in) [2]	2.7	3.9	6.4	8.0	9.3	9.3	9.6	9.1	7.1	5.3	3.2	2.4	70.2

Source: 2020 Coachella Valley Regional Urban Water Management Plan

[1] National Weather Service Forecast, Station Desert Resorts Regional Airport, 1990-2020

[2] CIMIS Station 218 – Thermal South, 2010-2020

3 Public Water System – Existing Supply and Demand

Currently, all of Coachella Valley Water District's (CVWD's) urban potable water uses are supplied using groundwater. In addition to groundwater, CVWD has imported water supplies from the State Water Project (SWP) and the Colorado River, and recycled water from water reclamation plants. These imported and recycled water supplies are used to meet CVWD's non-potable water demands and to replenish the groundwater basin.

3.1 Groundwater

Groundwater is the principal source of potable supply in the Coachella Valley and CVWD obtains groundwater from both the Indio and Mission Creek Subbasins of the Coachella Valley Groundwater Basin. CVWD has the legal authority to manage the groundwater basin within its boundaries under the County Water District Law (California Water Code section 30000, et seq.) and as a Groundwater Sustainability Agency (GSA) under the Sustainable Groundwater Management Act (SGMA).

Groundwater, to be supplied to the Project, is also used by other domestic water suppliers and private pumpers for crop irrigation, fish farms, duck clubs, golf course irrigation, greenhouses, and industrial uses in the Coachella Valley.

3.1.1 Coachella Valley Groundwater Basin

The Coachella Valley Groundwater Basin is bounded on the north and east by the San Bernardino and Little San Bernardino Mountains, on the south and west by the Santa Rosa and San Jacinto Mountains, and on the south by the Salton Sea. At the west end of the San Gorgonio Pass, between Beaumont and Banning, the basin boundary is defined by a surface drainage divide separating the Coachella Valley Groundwater Basin from the Beaumont Groundwater Basin of the Upper Santa Ana Drainage Area.

The southern boundary is formed primarily by the watershed of the Mecca Hills and by the northwest shoreline of the Salton Sea running between the Santa Rosa Mountains and Mortmar. Between the Salton Sea and Travertine Rock, at the base of the Santa Rosa Mountains, the southern boundary crosses the Riverside County Line into Imperial and San Diego Counties.

Although there is interflow of groundwater throughout the Coachella Valley Groundwater Basin, fault barriers, constrictions in the basin profile, and areas of low permeability limit and control movement of groundwater. Based on these factors, the Coachella Valley Groundwater Basin has been divided into subbasins and subareas as described by DWR in 1964 and 2003, and by the United States Geological Survey (USGS) in 1974.

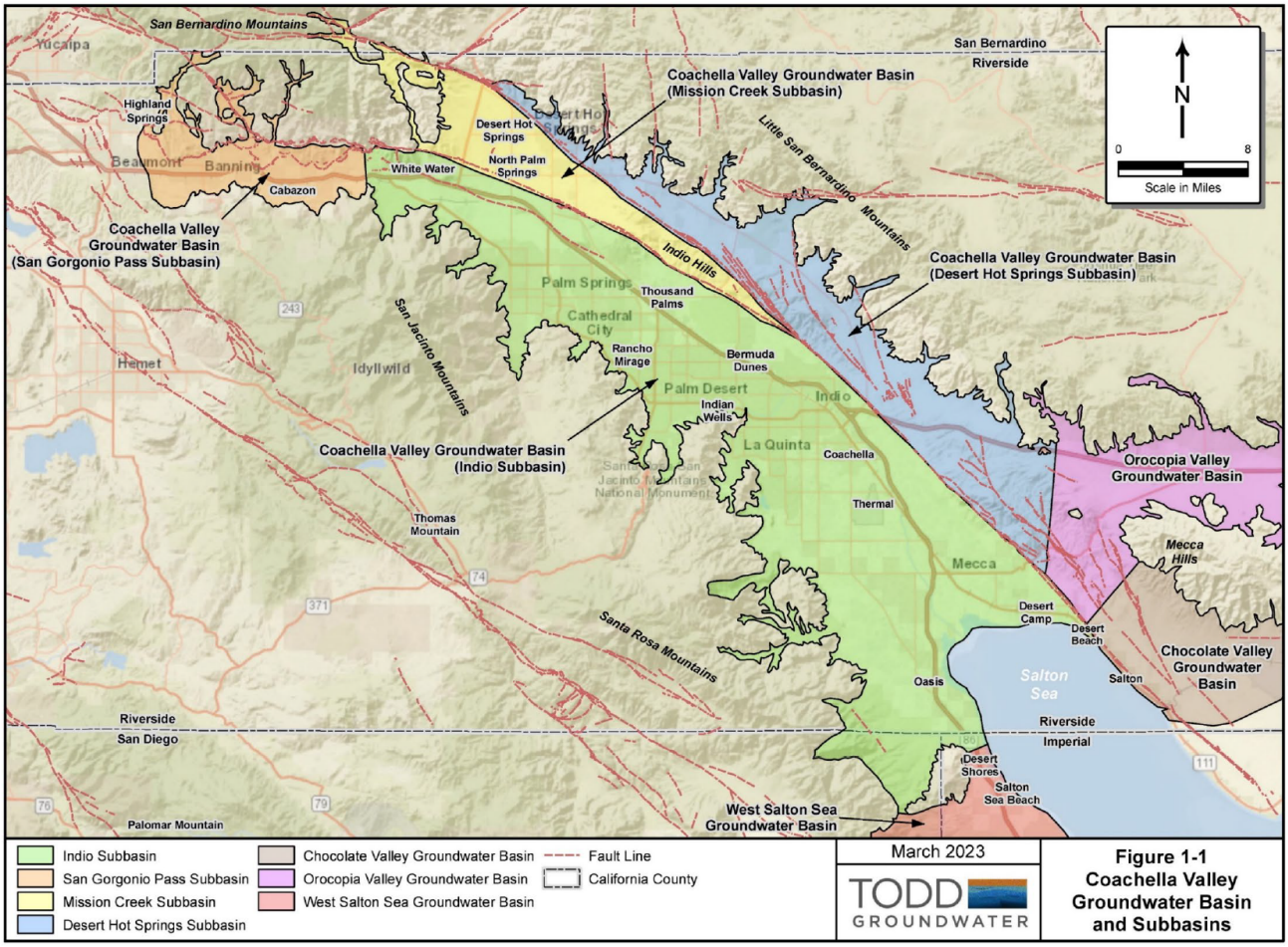
3.1.1.1 Coachella Valley Groundwater Basin – Subbasins

As shown on **Figure 3-1,** the subbasins of the Coachella Valley Groundwater Basin are the Indio, Mission Creek, San Gorgonio Pass, and Desert Hot Springs Subbasins. The subbasins are defined without regard to water quantity or quality. They delineate areas underlain by formations which

readily yield stored groundwater through water wells and offer natural reservoirs for the regulation of water supplies.

The boundaries between subbasins within the Coachella Valley Groundwater Basin are generally defined by faults that impede the lateral movement of groundwater. Minor subareas have also been delineated based on one or more of the following geologic or hydrologic characteristics: types of water-bearing formations, water quality, areas of confined groundwater, forebay areas, groundwater divides, and surface drainage divides.

Figure 3-1: Coachella Valley Groundwater Basin and Subbasins



Source: Indio Subbasin Annual Report for Water Year 2021-2022

The following is a list of the subbasins in the Coachella Valley Groundwater Basin as designated by DWR in Bulletin 118:

- Indio Subbasin (Subbasin 7-21.01)
- Mission Creek Subbasin (Subbasin 7-21.02)
- San Gorgonio Pass Subbasin (Subbasin 7-21.03)
- Desert Hot Springs Subbasin (Subbasin 7-21.04)

DWR designated the Indio, Mission Creek, and San Gorgonio Pass Subbasins as medium-priority, and the Desert Hot Springs Subbasin as very low priority. None of the subbasins are adjudicated or in a state of overdraft.

In 1964, DWR estimated that the subbasins in the Coachella Valley Groundwater Basin contained approximately 39,200,000 acre-feet (AF) of water in the first 1,000 feet below the groundwater surface. The capacities of the subbasins are shown in **Table 3-1**.

Table 3-1: Groundwater Storage in the Coachella Valley Groundwater Basin

Subbasin/Subarea	Storage (AF) [1]
Indio Subbasin	
Palm Springs Subarea	4,600,000
Thousand Palms Subarea	1,800,000
Oasis Subarea	3,000,000
Garnet Hill Subarea	1,000,000
Thermal Subarea	19,400,000
Indio Subbasin Subtotal	**29,800,000**
Mission Creek Subbasin	2,600,000
San Gorgonio Subbasin	2,700,000
Desert Hot Springs Subbasin	4,100,000
Total	**39,200,000**

Source: DWR Bulletin 108 (1964)

[1] First 1,000 feet below ground surface. (DWR, 1964)

3.1.2 Groundwater Demand

Groundwater is the principal source of potable supply in the Coachella Valley and CVWD extracts groundwater from both the Indio and Mission Creek Subbasins of the Coachella Valley Groundwater Basin. CVWD's groundwater demand in the Coachella Valley Groundwater Basin for 2018 through 2022 is shown in **Table 3-2**.

Table 3-2: CVWD Groundwater Demand in the Coachella Valley Groundwater Basin

Groundwater Production (AF)	2018	2019	2020	2021	2022
Indio Subbasin	96,176	93,130	96,661	98,484	97,106
Mission Creek Subbasin	2,786	2,642	3,182	3,062	2,960
Total	**98,962**	**95,772**	**99,843**	**101,546**	**100,066**

3.1.3 Groundwater Sustainability

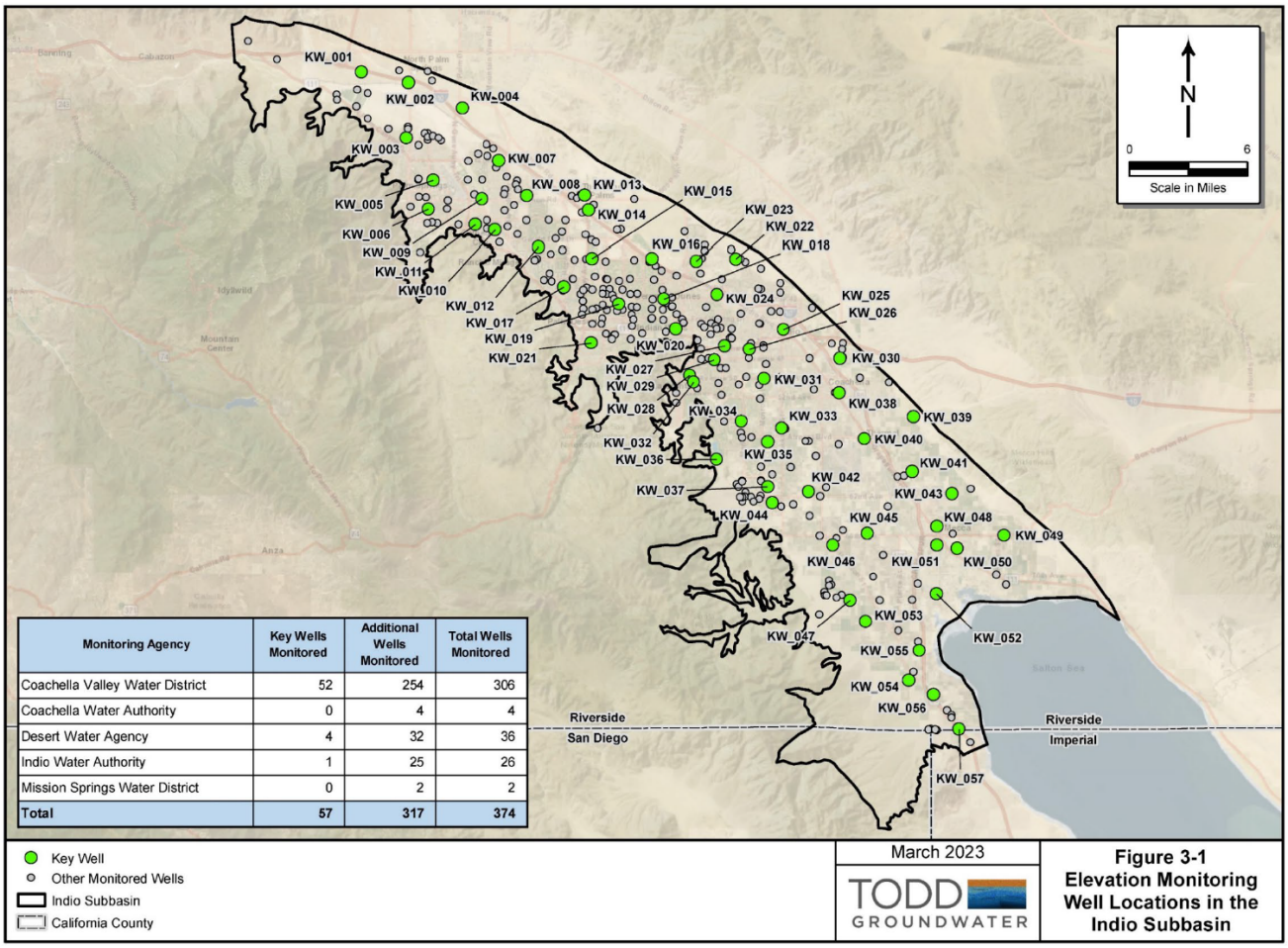
Long-term sustainability is typically assessed based on changes in groundwater storage over a period on the order of ten to twenty years that includes wet and dry periods.

3.1.3.1 Indio Subbasin

The 2022 Indio Subbasin Alternative Plan Update identified 57 Key Wells across the subbasin to represent local groundwater levels, shown in **Figure 3-2**. The plan set metrics to demonstrate sustainability, including a Minimum Threshold (MT) at each Key Well. MTs are numeric values

used to define undesirable results under SGMA. In WY 2021-2022, water levels in all 57 Key Wells remained above their respective MTs. This confirms that the significant undesirable results of chronic lowering of groundwater levels, depletion of groundwater storage, and potential subsidence are not occurring in the Indio Subbasin.

Figure 3-2: Water Level Monitoring Wells in the Indio Subbasin



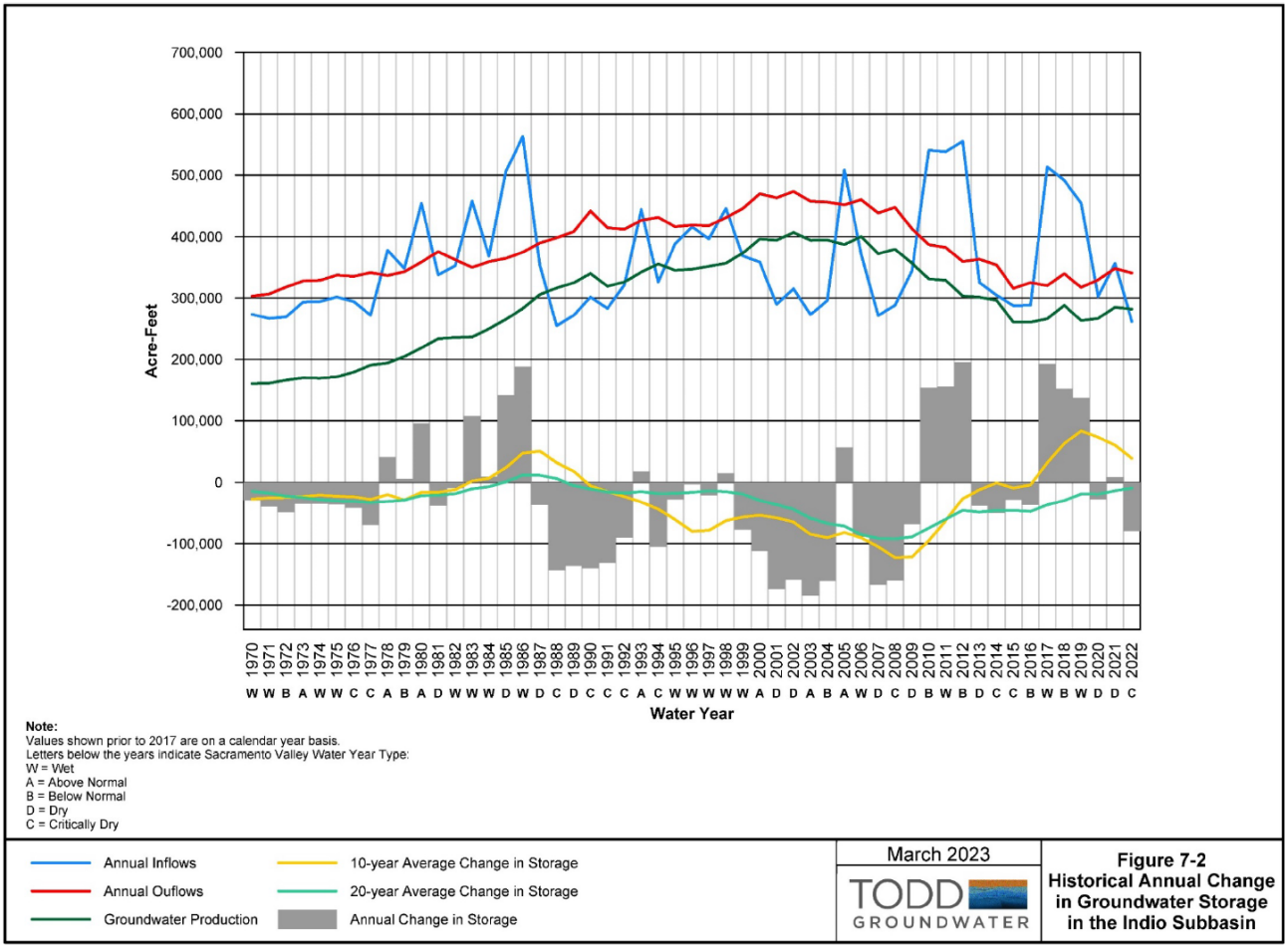
Source: 2022 Alternative Plan Update for the Indio Subbasin

Figure 3-3 shows the historical annual change in groundwater storage from 1970 through Water Year (WY) 2020-2021 in the Indio Subbasin. The figure also shows annual inflows, outflows, groundwater production, and 10-year and 20-year running-average change in groundwater storage. During periods of high artificial recharge, the change in storage tends to be positive. In dry years or periods of high groundwater pumping, the change in storage can be negative.

As shown in **Figure 3-3**, annual inflows to the Indio Subbasin are highly variable with years of high inflows corresponding to wet years when SWP delivery volumes were greater. Higher inflows in the mid-1980s occurred when the Metropolitan Water District of Southern California (MWD) commenced large-scale advanced water deliveries to the Indio Subbasin. After an extended

period of decline, both the 10-year and 20-year running-average change in storage have shown positive trends since 2009, and the 10-year running-average has been positive since 2017.

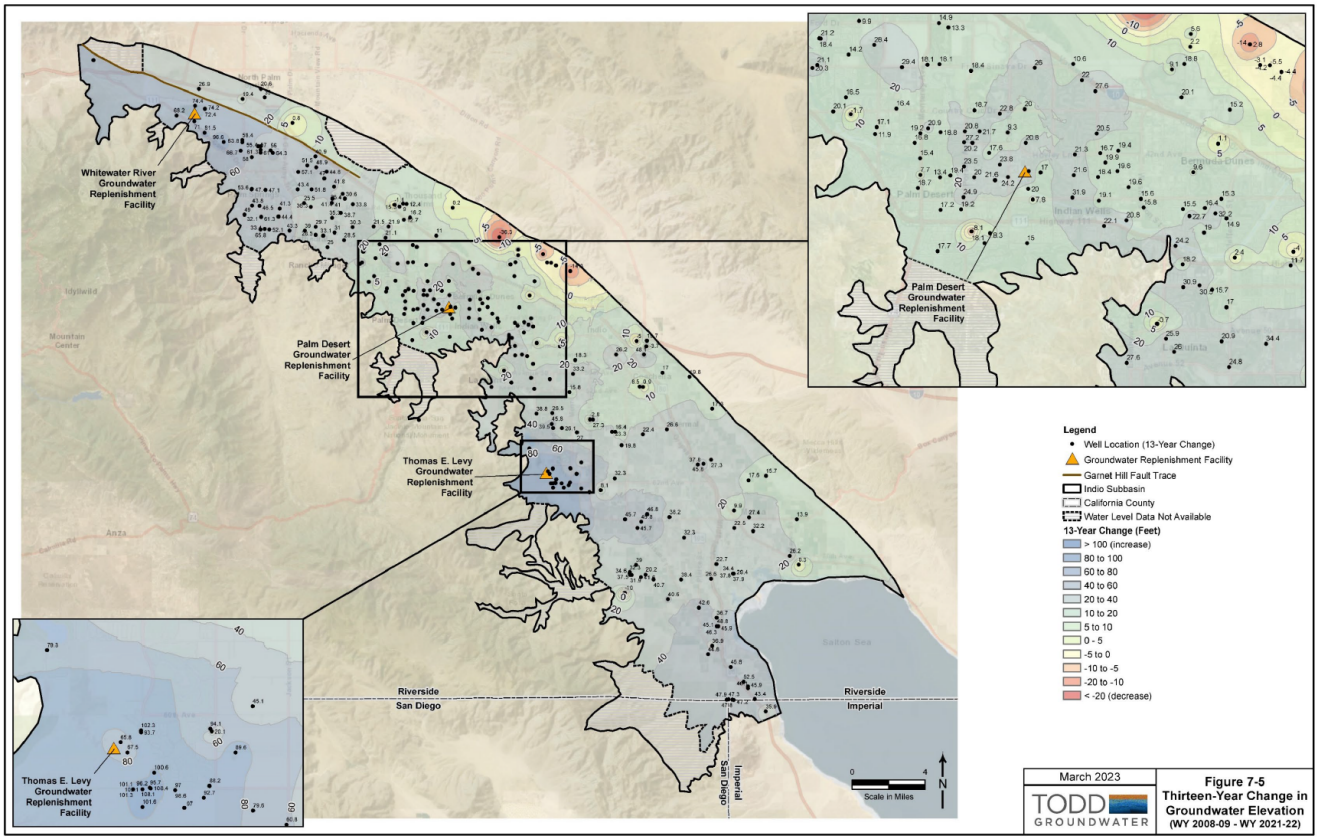
Figure 3-3: Historical Annual Change in Groundwater Storage in the Indio Subbasin



Source: Indio Subbasin Annual Report for Water Year 2021-2022

As shown in **Figure 3-4**, groundwater levels have increased significantly in the Indio Subbasin from WY 2008-2009 to WY 2021-2022. The Indio Subbasin Annual Report uses 2009 water levels as a metric of sustainability because historical low groundwater levels occurred in the years around 2009 throughout most of the Indio Subbasin. The Indio Subbasin shows a long-term positive trend in sustainability resulting from implementation of the Indio Subbasin Alternative Plan.

Figure 3-4: Change in Groundwater Elevation from Water Year 2008-2009 through Water Year 2021-2022 in the Indio Subbasin

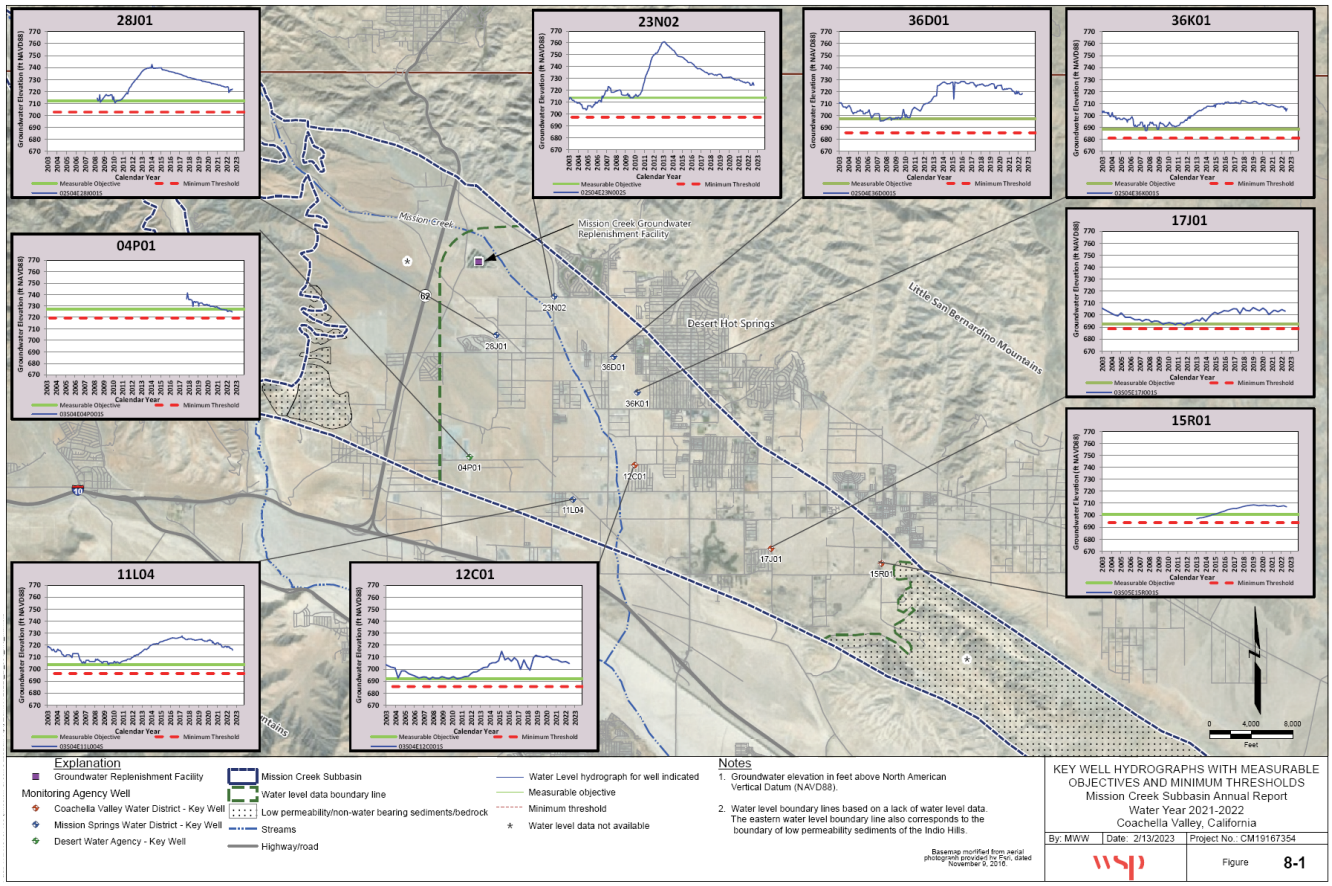


Source: Indio Subbasin Annual Report for Water Year 2021-2022

3.1.3.2 Mission Creek Subbasin

The 2022 Mission Creek Subbasin Alternative Plan Update identified nine Key Wells across the subbasin to represent local groundwater levels, as shown in **Figure 3-5**. The plan set MTs at each Key Well to demonstrate sustainability. In WY 2021-2022, water levels in all nine Key Wells remained above their respective MTs, as shown in the hydrographs in **Figure 3-5**. This confirms that the significant undesirable results of chronic lowering of groundwater levels, depletion of groundwater storage, and potential subsidence are not occurring in the Mission Creek Subbasin.

Figure 3-5: Water Level Monitoring Wells in the Mission Creek Subbasin

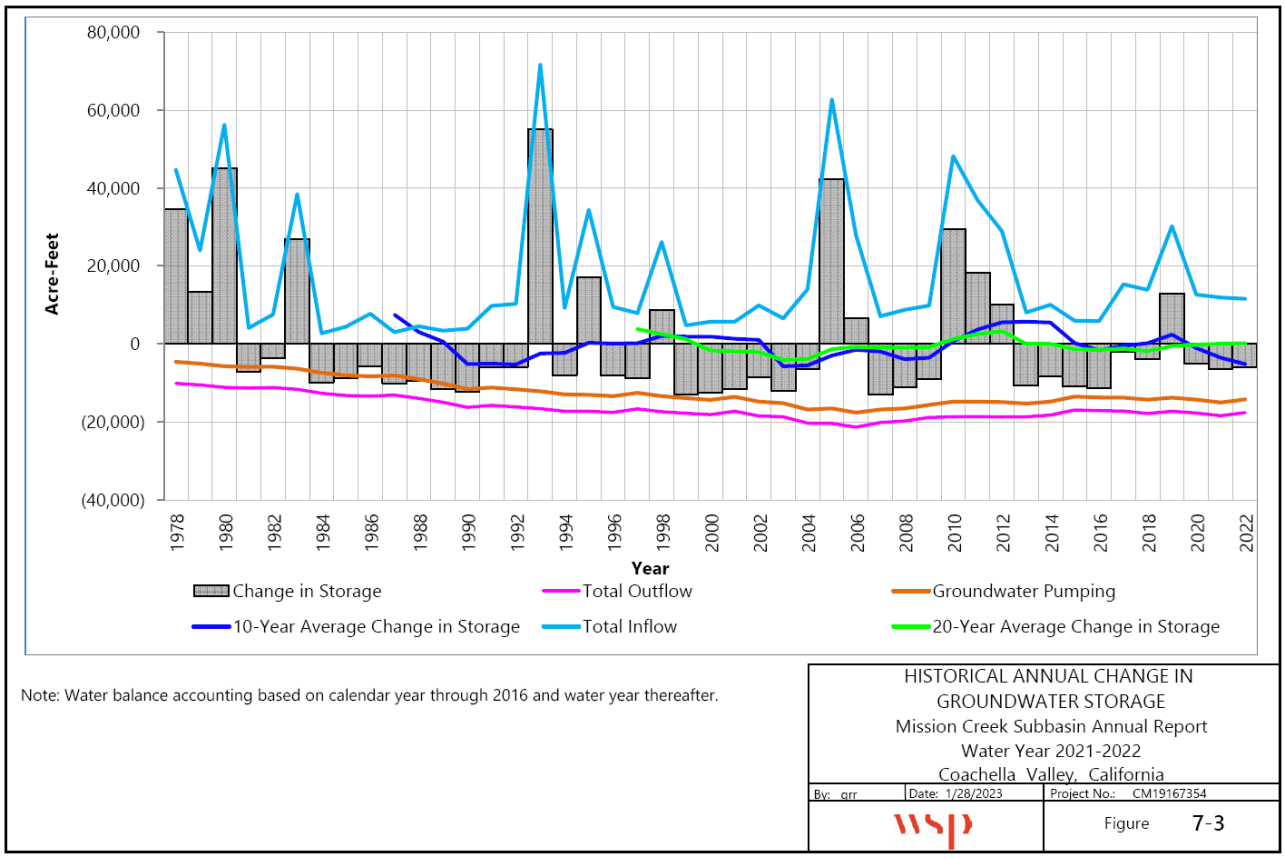


Source: 2022 Alternative Plan Update for the Mission Creek Subbasin

Figure 3-6 shows the historical annual change in groundwater storage from 1978 through WY 2021-2022 in the Mission Creek Subbasin. The figure also shows annual inflows, outflows, groundwater production, and 10-year and 20-year running-average change in groundwater storage. During periods of high artificial recharge, the change in storage tends to be positive. In dry years or periods of high groundwater pumping, the change in storage can be negative.

As shown in **Figure 3-6**, after a period of decline, starting in 2004 both the 10-year and 20-year running-average change in groundwater storage have shown positive trends. Annual inflows to the Mission Creek Subbasin are highly variable with years of high inflows corresponding to years when SWP delivery volumes were greater. The 20-year running-average change in storage shows that the Mission Creek Subbasin has been in balance since 2012.

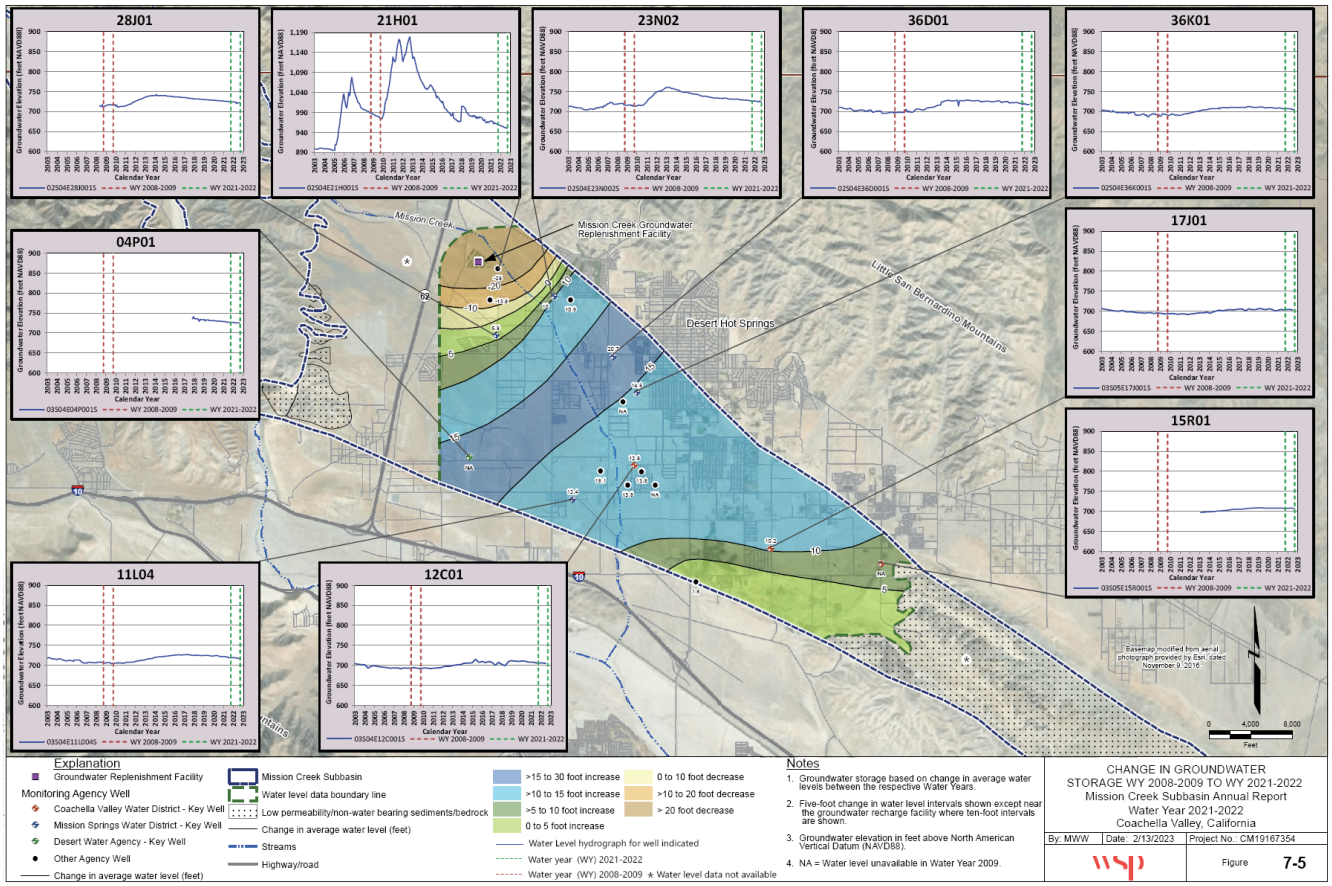
Figure 3-6: Historical Annual Change in Groundwater Storage in the Mission Creek Subbasin



Source: Mission Creek Subbasin Annual Report for Water Year 2021-2022

Groundwater levels have increased significantly in the Mission Creek Subbasin over the past 10 years from WY 2008-2009 to WY 2021-2022 as shown in **Figure 3-7**. The Mission Creek Subbasin Annual Report uses 2009 water levels as a metric of sustainability because historical low groundwater levels occurred in the years around 2009 throughout most of the Mission Creek Subbasin. The Mission Creek Subbasin shows a long-term positive trend in sustainability resulting from implementation of the Mission Creek Subbasin Alternative Plan.

Figure 3-7: Change in Groundwater Elevation from Water Year 2008-2009 through Water Year 2021-2022 in the Mission Creek Subbasin



Source: Mission Creek Subbasin Annual Report for Water Year 2021-2022

3.2 Imported Water

CVWD has two sources of imported water available: Colorado River water delivered via the Coachella Canal and SWP water exchanged for Colorado River water delivered through the Colorado River Aqueduct. These imported water sources are used to recharge the groundwater basin and as an alternative source to meet non-potable demands from irrigation of agriculture, golf, and urban uses that would have otherwise been met by pumping groundwater. In the future, if urban demand significantly increases relative to non-potable uses, Colorado River water may be treated and delivered directly to customers through CVWD's potable water distribution system.

3.2.1 Colorado River Water

Colorado River water has been a significant water supply source for the Indio Subbasin since the Coachella Canal was completed in 1949. CVWD is the only agency in the Indio Subbasin that receives Colorado River water allocations. The Colorado River is managed and operated in accordance with the Law of the River, a collection of interstate compacts, federal and state legislation, various agreements and contracts, an international treaty, a U.S. Supreme Court

decree, and federal administrative actions that govern the rights to use Colorado River water within the seven Colorado River Basin states. The 1922 Colorado River Compact apportioned the waters of the Colorado River Basin between the Upper Colorado River Basin (i.e., Colorado, Wyoming, Utah, and New Mexico) and the Lower Basin (i.e., Nevada, Arizona, and California). The 1922 Colorado River Compact allocates 15 million AFY of Colorado River water as follows: 7.5 million AFY to the Upper Basin and 7.5 million AFY to the Lower Basin, plus up to 1 million AFY of surplus supplies. The Lower Basin's water was further apportioned among the three Lower Basin states by the 1928 Boulder Canyon Project Act and the 1931 Boulder Canyon Project Agreement, typically called the 1931 Seven Party Agreement, which allocates California's apportionment of Colorado River water among Palo Verde Irrigation District, Imperial Irrigation District (IID), CVWD, Metropolitan Water District of Southern California (MWD), City of Los Angeles, City of San Diego, and County of San Diego. The 1964 U.S. Supreme Court decree in Arizona v. California established Arizona's basic annual apportionment at 2.8 million AFY, California's at 4.4 million AFY, and Nevada's at 0.3 million AFY. Mexico is entitled to 1.5 million AFY of the Colorado River under the 1944 United States-Mexico Treaty for Utilization of Waters of the Colorado and Tijuana Rivers and of the Rio Grande. However, this treaty did not specify a required quality for water entering Mexico. In 1973, the United States and Mexico signed Minute No. 242 of the International Boundary and Water Commission requiring certain water quality standards for water entering Mexico. California's Colorado River supply is protected by the 1968 Colorado River Basin Project Act, which provides that in years of insufficient supply on the main stem of the Colorado River, supplies to the Central Arizona Project shall be reduced to zero before California will be reduced below 4.4 million AF in any year. This assures full supplies to the Coachella Valley, except in periods of extreme drought.

The Coachella Canal is a branch of the All-American Canal that brings Colorado River water into the Imperial and Coachella Valleys. Under the 1931 Seven Party Agreement, CVWD receives 330,000 AFY of Priority 3A Colorado River water diverted from the All-American Canal at the Imperial Dam. The Coachella Canal originates at Drop 1 on the All-American Canal and extends approximately 123 miles, terminating in CVWD's Lake Cahuilla. The service area for Colorado River water delivery under CVWD's contract with the U.S. Bureau of Reclamation (USBR) is defined as Improvement District No. 1 (ID-1), which encompasses 136,400 acres covering most of the East Valley and a portion of the West Valley north of Interstate 10. Under the 1931 Seven Party Agreement, CVWD has water rights to Colorado River water as part of the first 3.85 million AFY allocated to California. CVWD is in the third priority position along with IID.

In 2003, CVWD, IID, and MWD successfully negotiated the 2003 Quantification Settlement Agreement (2003 QSA), which quantifies Colorado River allocations through 2077 and supports the transfer of water between agencies. Under the 2003 QSA, CVWD has a base entitlement of 330,000 AFY. CVWD negotiated water transfer agreements with MWD and IID that increased CVWD supplies by an additional 123,000 AFY. CVWD's net QSA supply will increase to 424,000 AFY by 2026 and remain at that level until 2047, decreasing to 421,000 AFY until 2077, when the agreement terminates. As of 2021, CVWD's available Colorado River water diversions at Imperial Dam under the QSA were 399,000 AFY. This includes the base entitlement of 330,000 AFY, the MWD/IID Transfer of 20,000 AFY, IID/CVWD First Transfer of 50,000 AFY, and IID/CVWD Second

Transfer of 28,000 AFY. CVWD's QSA diversions also deducts the -26,000 AFY transferred to San Diego County Water Authority (SDCWA) as part of the Coachella Canal Lining Project and the -3,000 AFY transfer to Indian Present Perfected Rights. Additionally, under the 2003 QSA, MWD transferred 35,000 AFY of its State Water Project (SWP) Table A Amount to CVWD. This SWP water is exchanged for Colorado River water and can be delivered at Imperial Dam for delivery via the Coachella Canal to the eastern portion of the Indio Subbasin or at Lake Havasu for delivery via the Colorado River Aqueduct to the western portion of the Indio Subbasin at the Whitewater River Groundwater Replenishment Facility (WWR-GRF). The 2019 Second Amendment guaranteed delivery of the 35,000 AFY from 2019 to 2026, for a total of 280,000 AFY of water to the WWR-GRF during that timeframe. MWD can deliver the water through CVWD's Whitewater Service Connections (for recharge at WWR-GRF) or via the Advance Delivery account.

The MWD/IID Transfer originated in a 1989 agreement with MWD to receive 20,000 AF of its Colorado River supply. The 2019 Amended and Restated Agreement for Exchange and Advance Delivery of Water defined the exchange and delivery terms between MWD, CVWD, and DWA. The 2019 Second Amendment to Delivery and Exchange Agreement reduced CVWD's annual delivery of the MWD/IID Transfer to 15,000 AFY, for a total of 105,000 AF, if taken at the Whitewater Service Connections (for recharge at WWR-GRF) between 2020 and 2026. For those seven years, MWD keeps the remaining 5,000 AFY, after which CVWD's allocation increases back up to 20,000 AFY. CVWD's total allocations under the QSA, including MWD's transfer of 35,000 AFY and the MWD/IID Transfer, will increase from 424,000 AFY in 2020 to 459,000 AFY by 2026 and remain at that level for the remainder of the 75-year term of the QSA. **Table 3-3** lists total Colorado River entitlements under existing agreements.

Table 3-3: CVWD Colorado River Entitlements (AFY)

Diversion	2020	2025	2030	2035	2040	2045
Base Entitlement	330,000	330,000	330,000	330,000	330,000	330,000
1988 MWD/IID Approval Agreement	20,000	20,000	20,000	20,000	20,000	20,000
IID/CVWD First Transfer	50,000	50,000	50,000	50,000	50,000	50,000
IID/CVWD Second Transfer[1]	23,000	48,000	53,000	53,000	53,000	53,000
Coachella Canal Lining	-26,000	-26,000	-26,000	-26,000	-26,000	-26,000
Indian Present Perfected Rights Transfer	-3,000	-3,000	-3,000	-3,000	-3,000	-3,000
QSA Diversions	**394,000**	**419,000**	**424,000**	**424,000**	**424,000**	**424,000**
MWD SWP Transfer[2]	35,000	35,000	35,000	35,000	35,000	35,000
Total Diversions	**429,000**	**454,000**	**459,000**	**459,000**	**459,000**	**459,000**
Assumed Conveyance Losses (5%)	-21,200	-22,700	-22,950	-22,950	-22,950	-22,950
MWD/IID Approval Agreement Transfer[3]	-5,000	-5,000	0	0	0	0
Total Available Deliveries	**402,800**	**426,300**	**436,050**	**436,050**	**436,050**	**436,050**

Source: 2022 Alternative Plan Update for the Indio Subbasin

[1] The Second IID/CVWD Transfer began in 2018 with 13,000 AF of water. This amount increases annually by 5,000 AFY for a total of 53,000 AFY in 2026.

[2] The 35,000 AFY MWD/CVWD SWP Transfer may be delivered at either Imperial Dam or Whitewater River and is not subject to SWP or Colorado River reliability.

[3] Accounts for -5,000 AFY reduction in MWD/IID Approval Agreement deliveries from 2020-2026 per the 2019 Amendments with MWD.

The Colorado River deliveries to CVWD at the Imperial Dam/Coachella Canal from 2018 through 2022 are shown in **Table 3-4.**

Table 3-4: Colorado River Deliveries to CVWD at the Imperial Dam/Coachella Canal

Diversions (AF)	2018	2019	2020[1]	2021[1]	2022[1]
Imperial Dam/Coachella Canal	338,035	343,971	350,618	351,904	330,387

Source: U.S. Bureau of Reclamation, Lower Colorado Region, Colorado River Accounting and Water Use Reports for Arizona, California, and Nevada.

[1] The 15,000 AFY of 1988 MWD/IID Approval Agreement water was delivered at WWR-GRF from 2020 to 2022.

CVWD's recharge volumes of Colorado River water from 2018 through 2022 are shown in **Table 3-5**.

Table 3-5: Groundwater Recharge of Colorado River Water Deliveries to CVWD at the Imperial Dam/Coachella Canal

Groundwater Recharge (AF)	2018	2019	2020	2021	2022
Thomas E. Levy GRF	33,348	36,143	37,536	37,971	27,993
Palm Desert GRF	0	7,757	9,700	10,633	10,949
Total	**33,348**	**43,900**	**47,236**	**48,604**	**38,942**

Source: 2023-2024 CVWD Annual Engineer's Reports on Water Supply and Replenishment Assessment

3.2.2 State Water Project

The SWP is managed by DWR and includes 705 miles of aqueduct and conveyance facilities extending from Lake Oroville in Northern California to Lake Perris in Southern California. The SWP has contracts to deliver 4.172 million AFY to the State Water Contractors. The State Water Contractors consist of 29 public entities with long-term contracts with DWR for all, or a portion of, their water supply needs. In 1962 and 1963, DWA and CVWD, respectively, entered contracts with the State of California for a total of 61,200 AFY of SWP water. SWP water has been an important component of the region's water supply mix since CVWD and DWA began receiving and recharging SWP exchange water at the WWR-GRF. Starting in 1973, CVWD and DWA began exchanging their SWP water with MWD for Colorado River water delivered via MWD's Colorado River Aqueduct. Because CVWD and DWA do not have a physical connection to SWP conveyance facilities, MWD takes delivery of CVWD's and DWA's SWP water, and in exchange, delivers an equal amount of Colorado River water to the Whitewater Service Connections (for recharge at WWR-GRF and Mission Creek Groundwater Replenishment Facility). The exchange agreement was most recently re-established in the 2019 Amended and Restated Agreement for Exchange and Advance Delivery of Water.

Each SWP contract contains a "Table A" exhibit that defines the maximum annual amount of water each contractor can receive excluding certain interruptible deliveries. DWR uses Table A amounts to allocate available SWP supplies and some SWP project costs among the contractors. Each year, DWR determines the amount of water available for delivery to SWP contractors based on hydrology, reservoir storage, the requirements of water rights licenses and permits, water quality, and environmental requirements for protected species in the Sacramento-San Joaquin

River Delta (Delta). The available supply is then allocated according to each SWP contractor's Table A amount.

CVWD's and DWA's collective increments of Table A water are listed in Table **3-6**. Original Table A SWP water allocations for CVWD and DWA were 23,100 AFY and 38,100 AFY, respectively, for a combined amount of 61,200 AFY. CVWD and DWA obtained a combined 100,000 AFY transfer from MWD under the 2003 Exchange Agreement. In 2004, CVWD purchased an additional 9,900 AFY of SWP Table A water from the Tulare Lake Basin Water Storage District (Tulare Lake Basin) in Kings County. In 2007, CVWD and DWA made a second purchase of Table A SWP water from Tulare Lake Basin totaling 7,000 AFY. In 2007, CVWD and DWA also completed the transfer of 16,000 AFY of Table A Amounts from the Berrenda Mesa Water District in Kern County. These latter two transfers became effective in January 2010. With these additional transfers, the total SWP Table A Amount for CVWD and DWA is 194,100 AFY. **Table 3-7** shows the percent allocation of SWP Table A allocations from 2018 through 2022. **Table 3-8** shows the recharge of SWP Exchange Water from 2018 through 2022.

Table 3-6: State Water Project Table A Allocations

	Original SWP Table A (AFY)	Tulare Lake Basin 2004 Transfer (AFY)	Metropolitan Water District 2003 Transfer (AFY)	Tulare Lake Basin 2007 Transfer (AFY)	Berrenda Mesa 2007 Transfer (AFY)	Total (AFY)
CVWD	23,100	9,900	88,100	5,250	12,000	138,350
DWA	38,100	0	11,900	1,750	4,000	55,750
Total	**61,200**	**9,900**	**100,000**	**7,000**	**16,000**	**194,100**

Source: 2020 Coachella Valley Regional Urban Water Management Plan

Table 3-7: State Water Project Table A Percent Allocations

	2018	2019	2020	2021	2022
Table A Allocation	35%	75%	20%	5%	5%

Source: CA Department of Water Resources Historical Table A Allocations for Years 1996-2023

Table 3-8: CVWD and DWA Groundwater Recharge

Groundwater Recharge (AF)	2018	2019	2020	2021	2022
Whitewater River GRF	129,725	235,600	126,487[1]	15,006[1]	15,011[1]
Mission Creek GRF	2,027	3,688	1,768	0	0
Total	**131,752**	**239,288**	**128,255**	**15,006**	**15,011**

Source: CVWD 2023-2024 Annual Engineer's Reports on Water Supply and Replenishment Assessment

[1] Between 2020 and 2022, the 15,000 AFY of 1988 MWD/IID Approval Agreement water was delivered at Whitewater River GRF.

3.2.3 Other SWP Water

There are other types of SWP water that can be purchased, such as individual water purchase opportunities and transfers/exchanges. These may be conveyed to CVWD and DWA as available, but no commitments exist.

In 2008, CVWD and DWA entered into separate agreements with DWR for the purchase and conveyance of supplemental SWP water under the Yuba River Accord Dry Year Water Purchase Program (Yuba Accord). This program provides dry year supplies through a water purchase agreement between DWR and Yuba County Water Agency, which settled long-standing operational and environmental issues over instream flow requirements for the lower Yuba River. The amount of water available for purchase varies annually and is allocated among participating SWP contractors based on their Table A amounts. CVWD and DWA may purchase up to 1.72 percent and 0.69 percent, respectively, of available Yuba Accord water, in years it is made available. Yuba Accord deliveries have varied from zero in multiple years to a total of 2,664 AFY to CVWD and DWA in 2013.

Article 21 water (described in Article 21 of the SWP water contracts), "Interruptible Water," is water that State Water Contractors may receive on a short-term basis in addition to their Table A water if they request it in years when it is available. Article 21 water is used by many contractors to help meet demands in low allocation years. Article 21 water is not available every year, amounts vary when it is available, and is proportionately allocated among participating Contractors. The availability and delivery of Article 21 water cannot interfere with normal SWP operations and cannot be carried over for delivery in a subsequent year.

3.3 Surface Water

CVWD does not currently use or intend to use any local surface water as part of its urban potable water supply. Local runoff is captured and used for groundwater recharge.

3.3.1 River/Stream Diversion

Surface water supplies come from several local rivers and streams including the Whitewater River, Snow Creek, Falls Creek, and Chino Creek, as well as a number of smaller creeks and washes. Because surface water supplies are affected by variations in annual precipitation, the annual supply is highly variable. The 50-year hydrologic period from 1970 to 2019 had an annual average watershed runoff of 52,506 AFY, with approximately 43,300 AFY in natural infiltration. Runoff during the 25-year period from 1995 to 2019 was below average, with 39,196 AFY in watershed runoff and 29,200 AFY in natural infiltration. CVWD does not currently use or intend to use any local surface water as part of its urban potable water supply. Local runoff is captured and used for groundwater recharge.

3.3.2 Stormwater Capture

The Coachella Valley drainage area is approximately 65 percent mountainous and 35 percent typical desert valley with alluvial fan topography buffering the valley floor from the steep mountain slopes. The mean annual precipitation ranges from 30 inches or more in the San Bernardino Mountains to less than 3 inches at the Salton Sea. Three types of storms produce precipitation in the drainage area: general winter storms, general thunderstorms, and local thunderstorms. Longer duration, lower intensity rainfall events tend to have higher recharge rates, but runoff from flash flooding can result from all three types of storms. Otherwise, there is little to no flow in most of the streams in the drainage area.

Significant amounts of local runoff are currently captured at the Whitewater River GRF and in the debris basins and unlined channels of the western Coachella Valley. Additional stormwater will be captured when the Thousand Palms Flood Control Project is completed and when flood control is constructed in the Oasis area. However, limited data exists to estimate the amount of additional stormwater that could be captured by new facilities in the Coachella Valley. Nonetheless, large-scale stormwater capture is not expected to yield sufficient water to be worth the investment as a single purpose project. Small-scale stormwater retention systems located in areas of suitable geology to allow percolation could capture small intensity storms as well as street runoff. The potential yield of these systems is not known at this time, but stormwater capture should be considered in conjunction with projects that construct stormwater and flood control facilities.

3.4 Wastewater and Recycled Water

Wastewater that has been highly treated and disinfected can be reused for landscape irrigation and other purposes. Recycled wastewater has historically been used for irrigation of golf courses and municipal landscaping in the Coachella Valley since as early as the 1960s. As growth occurs in the eastern Coachella Valley, the supply of recycled water is expected to increase, creating an additional opportunity to maximize local water supply.

CVWD operates five water reclamation plants (WRPs), two of them (WRP-7 and WRP-10) generate recycled water for irrigation of golf courses and large landscaped areas. WRP-4 became operational in 1986 and serves the communities from La Quinta to Mecca. WRP-4 effluent is not currently recycled, however, it will be in the future when the demand for recycled water is developed and tertiary treatment is constructed. The other two WRPs serve communities near the Salton Sea. A sixth WRP (WRP-9) was decommissioned in July 2015. The wastewater treated by CVWD from 2018 through 2022 is shown in **Table 3-9**. **Table 3-10** shows the recycled water produced by CVWD from 2018 through 2022. CVWD will continue to expand its recycled water program by connecting additional recycled water customers to meet the non-potable water demands in the western and eastern portions of the Coachella Valley.

Table 3-9: Wastewater Treated by CVWD

Wastewater (AF)	2018	2019	2020	2021	2022
WRP-1	19	16	18	24	22
WRP-2	12	16	13	15	16
WRP-4	5,900	6,065	6,353	6,452	6,440
WRP-7	3,275	3,246	3,236	3,287	3,375
WRP-10	10,124	9,663	9,238	8,980	9,235
Total	**19,330**	**19,006**	**18,858**	**18,758**	**19,088**

Table 3-10: Recycled Water Produced by CVWD

Recycled Water (AF)	2018	2019	2020	2021	2022
WRP-7	2,246	1,657	1,936	2,136	2,170
WRP-10	7,857	7,100	7,521	7,285	7,371
Total	**10,103**	**8,757**	**9,457**	**9,421**	**9,541**

3.5 Conservation

Water conservation, and the reduced groundwater production associated with water conservation, benefits the groundwater basin and is an important element of the Alternative Plans and the 2020 Regional UWMP.

CVWD has utilized several programs to ensure water conservation within its service area. CVWD has implemented allocation-based conservation water pricing (i.e. tiered rates) to prevent water waste or unreasonable use of water. In addition, CVWD's indoor rebate programs are designed to assist homeowners and commercial customers reduce water usage by upgrading toilets, replacing inefficient devices, and installing new technology to improve efficiency. CVWD also has outdoor rebate programs that are designed to assist homeowners, homeowners associations, and commercial customers reduce outdoor water usage by converting turf to desert landscaping, installing smart irrigation controllers, and improving the efficiency of irrigation systems. CVWD offers seminars, workshops, and classes to help educate the public regarding the need for water conservation and the conservation programs that are available.

3.6 Landscape Ordinance

CVWD Landscape Ordinance 1302.5 requires a series of reduction methods, including requirements that new developments install weather-based irrigation controllers that automatically adjust watering. Additional requirements include setbacks of spray emitters from impervious surfaces, as well as use of porous rock and gravel buffers between grass and curbs to eliminate run-off onto streets. With the exception of turf, all landscaping including groundcover and shrubbery must be irrigated with a drip system. Also, the maximum water allowance for landscaped areas through the CVWD service area has been reduced. This reduction goal requires that developers maximize the use of native and other drought-tolerant landscape materials and minimize use of more water-intensive landscape features, including turf and fountains.

3.7 Water Shortage Contingency Planning

Based on the experiences from the 2013-2015 drought, CVWD's domestic Water Shortage Contingency Plan provides the shortage levels summarized in **Table 3-11**. The trigger levels used to determine the water shortage level depend on the local water situation or applicable State mandates. CVWD has a diverse mix of water supplies and benefits from a large groundwater basin providing storage. CVWD's groundwater replenishment program replenishes the basin to increase groundwater storage during wet years and that supply is available for use during dry years.

Table 3-11: Urban Water Shortage Contingency Plan Shortage Levels

Shortage Level	Shortage Range	Water Supply Condition
1	Up to 10%	Normal water supplies
2	Up to 20%	Slightly limited water supplies
3	Up to 30%	Moderately limited water supplies
4	Up to 40%	Limited water supplies
5	Up to 50%	Significantly limited water supplies
6	Up to 60%	Severe shortage or catastrophic incident

Source: 2020 CVWD Water Shortage Contingency Plan

4 Public Water System – Projected Supply and Demand

Coachella Valley Water District (CVWD) projects that a majority of its urban potable water uses will continue to be supplied from local groundwater. In addition to groundwater, CVWD has secured imported water supplies from the State Water Project (SWP) and the Colorado River, and recycled water from water reclamation plants. These imported and recycled water supplies are used to meet CVWD's non-potable water demands and to replenish the groundwater basin.

4.1 Projected Urban Demand and Supply

The following tables from the 2020 Regional Urban Water Management Plan (Regional UWMP) provide the CVWD's projected water supplies and demands. Potable water demand projections for the CVWD service area are summarized in **Table 4-1**.

Table 4-1: CVWD Projected Urban Retail Potable Demands

	Projected Water Use				
Use Type	**2025**	**2030**	**2035**	**2040**	**2045**
Single Family	60,142	63,824	67,331	69,816	71,695
Multi-Family	6,873	7,245	7,742	8,267	9,045
CII	7,060	7,244	7,438	7,709	7,985
Landscape	34,193	36,205	38,226	39,865	41,516
Other	1,457	1,563	1,670	1,755	1,840
Losses	13,736	14,501	15,222	15,670	16,085
Total	**123,461**	**130,582**	**137,629**	**143,081**	**148,166**

Source: 2020 Coachella Valley Regional Urban Water Management Plan

A summary of existing and planned urban water supply volumes by source are presented in **Table 4-2**. It should be noted that the supplies and demands presented in the tables below include recycled water delivered to CVWD's non-potable customers based on the DWR standardized tables and 2020 UWMP Guidebook. DWR requires the supply reliability table to include both potable and recycled water, however, CVWD's recycled water is not a potable water supply and is not delivered to CVWD's potable water customers. Instead, recycled water is used to offset the groundwater pumping of private well owners (mainly for golf course and landscape irrigation) to eliminate overdraft.

These projections were based on 2010 U.S. Census Data, DWR's Population Tool, the Southern California Association of Governments' (SCAG) 2020 Connect SoCal Regional Transportation Plan, and seasonal occupancy data from the Greater Palm Springs Convention and Visitors Bureau.

Table 4-2: CVWD Projected Urban Water Supplies

Water Supply	Projected Water Supply (AFY)				
	2025	2030	2035	2040	2045
Groundwater	123,461	130,582	137,629	143,081	148,166
Recycled Water	13,600	14,400	15,100	15,900	16,800
Total	**137,061**	**144,982**	**152,729**	**158,981**	**164,966**

Source: 2020 Coachella Valley Regional Urban Water Management Plan

4.2 Normal, Single-Dry, Multiple-Dry Year Comparison

The following tables from the 2020 Regional UWMP provide CVWD's projected water supplies and demands in a normal year, single-dry year, and multiple-dry years.

During normal years, CVWD will be able to meet current and future urban water demand needs projected in the 2020 Regional UWMP through groundwater pumping and recycled water as shown in **Table 4-3**.

Table 4-3: Normal Year Supply and Demand Comparison

	2025	2030	2035	2040	2045
Supply Totals (AFY)	**137,061**	**144,982**	**152,729**	**158,981**	**164,966**
Groundwater	123,461	130,582	137,629	143,081	148,166
Recycled Water	13,600	14,400	15,100	15,900	16,800
Demand Totals (AFY)	**137,061**	**144,982**	**152,729**	**158,981**	**164,966**
Potable Water Demand	123,461	130,582	137,629	143,081	148,166
Recycled Water Demand	13,600	14,400	15,100	15,900	16,800
Difference	**0**	**0**	**0**	**0**	**0**

Source: 2020 Regional Urban Water Management Plan

Note: CVWD and the other Regional UWMP agencies collaborate on groundwater management plans for long-term sustainability. During a normal year, single-dry year, or five-dry year period, the agencies could produce additional groundwater if demands exceeded the estimates shown here.

During single-dry years, CVWD will be able to meet current and future urban water demand needs through groundwater pumping and recycled water as shown in **Table 4**-4. Water supplies during the single-dry year are 100 percent reliable. CVWD's groundwater replenishment program replenishes the basin to increase groundwater storage during wet years and that supply is available for use during dry years. Thus, the supply and demand comparison for the single-dry year is the same as the normal year.

Table 4-4: Single-Dry Year Supply and Demand Comparison

	2025	2030	2035	2040	2045
Supply Totals (AFY)	**137,061**	**144,982**	**152,729**	**158,981**	**164,966**
Groundwater	123,461	130,582	137,629	143,081	148,166
Recycled Water	13,600	14,400	15,100	15,900	16,800
Demand Totals (AFY)	**137,061**	**144,982**	**152,729**	**158,981**	**164,966**
Potable Water Demand	123,461	130,582	137,629	143,081	148,166
Recycled Water Demand	13,600	14,400	15,100	15,900	16,800
Difference	**0**	**0**	**0**	**0**	**0**

Source: 2020 Regional Urban Water Management Plan

Note: CVWD and the other Regional UWMP agencies collaborate on groundwater management plans for long-term sustainability. During a normal year, single-dry year, or five-dry year period, the agencies could produce additional groundwater if demands exceeded the estimates shown here.

During multiple-dry years, CVWD will be able to meet current and future urban water demand needs through groundwater pumping and recycled water as shown in **Table 4-5**. Similar to the single-dry year, the multiple-dry year water supply reliability is 100 percent. Thus, the supply and demand comparison for the multiple-dry years is the same as the normal year. CVWD and the other Regional UWMP agencies collaborate on groundwater management plans for long-term sustainability. During a normal year, single-dry year, or five-dry year period, the agencies could produce additional groundwater if demands exceeded the estimates shown here.

Table 4-5: Multiple-Dry Years Supply and Demand Comparison

		2025	2030	2035	2040	2045
First Year	**Supply Totals (AFY)**	**137,061**	**144,982**	**152,729**	**158,981**	**164,966**
	Groundwater	123,461	130,582	137,629	143,081	148,166
	Recycled Water	13,600	14,400	15,100	15,900	16,800
	Demand Totals (AFY)	**137,061**	**144,982**	**152,729**	**158,981**	**164,966**
	Potable Water Demand	123,461	130,582	137,629	143,081	148,166
	Recycled Water Demand	13,600	14,400	15,100	15,900	16,800
	Difference	**0**	**0**	**0**	**0**	**0**
Second Year	**Supply Totals (AFY)**	**137,061**	**144,982**	**152,729**	**158,981**	**164,966**
	Groundwater	123,461	130,582	137,629	143,081	148,166
	Recycled Water	13,600	14,400	15,100	15,900	16,800
	Demand Totals (AFY)	**137,061**	**144,982**	**152,729**	**158,981**	**164,966**
	Potable Water Demand	123,461	130,582	137,629	143,081	148,166
	Recycled Water Demand	13,600	14,400	15,100	15,900	16,800
	Difference	**0**	**0**	**0**	**0**	**0**
Third Year	**Supply Totals (AFY)**	**137,061**	**144,982**	**152,729**	**158,981**	**164,966**
	Groundwater	123,461	130,582	137,629	143,081	148,166
	Recycled Water	13,600	14,400	15,100	15,900	16,800
	Demand Totals (AFY)	**137,061**	**144,982**	**152,729**	**158,981**	**164,966**
	Potable Water Demand	123,461	130,582	137,629	143,081	148,166
	Recycled Water Demand	13,600	14,400	15,100	15,900	16,800
	Difference	**0**	**0**	**0**	**0**	**0**
Fourth Year	**Supply Totals (AFY)**	**137,061**	**144,982**	**152,729**	**158,981**	**164,966**
	Groundwater	123,461	130,582	137,629	143,081	148,166
	Recycled Water	13,600	14,400	15,100	15,900	16,800
	Demand Totals (AFY)	**137,061**	**144,982**	**152,729**	**158,981**	**164,966**
	Potable Water Demand	123,461	130,582	137,629	143,081	148,166
	Recycled Water Demand	13,600	14,400	15,100	15,900	16,800
	Difference	**0**	**0**	**0**	**0**	**0**
Fifth Year	**Supply Totals (AFY)**	**137,061**	**144,982**	**152,729**	**158,981**	**164,966**
	Groundwater	123,461	130,582	137,629	143,081	148,166
	Recycled Water	13,600	14,400	15,100	15,900	16,800
	Demand Totals (AFY)	**137,061**	**144,982**	**152,729**	**158,981**	**164,966**
	Potable Water Demand	123,461	130,582	137,629	143,081	148,166
	Recycled Water Demand	13,600	14,400	15,100	15,900	16,800
	Difference	**0**	**0**	**0**	**0**	**0**

Source: 2020 Regional Urban Water Management Plan

Note: CVWD and the other Regional UWMP agencies collaborate on groundwater management plans for long-term sustainability. During a normal year, single-dry year, or five-dry year period, the agencies could produce additional groundwater if demands exceeded the estimates shown here.

CVWD's total current urban water demand was 109,607 acre-feet (AF) for 2022, including 100,066 AF of groundwater and 9,541 AF of recycled water.

5 Project Description

Thermal Ranch Specific Plan (Project or TRSP) is located in the southeast portion of the Coachella Valley within the unincorporated area of Thermal, Riverside County as shown in **Figure 5-1**. The Project will be accessible from Avenue 62, Harrison Street, and Tyler Street and is bounded by Avenue 62 to the north, Tyler Street to the east, vacant lands to the south, and Harrison Street to the west, as shown in **Figure 5-2**. The Project consists of 619.1 acres and proposes a high-quality, master-planned equestrian lifestyle community within six (6) distinct Planning Areas centered around a world-class equestrian center as shown in **Figure 5-3** and **Table 5-1**.

Planning Area 1 (PA-1, Equestrian Center) is 223.1 acres and zoned "Tourist Commercial" in the proposed TRSP. PA-1 consists of an equestrian center with key facilities including a central VIP dining commons, an Olympic-level grand prix riding ring, barns, competition arenas, highly manicured turf showring, equestrian-serving retail shops, maintenance/feed storage buildings and equine service facilities. The equestrian center will have the capacity to stable 2,700 horses and provide onsite veterinary services, farrier services, and feed and tack stores. It is assumed that 54 percent of PA-1, approximately 119.04 acres (5,185,626.34 square feet), will be landscaped, which will primarily consist of drought tolerant plants with limited turf areas reserved for pastures and grass fields (see **Figure 5-4** for PA 1 Tentative Plot Plan for turf areas). Outdoor water usage includes water used for dust control management on internal dirt roadways and arenas. It is assumed that 26 percent of PA-1, approximately 58.63 acres (2,554,114.46 square feet), will require daily dust control management. PA-1 also includes a 1-acre irrigation pond.

Planning Area 2 (PA-2, Estate Neighborhood) is approximately 194.3 acres and zoned "Low Density Residential" in the proposed TRSP. PA-2 consists of a gated-community with access to the equestrian center and will require a tract map. It will provide up to 132 large single-family estate lots ranging from a half-acre to two acres. PA-2 will also feature a central community center with a range of residential amenities such as a clubhouse, swimming pool, pickle ball court, gym, locker rooms, meeting areas and dining. It is assumed that 75 percent of PA-2, or 6,347,781 square feet, will be landscaped with a mix of drought tolerant plants and minimal turf for private homes. For analysis purposes, it is also assumed that each home will have a 600 square foot private pool.

Planning Area 3 (PA-3, Traditional Neighborhood) is approximately 69.5 acres and zoned "Medium Density Residential" in the proposed TRSP. PA-3 allows up to 390 traditional single-family detached and attached houses (for residents who want to board horses at the equestrian center and live nearby with immediate access to the equestrian showgrounds, riding trails and services). PA-3 will also require a tract map. Amenities may include a community center, tennis and pickle ball courts, gym, pool, meeting areas and dining. It is assumed that 55 percent of PA-3, or 1,665,081 square feet, will be landscaped with a mix of drought tolerant plants and minimal turf for private homes. For analysis purposes, it is also assumed that there will be up to 5,000

square feet of shared community pools and that 161 single-family detached homes will have a 400 square foot private pool.
Planning Area 4 (PA-4, Horse Park Workforce Housing) is approximately 41.1 acres and zoned "High Density Residential" in the proposed TRSP. PA-4 is divided into two sub-areas: PA-4(a) will provide up to 500 units of modular workforce housing and PA-4b will provide 320 recreational vehicle parking spaces. From October to March, workforce housing would be used exclusively by workers at the equestrian center (PA-1). From April to September (the offseason) workforce housing would be made available for rent to farmworkers in coordination with farmers in the eastern Coachella Valley. It is assumed that 40 percent of PA-4, or 716,126 square feet, will be landscaped with a mix of drought tolerant plants and minimal turf areas. For analysis purposes, it is also assumed that there will be up to 5,000 square feet of shared community pools.

Planning Area 5 (PA-5, Resort/Hotel) is 54.4 acres and zoned "Tourist Commercial" in the proposed TRSP. PA-5 will provide a full range of hospitality/resort services, including dining, spa, entertainment, and retail activities with 50,000 square feet of retail space (assumes 65 percent commercial, 35 percent restaurant), a 150-key hotel, and up to 340 resort condos. PA-5 will require a tract map for the resort condos. It is assumed that 30 percent of PA-5, or 710,899 square feet, will be landscaped with a mix of drought tolerant plants and minimal turf areas. For analysis purposes, it is also assumed that there will be up to 5,000 square feet of resort pools and up to 7-acres (304,924 square feet) of water features or irrigation ponds.

Planning Area 6 (PA-6, Retail Village) is 21.4 acres and zoned "Commercial Retail" in the proposed TRSP. PA-6 will offer a variety of conveniently accessible entertainment, food and beverage, service, retail, and commercial recreation amenities that cater to the residents and guests of Thermal Ranch and the local Thermal Community with up to 150,000 square feet of neighborhood commercial and other retail space (assumes 65 percent commercial, 35 percent restaurant). It is assumed that 25 percent of PA-6, or 233,046 square feet, will be landscaped with drought tolerant plants.

Perimeter Right-of-Way: Approximately 15.3 acres of the project area are perimeter rights of way (ROW). It is assumed that up to 50 percent (333,234 square feet) of the perimeter ROW will be landscaped.

Figure 5-1: Project Regional Location Map

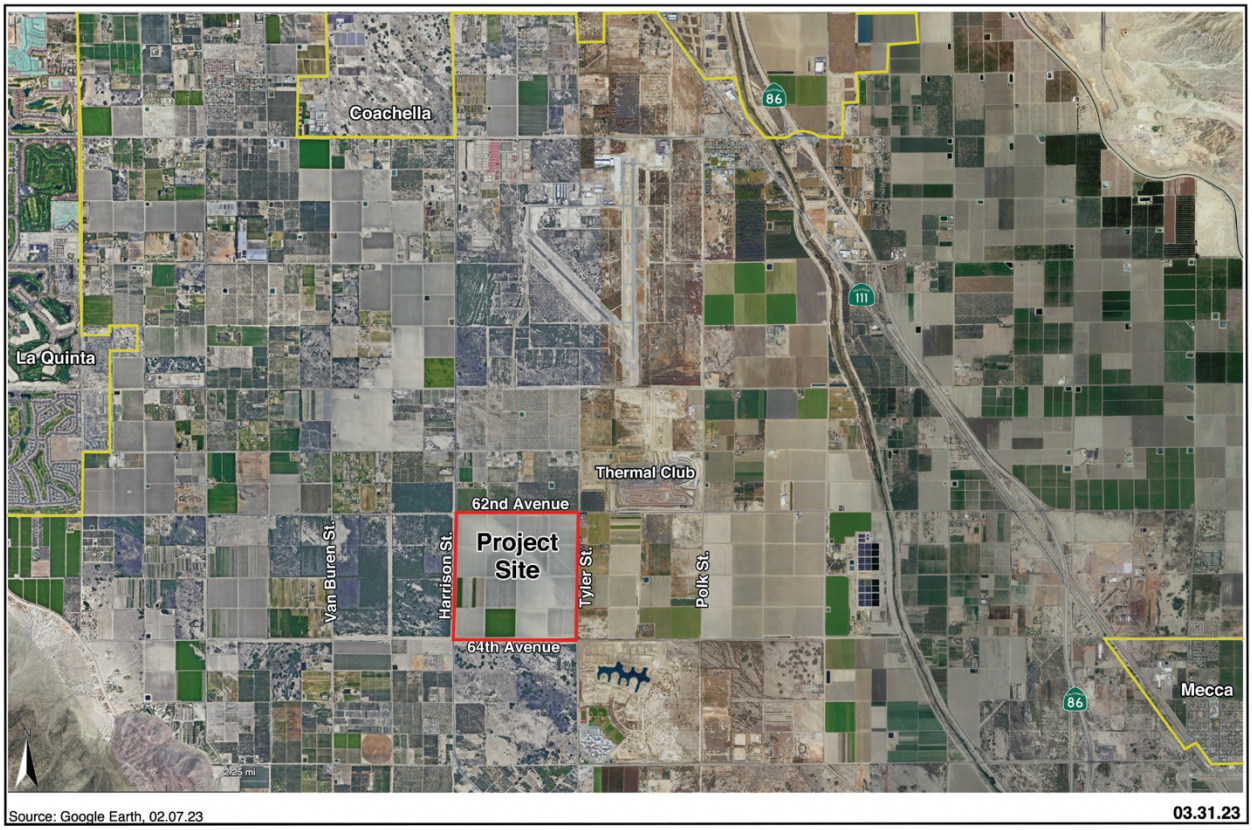


Figure 5-2: Project Vicinity Map

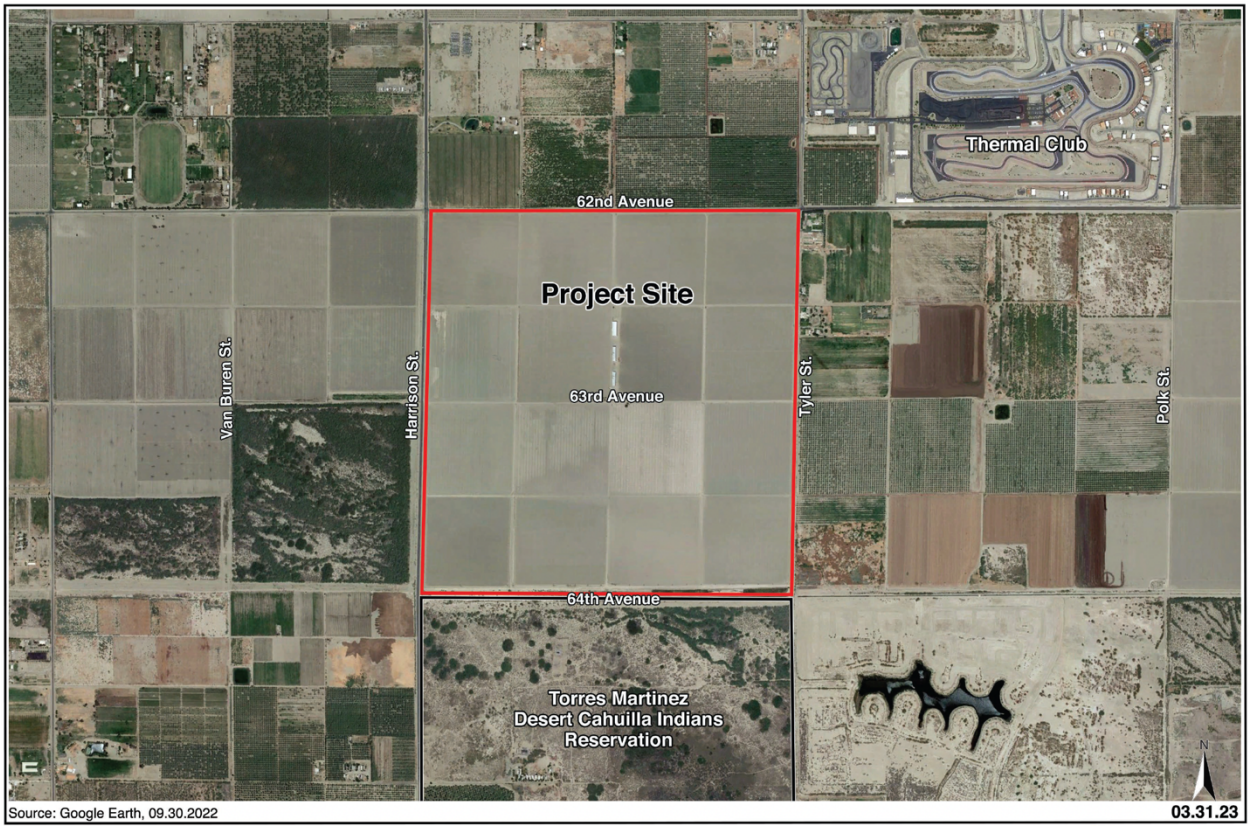
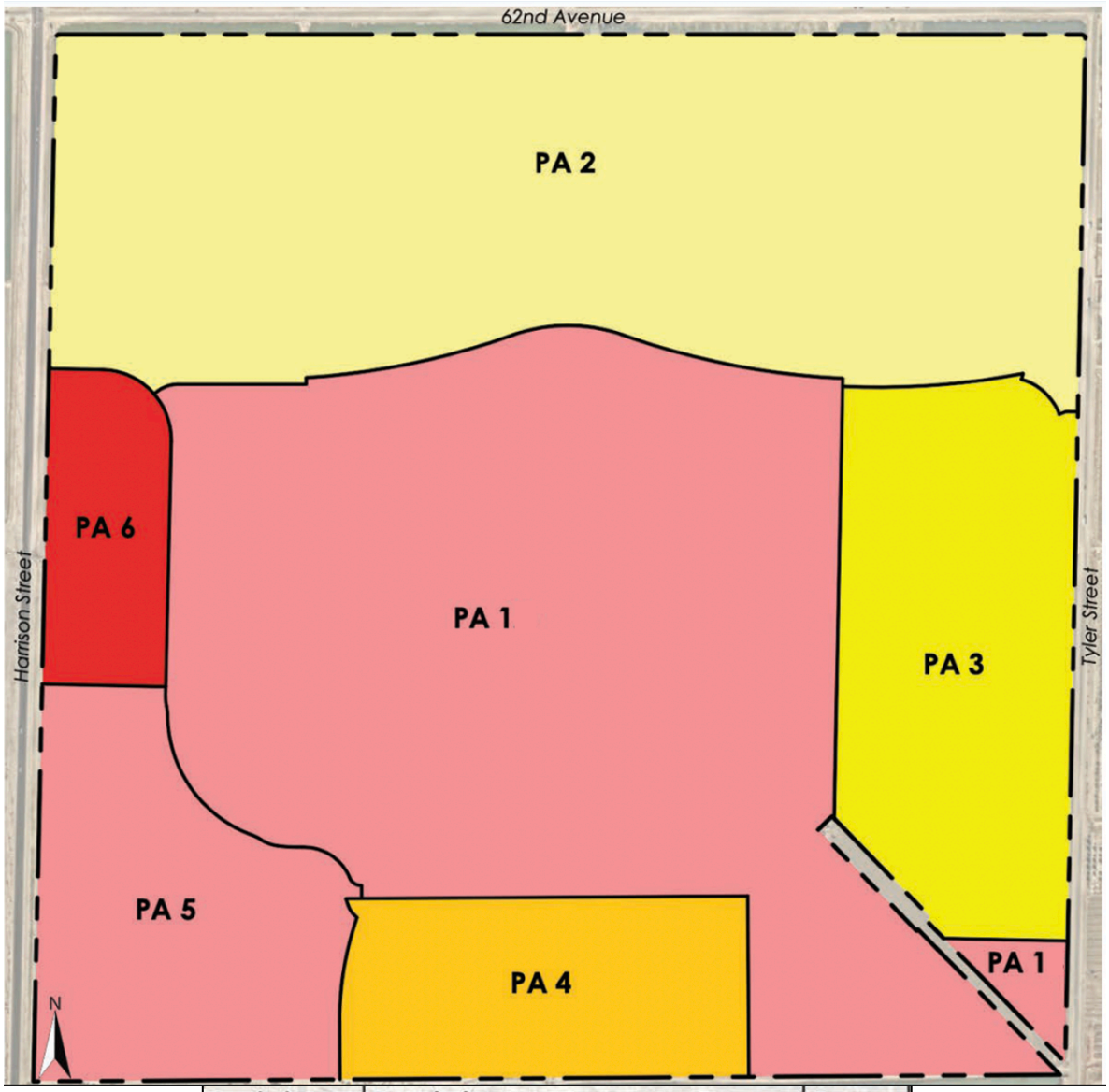


Figure 5-3: Specific Plan Planning Areas



Symbol	Description	Area (Acres)
	Project Boundary	-
	Planning Area Boundary	-
	PA 1: Tourist Commercial (CT)	223.1
	PA 2: Low Density Residential (LDR)	194.3
	PA 3: Medium Density Residential (MDR)	69.5
	PA 4: High Density Residential (HDR)	41.1
	PA 5: Tourist Commercial (CT)	54.4
	PA 6: Commercial Retail (CR)	21.4
	Developable Area	**603.8**
	Perimeter R.O.W.	15.3
	Total	**619.1**

Figure 5-4: Planning Area 1 Tentative Plot Plan

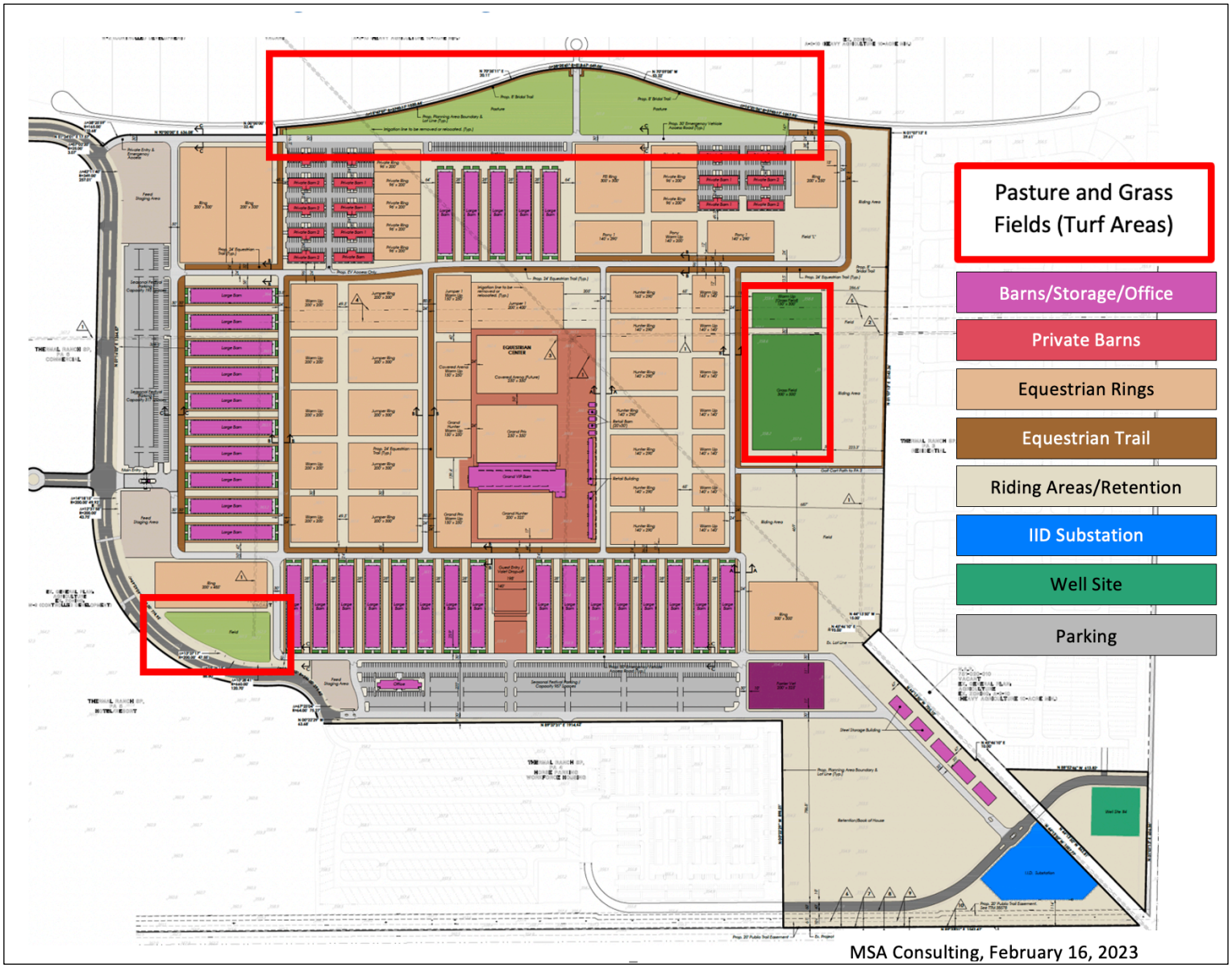


Table 5-1: Project Land Use Summary

Planning Area	Specific Plan/Land Use Designation	Land Area (Acres)	Target Density (EDUs/Acre)	Estimated Dwelling Units (EDUs)	Non-Residential Building Area (ft^2)
1	Tourist Commercial	223.1			85,000
2	Low Density Residential	194.3	0.6	132	
3	Medium Density Residential	69.5	5.6	390	
4(a)	High Density Residential – Modular Housing	18.3	27.3	500	
4(b)	High Density Residential – RVs	22.8	14	320	
5(a)	High Density Residential	42.1	8.1	340	
5(b)	Hotel	8.1		150 Hotel Keys	112,500
5(c)	Tourist Commercial	4.2			50,000
6	Tourist Commercial	21.4			150,000
Perimeter ROW	Right-of-Way	15.3	-	-	-
Total		**619.1**		**1,682**	**397,500**

6 Project Water Demands

The Thermal Ranch Specific Plan (Project or TRSP) proposes to develop approximately 619.1 acres of vacant farmland in the Coachella Valley to include up to 1,682 dwelling units, 397,500 square feet of commercial uses including a 150 key hotel, 17,789,468 square feet of landscaping/open space, and 463,520 square feet of outdoor water features.

6.1 Projected Indoor Residential Water Demand

The projected indoor residential unit usage for this Water Supply Assessment (WSA) is based on indoor water use performance standards as provided in the California Water Code (CWC) for residential water demand Water Code Section 10910 approved November 10, 2009, codified in CWC section 10608.20 (b)(2)(A). The projected indoor residential water demand for the Project totals 279.79 acre-feet per year (AFY) as shown in **Table 6-1**. SB 606 and AB 1668 established guidelines for efficient water use and a framework for the implementation and oversight of the new standards. Based on results of the Indoor Residential Water Use Study, DWR and the State Water Resources Control Board jointly recommended that the indoor residential standard remain at 55 gallons per capita per day (gpcd) through 2024 and decline to 47 gpcd in 2025 and to 42 gpcd in 2030.

Table 6-1: Projected Indoor Residential Water Demand

Planning Area	Land Area (Acres)	Estimated Dwelling Units (EDUs)	Estimated Occupants per Home [1]	Gallons per Day (gpd) per Occupant [2]	gpd/EDU	Water Demand (gpd)	Water Demand (AFY)
PA-2	194.3	132	2.7	55	148.5	19,602	21.96
PA-3	69.5	390	2.7	55	148.5	57,915	64.87
PA-4	41.1	820	2.7	55	148.5	121,770	136.40
PA-5	42.1	340	2.7	55	148.5	50,490	56.56
Total	**347**	**1,682**				**249,777**	**279.79**

[1] Occupant assumptions based on U.S. Census Bureau American Community Survey 2021 5-year data for Coachella Valley CCD, Thermal, and Mecca; and Project specific Vehicle Mile Traveled (VMT) analysis that averages the occupancy rates across the entire project as 2.7 persons per dwelling unit: estate and single family detached housing (3 persons), resort condo and attached housing (2.5 to 3 persons) and RV (2.5 persons)

[2] CA Indoor Water Use Performance Standard

6.2 Projected Indoor Commercial and Industrial Water Demand

The projected indoor commercial and industrial unit usage for this WSA are based on the American Water Works Association Research Foundations (AWWARF's) Commercial and Industrial End Uses of Water. The projected indoor commercial and industrial water demand for the Project totals 231.28 AFY as shown in **Table 6-2** below.

Table 6-2: Projected Indoor Commercial and Industrial Water Demand

Planning Area	Indoor Area (ft^2)	Number of Rooms/ Stalls	Water Demand Factor (gal/ ft^2)[1]	Water Demand (gpd)	Water Demand (AFY)
PA-1: Office/Commercial	55,250		35	5,297.95	5.93
PA-1: Restaurant	29,750		331	26,978.77	30.22
PA-1: Stable Stalls		2,700	30[2]	81,000.00	90.73
PA-5: Hotel[3]	112,500	150	115	17,250.00	19.32
PA-5: Restaurant	17,500		331	15,869.86	17.78
PA-5: Commercial	32,500		35	3,116.44	3.49
PA-6: Restaurant	52,500		331	47,609.59	53.33
PA-6: Commercial	97,500		35	9,349.32	10.47
Total	**397,500**			**206,471.92**	**231.28**

[1] AWWARF Commercial and Industrial End Uses of Water, 2000.

[2] Stable stall water demand is 30 gallons per day per stall. Includes drinking water, bathroom/washroom/shower flush, equipment cleaning.

[3] 150-key hotel is estimated to be 112,500 square feet. Number of hotel rooms is used to estimate demand.

6.3 Projected Outdoor Irrigation Water Demand

The projected outdoor irrigation water usage is based on the Maximum Applied Water Allowance (MAWA) equation from Appendix D of Coachella Valley Water District's (CVWD's) Landscape Ordinance No. 1302.5, which meets the water conservation goals of the California Department of Water Resources (DWR) Model Efficient Landscape Ordinance (MWELO). The projected outdoor irrigation water demand for the Project is 1,168.39 AFY as shown in **Table 6-3** below.

Table 6-3: Projected Outdoor Irrigation Water Demand

Planning Area	Landscaped Area (ft^2)	ETo (in/yr) [1]	ETAF [2]	Conversion Factor (gal/ft^2) [3]	Water Demand (gpd)	Water Demand (AFY)
PA-1 – 54% irrigated	5,185,626.34	76.46	0.45	0.62	303,072.72	339.49
PA – 1 26% dust control	2,554,114.46	See footnote 4			148,962.98	166.86
PA-1 – Irrigation Pond	43,560.00	76.46	1.1	0.62	6,223.20	6.97
PA-2 – 75% irrigated	6,347,781.00	76.46	0.45	0.62	370,994.58	415.57
PA-3 – 55% irrigated	1,665,081.00	76.46	0.45	0.62	97,315.27	109.01
PA-4 – 40% irrigated	716,126.40	76.46	0.45	0.62	41,853.84	46.88
PA-5 – 30% irrigated	710,899.20	76.46	0.45	0.62	41,548.34	46.54
PA-6 – 25% irrigated	233,046.00	76.46	0.45	0.62	13,620.32	15.26
ROW – 50% irrigated	333,234.00	76.46	0.45	0.62	19,475.78	21.82
Total	**17,789,468.40**				**1,043,378.68**	**1,168.39**

[1] Reference Evapotranspiration (ETo) for ETo Zone 4 from CVWD Landscape Ordinance 1302.5, Appendix C

[2] Evapotranspiration Adjustment Factor (ETAF) from CVWD Landscape Ordinance 1302.5, Appendix D

[3] Conversion Factor from CVWD Landscape Ordinance 1302.5, Appendix D

[4] Dust control water demand based on current dust control operations at the existing off-site equestrian center: During Season (7 months, Oct-Apr, approx. 210 days)

- Road Dust Control: 1 truck (5,000 gals) 10 trips per day for 210 days = 50,000 gal/day or 10,500,000 gal total during season
- Arena/Riding Path Dust Control: 4 trucks (5,000 gals each) 10 trips each per day, or 40 trips total per day for 210 days = 200,000 gal/day or 42,000,000 gals total during season

Total Season Dust Control Water Use: 250,000 gals/day or 52,500,000 gals total or 161.11 AF

Off Season (5 months, May-Sept, approx. 150 days)

Dust control water use is on an as needed basis, total daily use for roads/arenas/riding paths reduced by 95%, or a total of 12,500 gal/day or 1,875,000 gals total during off season

Total Off Season Dust Control Water Use: 12,500 gal/day or 1,875,000 gals total or 5.75 AF

Total Annual Dust Control Use = 166.86 AFY

6.4 Projected Outdoor Water Features Demand

The projected outdoor water features usage is based on the Estimated Total Water Usage (ETWU) equation from Appendix D of CVWD's Landscape Ordinance No. 1302.5. Outdoor water features include community and private pools, as well as decorative water features or irrigation ponds. The projected outdoor water features demand for the Project is 74.18 AFY as shown in **Table 6-4** below.

Table 6-4: Projected Outdoor Water Features Demand

Planning Area	Water Feature Area (ft^2)	ETo (in/yr) [1]	Plant Factor [2]	Conversion Factor (gal/ft^2) [3]	Water Demand (gpd)	Water Demand (AFY)
PA-2	79,200	76.46	1.1	0.62	11,314.91	12.67
PA-3	69,400	76.46	1.1	0.62	9,914.83	11.11
PA-4	5,000	76.46	1.1	0.62	714.32	0.80
PA-5	309,920	76.46	1.1	0.62	44,276.72	49.60
Total	**463,520**				**66220.78**	**74.18**

[1] Reference Evapotranspiration (ETo) for ETo Zone 4 from CVWD Landscape Ordinance 1302.5, Appendix C

[2] Plant Factor of 1.1 for a stationary body of water from CVWD Landscape Ordinance 1302.5

[3] Conversion Factor from CVWD Landscape Ordinance 1302.5, Appendix D

6.5 Projected Total Water Demand

The total projected water demand for the Project is 1,753.63 AFY, or 2.83 acre-feet per acre, as shown in **Table 6-5** below.

Table 6-5: Projected Total Water Demand

Planning Area	Land Area (Acres)	Indoor Residential Demand (AFY)	Indoor Commercial and Industrial Demand (AFY)	Outdoor Irrigation Demand (AFY)	Outdoor Water Features Demand (AFY)	Total Water Demand (AFY)
PA-1	223.10		126.89	513.32		640.20
PA-2	194.30	21.96		415.57	12.67	450.20
PA-3	69.50	64.87		109.01	11.11	184.99
PA-4	41.10	136.40		46.88	0.80	184.08

PA-5	54.40	56.56	40.59	46.54	49.60	193.28
PA-6	21.40		63.80	15.26		79.06
ROW	15.30			21.82		21.82
Total	**619.10**	**279.79**	**231.28**	**1,168.39**	**74.18**	**1,753.63**

6.6 Projected Water Sources

The primary source of potable water for the Project will be supplied by CVWD's domestic system. This source will serve all indoor uses, horse watering, and recreational (contact) water uses such as swimming pools. It is anticipated that all other outdoor water uses including landscaping and dust control management will be met with canal water or CVWD's non-potable system if and when available, with private well water available as a secondary/backup source if needed.

Table 6-6: Projected Water Sources

Planning Area	Land Area (Acres)	Indoor Residential Demand	Indoor Commercial and Industrial Demand	Outdoor Irrigation Demand	Outdoor Water Feature Demand
PA-1	223.10		CVWD Domestic	CVWD Canal/Non-Potable or Private Well	
PA-2	194.30	CVWD Domestic		CVWD Canal/Non-Potable or Private Well	CVWD Domestic
PA-3	69.50	CVWD Domestic		CVWD Canal/Non-Potable or Private Well	CVWD Domestic
PA-4	41.10	CVWD Domestic		CVWD Canal/Non-Potable or Private Well	CVWD Domestic
PA-5	54.40	CVWD Domestic	CVWD Domestic	CVWD Canal/Non-Potable or Private Well	CVWD Domestic and Canal/Non-Potable
PA-6	21.40		CVWD Domestic	CVWD Canal/Non-Potable or Private Well	
ROW	15.30			CVWD Canal/Non-Potable or Private Well	

6.7 Conservation Measures

The landscape guidelines in the Thermal Ranch Specific Plan emphasize non-invasive drought tolerant plant materials that are climate-appropriate, water efficient, and sustainable. The plant palette throughout the Specific Plan area shall utilize a low maintenance and low water palette

(see **Table 6-7**). Turfed areas, including those in PA-1 and PA-2, will be limited. The landscaping and irrigation plans and system shall comply with all CVWD and County ordinances relating to water efficiency and the Project shall use automated irrigation systems with irrigation timers, and two drip or bubbler heads per tree to provide efficient deep-root irrigation.

The Project's adherence to the CVWD conservation programs, most notably in CVWD Landscape Ordinance 1302.5, has guided development of the Project landscape plan and will further enforce the water conservation ethic and strategy.

Table 6-7: Specific Plan Plant Palette

LARGE AND MEDIUM TREES (15 GAL-36" BOX)
BAUHINIA PURPUREA / PURPLE ORCHID TREE
CHORISIA SPECIOSA / SILK FLOSS TREE
OLEA EUROPAEA 'SWANHILL FRUITLESS' / EUROPEAN OLIVE
PARKINSONIA SPECIES
PROSOPIS SPECIES
TIPUANA TIPU / TIPU TREE
SCHINUS MOLLE / CALIFORNIA PEPPER
UPRIGHT TREES (15 GAL-36" BOX)
ACACIA SALICINA / WILLOW ACACIA
ACACIA SALIGNA / ORANGE WATTLE
ACACIA STENOPHYLLA / SHOESTRING ACACIA
ACACIA WILLARDIANA / PALO BLANCO
CALLISTEMON SPECIES
EUCALYPTUS SPECIES
SMALL TREES (15 GAL-36" BOX)
ACACIA ANEURA / MULGA
ACACIA FARNESIANA / SWEET ACACIA
CAESALPINIA CACALACO "SMOOTHIE" / CASCALOTE
CITRUS SPECIES
SMALL TREES (20'-30' HT.)
PHOENIX DACTYLIFERA / DATE PALM
WASHINGTONIA ROBUSTA / MEXICAN FAN PALM
ACCENT PALMS (24"-36" BOX)
BISMARCKIA NOEBIUS / BISMARK PALM
BEAUCARNEA RECURVATA / PONY TAIL PALM
CHAMAEROPS HUMILIS / MEDITERRANEAN FAN PALM
LARGE ACCENTS (5-15 GAL)
GAVE ANGUSTIFOLIA / CENTURY PLANT
DASYLIRION WHEELERI / GREY DESERT SPOON
FEROCACTUS ACANTHODES / COMPASS BARREL
NOLINA NELSONII / BLUE MOLINA
OPUNTIA SANTA-RITA / SANTA RITA PRICKLY PEAR
YUCCA SPECIES
SMALL ACCENTS / CACTI (1 GAL)
ECHINOCACTUS GRUSONII / GOLDEN BARREL CACTUS
HESPERALOE SPECIES

LARGE GRASS (1-5 GAL)
SPOROBOLUS AIROIDES / ALKALI SACATON
SPOROBOLUS WRIGHT / BIG SACATON
MEDIAN/SMALL GRASS (1-5 GAL)
MUHLENBERGIA RIGENS / DEER GRASS
PENSTEMON SP. (RED) / MIXED PENSTEMON SPECIES
LARGE SHRUBS (5 GAL)
CAESALPINIA PULCHERRIMA / RED BIRD OF PARADISE
CASSIA SPECIES
LEUCOPHYLLUM SPECIES
NERIUM OLEANDER / OLEANDER
SIMMONDSIA CHINENSIS / JOJOBA
MEDIUM SHRUBS (5 GAL)
BOUGAINVILLEA SPECIES
CALLISTEMON VIMINALIS 'LITTLE JOHN' / DWARF WEEPING BOTTLE BRUSH
CARISSA MACROCARPA 'GREEN CARPET' / GREEN CARPET NATAL PLUM
DALEA SPECIES
EREMOPHILA SPECIES
JUNIPERUS C. 'BLUE PACIFIC' / BLUE PACIFIC JUNIPER
LANTANA SPECIES
OLEA EUROPAEA 'MONTEA' / LITTLE OLLIE DWARF OLIVE
GROUNDCOVERS (1-5 GAL)
ACACIA REDOLENS 'DESERT CARPET' TM /BANK CATCLAW
DALEA SPECIES
JUNIPERUS SPECIES
LANTANA SPECIES
PORTULACARIA AFRA / ELEPHANT BUSH
PYRACANTHA FORTUNEANA 'GRABERI' / GRABERI PYRACANTHA
VINE (1-5 GAL)
BOUGAINVILLEA X 'BARBARA KARST' / BARBARA KARST BOUGAINVILLEA
ROSA BANKSIAE 'ALBA PLENA' / WHITE LADY BANK'S ROSE
GROUND COVERS
PASTURE
DECOMPOSED GRANITE

7 Availability of Sufficient Supplies

7.1 Water Supply Assessment

Based on the analysis in this Water Supply Assessment (WSA), the projected total water demand for the Thermal Ranch Specific Plan (Project) will be 1,753.63 acre-feet per year (AFY), or 2.83 acre-feet per acre. CVWD's long-term water management planning ensures that adequate water supplies are available to meet existing and future water needs within its service area. CVWD's current urban water demand was 100,066 acre-feet (AF) for 2022, and the projected urban water demand by 2045 is 148,166 AFY. This Project's water demand of 1,753.63 AFY accounts for approximately 3.6% percent of the total planned increases in demand of 48,100 AFY by 2045.

This WSA provides an assessment of the availability of sufficient water supplies during normal, single-dry, and multiple-dry years over a 20-year projection to meet the projected demands of the Project, in addition to existing and planned future water demands of CVWD, as required by Senate Bill (SB) 610 and SB 1262. This WSA also includes identification of existing water supply entitlements, water rights, water service contracts, and agreements relevant to the identified water supply for the Project and quantities of water received in prior years pursuant to those entitlements, rights, contracts, and agreements.

This WSA has been prepared in compliance with the requirements of SB 610 and SB 1262 by Terra Nova Planning and Research in consultation with CVWD and the County. This WSA does not relieve the Project from complying with all applicable state, county, city, and local ordinances or regulations including the CVWD Landscape Ordinance, and indoor water use performance standards provided in the California Water Code now or in the future.

Consistent with the provisions of SB 610, neither this WSA nor its approval shall be construed to create a right or entitlement to water service or any specific level of water service, and shall not impose, expand, or limit any duty concerning the obligation of CVWD to provide certain service to its existing customers or to any future potential customers.

This WSA does not constitute an agreement to provide water service to the Project, and does not entitle the Project, Project applicant, or any other person or entity to any right, priority, or allocation in any supply, capacity, or facility. To receive water service, the Project will be subject to an agreement with CVWD, together with any and all applicable fees, charges, plans and specifications, conditions, and any and all other applicable CVWD requirements in place and as amended from time to time. Nor does anything in this WSA prevent or otherwise interfere with CVWD's discretionary authority to declare a water shortage emergency in accordance with the Water Code.

This WSA will be reviewed every five years, or in the event that the water planning assumptions have changed, until the Project begins construction on all planning areas to ensure it remains accurate and no significant changes to either the Project or available water supply has occurred.

The Project applicant shall notify CVWD when construction of projects in all planning areas begins.

7.2 Requirement for Written Verification of Water Supply Availability

Government Code §66473.7 requires that a Written Verification of Water Supply (WV) be prepared in connection with the approval of a development agreement or tentative map that includes a subdivision. A subdivision is defined as a proposed residential development of more than 500 units, except that for a water agency with fewer than 5,000 service connections, a subdivision includes a residential development project that would account for an increase of 10 percent or more in the number of the agency's existing service connections.

This WSA is not a WV. If the County determines that the Project or any planning area meets the definition of a subdivision and requires preparation of a WV, the County must request a WV prepared by CVWD in compliance with the requirements of SB 221. This WSA may be used to support the WV. Depending on circumstances including but not limited to new water efficiency regulations or changes in water supply availability, CVWD may recommend preparation of an updated supply and demand assessment to support the WV.

8 References

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