

**COACHELLA VALLEY WATER MANAGEMENT PLAN
2010 UPDATE**

**Administrative Draft
Subsequent Program Environmental Impact Report
SCH No. 2007091099**

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Section 1 Summary

1.1 PROJECT BACKGROUND

The Coachella Valley Water District (CVWD or District) is a public agency that provides domestic water, wastewater (sanitation), non-potable water (reclaimed wastewater and Colorado River water), irrigation and drainage, stormwater and groundwater management services to a population of 265,000 throughout the Coachella Valley in central Riverside County, California.

CVWD adopted the Coachella Valley Water Management Plan (WMP or Plan) and Program Environmental Impact Report (PEIR) in September 2002. The WMP is a multi-faceted plan to allow CVWD to meet its responsibilities for securing and protecting Coachella Valley water supplies into the future. The CVWD Board of Directors recognized the need to update the Plan periodically to respond to changing external and internal conditions. The 2010 WMP Update has been prepared to meet that need. The 2010 WMP Update defines how the project goals will be met given changing conditions and new uncertainties regarding water supplies, water demands and evolving federal and state regulations. The planning time horizon for the 2010 WMP Update is 35 years, from 2010 to 2045. The baseline data year is 2009.

California Environmental Quality Act (CEQA) compliance for the 2010 WMP Update, the Proposed Project, is a Subsequent Program EIR (SPEIR), State Clearinghouse (SCH) No. 2007091099), based on the 2002 WMP PEIR (SCH No. 1999041032 and SCH No. 2000031027), which is hereby incorporated in full by reference.

1.2 PURPOSE OF AND NEED FOR THE PROJECT

The original and ongoing purpose of the project is to address the state of overdraft in the Coachella Valley groundwater basin, and thereby reduce potentially significant adverse effects of overdraft:

- groundwater storage reduction,
- decline in groundwater levels,
- land subsidence, and
- degradation in groundwater quality.

Since the adoption of the 2002 WMP, the Coachella Valley has experienced a number of changes that affect water demands in the Valley for the foreseeable future:

- rapid population growth,
- changes in land use from agricultural or vacant to urban,
- development on tribal lands, and
- projected urban development outside the 2002 WMP study area.

Section 1 – Summary

External factors also have affected or may affect Valley water supplies:

- Annual fluctuation in imported State Water Project (SWP) supplies to the Coachella Valley due to drought and environmental needs in the Sacramento-San Joaquin Delta (Delta).
- Recent environmental rulings to protect sensitive fish species in the Delta that restrict the State's ability to move water through the Delta to the SWP, decreasing supply reliability. The degree to which the long term supply of the SWP will be affected is uncertain.
- Preparation of the Bay-Delta Conservation Plan, which is intended to restore the Delta's ecosystem and improve water supply reliability.
- The Quantification Settlement Agreement (QSA), signed in 2003 to allocate California's Colorado River water and meet its contractual limitation, has been overturned by the court, creating uncertainty in future Colorado River supplies.
- Effects of climate change on the long term reliability of SWP and Colorado River water supplies to the Coachella Valley.

1.3 PROJECT GOALS AND OBJECTIVES

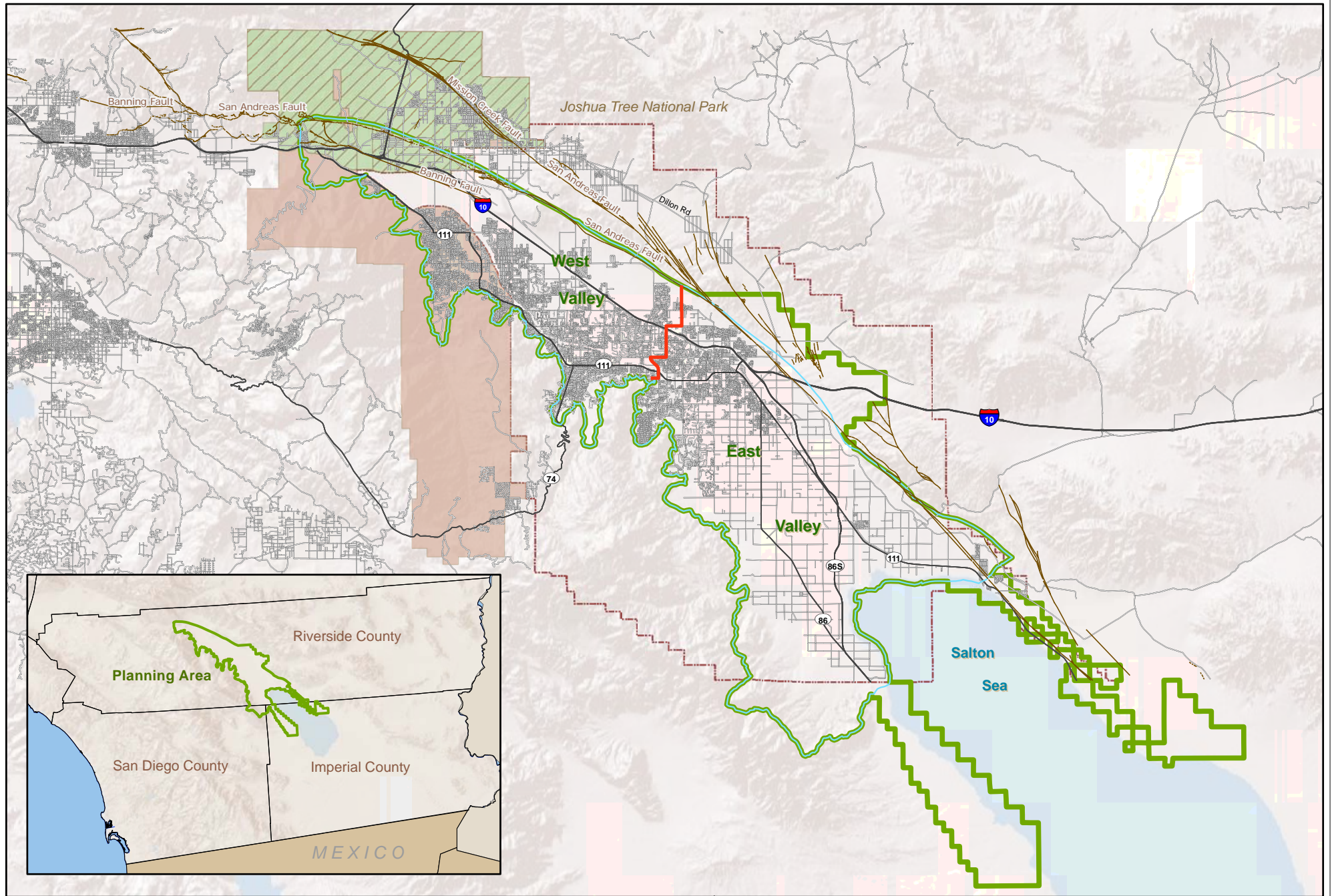
The goal of the 2010 WMP Update is to allow CVWD and other water agencies in the Valley to reliably meet current and future water demands in the study area in a cost effective and sustainable manner for the period 2010 to 2045. The programs and projects identified in the 2010 WMP Update fulfill this goal by meeting the following objectives:

- Meet current and future water demands with a 10 percent supply buffer,
- Reduce/eliminate long-term groundwater overdraft,
- Manage and protect water quality,
- Comply with state and federal laws and regulations,
- Manage future costs, and
- Minimize adverse environmental impacts.

The 2010 WMP Update differs from the 2002 WMP in that a 10 percent supply buffer is applied to the projected water demands while eliminating overdraft. This buffer compensates for uncertainties such as demands higher than forecast or supplies that cannot be implemented or do not deliver as much water as planned. The supply buffer would be established through a combination of additional supplies and water conservation measures.

1.4 STUDY AREA LOCATION AND SETTING

The study area is in the Coachella Valley, is located approximately 100 miles east of Los Angeles, and forms the northwestern portion of the great Salton Trough that extends northwest from the Gulf of California in Mexico to the Cabazon area. The Colorado River intersects this trough about midway, and its delta has formed a barrier between the Gulf of California and the Coachella and Imperial valleys (**Figure 1-1**).



Key to Features

- | | | | | |
|--------------------------|------------|----------------------------|----------|--|
| Area of Benefit Boundary | Fault | Whitewater River Sub-Basin | DWA | CVWD |
| Highways | Study Area | MSWD | MSWD/DWA | Source: DWR, ESRI, County of Riverside |

Document: \Coachella Valley WD\WMP Update\14 Electronic Files - Modeling\GIS\Projects\EastWest.mxd
 Date: December 2010

2010 Water Management Plan Update Study Area

Figure 1-1



Section 1 – Summary

The study area for the Proposed Project is defined as the Coachella Valley floor and underlying groundwater basins, extending from north of the community of Whitewater on the northwest to the Salton Sea at the southeastern end (**Figure 1-1**) and to the San Jacinto and Santa Rosa Mountains on the west.

East of the Banning and San Andreas faults, which form a barrier to groundwater flow, the study area has been expanded since 2002 to add areas of potential development located along Dillon Road. This eastern area falls within the spheres of influence of the cities of Coachella and Indio.

The Coachella Valley floor, which encompasses an area of 1.2 million acres, is surrounded by mountains on three sides. The San Bernardino, San Jacinto and Santa Rosa Mountains, which rise more than 10,000 feet above mean sea level (MSL), define the western and northern edges of the study area from Fingal Point (about 1 mile west of the Interstate 10-State Highway 111 interchange) to Travertine Rock (near State Highway 86 at the Riverside County-Imperial County line). To the northeast and east are the Little San Bernardino Mountains, which attain elevations of 5,500 feet above MSL.

For purposes of the 2002 WMP and 2010 WMP Update, the Coachella Valley is divided geographically into the West Valley and the East Valley (**Figure 1-1**). West Valley lies northwest of a line generally extending from Washington Street and Point Happy northeasterly across the Valley floor to the Indio Hills near Jefferson Street. This line corresponds to the southerly boundary of the West Valley management area, which is the area of benefit for groundwater recharge in the West Valley. In character, the West Valley consists of urban/resort development that depends on groundwater and also vast open space areas. West Valley municipalities are the cities of Palm Springs, Cathedral City, Rancho Mirage, Palm Desert and Indian Wells, and the unincorporated communities of Whitewater, Garnet, Thousand Palms and Bermuda Dunes east of Washington.

The East Valley lies southeast of the line described above and consists chiefly of agricultural land irrigated with groundwater and Colorado River water imported via the Coachella Canal. The East Valley municipalities are the cities of La Quinta, Indio and Coachella, and the unincorporated communities of Oasis, Thermal and Mecca. The WMP study area also includes CVWD's domestic water service area along the western and eastern shores of the Salton Sea, an area which relies on groundwater pumped from the Whitewater River Subbasin.

Indian Trust Assets in the study area are landholdings, wells and claimed water rights of five tribes: Agua Caliente Band of Cahuilla Indians, Cabazon Band of Mission Indians, Torres-Martinez Band of Desert Cahuilla Indians, Augustine Band of Cahuilla Mission Indians, and Twenty-nine Palms Band of Mission Indians. The resident tribes claim surface water and groundwater rights in the Coachella Valley.

The service area boundaries of Valley water purveyors along with city boundaries are presented in **Figure 1-2**. The majority of water users in the Coachella Valley receive water service from five water purveyors: CVWD, DWA, Indio Water Authority (IWA), Coachella Water Authority and Myoma Dunes Mutual Water Company. Several isolated communities are supplied by small private water companies.

1.5 SUBSEQUENT PROGRAM EIR - APPROACH

The 2002 PEIR was reviewed with respect to the 2002 WMP and the 2010 WMP Update. The results of this review indicated that preparation of a SPEIR is appropriate because of new environmental information, significant effects identified previously that would be more severe, new significant effects, and new mitigation measures that may reduce previously identified significant effects.

Like the 2002 WMP PEIR, the 2010 WMP Update SPEIR analyzes the District's proposed actions under CEQA at a program level (the SPEIR evaluates no Proposed Project elements at a specific or construction level). The proposed 2010 WMP Update describes a set of policies and actions to be implemented by the District throughout the Coachella Valley over a 35-year period. The baseline year for the 2010 WMP Update analysis is 2009; the planning horizon is 2045. For water resources, the analysis is compared to the adopted 2002 WMP implemented under current conditions, which is the No Project alternative.

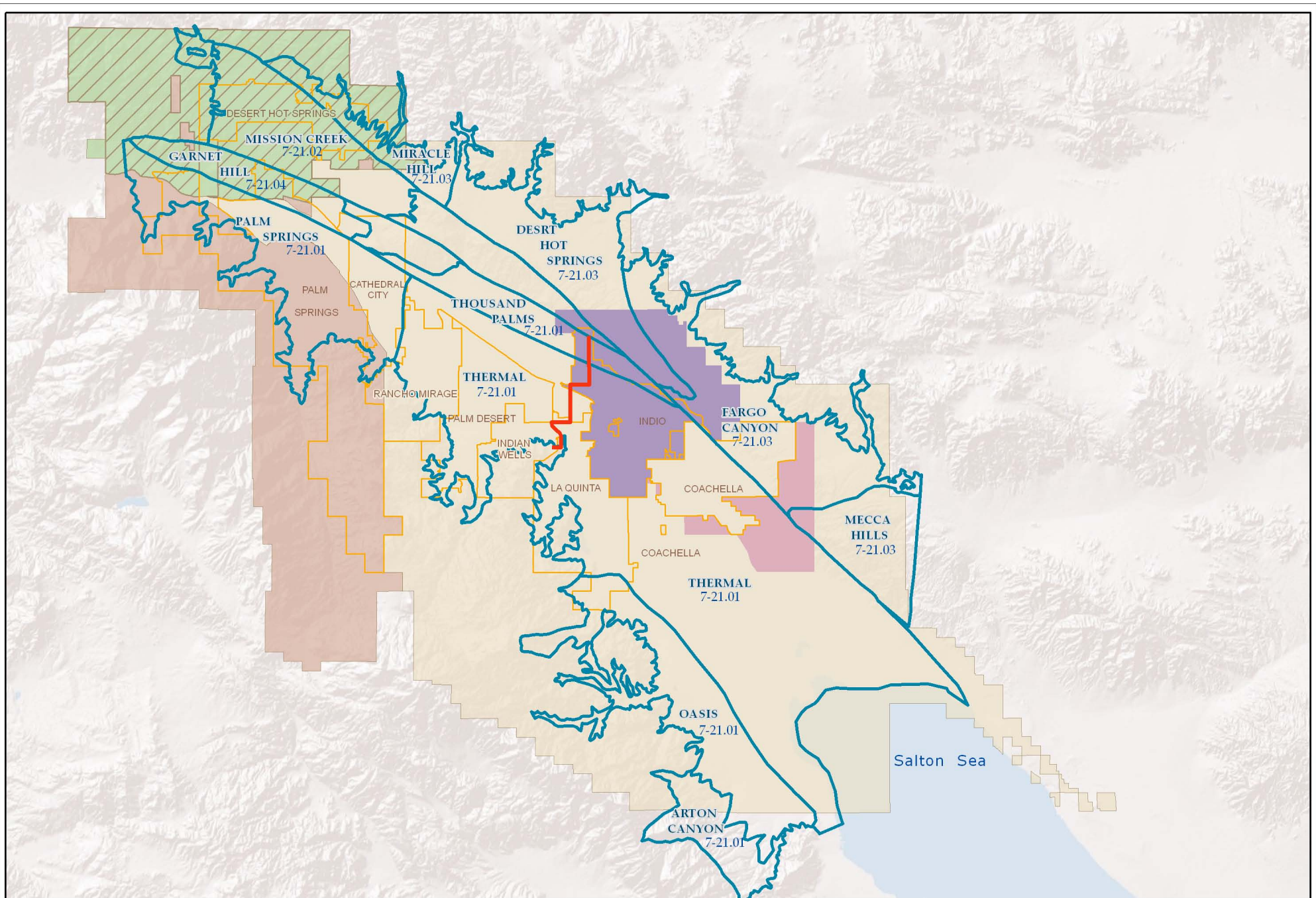
Once the 2010 WMP Update is adopted, second-tier or site-specific environmental documents will be prepared as appropriate to analyze issues specific to the elements of the Proposed Project being implemented and the site(s) chosen for the actions. Additional environmental review as required by CEQA will be prepared at the appropriate time.

Agencies expected to use the SPEIR in their decision making are:

CVWD, the Lead Agency. CVWD, as Lead Agency with principal responsibility for carrying out the majority of projects identified in the 2010 WMP Update, will use the SPEIR as a basis for Board of Directors decisions on adoption of the Plan, adoption of mitigation measures for avoiding or minimizing potentially significant Plan impacts and for implementation of future WMP elements.

Desert Water Agency (DWA), a Responsible Agency. DWA is a responsible agency for the Proposed Project since DWA would be involved with CVWD in the implementation of water transfers or leases, recycled water programs and conservation.

California Department of Water Resources (DWR), a Responsible Agency. DWR, as the administrator of the SWP, has the responsibility to approve transfers between SWP contractors. DWR approval would be required for future SWP entitlement transfers or leases.



Key to Features

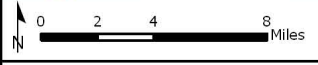
- Area of Benefit Boundary
- Highways

- City Boundaries
- Groundwater Subbasins

- CVWD
- DWA
- MSWD
- MSWD/DWA

- City of Coachella (including Sphere of Influence)
- City of Indio (including Sphere of Influence)

Source: DWR, USDA, ESRI, USGS, County of Riverside



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Date: December 2010

Coachella Valley City Boundaries and Groundwater Subbasins

Figure 1-2



Significance thresholds, criteria used as a basis for deciding whether an identified effect is potentially significant, less than significant or not significant, applied in the SPEIR are identified as numeric where established legislative or regulatory standards exist for environmental protection (e.g., noise, air quality, and water quality), or qualitative (based on Appendix G of the State CEQA Guidelines (California Resources Agency, 2010)). Some significance criteria reflect Lead Agency engineering and environmental judgment specific to the Proposed Project and study area and are so noted.

The Notice of Preparation (NOP) for the SPEIR was filed with the State Clearinghouse on September 13, 2007 and distributed to public agencies and the interested public for a 30-day review period (through October 13). The CVWD received seven letters responding to the NOP (**Appendix C**).

A Scoping Meeting for the SPEIR was held on September 27, 2007 at CVWD headquarters in Coachella. There were 17 attendees, plus District staff and consultants. Oral comments made at the meeting are presented in **Appendix C, Table C-2**.

In addition, CVWD widely noticed and held seven public meetings on the 2010 WMP Update and SPEIR to which federal state, regional and local agencies, non-governmental agencies and the general public were invited. CVWD also held ten monthly meetings with the Coachella Valley tribes and the U.S. Bureau of Indian Affairs (BIA) to discuss issues raised in their responses to the NOP. Principal issues were effects on water quality from groundwater recharge, basin overdraft, and participation of tribes in Valley-wide planning and governance.

1.6 PROJECT DESCRIPTION

The 2010 WMP Update identifies ways and means of meeting future water needs in the study area in light of changing conditions and uncertainties. To meet revised future needs, the WMP includes new features in the areas of water conservation, source substitution, new supplies and groundwater recharge.

1.6.1 Conceptual Approach

The Update incorporates both a “bookends” approach and “building block” approach to deal with uncertainties in future demands and supplies. The Update also incorporates enhanced cooperation in Plan implementation among Valley municipalities, local water agencies and tribes.

Bookends on Demands and Supplies: To account for the uncertainty and potential variability in demands, development of the 2010 WMP Update has assigned bookend targets (ranges) for each of the major categories of water supplies. The bookends represent reasonable minimum and maximum amounts for potential project development. Depending on the actual demands that are encountered in the future, the 2010 WMP Update elements can be implemented within these ranges to meet demands.

Building Block Approach: The 2010 WMP Update has incorporated a flexible approach to meeting future needs that reflects uncertainties in supplies, demands and future circumstances by combinations of Plan elements. For example, the 2010 WMP Update includes an aggressive program of water conservation for urban, golf course and agricultural water users. However, there are limits in terms of cost, effectiveness and acceptability of water conservation activities. As those limits are reached, other Plan elements for meeting future needs also can be adjusted. One source of supply is desalination of drain water, the most expensive alternative for providing new supplies. This approach only will be implemented as other sources of supplies reach practical limits. Therefore, the Plan includes a range of 55,000 to 80,000 acre-feet per year (AFY) for desalination of drain water. The actual amount of water from this source will depend upon how much can be obtained first from other, lower cost sources.

1.6.2 Elements of the 2010 WMP Update

Table 1-1 provides a summary of the 2010 WMP Update elements and Implementation Plan. The 2010 WMP Update has the same five major elements as the 2002 WMP, but with a different mix of implementing elements:

- **water conservation** (urban, agricultural and golf, but at higher rates than in the 2002 Plan). Example urban measures are water efficient plumbing and landscape water use audit programs. For golf, measures are scientific irrigation scheduling, water audits and monitoring of maximum water allowance compliance, turf limitations for new course as well as water audits. Agricultural water conservation methods are scientific irrigation scheduling, salinity management, salinity field mapping, conversion to micro-irrigation, distribution uniformity evaluations, grower training and engineering evaluations of irrigation efficiency.
- **additional water sources**, increasing surface supplies for the Valley from outside sources (Colorado River and SWP transfers and leases), exchanges, dry-year purchases, water development projects, stormwater capture, and desalination.
- **source substitution** of surface water supplies for groundwater – providing recycled water or Canal water or other sources to additional urban, golf and agricultural users to reduce groundwater pumping. Additional use of the Mid-Valley Pipeline Project, Phase I of which was completed in 2009.
- **groundwater recharge**, constructing and operating recharge basins to augment stored groundwater. continued and increased recharge at the Whitewater Recharge Facility, construction and operation of a new facility at Martinez Canyon, increased recharge at the Levy facility, and a possible new City of Indio recharge facility at Posse Park.
- **monitoring and data management** are an element of the Proposed Project, comprising monitoring and evaluation of subsidence and groundwater levels and quality to provide the information needed to manage the Valley’s groundwater resources.

In developing the 2010 WMP Update, CVWD necessarily has relied on the latest population projections developed by Riverside County and adopted by the Southern California Association of Governments (SCAG) in 2008. CVWD does not develop population growth projections for use in water management planning. The 2008 SCAG projections could not have taken into

account the current recession, which has slowed growth and will continue to have negative effects on growth in the near term. Over the long term, growth will continue; however, population projections will need to be adjusted in terms of the timing of growth. These realities necessitate adjustment of Plan implementation to meet actual near term needs and continued updates of the WMP in the future to reflect revised population projections.

**Table 1-1
Summary of the 2010 Water Management Plan Update
and Implementation Plan**

Plan Element	Responsible Entity(ies)	Completion Year
Water Conservation Program		
<ul style="list-style-type: none"> Adopt 2009 CVWD/CVAG Landscape Ordinance or equivalent 	CVWD, DWA, water purveyors, cities, Riverside County	ongoing
<ul style="list-style-type: none"> Establish urban water conservation baseline 	CVWD, other urban water purveyors	2011
<ul style="list-style-type: none"> Achieve minimum 10% reduction in existing golf course use 	CVWD, DWA	2015
<ul style="list-style-type: none"> Achieve 14% reduction in agricultural water use 	CVWD	2020
<ul style="list-style-type: none"> Achieve 20% reduction in urban use 	CVWD, other urban water purveyors	2020
Water Supply Development Program		
<ul style="list-style-type: none"> Complete siting studies, environmental impact evaluation and design for Coachella Valley Stormwater Channel (CVSC) and drain water capture and treatment facilities 	CVWD	2013
<ul style="list-style-type: none"> File for water rights application for change of point of use for wastewater effluent discharges to allow water recycling 	CVWD, VSD, Coachella	2015
<ul style="list-style-type: none"> Complete construction of initial CVSC drain water capture and treatment facilities 	CVWD	2015
<ul style="list-style-type: none"> Conduct a feasibility study to investigate the potential for additional stormwater capture in the East Valley 	CVWD	2015
<ul style="list-style-type: none"> Conduct a study to determine the amount of water lost to leakage or otherwise unaccounted in the first 49 miles of the Coachella Canal and evaluate the feasibility of corrective actions to capture the lost water 	CVWD	2015

Section 1 – Summary

**Table 1-1
Summary of the 2010 Water Management Plan Update
and Implementation Plan (Continued)**

Plan Element	Responsible Entity(ies)	Completion Year
<ul style="list-style-type: none"> Conduct a joint investigation with Indio and Coachella of groundwater development potential in Fargo Canyon Subarea of the Desert Hot Springs Subbasin to determine the available supply and suitability for use in meeting non-potable demands of development east of the San Andreas fault 	CVWD, IWA, Coachella	2020
Source Substitution Program		
<ul style="list-style-type: none"> Prepare a master plan for Mid-Valley Pipeline (MVP) completion 	CVWD	2015
<ul style="list-style-type: none"> Connect four golf course users along the MVP alignment to MVP 	CVWD	2015
<ul style="list-style-type: none"> Acquire additional imported supplies through long-term lease or purchase where cost-effective 	CVWD, DWA	ongoing
<ul style="list-style-type: none"> Continue to purchase SWP Turnback pool, SWP Article 21 and supplemental SWP water under the Yuba River Accord Dry Year Water Purchase Program as available 	CVWD, DWA	ongoing
<ul style="list-style-type: none"> Work with Metropolitan to define the frequency and magnitude for SWP Table A callback under the 2003 Water Transfer Agreement 	CVWD, DWA	ongoing
<ul style="list-style-type: none"> Increase West Valley effluent recycling for non-potable irrigation from 60% to 90% 	CVWD	2020
<ul style="list-style-type: none"> Maximize use of East Valley recycled water from new growth or urban irrigation by constructing tertiary treatment and distribution at WRP-4, CSD and VSD facilities 		
<ul style="list-style-type: none"> Evaluate the feasibility of delivering recycled water in the existing Canal water distribution system while avoiding potential conflicts with future urban water treatment and use of Canal water 	CVWED	unknown
<ul style="list-style-type: none"> Determine the minimum amount of recycled and other water flow that just be maintained in the CVSC to support riparian and wetland habitat 	CVWD, CDFG, USFWS	2020
<ul style="list-style-type: none"> Fully use all wastewater generated by development east of the San Andreas fault for irrigation uses 	CVWD	Post-2020
<ul style="list-style-type: none"> Work with existing East Valley golf courses having Canal water access to increase their use to 90 percent of demand 	CVWD	2012
<ul style="list-style-type: none"> Investigate regional opportunities for Colorado River water treatment facilities 	CVWD, IWA, Coachella	2012

**Table 1-1
Summary of the 2010 Water Management Plan Update
and Implementation Plan (Continued)**

Plan Element	Responsible Entity(ies)	Completion Year
<ul style="list-style-type: none"> Develop policy requiring the installation of non-potable water systems for new development 	CVWD	2012
<ul style="list-style-type: none"> Work with large agricultural groundwater pumpers to determine what obstacles exist that prevent them from using additional Canal water and encourage them to reduce their groundwater pumping 	CVWD	ongoing
<ul style="list-style-type: none"> Construct north and east extensions to the MVP system 	CVWD	2015
<ul style="list-style-type: none"> Complete siting studies, environmental impact evaluation and design for Colorado River water treatment facilities 	CVWD	2013
<ul style="list-style-type: none"> Complete construction of initial Colorado River water treatment facilities and connect to distribution system 	CVWD	2015
<ul style="list-style-type: none"> Complete Oasis study update 	CVWD	2015
<ul style="list-style-type: none"> Prepare a non-potable water distribution master plan 	CVWD	2015
<ul style="list-style-type: none"> Complete construction of MVP backbone system 	CVWD	2020
Groundwater Recharge Program		
<ul style="list-style-type: none"> Operate and monitor the Levy replenishment facility with a 40,000 AFY goal 	CVWD	ongoing
<ul style="list-style-type: none"> Investigate groundwater storage opportunities with IID 	CVWD	ongoing
<ul style="list-style-type: none"> Transfer the unused portion of the 35,000 AFY of SWP water available under the QSA to the Whitewater Recharge Facility (QSA assumed to be reinstated) 	CVWD	2011
<ul style="list-style-type: none"> Work with the City of Indio to evaluate the feasibility of developing a groundwater recharge project that reduces groundwater overdraft. If feasible, work with Indio to construct the facility. 	CVWD, IWA	2011
<ul style="list-style-type: none"> Design and construct an additional pumping station and pipeline from Lake Cahuilla to the Levy facility if the existing pumping station and pipeline cannot provide sufficient water to meet the annual goal 	CVWD	2015
<ul style="list-style-type: none"> Conduct siting studies, environmental impact evaluation and design for Martinez Canyon Replenishment Facility 	CVWD	2018

**Table 1-1
Summary of the 2010 Water Management Plan Update
and Implementation Plan (Continued)**

Plan Element	Responsible Entity(ies)	Completion Year
Monitoring and Data Management		
<ul style="list-style-type: none"> • Continue to monitor the extent of land subsidence 	CVWD, USGS	ongoing
<ul style="list-style-type: none"> • Provide additional information in the annual engineers' reports: <ul style="list-style-type: none"> - Annual precipitation and stream flows - Additional groundwater level data and hydrographs - In-lieu recharge water deliveries from imported and recycled water that offset pumping - Imported water deliveries for direct use 	CVWD, [CVWD will work with DWA to obtain additional information]	2011
<ul style="list-style-type: none"> • Obtain DWR designation as groundwater level monitoring and reporting entity for the Coachella Valley 	CVWD	2011
<ul style="list-style-type: none"> • Prepare a comprehensive groundwater monitoring plan 	CVWD, DWA, water purveyors, wastewater agencies, tribes	2012
<ul style="list-style-type: none"> • Enhance the CVSC gauging station at Lincoln Street to provide continuous flow recording 	CVWD, USGS	2012
<ul style="list-style-type: none"> • Develop centralized groundwater database 	CVWD, DWA, water agencies, tribes	2012
Other Programs		
<ul style="list-style-type: none"> • Continue to operate the Lower Valley Whitewater River Subbasin Joint Water Policy Advisory Committee 	CVWD, water agencies, pumpers, tribes	ongoing
<ul style="list-style-type: none"> • Develop a program to educate and work with well owners to properly control artesian wells 	CVWD	2011
<ul style="list-style-type: none"> • Update and recalibrate the CVWD groundwater model based on the most current information 	CVWD	2013
<ul style="list-style-type: none"> • Develop a water planning interface to the groundwater model 	CVWD	2013
<ul style="list-style-type: none"> • Prepare a plan to maintain and enhance the existing drainage system to allow its future use for urban purposes 	CVWD	2012
<ul style="list-style-type: none"> • Develop well construction, destruction and abandonment policies 	CVWD, DWA, water agencies, tribes, Riverside County	2012

**Table 1-1
Summary of the 2010 Water Management Plan Update
and Implementation Plan (Continued)**

Plan Element	Responsible Entity(ies)	Completion Year
<ul style="list-style-type: none"> Add groundwater quality simulation capabilities to the model that will allow simulation of salinity (TDS) and nitrogen in the groundwater 	CVWD	2013
<ul style="list-style-type: none"> Prepare a salt/nutrient management plan for the Valley to meet SWRCB Recycled Water Policy requirements 	CVWD, DWA, water purveyors, wastewater agencies, tribes, agricultural and golf communities, and Regional Board	2014
<ul style="list-style-type: none"> Extend urban water and sewer service to trailer/RV park communities with deficient infrastructure and poor water quality 	CVWD	ongoing
<ul style="list-style-type: none"> Investigate the feasibility of installing nitrate treatment on selected high nitrate wells to avoid redistribution of nitrates 	CVWD	2015
<ul style="list-style-type: none"> Undertake a cooperative program to identify and cap wells that are no longer being used for groundwater production 	CVWD, DWA	2015
Environmental Enhancement and Mitigation Projects		
<ul style="list-style-type: none"> Develop plans for the creation of: <ul style="list-style-type: none"> 25 acres of managed pupfish replacement habitat 66 acres of managed rail replacement habitat 44 acres of Sonoran cottonwood-willow riparian forest habitat 	CVWD	ongoing
<ul style="list-style-type: none"> Remove tamarisk, restore and enhance mesquite and Coachella Valley round-tailed ground squirrel habitat on land CVWD owns in the East Indio Hills Conservation Area 	CVWD	not specified
<ul style="list-style-type: none"> Conserve approximately 1,200 acres of land owned in the CVFTL HCP Whitewater Floodplain Preserve in perpetuity as part of the CVMSHCP Reserve System 	CVWD	ongoing

CVAG = Coachella Valley Association of Governments; CVSC = Coachella Valley Stormwater Channel; CVAG = Coachella Valley Association of Governments; CVMSHCP = Coachella Valley Multiple Species HCP; CVFTL = Coachella Valley fringe-toed lizard; DWA = Desert Water Agency; HCP = Habitat Conservation Plan; IID = Imperial Irrigation District; IWA = Indio Water Authority; MVP = Mid-Valley Pipeline; Regional Board = California Regional Water Quality Control Board; SWRCB = State Water Resources Control Board; TDS = total dissolved solids; USGS = U.S. Geological Survey; VSD = Valley Sanitary District:

Section 1 – Summary

Implementation of the 2010 WMP Update has been divided into near-term elements and long-term elements.

Near Term Elements to Meet Water Management Needs

Even with the current recession and lack of growth, continuation of existing elements and some new elements are needed to reduce overdraft and its adverse affects. Ongoing elements that will continue are:

- recharge at Whitewater Recharge Facility with SWP Exchange water and SWP purchases,
- implementation of the QSA,
- levy facility recharge at current levels of 32,000 AFY,
- Martinez Canyon recharge at current Pilot Facility Level of 3,000 AFY,
- water conservation programs at current levels, including implementation of the Landscape Ordinance,
- effluent recycling in the West Valley,
- increased use of Canal water by golf courses with existing Canal water connections to reduce groundwater pumping,
- conversion of East Valley agriculture to Canal water, as opportunities arise, to reduce groundwater pumping
- groundwater level/quality monitoring, and
- subsidence monitoring.

Assuming that the Coachella Valley study area growth rate remains relatively low, during the next five years CVWD will focus on three new or expanded activities to reduce overdraft:

- increased use of the Mid-Valley Pipeline project to reduce overdraft in the West Valley by connecting golf courses and reducing groundwater pumping by those courses,
- implementation of additional water conservation measures, including the Landscape Ordinance, to meet the State's requirement of 20 percent conservation by 2020, and
- preparation of a salt/nutrient management plan for the Valley by 2014 to meet SWRCB Recycled Water Policy requirements to improve implementation of wastewater effluent recycling.

Of these three elements, only the increased use of the Mid-Valley Pipeline would have a second-tier CEQA document. Implementation of Proposed Project elements, such as a desalination plant or additional water transfers, which would trigger second tier CEQA documents, are anticipated after 2015.

Long Term Elements to Meet Water Management Needs

Project elements to eliminate and control overdraft that are likely to be needed as future growth occurs are described in the 2010 WMP Update. These elements are:

- additional water conservation,
- additional water transfers or leases,
- drain water desalination,
- additional recycled water,
- canal water treatment for urban indoor use,
- canal water treatment for urban outdoor irrigation, and
- recharge in the Indio area.

As growth ramps up, these projects will be implemented based on cost effectiveness and need. With the exception of conservation, all of these elements would require preparation of a second tier CEQA document. CEQA compliance for the Indio recharge facility is anticipated to be prepared by the City of Indio as part of Posse Park development.

In summary, the goal of the Coachella Valley 2010 WMP Update is to reliably meet current water demands and future water demands through 2045 in a cost-effective and sustainable manner. Past and ongoing implementation of the 2002 WMP has resulted in many successes toward achieving this goal. However, the 2002 WMP recognized the importance of review and update to ensure the Plan meets the ever-changing needs of the Coachella Valley. The 2010 WMP Update endeavors to achieve this objective and presents a number of changes in water management strategy for the Valley to adapt the WMP to changing conditions. Additional changes in direction and scope will occur in the future as the Plan is adapted further to reflect the needs of the Valley.

1.7 ISSUES OF CONTROVERSY AND ISSUES TO BE RESOLVED

CEQA Guidelines Section 15123 requires that the SPEIR contain a discussion of areas of known controversy and issues to be resolved.

1.7.1 Issues of Controversy

In the course of preparation of the draft 2010 WMP Update and draft SPEIR, including review of the 2002 WMP and PEIR, comments on the NOP, input at stakeholder meetings, meetings with the Coachella Valley tribes and the public, the following issues of controversy have been identified and are addressed in this document:

Section 1 – Summary

- potential impacts on Coachella Valley groundwater quality from additional recharge with Colorado River water,
- potential impacts on Indian Trust Assets of additional recharge with Colorado River water, and
- feasibility of mitigation for impacts of Colorado River recharge.

These were also the issues of controversy for the 2002 WMP and PEIR.

1.7.2 Issues to be Resolved

Issues to be resolved are:

- timing of implementation for Proposed Project elements,
- specific locations, site boundaries and characteristics of facilities proposed in the 2010 WMP Update and the impacts of their construction and operation,
- need for and capacity of treatment of imported water and drain water for use in the Coachella Valley, compared to other water sources such as transfers, and
- brine disposal methods for desalination facilities.

1.8 ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Table 1-2 is a summary of Proposed Project impacts and mitigation measures.

**Table 1-2
Summary of Proposed Project Impacts and Mitigation Measures**

Category	Impact Discussion	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
PHYSICAL ENVIRONMENT				
Geology	<ul style="list-style-type: none"> Site geology limits siting of recharge basins. No unique geologic or physical features will be altered. 	Less than Significant	Damage to pipelines, pumping stations, water treatment facilities, and basins will be repaired as soon as feasible after a seismic event.	Less than Significant
Earthquake Hazards	<ul style="list-style-type: none"> Earthquakes could damage proposed facilities <p>Second tier CEQA documents will state that CVWD is required to implement CGS Special Publication 117, CBC and UBC requirements, as applicable to all facilities design.</p>	Less than Significant		Less than Significant
Liquefaction Hazards	<ul style="list-style-type: none"> The entire Coachella Valley has a recognized liquefaction hazard, rated "Moderate" in the West Valley, "High" in the East Valley. Proposed Project will increase slightly shallow groundwater levels in the East Valley, but will not change the liquefaction potential. CVWD and developers must implement CGS Special Publication 117, CBC and UBC requirements, as applicable to all facilities design. 	Less than Significant	No mitigation required.	Less than Significant
Land Subsidence	<ul style="list-style-type: none"> Land subsidence risk will be reduced throughout the Coachella Valley as groundwater levels rise. 	Beneficial Effect	For verification and monitoring, USGS and CVWD will continue ongoing studies of subsidence in the Coachella Valley.	Beneficial Effect

Table 1-2 (Continued)
Summary of Proposed Project Impacts and Mitigation Measures

Category	Impact Discussion	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
Soils	<ul style="list-style-type: none"> • Soil will be disturbed during construction of project facilities (pipelines, pumping stations, tanks, recharge basins, water treatment plants, wastewater treatment plants and desalination plants). • Facilities could be built on expansive soils, which could affect foundation stability. <p>Standard measures to minimize soil erosion during construction will be included in the plans and specifications for Proposed Project elements.</p> <p>Detailed foundation analysis will be performed prior to construction of facilities. CVWD and developers will implement CGS Special Publication 117, CBC and UBC requirements, as applicable, to all facilities design.</p>	Less than Significant	None required.	Less than Significant

Table 1-2 (Continued)
Summary of Proposed Project Impacts and Mitigation Measures

Category	Impact Discussion	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
Air Quality	<p>Criteria air pollutants (CO, NO_x, VOC, PM₁₀, PM_{2.5}, SO_x and lead) will be emitted temporarily during facilities construction. Dust (PM 10 and PM 2.5) and NO_x may exceed SCAQMD significance criteria.</p> <p>Use of alternative fuels may not reduce NO_x emissions below established thresholds or may not be suitable, available or feasible for all projects. Emissions may be brought below thresholds by extending construction schedules, but this results in greater emissions overall and delays projects unnecessarily.</p>	<p>Potentially Significant for dust</p> <p>Potentially Significant for NO_x</p> <p>Less than Significant for other construction emissions</p>	<p>In second tier CEQA documents, if the estimated construction emissions exceed the SCAQMD thresholds of significance then one or more of the following measures shall be incorporated in to project specifications as applicable:</p> <ul style="list-style-type: none"> • Prohibit vehicles from idling in excess of 10 minutes, both on- and off-site. • Maintain construction equipment to reduce exhaust emissions. • Contractors shall establish and implement trip reduction plans to achieve a 1.5 average vehicle ridership for construction employees. • Construction activities shall be discontinued during second stage smog alerts as declared by the SCAQMD. • As feasible, construction equipment should be selected with low pollutant emissions and high energy efficiency. Factors to consider include model year, alternative fuels (e.g., compressed natural gas, biodiesel, emulsified diesel, methanol, propane, butane), and lean-NO₂ catalysts. • Use alternative fuels if available and feasible. 	<p>Less than Significant for dust</p> <p>Potentially Significant for NO_x</p> <p>Less than Significant for other construction emissions</p>

Table 1-2 (Continued)
Summary of Proposed Project Impacts and Mitigation Measures

Category	Impact Discussion	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
Air Quality (continued)	Salton Sea Playa Exposure –Dust and Toxics. The Salton Sea elevation is declining, exposing shoreline and potentially increasing dust. Depending on capacity, drain water desalination, could increase or decrease inflows to the Salton Sea. CVWD’s decision to implement desalination and at what capacity to be made circa 2015-2020. The Proposed Project impact on air quality will be less than significant or beneficial until that time. <ul style="list-style-type: none"> • Minimum desalination or no desalination would potentially offset playa exposure because drain flows from the Coachella Valley with reduced overdraft would increase. 	Beneficial Effect	None required.	Beneficial Effect
	<ul style="list-style-type: none"> • decreased drain flows from the Coachella Valley with maximum desalination, if implemented, could potentially increase playa exposure. 	Potentially Significant	Ongoing 4-step implementation plan for Salton Sea air quality is part of existing conditions; but is anticipated to have residual significant impacts even when fully implemented	Potentially Significant

Table 1-2 (Continued)
Summary of Proposed Project Impacts and Mitigation Measures

Category	Impact Discussion	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
Air Quality (continued)	<ul style="list-style-type: none"> Pollutant emissions from operation of Valley facilities: pumping stations, combustion engines from equipment and vehicles, treatment facilities, etc. 	Potentially Significant	Second tier CEQA documents will contain operations-related mitigation to further reduce less than significant impacts: <ul style="list-style-type: none"> Maintain operations equipment in proper tune. Select operations equipment (including pumps and motors) considering low-emission factors and energy efficiency. Pumping stations will have electric power. 	Less than Significant
	<ul style="list-style-type: none"> Air pollutant emissions from energy generation to power Valley facilities including desalination if implemented. Air pollutant emissions from energy generation for water importation may exceed state thresholds; emissions on the grid may be outside SCAQMD air basin. 	Potentially Significant; not mitigable by CVWD	<ul style="list-style-type: none"> CVWD will expand use of alternative fuels for its operations. CVWD will coordinate with SCE and IID on long-term future energy demands. SCE and IID and other electricity providers on the grid will mitigate emissions from their systems. 	Less than Significant with Mitigation by others
	<ul style="list-style-type: none"> Sensitive receptors (schools, hospitals, residences, etc.) may be affected by construction and operational air pollutant emissions. 	Potentially Significant	<ul style="list-style-type: none"> Locations of sensitive receptors will be identified in second tier documents. Second tier CEQA documents shall also state that emissive wastewater treatment and other facilities will be enclosed and have odor control devices, as necessary. 	Less than Significant

Table 1-2 (Continued)
Summary of Proposed Project Impacts and Mitigation Measures

Category	Impact Discussion	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
WATER RESOURCES				
Colorado River Flows, Erosion, Siltation and Salinity	<ul style="list-style-type: none"> Flows in the river between Parker Dam and Imperial Dam will increase by 37,000 AFY, excluding other QSA actions. 	Less than Significant	None required.	Less than Significant
Coachella Canal	<ul style="list-style-type: none"> The volume of water delivered through the Canal will increase to a minor degree and will remain within Canal capacity 	Less than Significant	None required.	Less than Significant
State Water Project and other Sources	<ul style="list-style-type: none"> Future SWP diversions from the Sacramento-San Joaquin Delta for transfers/leases from sources south of the Delta. Effect on SWP flows minor because of delivery timing. 	Less than Significant	Second tier water transfer CEQA documents will evaluate impacts on seller's and recipient's (CVWD, and DWA) service areas and on SWP. DWR is responsible agency and approves all SWP transfers.	Less than Significant
	<ul style="list-style-type: none"> Increases or decreases in SWP reaches as a result of SWP or other transfers or leases; Transfers or leases from north of or within the Delta could potentially affect Delta water quantity or quality. 	Flow changes in SWP Less than Significant Effects on Delta Potentially Significant	Future water transfer CEQA document(s) will evaluate and mitigate impacts on seller's and recipients (CVWD and DWA) service areas and Delta. DWR is responsible agency and must approve all SWP transfers.	Less than Significant
	<ul style="list-style-type: none"> Average delivered water volumes will be similar to previous deliveries and less than infrastructure capacity (140,000 AFY by 2045) 	Less than Significant	None required.	Less than Significant

**Table 1-2 (Continued)
Summary of Proposed Project Impacts and Mitigation Measures**

Category	Impact Discussion	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
Colorado River Aqueduct	<ul style="list-style-type: none"> • CRA flows could increase with the acquisition of SWP water by transfer or lease and subsequent exchange with Metropolitan. Flow will remain within range of previous flows. 	Less than Significant	None required.	Less than Significant
CVSC and Drains	<ul style="list-style-type: none"> • TDS increase from 2,000 to 2,800 - 2,900 mg/L in agricultural drains • Agricultural drainage is exempt from Basin Plan TDS limit. 	Less than Significant for TDS	None required.	Less than Significant
	<ul style="list-style-type: none"> • Selenium in CVSC and drains could increase to exceed aquatic life criterion for chronic exposure. • CVWD continues its monitoring program to characterize the selenium concentrations in the drains 	Potentially Significant	<ul style="list-style-type: none"> • No feasible selenium removal methods for areawide agricultural drainage water 	Potentially Significant

Table 1-2 (Continued)
Summary of Proposed Project Impacts and Mitigation Measures

Category	Impact Discussion	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
Salton Sea Elevation & Water Quality	<ul style="list-style-type: none"> • Salton Sea salinity will increase with or without the Proposed Project • Salton Sea elevation will decline with or without the Proposed Project • Existing treated effluent flows to the CVSC will remain unchanged; future incremental flows will be recycled. • CVWD’s decision to implement desalination to be made after 2015-2020. • Coachella Valley inflows increase from 61,000 AFY to 125,000 AFY with no desalination by 2045. Inflows increase from 61,000 AFY to 70,000 AFY by 2045 with minimum desalination. • Drain water desalination, if implemented at the maximum level, could decrease inflows to the Salton Sea to 40,000 AFY by 2045. • CVWD participates as a member of the Salton Sea Authority. • CVWD participates in Salton Sea mitigation CVWD continues to monitor flows to the Sea 	<p>Impact on salinity Less than Significant</p> <p>Increased flows beneficial (with no or minimum desalination)</p> <p>Decreased flows less than significant (with maximum desalination)</p>	<ul style="list-style-type: none"> • Second-tier EIR for desalination will consider existing flows to the Sea at that time • Disposal of desalination brine will consider supplementation of existing and expanded Torres-Martinez wetlands, a beneficial effect 	<p>Less than Significant</p>

**Table 1-2 (Continued)
Summary of Proposed Project Impacts and Mitigation Measures**

Category	Impact Discussion	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
Flooding and Stormwater Protection	<ul style="list-style-type: none"> Stormwater routing may be required around Martinez Canyon recharge basins and other facilities if located in a floodplain; could cause offsite flooding. Construction disturbance could create storm runoff pollution from site. 	Potentially Significant	<ul style="list-style-type: none"> Conduct site-specific hydrologic studies of recharge and other sites in second tier CEQA documents; implement study recommendations in project plans and specifications 	Less than Significant
Groundwater Overdraft	<ul style="list-style-type: none"> Annual overdraft decreases in West Valley and East Valley Water levels change at a slower rate than current conditions in West Valley and increase in East Valley 	Beneficial Effect	None required.	Beneficial Effect
Groundwater Levels and Storage	<ul style="list-style-type: none"> Restoration of artesian conditions in deeper aquifers as basin refills could result in leakage and wasted water from older wells. 	Less Than Significant	<ul style="list-style-type: none"> CVWD will monitor its wells for artesian conditions as part of ongoing water level monitoring. If previously abandoned CVWD wells begin to flow and flood adjacent land, CVWD will cap these wells in accordance with applicable regulatory guidelines. 	Less than Significant
	<ul style="list-style-type: none"> Shallow groundwaters will rise as a result of the Proposed Project; intercepted in drains. Liquefaction potential in the study area may increase slightly with the Proposed Project; remaining High in the East Valley and Moderate in the West Valley 	Less than Significant	<ul style="list-style-type: none"> Second tier CEQA documents will note that foundation designs for all habitable facilities need to consider liquefaction, as at present. CEQA documents prepared by developers will also need to consider liquefaction, as at present. 	Less than Significant

Table 1-2 (Continued)
Summary of Proposed Project Impacts and Mitigation Measures

Category	Impact Discussion	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
Groundwater Quality	<ul style="list-style-type: none"> • Net annual salt inputs increase in West Valley and decrease in East Valley. • West Valley average TDS increases by 4.1 mg/L per year in 2010 to 8.6 mg/L per year by 2020 and to 9.5 mg/L per year by 2045. • Average East Valley TDS increase falls from 14.0 mg/L per year in 2009 to 11.1 mg/L per year in 2020 to 2.1 mg/L per year by 2045. • Increased TDS near recharge basins in West and East Valleys. • TDS concentrations projected to be above 500 mg/L aesthetic (not public health-related) secondary standard in the vicinity of recharge basins. 	Potentially Significant	<ul style="list-style-type: none"> • No feasible measures are currently available to reduce TDS in recharge water. • CVWD and DWA will monitor the quality of groundwater produced for domestic purposes near the groundwater recharge areas to ensure that all recognized health-based drinking water standards are met. If monitoring shows that the groundwater exceeds any health-based drinking water standard, CVWD and DWA will work with the well owners to bring the drinking water supply into compliance by either providing domestic water service from the domestic water system or by providing appropriate well-head treatment within their respective service areas. 	Potentially Significant

Table 1-2 (Continued)
Summary of Proposed Project Impacts and Mitigation Measures

Category	Impact Discussion	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
THE HUMAN OR BUILT ENVIRONMENT				
Population/ Housing/ Employment	<ul style="list-style-type: none"> The Proposed Project will not determine the location, density or magnitude of population growth through 2045. The Proposed Project will accommodate growth approved for the Valley by Riverside and Imperial counties and the Coachella Valley municipalities. The impact on economic growth involves creation of a small number of jobs for construction and operation of new facilities. 	Less than Significant	<ul style="list-style-type: none"> None required. CVWD has no land use control authority and matches facilities planning and construction to development requests and cannot mitigate for decisions by other agencies. 	Less than Significant
Land Use	<ul style="list-style-type: none"> Pipelines will be buried and therefore consistent with all land uses. Pumping stations, recharge basins and treatment plants will be consistent with surrounding land uses because water facilities are consistent with all zoning and General Plan designations. The Proposed Project is supportive of local and areawide planning policies. 	Less than Significant	<ul style="list-style-type: none"> Second tier CEQA documents will require that CVWD secure permits or easements from agencies and tribes having jurisdiction over the facility locations, as applicable. 	Less than Significant

Table 1-2 (Continued)
Summary of Proposed Project Impacts and Mitigation Measures

Category	Impact Discussion	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
Indian Trust Assets	<ul style="list-style-type: none"> • No impact on ITA land ownership or use. • Reduced depth to water in producing wells. • Recharged water in East Valley predicted to affect the TDS of Torres-Martinez wells. • Current and future recharge in West Valley predicted to affect the TDS of Agua Caliente wells. • No other tribal wells affected. 	<p>Potentially Significant for groundwater quality</p> <p>Beneficial Effect for reduced depth to water</p>	<ul style="list-style-type: none"> • Should recharge with Colorado River water under the Proposed Project cause any Torres Martinez or Agua Caliente domestic drinking water well to exceed any recognized health-based water quality standard, CVWD and DWA will work with the tribes to bring the drinking water supply of the tribes into compliance by providing domestic water service to the tribes from CVWD's or DWA's respective domestic water system or by providing appropriate well-head treatment. 	Potentially Significant for groundwater quality
Traffic, Access and Transportation	<ul style="list-style-type: none"> • Construction could temporarily interfere with emergency evacuation routes. 	Potentially Significant	<ul style="list-style-type: none"> • Second tier CEQA documents will require that emergency service providers (fire, police, and ambulance) be provided with construction contact names, locations, and schedules and traffic plans, if applicable, prior to the start of construction. 	Less than Significant

Table 1-2 (Continued)
Summary of Proposed Project Impacts and Mitigation Measures

Category	Impact Discussion	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
Traffic, Access and Transportation (continued)	<ul style="list-style-type: none"> Construction will temporarily disrupt traffic patterns in the vicinity of project facilities. 	Potentially Significant	In second tier CEQA documents, mitigation measures will include the following: <ul style="list-style-type: none"> Contractor will prepare a traffic control plan for construction in or near higher traffic volume roadways – provide plan to applicable agencies for approval. Avoid high-volume intersections, jack under if necessary. Obtain Caltrans encroachment permits, if necessary. Obtain permits for crossing railroad rights-of-way, as applicable. 	Less than Significant
Public Services and Utilities	<ul style="list-style-type: none"> Minor impacts to services and utilities during construction related to underground lines, access, or noise. 	Potentially Significant	<ul style="list-style-type: none"> As applicable, contractor will conduct underground utility searches prior to construction. Emergency service providers and schools will be provided with contact names, locations, and schedules prior to the start of construction. 	Less than Significant
	<ul style="list-style-type: none"> Minor impact on solid waste disposal facilities from disposal of non-hazardous construction debris, excess soil. 	Less than Significant	None required.	Less than Significant

Table 1-2 (Continued)
Summary of Proposed Project Impacts and Mitigation Measures

Category	Impact Discussion	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
Energy Resources	<ul style="list-style-type: none"> • Decreased energy use for groundwater pumping as compared to existing conditions • Overall energy use increase for Valley projects (SCE, IID suppliers) • Overall increase in energy use compared to existing conditions for water importation (SCE and IID) 	<p>Beneficial Effect for energy use related to groundwater pumping</p> <p>Potentially Significant for overall energy use</p>	<p>Second-tier CEQA documents will require:</p> <ul style="list-style-type: none"> • The siting, orientation and design of facilities shall minimize energy consumption, as feasible. • Design of WMP elements shall incorporate energy conservation, water conservation and solid waste reduction measures. • Operation of WMP elements shall include some or all of the following, as applicable: <ul style="list-style-type: none"> - Periodic energy audits, - System modifications to reduce energy use' - Use of low energy demand equipment, - Compliance with LEED certification standards for new structures - Evaluation and incorporation of emerging and innovative energy conservation measures where feasible. • CVWD will continue to develop and use alternative fuels as feasible for its own operations • CVWD will coordinate with IID and SCE on anticipated energy needs for CVWD operations. 	Less than Significant

Table 1-2 (Continued)
Summary of Proposed Project Impacts and Mitigation Measures

Category	Impact Discussion	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
Mineral Resources	<ul style="list-style-type: none"> Minor amounts of sand and gravel will be used for construction. 16 aggregate mines in the Valley; no facilities siting conflicts anticipated. 	Less than Significant	None required.	Less than Significant
Cultural Resources	<ul style="list-style-type: none"> Cultural resources are known for the study area. Potential for disruption of resources from construction activity assumed to be proportional to the size of the area disturbed. Sites not yet identified or previous surveys out of date. 	Potentially Significant	Second tier CEQA document will include site specific analysis for facilities sites: <ul style="list-style-type: none"> Conduct record searches at the UC Riverside Eastern Information Center Conduct on-foot reconnaissance of the project sites Coordinate with local tribes Implement mitigation as identified by the project archaeologist During construction, if previously unknown cultural resources are discovered, halt work until evaluated by an archeologist Contact the County Coroner if human remains are uncovered during construction 	Less than Significant
Recreation	<ul style="list-style-type: none"> Possible temporary effects on bike paths and trails during facilities' construction 	Potentially Significant	Second tier CEQA documents will identify impacts on trails and bike paths; notification of temporary construction and re-routing will be made as applicable.	Less than Significant

Table 1-2 (Continued)
Summary of Proposed Project Impacts and Mitigation Measures

Category	Impact Discussion	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
Visual Effects	<ul style="list-style-type: none"> • Pumping stations and recharge facilities appearance in keeping with the adjacent setting • Treatment facilities constructed to blend with surrounding values. • Pipelines will be buried; no visual affect 	Potentially Significant	Second tier CEQA documents will identify visual treatment of facilities and view sheds, as applicable.	Less than Significant
Hazardous Materials	<ul style="list-style-type: none"> • Construction could interfere temporarily with emergency evacuation routes (see also Traffic and Transportation) • Limited potential for encountering contaminated soils during construction. • Use of hazardous chemicals in water treatment 	Potentially Significant	Second tier CEQA documents will require the following mitigation, as applicable: <ul style="list-style-type: none"> • Implement traffic plans and notification of emergency providers of construction location and duration. • Evaluate database searches of known hazardous material sites near the construction area • Identify and implement mitigation for disposal of contaminated soils, if encountered during construction • Follow required industry standards for chemical handling, use and storage in the UBC, Uniform Fire Code and National Electric Code. 	Less than Significant

Table 1-2 (Continued)
Summary of Proposed Project Impacts and Mitigation Measures

Category	Impact Discussion	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
Noise	<ul style="list-style-type: none"> • Construction noise will be temporary, but could exceed applicable city or county noise ordinances. • Facilities that generate noise during operations (pumping stations, treatment plant and desalination plant operation and routine maintenance activities) will be isolated from sensitive receptors. 	Potentially Significant	Sensitive noise receptors (residences, schools, hospitals, etc.) will be identified in second tier CEQA documents. If necessary to meet applicable City or county noise ordinance, mitigation will include: <ul style="list-style-type: none"> • Limit construction to normal work days and hours; • Schedule construction activities to avoid sensitive seasons, days, or hours (e.g. near schools); • Install mufflers on construction equipment; • Install temporary sound walls during construction; • Enclose pumping stations located near sensitive noise receptors; • Modify noise enclosures with acoustical louvers, baffle walls, and/or acoustical panels 	Less than Significant

Table 1-2 (Continued)
Summary of Proposed Project Impacts and Mitigation Measures

Category	Impact Discussion	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
BIOLOGICAL RESOURCES				
Terrestrial Resources	<ul style="list-style-type: none"> Potential for encountering sensitive plant or animal species on undeveloped facilities sites. 	Potentially Significant	Second tier CEQA documents will: <ul style="list-style-type: none"> Coordinate with CVMSHCP Coachella Valley Conservation Commission (CVCC) for Covered Activities and with CDFG, USFWS, as applicable to non-covered species, to identify mitigation and permit requirements as appropriate. Conduct site-specific protocol surveys at appropriate times for sensitive species at proposed facility sites if suitable habitat is present Avoid identified sensitive species habitats as feasible Avoid removal of large native trees and shrubs 	Less than Significant
Peninsular Bighorn Sheep (PBS)	<ul style="list-style-type: none"> Martinez Canyon recharge basins on the western edge of the Coachella Valley floor at Martinez Canyon could be located in or near designated critical habitat for PBS. 	Potentially Significant	Project is CVMSHCP Covered Activity—Second tier documents will comply with CVMSHCP PBS requirements.	Less than Significant
Desert Tortoise	<ul style="list-style-type: none"> There is a minor potential for impact on tortoise during construction of Martinez Canyon recharge basins and appurtenant facilities. 	Potentially Significant	Second tier documents will comply with CVMSHCP Desert Tortoise Measures.	Less than Significant

**Table 1-2 (Continued)
Summary of Proposed Project Impacts and Mitigation Measures**

Category	Impact Discussion	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
Coachella Valley Fringe-toed Lizard (CVFTL)	<ul style="list-style-type: none"> Future facilities sites on undeveloped land could affect the CVFTL if suitable habitat is present. or CVFTL observed. 	Potentially Significant	<ul style="list-style-type: none"> If proposed construction is deemed to have a potential effect in second tier documents, CVWD will mitigate in keeping with the CVMSHCP. 	Less than Significant
Biological Resources in the Whitewater River (CRA turnout to Whitewater Recharge Facility)	<ul style="list-style-type: none"> Changes in flows from transfers and purchases of SWP Exchange water. Whitewater River resources include riparian or aquatic habitat. No arroyo toads or sensitive plant species present. 	Less than Significant	None required.	Less than Significant
Biological Resources in CVSC and Agricultural Drains	<ul style="list-style-type: none"> Increased flows and velocities in the CVSC and drains, but flows may decrease with desalination if implemented. Sufficient flow remaining to maintain existing and projected wetlands at mouth of CVSC and drains. 	Less than Significant	None required	Less than Significant
	<ul style="list-style-type: none"> Increased drain flows will expand desert pupfish habitat in drains and shoreline pools; increased drain flows will also expand habitat for fish predatory on the desert pupfish. 	Potentially Significant	Replacement habitat for pupfish incorporated into the CVMSHCP. No additional mitigation required.	Less than Significant
	<ul style="list-style-type: none"> Depending on location and time of year, facilities construction noise could affect nesting waterfowl. 	Potentially Significant	<ul style="list-style-type: none"> Second tier CEQA documents mitigation will require that construction noise levels at edge of waterfowl habitat are 60 decibels (dBA) or below during the nesting season 	Less than Significant

Table 1-2 (Continued)
Summary of Proposed Project Impacts and Mitigation Measures

Category	Impact Discussion	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
Growth Inducing Impacts	<ul style="list-style-type: none"> • The Proposed Project does not provide new housing or significant job opportunities that could directly foster economic or population growth. • Substantial growth is projected in the Valley and can be accommodated by the Proposed Project through 2045. • The Proposed Project will not directly or indirectly foster economic growth or growth in population or housing. • CVWD planning takes into account the necessary increases in its facilities in response to requests for water, sewer and flood control service in the Coachella Valley. 	<p>Significance determination not required</p>		

**Table 1-2 (Continued)
Summary of Proposed Project Impacts and Mitigation Measures**

Category	Impact Discussion	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
Greenhouse Gas (GHG) Emissions	<ul style="list-style-type: none"> • Proposed Project is not in conflict with any applicable adopted plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of GHG. Proposed Project elements implement the AB 32 Scoping Plan elements for GHG reductions in the Water Sector. • Higher groundwater levels reduce pumping power consumption and associated GHG emissions • Proposed Project GHG emissions increases are primarily indirect emissions associated with power generation at SCE, IID and on the grid and would occur primarily outside the South Coast Air Basin. • There is currently no applicable GHG emissions threshold for long-term public agency water management plans. 	<p style="text-align: center;">Less than Significant</p> <p style="text-align: center;">Beneficial Effect</p> <p style="text-align: center;">Beneficial Effect</p> <p style="text-align: center;">Potentially Significant</p>	<p>Mitigation measures to reduce GHG emissions per unit energy generated can and will be implemented by SCE and IID and other power generators. Current fuel mixes are required to change to lower emission, renewable sources.</p> <p>CVWD commits to incorporating the following measures into project construction specifications for facilities to reduce GHG by reducing energy usage:</p> <ul style="list-style-type: none"> • use alternative fuels for construction equipment as available, • use electric and hybrid construction equipment as available, • limit construction equipment idling beyond regulation requirements, • institute a heavy-duty off-road vehicle plan, and • implement a construction vehicle inventory tracking system. • investigation of solar power for desalination 	<p style="text-align: center;">Less than Significant</p>

Table 1-2 (Continued)
Summary of Proposed Project Impacts and Mitigation Measures

Category	Impact Discussion	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
GHG Emissions (continued)	<ul style="list-style-type: none"> • Direct GHG emissions for operation of WMP facilities are anticipated to be minor—employee vehicles and equipment. • Water Reclamation Plants could emit GHG • Electrical energy for water importation will increase GHG emissions from power plants on the grid. • CVWD will have solar facilities on new headquarters building parking shade roofs. Building will meet LEED Gold criteria. 	<p align="center">Less than Significant</p> <p align="center">Potentially Significant</p> <p align="center">Potentially Significant</p>	<p>Emissive CVWD Water Reclamation Plant treatment units will be covered.</p> <p>CVWD is investigating and has committed to implementing alternative energy sources for its own operations use as feasible.</p> <p>Second tier documents will evaluate energy sources and requirements and perform facility-specific GHG analyses.</p>	<p align="center">Less than Significant</p>

1.9 RELATED PROJECTS AND CUMULATIVE IMPACTS

Several ongoing or planned projects are located in the Proposed Project study area or are otherwise related to it. Related projects are listed and described in **Section 9** of the SPEIR. Key cumulative impacts are discussed below.

1.9.1 Cumulative Groundwater Impacts

The intent of the Proposed Project is to address overdraft in the Coachella Valley. Certain related projects could result in increased groundwater demand, offsetting the overall beneficial impact of the Proposed Project. However, the overall net effect is beneficial.

Groundwater quality in the Coachella Valley will degrade with the Proposed Project compared to current conditions near existing recharge basins and near proposed recharge basins at Martinez Canyon and Indio.

Future groundwater conditions near the Salton Sea with the Proposed Project are improved compared to future conditions without the Proposed Project. Because the related projects have no additional impacts on groundwater quality in the Coachella Valley, there would be no cumulative impacts on groundwater quality.

1.9.2 Cumulative Biologic Impacts

As discussed in the 2002 PEIR, construction of 2010 WMP Update elements may have potentially significant impacts on special status terrestrial species, cumulative with the impacts of project development within the Coachella Valley approved by the counties of Riverside and Imperial and the Valley municipalities. These impacts will be mitigated for WMP project elements by CVWD to a level of less than significant on a project by project basis through site specific implementation of the SPEIR mitigation measures and CVWD's continued participation as a signatory to the CVMSHCP.

1.9.3 Cumulative Salton Sea Impacts

The inflows to the Salton Sea from the Coachella Valley in the CVSC and agricultural drains currently represent 6 to 8 percent of the total inflow. Drain flows, under the 2010 WMP Update, are projected to increase from existing conditions. If no desalination or minimum desalination is implemented (a decision to be made in 2015-2020), Coachella Valley flows to the sea will increase. If maximum desalination is implemented in the future, that is if leases and transfers are not sufficient future water supplies to meet demands, then net drain flow to the Sea could be up to approximately 30 percent lower than at present. The impact on overall inflows to the Sea would be less than significant for hydrology and salinity.

The Salton Sea Ecosystem Restoration Project (SSERP) and its EIR, developed by the California Department of Water Resources (DWR), included projected Coachella Valley inflows to the Sea incorporating the 2002 WMP and PEIR projected flows into existing conditions. The EIS/EIR also indicated that these flows could change from the projected figures over time. The Salton

Sea project proposed tens of thousands of acres of ponds at the mouth of the CVSC, based on a projected 94,000 to 138,000 AFY of drain flow by 2075. However, the SSERP was not funded by the State legislature and its future is uncertain. If the SSERP is revisited at some future time, the potential effect of Coachella Valley drain flow changes on ponds proposed at that time would need to be re-evaluated against the conditions existing at that point.

A near term Species Conservation Habitat (SCH) project is proposed by CDFG and DWR that creates up to 2,400 acres of fish ponds at the Salton Sea to support fish-eating birds, but only at the south end of the Sea, and therefore does not involve the Coachella Valley inflow contributions to the Sea.

A Salton Sea Restoration Council was established in September 2010; CVWD has been invited to be a voting member of the executive committee. The Council is to develop and present to the Governor a restoration plan by June 2013.

The Salton Sea Authority (SSA) and the U.S. Bureau of Reclamation (Reclamation) developed a separate Salton Sea Restoration Plan, which was adopted in 2006. The Plan was included as an alternative in the DWR Salton Sea Ecosystem Restoration Plan PEIR completed in 2007, but was not selected as the preferred alternative. The SSA Reclamation Plan is seeking separate funding.

If either the DWR Plan or SSA Plan or Restoration Council Plan proceeds, the flows from the Coachella Valley remain a minor contributor with respect to hydrology and biology. The cumulative impact on the Sea of implementation of a restoration plan would be beneficial for hydrology and biology

To the extent the WMP contributes to a reduction in sea inflows under maximum desalination, it would contribute to the exposure of additional Salton Sea playa and potential air quality impacts, if such exposure increases particulate emissions. The adopted four-step air quality plan associated with the QSA and IID water transfer project is being implemented and is part of existing conditions for the Proposed Project. The previous EIRs concluded, however, that the 4-step program was expected to have potentially significant and unavoidable residual impacts. While CVWD participates in implementation of the 4-step program, the impact of the Proposed Project is also considered to be potentially significant and unavoidable.

1.9.4 Cumulative Wetlands Impacts

The 2002 PEIR included wetland habitat replacement for all potential impacts of the WMP and channel maintenance on pupfish, rails and cottonwood-willow habitat in the Coachella Valley agricultural drains and CVSC. These measures were subsequently incorporated into the CVMSHCP and are being implemented. Therefore, there is no cumulatively considerable cumulative impact with the CVMSHCP wetlands. The authority over state and federal jurisdictional wetlands remains with the CDFG and U.S. Fish and Wildlife Service, however.

The 85 acres of Torres Martinez tribal wetlands currently are supported by water diverted from the CVSC. CVWD anticipates working with the tribe to expand these wetlands, a cumulative benefit. The tribe also proposes to create brackish habitat in new ponds; the desalination treatment brine, should desalination proceed, could also help create brackish conditions, a

cumulative benefit. Therefore, there is no cumulatively considerable cumulative impact with the Torres-Martinez tribal wetlands.

1.10 ALTERNATIVES TO THE PROPOSED PROJECT

In the 2010 WMP Update SPEIR, alternatives evaluated are No Project, as required by CEQA, and alternatives that focus on reducing potentially significant impacts of the Proposed Project. Potentially significant impacts relate to groundwater quality degradation from groundwater recharge with Colorado River water and a potential long-term increase in selenium in Coachella Valley drains, and air pollutant impacts during construction.

1.10.1 No Project

The No Project alternative is the continued implementation of the adopted 2002 WMP under the current and uncertain water supply and water demand conditions that now exist and under substantially revised population and land use projections adopted by SCAG in 2008.

The analysis in the 2010 WMP Update and SPEIR shows clearly that to continue implementation of the 2002 WMP without revision would significantly increase basin overdraft, land subsidence and Salton Sea water intrusion, and increase pumping energy. Drain flows would be slightly higher than under the Proposed Project, particularly if the latter involves diversion of drain water for desalination. Nevertheless, the No Project alternative fails to meet the WMP objectives and would have significant impacts.

1.10.2 Alternatives to the Proposed Project Considered to Reduce Significant Impacts

State CEQA Guidelines Section 15126.6 (b) state that “the discussion of alternatives shall focus on alternatives to the project or its location which are capable of avoiding or substantially lessening any significant effects of the project, even if these alternatives would impede to some degree the attainment of project objectives, or would be more costly.”

Potentially significant effects of the Proposed Project are the impacts on groundwater quality of recharging the basin with Colorado River water, which generally has lower salinity than native groundwater; an increase in selenium in Coachella Valley drains; and air quality impacts of construction.

1.10.3 Alternatives Considered for Reducing Groundwater Quality Impacts

A recent study of direct importation for basin recharge of lower-salinity SWP water, the State Water Project Extension Feasibility Analysis, remains in draft form and its feasibility is not determined. This approach also has significant environmental impacts and significant costs in addition to those of the Proposed Project. Therefore, it is not considered to be a viable alternative.

Desalination of all Colorado River water before recharge, compared to present screening criteria — brine disposal impact, permitting feasibility especially for brine disposal, and high cost — also is considered to be infeasible.

Increasing recharge to export additional salt from the groundwater basin was also considered. While additional accumulated salt would be exported in poor quality waters via the drains, the quality of local groundwaters would be affected by the additional recharge. It is also not considered to be a feasible mitigation measure.

1.10.4 Alternatives Considered for Reducing Selenium Concentrations in Agricultural Drains

Chemical, physical and biological selenium treatment methods have been reviewed and were found to be infeasible for removing low levels of selenium on an areawide basis in an agricultural and wetland area.

1.10.5 Alternatives Considered for Reducing Air Pollutant Impacts of Construction

Meeting South Coast Air Quality Management District (SCAQMD) peak day emissions thresholds for construction applied to the Coachella Valley could be achieved by delaying construction to have fewer pieces of equipment on site, but would result in greater overall air pollutant emissions and delay construction unnecessarily. Therefore, this approach would have greater environmental impacts and is eliminated.

The SCAQMD emissions thresholds could also be achieved by the use of alternative fuels, but these are not always available or usable with available equipment. Therefore this approach is not considered to be a viable alternative.

1.10.6 Alternatives Considered for Reducing Air Pollutant Impacts of Salton Sea Playa Exposure

The IID Water Conservation and Transfer Project EIR and Mitigation Monitoring and Reporting Program (MMRP) (IID, 2003), part of existing conditions for the proposed Project, outlined a four-step mitigation plan for air pollutant emissions from exposed playa, a plan which is in the process of implementation. Actions begin with restricting access to the playa to reduce soil disturbance, establishing and operating a monitoring network and pilot studies of emissions. Other mitigation measures for dust from exposed playa are use of playa for wetland/march habitat, placement of solar panels on the exposed playa, and use of exposed playa for energy generating algae ponds.

CVWD cannot identify and implement additional mitigation now for worst-case potential future playa exposure, but commits to participating in the ongoing four step implementation plan for the Salton Sea. It is anticipated however, that the impact of playa exposure under worst case conditions (maximum drain water desalination) would remain potentially significant and unavoidable even with mitigation incorporated.

1.11 THE ENVIRONMENTALLY SUPERIOR ALTERNATIVE

State CEQA Guidelines Section 15126.6 (e)(2) states if the environmentally superior alternative is the No Project alternative, then the EIR shall also identify an environmentally superior alternative among the other alternatives.

For the present Proposed Project, the No Project alternative – application of the adopted 2002 WMP in the current environment – is not the environmentally superior alternative. Rather, the No Project alternative is more environmentally damaging overall than the Proposed Project because its implementation would increase groundwater overdraft and its associated impacts and would not meet the goals of the project.

The environmentally superior alternative is the Proposed Project, because the alternatives to the Proposed Project have substantially greater adverse environmental impacts, even though the Proposed Project has significant impacts of its own. The SPEIR has identified no feasible alternatives that reduce all potentially significant impacts to a level of less than significant.

1.12 EFFECTS FOUND NOT TO BE SIGNIFICANT

Section 11 presents a table of potential environmental impacts found to be less than significant, as well as beneficial effects and impacts mitigated to levels of less than significant, as required by Public Resources Code section 21100(c).

1.13 GROWTH-INDUCING IMPACTS

SPEIR **Section 11** found the 2010 WMP Update to be growth accommodating rather than growth inducing. That is, infrastructure would be planned and constructed in response to land use decisions made by the counties of Riverside and Imperial and the Coachella Valley cities and requests for service from developers, considering that putting such facilities in place requires approximately 5 years' lead time for planning and construction. The Proposed Project could be viewed as eliminating an obstacle to growth, but would in itself not result in growth. Therefore, the Proposed Project would not foster economic or population growth, or the construction of additional housing.

The accommodated growth could have significant impacts on the environment in the form of traffic, air pollution, GHG emissions, energy requirements, impacts on cultural resources and biological resources, other utilities, and public services. Mitigation of these impacts is the responsibility and authority of others.

1.14 SIGNIFICANT ENVIRONMENTAL IMPACTS FOR WHICH NO FEASIBLE MITIGATION IS AVAILABLE

Section 11 of the SPEIR discusses:

- groundwater quality (salinity) from recharge with Colorado River water,
- selenium concentrations increases in Coachella Valley drains, and

- construction impacts on air quality.

1.15 SIGNIFICANT, IRREVERSIBLE ENVIRONMENTAL CHANGES WHICH WOULD BE CAUSED BY THE PROPOSED PROJECT SHOULD IT BE IMPLEMENTED

Local degradation of groundwater quality near existing and proposed recharge basins from recharge of Colorado River water is considered a significant irreversible environmental change. In the absence of this recharge, however, the infiltration of agricultural drainage water and sea water intrusion would have greater, significant irreversible impacts on groundwater quality.

1.16 IDENTIFICATION OF SITE-SPECIFIC EIRS / NEGATIVE DECLARATIONS THAT COULD TIER OFF THE SPEIR

Potential Proposed Project elements whose CEQA documents could tier off the SPEIR are:

- canal water loss recovery facilities,
- facilities for increased use of recycled water for agricultural, landscape and golf course irrigation,
- acquisition of additional imported water supplies (leases, transfers),
- construction and operation of a desalination facility to treat agricultural drainage water and facilities to dispose of produced brine once project proceeds and sites are selected (CEQA and NEPA compliance may both be required if federal land is involved),
- construction and operation of Mid-Valley Pipeline Phases 2 and 3 facilities to bring Colorado River water to West Valley golf courses,
- second pumping station and new pipeline conveyance of additional Canal water from Lake Cahuilla to the Levy facility for recharge,
- full-scale groundwater recharge facilities at Martinez Canyon (NEPA analysis also required if on federal land),
- groundwater recharge facilities at Indio (City of Indio assumed to be Lead Agency),
- construction and operation of backbone water conveyance systems to serve new developments,
- construction and operation of backbone sewage collection systems to serve new developments,
- construction and operation of a water treatment plant to treat Canal water for urban use,
- construction and operation of new groundwater wells,
- construction and operation of a backbone non-potable water distribution system for urban use, and
- conversion of existing East Valley golf courses and agricultural uses in East Valley Improvement District No. 1 (ID-1); convert Oasis area agricultural users inside ID-1 to

Canal water, via construction and operation of conveyance systems (pipelines, pumping stations, and reservoirs).

1.17 APPENDICES

Appendices to the SPEIR contain references and bibliography; acronyms, abbreviations, and glossary; the Notice of Preparation and responses received; Scoping activities; organizations and persons consulted; a discussion of the Coachella Valley Groundwater Model, and updated biological survey reports for the Martinez Canyon recharge site area and for a potential desalination plant area near CVWD Water Reclamation Plant No. 4.

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Section 2

Introduction

The Coachella Valley Water Management Plan (WMP or Plan) completed in 2002 (2002 WMP; MWH and Water Consult, 2002) presented a multi-faceted approach to reducing groundwater overdraft in the Coachella Valley. The Plan addressed overdraft through the proposed implementation of water conservation measures, increased water supplies and a combination of source substitution and groundwater recharge projects to be implemented over 35 years (2009 to 2035). The Coachella Valley Water District (CVWD or District) Board of Directors adopted the Plan and accompanying Program Environmental Impact Report (PEIR) on the Coachella Valley Water Management Plan and State Water Project Entitlement Transfer, Mitigation Monitoring and Reporting Plan (MMRP) and Findings of Fact in September 2002 (MWH, 2002).

The District intends to update the 35-year Plan periodically. The first update, referred to as the 2010 WMP Update (Proposed Project), has been prepared and released in draft form (MWH and Water Consult, 2010). The update is required to reflect changes since 2002: new proposed projects, the effects of changes over time in the environment, changes in land use and population projections. The updated WMP will serve the District's and the Valley's future water supply needs while continuing to reduce groundwater basin overdraft and its consequences. The Proposed Project, described in detail in Section 3, re-evaluates for the planning period 2010 to 2045 the major elements of the 2002 Plan — groundwater recharge, conservation, importation and source substitution — in view of higher projected population, anticipated conversion of agriculture to urban land uses, and uncertainties in State Water Project (SWP) and Colorado River supplies to the Valley.

California Environmental Quality Act (CEQA) compliance for the 2010 WMP Update is a Subsequent Program EIR (SPEIR) based on the 2002 WMP PEIR (State Clearinghouse (SCH) No. 1999041032, SCH No. 2000031027), which is hereby incorporated in full by reference.

2.1 LEAD AGENCY

CVWD will act as Lead Agency for the SPEIR, pursuant to State CEQA Guidelines (California Code of Regulations, 2010) Section 15367. CVWD is a local government agency formed in 1918 under the County Water District Act (California Water Code Section 30000, et seq.) to conserve and protect the Coachella Valley's water supplies.

CVWD is responsible for SWP and Colorado River water importation, production and distribution of domestic water; wastewater collection, treatment and distribution of recycled water; regional flood protection; importation and distribution of irrigation water; irrigation drainage collection and disposal; groundwater management; and water conservation for a population of 265,000 throughout the Coachella Valley. CVWD's service area encompasses approximately 1,000 square miles, chiefly in central Riverside County, California, but also including small portions of northern Imperial County and northern San Diego County adjacent to the Salton Sea.

2.2 RESPONSIBLE AGENCIES

CEQA defines a “Responsible Agency” as a public agency, other than the lead agency, which has responsibility for carrying out or approving a project. A responsible agency typically has permitting authority or approval over some aspect of the overall project for which the lead agency is conducting CEQA review. The responsible agency relies on the lead agency’s environmental document in acting on whatever aspect of the project requires its approval. The responsible agency must issue its own findings regarding the feasibility of relevant mitigation measures or project alternatives that can substantially lessen or avoid significant environmental effects. Furthermore, where necessary, a responsible agency must issue its own statement of overriding considerations. Lead agencies are required to consult with responsible agencies and solicit comments from them regarding the scope and content of the environmental document.

For the Proposed Project, responsible agencies are Desert Water Agency (DWA) and the California Department of Water Resources (DWR). Additional responsible agencies may participate in the site specific documents that tier off the SPEIR, if they require specific permits and approvals, such as California Department of Fish and Game (CDFG) or California Regional Water Quality Control Board (Regional Board).

2.2.1 Desert Water Agency

DWA is a responsible agency for the Proposed Project because DWA is a party to the SWP importation and recharge activities at the Whitewater Recharge Facility and would be party to future transfers, conservation and source substitution projects.

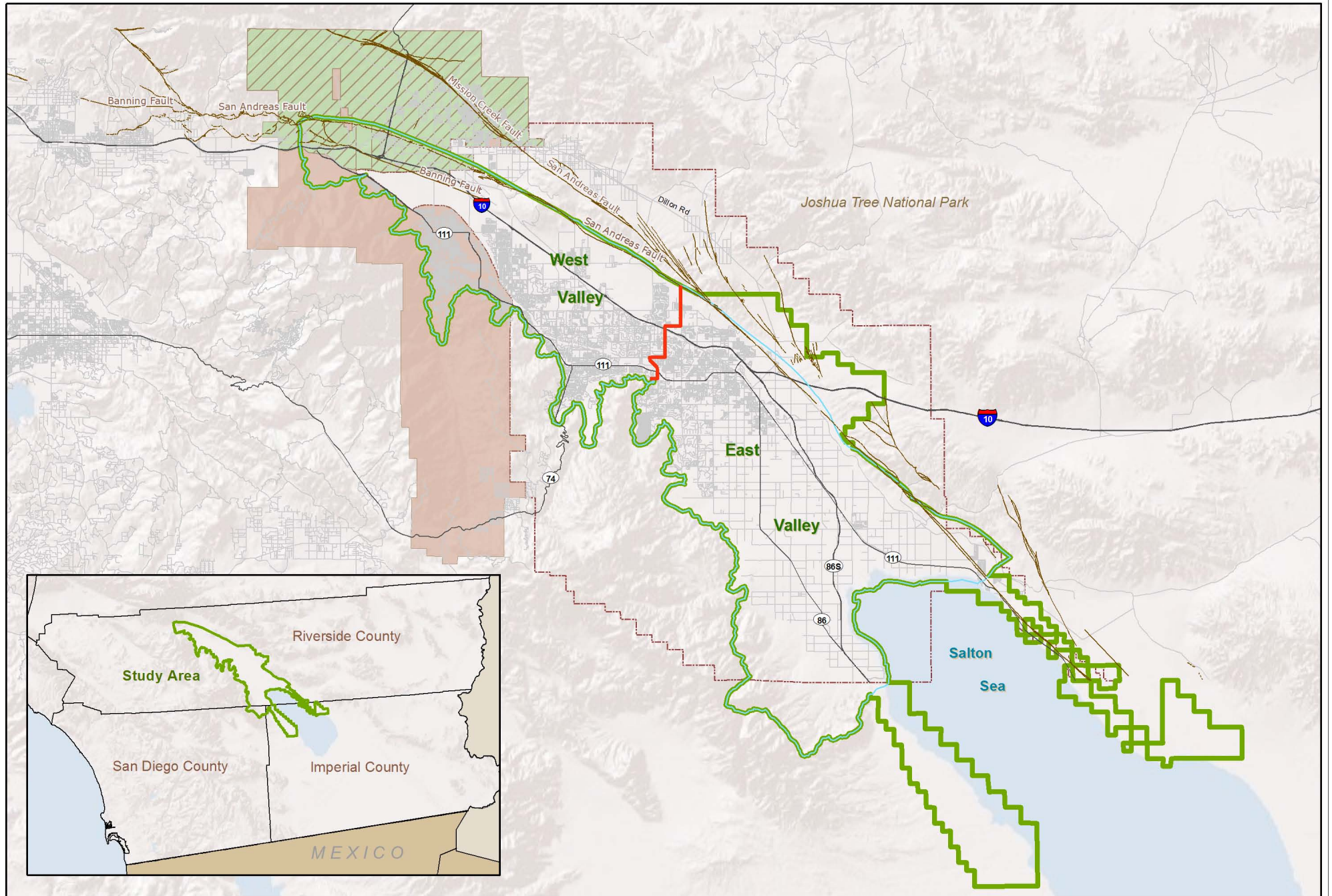
2.2.2 California Department of Water Resources

As the administrator of the SWP, DWR has the responsibility to approve transfers between SWP contractors. Although the agencies that would be the source of transfers have not been identified in the 2010 WMP Update, future transfers are an element of the 2010 WMP Update. DWR approval will be required for future SWP entitlement transfers from other SWP contractors to CVWD and DWA. Therefore, DWR would be a responsible agency for the Proposed Project under CEQA.

2.3 STUDY AREA DESCRIPTION

The study area is in the Coachella Valley, is located approximately 100 miles east of Los Angeles, and forms the northwestern portion of the great Salton Trough that extends northwest from the Gulf of California in Mexico to the Cabazon area. The Colorado River intersects this trough about midway, and its delta has formed a barrier between the Gulf of California and the Coachella and Imperial valleys (**Figure 2-1**).

The study area for the Proposed Project is defined as the Coachella Valley floor and underlying groundwater basins, extending from north of the community of Whitewater on the northwest to the Salton Sea at the southeastern end (**Figure 2-2**) and to the San Jacinto and Santa Rosa Mountains on the west.



Key to Features

- | | | | |
|--------------------------|------------|----------|----------------------------|
| Area of Benefit Boundary | Fault | DWA | CVWD |
| Highways | Study Area | MSWD | Whitewater River Sub-Basin |
| | | MSWD/DWA | |

0 5 10 Miles

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Date: February 2011

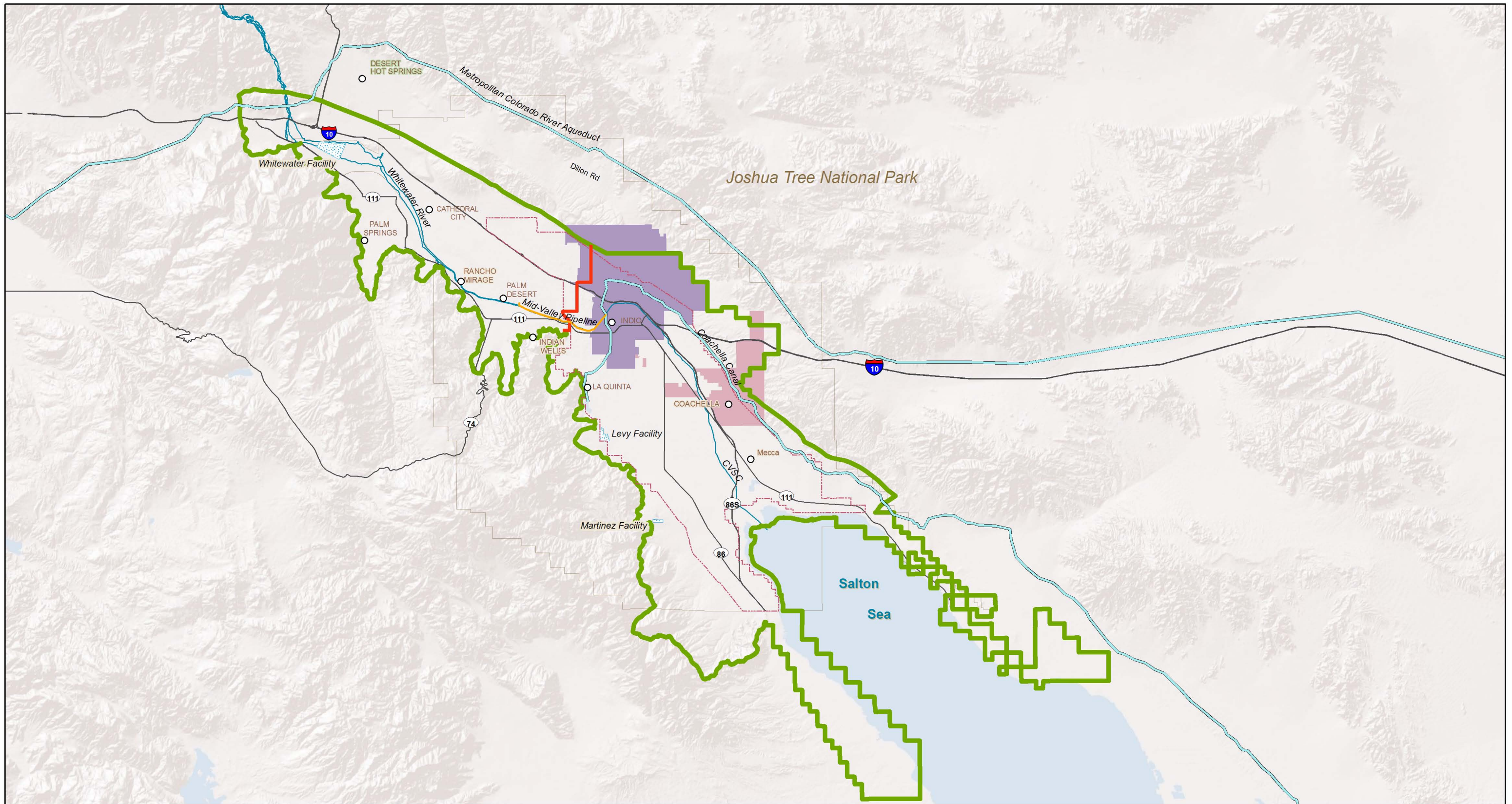
**2010 WMP Update
SPEIR Study Area**

Figure 2-1



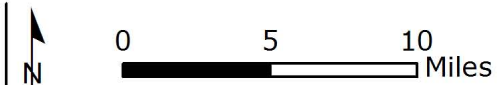
Source: DWR, ESRI, County of Riverside

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Key to Features

- | | | | |
|--------------------------|---------------------|-----------------------------------|----------------------------|
| Area of Benefit Boundary | Cities | Study Area | Improvement District No. 1 |
| Highways | Mid-Valley Pipeline | Spreading Facilities | City of Coachella |
| Aqueduct | CVWD | City of Indio Sphere of Influence | |



Document: \Coachella Valley WD\WMP Update\
14 Electronic Files - Modeling\GIS\Projects
Infrastructure.mxd

Date: February 2011 Source: DWR, ESRI, County of Riverside

Coachella Valley Setting

Figure 2-2



East of the Banning and San Andreas faults, which form a barrier to groundwater flow, the study area has been expanded since 2002 to add areas of potential development located along Dillon Road. This eastern area falls within the spheres of influence of the cities of Coachella and Indio.

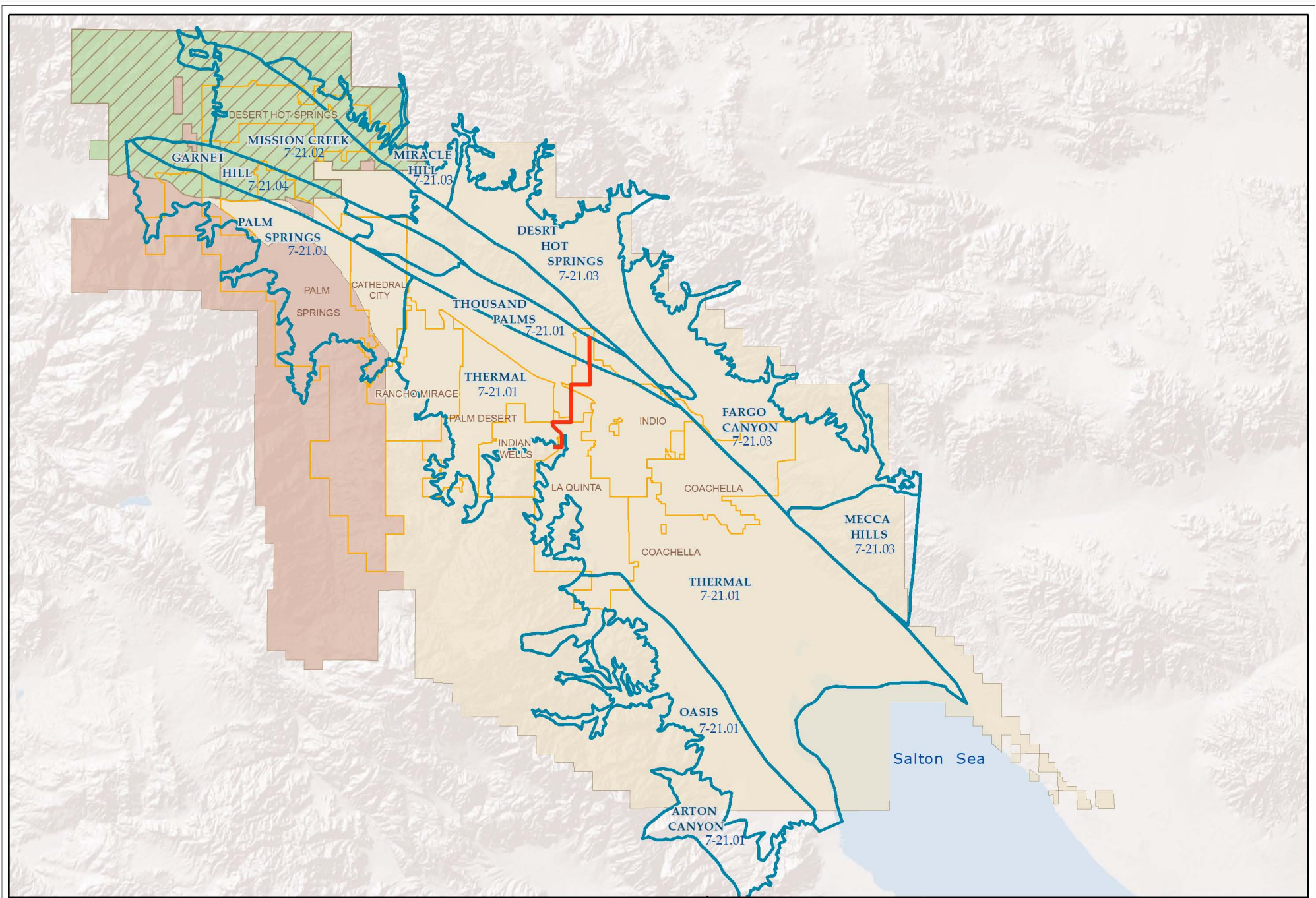
The Coachella Valley floor, which encompasses an area of 1.2 million acres, is surrounded by mountains on three sides. The San Bernardino, San Jacinto and Santa Rosa Mountains, which rise more than 10,000 feet above mean sea level (MSL), define the western and northern edges of the study area from Fingal Point (about 1 mile west of the Interstate 10-State Highway 111 interchange) to Travertine Rock (near State Highway 86 at the Riverside County-Imperial County line). To the northeast and east are the Little San Bernardino Mountains, which attain elevations of 5,500 feet above MSL.

For purposes of the 2002 WMP and 2010 WMP Update, the Coachella Valley is divided geographically into the West Valley and the East Valley (**Figure 2-1**). The West Valley lies northwest of a line generally extending from Washington Street and Point Happy northeasterly across the Valley floor to the Indio Hills near Jefferson Street. This line corresponds to the southerly boundary of the West Valley management area, which is the area of benefit for groundwater recharge in the West Valley. In character, the West Valley consists of urban/resort development that depends on groundwater and also vast open space areas. West Valley municipalities are the cities of Palm Springs, Cathedral City, Rancho Mirage, Palm Desert and Indian Wells, and the unincorporated communities of Whitewater, Garnet, Thousand Palms and Bermuda Dunes east of Washington.

The East Valley lies southeast of the line described above and consists chiefly of agricultural land irrigated with groundwater and Colorado River water imported via the Coachella Canal. The East Valley municipalities are the cities of La Quinta, Indio and Coachella, and the unincorporated communities of Oasis, Thermal and Mecca. The WMP study area also includes CVWD's domestic water service area along the western and eastern shores of the Salton Sea, an area which relies on groundwater pumped from the Whitewater River Subbasin.

Indian trust assets (ITA) in the study area are landholdings, wells and water rights of five tribes: Agua Caliente Band of Cahuilla Indians, Cabazon Band of Mission Indians, Torres Martinez Band of Desert Cahuilla Indians, Augustine Band of Cahuilla Mission Indians, and Twenty-nine Palms Band of Mission Indians. Federal law recognizes the Tribes' rights to water associated with the creation of their reservations. Tribal rights to groundwaters in the Coachella Valley are un-adjudicated.

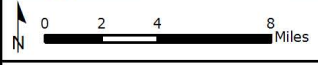
The service area boundaries of Valley water purveyors along with city boundaries are presented in **Figure 2-3**. The majority of water users in the Coachella Valley receive water service from six water purveyors: CVWD, DWA, Indio Water Authority (IWA), Coachella Water Authority (CWA) and Myoma Dunes Mutual Water Company. Several isolated communities are supplied by small private water companies.



Key to Features

- Area of Benefit Boundary
- Groundwater Subbasins
- Highways
- City Boundaries
- Groundwater Subbasins
- CVWD
- DWA
- MSWD
- MSWD/DWA

Source: DWR, USDA, ESRI, USGS, County of Riverside



Document: Coachella Valley WD (WMP Update) \06 Studies and Reports\06-2 Draft Report\ Subsequent PEIR\06-2-02 Draft Report\Figures\Fig2-3.mxd
 Date: February 2011

Coachella Valley City Boundaries, Water Agencies and Groundwater Basins

Figure 2-3



Wastewater service is provided by CVWD, DWA, the City of Palm Springs, Coachella Sanitary District (city of Coachella) and Valley Sanitary District (portions of Indio). Portions of the planning area not served by one of these agencies rely on individual septic systems for wastewater treatment and disposal.

The Coachella Valley's principal groundwater basin, the Whitewater River Subbasin, lies within a geologic trough created by the San Andreas fault system (**Figure 2-3**). The trough has filled with alluvial sediments eroded from the surrounding mountains and extends from Whitewater in the northwest to the Salton Sea in the southeast. The DWR Bulletin 118 refers to this subbasin as the Indio Subbasin (Basin No. 7-21.01) (DWR, 2003). The basin, which is bounded on the west by the San Jacinto and Santa Rosa Mountains and on the east by the San Andreas and Banning faults, has a storage capacity of approximately 30 million acre-feet¹ (AF) (DWR, 1964). The geology of the basin varies geographically, with coarse-grained sediments located in the vicinity of Palm Springs, gradually transitioning to fine-grained sediments near the Salton Sea. Water placed on the ground surface in the West Valley will percolate through the sand directly into the groundwater aquifer. In the East Valley, however, several impervious clay layers lie between the ground surface and the main groundwater aquifer. Water applied to the surface in the East Valley does not easily reach the East groundwater aquifers due to these impervious clay layers. The only natural outlet for groundwater in the Coachella Valley is through subsurface outflow to the Salton Sea or through collection in drains and transport to the Salton Sea via agricultural drains or the Coachella Valley Stormwater Channel (CVSC), a man-made extension of the Whitewater River.

Although the study area of the 2002 WMP and the 2010 WMP Update includes the Garnet Hill subbasin, this subbasin is evaluated in detail in the Mission Creek/Garnet Hill WMP, currently in preparation and is not included in the 2010 WMP Update. The 2010 WMP Update study area boundary also includes the southeast portion of the Desert Hot Springs Subbasin; however, little to no groundwater is produced from this subbasin. Therefore, it is not analyzed further with respect to groundwater resources or impacts.

2.4 PROJECT BACKGROUND

2.4.1 History of the Groundwater Basin

The Coachella Valley groundwater basin has been the principal source of water for the Valley since the early 1900s. As land was developed for agricultural and urban uses, demand on the groundwater basin increased. Groundwater levels in the East Valley began to decline and artesian wells ceased flowing. Recognizing the need for a supplemental water source, CVWD contracted with the federal government for Colorado River water from the All-American Canal and Coachella Canal in 1934. With the completion of the Coachella Canal in 1949, supplemental water deliveries began and the groundwater levels began to recover. Groundwater levels stabilized in the 1970s and early 1980s near historical levels. With increased growth, groundwater levels once again began to decline as demand exceeded the available supply. Groundwater levels have shown a steady decline since the mid 1980s.

¹ An acre-foot (AF) is the amount of water that would cover 1 acre of land (approximately the size of a football field), 1 foot deep, or about 326,000 gallons.

Section 2 – Introduction

Recognizing the need for additional water supplies, DWA and CVWD entered agreements with the State of California to purchase water from the SWP in 1962 and 1963, respectively. To avoid the estimated \$150 million cost to construct a pipeline to the Valley at that time, CVWD and DWA signed a water exchange agreement with The Metropolitan Water District of Southern California (Metropolitan) to deliver an equivalent amount of Colorado River water from Metropolitan's Colorado River Aqueduct (CRA) in exchange for the Valley's SWP water. Deliveries of SWP Exchange water to the Whitewater Recharge Facility commenced in 1973. Groundwater levels near the recharge facility showed a response to the recharge. However, in the central portions of the Valley, a steady decline continued. CVWD and DWA also signed an advanced delivery agreement with Metropolitan to store excess Colorado River water in the West Valley basin. This stored water represents a pre-delivery of the Valley's SWP supply. In the mid-1980s, Metropolitan stored up to 600,000 AF of water in the basin. Even with this additional water, groundwater levels in the West Valley declined.

2.4.2 Development of Objectives of the 2002 WMP

In 1994, CVWD with DWA commenced preparation of a water management plan to eliminate groundwater overdraft. Published in 2002, the goal of the WMP was to assure adequate quantities of safe, high-quality water at the lowest cost to Coachella Valley water users. To meet this goal, four objectives were identified:

1. Eliminate groundwater overdraft and its associated adverse impacts, including:
 - groundwater storage reductions,
 - declining groundwater levels,
 - land subsidence, and
 - water quality degradation;
2. Maximize conjunctive use opportunities;
3. Minimize adverse economic impacts to Coachella Valley water users; and
4. Minimize environmental impacts.

In 2002, CVWD, as Lead Agency under CEQA, certified the Program EIR for the Coachella Valley Water Management Plan and State Water Project Entitlement Transfer (MWH, 2002) and adopted a Mitigation Monitoring and Reporting Plan (MMRP) as conditions of approval of the project. The 2002 WMP evaluated in the Program EIR included a suite of water management approaches for the Valley's water resources. Plan elements included water conservation (urban agricultural, golf course and others); additional water supplies (Colorado River water, SWP water, and recycled water); source substitution (conversion of irrigators from groundwater to Canal water, recycled water); and groundwater recharge.

The Plan also included and evaluated the potential impacts on the SWP of water transfers to the study area. The District and Metropolitan considered the transfer of up to 100,000 acre-feet per year (AFY) of Metropolitan's SWP entitlement to CVWD and DWA, and the Plan also evaluated the effects of additional SWP entitlement transfers from other agencies (unidentified at that time) up to a total of 140,000 AFY of additional water, for recharge into the Coachella Valley Groundwater Basin.

The original and ongoing purpose of the project is to address the state of overdraft in the Coachella Valley groundwater basin, and thereby avoid significant adverse effects, including:

- **Groundwater storage reduction.** The total volume of groundwater available in the Coachella Valley will continue to decline.
- **Decline in groundwater levels.** A lower water table requires deeper wells, higher lift pumps, and increased energy to pump groundwater.
- **Land subsidence.** As groundwater is removed, aquifer soils begin to compress from the weight of the ground above. At the ground surface, subsidence causes fissures in the ground and can damage buildings, homes, sidewalks, streets, and buried pipelines and drains. Once subsidence has occurred, the pore spaces no longer exist, which decreases the amount of water the aquifer can store.
- **Degradation in groundwater quality.** With the reduction of water levels in the deeper aquifers, an upward water gradient is not maintained, and poor quality water from the shallow aquifers can leak downward and degrade the quality of the underlying potable aquifers. Continued decline in groundwater levels might also allow intrusion by hypersaline Salton Sea water into the adjacent freshwater aquifer.

2.4.3 Need for and Purpose of the 2010 WMP Update

Since the adoption of the 2002 WMP, the Coachella Valley has experienced a number of changes that affect water demands in the Valley for the foreseeable future:

- projected rapid population growth,
- changes in land use from agricultural or vacant to urban and corresponding changes in water demand in terms of both quantity and quality,
- development on Tribal lands and related water demands,
- projected urban development outside the 2002 WMP study area and corresponding increases in water demands, and
- economic uncertainty.

External factors also have affected or may affect Valley water supplies:

- Annual fluctuation in SWP supplies due to drought and environmental needs in the Sacramento-San Joaquin Delta (Delta).
- Recent environmental rulings that restrict the State's ability to move water through the Delta to the SWP decreasing supply reliability. The degree to which the long-term supply of the SWP will be affected is uncertain.
- Preparation of the Bay-Delta Conservation Plan (BDCP), which is intended to restore the Delta's ecosystem and improve water supply reliability.

Section 2 – Introduction

- The Quantification Settlement Agreement (QSA), adopted in 2003, which quantified water allocations to California Colorado River customers, has been overturned by the court, creating uncertainty in future Colorado River supplies.
- Climate change effects on the long term reliability of SWP and Colorado River supplies.

These changing conditions reinforce the need for a long-term WMP and for updating the adopted 2002 WMP. Consequently, the goals and objectives for the 2010 WMP Update reflect the profound changes in projected water demands and water supplies that have occurred in recent years.

The goal of the 2010 WMP Update therefore is to allow CVWD and other water agencies in the Valley to reliably meet current and future water demands in the study area in a cost effective and sustainable manner for the period 2010 to 2045. The programs and projects identified in the 2010 WMP Update fulfill this goal by meeting the following objectives:

- meet current and future water demands with a 10 percent supply buffer,
- reduce/eliminate long-term groundwater overdraft,
- manage and protect water quality,
- comply with state and federal laws and regulations,
- manage future costs, and
- minimize adverse environmental impacts.

The 2010 WMP Update differs from the 2002 WMP in that a 10 percent supply buffer is applied to the projected water demands while eliminating overdraft. This buffer compensates for uncertainties such as demands higher than forecast or supplies that cannot be implemented or do not deliver as much water as planned. The supply buffer would be established through a combination of additional supplies and water conservation measures.

2.4.4 Relationship of the Proposed Project to Other Plans, Programs and Actions

Since completion of the 2002 Plan, a number of related, compatible planning efforts have been initiated in the Valley that are considered in relation to the 2010 WMP Update. These are described below.

2.4.4.1 Integrated Regional Water Management Plan

In 2002, the California legislature enacted the Integrated Regional Water Management Planning Act (Division 6 Part 2.2 of the Water Code §10530 et seq.), amended in 2008. The act encourages local agencies to develop integrated regional strategies for management of water resources and to work cooperatively to manage their available local and imported water supplies to improve the quality, quantity and reliability of those supplies. DWR reviews all Integrated Regional Water Management Plans (IRWMPs). DWR also provides funding for the completion of IRWMPs through competitive planning and implementation grant programs.

In 2008, the Coachella Water Authority (CWA), CVWD, DWA, IWA, and MSWD formed the Coachella Valley Regional Water Management Group (CVRWMG) and signed a Memorandum of Understanding (MOU) for development of an IRWMP. In 2009, the CVRWMG established a planning region boundary and submitted an application for region acceptance to DWR, which was approved.

The CVRWMG completed an IRWMP in December 2010 (CVRWMG, 2010). The IRWMP qualifies the region for DWR grants under Proposition 84, Division 43: The Safe Drinking Water, Water Quality and Supply, Flood Control, River and Coastal Protection Bond Act of 2006, and Proposition 1E, Article 1.699: Disaster Preparedness and Flood Prevention Bond Act of 2006.

The 2010 WMP Update planning is a significant component of the IRWMP.

2.4.4.2 Urban Water Management Plan

In 1983, the California Legislature enacted the Urban Water Management Planning Act (Division 6 Part 2.6 of the Water Code §§10610-10656). This act requires that every urban water supplier that provides water to 3,000 or more customers, or more than 3,000 AF of water annually, should ensure the appropriate level of reliability in its water service sufficient to meet the needs of its various categories of customers during normal, dry, and multiple dry years. The act describes the contents of an Urban Water Management Plan (UWMP) as well as how urban water suppliers should adopt and implement such plans. Every five years (in years ending in five and zero), plans are prepared and adopted that define the supplier's current and future water use, sources of supply, source reliability, and existing conservation measures. DWR reviews plans for compliance and provides a report to the California legislature one year after plans are due to DWR.

In compliance with state requirements, CVWD prepared a 2005 UWMP for its service area (MWH, 2005). The plan documents CVWD's projected water demands and its plans for delivering water supplies to its CVWD water service area. The plan will be updated every 5 years or as required by DWR. The next deadline for UWMP submission is July 1, 2011. This deadline was extended by Senate Bill (SB) X7-7 (2009) which mandated the development and implementation of plans to decrease per capita urban water usage 20 percent by the year 2020.

The City of Coachella, DWA, and IWA each prepared and submitted a 2005 UWMP. MSWD also prepared a 2005 UWMP. Most of the MSWD service area is outside the WMP planning area but is within the Coachella Valley IRWMP region.

The information developed for the 2010 WMP Update will also be primary sources for preparation of CVWD's 2011 UWMP.

2.4.4.3 Mission Creek and Garnet Hill Water Management Plan

The Mission Creek and Garnet Hill subbasins of the Coachella Valley Groundwater Basin lie north of the Banning Fault and outside the 2010 WMP Update study area. CVWD and MSWD have public water systems that rely on groundwater from the Mission Creek and Garnet Hill

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Subbasins. CVWD and DWA have statutory authority to impose replenishment assessments on water produced from portions of the subbasins within their service areas that benefit from replenishment activities. MSWD was annexed to DWA in 1963. Since that time, land owners within MSWD's and DWA's boundaries have paid a SWP tax assessment for the capital and certain fixed operating costs of the SWP. As early as 1984, MSWD, CVWD and DWA held discussions about recharging the Mission Creek Subbasin and the facilities that would be required. In 2002, construction of spreading basins and a turnout from the Metropolitan CRA was completed and water deliveries began. CVWD and DWA executed the Mission Creek Groundwater Replenishment Agreement in April 2003, which also allowed for storage of advanced deliveries from Metropolitan.

In October 2003, MSWD filed action in the Superior Court of the State of California against DWA and CVWD seeking a writ of mandate, declaratory relief for prescriptive and appropriative water rights and declaratory and injunctive relief for a physical solution of a groundwater basin. MSWD sought adjudication of the subbasin and questioned the quality of the imported water. In December 2004, MSWD, DWA and CVWD reached a settlement agreement to work jointly to manage the subbasin. The agreement included provisions regarding payment of Replenishment Assessment Charges (RAC), shared costs for basin studies and development of a Water Management Plan for the Mission Creek and Garnet Hill Subbasins. Development of the Mission Springs and Garnet Hill Water Management Plan was initiated in August 2009 and is expected to be completed in late 2011.

The development of the Mission Creek/Garnet Hill WMP is being closely coordinated with the 2010 WMP Update to ensure consistent planning assumptions and analyses.

2.4.4.4 Multiple Species Habitat Conservation Plan

The purpose of the Coachella Valley Multiple Species Habitat Conservation Plan (CVMSHCP) is to provide a regional approach to balanced growth that will help conserve the Coachella Valley's natural heritage and allow for economic development by providing comprehensive compliance with federal and state laws to protect endangered species. The CVMSHCP permanently conserves 240,000 acres of open space and protects 27 threatened plant and animal species across the Coachella Valley. The Plan allows for more timely construction of infrastructure essential to improving the Coachella Valley. The CVMSHCP was prepared by the Coachella Valley Association of Governments (CVAG) and the Coachella Valley Mountains Conservancy (CVAG, 2008). Current signatories to the CVMSHCP include Riverside County; the cities of Cathedral City, Coachella, Indian Wells, Indio, La Quinta, Palm Desert, Palm Springs, and Rancho Mirage; CVWD and Imperial Irrigation District (IID). The Coachella Valley Conservation Commission (CVCC), a joint powers authority of elected representatives, oversees and manages the CVMSHCP. The CVCC has no regulatory powers and no land use authority; its primary purpose is to buy land from willing sellers in the conservation areas and to manage that land. The CVMSHCP will provide 75 years of habitat mitigation for CVWD activities. For participation in the CVMSHCP, CVWD will conserve lands in areas designated for conservation, and will also create additional habitat acreage in the future under ongoing plans.

Mitigation requirements for the creation of replacement habitat in the 2002 WMP PEIR have been incorporated into the CVMSHCP. The conservation areas defined in the CVMSHCP have been considered in developing the growth forecasts and water demand projections for the planning area of the 2010 WMP Update. In addition, the habitat replacement commitments have been included in the implementation program for the 2010 WMP Update.

2.5 SUBSEQUENT PROGRAM EIR (SPEIR)

In accordance with Section 15121 of the State CEQA Guidelines, as currently amended, the intended use of this SPEIR is to serve as an informational document that “...will inform public agency decision-makers and the public generally of the significant environmental effects of a project, identify possible ways to minimize the significant effects, and describe reasonable alternatives to the project.” The SPEIR also provides decision-makers and the public an opportunity to understand the proposed sequence for implementation of CVWD actions.

2.5.1 Definition of a Program EIR

Like the 2002 WMP PEIR, the 2010 WMP Update SPEIR analyzes the District’s proposed actions under CEQA at a program level. The proposed 2010 WMP Update describes a set of policies and actions to be implemented by the District throughout the Coachella Valley over a 35-year period. Section 15168 of the State CEQA Guidelines states that:

“a program EIR is an EIR which may be prepared on a series of actions that can be characterized as one large project and are related either:

- (1) Geographically,
- (2) As logical parts in the chain of contemplated actions,
- (3) In connection with issuance of rules, regulations, plans, or other general criteria to govern the conduct of a continuing program, or
- (4) As individual activities carried out under the same authorizing statutory or regulatory authority and having generally similar environmental effects which can be mitigated in similar ways.”

This SPEIR has been prepared as a Program EIR for the following reasons:

- The 2010 WMP Update will be implemented over a 35-year period.
- Specific facility locations have not yet been identified. Construction details and operation plans have not been developed. Therefore, it would be speculative to attempt to analyze site-specific project impacts at this time.
- The Proposed Project will be implemented over a large geographic area, the Coachella Valley study area.

Once the 2010 WMP Update is adopted, second-tier or site-specific environmental documents will be prepared as appropriate to analyze issues specific to the elements of the Proposed Project being implemented and the site(s) chosen for the actions. For those project elements for which

Section 2 – Introduction

CVWD does not have adequate site-specific information, additional environmental review as required by CEQA will be prepared at the appropriate time.

2.5.2 Applicability of Subsequent Program EIR

Concerning subsequent CEQA compliance for a project for which an EIR has previously been prepared, CEQA Guidelines state (Section 15162, Subsequent EIRs and Negative Declarations):

- a) When an EIR has been certified or a negative declaration adopted for a project, no subsequent EIR shall be prepared for that project unless the lead agency determines, on the basis of substantial evidence in the light of the whole record, one or more of the following:
 - (1) Substantial changes are proposed in the project which will require major revisions of the previous EIR ... due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; or
 - (2) Substantial changes occur with respect to the circumstances under which the project is undertaken which will require major revisions to the EIR ... due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; or
 - (3) New information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified as complete ..., shows any of the following:
 - (A) The project will have one or more significant effects not discussed in the previous EIR ...;
 - (B) Significant effects previously examined will be substantially more severe than shown in the previous EIR;
 - (C) Mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measure or alternative; or
 - (D) Mitigation measures or alternatives which are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the mitigation measure or alternative.

The 2002 PEIR has been reviewed with respect to the 2002 WMP and the 2010 WMP Update. The results of this review indicate that preparation of a SPEIR is appropriate because of new environmental information, significant effects identified previously that would be more severe, new significant effects, and new mitigation measures that may reduce previously identified significant effects.

2.6 INTENDED USES OF THE SPEIR - ACTIONS THAT WILL BE TAKEN BASED ON THIS DOCUMENT

State CEQA Guidelines Section 15124(d) requires a statement briefly describing the intended uses of the SPEIR.

2.6.1 Agencies Expected to Use the SPEIR in Their Decision Making

Agencies expected to use the SPEIR in their decision making are:

CVWD, the Lead Agency. CVWD, as Lead Agency with principal responsibility for carrying out the majority of projects identified in the 2010 WMP Update, will use the SPEIR as a basis for Board of Directors decisions on adoption of the Plan, adoption of mitigation measures for avoiding or minimizing potentially significant Plan impacts and for implementation of future WMP elements.

DWA, a Responsible Agency. DWA is a responsible agency for the Proposed Project since DWA would be involved with CVWD in the implementation of water transfers or leases, recycled water programs and conservation.

DWR, a Responsible Agency. DWR, as the administrator of the SWP, has the responsibility to approve transfers between SWP contractors. DWR approval would be required for future SWP entitlement transfers or leases.

2.6.2 List of Potential Permits and Other Approvals Required to Implement the Project

This SPEIR evaluates the aggregate impacts of the 2010 WMP Update elements. Most elements of the Plan evaluated on a program level in this SPEIR will require additional project-level CEQA analysis prior to implementation. The SPEIR also serves as the foundation for these future site-specific, “project level” CEQA documents, which are considered to “tier off” the SPEIR. **Table 2-1** presents anticipated environmental compliance, permits and approvals associated with each element of the Proposed Project.

Section 15385 of the CEQA Guidelines defines “tiering” as:

“...the coverage of general matters in broader EIRs (such as on general plans or policy statements) with subsequent narrower EIRs or ultimately site-specific EIRs incorporating by reference the general discussions and concentrating solely on the issues specific to the EIR subsequently prepared. Tiering is appropriate when the sequence of EIRs is:

- (a) From a general plan, policy, or program EIR to a program, plan, or policy EIR of lesser scope or to a site-specific EIR;
- (b) From an EIR on a specific action at an early stage to a subsequent EIR or a supplement to an EIR at a later stage. Tiering in such cases is appropriate when it helps the Lead Agency to focus on the issues which are ripe for decision and exclude from consideration issues already decided or not yet ripe.”

Future CEQA documents (Negative Declarations, Mitigated Negative Declarations, or EIRs) would incorporate this SPEIR by reference and would focus on those environmental issues not specifically evaluated herein. These issues are expected to be site-specific (e.g., biological resources, cultural resources, hazards, visual and traffic impacts) since sites for 2010 WMP Update elements have not been identified.

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**Table 2-1
Environmental Compliance, Permits and Approvals for Proposed Project Elements**

Proposed Project Element	Environmental Compliance	Potential Permits & Approvals
Expand agricultural, golf course and urban water conservation programs	<ul style="list-style-type: none"> This SPEIR provides program-level CEQA analysis. Project level CEQA analysis is not anticipated to be required. 	None
Canal Water Loss Recovery	<ul style="list-style-type: none"> This WMP element requires a feasibility study. Project-level (site-specific) CEQA analysis will be required if the project proceeds. 	<ul style="list-style-type: none"> Easement, land purchase, and/or ROW acquisition SWRCB NPDES General Permit for Stormwater Discharges Associated with Construction Activity
Increased use of recycled water – West Valley, East Valley existing flows; East Valley incremental flows, Fargo Canyon flows	<ul style="list-style-type: none"> This SPEIR provides program-level CEQA analysis for the development and use of recycled water. Project-level (site-specific) CEQA analysis for facilities construction will be provided in subsequent environmental review documents once sites are selected. 	<ul style="list-style-type: none"> Easement and/or ROW acquisition Regional Board WDR for recycled water use SWRCB NPDES General Permit for Stormwater Discharges Associated with Construction Activity Title 22 Report Compliance with SCAQMD dust rules
Stormwater Capture	<ul style="list-style-type: none"> This WMP element requires a feasibility study Project-level (site specific) CEQA analysis will be required if the project proceeds 	<ul style="list-style-type: none"> Easement, land purchase, and/or ROW acquisition SWRCB NPDES General Permit for Stormwater Discharges Associated with Construction Activity
Acquire additional Exchange Water supplies - leases, transfers, or purchases	<ul style="list-style-type: none"> This SPEIR provides program-level CEQA analysis Project-level (site specific) CEQA analysis will be required (transferor-transferee area impacts) 	<ul style="list-style-type: none"> DWR approval of future SWP transfer agreement Contract with transferor/lessor

Table 2-1 (Continued)
Environmental Compliance, Permits and Approvals for Proposed Project Elements

Proposed Project Element	Environmental Compliance	Potential Permits & Approvals
Construct agricultural drainage desalter	<ul style="list-style-type: none"> • This SPEIR provides program-level CEQA analysis for this use of agricultural drainage water • Project-level (site-specific) CEQA analysis for facilities construction will be provided in subsequent environmental review documents once project proceeds and sites are selected • Project-level (site-specific) NEPA compliance will be provided if federal approval is required. 	<ul style="list-style-type: none"> • Regional Board NPDES Permit • SWRCB action on appropriation application • Reclamation approval for conveying non-federal water in distribution system • USFWS/CDFG FESA/CESA compliance (included in CVMSHCP) • Easement and/or ROW acquisition • SWRCB NPDES General Permit for Stormwater Discharges Associated with Construction Activity
Obtain desalinated ocean water; purchase capacity in future plant	<ul style="list-style-type: none"> • CVWD is a responsible agency for a future ocean water desalination plant EIR • CVWD would be responsible for a pro rata share of mitigation costs 	<p>Numerous permits to be obtained by lead agency, e.g.</p> <ul style="list-style-type: none"> • California Coastal Commission Coastal Development Permit • U.S. Army Corps of Engineers CWA Section 404 Permit • Regional Board NPDES Permit for brine discharge • ROW, land acquisition • SWRCB NPDES General Permit for Stormwater Discharges Associated with Construction Activity
Whitewater Recharge Facility—increase recharge with unused desalinated water, SWP water from QSA and additional transfers	<ul style="list-style-type: none"> • This SPEIR provides program-level CEQA analysis • Project level CEQA analysis is not anticipated to be required since no construction would be required 	None

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**Table 2-1 (Continued)
Environmental Compliance, Permits and Approvals for Proposed Project Elements**

Proposed Project Element	Environmental Compliance	Potential Permits & Approvals
Thomas E. Levy Groundwater Replenishment Facility	<ul style="list-style-type: none"> • This SPEIR provides program-level CEQA analysis • Site specific CEQA analysis of second pumping station and pipeline from Lake Cahuilla, if required 	<ul style="list-style-type: none"> • ROW/Easement/Land Acquisition • City encroachment permit(s) • SWRCB NPDES General Permit for Stormwater Discharges Associated with Construction Activity
Martinez Canyon Recharge Facility	<ul style="list-style-type: none"> • This SPEIR provides program-level CEQA analysis • Project-level (site specific) CEQA analysis will be required • NEPA analysis also, if on federal land 	<ul style="list-style-type: none"> • ROW/Easement/Land Acquisition • CVMSHCP coordination • SCAQMD dust control plan • Corps of Engineers CWA Section 404 • CDFG Streambed Alteration Agreement • SWRCB NPDES General Permit for Stormwater Discharges Associated with Construction Activity
Complete the MVP-convert West Valley golf courses to Colorado River water	<ul style="list-style-type: none"> • This SPEIR provides program-level CEQA analysis • Project-level (site specific) CEQA analysis will be required 	<ul style="list-style-type: none"> • Easement and/or ROW acquisition • SWRCB NPDES General Permit for Stormwater Discharges Associated with Construction Activity • Regional Board WDR • DPH Title 22 report
Convert existing East Valley golf courses and agricultural uses to Canal water; convert Oasis area agricultural users inside ID-1 to Canal water	<ul style="list-style-type: none"> • This SPEIR provides program-level CEQA analysis for these uses of Canal water • Project-level (site specific) CEQA analysis will be required 	<ul style="list-style-type: none"> • Easement and/or ROW acquisition • USFWS/CDFG FESA/CESA compliance (included in CVMSHCP) • SWRCB NPDES General Permit for Stormwater Discharges Associated with Construction Activity

Table 2-1 (Continued)
Environmental Compliance, Permits and Approvals for Proposed Project Elements

Proposed Project Element	Environmental Compliance	Potential Permits & Approvals
Evaluate Canal water treatment facilities and convert East Valley ID-1 urban users to treated Canal water	<ul style="list-style-type: none"> • This SPEIR provides program-level CEQA analysis CEQA analysis will be provided in for this use of Canal water • Project-level (site-specific) CEQA analysis for facilities construction will be provided in subsequent environmental review documents once sites are selected 	<ul style="list-style-type: none"> • DPH water supply permit amendment • Easement and/or ROW acquisition • USFWS/CDFG FESA/CESA compliance (included in CVMSHCP) • SWRCB NPDES General Permit for Stormwater Discharges Associated with Construction Activity

Abbreviations and Acronyms

CDFG = California Department of Fish and Game; CESA = California Endangered Species Act; CVMSHCP = Coachella Valley Multiple Species Conservation Plan; CWA = Clean Water Act; DPH = California Department of Public Health; FESA = Federal Endangered Species Act; MVP = Mid-Valley Pipeline; NEPA = National Environmental Policy Act; NPDES = National Pollution Discharge Elimination System; QSA = Quantification Settlement Agreement; ROW = right-of-way; SCAQMD = South Coast Air Quality Management District; SWRCB = State Water Resources Control Board; USFWS = United States Fish and Wildlife Service; WDR = Waste Discharge Requirements

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Since 2002, CEQA compliance for at least 35 CVWD projects has tiered off the 2002 WMP PEIR: three major transmission mains, five reservoirs, four SWP water transfer projects, the Dike 4 Groundwater Recharge Facility (Levy Facility), the Mid-Valley Pipeline (MVP) Phase I Project, and 21 new wells.

2.7 AREAS OF KNOWN CONTROVERSY AND ISSUES TO BE RESOLVED

CEQA Guidelines Section 15123 requires that the SPEIR contain a discussion of areas of known controversy and issues to be resolved.

2.7.1 Areas of Known Controversy

The following issues of controversy have been identified in the course of preparation of the Draft 2010 WMP Update and Draft SPEIR. Other sources of information are comments on the Notice of Preparation (NOP), input at stakeholder meetings, and meetings with the Coachella Valley Tribes and the public. Areas of known controversy are:

- potential impacts on Coachella Valley groundwater quality from additional recharge with Colorado River water,
- potential impacts on Indian Trust Assets (ITA), including water rights from additional recharge with Colorado River water, and
- potential increases in selenium concentrations in the Coachella Valley drains.

These were also the identified issues of controversy for the 2002 WMP and PEIR.

2.7.2 Issues to be Resolved

Issues to be resolved are not necessarily issues of controversy, rather information not currently available. Principal issues to be resolved are:

- specific locations and characteristics of facilities proposed in the 2010 WMP Update and impacts of their construction and operation,
- need for and capacity of treatment of imported water and drain water for use in the Coachella Valley compared to other water sources, such as transfers,
- methods for disposal of brine from desalination facilities, and
- minimum drain and CVSC flows needed to maintain existing habitat and to meet habitat commitments (see **Section 5 Surface Water Resources** and **Section 7 Biological Resources**).

2.8 ORGANIZATION OF AND APPROACH TO THE SPEIR

The SPEIR is organized to comply with CEQA, as currently amended, to document project development and element selection, to analyze the impacts of the Proposed Project, and to identify mitigation for significant effects.

CEQA normally considers the baseline condition for comparison of project impacts as the environmental setting at the time the NOP is issued (State CEQA Guidelines Section 15125). By using the word “normally,” however, the California Resources Agency has implicitly recognized that at least in some circumstances, a “past” or “future” baseline might be appropriate (see also *Save Our Peninsula Committee v. Monterey County Board of Supervisors* (2001) 87 Cal. App. 4th 99).

The SPEIR NOP was issued in September 2007. Although the environmental setting is generally based on conditions existing when the NOP was issued, the environmental setting for each resource topic in the SPEIR is described based on 2009 conditions for reasons described below.

Judge Wanger’s ruling was the main reason that 2009 was used instead of 2007 as a baseline for the WMP and SPEIR. In late 2007, Judge Wanger made a ruling to protect the threatened Delta smelt that curtailed water deliveries by the SWP and federal Central Valley Project. The ruling was made to protect the threatened Delta smelt from export pumping operations until new federal biological permits were obtained. To reflect this changed reality, CVWD was required to re-evaluate the reliability of future SWP supplies and thus reconceive the preferred alternative in the WMP. As a result, the WMP and SPEIR schedule was severely impacted.

With the exception of future SWP reliability, other aspects of the environment changed little in the intervening two years. Riverside County and Coachella Valley city population and land use projections, which determined the projected need for water supply and wastewater management facilities, were developed in 2007 and did not change since that time. Actual growth in the study area between 2007 and 2009 was minor because of the economic downturn, so changes in land use, traffic, demands for public utilities and services, and impacts on biological resources and cultural resources therefore also were minor. Long-term water supply reliability estimates for the Colorado River did not change significantly between 2007 and 2009. Actual SWP reliability decreased slightly between 2007 and 2009 due to Delta environmental issues; Colorado River deliveries increased due to ongoing implementation of the QSA. No new related projects with potential cumulative impacts appeared between 2007 and 2009. Total Coachella Valley flows to the Salton Sea decreased from 85,600 AFY in 2007 to 70,200 AFY in 2009. Groundwater storage declined by 146,000 AFY in 2007 and 53,000 AFY in 2009. There are several reasons for this difference:

- less SWP water recharge occurred in 2007 (reduced deliveries in dry year) than in 2009,
- more Canal water recharge with the completion of the Thomas E. Levy Groundwater Replenishment Facility,
- reduced groundwater pumping for urban and fish farm use,
- increased Canal water availability due to ongoing QSA implementation,

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- more return flows from Canal water use for agriculture and other uses, and
- increased water conservation.

These elements do not have steady trajectories, but rather vary each year with meteorology, conservation, and the economy. These conditions do not increase or decrease potential impacts of the Proposed Project.

The objective of the Proposed Project is to correct an on-going environmental problem. Because the effects of WMP implementation will occur gradually over time, the Proposed Project's effects are discussed over the years 2009 through 2045. This approach allows greater disclosure of potential project effects to decision-makers, to better compare the impacts of approving the Proposed Project to a long-term "baseline," and the impacts of taking no action. No Action in this case is implementation of the adopted 2002 WMP without modification under current conditions. This approach exceeds the requirements of CEQA by providing reviewing agencies and the public with additional information comparing project-related impacts.

Significance thresholds, criteria used as a basis for deciding whether an identified effect is potentially significant, less than significant or not significant, applied in the SPEIR are identified as numeric where established legislative or regulatory standards exist for environmental protection (e.g., noise, air quality, and water quality), or qualitative (based on Appendix G of the State CEQA Guidelines (California Resources Agency, 2010), or reflect Lead Agency engineering and environmental judgment specific to the Proposed Project and study area.

The NOP for the SPEIR was filed with the State Clearinghouse in September, 2007 and distributed to public agencies and the interested public. The CVWD received seven letters responding to the NOP.

The Scoping Meeting for the SPEIR was held on September 27, 2007 at CVWD headquarters in Coachella. There were 17 attendees, plus District staff and consultants. Oral comments made at the meeting are presented in **Appendix C, Table C-2**.

In addition, CVWD widely noticed and held seven public meetings on the 2010 WMP Update and SPEIR to which federal state, regional and local agencies, non-governmental agencies and the general public were invited. CVWD also held ten monthly meetings with the Coachella Valley Tribes and the U.S. Bureau of Indian Affairs (BIA) to discuss issues raised in the responses to the NOP.

2.9 CUSTODIAN AND LOCATION OF RECORDS

The 2002 WMP, the 2002 PEIR for the Water Management Plan and State Water Project Entitlement Transfer, the draft 2010 WMP Update and other related documents used in the preparation of this SPEIR can be viewed during normal working hours at CVWD offices located at 85-995 Avenue 52, Coachella, California 92236. The Custodian of Records is Ms. Julia Fernandez, District Secretary.

Section 3

Project Description

The 2010 Water Management Plan (WMP) Update considers a suite of water management approaches to meet future water demands while controlling groundwater overdraft. The principal components of the WMP are water conservation and water supply development to meet water demand, coupled with groundwater recharge and source substitution to reduce groundwater overdraft. Water quality improvements incorporated into the Plan will ensure that the water delivered for urban uses meets State and Federal drinking water requirements.

Because of uncertainties in water supplies and demands, the 2010 WMP Update focuses on balance and flexibility in implementation of Plan elements. The recommended Plan avoids excessive reliance on any one new supply source or management approach, while meeting projected water demands with a 10 percent supply buffer, achieved by establishing higher planning targets for water conservation, desalinated drain water, recycled water and water transfers and identifying the actions to implement these higher targets.

State California Environmental Quality Act (CEQA) Guidelines state (Section 15124) that a project description shall contain the location and boundaries of the Proposed Project on a local and a regional map; a statement of project objectives; a statement describing the intended uses of the environmental impact report (EIR), and a general description of the project's technical, economic and environmental characteristics. The Proposed Project location, objectives and intended uses of the Subsequent Program EIR (SPEIR) are presented in **Section 2 - Introduction**. **Section 3** describes the Proposed Project's characteristics, and also the information used to develop the Proposed Project elements under current and project conditions whose changes require an update to the adopted 2002 WMP to meet project objectives.

3.1 DEVELOPMENT OF THE 2010 WMP UPDATE – WATER DEMAND AND SUPPLY CONDITIONS

The 2010 WMP Update uses a revised set of growth projections, water demands and supply estimates as its basis. This section summarizes these revised forecasts and estimates.

3.1.1 Growth and Land Use Projections

Adoption of new Coachella Valley growth forecasts by the Coachella Valley Association of Governments (CVAG) and Riverside County in 2007, subsequently adopted without change by the Southern California Association of Governments (SCAG) in 2008, greatly changed projected growth for the WMP planning area and extended the forecasts through 2035. To maintain the 35-year planning period for the 2010 WMP Update, Coachella Valley Water District (CVWD) extended the 2008 SCAG growth forecasts to 2045 through straight line extrapolation. Compared to the growth forecasts in the 2002 WMP, the current forecast shows the study area population to be 70 percent higher in 2035, reaching over 1 million by 2040. **Figure 3-1** shows the current population forecasts in comparison to the population used in the 2002 WMP.

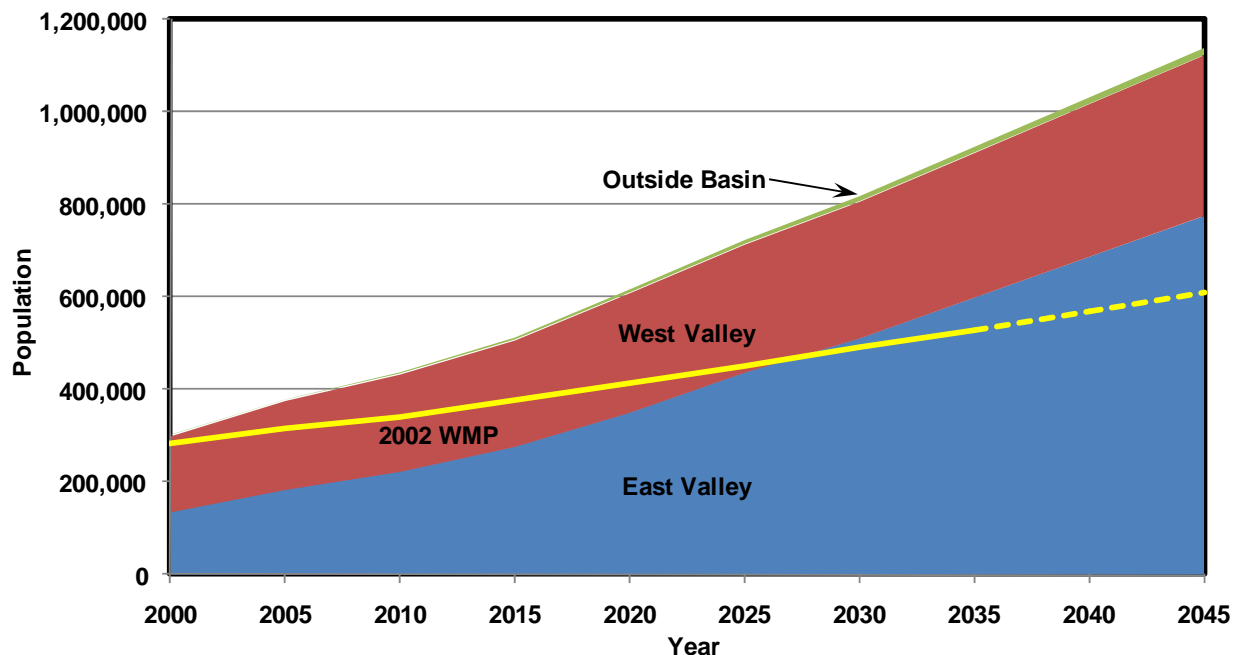


Figure 3-1
Comparison of 2008 and 2002 Population Projections for the Coachella Valley

Riverside County embarked on major revisions to the County's General Plan and General Plan EIR (Riverside County, 2009). In the absence of these completed documents, CVWD has been required to make assumptions in the 2010 WMP Update regarding the effects of projected growth on land use, particularly the conversion of agricultural land to urban use in the East Valley. Consequently, the 2010 WMP Update projects a reduction in agricultural water demand combined with a significant increase in urban water demand. Increased urbanization also increases domestic wastewater generation in the East Valley.

Expansion of the WMP planning area to include land annexed or within the spheres of influence of the cities of Coachella and Indio also adds to the potential for growth in the Valley. Although the 2007 Riverside County/CVAG growth forecasts did not anticipate significant growth in this area, the potential for development could result in additional population growth and water demand during the 2010 WMP Update planning period.

While there has been an economic slowdown over the past two years, these projected population and land use changes are anticipated to be fulfilled in the long term, but at a slower pace.

3.1.2 Water Demand Projections

Future water demand for the Valley is presented in **Table 3-1** and on **Figure 3-2**. Agricultural water demands are projected to decrease, while urban demands will increase in response to anticipated population growth.

**Table 3-1
Baseline Water Demand Projections for the Coachella Valley**

Component	2005 ¹	2010	2015	2020	2025	2030	2035	2040	2045
Agricultural									
Crop Irrigation	283,100	317,400	302,900	282,300	258,500	238,100	213,900	189,700	166,100
Total Agricultural Demand	283,100	317,400	302,900	282,300	258,500	238,100	213,900	189,700	166,100
Urban									
Municipal	205,400	234,600	260,900	298,100	346,600	390,000	438,500	487,300	537,000
Industrial	1,700	2,300	2,300	2,300	2,300	2,300	2,300	2,300	2,300
Total Urban Demand	207,100	236,900	263,200	300,400	348,900	392,300	440,800	489,600	539,300
Golf Course Demand	109,800	113,800	118,800	125,900	134,600	142,400	151,900	160,700	169,500
Fish Farms and Duck Clubs									
Fish Farms	23,500	8,500	8,500	8,500	8,500	8,500	8,500	8,500	8,500
Duck Clubs	4,600	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000
Total Fish Farms and Duck Clubs	28,100	10,500	10,500	10,500	10,500	10,500	10,500	10,500	10,500
TOTAL DEMAND	628,100	678,600	695,400	719,100	752,500	783,300	817,100	850,500	885,400

1. Demands shown are actual demands for 2005 excluding the extra-ordinary agricultural conservation of 18,491 AFY. For demand projection purposes, the 2005 actual demands were adjusted upwards for wet weather effect by a factor of 8.7%.

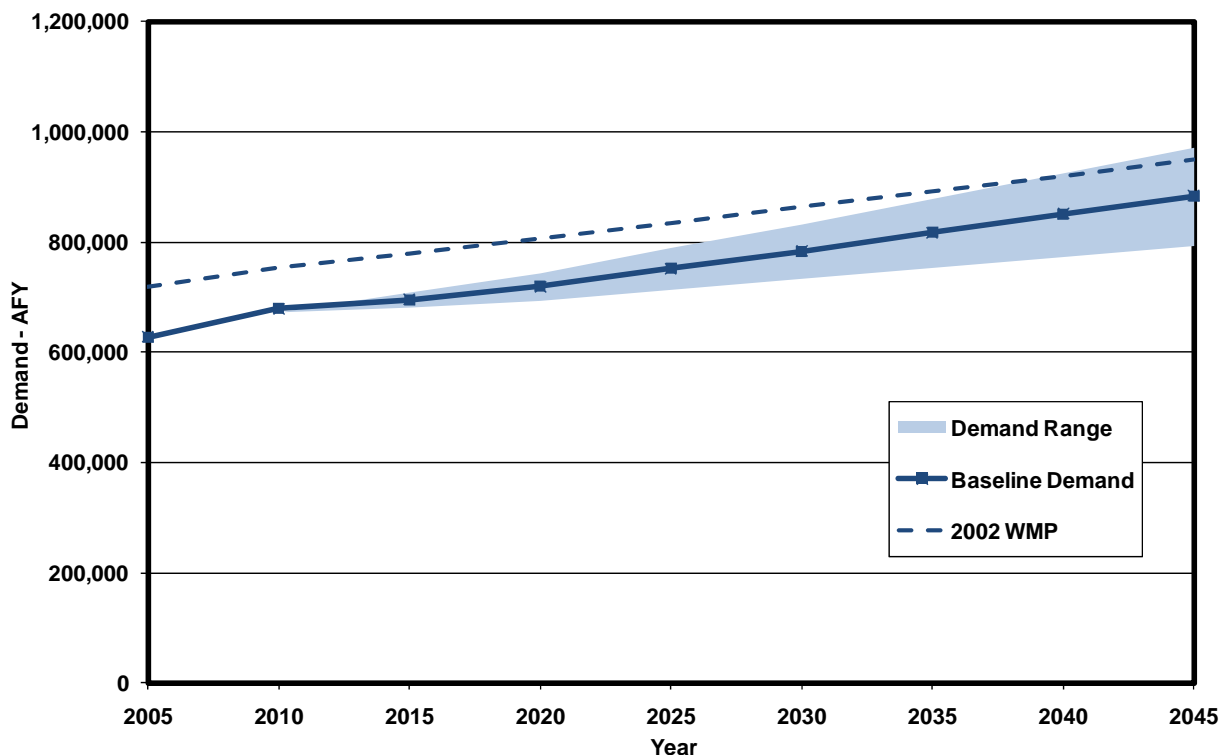


Figure 3-2
Projected Water Demands in the Study Area

Factoring potential variations in future land use and growth forecasts into these demand projections, water demands in 2045 could range from 793,600 acre-feet per year (AFY) to 971,500 AFY with a mid-range planning value of 885,400 AFY. These projections incorporate reduced outdoor water use for new development as required by the CVWD-CVAG water efficient Landscape Ordinance (2009). In the absence of this ordinance and other on-going conservation measures, water demands in the Valley would be nearly 1,040,000 AFY by 2045.

As illustrated in **Figure 3-2**, projected overall water demand by 2045 in the 2010 WMP Update is expected to be similar to the total demand projected in the 2002 WMP; however, the proportional use by user type has changed substantially as shown in **Table 3-1**. The projected total demand by all sectors is considered to be baseline demand. The demand range reflects the uncertainty of future demand.

3.1.3 Water Supply Reliability

In addition to profound changes in projected land uses and water demands, the 2010 WMP Update addresses the future availability of the Valley’s imported water supplies. The Coachella Valley obtains imported water from two sources – Colorado River water delivered via the Coachella Canal (Canal water) and State Water Project (SWP) water from northern California delivered via exchange agreement through the Metropolitan Water District of Southern California

(Metropolitan) Colorado River Aqueduct (CRA). The Coachella Canal is a branch of the All-American Canal that brings Colorado River water north into the Imperial and Coachella valleys.

3.1.3.1 Coachella Canal

Since adoption of the 2002 WMP, the Canal water supply to the Coachella Valley has been augmented with the signing of the Quantification Settlement Agreement (QSA) in 2003. The QSA quantifies the Colorado River allocations of California's agricultural water contractors for the next 75 years and provides for the transfer of water between agencies. Under the QSA, CVWD has a base allotment of 330,000 AFY. In accordance with the QSA, CVWD has entered into water transfer agreements with The Metropolitan Water District of Southern California (Metropolitan) and Imperial Irrigation District (IID) that increase CVWD supplies by an additional 129,000 AFY. CVWD's allocation will increase to 459,000 AFY of Colorado River water by 2026 and remain at that level for the 75-year term of the QSA.

The Valley's Canal water supply faces issues that could impact long-term reliability: the extended Colorado River Basin drought, long-term Colorado River supply availability, the 2007 Colorado River shortage sharing agreement, water requirements for endangered species and habitat protection, climate change and lawsuits challenging the validity of the QSA. A detailed discussion of these factors is presented in Section 4.7.1 of the 2010 WMP Update.

The Seven Party Agreement of 1931 allocated California apportionment of Colorado River water among Palo Verde Irrigation District (PVID), IID, CVWD and Metropolitan. PVID has priorities 1 and 3(b); the Yuma Project (Reservation Division) has second priority; and IID, CVWD and land to be served by the All American Canal off the river share priority 3(a). Metropolitan has priority 4. Because of both California's and CVWD's high priority positions regarding Colorado River allocations, the Canal water supply to the Coachella Valley is expected to be relatively reliable.

In January 2010, the QSA was rendered invalid in a state court decision (Superior Court of California, 2010); CVWD and the other parties appealed the judgment. In March 2010 the California Court of Appeal, Third Appellate District, issued a temporary stay of the judgment pending further briefing. An appellate decision is expected in early 2011. Since the effects of the QSA litigation and other factors are uncertain, the 2010 WMP Update considers two Canal water supply scenarios. The first assumes delivery pursuant to the QSA while the second assumes use is limited to the historical delivery and use prior to the QSA.

3.1.3.2 State Water Project

The SWP, managed by the California Department of Water Resources (DWR), has contracts to deliver 4.172 million AFY to 29 contracting agencies. The Desert Water Agency (DWA) and CVWD initially contracted for water from the SWP in 1962 and 1963, respectively. CVWD's original SWP water allocation (Table A Amount) was 23,100 and DWA's original SWP Table A Amount was 38,100 AFY, for a combined Table A Amount of 61,200 AFY. 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 of protected species in the Sacramento-San Joaquin Delta. The

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available supply is then allocated according to each SWP contractor's Table A Amount. Between 1988 and 2010, the allocation has averaged 77 percent of entitlement.

There is no physical conveyance for SWP water into the Coachella Valley. CVWD and DWA Table A water is exchanged with the Metropolitan for a like amount of water from Metropolitan's Colorado River Aqueduct (CRA) which extends from Lake Havasu through the Coachella Valley to Metropolitan's Lake Mathews. This document refers to this exchanged SWP water as SWP Exchange water. SWP Exchange water has been used to recharge the Whitewater River subbasin at the Whitewater River Recharge Facility since 1973.

DWR administers the SWP Turnback Pool Program in accordance with Article 56 of the SWP contracts. Under Article 56, a SWP contractor may sell back Table A water that it will not use; this water may then be purchased by other SWP contractors who have submitted a request. This supply is not available in all years and is therefore an "interruptible" supply.

Article 21 of the long term SWP contracts allows DWR to sell water to contractors that is surplus to the Table A needs of other contractors. This supply is not available in all years and is therefore an "interruptible" supply. Contractors' requests for Article 21 water are separate from requests for Table A water. DWR notifies those contractors by mail when Article 21 water is available.

DWR issues the SWP Delivery Reliability Report (DRR) every two years, with the 2009 final version currently available (DWR, 2010). This report accounts for impacts to water delivery reliability associated with climate change and recent federal litigation. Based on information from the final 2009 DRR, the average reliability of SWP Table A deliveries through 2029 was projected to be 60 percent of Table A Amounts after taking into consideration the effects of climate change. This allocation percentage was based on computer modeling of the State's watersheds, an expected range of Delta export controls to protect the Delta smelt, the current condition of the river and reservoir systems, and a climate change scenario.

To account for additional uncertainties in SWP future reliability, the 2010 WMP Update further reduces the average reliability factor for anticipated future conditions based on the following factors:

- uncertainty in modeling restrictions associated with biological opinions,
- risk of levee failure in the Delta,
- additional pumping restrictions resulting from biological opinions on new species or revisions to existing biological opinions, and
- impacts associated with litigation such as the California Endangered Species Act (CESA) lawsuit.

These factors are discussed in detail in Section 4.7.2 of the 2010 WMP Update.

Current Bay-Delta planning efforts to address Delta conveyance and environmental concerns include the Delta Vision, CALFED Science Program and the Bay-Delta Conservation Plan

(BDCP) which seek to balance water supply needs and the needs of the Delta ecosystem. Taking the above factors into consideration, the 2010 WMP Update evaluated two SWP Exchange water scenarios. One scenario assumes the long-term future average SWP reliability of 50 percent of Table A Amounts in the absence of successful completion of the BDCP and Delta conveyance facilities. The second scenario assumes average SWP supply reliability will be restored to the 77 percent value identified in the 2005 SWP DRR if the BDCP and Delta conveyance facilities are successfully implemented.

Another potentially available, intermittent source of SWP water to the Coachella Valley is the Yuba River Accord Dry Year Water Purchase Program. In March 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, which provides dry year supply through a water purchase agreement between DWR and Yuba County Water Agency (YCWA). The agreement was part of the Lower Yuba River Accord, which settled long stranding operational and environmental issues over instream flow requirements for the lower Yuba River. Yuba Accord water transfers include both surface water and groundwater substitution transfers for an estimated total of up to 140,000 AFY. The available water is allocated among participating SWP contractors based on their Table A Amounts. It is estimated that CVWD and DWA may be able to purchase up to 4 percent of Table A or 5,600 AFY, and 1.3 percent or 1,820 AFY, respectively, for a total of 7,420 AFY. The amount of water available for purchase in a given year varies and will be based on DWR's determination of the Water Year Classification. These agreements provide for the exchange of these supplies with Metropolitan for CRA water in accordance with existing exchange agreements. CVWD and DWA obtained 1,836 AF in 2008 and 3,482 AF in 2009 from this program.

3.1.4 Water Supply Scenarios

The amount of additional supply required in 2045 is based on projected demand plus 10 percent for the supply buffer less existing local and imported supplies. Existing local supplies consist of local surface runoff, returns to the groundwater basin from irrigation use in excess of plant uptake, and recycled water minus agricultural drain flows exported to the Salton Sea, and evapotranspiration losses.

Due to the future uncertainty associated with imported water supplies from the Colorado River water and SWP Exchange water, the 2010 WMP Update evaluates an array of water supply scenarios to determine a likely range of future supply needs, as shown in **Table 3-2**. These scenarios assume different combinations of a Delta conveyance solution and QSA validity to determine the future amount of imported water available to the Valley.

Based upon these scenarios, between 292,000 and 453,000 AFY of additional water supplies (over present) and conservation would be required to meet projected demands in 2045 while providing 10 percent supply buffer, eliminating groundwater overdraft and improving the salt balance of the basin. These supplies represent needs under average hydrologic conditions. The QSA invalidation was based on the lack of quantification for the State's monetary share of Salton Sea mitigation. The QSA parties are working to resolve the issues that resulted in invalidation and are committed moving forward with the QSA. Therefore, the range of additional future supply need is assumed to be 292,000 to 325,000 AFY.

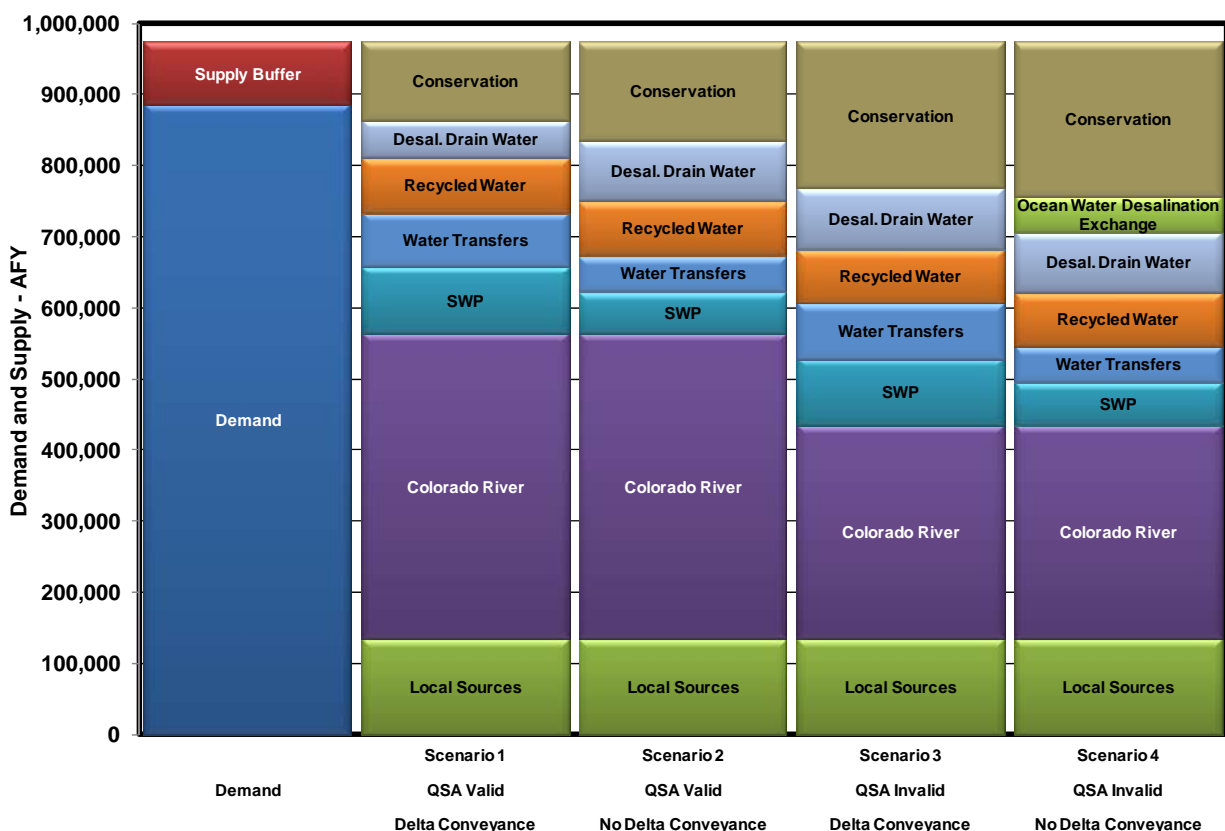
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**Table 3-2
Future Water Supply Scenarios Considered in 2010 WMP Update**

Supply Scenario	Delta Conveyance	QSA Valid	Additional Supply Required in 2045 (AFY)
1	Yes	Yes	291,600
2	No	Yes	324,800
3	Yes	No	419,600
4	No	No	452,800

MWH and Water Consult, 2010.

The 2010 WMP Update evaluated a wide range of water conservation and supply options based on potential yield, reliability, cost, water quality and other feasibility factors. Based on this evaluation, a range of water supply mixes was established for each planning scenario as shown on **Figure 3-3**.



**Figure 3-3
Supply Mixes in Water Supply Scenarios to Meet Projected Demand**

Each scenario maximizes the use of local sources and recycled water. Water conservation and drain water desalination are variable, based on the availability of existing and future imported

water supplies including potential future water transfers and acquisitions (on the SWP). Ranges for future water supplies presented in **Section 3.3** are based on these amounts.

3.1.5 Continuation and Expansion of Existing Projects

The 2002 WMP included a number of recommended programs and features to reduce groundwater overdraft. These programs are effective, but with the reduced supply reliability and changed population and land use projections described in the 2010 WMP Update, they are not enough. The programs must be expanded to provide the balance and flexibility needed to reliably reduce groundwater overdraft and accommodate growth planned by others. The following describes the expansion of these existing programs.

3.1.5.1 Water Conservation

Water conservation is a major component of water management in the Coachella Valley. As a desert community heavily reliant upon imported water supplies, the Coachella Valley must use its water resources as efficiently as possible to meet California Water Code requirements and State legislation such as “20x2020” (requiring 20 percent per capita water use reduction by the year 2020), as well as to maintain eligibility for State funding opportunities through compliance with Assembly Bill (AB) 1420 demand management measures (DMMs) required in Urban Water Management Plans (UWMPs).

This section describes urban, agricultural and golf course conservation activities, and describes potential water conservation implementation strategies. In addition to water conservation included in the baseline water demand projections, the 2010 WMP Update includes at least 106,200 AFY of additional water conservation.

Agricultural Conservation

Agriculture, an essential part of the Coachella Valley economy, currently uses an average of 6.2 AFY per cropped acre, including allowances for multiple cropping, and accounts for more than 40 percent of the Valley’s water use. Agricultural water conservation remains the most cost-effective approach for extending the existing water supplies of the Valley. The 2002 WMP had an agricultural conservation goal of 7 percent by 2015. Under the 2010 WMP Update, an agricultural conservation program will be implemented that achieves up to a 14 percent reduction in consumptive use by 2020. The savings would be achieved using a staged approach. Initially, low cost, voluntary programs would be initiated followed by increasingly more expensive and mandatory programs. The following building blocks have been identified for implementation:

- Grower Education and Training – Grower meetings and training programs combined with confidential grower audits funded by the District.
- District-Provided Services – Scientific irrigation scheduling, scientific salinity management, moisture monitoring and farm water distribution evaluations funded by the District.

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- Irrigation System Upgrade/Retrofit – Partial or full funding and/or financial support of growers that convert from flood/sprinkler to micro-sprinkler/drip irrigation systems.
- Economic Incentives – As needed to achieve the 14 percent goal, adoption of one or more incentive pricing approaches to encourage conservation. Examples include tiered pricing, water budget pricing, or seasonal pricing.
- Regulatory Programs – regulations that support and provide for agriculture conservation, including farm management plans, mandatory drip/micro-spray systems for new permanent crops, and conversion of existing crops over time.

These program features will be incrementally expanded until the target reduction is achieved. To achieve the maximum return on investment from conservation activities, initial emphasis will be placed on those agricultural operations with the lowest irrigation efficiency.

The agricultural conservation program is anticipated to save about 39,500 AFY of water by 2020. The savings will decrease to 23,300 AFY by 2045 as agricultural land transitions to urban uses. CVWD is developing methods for tracking the effectiveness of agricultural water conservation. These methods will include determining average water use per acre of farmed land and average irrigation efficiency. The methods will reflect variations in annual/seasonal evapotranspiration and cropping patterns. Progress toward meeting agricultural conservation goals will be evaluated and reported annually.

Urban Conservation

The 2002 WMP had an urban conservation goal of 10 percent by 2010, which has been achieved. Under the 2010 WMP Update, the urban water conservation program will be expanded and enhanced to meet the State's requirement of a 20 percent reduction in per capita use by 2020 ("20 by 2020"). The baseline for this reduction is the 10-year average per capita usage for the period of 1995 through 2004, as specified in Senate Bill SBx7-7 (Water Conservation Requirements). This will be accomplished by:

- continued public education and outreach programs promoting water conservation,
- improved landscape irrigation scheduling and efficiency,
- implementation of irrigation system retrofit rebates,
- implementation of appropriate water rate structures that provide the economic incentives needed to encourage efficient water use,
- coordinated regional water conservation programs involving Valley water purveyors, cities and Riverside County,
- continued implementation of the CVWD Valley-wide Landscape Ordinance (Ordinance 1302-1; revised Ordinance 1374)
- installation of automated or "smart" water meters,

- extension of the Landscape Ordinance to include all landscaping regardless of size (current limit is 5,000 square feet or larger for homeowner furnished landscaping); further decreases in the water allocations for landscape irrigation consistent with good irrigation practices and desert landscaping,
- landscape retrofit rebates – i.e., economic incentives for replacing high water use landscaping, also known as “cash for grass”,
- restrictions on the total amount of turf allowed,
- audits of new development to assure continued compliance with the Landscape Ordinance,
- plumbing retrofits for existing properties including mandatory retrofit (ultra low flush toilets, showerhead replacement, etc.) prior to sale of property,
- conservation rebates for high-efficiency clothes washers,
- compliance with California Green Building Code Standards (California Code of Regulations Title 24, Part 11, 2010), and
- water distribution system audits and loss reduction programs.

Once the 20 percent conservation mandate is achieved, continued implementation of these conservation measures will result in even greater savings per capita as new growth occurs. Projections indicate that continued implementation of these measures in conjunction with the State’s 2010 CALGREEN Building Code requirements will result in per capita water use reduction of nearly 40 percent compared to the baseline per capita use defined in SBx7-7. This could potentially result in additional water savings of 55,000 AFY by 2045 if growth occurs as projected. To provide the water supply buffer, this target is increased to 73,500 AFY by 2045. Additional water conservation beyond this amount will be implemented if needed to offset unanticipated reductions in other water supplies during the planning period.

Valley water agencies will adopt DWR’s methods pursuant to SBx7-7 to track the effectiveness of urban water conservation. Progress toward achieving the urban water conservation goals will be evaluated annually and reported in UWMPs prepared on five-year intervals. If progress shows that additional conservation is being achieved, then the water supply needs will be reassessed.

Golf Course Conservation

The 2002 WMP had a golf course conservation goal of 5 percent by 2010 for existing golf courses. This goal is not yet been achieved, but golf course conservation is increasing. The 2002 WMP provided for a case-by-case evaluation of water conservation at new golf courses. However, new courses were generally expected to use about 25 percent less water than existing courses. Golf course conservation continues to be an important component of water management in the Valley. Under the 2010 WMP Update, Valley water agencies are expected to do the following:

- Implement a water conservation program to achieve a 10 percent reduction in water use by existing golf courses (built prior to 2007) by 2020. This would be accomplished through golf course irrigation system audits and soil moisture monitoring services.

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- Encourage existing golf courses to reduce water use by reducing their acreage of turf.
- Implement the 2009 CVWD/CVAG Landscape Ordinance objectives for all new golf courses (built in 2007 and later). Conduct landscaping and irrigation system plan checks to verify compliance.
- Develop and implement methods to evaluate the effectiveness of golf course water conservation such as measuring water use per irrigated acre.

These measures are expected to achieve a savings of 11,600 AFY by 2045. Conservation by future courses has been incorporated into the water demand projections. Progress toward meeting golf course conservation goals will be evaluated and reported annually. Additional conservation could contribute to the supply buffer; however, no specific target is identified in the 2010 WMP Update.

3.1.5.2 Supply Development

The 2010 WMP Update strategy for water supply development consists of a balanced portfolio that retains flexibility to adapt to future changes in supply reliability. Sufficient water supplies are planned to provide a 10 percent buffer on an average basis to meet unanticipated reductions in existing supplies or difficulties in developing new supplies. The additional supplies needed to provide the buffer would be implemented when required based on an on-going analysis of projected demands and supplies.

Acquisition of Additional Imported Supplies

Additional imported water supplies will be required to eliminate groundwater overdraft and meet the future demands of the Valley. The 2002 WMP established an average water supply target of 140,000 AFY from the SWP, of which about 103,000 AFY would be used for recharge at Whitewater and 35,000 AFY would supply the Mid-Valley Pipeline (MVP) project.

CVWD and DWA have made significant progress since 2002 toward achieving these targets with the acquisition of SWP Table A entitlement water from Metropolitan (100,000 AFY), Tulare Lake Basin Water Storage District (16,900 AFY) and Berrenda Mesa Water District (16,000 AFY). This has increased the Valley's SWP Table A Amounts from 61,200 AFY to 194,100 AFY. In addition, periodic one-time purchases of water totaling 50,200 AF have been made after 2002.

As described in **Section 3.1.3**, given uncertainties in the California water supply picture, the average amount of additional imported supply required is in the range of 45,000 to 80,000 AFY. The higher value assumes successful implementation of the BDCP and Delta conveyance facilities while the lower value is based on reduced future SWP reliability (to 50 percent).

Additional supplies will be obtained through the following actions:

- acquire additional imported water supplies through long-term lease or purchase where cost-effective,
- continue to purchase SWP Turnback Pool and SWP Article 21 (Interruptible) waters ,
- continue to purchase supplemental SWP water under the Yuba River Accord Dry Year Water Purchase Program as available,
- work with Metropolitan to define the frequency and magnitude for SWP Table A call-back under the 2003 Water Transfer Agreement, and
- continue to play an active role with U.S. Bureau of Reclamation (Reclamation), DWR, the State Water Contractors and other agencies in developing the BDCP and Delta Habitat Conservation and Conveyance Program.

Increased Recycled Water Use

The 2002 WMP had a recycled water use target of 30,000 AFY for the West Valley and 8,000 AFY for the East Valley in 2035. Essentially all available recycled water in the West Valley is currently being put to beneficial use either through direct non-potable uses like urban and golf course irrigation or through percolation; however, only a small amount of recycled water is currently being reused in the East Valley. Instead, essentially all East Valley recycled water is discharged to the Coachella Valley Stormwater Channel (CVSC) and flows to the Salton Sea.

As urban growth occurs, the following activities will be implemented under the 2010 WMP Update:

- in the West Valley, implement a joint agency goal to increase recycling of all generated wastewater for non-potable irrigation from 60 percent to at least 90 percent where feasible,
- in the East Valley, maximize the use of recycled water generated by future growth for irrigation as development occurs and customers become available by constructing tertiary treatment and distribution facilities at the CVWD Water Reclamation Plant No. 4 (WRP-4), City of Coachella and Valley Sanitary District (VSD) facilities,
- evaluate the feasibility of delivering recycled water in the existing Coachella Canal water distribution system while avoiding potential conflicts with future urban water treatment and use of Canal water,
- determine the minimum amount of recycled and other water flow that must be maintained in the CVSC to support riparian and wetland habitat, and
- fully utilize all wastewater generated by development east of the San Andreas Fault for irrigation uses to meet demands in that area and reduce the need for additional imported water supplies.

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Based on these recommendations, up to 34,500 AFY of recycled water would be used in the West Valley, up to 33,000 AFY of recycled water would be used in the East Valley and up to 10,800 AFY of recycled water would be used in the area east of the San Andreas fault for direct non-potable uses by 2045, for a total of 78,300 AFY.

Develop Desalinated Drain Water

The 2002 WMP had a planning target of 11,000 AFY of desalinated drain water usage by 2035. No project has yet been implemented. CVWD will implement programs and projects to validate its water rights application for the Whitewater River. Measures will include:

- developing a program to recover, treat and distribute desalinated drain water and shallow (Semi-perched; see **Section 2**) groundwater for non-potable and potable uses in the East Valley,
- developing a disposal system to dispose of brine generated by the desalination process, and
- constructing a demonstration facility to gain operational experience in drain water desalination and brine disposal.

Under the 2010 WMP Update, the amount of water recovered through drain water desalination may range from 55,000 to 85,000 AFY by 2045, depending on the effectiveness of water conservation measures and the availability of other supplies. The lower end of the range reflects the successful implementation of the BDCP and Delta conveyance facilities. The high end of the range is close to the maximum amount of drain water expected to be generated in the Valley and would be implemented if SWP Exchange water reliability remains low. The desalination program will be phased so that it can be expanded in response to future water supply conditions and needs of the Valley.

3.1.5.3 Groundwater Recharge Programs

The 2002 WMP had a planning target of 103,000 AFY of SWP water at the Whitewater Recharge Facility and 80,000 AFY of Canal water recharge at East Valley recharge facilities by 2035. Whitewater recharge varies annually, but the SWP Exchange supply can currently provide about 77,700 for recharge. Canal water recharge is currently 32,000 AFY at the Levy Facility and 3,000 AFY at the Martinez Canyon Pilot facility.

Groundwater recharge continues to be a significant component of water management in the Coachella Valley. Existing and proposed recharge activities identified in the 2002 WMP will continue with the modifications identified below.

Whitewater Recharge Facility

The Whitewater Recharge Facility is a series of earthen recharge basins and distribution channels fed by the Whitewater River, into which Metropolitan has discharged SWP Exchange water from its CRA under the CVWD-DWA-Metropolitan Exchange Agreement since 1973 (see **Figure 1-2**). The 2010 WMP Update includes the following elements regarding the Whitewater Recharge Facility:

- continued operation of the Whitewater Recharge Facility to recharge SWP Exchange water, at least 100,000 AFY over a long-term (20-year) average,
- transfer and exchange any unused desalinated drain water and SWP water obtained through the QSA for CRA water delivered to Whitewater for recharge, and
- use of additional acquired water transfers or leases to supplement the existing SWP Exchange water.

Thomas E. Levy Groundwater Replenishment Facility

CVWD operated a pilot recharge facility at Dike 4 near Avenue 62 and Madison in the City of La Quinta beginning in 1997. Construction of the 180-acre, full scale Levy facility was completed in mid-2009 and has an estimated average recharge capacity of 40,000 AFY. Currently the capacity is limited by hydraulic and water delivery constraints within the Canal water distribution system to a long-term average of about 32,000 AFY. Consequently, construction of an additional pipeline and pumping station from Lake Cahuilla may be required in the future.

The 2010 WMP Update includes the following elements regarding the Levy Replenishment Facility:

- continued operation of the Levy Facility and recharge 40,000 AFY on a long-term basis as system conveyance capacity allows,
- monitoring groundwater levels in shallow and deep aquifers for signs of rising shallow groundwater; develop operating criteria to minimize chances for shallow groundwater mounding, and
- if the existing conveyance system is not capable of sustaining 40,000 AFY of deliveries for recharge at the Levy facility, constructing a second pumping station and pipeline from Lake Cahuilla to provide a supplemental supply.

Martinez Canyon Recharge

The Martinez Canyon recharge facility is a pilot project underway since 2005. Upon completion of a full-scale facility, estimated to be 240 acres in area, this project is expected to recharge 20,000 to 40,000 AFY on average. The recharge facility would be located adjacent to the pilot facility west of the community of Valerie Jean in the East Valley, at the Martinez Canyon alluvial fan between Avenues 74 and 76.

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The 2010 WMP Update includes the following elements regarding the Martinez Canyon Recharge Facility:

- conducting siting and environmental studies, land acquisition and design for the full-scale Martinez Canyon facility with a design capacity of up to 40,000 AFY,
- completing construction of the Martinez Canyon facilities in phases such that the facility can be initially operated at 20,000 AFY, with potential future expansion to as much as 40,000 AFY based on groundwater overdraft conditions and implementation of East Valley source substitution projects, and
- coordinating pipeline and pumping station construction with expansion of the Canal distribution system in the Oasis area.

3.1.5.4 Source Substitution Programs

Source substitution also continues to be an important means to reducing groundwater overdraft. Due to the expected changes in water use patterns in the Valley as a result of continued development, source substitution will receive increased emphasis in the future. The following source substitution actions are proposed in the 2010 WMP Update.

Mid-Valley Pipeline

The MVP (see **Figure 1-2**) is a pipeline distribution system to deliver Canal water to the Mid-Valley area for use with CVWD's recycled water for golf courses and open space irrigation in lieu of groundwater pumping for these uses. Construction of the first phase of the MVP from the Coachella Canal in Indio to WRP-10 (6.6 miles in length) was completed in 2009. MVP Canal water is blended with



Construction of the Mid-Valley Pipeline

WRP-10 recycled water for golf course irrigation. Implementation of later phases will expand the MVP to serve approximately 50 golf courses in the Rancho Mirage - Palm Desert - Indian Wells area that currently use groundwater as their primary source of supply with a mixture of Colorado River water and recycled water as anticipated in the 2002 WMP.

The 2010 WMP Update continues to include the MVP project, which will serve about 37,000 AFY of imported water and 15,000 AFY of WRP-10 recycled water on average by 2045. The MVP will meet approximately 72 percent of the West Valley golf course demand by 2045. Under the 2010 WMP Update, it is proposed to:

- prepare a MVP system master plan to lay out the future pipeline systems,
- implement near-term (next five years) project expansions to connect 14 golf courses along the MVP alignment and extensions of the existing non-potable distribution system, and
- complete the construction of the remaining phases of the MVP system to provide up to 37,000 AFY of Canal water and 15,000 AFY of WRP-10 recycled water on average to West Valley golf courses.

Conversion of Agricultural and Golf Course Uses to Canal Water

The 2010 WMP Update includes the following elements regarding conversion of agricultural and golf course uses to Canal water:

- working with existing East Valley golf courses to increase Canal water use to 90 percent of demand,
- connecting new East and West Valley golf courses having access to Canal water and meet 80-90 percent of demand,
- working with large agricultural groundwater pumpers to provide access to Canal water and encourage them to reduce their groundwater pumping,
- revising and update the Oasis distribution system feasibility study, considering possible future conversion to urban use, and
- upon completion of cost-effectiveness feasibility analyses, designing and constructing the Oasis distribution system to deliver up to 27,000 AFY of Canal and desalinated drain water by 2020.

These projects will deliver up to 71,000 AFY of additional Canal water to reduce groundwater pumping.

Treatment of Colorado River Water for Urban Use

The Plan includes treatment of Canal water for urban uses:

- CVWD, the City of Coachella and Indio Water Authority (IWA) will develop coordinated plans to treat Canal water for urban use in the East Valley,
- conduct a feasibility study to determine the economic tradeoffs between large-scale centralized treatment facilities and small scale satellite treatment facilities including potential delivery from the MVP system,
- evaluate opportunities for regional water treatment projects among CVWD, the City of Coachella and IWA to capture economies of scale, and

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- determine the amount of Canal water desalination needed to minimize taste, odor and corrosion.

These projects will deliver up to 90,000 AFY of treated Canal water for urban use by 2045 to reduce existing and future groundwater pumping.

3.2 NEW PROJECTS AND PROGRAMS

In addition to those programs identified in the 2002 WMP that will continue or be expanded, the following projects and programs are elements of the 2010 WMP Update:

- Canal water use for urban irrigation,
- groundwater recharge in the Indio area,
- investigation of groundwater storage opportunities with IID,
- additional groundwater treatment for arsenic,
- development of a salt/nutrient management plan,
- desalination brine disposal,
- evaluation of Canal water loss reduction,
- drainage control,
- evaluation of stormwater capture feasibility, and
- development of local groundwater supplies for non-potable use.

3.2.1.1 Canal Water Use for Urban Irrigation

As development proceeds in the East Valley, CVWD and the other Valley water purveyors will require new development to install dual piping systems for distribution of non-potable water (Canal or recycled water) for landscape irrigation. This program will offset the reduced Canal water use by agriculture as land use transitions to urban development. It will also reduce groundwater pumping for urban use. From at least two-thirds to as much as 80 percent of the landscape demand of new development will be connected to non-potable water delivery systems. This will result in the utilization of 91,000 to 108,000 AFY of non-potable water by 2045. This program is essential to continued full use of the Valley's Colorado River water supplies as agricultural land use declines.

3.2.1.2 Groundwater Recharge in the Indio Area

The City of Indio is evaluating the feasibility of constructing a groundwater recharge project within its service area. Pursuant to the Indio-CVWD settlement agreement (2009), CVWD will work with the City of Indio to evaluate the feasibility of developing a groundwater recharge project that reduces groundwater overdraft in the Indio area. Indio has no water rights, so the supply will be Canal water, either purchased from CVWD or purchased from another rights holder and exchanged for Canal water.

The 2010 WMP Update assumes that an Indio area groundwater recharge project could offset pumping by 10,000 AFY. The actual amount will depend on the feasibility study results.

3.2.1.3 Investigation of Groundwater Storage Opportunities with IID

As part of the QSA, CVWD and IID signed an agreement that allows IID to store surplus Colorado River water in the Coachella Valley groundwater basin. Under the agreement, CVWD will store water for IID, subject to available storage space, delivery and recharge capacity and the prior storage rights of CVWD, DWA and Metropolitan. Stored water would incur a 5 percent recharge loss and a 5 percent per year storage loss. IID may also request CVWD to investigate and construct additional locations for direct or in-lieu recharge facilities and possible water extraction facilities. IID is currently investigating several sites in the East Valley near the Coachella Canal. Because of the uncertain nature of the facilities, the potential impacts of this water storage program are not evaluated in the 2010 WMP Update and SPEIR but would be considered in a separate, project-level document if a storage program is determined to be feasible.

3.2.1.4 Additional Groundwater Treatment for Arsenic

The quality of Coachella Valley groundwater generally is high and most of the groundwater delivered to urban customers receives only disinfection. Currently, the only other groundwater treatment is for arsenic removal in a portion of the East Valley. Naturally-occurring arsenic is found in the eastern Coachella Valley groundwater from Mecca to Oasis and appears to be associated with local faults and geothermal activity. CVWD identified six of its domestic water wells with arsenic levels above the revised federal maximum contaminant limit (MCL) of 0.01 mg/L. In early 2006, CVWD completed construction of three groundwater treatment facilities that use an ion-exchange process with a brine minimization and treatment process to remove arsenic. The facilities can be expanded to treat additional wells in the future.

In response to elevated arsenic levels in private wells (chiefly serving mobile home and recreational vehicle (RV) parks and certain tribal wells), CVWD is pursuing federal grants to fund a portion of the cost to extend the potable water system to serve these affected communities. CVWD is also assisting the communities in connecting to the potable water system to the extent feasible. CVWD is evaluating the feasibility of treating Colorado River water (Coachella Canal water) for delivery to urban water users. To the extent Canal water is used for urban indoor use, additional arsenic removal will not be needed for those areas. However, as required to meet future demands and provide adequate redundancy, CVWD may need to expand its existing arsenic treatment facilities or construct new facilities to treat water from additional wells.

3.2.1.5 Development of Salt/Nutrient Management Plan

The State Water Resources Control Board (SWRCB) Recycled Water Policy (adopted February 11, 2009) requires every region in the State to develop a salt/nutrient management plan by 2014. The goal of the plans is to responsibly increase the use of recycled water. The salt/nutrient management plans are intended for management of all sources contributing salt/nutrients on a basin-wide basis to ensure that ground and surface water quality objectives are achieved.

The Coachella Valley plan will assess the salt contributions of imported water, including that used for groundwater recharge and evaluate the feasibility of reducing salt in recharge water. The Coachella Valley Regional Water Management Group (CVRWMG), of which CVWD is a member, will take the lead in developing a salt/nutrient management plan with participation from

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interested Tribes and other parties that meets the SWRCB requirements to increase cost-effective recycling of municipal wastewater in the Valley.

3.2.1.6 Brine Disposal

The 2010 WMP Update proposes desalination of agricultural drain water from the CVSC for use in the East Valley. Desalination of Canal water may also be required for East Valley potable water delivery. Treatment to potable levels would produce large volumes of brine, which would need to be disposed of in a cost-effective and environmentally sound manner and in compliance with State and Federal regulations. At the same time, groundwater treatment for arsenic and for nitrate removal, if pursued, requires a salt brine to regenerate the treatment resins, a potential use for the desalination brine. In addition, creation of salt or brackish water wetlands near the Salton Sea may also use the brine on a pass-through basis. Consequently, a brine disposal system is required to safely convey salts to an acceptable point of disposal. Concepts for brine conveyance and disposal and their feasibility will be evaluated in conjunction with the salt/nutrient management plan described above.

3.2.1.7 Canal Water Loss Reduction

Allocated losses and unaccounted-for water in the All-American Canal, the Coachella Canal and the distribution system are due to seepage, leakage and evaporation and may be as high as 31,000 AFY. Under the 2010 WMP Update, to increase the amount of water delivered to the Coachella Valley, CVWD will:

- Conduct a study to determine the amount of water lost to leakage in the first 49 miles of the Coachella Canal and evaluate the feasibility of corrective actions to capture the lost water. This may require the installation of additional flow metering locations along the Canal. If feasible, CVWD will implement the recommendations of this study.
- Work with IID to develop a transparent system for allocating losses along the All-American Canal.

3.2.1.8 Drainage Control

Both basin management (shallow groundwater level control and salt export) and the prevention of adverse impacts to shallow groundwater require that CVWD's existing agricultural drainage system be maintained in some form or replaced as urban development proceeds to prevent waterlogging of clayey soils. Funding will be needed to replace, expand, enhance and maintain the drainage system for urban development in the future. CVWD is evaluating alternative methods for funding the drainage system and will undertake a study of the improvements needed to continue system operation in the future.

3.2.1.9 Stormwater Capture

Stormwater capture has been identified in the 2010 WMP Update as a viable method for increasing the amount of local water available for either groundwater recharge or direct use. The amount of

additional stormwater that could be captured and used has not been documented. Based on this, CVWD will undertake the following measures:

- conduct a feasibility study to investigate the potential for additional stormwater capture in the East Valley, and
- if cost effective, implement stormwater capture projects in conjunction with flood control facilities as development occurs in the East Valley.

Proposals to capture stormwater will only be considered to offset groundwater pumping or provide replenishment if they can clearly demonstrate that the water captured is “new water” that otherwise would have been lost to the Salton Sea or evapotranspiration, rather than water already considered in the Valley water balance.

3.2.1.10 Development of Local Groundwater Supplies for Non-Potable Use

An investigation of groundwater development in the Fargo Canyon Subarea of the Desert Hot Springs Subbasin will be conducted to determine the available supply and suitability for use in meeting non-potable demands of future development east of the San Andreas fault.

CVWD will propose that a study be performed jointly with the cities of Coachella and Indio. Preliminary estimates prepared for the 2010 WMP Update indicate that up to 10,000 AFY of local groundwater supply, which includes returns (excess) from irrigation use, might be developed, depending upon the ultimate level of development in this area.

3.3 POTENTIAL FUTURE WMP ELEMENTS

Several programs and projects have been identified for possible inclusion in future updates to the WMP, pending the results of feasibility studies and environmental compliance documents. These include:

- **SWP Extension** – Construction of a pipeline to convey SWP water directly to the Coachella Valley,
- **Desalination of Recharge Water** – Construction of desalination facilities to reduce the salt load of imported water used for groundwater recharge,
- **Nitrate Treatment** – Pumping and treatment of high nitrate groundwater to reduce the potential for basin contamination, and
- **Seawater Desalination** – Participation in a future coastal seawater desalination project and delivery of water to the Coachella Valley through water exchanges or transfers.

Although feasibility studies of some of these projects are underway, none of the projects have advanced sufficiently through the implementation process to be included in the 2010 WMP Update. Consequently, they are too speculative to evaluate in this SPEIR.

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3.3.1 Other Programs

Other water management programs in the Coachella Valley are monitoring and data management activities, well management programs, and stakeholder input. These are presented for information purposes, but are considered to be ministerial activities and not subject to CEQA review.

3.3.1.1 Monitoring and Data Management

The following new programs/projects should be implemented to improve monitoring and data management in the Valley:

- develop water resources database to facilitate data sharing among participating agencies and Tribes,
- construct additional monitoring wells in conjunction with new recharge facilities,
- develop a water quality assessment that identifies on-going monitoring activities in the basin,
- update and recalibrate Coachella Valley groundwater model based on current data and conduct a peer review of updated model,
- develop a new planning interface and database that can be linked with land use plans and agricultural activities to better distribute pumping and return flows to the model,
- develop and calibrate a water quality model capable of simulating the changes in salinity and possibly other conservative water quality parameters in conjunction with the salt/nutrient management plan, and
- develop a coordinated approach among the water purveyors and CVAG for calculating urban per capita water usage.

3.3.1.2 Well Management Programs

Well management programs would be initiated by the Riverside County Department of Environmental Health and supported by the Coachella Valley water agencies. CVWD is not an enforcing agency for these programs.

- **Well construction/destruction/abandonment policies.** Improperly constructed wells can result in poor yield and contaminated groundwater by establishing a pathway for pollutants to enter a well, allow communication between aquifers of varying quality, or the unauthorized disposal of waste into the well. Well construction, destruction and abandonment policies will be developed in cooperation with Riverside County.
- **Artesian well management program.** Under State Law, allowing an artesian well to flow uncontrolled without putting the water to beneficial use is considered a waste. Any artesian well which is not capped or equipped with a mechanical appliance which will effectively arrest and prevent the flow of any water from the well is a public nuisance, a misdemeanor under California law. To avoid unnecessary waste of water and the potential for property

damage, CVWD will develop a program to educate and work with well owners to properly control artesian wells.

- **Well capping program.** Unused and improperly abandoned wells can provide a pathway for groundwater contamination. Rather than destroying the wells, a capping program could allow the well's continued use for groundwater monitoring. CVWD will implement a cooperative program to identify and cap wells that are no longer being used for groundwater production.

3.4 IMPLEMENTATION PLAN

The implementation strategy is a function of water needs and the feasibility of specific programs. CVWD, in conjunction with the Tribes and the other Valley water districts as appropriate, will implement new Plan elements on the schedule shown in **Table 3-3**.

In developing the 2010 WMP Update, CVWD relies on the latest population projections developed by Riverside County. CVWD does not develop population growth projections for use in water management planning. The 2008 SCAG projections, generated in 2007, did not take into account the current recession, which has slowed growth and will continue to have negative effects on growth in the near term. Over the long term, growth will continue; however, population projections will need to be adjusted in terms of the timing of growth. These realities necessitate adjustment of Plan implementation to meet actual near term needs and continued updates of the WMP in the future to reflect revised population projections.

3.4.1.1 Near Term Projects to Meet Water Management Needs

Even with the current recession and lack of growth, continuation of existing WMP projects and some new projects are needed to reduce overdraft and its adverse affects. On-going actions that will continue are:

- Whitewater recharge with SWP Exchange water and SWP purchases,
- implementation of the QSA,
- Levy Facility recharge at current levels of 32,000 AFY,
- Martinez Canyon recharge at current pilot level of 3,000 AFY,
- water conservation programs at current levels, including implementation of the adopted Landscape Ordinance and recycling in the West Valley,
- increased use of Canal water by golf courses with Canal water connections,
- conversion of East Valley agriculture to Canal water as opportunities arise,
- groundwater level/quality monitoring, and
- subsidence monitoring.

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**Table 3-3
2010 WMP Update – Implementation Plan**

Plan Element	Responsible Entity(ies)	Completion Year	Environmental Impact Potential
Water Conservation Program			
<ul style="list-style-type: none"> Adopt 2009 CVWD/CVAG Landscape Ordinance or equivalent that meets State requirements 	CVWD, DWA, water purveyors, cities, Riverside County	Ongoing	Overall beneficial impact on groundwater volumes; reduction in percolation to groundwater over existing irrigation practices (Section 6); reduced energy use (Section 8)
<ul style="list-style-type: none"> Establish urban water conservation baseline 	CVWD, DWA, other urban water purveyors	2011	No impacts – study only
<ul style="list-style-type: none"> Achieve minimum 10% reduction in existing golf course water use sector 	CVWD, DWA	2015	Overall beneficial impact on groundwater volumes; reduction in percolation to groundwater over existing irrigation practices (Section 6); reduced energy use Section 8)
<ul style="list-style-type: none"> Achieve 14% reduction in agricultural water use sector 	CVWD	2020	Overall beneficial impact on groundwater volumes; reduction in flow to drains over existing irrigation practices (Section 6); drain salinity increase; minimal reduced energy use – Canal is gravity flow (Section 8)
<ul style="list-style-type: none"> Achieve 20% reduction in urban per capita water use 	CVWD, DWA, other urban water purveyors	2020	Overall beneficial impact on groundwater volumes (Section 6); increase in recyclable effluent TDS (Section 5); reduced energy use (Section 8)

**Table 3-3 (Continued)
2010 WMP Update – Implementation Plan**

Plan Element	Responsible Entity(ies)	Completion Year	Environmental Impact Potential
Water Supply Development Program			
<ul style="list-style-type: none"> Complete siting studies, environmental impact evaluation and design for CVSC drain water capture and treatment facilities 	CVWD	2013	Future CEQA document will evaluate impacts on CVSC/drain flows and treatment
<ul style="list-style-type: none"> File water rights application for change of point of use for wastewater effluent discharges to allow water recycling 	CVWD, VSD, City of Coachella	2015	SWRCB requires CEQA document for point of use change; effects of flow diversions from CVSC to new use locations; water quality impacts.
<ul style="list-style-type: none"> Complete construction of and operate initial CVSC /drain water capture and treatment facilities 	CVWD	2015	Change in CVSC and/or drain flows (Section 5) and biology (Section 7); future site specific CEQA document for collection, treatment and waste stream management.
<ul style="list-style-type: none"> Conduct a feasibility study to investigate the potential for additional stormwater capture in the East Valley 	CVWD	2015	No Impact – study only. Future CEQA if found to be feasible and decision to proceed.
<ul style="list-style-type: none"> Conduct a study to determine the amount of water lost to leakage or otherwise unaccounted in the Coachella Canal and evaluate the feasibility of corrective actions to capture the lost water 	CVWD	2015	No Impact – study only. Future CEQA if found to be feasible and decision to proceed.
<ul style="list-style-type: none"> Conduct a joint investigation with Indio and Coachella of groundwater development potential in Fargo Canyon Subarea of the Desert Hot Springs Subbasin to determine the available supply and suitability for use in meeting non-potable demands of development east of the San Andreas fault 	CVWD, IWA, City of Coachella	2020 or sooner if dictated by growth	No Impact – study only. Future CEQA if found to be feasible and decision to proceed.

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Table 3-3 (Continued)
2010 WMP Update – Implementation Plan

Plan Element	Responsible Entity(ies)	Completion Year	Environmental Impact Potential
Source Substitution Program			
<ul style="list-style-type: none"> Prepare a master plan for Mid-Valley Pipeline (MVP) completion 	CVWD	2015	No Impact – study only
<ul style="list-style-type: none"> Connect four golf courses along the MVP alignment to MVP 	CVWD	2015	Impacts covered in MVP Phase 1 SEIR.
<ul style="list-style-type: none"> Acquire additional imported supplies through long-term lease or purchase where cost-effective 	CVWD, DWA	ongoing	Area of origin impacts of reduced water entitlement/availability and receiving area impacts — future project-specific CEQA documents; no construction in Coachella Valley for additional Exchange water; no change in amount of groundwater recharge at Whitewater compared to 2002 PEIR (Section 6)
<ul style="list-style-type: none"> Continue to purchase SWP Turnback Pool, SWP Article 21 and supplemental SWP water under the Yuba River Accord Dry Year Water Purchase Program as available 	CVWD, DWA	ongoing	No new impacts – impact analysis included in the 2002 WMP PEIR
<ul style="list-style-type: none"> Work with Metropolitan to define the frequency and magnitude for SWP Table A callback under the 2003 Water Transfer Agreement 	CVWD, DWA	ongoing	Beneficial effect on water supply in less call back than previously assumed (Section 5).

Table 3-3 (Continued)
2010 WMP Update – Implementation Plan

Plan Element	Responsible Entity(ies)	Completion Year	Environmental Impact Potential
<ul style="list-style-type: none"> Increase West Valley effluent recycling for non-potable irrigation from 60% to 90% 	CVWD	2020	No groundwater balance effect in West Valley – effluent reused where it offsets pumping or percolates where replenishes pumping. TDS increase but potential water quality benefit from reuse if grass takes up nutrients (Section 6) Future site-specific CEQA document for distribution system construction /operation effects
<ul style="list-style-type: none"> Maximize use of East Valley recycled water from new growth or urban irrigation by constructing tertiary treatment and distribution at WRP-4, CSD and VSD facilities. 	CVWD, CSD, VSD	2020	Overall beneficial reduction in projected groundwater pumping (Section 6) and energy use reduction (Section 8) Future site specific CEQA documents for treatment and distribution system construction and operation.
<ul style="list-style-type: none"> Evaluate the feasibility of delivering recycled water in the existing Canal water distribution system while avoiding potential conflicts with future urban water treatment and use of Canal water. 	CVWD	unknown	No impacts — feasibility study only Future CEQA compliance required if recycled water is put in Canal system
<ul style="list-style-type: none"> Determine the minimum amount of recycled and other water flow that must be maintained in the CVSC to support riparian and wetland habitat. 	CVWD, CDFG, USFWS; CVMSHCP	2020	Biologic effects of projected changes in drain and CVSC flows (Section 7); interagency analysis in future site-specific CEQA documents.
<ul style="list-style-type: none"> Fully use all wastewater generated by development east of the San Andreas fault for irrigation uses 	CVWD	Post-2020	Analyze in future site-specific developments' CEQA documents for treatment and distribution systems.

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Table 3-3 (Continued)
2010 WMP Update – Implementation Plan

Plan Element	Responsible Entity(ies)	Completion Year	Environmental Impact Potential
<ul style="list-style-type: none"> Work with existing East Valley golf courses having Canal water access to increase their use to 90 percent of demand 	CVWD	2012	Golf courses have connections — no construction required. Beneficial impact on groundwater through reduced pumping (Section 6).
<ul style="list-style-type: none"> Investigate regional opportunities for Colorado River water treatment facilities 	CVWD, IWA, Coachella	2012	No Impact – study only
<ul style="list-style-type: none"> Develop policy requiring the installation of non-potable water systems for new development 	CVWD	2012	No Impact – policy only
<ul style="list-style-type: none"> Work with large agricultural groundwater pumpers to determine what obstacles exist that prevent them from using additional Canal water and encourage them to reduce their groundwater pumping 	CVWD	ongoing	No Impact – study only
<ul style="list-style-type: none"> Construct north and east extensions to the MVP system 	CVWD	2015	Overall beneficial reduction in groundwater pumping; minor reduction in recharge from irrigation (Section 6); beneficial reduction in energy use (Section 8); distribution systems construction impacts (street construction of pipelines) in future site specific CEQA document(s)
<ul style="list-style-type: none"> Complete siting studies, CEQA, and design for Colorado River water treatment facilities 	CVWD	2013	Site specific CEQA document; reduced groundwater pumping; reduction in energy use.

**Table 3-3 (Continued)
2010 WMP Update – Implementation Plan**

Plan Element	Responsible Entity(ies)	Completion Year	Environmental Impact Potential
<ul style="list-style-type: none"> Complete construction of initial Colorado River water treatment facilities and connect to distribution system 	CVWD	2015	Overall beneficial reduction in groundwater pumping; (Section 6) ; beneficial reduction in energy use if no desalination; brine disposal (Section 5) treatment chemical use impacts (Section 8); distribution system construction impacts (street construction of pipelines) in future site specific CEQA document(s)
<ul style="list-style-type: none"> Complete Oasis study update 	CVWD	2015	No Impact – study only
<ul style="list-style-type: none"> Prepare a non-potable water distribution master plan 	CVWD	2015	No Impact – study only
<ul style="list-style-type: none"> Complete construction of MVP backbone system 	CVWD	2020	Overall beneficial reduction in groundwater pumping; (Section 6); beneficial reduction in energy use (Section 8); distribution systems construction impacts (street construction of pipelines) in future site specific CEQA document(s)
Groundwater Recharge Program			
<ul style="list-style-type: none"> Operate and monitor the Levy facility with a 40,000 AFY goal 	CVWD	Ongoing	Operation impacts addressed in the 2007 Dike 4 Recharge Facility SEIR
<ul style="list-style-type: none"> Investigate groundwater storage opportunities with IID 	CVWD	Ongoing	No Impact – study only

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Table 3-3 (Continued)
2010 WMP Update – Implementation Plan

Plan Element	Responsible Entity(ies)	Completion Year	Environmental Impact Potential
<ul style="list-style-type: none"> Transfer the unused portion of the 35,000 AFY of SWP water available under the QSA to the Whitewater Recharge Facility 	CVWD	2011	Impacts evaluated in 2002 PEIR.
<ul style="list-style-type: none"> Work with the City of Indio to evaluate the feasibility of developing a groundwater recharge project that reduces groundwater overdraft. If feasible, work with Indio to construct the facility 	CVWD, IWA	2011	If feasible project, future site-specific CEQA for recharge facility; beneficial increase in local groundwater levels, reduced pumping; water quality impact (Section 6)
<ul style="list-style-type: none"> Design and construct an additional pumping station and pipeline from Lake Cahuilla to the Levy facility if the existing pumping station and pipeline cannot provide sufficient water to meet the annual recharge goal of 40,000 AFY 	CVWD	2015	Beneficial effect of 40,000 AFY recharge addressed in the 2007 Dike 4 Recharge Facility SEIR; impacts of pump station and pipeline construction in streets in future site-specific CEQA document.
<ul style="list-style-type: none"> Conduct siting studies, environmental impact evaluation and design for Martinez Canyon Replenishment Facility 	CVWD	2018	No Impact – study and design only
Monitoring and Data Management			
<ul style="list-style-type: none"> Continue to monitor the extent of land subsidence 	CVWD, USGS	Ongoing	No Impact – monitoring only

**Table 3-3 (Continued)
2010 WMP Update – Implementation Plan**

Plan Element	Responsible Entity(ies)	Completion Year	Environmental Impact Potential
<ul style="list-style-type: none"> • Provide additional information in the annual engineer’s reports: • Annual precipitation and stream flows data • Additional groundwater level data and hydrographs • In-lieu recharge water deliveries from imported and recycled water that offset pumping • Imported water deliveries for direct use 	CVWD, [CVWD to work with DWA to provide additional information]	2011	No Impact –information gathering and management
<ul style="list-style-type: none"> • Obtain DWR designation as groundwater level monitoring and reporting entities within their respective service areas 	CVWD, DWA, Coachella, IWA, MSWD	2011	No Impact – coordination only
<ul style="list-style-type: none"> • Prepare a comprehensive groundwater monitoring plan 	CVWD, DWA, water purveyors, wastewater agencies, Tribes	2012	No Impact – plan only
<ul style="list-style-type: none"> • Enhance the CVSC gauging station at Lincoln Street to provide continuous flow recording 	CVWD, USGS	2012	No Impact – minor improvement on existing site
<ul style="list-style-type: none"> • Develop centralized groundwater database 	CVWD, DWA, water agencies, Tribes	2012	No Impact –information gathering and management
Other Programs			
<ul style="list-style-type: none"> • Continue to operate the Lower Valley Whitewater River Subbasin joint Water Policy Advisory committee 	CVWD, water agencies, pumpers, Tribes	Ongoing	No Impact –meetings only
<ul style="list-style-type: none"> • Develop a program to educate and work with well owners to properly control artesian wells 	CVWD	2011	No Impact –program development only; implementation would reduce water loss - a benefit.
<ul style="list-style-type: none"> • Update and recalibrate the CVWD groundwater model based on the most current information 	CVWD	2013	No Impact –model recalibration only

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**Table 3-3 (Continued)
2010 WMP Update – Implementation Plan**

Plan Element	Responsible Entity(ies)	Completion Year	Environmental Impact Potential
<ul style="list-style-type: none"> Develop a water planning interface to the groundwater model 	CVWD	2013	No Impact – model modifications only
<ul style="list-style-type: none"> Prepare a plan to maintain and enhance the existing drainage system to allow its future use for urban purposes 	CVWD	2012	No Impact –plan only
<ul style="list-style-type: none"> Develop well construction, destruction and abandonment policies 	CVWD, DWA, water agencies, Tribes, Riverside County	2012	No Impact – policy development only
<ul style="list-style-type: none"> Add groundwater quality simulation capabilities to the model that will allow simulation of salinity and nitrogen in the groundwater 	CVWD	2013	No Impact – model modifications only
<ul style="list-style-type: none"> Prepare a salt/nutrient management plan for the Valley to meet SWRCB Recycled Water Policy requirements 	CVWD, DWA, water purveyors, wastewater agencies, Tribes, interested parties, and Regional Board	2014	No Impact - plan only; Plan implementation will have beneficial water quality effects.
<ul style="list-style-type: none"> Extend urban water and sewer service to trailer/RV park communities with deficient infrastructure and poor water quality 	CVWD	ongoing	Future site specific CEQA document
<ul style="list-style-type: none"> Investigate the feasibility of installing nitrate treatment on selected high nitrate wells to avoid redistribution of nitrates. 	CVWD	2015	No Impact - feasibility study only
<ul style="list-style-type: none"> Undertake a cooperative program to identify and cap wells no longer used for groundwater production 	CVWD, DWA	2015	No Impact - program and monitoring only

**Table 3-3 (Continued)
2010 WMP Update – Implementation Plan**

Plan Element	Responsible Entity(ies)	Completion Year	Environmental Impact Potential
Environmental Enhancement and Mitigation Projects—Mitigation for 2002 PEIR Impacts			
<ul style="list-style-type: none"> • Develop plans for the creation of: <ul style="list-style-type: none"> —25 acres of managed pupfish replacement habitat —66 acres of managed rail replacement habitat —44 acres of Sonoran cottonwood-willow riparian forest replacement habitat 	CVWD	2020 or within 3 years of Wildlife Agency approval of the project plan	Overall beneficial impact of increasing habitat. Future site specific CEQA document.
<ul style="list-style-type: none"> • Remove tamarisk, restore and enhance mesquite and Coachella Valley round-tailed ground squirrel habitat on land CVWD owns in the East Indio Hills Conservation Area 	CVWD	Not Specified	Future site specific CEQA document
<ul style="list-style-type: none"> • Conserve approximately 1,200 acres of land owned in the CVFTL HCP Whitewater Floodplain Preserve in perpetuity as part of the CVMSHCP Reserve System 	CVWD	Ongoing	Overall beneficial impact of increasing and enhancing habitat quality. No new impact in existing preserve.

CVAG = Coachella Valley Association of Governments; CVSC = Coachella Valley Stormwater Channel; CVAG = Coachella Valley Association of Governments; CVMSHCP = Coachella Valley Multiple Species HCP; CVFTL = Coachella Valley fringe-toed lizard; DWA = Desert Water Agency; HCP = Habitat Conservation Plan; IID = Imperial Irrigation District; IWA = Indio Water Authority; MVP = Mid-Valley Pipeline; Regional Board = California Regional Water Quality Control Board; SWRCB = State Water Resources Control Board; TDS = total dissolved solids; USGS = U.S. Geological Survey; VSD = Valley Sanitary District:

Assuming that the growth rate remains relatively low, during the next five years CVWD will focus on the following three activities to reduce overdraft:

- Prepare a master plan for the MVP system, hook up at least four of the closest golf courses and construct north and east extensions of the MVP system connecting up to ten additional golf courses to reduce overdraft in the West Valley,
- Implement additional water conservation measures, including the Landscape Ordinance, to meet the State’s requirement of 20 percent conservation by 2020, and
- Participate in CVRWMG preparation of a salt/nutrient management plan for the Valley by 2014 to meet SWRCB Recycled Water Policy requirements.

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3.4.1.2 Near Term Projects to Meet Growth Needs

Projects to eliminate and control overdraft likely to be needed as future growth occurs are described in the 2010 WMP Update. These projects are:

- additional water conservation,
- desalinated drain water,
- additional water transfers,
- additional recycled water,
- Canal water filtration for urban outdoor irrigation, and
- recharge in the Indio area.

As growth ramps up, these projects will be implemented based on cost-effectiveness and need.

In summary, the goal of the Coachella Valley WMP is to reliably meet current and future water demands in a cost-effective and sustainable manner while controlling overdraft. Implementation of the 2002 WMP has resulted in many successes toward achieving this goal. However, the 2002 WMP recognized the importance of on-going review and update to ensure the plan continues to meet the ever-changing needs of the Coachella Valley. The 2010 WMP Update endeavors to achieve this goal and presents a number of changes in water management strategy for the Valley that adapt the WMP to these changing conditions. Additional changes in direction and scope will occur in the future as the plan continues to adapt to the needs of the Valley.