2014 Status Report

for the

2010 Coachella Valley Water Management Plan Update

Prepared for:

Board of Directors
of the
Coachella Valley Water District

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2014 Status Report Overview

The purpose of this 2014 Water Management Plan Status Report (2014 Status Report) is to accomplish the following:

1. Evaluate changes in the planning environment that impact water demand projections and warrant adjustments to the 2010 Coachella Valley Water Management Plan Update (2010 WMP Update).

2. Review the effectiveness of the 2010 WMP Update including overdraft reduction progress.

3. Evaluate implementation progress of the 2010 WMP Update programs and recommend new implementation targets.

The 2014 WMP Status Report demonstrates that the 2010 WMP Update is working. Continued implementation ensures that long-term overdraft will be eliminated by 2021 with increased groundwater levels in the Palm Springs area and the East Valley. Groundwater levels in the Mid-Valley Area will continue to decline until programs are implemented in this area to reduce groundwater pumping. These Mid-Valley programs include urban conservation programs to reduce municipal pumping 20% by 2020; source substitution programs including non-potable water system expansion to golf courses and Colorado River treatment for domestic water use; and direct groundwater recharge.

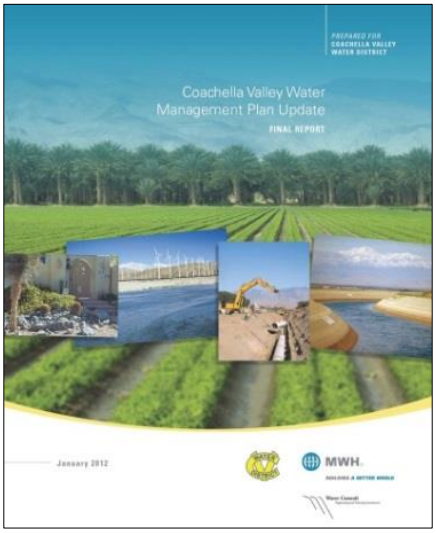
The most significant change in the planning environment is that regional growth projections have been reduced to reflect the impacts of the sustained economic downturn. Population projections through 2045 are reduced in the 2014 Status Report based on revised regional growth projections. The result is that long-term water demands increase at slower rate and estimated total water demand in 2045 is approximately 14% lower in the 2014 Status Report than in the 2010 WMP Update. It is estimated that the 2010 WMP Update demands will not be realized until after 2055 allowing more time to plan for future needs.

The 2010 WMP Update Implementation Plan is summarized in **Table 8-1** of the Plan. **Table 8-1** has been revised and is included in this document as **Table 8-1 REVISED - for the 2014 Status Report**.

Purpose of 2010 WMP Update

The Coachella Valley Water District (CVWD) adopted the Coachella Valley Water Management Plan in 2002 (2002 WMP) to eliminate groundwater overdraft. The Plan was updated in 2010 in response to changes in the water planning environment such as increased growth projections and reduced State Water Project (SWP) reliability. The 2010 Coachella Valley Water Management Plan Update (2010 WMP Update) was adopted by the CVWD Board of Directors in January 2012, following completion of a supplemental program environmental impact report. This plan has a 35 year planning horizon and serves as a roadmap for water resources planning and development for the Coachella Valley.

The 2010 WMP Update focuses on a flexible management approach that allows CVWD to increase or decrease the magnitude and implementation rate of Plan elements in response to changes in supply availability, population projections, and water demands. The 2010 WMP Update uses a "building block approach" so that new supply increments and projects are developed as needed, rather than in response to a pre-defined schedule. Consequently, periodic review of water demands, supplies and implementation progress is an important element of the planning process. This 2014 Status Report is the first periodic review of the 2010 WMP Update.



The goal of the plan is to reliably meet current and future water demands with a 10 percent supply buffer in a cost-effective and sustainable manner. The key water management plan elements identified to meet this goal are:

- Water conservation
- Acquisition of additional imported water supplies
- Development of local water supplies such as recycled water and desalinated drain water
- Source substitution
- Groundwater recharge

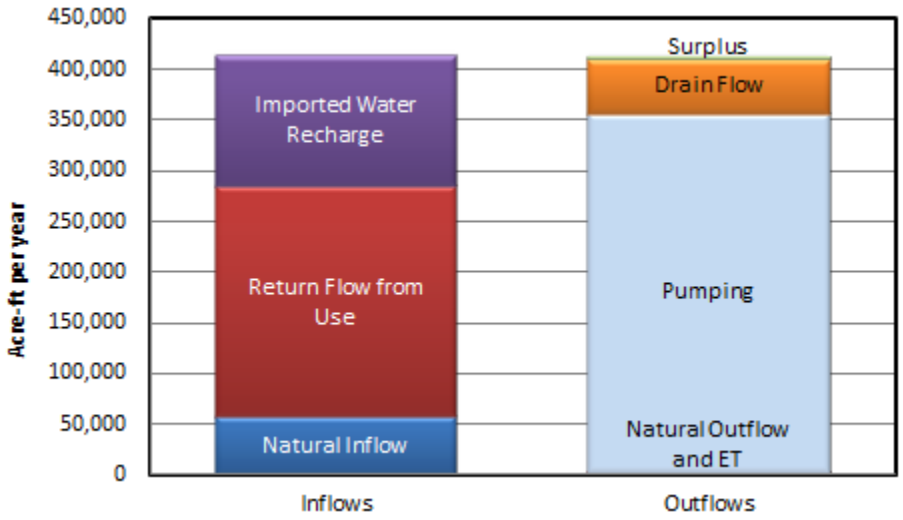
The 10 percent supply buffer is necessary to protect against unanticipated loss of supplies and growth.

2014 Overdraft Status

The California Department of Water Resources defines overdraft as the condition of a groundwater basin in which the amount of water withdrawn by pumping exceeds the amount of water that replenishes the basin over a period of years during which water supply conditions approximate *average* conditions. The 2010 WMP Update estimates *long-term* overdraft using a calculation of change in storage based on long-term local hydrology and imported water deliveries. Change in storage is calculated by subtracting total basin outflows from total basin inflows.

In the Coachella Valley groundwater basin, water is withdrawn by pumping, through natural outflow and agricultural drain flows to the Salton Sea, and through evapotranspiration from native vegetation with root systems. The only sources of groundwater basin replenishment are natural inflow from storms, return flows from irrigation, and imported water recharge. **Figure 1**, on page 3, shows that in the last ten years inflows have exceeded outflows with a slight surplus meaning the groundwater basin has not been in overdraft over the specified ten-year period, and the amount of groundwater in storage has slightly increased. This was accomplished by implementation of conservation and source substitution programs which reduce pumping, and by receiving Table A allotments and advanced deliveries of State Water Project water supplies via CVWD's and DWA's advanced delivery agreement with Metropolitan Water District of Southern California.

Figure 1
Average Inflows and Outflows from 2003 through 2012



It is important to note that although drain flows to the Salton Sea are outflows, they consist of higher salinity discharges and serve as a means of exporting salt from the groundwater basin which reduces the rate of increase in groundwater salinity over time. As overdraft is eliminated and groundwater levels increase, drain flows are predicted to increase exporting additional salt from the groundwater basin. The 2010 WMP Update proposes to recycle a portion of drain flows in the future to satisfy future increases in demand.

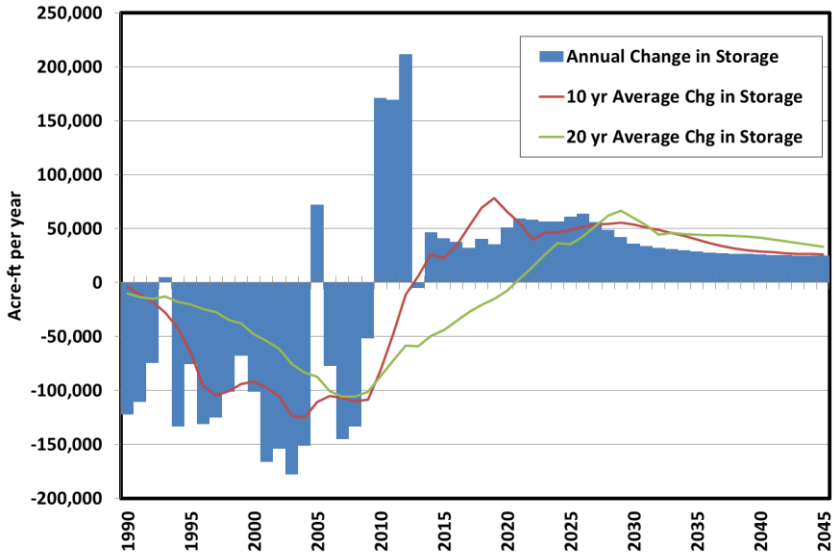
In addition to looking at average inflows and outflows over the last ten years, the annual change in storage from 1990 to 2045 is shown in **Figure 2** and shows long-term progress toward eliminating overdraft. **Figure 2** estimates future annual changes in storage based on the following assumptions:

- Natural inflows and outflows are based on average hydrologic conditions.
- Long-term State Water Project reliability is estimated to be 50%.
- Colorado River Water Supplies will be fully utilized within the groundwater basin.
- 2010 WMP Update programs including conservation, source substitution and recharge programs will continue to be implemented.

Figure 2 illustrates the benefits of fully utilizing and storing imported water supplies for the future. For instance from 2010 to 2013, approximately 260,000 acre feet of advanced deliveries were recharged at the Whitewater Replenishment facility. This amount is in addition to CVWD's and DWA's Table A allotments that were recharged. These advanced deliveries resulted in a significant increase in both 10-year and 20-year average storage volumes. **Figure 2** shows that with successful 2010 WMP Update implementation, long-term overdraft is eliminated in 2021.

Figure 2

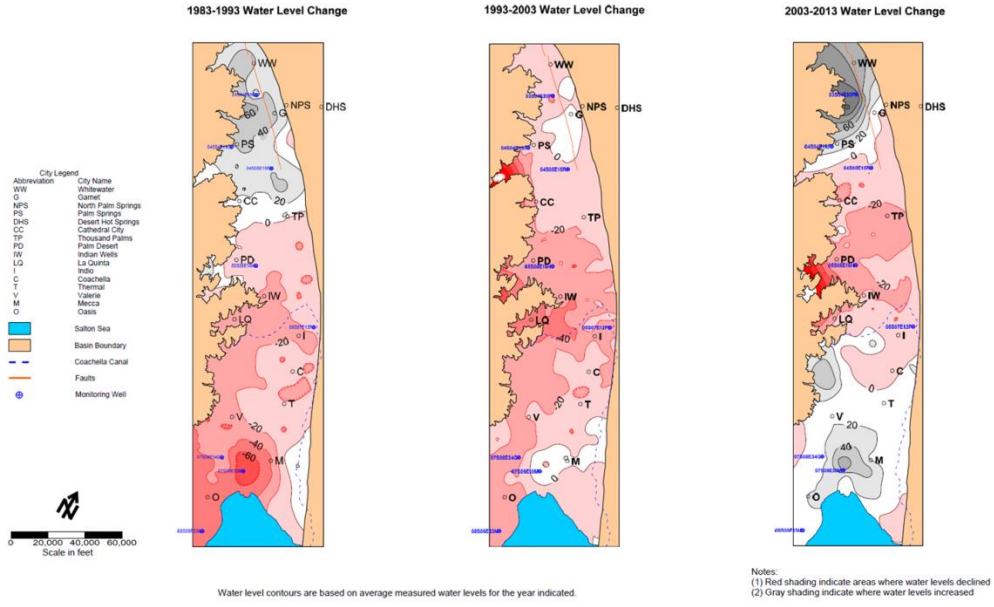
Status of the Overdraft - Annual Change in Storage



It is important to note that even with the recent positive change in groundwater storage, groundwater levels still continue to decline in portions of the Coachella Valley. **Figure 3** shows that increased groundwater levels, shown in gray, have occurred in the Palm Springs area and the East Valley from 2003 to 2013. However decreased groundwater levels, shown in pink, in the Mid-Valley Area will continue until 2010 WMP Update Programs are implemented in this area to reduce pumping. These programs include urban conservation programs to reduce municipal pumping 20% by 2020; source substitution programs including non-potable water system expansion to golf courses and Colorado River treatment for domestic water use; and direct groundwater recharge.

Figure 3

Water Level Changes over the last 30 years in 10-year Increments



Specifically, **Figure 3** shows that in the ten-year period from 1983 to 1993, groundwater level decline was most severe in the East Valley while groundwater levels in the West Valley were stable and actually increasing in the vicinity of Palm Springs and Cathedral City due to large advance deliveries of State Water Project (SWP) that occurred at the Whitewater Replenishment Facility from 1984 through 1986. In the ten-year period from 1993 to 2003 low recharge levels at Whitewater Replenishment Facility resulted in groundwater level decline. Until 2003, CVWD's and DWA's combined Table A allocation was only 62,000 afy and urbanization was causing increased groundwater pumping. Because of these continued groundwater level declines, the first WMP was adopted in 2002. One of the key implementation efforts of that first plan was to increase imported water supplies. CVWD's and DWA's combined allocation is now 194,100 afy and delivery is subject to annual SWP reliability. In the ten-year period from 2003 to 2013 the benefits of additional recharge at Whitewater and Thomas E. Levy replenishment facilities are verified by the increase in groundwater levels at east and west ends of Valley. Reductions in pumping, especially in the East Valley also contribute toward this upward trend. However, in spite of recharge and increases in storage, declining water levels are still occurring in the Mid Valley Area.

Factors Affecting Future Water Needs.

The population projections utilized in the 2010 WMP Update have been updated with current population projection data. The new lower population projections result in lower future water demands during the 35-year planning period.

In April 2014 CDPH adopted a standard of 10 µg/L for chromium-6, putting approximately 50% of the municipal wells in the Coachella Valley are out of compliance. It is anticipated that this new standard will expedite the need to treat Colorado River water for municipal use in portions of the Coachella Valley. Both factors are discussed below.

Recent Population Trends

Population in the Coachella Valley is estimated to have increased from 318,125 in 2000 to 421,146 in 2010, an average annual increase of 10,300 people per year and a corresponding average growth rate of 3.2 percent per year (US Census, 2010). According to the US Census, most of the growth from 2000 to 2010 occurred in the incorporated areas of the Coachella Valley. Based on California Department of Finance (CADOF) population estimates, annual growth rates within the Coachella Valley cities reached a high of 18,000 people per year or 5.65 percent per year in 2005 prior to the recession. Some of the greatest increases in population occurred in the cities of Coachella, La Quinta, Indio, and Desert Hot Springs. These cities had population increases ranging from 55 percent in Indio to 80 percent in Coachella over a ten year period.

Since 2010, growth rates within the Coachella Valley cities have averaged about 5,500 people per year or 1.3 percent based on CADOF estimates. CADOF population estimates are based on changes in indicators such as housing unit counts, home vacancy rates, driver's license address changes, births and deaths, school enrollment, and foreign and domestic migration data. CADOF population estimates show a slight decrease in population for unincorporated Riverside County as a whole, and show virtually all

growth occurring within the incorporated cities of the Coachella Valley. While several large developments have been approved within the unincorporated areas of the Valley, few of these have proceeded to construction.

The Coachella Valley has a significant seasonal population, especially during the winter months. Seasonal population is not counted in the US Census or estimated by the CADOF. Consequently, reliable estimates of seasonal population do not exist. The City of Palm Springs estimates 30,000 to 35,000 people live in the city on a seasonal basis in addition to its 45,000 permanent population (Palm Springs, 2011). A study for the Greater Palm Springs Convention Center and Visitors Bureau estimated 5.1 million annual overnight visitors and 6.4 million day trip visitors to the Valley in 2011. While the seasonal and visitor population clearly have an effect on water usage, in the 2010 WMP Update total water use is divided by permanent population to determine per capita water use. Thus the water use by both visitors and permanent residents is reflected in both per capita and total water use projections. Consequently, as long as the ratio of visitor to permanent population remains roughly the same in the future, no adjustments are required to estimate future water needs of visitors.

The principal sources of population data for the Coachella Valley are:

- **RCP06** - Riverside County Center for Demographic Research 2006 growth forecasts were the most detailed data available at the time that the Plan baseline was established. They were adopted by CVAG and SCAG and used to develop the Regional Transportation Plan (RTP).
- **SCAG RTP 2008** – The Southern California Association of Governments Regional Transportation Plan projections for 2008 were the same as the RCP06 projections.
- **RCP10** – In 2010 before Census data was available, the Riverside County Center for Demographic Research adjusted the RCP06 downward to account for the economic downturn.
- **2010 Census** - United States Census data for 2000 and 2010 (Decennial Census) is available in GIS Census blocks for the Coachella Valley.
- **SCAG RTP 2012** – the Southern California Association of Governments adjusted the RCP2010 projections downward based on the 2010 Census.
- **CADOF 2000 through 2013** - The California Department of Finance Demographic Research Unit annually estimates current populations by city and county (total unincorporated county). Specific data for unincorporated areas of the Coachella Valley is not considered separately.

The 2010 WMP Update used the 2006 Riverside County Projections (RCP06) as the basis for urban water demand projections. The RCP06 projections were adopted by the Coachella Valley Association of Governments (CVAG) and the Southern California Association of Governments (SCAG) as part of the 2008 Regional Transportation Plan. In order to calculate future demands in the 2010 WMP Update, per capita water use was reduced for current and future users by applying the 2010 WMP Update conservation targets. Then the future per capita demands were multiplied by the population projections to determine total future urban demand. Since population projections only extend to 2035, a straight line projection of the average slope was used to estimate 2045 demands. The RCP06 projections were established during a period of significant economic growth and development. In the

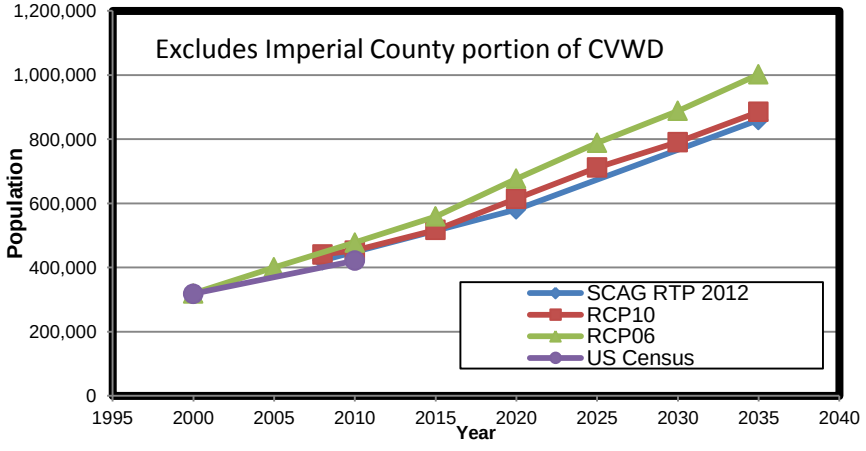
years immediately following publishing of the RCP06 projections and before the 2010 WMP Update was complete, the nation experienced a severe economic recession impacting housing development and population growth in the Coachella Valley. The economy is now showing signs of improvement but at a slower rate than was projected in RCP06.

Figure 4, presents a comparison of the available growth forecasts and the Census data. Based on the SCAG RTP 2012 growth forecast, significant population growth in the Valley is still expected over the next 25 years. Growth within the cities is expected to add about 215,000 people while growth in the unincorporated portions of the Valley will add about 220,000 people by 2035. The total population within the WMP study area is expected to be about 812,000 by 2035, more than double the current population. Assuming growth continues at this rate beyond 2035, the population in the WMP study area would reach almost 990,000 by 2045. In comparison, the 2010 WMP Update estimated a population of 1,120,000 in 2045 (excluding the Imperial County portion of CVWD). The population of the Mission Creek area would increase from 44,600 in 2010 to 96,000 by 2035 and 110,000 by 2045 based on the RCP10 projection. The following observations are made regarding the projections:

- CADOF's reported population estimates for Coachella Valley cities continue to increase but at a lower rate than prior to the recession. The rate of increase is currently less than the SCAG RTP 2012 rate of increase.
- RCP10 projections are lower than the RCP2006 projections for the CVAG area as a result of the prolonged recession.
- SCAG RTP 2012 projection for the Coachella Valley area is about 40,000 people lower than the RCP10 projection. This difference is believed to be the use of the actual 2010 Census numbers as a starting point. No breakdown between East and West Valley population is readily available for this projection.

The 2010 WMP Update assumed that growth would occur equally on vacant desert land and existing agricultural land. Consequently, a decline in agricultural land use (and corresponding water demand) is expected as growth occurs.

Figure 4
Comparison of Coachella Valley Growth Forecasts



Summary of WMP Impacts Related to Growth Projections

The 2014 Status Report recommendation is that population projections are reduced from 1,136,739 in 2045 published in the 2010 WMP Update, to approximately 920,000 , based on SCAG RTP 2012 projections. This is approximately an 18 percent reduction in population in 2045 compared to that of the 2010 WMP Update. **Table 1** on Page 9, shows revised water demand projections compared to the 2010 WMP Update demand projections. The Table 1 values were determined by revising the basis for the 2010 WMP Update population projections from RCP06 to SCAG RTP 2012. While urban and golf course demands are reduced by 22 percent and 16 percent, respectively, agricultural demand is increased by approximately 13 percent. This agricultural demand increase results from a slower rate agricultural land conversion to urban uses. Total reduction in 2045 water demands is approximately 14 percent. However, it is important to note that this is not an elimination of demand but a deferral of demand to later years. Build-out growth will occur over a longer period of time.

As shown in **Figure 5**, long term supply programs may be reduced by a combined value of 70,000 AFY in 2045, as a result of the approximately 14% reduction in demand. Programs that may be deferred or slowed based on this reduction include desalination of agricultural drain water, purchase of additional imported allocations, and conversion of non-potable water supplies to urban uses, except as necessary for full utilization of Colorado River water supplies.

A reduction in growth projections does not reduce the rate at which development of Colorado River water supplies occurs. These supplies available through the Quantification Settlement Agreement (QSA) will continue to increase at an average rate of 5,500 AFY through 2026. Therefore, the need for source substitution and recharge programs to utilize this supply is not affected by changes in population projections. Also a reduction in growth projections does not reduce the need to implement conservation programs for existing and future customers.

Figure 5
Comparison of Coachella Valley Growth Forecasts

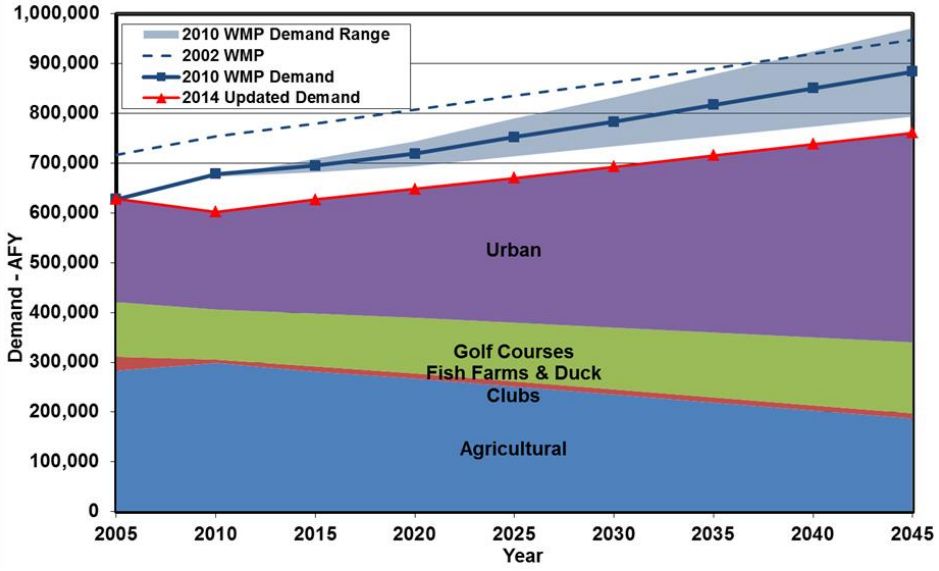


Table 1
Water Demand Projections for CVWD WMP Update Status Report - 2014
Baseline Projection (without additional conservation)

Component	2005	2010	2015	2020	2025	2030	2035	2040	2045
Agricultural									
Crop Irrigation	283,100	298,600	281,300	267,300	251,200	235,200	219,100	203,100	187,100
Total Agricultural Demand	**283,100**	**298,600**	**281,300**	**267,300**	**251,200**	**235,200**	**219,100**	**203,100**	**187,100**
Urban									
Municipal	205,400	192,200	224,800	254,600	287,100	319,400	351,700	384,200	417,000
Industrial	1,700	2,300	2,300	2,300	2,300	2,300	2,300	2,300	2,300
Total Urban Demand	**207,100**	**194,500**	**227,100**	**256,900**	**289,400**	**321,700**	**354,000**	**386,500**	**419,300**
Golf Course Demand	**109,800**	**100,500**	**106,200**	**111,800**	**118,000**	**124,081**	**130,300**	**136,500**	**142,600**
Fish Farms & Duck Clubs									
Fish Farms	23,500	5,648	8,500	8,500	8,500	8,500	8,500	8,500	8,500
Duck Clubs	4,600	1,418	2,000	2,000	2,000	2,000	2,000	2,000	2,000
Total Fish Farms and Duck Clubs	**28,100**	**7,065**	**10,500**	**10,500**	**10,500**	**10,500**	**10,500**	**10,500**	**10,500**
Total Demand	**628,100**	**600,665**	**625,100**	**646,500**	**669,100**	**691,481**	**713,900**	**736,600**	**759,500**

Water Demand Projections from Table 3-2 of the 2010 WMP Update

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**

Hexavalent Chromium

The 2002 WMP focused on water supplies and overdraft and did not discuss water quality in detail. The 2010 WMP Update devoted a chapter to emerging issues including groundwater quality issues. At the time of the 2010 WMP Update adoption, hexavalent chromium (chromium-6) was regulated in California under the 50 µg/L Maximum Contaminant Level (MCL) for total chromium. No CVWD wells exceed this limit. Also at that time the Office of Environmental Health Hazard Assessment (OEHHA) had recently finalized a Public Health Goal for chromium-6 of 0.02 parts per billion (µg/L) and the California Department of Public Health (CDPH) was developing a proposed MCL for chromium-6.

In August 2013 CDPH published the nation's first draft MCL for chromium-6 of 10 µg/L. It was approved in April 2014, and became effective on July 1, 2014. It is expected that approximately 50% of municipal wells in the Coachella Valley will not comply with the new standard. CVWD, Mission Springs Water District, Coachella Water Authority, and Indio Water Authority all have wells that are expected to exceed the MCL. The cost to comply with this standard is of significant concern, and will expedite the need to treat Colorado River water for direct municipal use in portions of the Coachella Valley.

CVWD is conducting a source of supply study to evaluate chromium-6 treatment options. A final report is expected to be available in December 2014, and it is anticipated that project design and implementation will begin in early 2015.

Evaluation of 2010 WMP Implementation Progress

The key water management plan elements identified to meet 2010 WMP Update goal are:

- Water conservation
- Acquisition of additional imported water supplies (Water Supply Development)
- Continued development of local water supplies such as recycled water and desalinated drain water (Water Supply Development)
- Source substitution, and
- Groundwater recharge.

Prior to the 2010 WMP Update adoption and in direct response to the economic downturn, the Board of Directors expressed concerns over the cost of Plan implementation. In response to their concerns, **Section 8 – Implementation Plan**, of the 2010 WMP Update included a list of priority activities to be implemented by 2020. This priority list is summarized in **Table 8-1** on page 8-16 of the Plan. Table 8-1 has been reviewed and adjusted to recognize progress to date. **Table 8-1 REVISED - for the 2014 Status Report** is located at the end of the document. It is important to note that the 2010 WMP Update identifies many additional future activities not included in **Table 8-1** that will be reconsidered in future plan updates. Examples of such activities are recycled water development in the Eastern Coachella Valley, and participation in desalination of seawater.

Final 2014 Status Report Recommendations

As shown in **Figures 1 and 2,** the 2014 Status Report demonstrates that the 2010 WMP Update is working. Continued Plan implementation ensures that long-term overdraft will be eliminated by 2021

with increased groundwater levels in the Palm Springs area and the East Valley. Although groundwater levels in the Mid-Valley Area will continue to decline, continued implementation of Mid-Valley programs is the most effective means of curtailing these declines. The Programs in **Table 8-1 REVISED - for the 2014 Status Report** should be implemented as scheduled and the four key activities below are recommended:

- Continue to Support Water Conservation Programs
- Accomplish Source Substitution Program Implementation as Scheduled
- Evaluate Additional Recharge Opportunities
- Continue to Evaluate Water Purchase Opportunities

Table 8-1 REVISED - for the 2014 Report

Implementation Plan

Plan Element	Responsible Entity(ies)	2010 Update Goal	Status	Status Report Recommendation
Water Conservation Program				
• Adopt and implement 2009 CVWD/CVAG Landscape Ordinance or equivalent	CVWD, water purveyors, cities, Riverside County	Ongoing	Complete	Revise as needed based on State legislation
• Establish urban water conservation baseline	CVWD, other urban water purveyors	Complete	Complete	Assess status annually and report in 2015 UWMP
• Achieve minimum 10 percent reduction in existing golf course use	CVWD, DWA	2015	Underway	Work via Golf Task Force to implement and monitor custom water budgets. Budget program funds in CIP
• Achieve 14 percent reduction in agricultural water use	CVWD	2020	Underway	2020
• Achieve 20 percent reduction in urban use	CVWD, other urban water purveyors	2020	Underway	Continue funding conservation programs in CIP
Water Supply Development Program				
• Complete siting studies, environmental impact evaluation and design for CVSC drain water capture and treatment facilities	CVWD	2013	Deferred	Re-evaluate need in next WMP Update
• File for water rights application for change of point of use for wastewater effluent discharges to allow water recycling	CVWD, VSD, Coachella	2015	Deferred	Work with Legal Staff to complete filing
• Complete construction of initial CVSC drain water capture and treatment facilities	CVWD	2015	Deferred due to changes in needs	Re-evaluate need in next WMP Update
• Conduct a feasibility study to investigate the potential for additional stormwater capture in the East Valley	CVWD	2015	Ongoing with Stormwater studies	Maximize stormwater capture in facilities design
• 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	Complete	Continue to monitor annual system losses

Plan Element	Responsible Entity(ies)	2010 Update Goal	Status	Status Report Recommendation
• 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	Deferred due to changes in needs	Re-evaluate need in next WMP Update
Source Substitution Program				
• Prepare a master plan for Mid-Valley Pipeline completion Phase 2	CVWD	2011	Complete	Budget for Phase 2 in CIP
• Connect four golf course users along the MVP alignment to MVP	CVWD	2011	2 connected 7 scheduled by end of 2015	Monthly Progress Report to Board
• Work with existing East Valley golf courses having Colorado River water access to increase their use to 90 percent of demand	CVWD	2012	Underway – revised to 85% via non-potable agreements	Report Progress in annual Non-Potable Water Report
• Investigate regional opportunities for Colorado River water treatment facilities for domestic water use	CVWD, IWA, Coachella	2012	Underway via Source of Supply/Treatment Study (SS/TS)	Complete by 12/2014 Budget funds in 2015/16 CIP
• Develop policy requiring the installation of non-potable water systems for new development	CVWD	2012	Complete	Required via WSA's/WSV's and Development Design Manual
• Work with large agricultural groundwater pumpers to determine what obstacles exist that prevent them from using additional Colorado River water and encourage them to reduce their groundwater pumping	CVWD	2012	Underway Example: Oasis Irrigation System Expansion Project	Complete Oasis Irrigation System Expansion and Golf Course Conversions
• Construct north and east extensions to the MVP system	CVWD	2013	Partially addressed in Phase 2 master plan	Monthly Progress Report to Board
• Complete siting studies, environmental impact evaluation and design for Colorado River water treatment facilities	CVWD	2013	SS/TS Underway	Re-evaluate schedule based on SS/TS
• Complete construction of initial Colorado River water treatment facilities and connect to domestic water distribution system	CVWD	2015	SS/TS Underway	Re-evaluate schedule based on SS/TS

Plan Element	Responsible Entity(ies)	2010 Update Goal	Status	Status Report Recommendation
• Complete Oasis study update	CVWD	2015	Complete. Design by 2015 Construction by 2018	Form Assessment District Budget funds in CIP Complete by 2018
• Prepare a non-potable water distribution master plan Phase 3	CVWD	2015	Deferred	2017
• Complete construction of MVP backbone system	CVWD	2020	Deferred	Re-evaluate schedule based on Phase 3 master planning
Groundwater Recharge Program				
• Operate and monitor the Levy replenishment facility with a 40,000 AFY goal	CVWD	2010	Underway with lower goal of 32,000 AFY	Re-evaluate need in next WMP Update
• Investigate groundwater storage opportunities with IID	CVWD	2010	Complete	
• Transfer the unused portion of the 35,000 AFY of SWP water available under the QSA to the Whitewater Recharge Facility	CVWD	2011	Complete	Budget transportation funds annually. Maximize advanced delivery opportunities.
• Work with the City of Indio to evaluate the feasibility of developing a groundwater recharge project that reduce groundwater overdraft. If feasible, work with Indio to construct the facility.	CVWD, IWA	2011	Deferred	Recommend changing priority to working with Indio on supply development opportunities.
• 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	Deferred	Re-evaluate need in next WMP Update
• Conduct siting studies, environmental impact evaluation and design for Martinez Canyon Replenishment Facility	CVWD	2018	Deferred due to monitoring results	Budget Oasis Expansion funds in CIP
Monitoring and Data Management				
• Continue to monitor the extent of land subsidence	CVWD, USGS	2010	Ongoing Phase VI Underway	Continue monitoring and evaluate results relative to Groundwater modeling in next WMP Update.

Plan Element	Responsible Entity(ies)	2010 Update Goal	Status	Status Report Recommendation
• Provide additional information in the annual engineers' reports: o Annual precipitation and stream flows o Additional groundwater level data and hydrographs o In-lieu recharge water deliveries from imported and recycled water that offset pumping o Imported water deliveries for direct use	CVWD, DWA	2011	Complete Hydrographs added, more consistency with DWA's reports achieved.	
• Obtain DWR designation as groundwater level monitoring and reporting entity for the Coachella Valley within their respective service areas	CVWD, DWA, water purveyors	2011	Complete via the CASGEM Program	Budget funds as needed to Continue Program Participation
• Prepare a comprehensive groundwater monitoring plan	CVWD, DWA, water purveyors, wastewater agencies, tribes	2012	Deferred	Pursue IRWM Grant Funding
• Enhance the CVSC gauging station at Lincoln Street to provide continuous flow recording	CVWD, USGS	2012	Complete	Budget CIB funds as necessary to continue to drain flow monitoring.
• Develop centralized groundwater database	CVWD, DWA, water agencies, tribes	2012	Complete via the CASGEM Program	Budget funds in CIB as necessary to maintain program participation
Other Programs				
• Continue to operate a groundwater advisory committee regarding groundwater management issues in the East Valley	CVWD, water agencies, pumpers, tribes	2010	Complete	Budget CIB funds as necessary to continue annual meetings
• Develop a program to educate and work with well owners to properly control artesian wells	CVWD	2011	Complete	Budget funds in CIB/CIP. and Pursue Grant funding
• Update and recalibrate the CVWD groundwater model based on the most current information	CVWD	2012	Deferred	Complete in parallel with next WMP Update
• Develop a water planning interface to the groundwater model	CVWD	2012	Deferred	Add to scope of work for next groundwater model update
• Prepare a plan to maintain and enhance the existing drainage system to allow its future use for urban purposes	CVWD	2012	Complete Legal Authority Established	

Plan Element	Responsible Entity(ies)	2010 Update Goal	Status	Status Report Recommendation
• Develop well construction, destruction and abandonment policies	CVWD, DWA, water agencies, tribes, Riverside County	2012	Complete	Support County's efforts to enforce. Pursue IRWM Grant Funding
• Add groundwater quality simulation capabilities to the model that will allow simulation of salinity (TDS) and nitrogen in the groundwater	CVWD	2013	Deferred	Add to scope of work for next groundwater model update.
• Prepare a salt/nutrient management plan for the Valley to meet SWRCB Recycled Water Policy requirements	CVWD, CWA,DWA, and IWA	2014	Underway	Work with RWQCB to amend completion date to March 2015
• Extend urban water and sewer service to trailer/RV park communities with deficient infrastructure and poor water quality	CVWD	2015	Ongoing Mountain View Estates Connected, Short Term Arsenic Treatment, DAC Program	Continue to sponsor applications for USDA, IRWM, CDPH, SWRCB funding
• Investigate the feasibility of installing nitrate treatment on selected high nitrate wells to avoid redistribution of nitrates.	CVWD	2015	Underway via SS/TS	Complete by 12/2014 Budget funds in 2015/16 CIP
• Undertake a cooperative program to identify and cap wells that are no longer being used for groundwater production	CVWD, DWA	2015	Underway	Support County's efforts to enforce. Pursue IRWM Grant Funding
Environmental Enhancement and Mitigation Projects				

• Develop plans for the creation of:
  • 25 acres of managed pupfish replacement habitat
  • 66 acres of managed rail replacement habitat
  • 44 acres of Sonoran cottonwood-willow riparian forest habitat
	CVWD	2010	Underway: Received Wildlife Agency approval of site; Under Review by Corps.	Work with Corps to complete review. Update project implementation Schedule. Budget funds in CIB/CIP

• 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	Study Underway by CVCC	Support CVCC efforts to complete feasibility study

Plan Element	Responsible Entity(ies)	2010 Update Goal	Status	Status Report Recommendation
• 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	2010	Underway: Resource Agencies reviewing Draft Conservation Easement prepared by CVCC & CVWD	Work with Resource agencies to achieve conservation easement approvals