Appendix A

UWMP Checklist

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Appendix A

UWMP Checklist

This checklist is developed directly from the Urban Water Management Planning Act and SB X7-7. It is provided to support water suppliers during preparation of their UWMPs. Two versions of the UWMP Checklist are provided – the first one is organized according to the California Water Code and the second checklist according to subject matter. The two checklists contain duplicate information and the water supplier should use whichever checklist is more convenient. In the event that information or recommendations in these tables are inconsistent with, conflict with, or omit the requirements of the Act or applicable laws, the Act or other laws shall prevail.

Each water supplier submitting an UWMP can also provide DWR with the UWMP location of the required element by completing the last column of eitherchecklist. This will support DWR in its review of these UWMPs. The completed form can be included with the UWMP.

If an item does not pertain to a water supplier, then state the UWMP requirement and note that it does not apply to the agency. For example, if a water supplier does not use groundwater as a water supply source, then there should be a statement in the UWMP that groundwater is not a water supply source.

Checklist Arranged by Water Code Section

CWC Section	UWMP Requirement	Subject	Guidebook Location	UWMP Location *(Optional Column for Agency Use)*
10608.20(b)	Retail suppliers shall adopt a 2020 water use target using one of four methods.	Baselines and Targets	Section 5.7 and App E	**Section 5.8**
10608.20(e)	Retail suppliers shall provide baseline daily per capita water use, urban water use target, interim urban water use target, and compliance daily per capita water use, along with the bases for determining those estimates, including references to supporting data.	Baselines and Targets	Chapter 5 and App E	**Section 5**
10608.22	Retail suppliers' per capita daily water use reduction shall be no less than 5 percent of base daily per capita water use of the 5 year baseline. This does not apply if the suppliers base GPCD is at or below 100.	Baselines and Targets	Section 5.7.2	**Section 5.8**
10608.24(a)	Retail suppliers shall meet their interim target by December 31, 2015.	Baselines and Targets	Section 5.8 and App E	**Section 5.8**
10608.24(d)(2)	If the retail supplier adjusts its compliance GPCD using weather normalization, economic adjustment, or extraordinary events, it shall provide the basis for, and data supporting the adjustment.	Baselines and Targets	Section 5.8.2	**Section 5.8.1**
10608.26(a)	Retail suppliers shall conduct a public hearing to discuss adoption, implementation, and economic impact of water use targets.	Plan Adoption, Submittal, and Implementation	Section 10.3	**Appendix G**
10608.36	Wholesale suppliers shall include an assessment of present and proposed future measures, programs, and policies to help their retail water suppliers achieve targeted water use reductions.	Baselines and Targets	Section 5.1	**Does Not Apply**
10608.40	Retail suppliers shall report on their progress in meeting their water use targets. The data shall be reported using a standardized form.	Baselines and Targets	Section 5.8 and App E	**Section 5.8**
10620(b)	Every person that becomes an urban water supplier shall adopt an urban water management plan within one year after it has become an urban water supplier.	Plan Preparation	Section 2.1	**Section 2.1**
10620(d)(2)	Coordinate the preparation of its plan with other appropriate agencies in the area, including other water suppliers that share a common source, water management agencies, and relevant public agencies, to the extent practicable.	Plan Preparation	Section 2.5.2	**Section 2.5.2**

10620(f)	Describe water management tools and options to maximize resources and minimize the need to import water from other regions.	Water Supply Reliability Assessment	Section 7.4	**Section 7.4**
10621(b)	Notify, at least 60 days prior to the public hearing, any city or county within which the supplier provides water that the urban water supplier will be reviewing the plan and considering amendments or changes to the plan.	Plan Adoption, Submittal, and Implementation	Section 10.2.1	**Appendix G**
10621(d)	Each urban water supplier shall update and submit its 2015 plan to the department by July 1, 2016.	Plan Adoption, Submittal, and Implementation	Sections 10.3.1 and 10.4	**To be completed in subsequent draft**
10631(a)	Describe the water supplier service area.	System Description	Section 3.1	**Section 3.2**
10631(a)	Describe the climate of the service area of the supplier.	System Description	Section 3.3	**Section 3.3**
10631(a)	Indicate the current population of the service area.	System Description and Baselines and Targets	Sections 3.4 and 5.4	**Section 3.4; Section 5.4**
10631(a)	Provide population projections for 2020, 2025, 2030, and 2035.	System Description	Section 3.4	**Section 3.4**
10631(a)	Describe other demographic factors affecting the supplier's water management planning.	System Description	Section 3.4	**Section 3.4.3**
10631(b)	Identify and quantify the existing and planned sources of water available for 2015, 2020, 2025, 2030, and 2035.	System Supplies	Chapter 6	**Section 6**
10631(b)	Indicate whether groundwater is an existing or planned source of water available to the supplier.	System Supplies	Section 6.2	**Section 6.1**
10631(b)(1)	Indicate whether a groundwater management plan has been adopted by the water supplier or if there is any other specific authorization for groundwater management. Include a copy of the plan or authorization.	System Supplies	Section 6.2.2	**Section 6.1.2**
10631(b)(2)	Describe the groundwater basin.	System Supplies	Section 6.2.1	**Section 6.1.1**
10631(b)(2)	Indicate if the basin has been adjudicated and include a copy of the court order or decree and a description of the amount of water the supplier has the legal right to pump.	System Supplies	Section 6.2.2	**Section 6.1.2.1**
10631(b)(2)	For unadjudicated basins, indicate whether or not the department has identified the basin as overdrafted, or projected to become overdrafted. Describe efforts by the supplier	System Supplies	Section 6.2.3	**Section 6.1.3**

	to eliminate the long-term overdraft condition.			
10631(b)(3)	Provide a detailed description and analysis of the location, amount, and sufficiency of groundwater pumped by the urban water supplier for the past five years	System Supplies	Section 6.2.4	**Section 6.1.4**
10631(b)(4)	Provide a detailed description and analysis of the amount and location of groundwater that is projected to be pumped.	System Supplies	Sections 6.2 and 6.9	**Section 6.1; Section 6.9**
10631(c)(1)	Describe the reliability of the water supply and vulnerability to seasonal or climatic shortage.	Water Supply Reliability Assessment	Section 7.1	**Section 7.1**
10631(c)(1)	Provide data for an average water year, a single dry water year, and multiple dry water years	Water Supply Reliability Assessment	Section 7.2	**Section 7.2**
10631(c)(2)	For any water source that may not be available at a consistent level of use, describe plans to supplement or replace that source.	Water Supply Reliability Assessment	Section 7.1	**Section 7.1**
10631(d)	Describe the opportunities for exchanges or transfers of water on a short-term or long-term basis.	System Supplies	Section 6.7	**Section 6.7**
10631(e)(1)	Quantify past, current, and projected water use, identifying the uses among water use sectors.	System Water Use	Section 4.2	**Section 4.2**
10631(e)(3)(A)	Report the distribution system water loss for the most recent 12-month period available.	System Water Use	Section 4.3	**Section 4.3**
10631(f)(1)	Retail suppliers shall provide a description of the nature and extent of each demand management measure implemented over the past five years. The description will address specific measures listed in code.	Demand Management Measures	Sections 9.2 and 9.3	**Section 9.2; Section 9.3**
10631(f)(2)	Wholesale suppliers shall describe specific demand management measures listed in code, their distribution system asset management program, and supplier assistance program.	Demand Management Measures	Sections 9.1 and 9.3	**Does Not Apply**
10631(g)	Describe the expected future water supply projects and programs that may be undertaken by the water supplier to address water supply reliability in average, single-dry, and multiple-dry years.	System Supplies	Section 6.8	**Section 6.8**
10631(h)	Describe desalinated water project opportunities for long-term supply.	System Supplies	Section 6.6	**Section 6.6**
10631(i)	CUWCC members may submit their 2013-2014 CUWCC BMP annual reports in lieu of, or in addition to, describing the DMM implementation in their UWMPs. This option is only allowable if the supplier has been	Demand Management Measures	Section 9.5	**Does Not Apply**

	found to be in full compliance with the CUWCC MOU.			
10631(j)	Retail suppliers will include documentation that they have provided their wholesale supplier(s) – if any - with water use projections from that source.	System Supplies	Section 2.5.1	**Does Not Apply**
10631(j)	Wholesale suppliers will include documentation that they have provided their urban water suppliers with identification and quantification of the existing and planned sources of water available from the wholesale to the urban supplier during various water year types.	System Supplies	Section 2.5.1	**Does Not Apply**
10631.1(a)	Include projected water use needed for lower income housing projected in the service area of the supplier.	System Water Use	Section 4.5	**Section 4.5**
10632(a) and 10632(a)(1)	Provide an urban water shortage contingency analysis that specifies stages of action and an outline of specific water supply conditions at each stage.	Water Shortage Contingency Planning	Section 8.1	**Section 8.1**
10632(a)(2)	Provide an estimate of the minimum water supply available during each of the next three water years based on the driest three-year historic sequence for the agency.	Water Shortage Contingency Planning	Section 8.9	**Section 8.9**
10632(a)(3)	Identify actions to be undertaken by the urban water supplier in case of a catastrophic interruption of water supplies.	Water Shortage Contingency Planning	Section 8.8	**Section 8.8**
10632(a)(4)	Identify mandatory prohibitions against specific water use practices during water shortages.	Water Shortage Contingency Planning	Section 8.2	**Section 8.2**
10632(a)(5)	Specify consumption reduction methods in the most restrictive stages.	Water Shortage Contingency Planning	Section 8.4	**Section 8.4**
10632(a)(6)	Indicated penalties or charges for excessive use, where applicable.	Water Shortage Contingency Planning	Section 8.3	**Section 8.3**
10632(a)(7)	Provide an analysis of the impacts of each of the actions and conditions in the water shortage contingency analysis on the revenues and expenditures of the urban water supplier, and proposed measures to overcome those impacts.	Water Shortage Contingency Planning	Section 8.6	**Section 8.6**
10632(a)(8)	Provide a draft water shortage contingency resolution or ordinance.	Water Shortage Contingency Planning	Section 8.7	**Section 8.7**
10632(a)(9)	Indicate a mechanism for determining actual reductions in water use pursuant to the water shortage contingency analysis.	Water Shortage Contingency Planning	Section 8.5	**Section 8.5**

10633	For wastewater and recycled water, coordinate with local water, wastewater, groundwater, and planning agencies that operate within the supplier's service area.	System Supplies (Recycled Water)	Section 6.5.1	**Section 6.5.1**
10633(a)	Describe the wastewater collection and treatment systems in the supplier's service area. Include quantification of the amount of wastewater collected and treated and the methods of wastewater disposal.	System Supplies (Recycled Water)	Section 6.5.2	**Section 6.5.2**
10633(b)	Describe the quantity of treated wastewater that meets recycled water standards, is being discharged, and is otherwise available for use in a recycled water project.	System Supplies (Recycled Water)	Section 6.5.2.2	**Section 6.5.2.2**
10633(c)	Describe the recycled water currently being used in the supplier's service area.	System Supplies (Recycled Water)	Section 6.5.3 and 6.5.4	**Section 6.5.3; Section 6.5.4**
10633(d)	Describe and quantify the potential uses of recycled water and provide a determination of the technical and economic feasibility of those uses.	System Supplies (Recycled Water)	Section 6.5.4	**Section 6.5.4**
10633(e)	Describe the projected use of recycled water within the supplier's service area at the end of 5, 10, 15, and 20 years, and a description of the actual use of recycled water in comparison to uses previously projected.	System Supplies (Recycled Water)	Section 6.5.4	**Section 6.5.4**
10633(f)	Describe the actions which may be taken to encourage the use of recycled water and the projected results of these actions in terms of acre-feet of recycled water used per year.	System Supplies (Recycled Water)	Section 6.5.5	**Section 6.5.5**
10633(g)	Provide a plan for optimizing the use of recycled water in the supplier's service area.	System Supplies (Recycled Water)	Section 6.5.5	**Section 6.5.5**
10634	Provide information on the quality of existing sources of water available to the supplier and the manner in which water quality affects water management strategies and supply reliability	Water Supply Reliability Assessment	Section 7.1	**Section 7.1**
10635(a)	Assess the water supply reliability during normal, dry, and multiple dry water years by comparing the total water supply sources available to the water supplier with the total projected water use over the next 20 years.	Water Supply Reliability Assessment	Section 7.3	**Section 7.3**
10635(b)	Provide supporting documentation that Water Shortage Contingency Plan has been, or will be, provided to any city or county within which it provides water, no later than 60 days after the submission of the plan to DWR.	Plan Adoption, Submittal, and Implementation	Section 10.4.4	**Section 10.4**

10642	Provide supporting documentation that the water supplier has encouraged active involvement of diverse social, cultural, and economic elements of the population within the service area prior to and during the preparation of the plan.	Plan Preparation	Section 2.5.2	**Section 10.2.2**
10642	Provide supporting documentation that the urban water supplier made the plan available for public inspection, published notice of the public hearing, and held a public hearing about the plan.	Plan Adoption, Submittal, and Implementation	Sections 10.2.2, 10.3, and 10.5	**Sections 10.2 and 10.3**
10642	The water supplier is to provide the time and place of the hearing to any city or county within which the supplier provides water.	Plan Adoption, Submittal, and Implementation	Sections 10.2.1	**Section 10.2**
10642	Provide supporting documentation that the plan has been adopted as prepared or modified.	Plan Adoption, Submittal, and Implementation	Section 10.3.1	**Section 10.3**
10644(a)	Provide supporting documentation that the urban water supplier has submitted this UWMP to the California State Library.	Plan Adoption, Submittal, and Implementation	Section 10.4.3	**Section 10.4**
10644(a)(1)	Provide supporting documentation that the urban water supplier has submitted this UWMP to any city or county within which the supplier provides water no later than 30 days after adoption.	Plan Adoption, Submittal, and Implementation	Section 10.4.4	**Section 10.4**
10644(a)(2)	The plan, or amendments to the plan, submitted to the department shall be submitted electronically.	Plan Adoption, Submittal, and Implementation	Sections 10.4.1 and 10.4.2	**Section 10.4**
10645	Provide supporting documentation that, not later than 30 days after filing a copy of its plan with the department, the supplier has or will make the plan available for public review during normal business hours.	Plan Adoption, Submittal, and Implementation	Section 10.5	**Section 10.5**

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Appendix B

2015 UWMP Standardized Tables

(Electronic Only)

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Table 2-1 Retail Only: Public Water Systems			
Public Water System Number	Public Water System Name	Number of Municipal Connections 2015	Volume of Water Supplied 2015
CA3310001	CVWD - Cove Community	103,076	89,050
CA1310011	CVWD - ID No. 11	2,740	1,357
CA3310048	CVWD - ID No. 8	1,542	2,567
	TOTAL	107,358	92,974
NOTES:			

Table 2-2: Plan Identification (Select One)		
☑	Individual UWMP	
☐	Regional UWMP (RUWMP) *(checking this triggers the next line to appear)*	
	Select One:	
	☐	RUWMP includes a Regional Alliance
	☐	RUWMP does not include a Regional Alliance
NOTES:		

Table 2-3: Agency Identification	
Type of Agency (select one or both)	
☐	Agency is a wholesaler
☑	Agency is a retailer
Fiscal or Calendar Year (select one)	
☑	UWMP Tables Are in Calendar Years
☐	UWMP Tables Are in Fiscal Years
If Using Fiscal Years Provide Month and Day that the Fiscal Year Begins (dd/mm)	
dd/mm	
Units of Measure Used in UWMP (select from Drop down)	
Unit	AF
NOTES: CVWD may become a wholesale agency in the future if raw water service is requested by other agencies.	

Table 2-4 Retail: Water Supplier Information Exchange
The retail supplier has informed the following wholesale supplier(s) of projected water use in accordance with CWC 10631.
Wholesale Water Supplier Name *(Add additional rows as needed)*
NOTES: CVWD does not purchase water from a wholesale water supplier.

Table 2-4 Wholesale: Water Supplier Information Exchange (select one)	
☐	Supplier has informed more than 10 other water suppliers of water supplies available in accordance with CWC 10631. Completion of the table below is optional. If not completed include a list of the water suppliers that were informed.
	Provide page number for location of the list.
☐	Supplier has informed 10 or fewer other water suppliers of water supplies available in accordance with CWC 10631. **Complete the table below.**
Water Supplier Name *(Add additional rows as needed)*	
NOTES:	

Table 3-1 Retail: Population - Current and Projected						
Population Served	2015	2020	2025	2030	2035	2040*(opt)*
	216,861	282,900	348,900	414,800	480,200	527,100
NOTES:						

Table 3-1 Wholesale: Population - Current and Projected						
Population Served	2015	2020	2025	2030	2035	2040*(opt)*
NOTES:						

Table 4-1 Retail: Demands for Potable and Raw Water - Actual			
Use Type *(Add additional rows as needed)*	2015 Actual		
Use Drop down list *May select each use multiple times* *These are the only Use Types that will be recognized by the WUEdata online submittal tool*	Additional Description *(as needed)*	Level of Treatment When Delivered *Drop down list*	Volume
Single Family	Potable	Drinking Water	48,543
Multi-Family	Potable	Drinking Water	6,490
Commercial	Potable	Drinking Water	5,195
Industrial	Potable	Drinking Water	0
Institutional/Governmental	Potable	Drinking Water	868
Landscape	Potable	Drinking Water	21,513
Other	Potable: construction	Drinking Water	799
Losses	Potable: non-revenue water	Drinking Water	9,566
		TOTAL	92,974
NOTES: Distribution losses (non-revenue water) are the difference between production and customer billing.			

Table 4-1 Wholesale: Demands for Potable and Raw Water - Actual			
Use Type *(Add additional rows as needed)*	2015 Actual		
Use Drop down list *May select each use multiple times* *These are the only use types that will be recognized by the WUE data online submittal tool*	Additional Description *(as needed)*	Level of Treatment When Delivered *Drop down list*	Volume
		TOTAL	0
NOTES:			

Table 4-2 Retail: Demands for Potable and Raw Water - Projected						
Use Type *(Add additional rows as needed)* ***Use Drop down list*** *May select each use multiple times* *These are the only Use Types that will be recognized by the WUEdata online submittal tool*	Additional Description *(as needed)*	Projected Water Use				
		2020	2025	2030	2035	2040-opt
Single Family	Potable	59,800	71,000	82,300	93,400	101,400
Multi-Family	Potable	8,000	9,500	11,000	12,500	13,600
Commercial	Potable	6,400	7,600	8,800	10,000	10,900
Industrial	Potable	0	0	0	0	0
Institutional/Governmental	Potable	1,100	1,300	1,500	1,700	1,800
Landscape	Potable	26,500	31,500	36,500	41,400	44,900
Other	Potable: construction	1,000	1,200	1,400	1,500	1,700
Losses	Potable: non-revenue water	11,800	14,000	16,200	18,400	20,000
	TOTAL	114,600	136,100	157,700	178,900	194,300
NOTES: Assume potable system losses scale linearly with demand.						

Table 4-2 Wholesale: Demands for Potable and Raw Water - Projected						
Use Type *(Add additional rows as needed)*	Additional Description *(as needed)*	Projected Water Use *Report To the Extent that Records are Available*				
Drop down list *May select each use multiple times These are the only Use Types that will be recognized by the WUEdata online submittal tool.*		2020	2025	2030	2035	2040 *(opt)*
Sales to other agencies	Canal water to Indio Water Authority [1]	5,000	10,000	20,000	20,000	20,000
Sales to other agencies	Canal water to Coachella Water Authority [2]	0	0	0	0	0
	TOTAL	5,000	10,000	20,000	20,000	20,000

NOTES:

[1] Indio Water Authority has identified Canal water as a future water source in its UWMP.

[2] Coachella Water Authority has identified Canal water as a potential future source but has not determined amounts and timing.

Table 4-3 Retail: Total Water Demands						
	2015	2020	2025	2030	2035	2040 *(opt)*
Potable and Raw Water *From Tables 4-1 and 4-2*	92,974	114,600	136,100	157,700	178,900	194,300
Recycled Water Demand *From Table 6-4*	8,749	14,300	27,700	30,800	33,900	36,300
TOTAL WATER DEMAND	101,723	128,900	163,800	188,500	212,800	230,600
NOTES: Recycled water does not currently and is not projected to offset urban water demands, but is used to offset private groundwater pumping.						

Table 4-3 Wholesale: Total Water Demands						
	2015	2020	2025	2030	2035	2040*(opt)*
Potable and Raw Water *From Tables 4-1 and 4-2*	0	5,000	10,000	20,000	20,000	20,000
Recycled Water Demand *From Table 6-4*	0	0	0	0	0	0
TOTAL WATER DEMAND	0	5,000	10,000	20,000	20,000	20,000
NOTES:						

Table 4-4 Retail: 12 Month Water Loss Audit Reporting	
Reporting Period Start Date (mm/yyyy)	Volume of Water Loss
07/2014	11,356
NOTES:	

Table 4-4 Wholesale: 12 Month Water Loss Audit Reporting	
Reporting Period Start Date (mm/yyyy)	Volume of Water Loss
NOTES:	

Table 4-5 Retail Only: Inclusion in Water Use Projections	
Are Future Water Savings Included in Projections? (Refer to Appendix K of UWMP Guidebook) *Drop down list (y/n)*	Yes
If "Yes" to above, state the section or page number, in the cell to the right, where citations of the codes, ordinances, etc… utilized in demand projections are found.	CVWD Ordinance No. 1302.2 (Landscape Ordinance)
Are Lower Income Residential Demands Included In Projections? *Drop down list (y/n)*	Yes
NOTES:	

Table 5-1 Baselines and Targets Summary
Retail Agency or Regional Alliance Only

Baseline Period	Start Year	End Year	Average Baseline GPCD*	2015 Interim Target *	Confirmed 2020 Target*
10-15 year	*1999*	*2008*	*606*	*540*	*473*
5 Year	*2003*	*2007*	*583*		

*All values are in Gallons per Capita per Day (GPCD)

NOTES: Confirmed 2020 target is the target calculated in the 2010 UWMP.

Table 5-2: 2015 Compliance

*Retail Agency or Regional Alliance Only**

Actual 2015 GPCD	2015 Interim Target GPCD	**Optional Adjustments to 2015 GPCD** "0" for adjustments not used Enter *From Methodology 8*					2015 GPCD *(Adjusted if applicable)*	Did Supplier Achieve Targeted Reduction for 2015? Y/N
		Extraordinary Events	Economic Adjustment	Weather Normalization	TOTAL Adjustments	Adjusted 2015 GPCD		
390	554	0	0	0	0	390	390	Yes

**All values are in Gallons per Capita per Day (GPCD)*

NOTES:

Table 6-1 Retail: Groundwater Volume Pumped						
❑	Supplier does not pump groundwater. The supplier will not complete the table below.					
Groundwater Type ***Drop Down List*** *May use each category multiple times*	Location or Basin Name	2011	2012	2013	2014	2015
Add additional rows as needed						
Alluvial Basin	Whitewater River Subbasin	109,400	111,787	111,920	108,959	90,407
Alluvial Basin	Mission Creek Subbasin	2,907	3,055	2,939	2,950	2,567
	TOTAL	112,306	114,842	114,859	111,909	92,974
NOTES:						

Table 6-1 Wholesale: Groundwater Volume Pumped						
☐	Supplier does not pump groundwater. The supplier will not complete the table below.					
Groundwater Type ***Drop Down List*** *May use each category multiple times*	Location or Basin Name	2011	2012	2013	2014	2015
TOTAL		0	0	0	0	0
NOTES:						

Table 6-2 Retail: Wastewater Collected Within Service Area in 2015						
☐	There is no wastewater collection system. The supplier will not complete the table below.					
	Percentage of 2015 service area covered by wastewater collection system *(optional)*					
	Percentage of 2015 service area population covered by wastewater collection system *(optional)*					
Wastewater Collection			**Recipient of Collected Wastewater**			
Name of Wastewater Collection Agency	Wastewater Volume Metered or Estimated? *Drop Down List*	Volume of Wastewater Collected in 2015	Name of Wastewater Treatment Agency Receiving Collected Wastewater	Treatment Plant Name	Is WWTP Located Within UWMP Area? *Drop Down List*	Is WWTP Operation Contracted to a Third Party? *(optional)* *Drop Down List*
Add additional rows as needed						
Coachella Valley Water District	Metered	18	Coachella Valley Water District	WRP-1	Yes	No
Coachella Valley Water District	Metered	14	Coachella Valley Water District	WRP-2	Yes	No
Coachella Valley Water District	Metered	5,145	Coachella Valley Water Di	WRP-4	Yes	No
Coachella Valley Water District	Metered	3,018	Coachella Valley Water District	WRP-7	Yes	No
Coachella Valley Water District	Metered	141	Coachella Valley Water District	WRP-9	Yes	No
Coachella Valley Water District	Metered	10,627	Coachella Valley Water District	WRP-10	Yes	No
Total Wastewater Collected from Service Area in 2015:		18,962				
NOTES: WRP-9 was taken offline on July 15, 2015.						

Table 6-3 Retail: Wastewater Treatment and Discharge Within Service Area in 2015

☐ No wastewater is treated or disposed of within the UWMP service area.
The supplier will not complete the table below.

Wastewater Treatment Plant Name	Discharge Location Name or Identifier	Discharge Location Description	Wastewater Discharge ID Number *(optional)*	Method of Disposal *Drop down list*	Does This Plant Treat Wastewater Generated Outside the Service Area?	Treatment Level *Drop down list*	2015 volumes			
							Wastewater Treated	Discharged Treated Wastewater	Recycled Within Service Area	Recycled Outside of Service Area
Add additional rows as needed										
CVWD WRP-1	Bombay Beach	Percolation Ponds		Percolation ponds	No	Secondary, Undisinfected	18	18	0	0
CVWD WRP-2	North Shore	Percolation Ponds		Percolation ponds	No	Secondary, Undisinfected	14	14	0	0
CVWD WRP-4	Thermal	CVSC		River or creek outfall	No	Secondary, Disinfected - 23	5,145	5,145	0	0
CVWD WRP-7 [1]	North Indio	Nonpotable customers and percolation ponds		Percolation ponds	No	Tertiary	3,018	1,016	1,773	0
CVWD WRP-9 [2]	East Palm Desert	Offline		Percolation ponds	No	Secondary, Disinfected - 23	141	61	80	0
CVWD WRP-10 [1]	Palm Desert	Nonpotable customers and percolation ponds		Percolation ponds	No	Tertiary	10,627	3,204	6,896	0
						Total	18,962	9,457	8,749	0

NOTES:

[1] Tertiary capacity of WRP-7 is 2.5 MGD, WRP-10 is 15 MGD.

[2] WRP-9 was taken offline on July 15, 2015 and has been decommissioned.

Table 6-3 Wholesale: Wastewater Treatment and Discharge Within Service Area in 2015										
☐	Wholesale supplier does not provide supplemental treatment to recycled water it distributes. The supplier will not complete the table below.									
Wastewater Treatment Plant Name	Discharge Location Name or Identifier	Discharge Location Description	Wastewater Discharge ID Number *(optional)*	Method of Disposal *Drop down list*	Does This Plant Treat Wastewater Generated Outside the Service Area?	Treatment Level *Drop down list*	2015 volumes			
							Wastewater Treated	Discharged Treated Wastewater	Recycled Within Service Area	Recycled Outside of Service Area
Add additional rows as needed										
						Total	0	0	0	0
NOTES:										

Table 6-4 Retail: Current and Projected Recycled Water Direct Beneficial Uses Within Service Area

☐	Recycled water is not used and is not planned for use within the service area of the supplier. The supplier will not complete the table below.

Name of Agency Producing (Treating) the Recycled Water:	Coachella Valley Water District
Name of Agency Operating the Recycled Water Distribution System:	Coachella Valley Water District
Supplemental Water Added in 2015	5,543
Source of 2015 Supplemental Water	Raw Colorado River water

Beneficial Use Type *These are the only Use Types that will be recognized by the DWR online submittal tool*	General Description of 2015 Uses	Level of Treatment *Drop down list*	2015	2020	2025	2030	2035	2040 (opt)
Agricultural irrigation	Served by WRP-4	Tertiary	0	0	12,700	15,100	17,500	19,200
Landscape irrigation (excludes golf courses)	HOAs and one high school served by WRP-10	Tertiary	387	400	400	400	400	400
Golf course irrigation	Served by WRP-7 and WRP-10	Tertiary	8,282	13,900	14,600	15,300	16,000	16,700
Golf course irrigation	Served by WRP-9	Secondary, Disinfected - 23	80	0	0	0	0	0
Commercial use								
Industrial use								
Geothermal and other energy production								
Seawater intrusion barrier								
Recreational impoundment								
Wetlands or wildlife habitat								
Groundwater recharge (IPR)								
Surface water augmentation (IPR)								
Direct potable reuse								
Other								
		Total:	8,749	14,300	27,700	30,800	33,900	36,300

IPR - Indirect Potable Reuse

NOTES: WRP-9 was taken offline on July 15, 2015 and has been decommissioned.

Table 6-4 Wholesale: Current and Projected Retailers Provided Recycled Water Within Service Area							
☐	Recycled water is not directly treated or distributed by the supplier. The supplier will not complete the table below.						
Name of Receiving Supplier or Direct Use by Wholesaler	Level of Treatment *Drop down list*	2015	2020	2025	2030	2035	2040 *(opt)*
Add additional rows as needed							
	Total	0	0	0	0	0	0
NOTES:							

Table 6-5 Retail: 2010 UWMP Recycled Water Use Projection Compared to 2015 Actual			
☐	Recycled water was not used in 2010 nor projected for use in 2015. The supplier will not complete the table below.		
Use Type *These are the only Use Types that will be recognized by the WUEdata online submittal tool*		2010 Projection for 2015	2015 actual use
Agricultural irrigation		0	0
Landscape irrigation (excludes golf courses)		530	387
Golf course irrigation		12,330	8,362
Commercial use			
Industrial use			
Geothermal and other energy production			
Seawater intrusion barrier			
Recreational impoundment			
Wetlands or wildlife habitat			
Groundwater recharge (IPR)			
Surface water augmentation (IPR)			
Direct potable reuse			
Other			
Total		12,860	8,749
NOTES:			

Table 6-5 Wholesale: 2010 UWMP Recycled Water Use Projection Compared to 2015 Actual		
☐	Recycled water was not used or distributed by the supplier in 2010, nor projected for use or distribution in 2015. The wholesale supplier will not complete the table below.	
Name of Receiving Supplier or Direct Use by Wholesaler	2010 Projection for 2015	2015 actual use
Add additional rows as needed		
Total	0	0
NOTES:		

Table 6-6 Retail: Methods to Expand Future Recycled Water Use			
☐	Supplier does not plan to expand recycled water use in the future. Supplier will not complete the table below but will provide narrative explanation.		
6-25 to 6-27	Provide page location of narrative in UWMP		
Name of Action	Description	Planned Implementation Year	Expected Increase in Recycled Water Use
Add additional rows as needed			
Recycled Water Market Assessment	CVWD will conduct a market assessment for recycled water in the next year.	By 2020	TBD
Financial incentives	CVWD makes the use of recycled water more affordable than the cost to pump groundwater.	2015-2040	TBD
WRP-4 Recycled Water Program	Initial phases of WRP-4 recycled water program with eventual construction of tertiary treatment, plant expansion, and conveyance facilities.	2020-2040	19,200
Addition of golf courses to MVP	Utilization of recycled water during winter months.	2020-2040	5,600
IWA Recycled Water Program	CVWD will work with IWA to develop their Recycled Water Program.	2020-2040	9,250
		Total	34,050
NOTES:			

Table 6-7 Retail: Expected Future Water Supply Projects or Programs						
☐	No expected future water supply projects or programs that provide a quantifiable increase to the agency's water supply. Supplier will not complete the table below.					
☐	Some or all of the supplier's future water supply projects or programs are not compatible with this table and are described in a narrative format.					
	Provide page location of narrative in the UWMP					
Name of Future Projects or Programs	Joint Project with other agencies?		Description (if needed)	Planned Implementation Year	Planned for Use in Year Type *Drop Down List User may select more than one.*	Expected Increase in Water Supply to Agency *This may be a range*
	Drop Down List (y/n)	*If Yes, Agency Name*				
Add additional rows as needed						
Desalinated agricultural drain water	No		Supplementary nonpotable source for urban use	2025 to 2040	Average Year	5,000 to 20,000 AFY
Recycled water	No		Additional recycled water supplies	2020 to 2040	Average Year	10,000 to 20,000 AFY
California WaterFix	Yes	SWP Contractors, DWR	Construction of water facilities to improve SWP delivery reliability in the Delta	2025 to 2040	Average Year	SWP reliability increase from 50% to 70%
NOTES: California WaterFix increase expected estimated assuming SWP reliability increase from 50% to 70%						

Table 6-7 Wholesale: Expected Future Water Supply Projects or Programs						
☐	No expected future water supply projects or programs that provide a quantifiable increase to the agency's water supply. Supplier will not complete the table below.					
☐	Some or all of the supplier's future water supply projects or programs are not compatible with this table and are described in a narrative format.					
	Provide page location of narrative in the UWMP					
Name of Future Projects or Programs	Joint Project with other agencies?		Description *(if needed)*	Planned Implementation Year	Planned for Use in Year Type *Drop Down list User may select more than one.*	Expected Increase in Water Supply to Agency
	Drop Down Menu	*If Yes, Agency Name*				
Add additional rows as needed						
NOTES:						

Table 6-8 Retail: Water Supplies — Actual				
Water Supply	Additional Detail on Water Supply	2015		
Drop down list *May use each category multiple times. These are the only water supply categories that will be recognized by the WUEdata online submittal tool*		Actual Volume	Water Quality *Drop Down List*	Total Right or Safe Yield *(optional)*
Add additional rows as needed				
Groundwater	Potable urban use	92,974	Drinking Water	Undefined
Recycled Water	WRP-9 [1,2]	80	Recycled Water	141
Recycled Water	WRP-7 [1]	1,773	Recycled Water	3,018
Recycled Water	WRP-10 [1]	6,896	Recycled Water	10,627
	Total	101,723		13,786

NOTES:

[1] Recycled water safe yield is based on total projected flows at each WWTP; surface discharge and percolated wastewater effluent is not included in the reasonably available supply estimates.

[2] WRP-9 was taken offline on July 15, 2015.

Table 6-8 Wholesale: Water Supplies — Actual				
Water Supply	Additional Detail on Water Supply	2015		
Drop down list *May use each category multiple times. These are the only water supply categories that will be recognized by the WUEdata online submittal tool*		Actual Volume	Water Quality *Drop Down List*	Total Right or Safe Yield *(optional)*
Add additional rows as needed				
	Total	0		0
NOTES:				

Table 6-9 Retail: Water Supplies — Projected											
Water Supply	Additional Detail on Water Supply	Projected Water Supply *Report To the Extent Practicable*									
Drop down list *May use each category multiple times. These are the only water supply categories that will be recognized by the WUEdata online submittal tool*		**2020**		**2025**		**2030**		**2035**		**2040** *(opt)*	
		Reasonably Available Volume	Total Right or Safe Yield *(optional)*	Reasonably Available Volume	Total Right or Safe Yield *(optional)*	Reasonably Available Volume	Total Right or Safe Yield *(optional)*	Reasonably Available Volume	Total Right or Safe Yield *(optional)*	Reasonably Available Volume	Total Right or Safe Yield *(optional)*
Add additional rows as needed											
Groundwater	Potable urban use	113,400		102,100		112,700		106,600		101,000	
Purchased or Imported Water	Treated Canal water for potable urban use in East Valley [1]	0	415,000	18,000	440,000	18,000	445,000	31,000	445,000	40,000	445,000
Purchased or Imported Water	Untreated Canal water for nonpotable urban use in East Valley [1]	1,200		11,000		17,000		26,300		33,300	
Desalinated Water	Desalinated drain water for nonpotable urban use	0		5,000		10,000		15,000		20,000	
Recycled Water	WRP-7 [2]	3,400	3,400	3,700	3,700	4,000	4,000	4,300	4,300	4,600	4,600
Recycled Water	WRP-10 [2]	10,900	10,900	11,300	11,300	11,700	11,700	12,100	12,100	12,500	12,500
Recycled Water	WRP-4 [2,3]	0	10,300	12,700	12,700	15,100	15,100	17,500	17,500	19,200	19,200
	Total	128,900	439,600	163,800	467,700	188,500	475,800	212,800	478,900	230,600	481,300

NOTES:

[1] Total Colorado River allotment will increase from 397,000 AF in 2016 to 459,000 AF in 2026. Colorado River water supply does not sum to total right because of nonurban supply not shown on this table and projected wholesale to other agencies.

[2] Recycled water safe yield is based on total projected flows at each WWTP; surface discharge and percolated wastewater effluent is not included in the reasonably available supply estimates.

[3] Assumes tertiary treatment is not available until after 2020 at WRP-4.

Table 6-9 Wholesale: Water Supplies — Projected

Water Supply	Additional Detail on Water Supply	Projected Water Supply *Report To the Extent Practicable*									
		2020		2025		2030		2035		2040 *(opt)*	
Drop down list *May use each category multiple times. These are the only water supply categories that will be recognized by the WUEdata online submittal tool*		Reasonably Available Volume	Total Right or Safe Yield *(optional)*	Reasonably Available Volume	Total Right or Safe Yield *(optional)*	Reasonably Available Volume	Total Right or Safe Yield *(optional)*	Reasonably Available Volume	Total Right or Safe Yield *(optional)*	Reasonably Available Volume	Total Right or Safe Yield *(optional)*
Add additional rows as needed											
Purchased or Imported Water	Sale of Canal water to IWA for potable use	5,000		10,000		20,000		20,000		20,000	
Purchased or Imported Water	Sale of Canal water to City of Coachella	0		0		0		0		0	
Total		5,000	0	10,000	0	20,000	0	20,000	0	20,000	0

NOTES:

Table 7-1 Retail: Basis of Water Year Data - All Non-SWP Exchange Water Sources			
Year Type	Base Year	Available Supplies if Agency may provide volume only, percent only, or both	
		Volume Available	% of Average Supply
Average Year	N/A[1]		100%
Single-Dry Year	2014		100%
Multiple-Dry Years 1st Year	2013		100%
Multiple-Dry Years 2nd Year	2014		100%
Multiple-Dry Years 3rd Year	2015		100%
Multiple-Dry Years 4th Year *Optional*			
Multiple-Dry Years 5th Year *Optional*			
Multiple-Dry Years 6th Year *Optional*			
Agency may use multiple versions of Table 7-1 if different water sources have different base years and the			

NOTES: Groundwater, Colorado River water, recycled water, and desalinated drain water supplies assumed to remain at 100% of average year supply during dry years.

[1] Average year is not applicable as supply amounts vary based on the QSA.

Table 7-1 Wholesale: Basis of Water Year Data			
Year Type	Base Year	Available Supplies if Year Type Repeats Agency may provide volume only, percent only, or both	
		Volume Available	% of Average Supply
Average Year			100%
Single-Dry Year			
Multiple-Dry Years 1st Year			
Multiple-Dry Years 2nd Year			
Multiple-Dry Years 3rd Year			
Multiple-Dry Years 4th Year *Optional*			
Multiple-Dry Years 5th Year *Optional*			
Multiple-Dry Years 6th Year *Optional*			
Agency may use multiple versions of Table 7-1 if different water sources have different base years and the supplier chooses to report the base years for each water source separately. If an agency uses multiple versions of Table 7-1, in the "Note" section of each table, state that multiple versions of Table 7-1 are being used and identify the particular water source that is being reported in each table.			
NOTES:			

Table 7-2 Retail: Normal Year Supply and Demand Comparison					
	2020	2025	2030	2035	2040 *(Opt)*
Supply totals (*autofill from Table 6-9)*	128,900	163,800	188,500	212,800	230,600
Demand totals *(autofill from Table 4-3)*	128,900	163,800	188,500	212,800	230,600
Difference	0	0	0	0	0
NOTES:					

Table 7-2 Wholesale: Normal Year Supply and Demand Comparison					
	2020	2025	2030	2035	2040 *(Opt)*
Supply totals *(autofill from Table 6-9)*	5,000	10,000	20,000	20,000	20,000
Demand totals *(autofill fm Table 4-3)*	5,000	10,000	20,000	20,000	20,000
Difference	0	0	0	0	0
NOTES:					

Table 7-3 Retail: Single Dry Year Supply and Demand Comparison					
	2020	2025	2030	2035	2040 (Opt)
Supply totals	128,900	163,800	188,500	212,800	230,600
Demand totals	128,900	163,800	188,500	212,800	230,600
Difference	0	0	0	0	0
NOTES:					

Table 7-3 Wholesale: Single Dry Year Supply and Demand Comparison					
	2020	2025	2030	2035	2040 (Opt)
Supply totals	5,000	10,000	20,000	20,000	20,000
Demand totals	5,000	10,000	20,000	20,000	20,000
Difference	0	0	0	0	0
NOTES:					

Table 7-4 Retail: Multiple Dry Years Supply and Demand Comparison						
		2020	2025	2030	2035	2040 (Opt)
First year	Supply totals	128,900	163,800	188,500	212,800	230,600
	Demand totals	128,900	163,800	188,500	212,800	230,600
	Difference	0	0	0	0	0
Second year	Supply totals	128,900	163,800	188,500	212,800	230,600
	Demand totals	128,900	163,800	188,500	212,800	230,600
	Difference	0	0	0	0	0
Third year	Supply totals	128,900	163,800	188,500	212,800	230,600
	Demand totals	128,900	163,800	188,500	212,800	230,600
	Difference	0	0	0	0	0
Fourth year *(optional)*	Supply totals					
	Demand totals					
	Difference	0	0	0	0	0
Fifth year *(optional)*	Supply totals					
	Demand totals					
	Difference	0	0	0	0	0
Sixth year *(optional)*	Supply totals					
	Demand totals					
	Difference	0	0	0	0	0
NOTES:						

Table 7-4 Wholesale: Multiple Dry Years Supply and Demand Comparison						
		2020	2025	2030	2035	2040 (Opt)
First year	Supply totals	5,000	10,000	20,000	20,000	20,000
	Demand totals	5,000	10,000	20,000	20,000	20,000
	Difference	0	0	0	0	0
Second year	Supply totals	5,000	10,000	20,000	20,000	20,000
	Demand totals	5,000	10,000	20,000	20,000	20,000
	Difference	0	0	0	0	0
Third year	Supply totals	5,000	10,000	20,000	20,000	20,000
	Demand totals	5,000	10,000	20,000	20,000	20,000
	Difference	0	0	0	0	0
Fourth year *(optional)*	Supply totals					
	Demand totals					
	Difference	0	0	0	0	0
Fifth year *(optional)*	Supply totals					
	Demand totals					
	Difference	0	0	0	0	0
Sixth year *(optional)*	Supply totals					
	Demand totals					
	Difference	0	0	0	0	0
NOTES:						

Table 8-1 Retail Stages of Water Shortage Contingency Plan		
Stage	Complete Both	
	Percent Supply Reduction[1] *Numerical value as a percent*	Water Supply Condition (*Narrative description)*
Add additional rows as needed		
1	10%	Normal water supplies
2	10%	10% reduction in total groundwater and imported supplies relative to long-term average conditions
3	25%	25% reduction in total groundwater and imported supplies relative to long-term average conditions
4	50%	50% reduction in total groundwater and imported supplies relative to long-term average conditions
[1] *One stage in the Water Shortage Contingency Plan must address a water shortage of 50%.*		
NOTES: Stage 1 is a voluntary reduction; stages 2 through 4 are mandatory reductions. Stage 2 and 3 reductions are flexible and may be adjusted by CVWD Board action based on actual supply conditions.		

Table 8-1 Wholesale Stages of Water Storage Contingency Plan		
Stage	Complete Both	
	Percent Supply Reduction[1] *Numerical value as a percentage*	Water Supply Condition (*Narrative description)*
Add additional rows as needed		
[1] *One stage in the Water Shortage Contingency Plan must address a water shortage of 50%.*		
NOTES:		

Table 8-2 Retail Only: Restrictions and Prohibitions on End Uses			
Stage	Restrictions and Prohibitions on End Users ***Drop down list*** *These are the only categories that will be accepted by the WUEdata online submittal tool*	Additional Explanation or Reference *(optional)*	Penalty, Charge, or Other Enforcement? *Drop Down List*
Add additional rows as needed			
1	Landscape - Other landscape restriction or prohibition	Application of any water supply to outdoor landscapes during and within 48 hours after measurable rainfall is prohibited. CVWD Ordinance 1422.3 (5a).	Yes
1	Landscape - Prohibit certain types of landscape irrigation	Irrigation with any water of ornamental turf on public street medians is prohibited. CVWD Ordinance 1422.3 (5b).	Yes
1	Landscape - Prohibit certain types of landscape irrigation	Irrigation with potable water of landscapes outside of newly constructed homes and buildings in a manner inconsistent with regulations or other requirements established in the California Building Standards Commission and the Department of Housing and Community Development is prohibited. CVWD Ordinance 1422.3 (5c).	Yes
1	Landscape - Other landscape restriction or prohibition	Variances for increased water budgets for over-seeding shall not be granted. CVWD Ordinance 1422.3 (5d).	Yes
1	Other - Customers must repair leaks, breaks, and malfunctions in a timely manner	Broken sprinklers shall be repaired within 24 hours of notification by CVWD, and leaks shall be repaired as soon as practicable. CVWD Ordinance 1422.3 (5e).	Yes
1	CII - Restaurants may only serve water upon request	The serving of drinking water other than upon request in eating or drinking establishments, including but not limited to restaurants, hotels, cafes, cafeterias, bars, or other public places where food or drink are served and/or purchased is prohibited. CVWD Ordinance 1422.3 (5f).	Yes
1	CII - Lodging establishment must offer opt out of linen service	Hotels and motels shall provide guests with the option of choosing not to have towels and linens laundered daily. Hotels and motels shall prominently display notice of this option in each guestroom using clear and easily understood language. CVWD Ordinance 1422.3 (5g).	Yes
1	Landscape - Restrict or prohibit runoff from landscape irrigation	Applying any water to outdoor landscapes in a manner that causes runoff such that water flows onto adjacent property, non-irrigated areas, private and public walkways, roadways, parking lots, or structures is prohibited. CVWD Ordinance 1422.3 (5h).	Yes
1	Other - Require automatic shut of hoses	Using a hose to wash an automobile, windows, solar panels, and tennis courts, except where the hose is equipped with a shut-off nozzle, is prohibited. CVWD Ordinance 1422.3 (5i).	Yes
1	Other - Prohibit use of potable water for washing hard surfaces	Applying any water to any hard surface including, but not limited to, driveways, sidewalks, and asphalt is prohibited. CVWD Ordinance 1422.3 (5j).	Yes
1	Landscape - Other landscape restriction or prohibition	Homeowner's Associations, community service organizations, or similar entities are prohibited from enforcing provisions of their Rules and Regulations that prohibit reducing or eliminating the watering of vegetation or lawns during a declared drought emergency. CVWD Ordinance 1422.3 (5l).	Yes
1	Water Features - Restrict water use for decorative water features, such as fountains	Using any water in a fountain or other decorative water feature is prohibited, except where the water is part of a recirculating system. CVWD Ordinance 1419(4c) and SWRCB Regulation 864(a4).	Yes
2	Other	Reduced outdoor water budget by 10%. Enforced through penalty water rates. Enacted as needed by ordinance.	Yes
3	Other	Reduced outdoor water budget by 25%. Enforced through penalty water rates. Enacted as needed by ordinance.	Yes
4	Other	Reduced outdoor water budget by 50%. Enforced through penalty water rates. Enacted as needed by ordinance.	Yes
1	Other	The irrigation and preservation of trees and shrubs is strongly encouraged. CVWD Ordinance 1422.3 (6a).	No
1	Other	CVWD strongly encourages counties, cities, Homeowners' Associations ("HOA's") and other enforcement agencies to suspend code enforcement and fines for brown turf areas and to otherwise comply with new State laws regarding limitations on such enforcement. CVWD Ordinance 1422.3 (6b).	No
1	Other	CVWD will work with private pumpers, canal water and non-potable water users to reduce water use. CVWD Ordinance 1422.3 (6c).	No
1	Pools and Spas - Require covers for pools and spas	Use of pool covers when not in use, especially during summer months, is strongly encouraged. CVWD Ordinance 1422.3 (6d).	No
1	Other water feature or swimming pool restriction	Draining and refilling of private swimming pools is discouraged, unless necessary for health and safety or leak repair. CVWD Ordinance 1422.3 (6e).	No
1	Other	HOA's are strongly encouraged to adopt and enforce water use restrictions in their rules and regulations. CVWD Ordinance 1422.3 (6f).	No
1	Other	Over-seeding is strongly discouraged. CVWD Ordinance 1422.3 (6g).	No
1	Other	Planting of spray irrigated annual flower beds is strongly discouraged. CVWD Ordinance 1422.3 (6h).	No
1	Other	Installation of irrigation smart controllers is strongly encouraged. CVWD Ordinance 1422.3 (6i).	No
NOTES:			

Table 8-3 Retail Only: Stages of Water Shortage Contingency Plan - Consumption Reduction Methods		
Stage	Consumption Reduction Methods by Water Supplier ***Drop down list*** *These are the only categories that will be accepted by the WUEdata online submittal tool*	Additional Explanation or Reference *(optional)*
Add additional rows as needed		
Varies	Other	Voluntary Rationing - 10% projected reduction
Varies	Implement or Modify Drought Rate Structure or Surcharge	Demand Reduction Program - % reduction varies with stage; penalty rates for exceedance
Varies	Expand Public Information Campaign	10% projected reduction
Varies	Provide Rebates on Plumbing Fixtures and Devices	10% projected reduction
Varies	Other	Mandatory Rationing - up to 50% projected reduction
Varies	Other	Flow Restrictions - up to 50% projected reduction
Varies	Other	Use Prohibitions - up to 50% projected reduction
1	Other	Use Prohibitions
All	Provide Rebates for Turf Replacement	
NOTES:		

Table 8-4 Retail: Minimum Supply Next Three Years			
Supply	2016	2017	2018
Available Water Supply	114,900	114,900	114,900
NOTES: Assumes available groundwater supply is the highest amount pumped from 2011 to 2015 of 114,900 AF. Colorado River water assumed to be unavailable for urban use until 2020.			

Table 8-4 Wholesale: Minimum Supply Next Three Years			
	2016	2017	2018
Available Water Supply			
NOTES:			

Table 10-1 Retail: Notification to Cities and Counties		
City Name	60 Day Notice	Notice of Public Hearing
Add additional rows as needed		
La Quinta	☑	☑
Indio (Indio Water Authority)	☑	☑
Coachella (Coachella Water Authority)	☑	☑
Palm Desert	☑	☑
Cathedral City	☑	☑
Indian Wells	☑	☑
Rancho Mirage	☑	☑
Desert Water Agency	☑	☑
Mission Springs Water District	☑	☑
County of Riverside Transportation and Land Management Agency - Planning Department	☑	☑
Riverside County Flood Control and Water Conservation District	☑	☑
Riverside County Department of Public Health	☑	☑
Imperial County Planning and Development Services	☑	☑
Native American Tribes	☑	☑
	☐	☐
County Name *Drop Down List*	60 Day Notice	Notice of Public Hearing
Add additional rows as needed		
Riverside County	☑	☑
Imperial County	☑	☑
	☐	☐
NOTES:		

Table 10-1 Wholesale: Notification to Cities and Counties (select one)		
☐	Supplier has notified more than 10 cities or counties in accordance with CWC 10621 (b) and 10642. **Completion of the table below is not required. Provide a separate list of the cities and counties that were notified.**	
	Provide the page or location of this list in the UWMP.	
☐	Supplier has notified 10 or fewer cities or counties. **Complete the table below.**	
City Name	60 Day Notice	Notice of Public Hearing
Add additional rows as needed		
	☐	☐
	☐	☐
	☐	☐
County Name *Drop Down List*	60 Day Notice	Notice of Public Hearing
Add additional rows as needed		
	☐	☐
	☐	☐
	☐	☐
NOTES:		

Appendix C

SB X7-7 Standardized Tables

(Electronic Only)

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SB X7-7 Table 0: Units of Measure Used in UWMP* *(select one from the drop down list)*
Acre Feet
**The unit of measure must be consistent with Table 2-3*
NOTES:

SB X7-7 Table-1: Baseline Period Ranges			
Baseline	**Parameter**	**Value**	**Units**
10- to 15-year baseline period	2008 total water deliveries	129,273	Acre Feet
	2008 total volume of delivered recycled water	0	Acre Feet
	2008 recycled water as a percent of total deliveries	0.00%	Percent
	Number of years in baseline period[1]	10	Years
	Year beginning baseline period range	1999	
	Year ending baseline period range[2]	2008	
5-year baseline period	Number of years in baseline period	5	Years
	Year beginning baseline period range	2003	
	Year ending baseline period range[3]	2007	

[1] *If the 2008 recycled water percent is less than 10 percent, then the first baseline period is a continuous 10-year period. If the amount of recycled water delivered in 2008 is 10 percent or greater, the first baseline period is a continuous 10- to 15-year period.*

[2] *The ending year must be between December 31, 2004 and December 31, 2010.*

[3] *The ending year must be between December 31, 2007 and December 31, 2010.*

NOTES:

SB X7-7 Table 2: Method for Population Estimates	
Method Used to Determine Population (may check more than one)	
☐	**1. Department of Finance** (DOF) DOF Table E-8 (1990 - 2000) and (2000-2010) and DOF Table E-5 (2011 - 2015) when available
☐	**2. Persons-per-Connection Method**
☑	**3. DWR Population Tool**
☐	**4. Other** DWR recommends pre-review
NOTES: DWR Population Tool methodology was used through a manual calculation due to errors uploading agency boundary files.	

SB X7-7 Table 3: Service Area Population		
Year		**Population**
10 to 15 Year Baseline Population		
Year 1	1999	149,328
Year 2	2000	155,972
Year 3	2001	163,557
Year 4	2002	169,889
Year 5	2003	177,144
Year 6	2004	186,583
Year 7	2005	194,960
Year 8	2006	202,094
Year 9	2007	208,166
Year 10	2008	209,218
Year 11		
Year 12		
Year 13		
Year 14		
Year 15		
5 Year Baseline Population		
Year 1	2003	177,144
Year 2	2004	186,583
Year 3	2005	194,960
Year 4	2006	202,094
Year 5	2007	208,166
2015 Compliance Year Population		
2015		216,861
NOTES:		

SB X7-7 Table 4: Annual Gross Water Use *								
	Baseline Year *Fm SB X7-7 Table 3*	**Volume Into Distribution System** *Fm SB X7-7 Table(s) 4-A*	**Deductions**					**Annual Gross Water Use**
			Exported Water	Change in Dist. System Storage (+/-)	Indirect Recycled Water *Fm SB X7-7 Table 4-B*	Water Delivered for Agricultural Use	Process Water *Fm SB X7-7 Table(s) 4-D*	
10 to 15 Year Baseline - Gross Water Use								
Year 1	1999	106805.4			0		0	106,805
Year 2	2000	117546.6			0		0	117,547
Year 3	2001	116915.9			0		0	116,916
Year 4	2002	123219.4			0		0	123,219
Year 5	2003	121230.6			0		0	121,231
Year 6	2004	124138.8			0		0	124,139
Year 7	2005	121737.1			0		0	121,737
Year 8	2006	134987.9			0		0	134,988
Year 9	2007	129870.9			0		0	129,871
Year 10	2008	129272.5			0		0	129,273
Year 11	0	0			0		0	0
Year 12	0	0			0		0	0
Year 13	0	0			0		0	0
Year 14	0	0			0		0	0
Year 15	0	0			0		0	0
10 - 15 year baseline average gross water use								**81,715**
5 Year Baseline - Gross Water Use								
Year 1	2003	121,231			0		0	121,231
Year 2	2004	124,139			0		0	124,139
Year 3	2005	121,737			0		0	121,737
Year 4	2006	134,988			0		0	134,988
Year 5	2007	129,871			0		0	129,871
5 year baseline average gross water use								**126,393**
2015 Compliance Year - Gross Water Use								
2015		92,974			0		0	92,974
* NOTE that the units of measure must remain consistent throughout the UWMP, as reported in Table 2-3								
NOTES:								

SB X7-7 Table 4-A: Volume Entering the Distribution System(s)

Complete one table for each source.

Name of Source	Groundwater
This water source is:	
☑	The supplier's own water source
☐	A purchased or imported source

Baseline Year *Fm SB X7-7 Table 3*		Volume Entering Distribution System	Meter Error Adjustment* *Optional (+/-)*	Corrected Volume Entering Distribution System
10 to 15 Year Baseline - Water into Distribution System				
Year 1	1999	106,805		106,805
Year 2	2000	117,547		117,547
Year 3	2001	116,916		116,916
Year 4	2002	123,219		123,219
Year 5	2003	121,231		121,231
Year 6	2004	124,139		124,139
Year 7	2005	121,737		121,737
Year 8	2006	134,988		134,988
Year 9	2007	129,871		129,871
Year 10	2008	129,273		129,273
Year 11	0			0
Year 12	0			0
Year 13	0			0
Year 14	0			0
Year 15	0			0
5 Year Baseline - Water into Distribution System				
Year 1	2003	121,231		121,231
Year 2	2004	124,139		124,139
Year 3	2005	121,737		121,737
Year 4	2006	134,988		134,988
Year 5	2007	129,871		129,871
2015 Compliance Year - Water into Distribution System				
2015		92,974		92,974

** Meter Error Adjustment - See guidance in Methodology 1, Step 3 of Methodologies Document*

NOTES:

SB X7-7 Table 4-B: Indirect Recycled Water Use Deduction *(For use only by agencies that are deducting indirect recycled water)*

Baseline Year *Fm SB X7-7 Table 3*		**Surface Reservoir Augmentation**					**Groundwater Recharge**			**Total Deductible Volume of Indirect Recycled Water Entering the Distribution System**
		Volume Discharged from Reservoir for Distribution System Delivery	Percent Recycled Water	Recycled Water Delivered to Treatment Plant	Transmission/ Treatment Loss	Recycled Volume Entering Distribution System from Surface Reservoir Augmentation	Recycled Water Pumped by Utility*	Transmission/ Treatment Losses	Recycled Volume Entering Distribution System from Groundwater Recharge	
10-15 Year Baseline - Indirect Recycled Water Use										
Year 1	1999			0		0			0	0
Year 2	2000			0		0			0	0
Year 3	2001			0		0			0	0
Year 4	2002			0		0			0	0
Year 5	2003			0		0			0	0
Year 6	2004			0		0			0	0
Year 7	2005			0		0			0	0
Year 8	2006			0		0			0	0
Year 9	2007			0		0			0	0
Year 10	2008			0		0			0	0
Year 11	0			0		0			0	0
Year 12	0			0		0			0	0
Year 13	0			0		0			0	0
Year 14	0			0		0			0	0
Year 15	0			0		0			0	0
5 Year Baseline - Indirect Recycled Water Use										
Year 1	2003			0		0			0	0
Year 2	2004			0		0			0	0
Year 3	2005			0		0			0	0
Year 4	2006			0		0			0	0
Year 5	2007			0		0			0	0
2015 Compliance - Indirect Recycled Water Use										
2015				0		0			0	0

**Suppliers will provide supplemental sheets to document the calculation for their input into "Recycled Water Pumped by Utility". The volume reported in this cell must be less than total groundwater pumped - See Methodology 1, Step 8, section 2.c.*

NOTES:

SB X7-7 Table 4-C: Process Water Deduction Eligibility *(For use only by agencies that are deducting process water) Choose Only One*	
☐	**Criteria 1**- Industrial water use is equal to or greater than 12% of gross water use. Complete SB X7-7 Table 4-C.1
☐	**Criteria 2** - Industrial water use is equal to or greater than 15 GPCD. Complete SB X7-7 Table 4-C.2
☐	**Criteria 3** - Non-industrial use is equal to or less than 120 GPCD. Complete SB X7-7 Table 4-C.3
☐	**Criteria 4** - Disadvantaged Community. Complete SB x7-7 Table 4-C.4
NOTES:	

SB X7-7 Table 4-C.1: Process Water Deduction Eligibility					
Criteria 1 Industrial water use is equal to or greater than 12% of gross water use					
Baseline Year *Fm SB X7-7 Table 3*		Gross Water Use Without Process Water Deduction	Industrial Water Use	Percent Industrial Water	**Eligible for Exclusion Y/N**
10 to 15 Year Baseline - Process Water Deduction Eligibility					
Year 1	1999	106,805		0%	NO
Year 2	2000	117,547		0%	NO
Year 3	2001	116,916		0%	NO
Year 4	2002	123,219		0%	NO
Year 5	2003	121,231		0%	NO
Year 6	2004	124,139		0%	NO
Year 7	2005	121,737		0%	NO
Year 8	2006	134,988		0%	NO
Year 9	2007	129,871		0%	NO
Year 10	2008	129,273		0%	NO
Year 11	0	0			NO
Year 12	0	0			NO
Year 13	0	0			NO
Year 14	0	0			NO
Year 15	0	0			NO
5 Year Baseline - Process Water Deduction Eligibility					
Year 1	2003	121,231		0%	NO
Year 2	2004	124,139		0%	NO
Year 3	2005	121,737		0%	NO
Year 4	2006	134,988		0%	NO
Year 5	2007	129,871		0%	NO
2015 Compliance Year - Process Water Deduction Eligiblity					
2015		92,974		0%	NO
NOTES:					

SB X7-7 Table 4-C.2: Process Water Deduction Eligibility					
Criteria 2 Industrial water use is equal to or greater than 15 GPCD					
Baseline Year *Fm SB X7-7 Table 3*		Industrial Water Use	Population	Industrial GPCD	**Eligible for Exclusion Y/N**
10 to 15 Year Baseline - Process Water Deduction Eligibility					
Year 1	1999		149,328	0	NO
Year 2	2000		155,972	0	NO
Year 3	2001		163,557	0	NO
Year 4	2002		169,889	0	NO
Year 5	2003		177,144	0	NO
Year 6	2004		186,583	0	NO
Year 7	2005		194,960	0	NO
Year 8	2006		202,094	0	NO
Year 9	2007		208,166	0	NO
Year 10	2008		209,218	0	NO
Year 11	0		0		NO
Year 12	0		0		NO
Year 13	0		0		NO
Year 14	0		0		NO
Year 15	0		0		NO
5 Year Baseline - Process Water Deduction Eligibility					
Year 1	2003		177,144	0	NO
Year 2	2004		186,583	0	NO
Year 3	2005		194,960	0	NO
Year 4	2006		202,094	0	NO
Year 5	2007		208,166	0	NO
2015 Compliance Year - Process Water Deduction Eligibility					
2015			216,861	0	NO
NOTES:					

SB X7-7 Table 4-C.3: Process Water Deduction Eligibility							
Criteria 3 Non-industrial use is equal to or less than 120 GPCD							
Baseline Year *Fm SB X7-7 Table 3*		Gross Water Use Without Process Water Deduction *Fm SB X7-7 Table 4*	Industrial Water Use	Non-industrial Water Use	Population *Fm SB X7-7 Table 3*	Non-Industrial GPCD	**Eligible for Exclusion Y/N**
10 to 15 Year Baseline - Process Water Deduction Eligibility							
Year 1	1999	106,805		106,805	149,328	639	NO
Year 2	2000	117,547		117,547	155,972	673	NO
Year 3	2001	116,916		116,916	163,557	638	NO
Year 4	2002	123,219		123,219	169,889	648	NO
Year 5	2003	121,231		121,231	177,144	611	NO
Year 6	2004	124,139		124,139	186,583	594	NO
Year 7	2005	121,737		121,737	194,960	557	NO
Year 8	2006	134,988		134,988	202,094	596	NO
Year 9	2007	129,871		129,871	208,166	557	NO
Year 10	2008	129,273		129,273	209,218	552	NO
Year 11	0	0		0	0		NO
Year 12	0	0		0	0		NO
Year 13	0	0		0	0		NO
Year 14	0	0		0	0		NO
Year 15	0	0		0	0		NO
5 Year Baseline - Process Water Deduction Eligibility							
Year 1	2003	121,231		121,231	177,144	611	NO
Year 2	2004	124,139		124,139	186,583	594	NO
Year 3	2005	121,737		121,737	194,960	557	NO
Year 4	2006	134,988		134,988	202,094	596	NO
Year 5	2007	129,871		129,871	208,166	557	NO
2015 Compliance Year - Process Water Deduction Eligiblity							
2015		92,974		92,974	216,861	383	NO
NOTES:							

SB X7-7 Table 4-C.4: Process Water Deduction Eligibility

Criteria 4
Disadvantaged Community
Use IRWM DAC Mapping tool http://www.water.ca.gov/irwm/grants/resources_dac.cfm

California Median Household Income		Service Area Median Household Income	Percentage of Statewide Average	**Eligible for Exclusion? Y/N**
2015 Compliance Year - Process Water Deduction Eligibility				
2010	$53,046		0%	YES

A "Disadvantaged Community" is a community with a median household income less than 80 percent of the statewide average.

NOTES:

SB X7-7 Table 4-D: Process Water Deduction - Volume *Complete a separate table for each industrial customer with a process water exclusion*						
Name of Industrial Customer		*Industrial Customer 1*				
Baseline Year *Fm SB X7-7 Table 3*		Industrial Customer's Total Water Use	Total Volume Supplied by Water Agency	% of Water Supplied by Water Agency	Customer's Total Process Water Use	Volume of Process Water Eligible for Exclusion for this Customer
10 to 15 Year Baseline - Process Water Deduction						
Year 1	1999					0
Year 2	2000					0
Year 3	2001					0
Year 4	2002					0
Year 5	2003					0
Year 6	2004					0
Year 7	2005					0
Year 8	2006					0
Year 9	2007					0
Year 10	2008					0
Year 11	0					0
Year 12	0					0
Year 13	0					0
Year 14	0					0
Year 15	0					0
5 Year Baseline - Process Water Deduction						
Year 1	2003					0
Year 2	2004					0
Year 3	2005					0
Year 4	2006					0
Year 5	2007					0
2015 Compliance Year - Process Water Deduction						
2015						0
NOTES:						

SB X7-7 Table 5: Gallons Per Capita Per Day (GPCD)				
Baseline Year *Fm SB X7-7 Table 3*		Service Area Population *Fm SB X7-7 Table 3*	Annual Gross Water Use *Fm SB X7-7 Table 4*	Daily Per Capita Water Use (GPCD)
10 to 15 Year Baseline GPCD				
Year 1	1999	149,328	106,805	639
Year 2	2000	155,972	117,547	673
Year 3	2001	163,557	116,916	638
Year 4	2002	169,889	123,219	648
Year 5	2003	177,144	121,231	611
Year 6	2004	186,583	124,139	594
Year 7	2005	194,960	121,737	557
Year 8	2006	202,094	134,988	596
Year 9	2007	208,166	129,871	557
Year 10	2008	209,218	129,273	552
Year 11	0	0	0	
Year 12	0	0	0	
Year 13	0	0	0	
Year 14	0	0	0	
Year 15	0	0	0	
10-15 Year Average Baseline GPCD				**606**
5 Year Baseline GPCD				
Baseline Year *Fm SB X7-7 Table 3*		Service Area Population *Fm SB X7-7 Table 3*	Gross Water Use *Fm SB X7-7 Table 4*	Daily Per Capita Water Use
Year 1	2003	177,144	121,231	611
Year 2	2004	186,583	124,139	594
Year 3	2005	194,960	121,737	557
Year 4	2006	202,094	134,988	596
Year 5	2007	208,166	129,871	557
5 Year Average Baseline GPCD				**583**
2015 Compliance Year GPCD				
2015		216,861	92,974	383
NOTES:				

SB X7-7 Table 6: Gallons per Capita per Day *Summary From Table SB X7-7 Table 5*	
10-15 Year Baseline GPCD	606
5 Year Baseline GPCD	583
2015 Compliance Year GPCD	383
NOTES:	

SB X7-7 Table 7: 2020 Target Method *Select Only One*		
Target Method		Supporting Documentation
☑	Method 1	SB X7-7 Table 7A
☐	Method 2	SB X7-7 Tables 7B, 7C, and 7D *Contact DWR for these tables*
☐	Method 3	SB X7-7 Table 7-E
☐	Method 4	Method 4 Calculator
NOTES:		

SB X7-7 Table 7-A: Target Method 1 20% Reduction	
10-15 Year Baseline GPCD	2020 Target GPCD
606	485

NOTES: The 2010 UWMP calculated method 1 target of 473 GPCD will be retained as the water use target instead of the 485 GPCD calculated for this UWMP.

SB X7-7 Table 7-B: Target Method 2	Target
Landscape Water Use	

Tables for Target Method 2 (SB X7-7 Tables 7-B, 7-C, and 7-D) are not included in the SB X7-7 Verification Form, but are still required for water suppliers using Target Method 2. These water suppliers should contact Gwen Huff at (916) 651-9672 or gwen.huff@water.ca.gov

SB X7-7 Table 7-C: Target Method 2

Target CII Water Use

Tables for Target Method 2 (SB X7-7 Tables 7-B, 7-C, and 7-D) are not included in the SB X7-7 Verification Form, but are still required for water suppliers using Target Method 2. These water suppliers should contact Gwen Huff at (916) 651-9672 or gwen.huff@water.ca.gov

SB X7-7 Table 7-D: Target Method 2 Summary
Tables for Target Method 2 (SB X7-7 Tables 7-B, 7-C, and 7-D) are not included in the SB X7-7 Verification Form, but are still required for water suppliers using Target Method 2. These water suppliers should contact Gwen Huff at (916) 651-9672 or gwen.huff@water.ca.gov

SB X7-7 Table 7-E: Target Method 3				
Agency May Select More Than One as Applicable	Percentage of Service Area in This Hydrological Region	Hydrologic Region	"2020 Plan" Regional Targets	Method 3 Regional Targets (95%)
☐		North Coast	137	130
☐		North Lahontan	173	164
☐		Sacramento River	176	167
☐		San Francisco Bay	131	124
☐		San Joaquin River	174	165
☐		Central Coast	123	117
☐		Tulare Lake	188	179
☐		South Lahontan	170	162
☑		South Coast	149	142
☐		Colorado River	211	200
Target *(If more than one region is selected, this value is calculated.)*				**0**
NOTES:				

SB X7-7 Table 7-F: Confirm Minimum Reduction for 2020 Target			
5 Year Baseline GPCD *From SB X7-7 Table 5*	Maximum 2020 Target*	Calculated 2020 Target *Fm Appropriate Target Table*	Confirmed 2020 Target
583	554	473	473
** Maximum 2020 Target is 95% of the 5 Year Baseline GPCD*			
NOTES:			

SB X7-7 Table 8: 2015 Interim Target GPCD		
Confirmed 2020 Target *Fm SB X7-7 Table 7-F*	10-15 year Baseline GPCD *Fm SB X7-7 Table 5*	2015 Interim Target GPCD
473	606	540
NOTES:		

SB X7-7 Table 9: 2015 Compliance								
Actual 2015 GPCD	2015 Interim Target GPCD	Optional Adjustments *(in GPCD)*					2015 GPCD *(Adjusted if applicable)*	Did Supplier Achieve Targeted Reduction for 2015?
		Extraordinary Events	Weather Normalization	Economic Adjustment	TOTAL Adjustments	Adjusted 2015 GPCD		
383	540	*From Methodology 8 (Optional)*	*From Methodology 8 (Optional)*	*From Methodology 8 (Optional)*	0	382.7430043	382.7430043	YES
NOTES:								

Appendix D

Basis for Population Growth Forecasts

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APPENDIX D
BASIS FOR COACHELLA VALLEY POPULATION FORECASTS

Prepared by David J Ringel, Consulting Engineer
On behalf of MWH Americas, Inc.
For Coachella Valley Water District, 2015 Urban Water Management Plan

The population served by a water agency has a significant effect on water usage. In the Coachella Valley, there are several population components that must be considered – permanent population, visitor population, and seasonal population. Permanent or resident population is typically determined by the federal census; however, the visitor and seasonal population are not directly enumerated. This document summarizes the approach and results for estimates of permanent, visitor, and seasonal population in the Coachella Valley.

D.1 Permanent Population

Permanent population is defined as the population that lives in the Coachella Valley throughout the entire year. The permanent population is typically counted through the decennial census conducted by the U. S. Census Bureau. The most recent federal decennial census was conducted in 2010.

The permanent population in the Valley is projected to increase in the future. The population growth forecast for the CVWD area is based on the following data sources:

- 2010 U. S. Census data broken down by city, unincorporated census designated place (CDP), and unincorporated not within a CDP.
- 2015 California Department of Finance (DOF) Report E-5 Population and Housing Estimates for Cities, Counties, and the State, January 1, 2011-2015, with 2010 Benchmark.
- 2012 Southern California Association of Governments (SCAG) Adopted Growth Forecast by City and Unincorporated County.

The Coachella Valley population is evaluated in three regions corresponding to groundwater subbasin areas: Mission Creek/Garnet Hill, West Whitewater, and East Whitewater. Population within the cities, CDPs, and other unincorporated areas are assigned to groundwater region based on the source of water supply. Water agency service areas often overlap the groundwater basin subdivisions. Population is allocated to water agency based on the areas of the cities, CDPs, or unincorporated regions served by each agency. If a water agency serves population in several groundwater subbasin areas, the population served in each subbasin is totaled to obtain

a water agency population. It should be noted that the actual population served may be lower for some water agencies than the amounts shown because a portion of the population may reside within a water agency's boundary but is not connected to the water system.

Several 2010 Census reports are used to determine the Coachella Valley population and assign population to regions and water districts within the Valley including population by CDP, city population, county subdivision, and, in a few cases, census tract and census block. Population in areas not assigned to a CDP are allocated to regions and water agency by overlaying water service area, CDP areas, and groundwater basin maps. Areas served by multiple water agencies are allocated based on relative percentages of developed land within each agency.

Population estimates for 2015 are based on DOF estimates published annually by city and county. DOF does not separately estimate the unincorporated population of the Coachella Valley. Consequently, the 2015 unincorporated population in each subbasin area is estimated by assuming the growth rate is the same as the city or cities within that area.

DWR developed a web-based population tool for water agency use in determining their service area population for the 2015 Urban Water Management Plan (UWMP). This tool uses a GIS-based approach that overlays the service area of the water agency with Census block data for 1990, 2000, and 2010. The tool outputs the single-family and multi-family population. MWH determined CVWD's service area extent by overlaying the pipelines constructed prior to 1990, 2000, and 2010 on the census block maps. The CVWD domestic water service area populations for these years were determined to be 80,706, 155,972, and 212,029, respectively. Similar analyses for the other water agencies was outside the scope of this report.

Growth is allocated to regions and water agencies separately for city and unincorporated areas. Future city and unincorporated populations are based on the 2012 SCAG forecasts for 2020 and 2035. The 2015 DOF city populations are compared to the SCAG 2020 forecasts. If these values are not consistent, the 2020 forecast is adjusted to produce a linear trend between 2015 and 2035. This was done only for Desert Hot Springs and for the total Valley population, because the forecasts indicated extreme growth would be needed in the next five years to match the original forecasts. Population growth beyond 2035 is based on linear growth trends for the period of 2010 through 2035.

The following tables summarize the population growth and water demand forecasts. Table C-1 and **Figure C-1** summarizes population growth for the Coachella Valley and the northern portion of Imperial County served by CVWD. Specific assumptions are noted in the Comments column. Overall, the Mission Creek/Garnet Hill area is projected to grow from about 44,600 people in 2010 to almost 110,000 by 2045. The West Valley area is projected to grow from 181,900 in 2010 to 248,300 by 2045. The East Valley will grow from 197,500 in 2010 to almost 654,000 by 2045. In total, about 635,000 people could be added to the Valley by 2045.

To accommodate this level of growth, a significant amount of agricultural and vacant land will need to be developed. Assuming roughly 4 dwelling units per acre and a Riverside County-wide

occupancy of 3.2 people per dwelling unit, at least 50,000 acres of land will be required. The 2010 Coachella Valley Water Management Plan Update assumed half the growth would occur on vacant land and half would occur on existing agricultural land.

The population forecast by water agency is shown in **Table C-2**. The service areas are based on existing boundaries and executed service agreements between agencies. The CVWD population includes northern portions of Imperial County that are connected to CVWD's domestic water system.

D.2 Visitor and Seasonal Population

A significant portion of the Coachella Valley economy is derived from the leisure and hospitality industry. The Valley is a popular destination for "snowbirds," people whose primary residence is outside the Valley but may live in the Valley for three to six months during the winter period. In addition, there are people who maintain second homes in the Valley and use them for shorter periods of time throughout the year. The Coachella Valley Economic Partnership (CVEP) states that about 60 percent of single family homes are owner-occupied and 40 percent are remotely owned. Most of these remote owners (71 percent) live in California; about 9 percent are foreign-owned. For the condominium and attached home market, 27 percent are owner-occupied and 73 percent are remotely owned. CVEP indicates transient occupancy is generally high through the winter and spring months, peaking in March/April of each year in response to the professional tennis tournament and the Coachella music festivals (Coachella Valley Economic Partnership, 2015).

Quantification of the seasonal population of the Valley is not a straightforward task as there are no direct measurement methods. A variety of studies have conducted surveys and economic analyses to estimate the seasonal population in tourist regions. Other studies have used housing and hotel occupancy data or sales tax revenue to infer seasonal population. This discussion applies several of these methods to estimate the visitor and seasonal population of the Coachella Valley.

Previous economic studies have attempted to document the impact of tourism and seasonal residency on the Valley's economy. Among these are studies performed or commissioned by Wheeler's Market Intelligence, Coachella Valley Economic Partnership, Tourism Economics, Short Term Rental Advocacy Center, and the Greater Palm Springs Convention and Visitors Bureau (GPSCVB) among others. For 2013, the GPSCVB estimated 12.2 million day and overnight visits to the Valley, of which about 5.5 million were overnight visitors (Greater Palm Springs Convention & Visitors Bureau, 2013). These numbers are based on estimated visitor spending on tourism activities. If the 12.2 million visitors were averaged over a year, it would be equivalent to about 33,000 additional permanent residents, of which day visitors represent about 18,000. Counting only the overnight visitors would add about 15,000 to the permanent population. This overnight population may be indicative of hotel stays.

The 2010 Census documented the housing occupancy in the Valley. **Table C-5** presents the 2010 housing and occupancy data by city and unincorporated community. There were 221,018 housing units in the Valley in 2010. Of these, 71.3 percent were occupied. Vacant units totaled 62,197, of which 41,367 dwelling units were vacant for seasonal, recreational, or occasional use (about 80 percent of the Riverside County total). Most of these seasonal units are second homes. Multiplying the city or community permanent occupancy per dwelling unity by the number of seasonal units gives an estimated of the peak seasonal population of about 95,000. The actual seasonal occupancy of these units is not known, therefore two other estimation methods are used. If these units were occupied at the Valley average of 2.71 people per dwelling, the seasonal Valley population could be as much as 112,000 people. Because the seasonal population is predominantly retired people with second homes, the seasonal occupancy could average less than 2 people per unit for a peak seasonal population of 83,000. Thus, the 95,000 estimate of peak population appears to be reasonable. Assuming three to six month average stays by snowbirds, the seasonal population could be the equivalent of 24,000 to 48,000 permanent residents. Because some occupancy occurs even in the hot summer months, it is estimated that seasonally occupied housing could account for about 75,000 people on average, with higher occupancy in the winter and spring months.

The Coachella Valley also has approximately 120 hotels and motels with nearly 15,000 rooms, of which about 5,300 rooms in 55 properties are located in Pam Springs. Over 2,000 additional rooms are planned for the region. As discussed above, the Palm Springs area lodging market is highly seasonal. Winter and spring occupancy reaches the 70/80% level. Hot summer months traditionally show occupancies in the 40% range (Saritvanich, 2015). CVEP indicated an average occupancy rate of 67.6 percent for 2015 (Coachella Valley Economic Partnership, 2015). If an average occupancy of two people per room is assumed, approximately 10,000 people stay in hotels each night. This number peaks in the winter and spring at roughly 20,000 to 25,000 people.

Seasonal residents also stay in recreational vehicle (RV) parks. The Valley has at least 40 RV parks with less than 40 to more than 1,000 spaces based on a cursory internet survey. Assuming an average park size of 250 spaces, there may be approximately 10,000 RV spaces in the Valley. If each space is occupied with 2 people per space and the utilization is similar to hotels, the equivalent of about 14,000 people may stay in RV parks in the Valley. It should be noted that a number of RV parks have permanent residents that would be counted in the census, so there is more uncertainty in these numbers for seasonal RV residents.

Totaling the population in seasonal homes, hotels, and RV parks, the seasonal population of the Valley could be the equivalent of 41,000 to 72,000 full-time residents. Although the peak population in the winter and spring months could reach as high as 150,000, it seems unlikely that full occupancy would ever be approached.

Another approach to estimate seasonal population is through a comparison of taxable sales for the Valley compared to that of the County or the State. Sales greater than the County or State averages may indicate the effect of visitors to the Valley on the economy. The State Board of

Equalization documents taxable sales by city and county on a quarterly and annual basis. The sales are broken down by category on a statewide basis and summarized by retail and food service sales and total sales. The most recent full year of data is available for 2013. Taxable sales for retail and food service sales in all Valley cities totaled $4.69 billion in 2013. The average per capita retail and food service sales in the Valley was $12,850 per person. In comparison, California averaged $10,492 per person for retail and food service sales. If California per capita values are assumed to be representative of typical sales, the additional sales in the Valley can be a proxy indicator for the visitor population. Using the January 2014 California Department of Finance population estimate for the Valley cities of 364,987 (California Department of Finance, 2016). Based on these sales amounts, the Valley cities generate the equivalent sales of a population of 447,000. Therefore, the visitor population of the Valley cities could be approximately 82,000 people. Adjusting for unincorporated areas of the Valley could increase the estimated visitor population to as much as 100,000.

Based on the foregoing, it is estimated that the seasonal population of the Valley is the equivalent of about 79,000 permanent residents as shown in **Table C-6**. It should be noted the estimates presented are based on a number of assumptions that could significantly impact the results. Therefore, this value should be used for general guidance.

Considering these numbers, it is estimated that uncounted seasonal population adds the equivalent of about 100,000 to 109,000 people to the Valley's permanent population of about 453,000, a 25 percent increase. Based on the locations of seasonally vacant properties, about 69 percent or about 70,000 seasonal visitors are estimated to be within the CVWD service area. Incorporating seasonal/transient population in the per capita water use calculations would reduce the per capita water use by about 20 percent.

D.3 References

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Table C-1
Coachella Valley Population Forecasts by Planning Area

Mission Creek Garnet Hill Planning Area	2010	2015	2020	2025	2030	2035	2040	2045	Comment
Desert Hot Springs	25,938	28,134	35,600	43,100	50,600	58,100	63,800	70,600	Reduced 2020 pop from 43500; Interpolated from 2020 to 2035; 2010-2035 Trend for 2040-45
Unincorporated	18,634	19,600	23,100	26,500	30,000	33,400	36,000	39,200	Assume 64% the rate of DHS growth to match MCGHWMP projections in 2045
Total Mission Creek Garnet Hill	**44,572**	**47,734**	**58,700**	**69,600**	**80,600**	**91,500**	**99,800**	**109,800**	

West Valley Planning Area	2010	2015	2020	2025	2030	2035	2040	2045	Comment
Cathedral City	51,200	52,903	57,000	59,500	62,000	64,600	67,500	70,300	About 3,900 people served by DWA, rest by CVWD
Indian Wells	4,958	5,194	5,500	5,600	5,700	5,800	6,000	6,200	All served by CVWD
Palm Desert	48,445	51,053	52,100	53,700	55,300	56,800	58,500	60,100	All served by CVWD
Palm Springs	44,552	46,611	48,900	51,300	53,700	56,100	58,300	60,700	All served by DWA
Rancho Mirage	17,218	17,889	18,800	20,200	21,600	22,900	23,900	25,000	All served by CVWD
West Valley Cities	166,373	173,650	182,300	190,300	198,300	206,200	214,200	222,300	
Unincorporated	15,531	16,900	18,500	20,000	21,500	23,000	24,500	26,000	Assume double the cities growth rate based on location of vacant land-served by CVWD except Whitewater CDP
Total West Valley	**181,904**	**190,550**	**200,800**	**210,300**	**219,800**	**229,200**	**238,700**	**248,300**	

East Valley Planning Area	2010	2015	2020	2025	2030	2035	2040	2045	Comment
Coachella	40,704	43,917	70,200	89,700	109,200	128,700	145,900	164,700	All served by CWA
Indio	76,036	84,201	91,500	98,300	105,100	111,800	119,300	126,400	Mostly served by IWA; CVWD serves northwestern portion
La Quinta	37,467	39,694	41,600	43,200	44,800	46,300	48,300	50,000	All served by CVWD
East Valley Cities	154,207	167,812	203,300	231,200	259,100	286,800	313,500	341,100	
Unincorporated	43,339	47,163	92,100	145,500	198,900	252,200	285,200	312,800	Calculated to match 2012 CVAG/SCAG Valley numbers in 2035. Mostly served by CVWD
Total East Valley	**197,346**	**214,975**	**295,400**	**376,700**	**458,000**	**539,000**	**598,700**	**653,900**	
Total Coachella Valley	**424,022**	**453,259**	**554,900**	**656,600**	**758,400**	**859,700**	**937,200**	**1,012,000**	
CVWD Imperial County Area	**5,584**	**5,600**	**6,900**	**8,200**	**9,500**	**10,800**	**13,000**	**14,200**	Assume same growth rate as Unincorporated Imperial County
Total Planning Area	**427,200**	**458,900**	**561,800**	**664,800**	**767,900**	**870,500**	**950,200**	**1,026,200**	

Figure C-1
Coachella Valley Population by Region

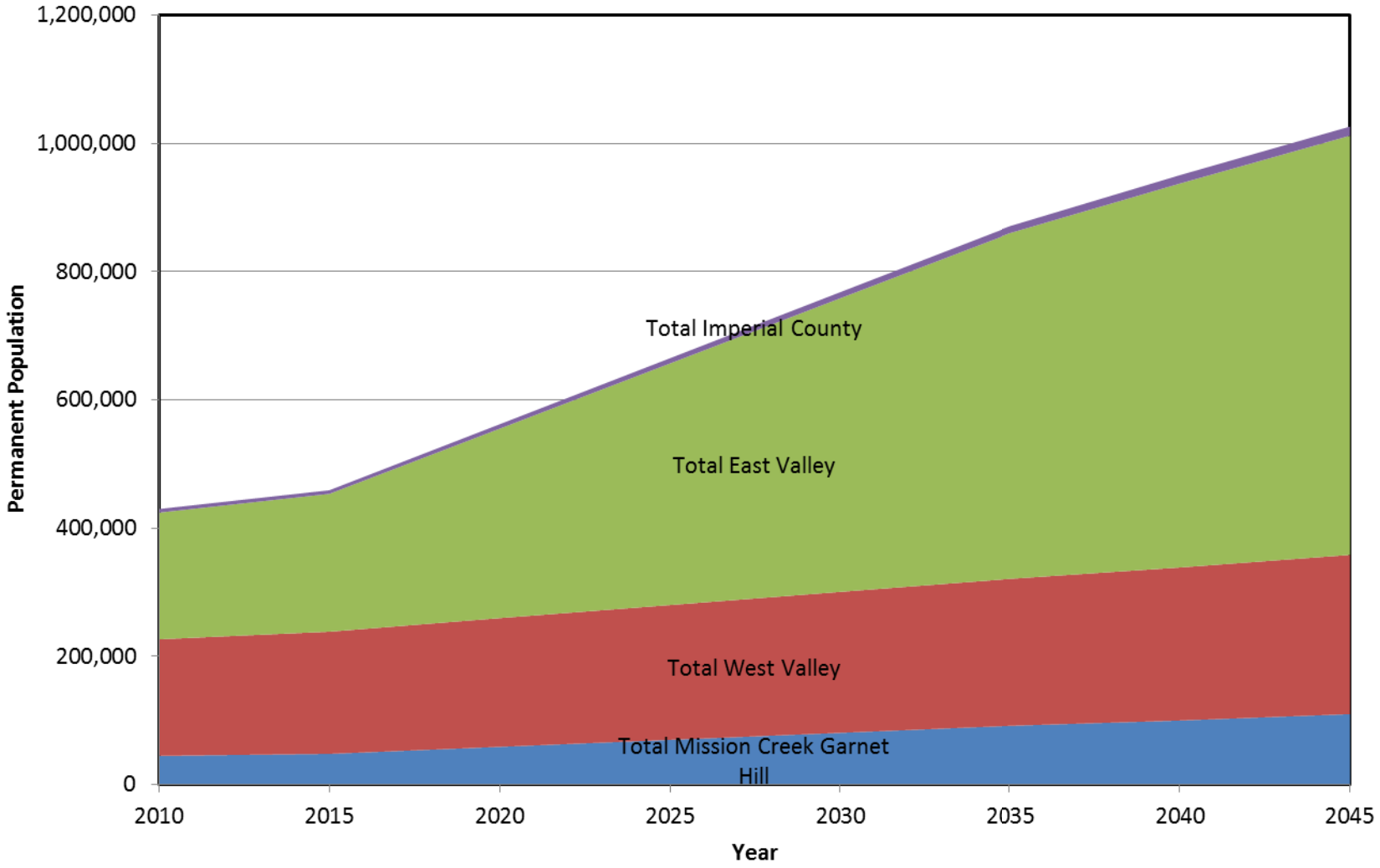

Table C-2
Estimated Water Agency Population Projections

Water Agency Population	2010	2015	2020	2025	2030	2035	2040	2045	Comment
CVWD Domestic – Whitewater	204,255	208,661	273,300	337,800	402,300	466,300	512,100	551,200	CVWD total less Mission Creek and unserved
CVWD Domestic – Mission Creek	7,774	8,200	9,600	11,100	12,500	13,900	15,000	16,400	Assumes constant 41.7 percent of unincorporated based on 2010
CVWD - Not Served	12,595	12,600	11,600	10,600	9,600	8,600	7,600	6,300	Assume reduces in half by 2045
CVWD Total	224,624	237,000	294,500	359,500	424,400	488,800	534,700	573,900	Remainder of Coachella Valley plus CVWD portion of Imperial County
MSWD	34,337	40,500	50,000	59,400	69,000	78,500	85,700	94,300	Desert Hot Springs plus unincorporated less CVWD - Mission Creek
DWA	50,652	52,900	55,700	58,400	61,100	63,800	66,300	69,100	Palm Springs City population plus 6100 in Cathedral City for 2010
IWA	70,330	77,900	84,600	90,900	97,200	103,400	110,300	116,900	Indio City population reduced by percent served by CVWD in 2010
CWA	40,704	43,900	70,200	89,700	109,200	128,700	145,900	164,700	All of Coachella
MDMWC	6,554	6,700	6,800	6,900	7,000	7,300	7,300	7,300	Serves about 90% of Bermuda Dunes CDP Population. Assume 90% built out in 2010; full build out by 2035
Total Population-Served	**414,605**	**446,300**	**550,200**	**654,200**	**758,300**	**861,900**	**942,600**	**1,019,900**	
Total Population	**427,200**	**458,900**	**561,800**	**664,800**	**767,900**	**870,500**	**950,200**	**1,026,200**	
Growth since 2010	0	31,700	134,600	237,600	340,700	443,300	523,000	599,000	

Table C-3
2010 Population and Housing Occupancy Data

Location	2010 Permanent Population	Total housing units	Total Occupied housing units	Total Vacant housing units	Vacant for seasonal, recreational, or occasional use	Total Vacancy Percent-age	Occupancy Excluding Seasonal Use	Permanent Population per Occupied Unit	Seasonal Population at Current Occupancy	Seasonal Population at Riverside County Average
Cities										
Cathedral City	51,200	20,995	17,047	3,948	2,138	18.8%	9.6%	3.00	6,421	6,842
Coachella	40,704	9,903	8,998	905	104	9.1%	8.2%	4.52	470	333
Desert Hot Springs	25,938	10,902	8,650	2,252	433	20.7%	17.4%	3.00	1,298	1,386
Indian Wells	4,958	5,137	2,745	2,392	2,028	46.6%	11.7%	1.81	3,663	6,490
Indio	76,036	28,971	23,378	5,593	2,986	19.3%	10.0%	3.25	9,712	9,555
La Quinta	37,467	23,489	14,820	8,669	6,448	36.9%	13.0%	2.53	16,301	20,634
Palm Desert	48,445	37,073	23,117	13,956	10,418	37.6%	13.3%	2.10	21,832	33,338
Palm Springs	44,552	34,794	22,746	12,048	8,151	34.6%	14.6%	1.96	15,965	26,083
Rancho Mirage	17,218	14,243	8,829	5,414	4,193	38.0%	12.1%	1.95	8,177	13,418
Total - Cities	**346,518**	**185,507**	**130,330**	**55,177**	**36,899**	**29.7%**	**12.3%**	**2.66**	**83,841**	**118,077**
Unincorporated Communities										
Bermuda Dunes CDP	7,282	3,639	2,942	697	250	19.2%	13.2%	2.48	619	800
Desert Edge CDP	3,822	3,492	1,969	1,523	1,305	43.6%	10.0%	1.94	2,533	4,176
Desert Palms CDP (Sun City)	6,957	5,055	4,104	951	705	18.8%	5.7%	1.70	1,195	2,256
Garnet CDP	7,543	2,670	2,174	496	220	18.6%	11.3%	3.47	763	704
Indio Hills CDP	972	358	304	54	14	15.1%	11.6%	3.20	45	45
Mecca CDP	8,577	2,020	1,854	166	17	8.2%	7.4%	4.63	79	54
North Shore CDP	3,477	854	750	104	25	12.2%	9.5%	4.64	116	80
Oasis CDP	6,890	1,575	1,474	101	23	6.4%	5.0%	4.67	108	74
Sky Valley CDP	2,406	1,766	1,064	702	367	39.8%	23.9%	2.26	830	1,174
Thermal CDP	2,865	761	684	77	6	10.1%	9.4%	4.19	25	19
Thousand Palms CDP	7,715	3,705	2,849	856	565	23.1%	9.3%	2.71	1,530	1,808
Vista Santa Rosa CDP	2,926	856	745	111	24	13.0%	10.5%	3.93	94	77
Whitewater CDP	859	405	312	93	19	23.0%	19.2%	2.75	52	61
Other Unincorporated	12,807	5,121	4,032	1,089	405	21.3%	14.5%	3.18	1,286	1,296
Total - Unincorporated	**75,098**	**32,277**	**25,257**	**7,020**	**3,945**	**21.7%**	**10.9%**	**2.97**	**11,730**	**12,624**

Table C-3
2010 Population and Housing Occupancy Data

Location	2010 Permanent Population	Total housing units	Total Occupied housing units	Total Vacant housing units	Vacant for seasonal, recreational, or occasional use	Total Vacancy Percent-age	Occupancy Excluding Seasonal Use	Permanent Population per Occupied Unit	Seasonal Population at Current Occupancy	Seasonal Population at Riverside County Average
Northern Imperial County Unincorporated Communities										
Bombay Beach CDP	295	449	175	274	96	61.0%	50.4%	1.69	162	307
Desert Shores CDP	1,104	421	344	77	25	18.3%	13.1%	3.21	80	80
Salton City	3,763	2,026	1,204	822	310	40.6%	29.8%	3.13	969	992
Salton Sea Beach CDP	422	338	177	161	92	47.6%	28.0%	2.38	219	294
Total – Imperial County	**5,584**	**3,234**	**1,900**	**1,334**	**523**	**41.2%**	**29.9%**	**2.94**	**1,430**	**1,674**
Coachella Valley including Northern Imperial County	**427,200**	**221,018**	**157,487**	**63,531**	**41,367**	**28.7%**	**12.3%**	**2.71**	**94,547**	**132,374**

Reference: (United States Census Bureau, 2010)
Notes:
CDP – Census designated place
Riverside County average occupancy is 3.2 people per dwelling unit (California Department of Finance, 2016).

Table C-4
Estimated Coachella Valley Seasonal Population

Method	Basis	Peak Winter	Lower Range	Upper Range
Occupancy				
Seasonal Homes	Census data	95,000	24,000	48,000
Hotels/Motels	Hotel occupancy	30,000	10,000	10,000
RV Parks	Internet listing	20,000	10,000	14,000
Day Visitors	GPSCVB Data	Not available	18,000	18,000
Total		**>145,000**	**62,000**	**90,000**
Sales Revenue	**California BOE**	**Not available**	**82,000**	**82,000**
Average			**79,000**	

Note: Upper and lower ranges reflect equivalent permanent population values considering annual occupancy.

Appendix E

CVWD Water Shortage Contingency Plan Ordinance

(Ordinance No. 1422.3)

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ORDINANCE NO. 1422.3

AN ORDINANCE OF THE COACHELLA VALLEY WATER DISTRICT IMPOSING REVISED AND ADDITIONAL RESTRICTIONS ON WATER USE TO COMPLY WITH STATEWIDE DROUGHT REGULATIONS

WHEREAS, in April 2015, Governor Edmund G. Brown Jr. issued Executive Order B-29-15, effective immediately and in addition to other requirements, mandating a 25% statewide reduction in urban water use. The Governor directed the State Water Resources Control Board ("SWRCB") to adopt regulations to achieve the statewide 25% reduction; and

WHEREAS, in May of 2015, the SWRCB adopted an Emergency Regulation (the "Regulation") to implement the Executive Order which mandated that urban water suppliers, such as the Coachella Valley Water District ("CVWD"), reduce their total potable water production by defined percentages. The Regulation imposes certain requirements on "urban water suppliers" that have water shortage contingency plans in place. "Urban water suppliers" are defined as suppliers providing water to over 3,000 municipal customers or providing over 3,000 acre-feet per year to municipal customers. CVWD meets the definition of an "urban water supplier" since it provides water to approximately 100,000 customers. Under the Regulation, the conservation savings for all urban water suppliers was allocated across nine tiers of increasing levels of residential water use (R-GPCD) to reach the statewide 25% reduction mandate. Agencies in Tier 9, including CVWD, having residential water use above 215 R-GPCD, were required to reduce water use by 36% compared to its 2013 water use; and

WHEREAS, CVWD has a Water Supply Reliability and Water Shortage Contingency Planning document ("Plan") in place as part of its 2010 Urban Water Management Plan. CVWD adopted Stage 2 of its Plan by way of Ordinance No. 1414 on August 12, 2014. On May 12, 2015, CVWD adopted Ordinance No. 1419 by which CVWD moved from Stage 2 of its Plan to Stage 3 in order to adopt a conservation standard of 36% and also to adopt additional mandatory water use restrictions. On November 10, 2015, CVWD adopted Ordinance No. 1422 in order to implement revised and additional restrictions for Stage 3. On February 23, 2016, CVWD adopted Ordinance No. 1426 in order to implement revised and additional restrictions for Stage 3; and

WHEREAS, on May 9, 2016 Governor Brown issued a new Executive Order (B-37-16) that is focused on long-term water use efficiency. The order directs the California Department of Water Resources (DWR) to work with the SWRCB to develop new water use targets as part of a permanent framework for urban water agencies. Additionally, the order directs the SWRCB to extend the Regulation through the end of January 2017; and

WHEREAS, on May 18, 2016, the SWRCB adopted revisions to the Regulation which transitions the mandates away from demand-based regulations. Under the new Regulation, individual districts will self-certify the level of available water supplies assuming three additional dry years and the level of conservation necessary to assure adequate supply over that time; and

WHEREAS, it is anticipated that the new self-certification process will result in a reduction in the emergency mandatory reduction target imposed on CVWD by the SWRCB. As a result, it is anticipated that it will not be necessary to continue to impose the Drought Budgets and Drought Penalties unless or until the emergency mandatory target imposed on CVWD by the

SWRCB exceeds 25% at some time in the future. Such 25% target is not anticipated as of the date of this Ordinance; and

WHEREAS, the SWRCB has reinforced the regulation related to penalties for homeowners' associations or community service organizations that block, stifle, or threaten homeowners from reducing or eliminating the watering of vegetation or lawns during a declared drought emergency in violation of existing law. This Ordinance includes such restrictions; and

WHEREAS, the purpose of this Ordinance is to continue to impose restrictions and fines and penalties, which were originally adopted in Ordinances 1414, 1419, 1422, and 1426 and to impose revised, reduced, and additional water use restrictions in order to meet the State's mandate; and

WHEREAS, Water Code Section 31026 provides that CVWD has the power to restrict the use of water during any emergency caused by drought, or other threatened or existing water shortage, and to prohibit the wastage of water or the use of water during such periods, for any purpose other than household uses or such other restricted uses as may be determined to be necessary by CVWD and may prohibit use of such water during such periods for specific uses which CVWD may from time to time find to be nonessential. CVWD has the authority to impose monetary fines and penalties and take other applicable actions pursuant to Water Code Sections 350-358, 375-378, and 31029; and

BE IT ORDAINED BY THE BOARD OF DIRECTORS OF THE COACHELLA VALLEY WATER DISTRICT AS FOLLOWS:

1. Incorporation of Recitals. All of the foregoing Recitals are true and correct and the Board so finds and determines. The Recitals set forth above are incorporated herein and made an operative part of this Ordinance.

2. Public Hearing. The Board conducted a public hearing on May 24, 2016 , at 9 a.m., or as soon thereafter as practicable, at the Dr. Forbes Auditorium, 51-501 Tyler Street, Coachella CA 92236.

3. Stage 2. The Board hereby moves from Stage 3 to Stage 2 which is the first mandatory level of water use reduction in the Plan, as revised and implemented by this Ordinance. CVWD shall notify the public of this determination by public proclamations. Upon such proclamation, due and proper notice shall be deemed to have been given to each and every person supplied water within CVWD.

4. Comprehensive List of Restrictions In order to set forth in one document all of the requirements for this current Stage 2, this Ordinance shall encompass all of the restrictions which shall be in effect until such time as the SWRCB rescinds said Emergency Regulation. Therefore, as of the effective date of this Ordinance, this Ordinance shall supersede Ordinances Noes. 1414, 1419, 1422 and 1426 and Ordinances Noes. 1414, 1419, 1422 and 1426 shall be of no further force or effect.

5. Mandatory Restrictions. Effective immediately upon adoption of this Ordinance, the following mandatory prohibitions shall be in effect for Stage 2, except where necessary to address an immediate health, safety and sanitation need or to comply with a term or condition in a permit issued by a state or federal agency:

(a) Application of any water supply to outdoor landscapes during and within 48 hours after measurable rainfall is prohibited.

(b) Irrigation with any water of ornamental turf on public street medians is prohibited.

(c) Irrigation with potable water of landscapes outside of newly constructed homes and buildings in a manner inconsistent with regulations or other requirements established in the California Building Standards Commission and the Department of Housing and Community Development is prohibited.

(d) Variances for increased water budgets for over-seeding shall not be granted.

(e) Broken sprinklers shall be repaired within 24 hours of notification by CVWD, and leaks shall be repaired as soon as practicable.

(f) The serving of drinking water other than upon request in eating or drinking establishments, including but not limited to restaurants, hotels, cafes, cafeterias, bars, or other public places where food or drink are served and/or purchased is prohibited.

(g) Hotels and motels shall provide guests with the option of choosing not to have towels and linens laundered daily. Hotels and motels shall prominently display notice of this option in each guestroom using clear and easily understood language.

(h) Applying any water to outdoor landscapes in a manner that causes runoff such that water flows onto adjacent property, non-irrigated areas, private and public walkways, roadways, parking lots, or structures is prohibited.

(i) Using a hose to wash an automobile, windows, solar panels, and tennis courts, except where the hose is equipped with a shut-off nozzle, is prohibited.

(j) Applying any water to any hard surface including, but not limited to, driveways, sidewalks, and asphalt is prohibited.

(k) Prohibit outdoor irrigation on Mondays and Thursdays from December 1, 2015 to March 31, 2016.

(l) Homeowner's Associations, community service organizations or similar entities are prohibited from enforcing provisions of their rules and regulations that prohibit reducing or eliminating the watering of vegetation or lawns during a declared drought emergency.

6. Recommended Activities.

(a) The irrigation and preservation of trees and shrubs is strongly encouraged.

(b) CVWD strongly encourages counties, cities, Homeowners' Associations ("HOA's") and other enforcement agencies to suspend code enforcement and fines for brown turf areas and to otherwise comply with new State laws regarding limitations on such enforcement.

(c) CVWD will work with private pumpers, canal water and non-potable water users to reduce water use.

(d) Use of pool covers when not in use, especially during summer months, is strongly encouraged.

(e) Draining and refilling of private swimming pools is discouraged, unless necessary for health and safety or leak repair.

(f) HOA's are strongly encouraged to adopt and enforce water use restrictions in their rules and regulations.

(g) Over-seeding is strongly discouraged.

(h) Planting of spray irrigated annual flower beds is strongly discouraged.

(i) Installation of irrigation smart controllers is strongly encouraged.

7. Fines for Noncompliance. The following fines will be imposed when a customer violates the Mandatory Restrictions set forth in Section 5 of this Ordinance.

(a) First Violation – Written notice.

Any notice required under this Ordinance may include, for example and not by way of limitation, the following information: (i) the water conservation stage and restrictions that are in effect; (ii) actions required for compliance in order to prevent future violations; and (iii) penalties and enforcement actions which may be imposed for future violations.

(b) Second Violation within a twelve-month period– A fine will be imposed in the amount of $50.00 which will be added to the customer's water service bill.

Any customer receiving a Second Violation, may at his or her option successfully complete CVWD Water School, in lieu of paying the $50.00 fine.

(c) Third Violation within a twelve-month period – A fine will be imposed in the amount of $100.00 which will be added to the customer's water service bill.

(d) Fourth Violation and any subsequent violation within a twelve –month period – A fine will be imposed in the amount of $200.00 which will be added to the customer's water service bill.

In the event of any violation after the fourth violation within a twelve-month period, the General Manager, or his/her designee, may determine, in his/her reasonable discretion, that the continued violation of the restrictions set forth in this Ordinance warrant the initiation of procedures for the termination of water service pursuant to CVWD's Regulations Governing Domestic Water Service ("Regulations"), as they may be amended from time to time. In addition to any other remedies provided in this Ordinance or available under applicable law, CVWD may alternatively seek injunctive relief in the Superior Court or take enforcement action, including discontinuing or appropriately limiting water service by the installation of a flow restricting device to any customer, for violations of this Ordinance. All remedies provided herein shall be cumulative and not exclusive.

8. Drought Volumetric Penalties. Effective June 1, 2016, volumetric penalties will be imposed if CVWD is required by the SWRCB to reduce water usage by an amount greater than 25% In such a case, CVWD will require customers to reduce their usage by the percentage number which is the difference between the SWRCB target percentage and the percentage of 25%. For example, if CVWD is required in the future to reduce usage by30%, CVWD will then implement volumetric drought penalties to encourage that additional 5% reduction. If a customer fails to limit outdoor water usage by said percentage, then penalties will be imposed in addition to normal Budget Based Tiered Rates. Any drought volumetric penalty imposed pursuant to this Ordinance may be collected on a customer's water bill. Any drought volumetric penalty shall be applicable to water used by a customer in violation of this Ordinance during the customer's first complete billing cycle after the adoption of this Ordinance.

The following table describes the drought volumetric penalties:

Tier 1: Excellent	Indoor budget of 10 Ccf	No Penalty
Tier 2: Efficient	With Assigned percentage less water use Without Assigned percentage less water use	No Penalty $ 2.51 per Ccf above reduction goal
Tier 3: Inefficient	105 – 150% of budget	$ 5.00 per Ccf or portion thereof
Tier 4: Excessive	150 – 250% of budget	$10.00 per Ccf or portion thereof
Tier 5: Wasteful	Over 250% of budget	$20.00 per Ccf or portion thereof

9. CVWD Rules and Regulations. The procedures for written notice, imposition of fines or penalties, termination of service, and appeal rights shall be the same such procedures as set forth in CVWD's rules and regulations including, but not necessarily limited to, Part 6 – Credit and Billing and Part 7 – Termination and Restoration of Service.

10. Purpose of Restrictions and Fines. The regulatory purposes of imposing the requirements and financial penalties, as set forth in this Ordinance, are to conserve water, deter waste and unreasonable use of water, encourage efficiency, and to help cover the costs incident to the investigation, inspection, and administration of the enforcement of this Ordinance.

11. Future Stage(s). In accordance with Section 5.3.2 of the Plan, the General Manager hereby determines that it is necessary to further implement Stage 2 of the Plan. The Board hereby authorizes the General Manager, or his/her designee, to make a determination as to when

it may be necessary to move to a further Stage, or a lesser Stage, in the Plan. Following said determination by the General Manager, the Board will consider an ordinance, or any other applicable action, to determine whether, and to what extent, to adopt the determination of the General Manager. Said determinations by the General Manager, and then the Board, may also include a determination that certain prohibitions in this Ordinance are best practices which should stay in effect regardless of what Stage, or any Stage, that may be in effect.

12. CEQA. The Board finds that adopting and enforcing mandatory restrictions on water use in order to comply with SWRCB requirements is exempt from the California Environmental Quality Act ("CEQA") pursuant to State CEQA Guidelines Section 15268 and Public Resources Code Section 21080(b)(1) as a ministerial action. The Regulations mandate that each urban water supplier implement all requirements and actions of the stage of its water shortage contingency plan that imposes mandatory restrictions on outdoor irrigation. Therefore, an action to implement a particular phase of a water shortage contingency plan is not a discretionary action and as such it is statutorily exempt from CEQA.

13. Publication Following Adoption. The President of the Board of Directors shall sign this Ordinance and the Secretary of the Board of Directors shall attest thereto, and this Ordinance shall be in full force and effect immediately upon adoption. Within 15 days after adoption of this Ordinance, a summary of this Ordinance shall be published with the names of the Directors voting for and against this Ordinance and a certified copy of the full text of this Ordinance, along with the names of those Directors voting for and against this Ordinance, shall be posted in the CVWD offices.

14. Severability. If any section, subsection, clause or phrase in this Ordinance is for any reason held invalid, the validity of the remainder of this Ordinance shall not be affected thereby. The Board hereby declares that it would have passed this Ordinance and each section, subsection, sentence, clause, or phrase thereof, irrespective of the fact that one or more sections, subsections, sentences, clauses or phrases or the application thereof be held invalid.

ADOPTED this 24th day of May, 2015, by the Board of Directors of the Coachella Valley Water District.

_____
John P. Powell Jr.
President of the Board of Directors

ATTEST:

_____
Sylvia Bermudez, Clerk of the Board
Coachella Valley Water District

STATE OF CALIFORNIA)
) ss.
COUNTY OF RIVERSIDE)

AFFIDAVIT OF TRUE COPY

I, MARICELA CABRAL, being first duly sworn, deposes and says:

That I am the duly appointed, qualified Acting Assistant Secretary and Custodian of Records of the Board of Directors of the Coachella Valley Water District, the attached "Ordinance of the Coachella Valley Water District Imposing Revised and Additional Restrictions on Water Use to Comply with Statewide Drought Regulations" adopted at the February 23, 2016, Board meeting is a true and correct copy of records of the Coachella Valley Water District.

Dated this 24th day of February, 2016

Maricela Cabral
Acting Assistant Secretary and Custodian of Records

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

STATE OF CALIFORNIA)
) ss.
COUNTY OF RIVERSIDE)

Subscribed and sworn to me this 24th day of February, 2016, by Maricela Cabral, proved to me on the basis of satisfactory evidence to be the person who appeared before me.

M. YOLANDA VASQUEZ
Commission # 2053463
Notary Public - California
Riverside County
My Comm. Expires Dec 26, 2017

M. Yolanda Vasquez
M. Yolanda Vasquez, Notary Public in and for said County and State

(SEAL)

ORDINANCE NO. 1426

AN ORDINANCE OF THE COACHELLA VALLEY WATER DISTRICT IMPOSING REVISED AND ADDITIONAL RESTRICTIONS ON WATER USE TO COMPLY WITH STATEWIDE DROUGHT REGULATIONS

WHEREAS, in April 2015, Governor Edmund G. Brown Jr. issued Executive Order B-29-15, effective immediately and in addition to other requirements, mandating a 25% statewide reduction in urban water use. The Governor directed the State Water Resources Control Board ("SWRCB") to adopt regulations to achieve the statewide 25% reduction; and

WHEREAS, in May, the SWRCB adopted an Emergency Regulation (the "Regulation") to implement the Executive Order which mandates that urban water suppliers, such as the Coachella Valley Water District ("CVWD"), reduce their total potable water production by defined percentages. The Regulation imposes certain requirements on "urban water suppliers" that have water shortage contingency plans in place. "Urban water suppliers" are defined as suppliers providing water to over 3,000 municipal customers or providing over 3,000 acre-feet per year to municipal customers. CVWD meets the definition of an "urban water supplier" since it provides water to approximately 100,000 customers. Under the Regulation, the conservation savings for all urban water suppliers have been allocated across nine tiers of increasing levels of residential water use (R-GPCD) to reach the statewide 25% reduction mandate. Agencies in Tier 9, including CVWD, having residential water use above 215 R-GPCD, must reduce water use by 36% compared to its 2013 water use; and

WHEREAS, CVWD has a Water Supply Reliability and Water Shortage Contingency Planning document ("Plan") in place as part of its 2010 Urban Water Management Plan. CVWD adopted Stage 2 of its Plan by way of Ordinance No. 1414 on August 12, 2014. On May 12, 2015, CVWD adopted Ordinance No. 1419 by which CVWD moved from Stage 2 of its Plan to Stage 3 in order to adopt a conservation standard of 36% and also to adopt additional mandatory water use restrictions; and

WHEREAS, the rolling average of water use reductions by CVWD customers from June through September, 2015, was 26.2%, which is below the 36% goal set by the State. Therefore, there is a need to adopt revised and additional restrictions in order to meet the State's mandate and to avoid financial penalties which could be imposed on CVWD by the State for not meeting the goal; and

WHEREAS, the purpose of this Ordinance is to continue to impose restrictions and fines and penalties, which were originally adopted in Ordinances 1414 and 1419, and to impose revised and additional water use restrictions in order to meet the State's mandate; and

WHEREAS, Water Code Section 31026 provides that CVWD has the power to restrict the use of water during any emergency caused by drought, or other threatened or existing water shortage, and to prohibit the wastage of water or the use of water during such periods, for any purpose other than household uses or such other restricted uses as may be determined to be necessary by CVWD and may prohibit use of such water during such periods for specific uses which CVWD may from time to time find to be nonessential. CVWD has the authority to impose monetary fines and penalties and take other applicable actions pursuant to Water Code Sections 350-358, 375-378, and 31029; and

WHEREAS, in accordance with Water Code Sections 350 et seq., 375 et seq., and 31027, and as required by Section 5.3.2 of the Plan, at least 10 days before consideration of this Ordinance, a Notice of Public Hearing was published in the Desert Sun and in the Imperial Valley Press, newspapers of general circulation. A certified copy of the full text of this Ordinance was posted in the CVWD offices at least 5 days prior to the hearing.

BE IT ORDAINED BY THE BOARD OF DIRECTORS OF THE COACHELLA VALLEY WATER DISTRICT AS FOLLOWS:

1. Incorporation of Recitals. All of the foregoing Recitals are true and correct and the Board so finds and determines. The Recitals set forth above are incorporated herein and made an operative part of this Ordinance.

2. Public Hearing. The Board conducted a public hearing on November 10, 2015 at 9 a.m., or as soon thereafter as practicable, at the Steve Robbins Administration Building, 75-515 Hovley Lane East, Palm Desert, CA 92236.

3. Stage 3. The Board hereby implements revised and additional restrictions for Stage 3, which is the second mandatory level of water use reduction in the Plan, as revised and implemented by this Ordinance. CVWD shall notify the public of this determination by public proclamations. Upon such proclamation, due and proper notice shall be deemed to have been given to each and every person supplied water within CVWD.

4. Comprehensive List of Restrictions In order to set forth in one document all of the requirements for this current Stage 3, this Ordinance shall encompass all of the restrictions which shall be in effect until such time as the SWRCB rescinds said Emergency Regulation, which is currently expected to be February 28, 2016. Therefore, as of the effective date of this Ordinance, this Ordinance shall supersede Ordinances Nos. 1414 and 1419 and Ordinances Noes. 1414 and 1419 shall be of no further force or effect.

5. Mandatory Restrictions. Effective immediately upon adoption of this Ordinance, the following mandatory prohibitions shall be in effect for Stage 3, except where necessary to address an immediate health, safety and sanitation need or to comply with a term or condition in a permit issued by a state or federal agency:

(a) Application of any water supply to outdoor landscapes during and within 48 hours after measurable rainfall is prohibited.

(b) Irrigation with any water of ornamental turf on public street medians is prohibited.

(c) Irrigation with potable water of landscapes outside of newly constructed homes and buildings in a manner inconsistent with regulations or other requirements established in the California Building Standards Commission and the Department of Housing and Community Development is prohibited.

(d) Variances for increased water budgets for over-seeding shall not be granted.

(e) Broken sprinklers shall be repaired within 24 hours of notification by CVWD, and leaks shall be repaired as soon as practicable.

(f) The serving of drinking water other than upon request in eating or drinking establishments, including but not limited to restaurants, hotels, cafes, cafeterias, bars, or other public places where food or drink are served and/or purchased is prohibited.

(g) Hotels and motels shall provide guests with the option of choosing not to have towels and linens laundered daily. Hotels and motels shall prominently display notice of this option in each guestroom using clear and easily understood language.

(h) Applying water to outdoor landscapes in a manner that causes runoff such that water flows onto adjacent property, non-irrigated areas, private and public walkways, roadways, parking lots, or structures is prohibited.

(i) Using a hose to wash an automobile, windows, solar panels, and tennis courts, except where the hose is equipped with a shut-off nozzle, is prohibited.

(j) Applying any water to any hard surface including, but not limited to, driveways, sidewalks, and asphalt is prohibited.

(k) Prohibit outdoor irrigation on Mondays and Thursdays from December 1, 2015 to March 31, 2016.

6. Recommended Activities.

(a) The irrigation and preservation of trees and shrubs is strongly encouraged.

(b) CVWD strongly encourages counties, cities, Homeowners' Associations ("HOA's") and other enforcement agencies to suspend code enforcement and fines for brown turf areas and to otherwise comply with new State laws regarding limitations on such enforcement.

(c) CVWD will work with private pumpers, canal water and non-potable water users to reduce water use.

(d) Use of pool covers when not in use, especially during summer months, is strongly encouraged.

(e) Draining and refilling of private swimming pools is discouraged, unless necessary for health and safety or leak repair.

(f) HOA's are strongly encouraged to adopt and enforce water use restrictions in their rules and regulations.

(g) Over-seeding is strongly discouraged.

(h) Planting of spray irrigated annual flower beds is strongly discouraged.

(i) Installation of irrigation smart controllers is strongly encouraged.

7. Fines for Noncompliance. The following fines will be imposed when a customer violates the Mandatory Restrictions set forth in Section 5 of this Ordinance.

(a) First Violation Written notice.

Any notice required under this Ordinance may include, for example and not by way of limitation, the following information: (i) the water conservation stage and restrictions that are in effect; (ii) actions required for compliance in order to prevent future violations; and (iii) penalties and enforcement actions which may be imposed for future violations.

(b) Second Violation within a twelve-month period– A fine will be imposed in the amount of $50.00 which will be added to the customer's water service bill.

Any customer receiving a Second Violation, may at his or her option successfully complete CVWD Water School, in lieu of paying the $50.00 fine.

(c) Third Violation within a twelve-month period – A fine will be imposed in the amount of $100.00 which will be added to the customer's water service bill.

(d) Fourth Violation and any subsequent violation within a twelve –month period – A fine will be imposed in the amount of $200.00 which will be added to the customer's water service bill.

In the event of any violation after the fourth violation within a twelve-month period, the General Manager, or his/her designee, may determine, in his/her reasonable discretion, that the continued violation of the restrictions set forth in this Ordinance warrant the initiation of procedures for the termination of water service pursuant to CVWD's Regulations Governing Domestic Water Service ("Regulations"), as they may be amended from time to time. In addition to any other remedies provided in this Ordinance or available under applicable law, CVWD may alternatively seek injunctive relief in the Superior Court or take enforcement action, including discontinuing or appropriately limiting water service by the installation of a flow restricting device to any customer, for violations of this Ordinance. All remedies provided herein shall be cumulative and not exclusive.

8. Drought Volumetric Penalties. The following volumetric penalties will be imposed when a customer fails to limit the customer's outdoor water budget by 32%. Penalties will be imposed in addition to normal Budget Based Tiered Rates. Any drought volumetric penalty imposed pursuant to this Ordinance may be collected on a customer's water bill. Any drought volumetric penalty shall be applicable to water used by a customer in violation of this Ordinance during the customer's first complete billing cycle after the adoption of this Ordinance.

The following drought volumetric penalties currently have been in effect prior to the effective date of this Ordinance:

Tier 1: Excellent	Indoor budget of 10 Ccf	No Penalty
Tier 2: Efficient	With 36% less water use	No Penalty
	Without 36% less water use	$ 2.51 per Ccf above reduction goal
Tier 3: Inefficient	105 150% of budget	$ 5.00 per Ccf or portion thereof
Tier 4: Excessive	150 -- 250% of budget	$10.00 per Ccf or portion thereof
Tier 5: Wasteful	Over 250% of budget	$20.00 per Ccf or portion thereof

The following drought volumetric penalties shall be in effect and implemented with bills being mailed starting March 1, 2016:

Tier 1: Excellent	Indoor budget of 10 Ccf	No Penalty
Tier 2: Efficient	With 32% less water use	No Penalty
	Without 32% less water use	$ 2.51 per Ccf above reduction goal
Tier 3: Inefficient	105 – 150% of budget	$ 5.00 per Ccf or portion thereof
Tier 4: Excessive	150 - 250% of budget	$10.00 per Ccf or portion thereof
Tier 5: Wasteful	Over 250% of budget	$20.00 per Ccf or portion thereof

9. CVWD Rules and Regulations. The procedures for written notice, imposition of fines or penalties, termination of service, and appeal rights shall be the same such procedures as set forth in CVWD's rules and regulations including, but not necessarily limited to, Part 6 -- Credit and Billing and Part 7 - Termination and Restoration of Service.

10. Purpose of Restrictions and Fines. The regulatory purposes of imposing the requirements and financial penalties, as set forth in this Ordinance, are to conserve water, deter waste and unreasonable use of water, encourage efficiency, and to help cover the costs incident to the investigation, inspection, and administration of the enforcement of this Ordinance.

11. Future Stage(s). In accordance with Section 5.3.2 of the Plan, the General Manager hereby determines that it is necessary to further implement Stage 3 of the Plan. The Board hereby authorizes the General Manager, or his/her designee, to make a determination as to when it may be necessary to move to a further Stage, or a lesser Stage, in the Plan. Following said determination by the General Manager, the Board will consider an ordinance, or any other applicable action, to determine whether, and to what extent, to adopt the determination of the General Manager. Said determinations by the General Manager, and then the Board, may also include a determination that certain prohibitions in this Ordinance are best practices which should stay in effect regardless of what Stage, or any Stage, that may be in effect.

12. CEQA. The Board finds that adopting and enforcing mandatory restrictions on water use in order to comply with SWRCB requirements is exempt from the California Environmental Quality Act ("CEQA") pursuant to State CEQA Guidelines Section 15268 and Public Resources Code Section 21080(b)(1) as a ministerial action. The Regulations mandate that each urban water supplier implement all requirements and actions of the stage of its water shortage contingency plan that imposes mandatory restrictions on outdoor irrigation. Therefore, an action to implement a particular phase of a water shortage contingency plan is not a discretionary action and as such it is statutorily exempt from CEQA.

13. Publication Following Adoption. The President of the Board of Directors shall sign this Ordinance and the Secretary of the Board of Directors shall attest thereto, and this Ordinance shall be in full force and effect immediately upon adoption. Within 15 days after adoption of this

Ordinance, a summary of this Ordinance shall be published with the names of the Directors voting for and against this Ordinance and a certified copy of the full text of this Ordinance, along with the names of those Directors voting for and against this Ordinance, shall be posted in the CVWD offices.

14. Severability. If any section, subsection, clause or phrase in this Ordinance is for any reason held invalid, the validity of the remainder of this Ordinance shall not be affected thereby. The Board hereby declares that it would have passed this Ordinance and each section, subsection, sentence, clause, or phrase thereof irrespective of the fact that one or more sections, subsections, sentences, clauses or phrases or the application thereof be held invalid.

ADOPTED this 23rd day of February, 2016, by the Board of Directors of the Coachella Valley Water District.

COACHELLA VALLEY WATER DISTRICT

John P. Powell Jr.
President of the Board of Directors

ATTEST:

Maricela Cabral
Acting Assistant Secretary

I, the undersigned Acting Assistant Secretary of the Board of Directors of the Coachella Valley Water District, do hereby certify that the foregoing is a true and correct copy of Ordinance No. 1426 of said District introduced and passed at meeting of said Board held February 23, 2016, and that said Ordinance was passed by the following vote:

Ayes:	Five
Directors:	Powell, Nelson, O'Dowd, Pack, Estrada
Nos:	None

I further certify that said Ordinance was thereupon signed by the President of the Board of Directors of said District.

Acting Assistant Secretary

(SEAL)

ORDINANCE NO. 1422

AN ORDINANCE OF THE COACHELLA VALLEY WATER DISTRICT IMPOSING REVISED AND ADDITIONAL RESTRICTIONS ON WATER USE TO COMPLY WITH STATEWIDE DROUGHT REGULATIONS

WHEREAS, in April 2015, Governor Edmund G. Brown Jr. issued Executive Order B-29-15, effective immediately and in addition to other requirements, mandating a 25% statewide reduction in urban water use. The Governor directed the State Water Resources Control Board ("SWRCB") to adopt regulations to achieve the statewide 25% reduction; and

WHEREAS, in May, the SWRCB adopted an Emergency Regulation (the "Regulation") to implement the Executive Order which mandates that urban water suppliers, such as the Coachella Valley Water District ("CVWD"), reduce their total potable water production by defined percentages. The Regulation imposes certain requirements on "urban water suppliers" that have water shortage contingency plans in place. "Urban water suppliers" are defined as suppliers providing water to over 3,000 municipal customers or providing over 3,000 acre-feet per year to municipal customers. CVWD meets the definition of an "urban water supplier" since it provides water to approximately 100,000 customers. Under the Regulation, the conservation savings for all urban water suppliers have been allocated across nine tiers of increasing levels of residential water use (R-GPCD) to reach the statewide 25% reduction mandate. Agencies in Tier 9, including CVWD, having residential water use above 215 R-GPCD, must reduce water use by 36% compared to its 2013 water use; and

WHEREAS, CVWD has a Water Supply Reliability and Water Shortage Contingency Planning document ("Plan") in place as part of its 2010 Urban Water Management Plan. CVWD adopted Stage 2 of its Plan by way of Ordinance No. 1414 on August 12, 2014. On May 12, 2015, CVWD adopted Ordinance No. 1419 by which CVWD moved from Stage 2 of its Plan to Stage 3 in order to adopt a conservation standard of 36% and also to adopt additional mandatory water use restrictions; and

WHEREAS, the rolling average of water use reductions by CVWD customers from June through September, 2015, was 26.2%, which is below the 36% goal set by the State. Therefore, there is a need to adopt revised and additional restrictions in order to meet the State's mandate and to avoid financial penalties which could be imposed on CVWD by the State for not meeting the goal; and

WHEREAS, the purpose of this Ordinance is to continue to impose restrictions and fines and penalties, which were originally adopted in Ordinances 1414 and 1419, and to impose revised and additional water use restrictions in order to meet the State's mandate: and

WHEREAS, Water Code Section 31026 provides that CVWD has the power to restrict the use of water during any emergency caused by drought, or other threatened or existing water shortage, and to prohibit the wastage of water or the use of water during such periods, for any purpose other than household uses or such other restricted uses as may be determined to be necessary by CVWD and may prohibit use of such water during such periods for specific uses which CVWD may from time to time find to be nonessential. CVWD has the authority to impose monetary fines and penalties and take other applicable actions pursuant to Water Code Sections 350-358, 375-378, and 31029; and

WHEREAS, in accordance with Water Code Sections 350 et seq., 375 et seq., and 31027, and as required by Section 5.3.2 of the Plan, at least 10 days before consideration of this Ordinance, a Notice of Public Hearing was published in the Desert Sun and in the Imperial Valley Press, newspapers of general circulation. A certified copy of the full text of this Ordinance was posted in the CVWD offices at least 5 days prior to the hearing.

BE IT ORDAINED BY THE BOARD OF DIRECTORS OF THE COACHELLA VALLEY WATER DISTRICT AS FOLLOWS:

1. Incorporation of Recitals. All of the foregoing Recitals are true and correct and the Board so finds and determines. The Recitals set forth above are incorporated herein and made an operative part of this Ordinance.

2. Public Hearing. The Board conducted a public hearing on November 10, 2015 at 9 a.m., or as soon thereafter as practicable, at the Steve Robbins Administration Building, 75-515 Hovley Lane East, Palm Desert, CA 92236.

3. Stage 3. The Board hereby implements revised and additional restrictions for Stage 3, which is the second mandatory level of water use reduction in the Plan, as revised and implemented by this Ordinance. CVWD shall notify the public of this determination by public proclamations. Upon such proclamation, due and proper notice shall be deemed to have been given to each and every person supplied water within CVWD.

4. Comprehensive List of Restrictions In order to set forth in one document all of the requirements for this current Stage 3, this Ordinance shall encompass all of the restrictions which shall be in effect until such time as the SWRCB rescinds said Emergency Regulation, which is currently expected to be February 28, 2016. Therefore, as of the effective date of this Ordinance, this Ordinance shall supersede Ordinances Nos. 1414 and 1419 and Ordinances Noes. 1414 and 1419 shall be of no further force or effect.

5. Mandatory Restrictions. Effective immediately upon adoption of this Ordinance, the following mandatory prohibitions shall be in effect for Stage 3, except where necessary to address an immediate health, safety and sanitation need or to comply with a term or condition in a permit issued by a state or federal agency:

(a) Application of any water supply to outdoor landscapes during and within 48 hours after measurable rainfall is prohibited.

(b) Irrigation with any water of ornamental turf on public street medians is prohibited.

(c) Irrigation with potable water of landscapes outside of newly constructed homes and buildings in a manner inconsistent with regulations or other requirements established in the California Building Standards Commission and the Department of Housing and Community Development is prohibited.

(d) Variances for increased water budgets for over-seeding shall not be granted.

(e) Broken sprinklers shall be repaired within 24 hours of notification by CVWD, and leaks shall be repaired as soon as practicable.

(f) The serving of drinking water other than upon request in eating or drinking establishments, including but not limited to restaurants, hotels, cafes, cafeterias, bars, or other public places where food or drink are served and/or purchased is prohibited.

(g) Hotels and motels shall provide guests with the option of choosing not to have towels and linens laundered daily. Hotels and motels shall prominently display notice of this option in each guestroom using clear and easily understood language.

(h) Applying water to outdoor landscapes in a manner that causes runoff such that water flows onto adjacent property, non-irrigated areas, private and public walkways, roadways, parking lots, or structures is prohibited.

(i) Using a hose to wash an automobile, windows, solar panels, and tennis courts, except where the hose is equipped with a shut-off nozzle, is prohibited.

(j) Applying any water to any hard surface including, but not limited to, driveways, sidewalks, and asphalt is prohibited.

(k) Prohibit outdoor irrigation on Mondays and Thursdays from December 1, 2015 to March 31, 2016.

6. Recommended Activities.

(a) The irrigation and preservation of trees and shrubs is strongly encouraged.

(b) CVWD strongly encourages counties, cities, Homeowners' Associations ("HOA's") and other enforcement agencies to suspend code enforcement and fines for brown turf areas and to otherwise comply with new State laws regarding limitations on such enforcement.

(c) CVWD will work with private pumpers, canal water and non-potable water users to reduce water use.

(d) Use of pool covers when not in use, especially during summer months, is strongly encouraged.

(e) Draining and refilling of private swimming pools is discouraged, unless necessary for health and safety or leak repair.

(f) HOA's are strongly encouraged to adopt and enforce water use restrictions in their rules and regulations.

(g) Over-seeding is strongly discouraged.

(h) Planting of spray irrigated annual flower beds is strongly discouraged.

(i) Installation of irrigation smart controllers is strongly encouraged.

7. Fines for Noncompliance. The following fines will be imposed when a customer violates the Mandatory Restrictions set forth in Section 5 of this Ordinance.

(a) First Violation – Written notice.

Any notice required under this Ordinance may include, for example and not by way of limitation, the following information: (i) the water conservation stage and restrictions that are in effect; (ii) actions required for compliance in order to prevent future violations; and (iii) penalties and enforcement actions which may be imposed for future violations.

(b) Second Violation within a twelve-month period– A fine will be imposed in the amount of $50.00 which will be added to the customer's water service bill.

Any customer receiving a Second Violation, may at his or her option successfully complete CVWD Water School, in lieu of paying the $50.00 fine.

(c) Third Violation within a twelve-month period – A fine will be imposed in the amount of $100.00 which will be added to the customer's water service bill.

(d) Fourth Violation and any subsequent violation within a twelve –month period – A fine will be imposed in the amount of $200.00 which will be added to the customer's water service bill.

In the event of any violation after the fourth violation within a twelve-month period, the General Manager, or his/her designee, may determine, in his/her reasonable discretion, that the continued violation of the restrictions set forth in this Ordinance warrant the initiation of procedures for the termination of water service pursuant to CVWD's Regulations Governing Domestic Water Service ("Regulations"), as they may be amended from time to time. In addition to any other remedies provided in this Ordinance or available under applicable law, CVWD may alternatively seek injunctive relief in the Superior Court or take enforcement action, including discontinuing or appropriately limiting water service by the installation of a flow restricting device to any customer, for violations of this Ordinance. All remedies provided herein shall be cumulative and not exclusive.

8. Drought Volumetric Penalties. The following volumetric penalties will be imposed when a customer fails to limit the customer's outdoor water budget by 36%. Penalties will be imposed in addition to normal Budget Based Tiered Rates. Any drought volumetric penalty imposed pursuant to this Ordinance may be collected on a customer's water bill. Any drought volumetric penalty shall be applicable to water used by a customer in violation of this Ordinance during the customer's first complete billing cycle after the adoption of this Ordinance.

The following drought volumetric penalties currently have been in effect prior to the effective date of this Ordinance:

Tier 1: Excellent	Indoor budget of 10 Ccf	No Penalty
Tier 2: Efficient	With 36% less water use Without 36% less water use	No Penalty $ 2.51 per Ccf above reduction goal
Tier 3: Inefficient	105 – 150% of budget	$ 3.34 per Ccf or portion thereof
Tier 4: Excessive	150 – 250% of budget	$ 5.01 per Ccf or portion thereof
Tier 5: Wasteful	Over 250% of budget	$10.03 per Ccf or portion thereof

The following drought volumetric penalties shall be in effect December 1, 2015 and will be implemented with the first full billing cycle after the effective date of the ordinance, which is approximately January 1, 2016, for water use in December 2015. These amounts reflect an increase in Tiers 3, 4 and 5:

Tier 1: Excellent	Indoor budget of 10 Ccf	No Penalty
Tier 2: Efficient	With 36% less water use Without 36% less water use	No Penalty $ 2.51 per Ccf above reduction goal
Tier 3: Inefficient	105 – 150% of budget	$ 5.00 per Ccf or portion thereof
Tier 4: Excessive	150 – 250% of budget	$10.00 per Ccf or portion thereof
Tier 5: Wasteful	Over 250% of budget	$20.00 per Ccf or portion thereof

9. CVWD Rules and Regulations. The procedures for written notice, imposition of fines or penalties, termination of service, and appeal rights shall be the same such procedures as set forth in CVWD's rules and regulations including, but not necessarily limited to, Part 6 – Credit and Billing and Part 7 – Termination and Restoration of Service.

10. Purpose of Restrictions and Fines. The regulatory purposes of imposing the requirements and financial penalties, as set forth in this Ordinance, are to conserve water, deter waste and unreasonable use of water, encourage efficiency, and to help cover the costs incident to the investigation, inspection, and administration of the enforcement of this Ordinance.

11. Future Stage(s). In accordance with Section 5.3.2 of the Plan, the General Manager hereby determines that it is necessary to further implement Stage 3 of the Plan. The Board hereby authorizes the General Manager, or his/her designee, to make a determination as to when it may be necessary to move to a further Stage, or a lesser Stage, in the Plan. Following said determination by the General Manager, the Board will consider an ordinance, or any other applicable action, to determine whether, and to what extent, to adopt the determination of the General Manager. Said determinations by the General Manager, and then the Board, may also include a determination that certain prohibitions in this Ordinance are best practices which should stay in effect regardless of what Stage, or any Stage, that may be in effect.

12. CEQA. The Board finds that adopting and enforcing mandatory restrictions on water use in order to comply with SWRCB requirements is exempt from the California Environmental Quality Act ("CEQA") pursuant to State CEQA Guidelines Section 15268 and Public Resources Code Section 21080(b)(1) as a ministerial action. The Regulations mandate that each urban water supplier implement all requirements and actions of the stage of its water shortage contingency plan that imposes mandatory restrictions on outdoor irrigation. Therefore, an action to implement a particular phase of a water shortage contingency plan is not a discretionary action and as such it is statutorily exempt from CEQA.

13. Publication Following Adoption. The President of the Board of Directors shall sign this Ordinance and the Secretary of the Board of Directors shall attest thereto, and this Ordinance shall be in full force and effect immediately upon adoption. Within 15 days after adoption of this Ordinance, a summary of this Ordinance shall be published with the names of the Directors voting for and against this Ordinance and a certified copy of the full text of this Ordinance, along with the names of those Directors voting for and against this Ordinance, shall be posted in the CVWD offices.

14. Severability. If any section, subsection, clause or phrase in this Ordinance is for any reason held invalid, the validity of the remainder of this Ordinance shall not be affected thereby. The Board hereby declares that it would have passed this Ordinance and each section, subsection, sentence, clause, or phrase thereof, irrespective of the fact that one or more sections, subsections, sentences, clauses or phrases or the application thereof be held invalid.

ADOPTED this 10th day of November, 2015, by the Board of Directors of the Coachella Valley Water District.

COACHELLA VALLEY WATER DISTRICT

John P. Powell Jr.
President of the Board of Directors

ATTEST:

Maricela Cabral
Acting Assistant Secretary

I, the undersigned Acting Assistant Secretary of the Board of Directors of the Coachella Valley Water District, do hereby certify that the foregoing is a true and correct copy of Ordinance No. 1422 of said District introduced and passed at meeting of said Board held November 10, 2015, and that said Ordinance was passed by the following vote:

Ayes:	Five
Directors:	Powell, Nelson, O'Dowd, Pack, Estrada
Noes:	None

I further certify that said Ordinance was thereupon signed by the President of the Board of Directors of said District.

Acting Assistant Secretary

(SEAL)

ORDINANCE NO. 1419

AN ORDINANCE OF THE COACHELLA VALLEY WATER DISTRICT IMPOSING MANDATORY RESTRICTIONS ON WATER USE IN ORDER TO COMPLY WITH STATEWIDE DROUGHT REGULATIONS

WHEREAS, on January 17, 2014, Governor Edmund G. Brown issued a proclamation declaring a State of Emergency due to severe drought conditions; and

WHEREAS, on April 25, 2014, the Governor proclaimed a Continued State of Emergency to exist throughout the State of California due to the ongoing drought; and

WHEREAS, California's water supplies continue to be severely depleted, severe drought conditions continue to present urgent challenges, and new expedited actions are needed to reduce the harmful impacts of the drought; and

WHEREAS, on July 15, 2014, the State Water Resources Control Board ("SWRCB") adopted Resolution No. 2014-0038 which adopted Emergency Regulations For Statewide Urban Water Conservation Regulations which became effective July 28, 2014; and

WHEREAS, on March 17, 2015, the SWRCB adopted Resolution No. 2015-0013 which expanded emergency conservation regulation to safeguard the state's remaining water supplies as California enters a fourth consecutive dry year, which became effective on March 27, 2015 and remain in place for up to 270 days (9 months), unless extended by the SWRCB. The regulations are set forth in Title 23, Sections 863-865 of the California Code of Regulations; and

WHEREAS, On April 1, 2015, Governor Edmund G. Brown issued Executive Order B-29-15, effective immediately and in addition to other requirements mandates a 25% statewide reduction in urban water use, and provides that the orders in the January 17, 2014 and April 25, 2014 proclamations and Executive Orders B-26-14 and B-28-14 also remain in full force except as modified by Executive Order B-29-15. The Governor directed the SWRCB to impose restrictions to achieve the statewide 25% reduction; and

WHEREAS, on April 7, 2015, the SWRCB proposed a mandatory Regulatory Framework that apportions water reductions according to consumption. The SWRCB revised the apportionment of water reductions on April 18 and April 28th. The conservation savings for all urban water suppliers are now allocated across nine tiers of increasing levels of residential water use (R-GPCD) to reach the statewide 25 % reduction mandate. Agencies in Tier 9, including CVWD, having residential water use above 215 GPCD, must reduce water use by 36%. On May 5-6, 2015, the SWRCB is scheduled to take final action to adopt its Emergency Regulation Implementing The 25% Conservation Standard ("Regulation") which includes a prohibition against certain irrigation practices and an order that all urban water suppliers reduce their total potable water production by a defined percentage which has been applied to each urban water supplier; and

WHEREAS, the Regulation imposes certain requirements on "urban water suppliers" that have water shortage contingency plans in place. "Urban water suppliers" are defined as

suppliers providing water to over 3,000 municipal customers or providing over 3,000 acre-feet per year to municipal customers. CVWD meets the definition of an "urban water supplier" since it provides water to approximately 100,000 customers. CVWD also has a Water Supply Reliability and Water Shortage Contingency Planning document ("Plan") in place as part of its 2010 Urban Water Management Plan; and adopted Stage 2 of its Plan in Ordinance No. 1414 on August 12, 2014; and

WHEREAS, the Regulation requires CVWD to move from Stage 2 in its Plan, to Stage 3 in order to adopt a conservation standard of 36% and also to adopt additional mandatory restrictions. The purpose of this Ordinance is to move to the mandatory level of water use reduction as mandated in Stage 3 of the Plan; and

WHEREAS, Water Code Section 31026 provides that CVWD has the power to restrict the use of water during any emergency caused by drought, or other threatened or existing water shortage, and to prohibit the wastage of water or the use of water during such periods, for any purpose other than household uses or such other restricted uses as may be determined to be necessary by CVWD and may prohibit use of such water during such periods for specific uses which CVWD may from time to time find to be nonessential. CVWD has the authority to impose monetary fines and penalties and take other applicable actions pursuant to Water Code Sections 350-358, 375-377, and 31029; and

WHEREAS, in accordance with Water Code Sections 350 et seq., 375 et seq., and 31027, and as required by Section 5.3.2 of the Plan, at least 10 days before consideration of this Ordinance, a Notice of Public Hearing was published in the Desert Sun and in the Imperial Valley Press, newspapers of general circulation. A certified copy of the full text of this Ordinance was posted in the CVWD offices at least 5 days prior to the hearing; and

BE IT ORDAINED BY THE BOARD OF DIRECTORS OF THE COACHELLA VALLEY WATER DISTRICT AS FOLLOWS:

1. Incorporation of Recitals. All of the foregoing Recitals are true and correct and the Board so finds and determines. The Recitals set forth above are incorporated herein and made an operative part of this Ordinance.

2. Public Hearing. The Board conducted a public hearing on May 12th at 9:00 a.m., or as soon thereafter as practicable, at the Steve Robbins Administration Building, 75-515 Hovley Lane East, Palm Desert, CA 92236 as part of the Regular Meeting of the Board.

3. Stage 3. The Board hereby implements Stage 3 which is the second mandatory level of water use reduction in the Plan, as revised and implemented by this Ordinance. In order to set forth in one document all of the requirements for this current Stage 3, this Ordinance shall encompass the new and extended SWRCB conservation regulations effective March 17, 2015, as well as the Regulation to implement the Governor's latest executive order. Said Regulations were adopted on May 5, 2015, and are anticipated to go into effect approximately 10 days thereafter. Therefore, as of the effective date of this Ordinance, this Ordinance shall supersede Ordinance No. 1414 and Ordinance No. 1414 shall be of no further force or effect. This Ordinance shall be in effect until such time as the SWRCB rescinds said Emergency Regulations, which is currently expected to be February 28, 2016. CVWD shall notify the public

of this determination by public proclamations. Upon such proclamation, due and proper notice shall be deemed to have been given to each and every person supplied water within CVWD.

4. Mandatory Restrictions. Effective immediately upon adoption of this Ordinance, the following mandatory prohibitions shall be in effect for Stage 3, except where necessary to address an immediate health, safety and sanitation need or to comply with a term or condition in a permit issued by a state or federal agency:

(a) Application of any water supply to outdoor landscapes during and within 48 hours after measurable rainfall is prohibited.

(b) Irrigation with any water of ornamental turf on public street medians is prohibited.

(c) Irrigation with potable water of landscapes outside of newly constructed homes and buildings in a manner inconsistent with regulations or other requirements established in the California Building Standards Commission and the Department of Housing and Community Development is prohibited.

(d) Increased water budget for over-seeding is eliminated.

(e) Using any water in a fountain or other decorative water feature is prohibited, except where the water is part of a recirculating system.

(f) Broken sprinklers shall be repaired within 24 hours of notification, and leaks shall be repaired as soon as practicable.

(g) The serving of drinking water other than upon request in eating or drinking establishments, including but not limited to restaurants, hotels, cafes, cafeterias, bars, or other public places where food or drink are served and/or purchased is prohibited.

(h) Hotels and motels shall provide guests with the option of choosing not to have towels and linens laundered daily. Hotels and motels shall prominently display notice of this option in each guestroom using clear and easily understood language.

(i) Applying water to outdoor landscapes in a manner that causes runoff such that water flows onto adjacent property, non-irrigated areas, private and public walkways, roadways, parking lots, or structures is prohibited.

(j) Using a hose to wash an automobile, windows, solar panels, and tennis courts, except where the hose is equipped with a shut-off nozzle, is prohibited.

(k) Applying any water to any hard surface including, but not limited to, driveways, sidewalks, and asphalt is prohibited.

5. Recommended Activities.

(a) The irrigation and preservation of trees and shrubs is strongly encouraged.

(b) CVWD strongly encourages Counties, Cities, HOA's and other enforcement agencies to suspend code enforcement and fines for brown turf areas.

(c) CVWD will work with private pumpers, canal water and non-potable water users to reduce water use.

(d) Draining and refilling of private swimming pools unless necessary for health and safety is strongly discouraged.

(e) Use of pool covers when not in use, especially during summer months is strongly encouraged.

(f) HOA's are strongly encouraged to adopt and enforce water use restrictions in their rules and regulations.

(g) Over-seeding is strongly discouraged.

(l) Planting of spray irrigated annual flower beds is strongly discouraged.

(m) Irrigation of non-functional ornamental turf, such as parkways is strongly discouraged.

(n) Installation of irrigation smart controllers is strongly encouraged.

(o) Use of decorative fountains and water features is strongly discouraged.

(p) CVWD Strongly encourages that outdoor Irrigation of ornamental landscapes and turf be limited to the hours between sunset and 10:00 a.m. except as necessary for essential turf maintenance and overseeding.

6. Fines for Noncompliance. The following financial penalties will be imposed when a customer violates the Mandatory Restrictions set forth in Section 4 of this Ordinance.

(a) First Violation – Written notice.

Any notice required under this Ordinance may include, for example and not by way of limitation, the following information: (i) the water conservation stage and restrictions that are in effect; (ii) actions required for compliance in order to prevent future violations; and (iii) penalties and enforcement actions which may be imposed for future violations.

(b) Second Violation – A fine will be imposed in the amount of $50.00 which will be added to the customer's water service bill.

Any customer receiving a Second Violation, may at his or her option successfully complete CVWD Water School, in lieu of paying the $50.00 fine.

(c) Third Violation – A fine will be imposed in the amount of $100.00 which will be added to the customer's water service bill.

(d) Fourth Violation and any subsequent violation – A fine will be imposed in the amount of $200.00 which will be added to the customer's water service bill.

In the event of any violation after the fourth violation, the General Manager, or his/her designee, may determine, in his/her reasonable discretion, that the continued violation of the restrictions set forth in this Ordinance warrant the initiation of procedures for the termination of water service pursuant to CVWD's Regulations Governing Domestic Water Service ("Regulations"), as they may be amended from time to time. For example, and not by way of limitation, CVWD has the right to terminate water service if a customer fails to comply with the Regulations, which hereby include the restrictions set forth in this Ordinance.

7. Drought Penalties. The following Penalties will be imposed when a customer fails to limit the customer's outdoor water budget by 36%. Penalties will be imposed in addition to normal Budget Based Tiered Rates which are in effect at the time and shall take effect as soon as possible, but no later than July 1, 2015, for June water usage. Staff is directed to pursue a one-billing-cycle shadow bill prior to July 1.

Tier 1: Excellent	Indoor budget of 10 Ccf	No Penalty
Tier 2: Efficient	With 36% less water use Without 36% less water use	No Penalty $2.51 per Ccf above reduction goal
Tier 3: Inefficient	105 – 150% of budget	$3.34 per Ccf
Tier 4: Excessive	150 – 250% of budget	$5.01 per Ccf
Tier 5: Wasteful	Over 250% of budget	$10.03 per Ccf

8. CVWD Rules and Regulations. The procedures for written notice, imposition of penalties, termination of service, and appeal rights shall be the same such procedures as set forth in CVWD's rules and regulations including, but not necessarily limited to, Part 6 – Credit and Billing and Part 7 – Termination and Restoration of Service.

9. Purpose of Restrictions and Fines. The regulatory purposes of imposing the requirements and financial penalties, as set forth in this Ordinance, are to conserve water, deter waste and unreasonable use of water, encourage efficiency, and to help cover the costs incident to the investigation, inspection, and administration of the enforcement of this Ordinance.

10. Future Stage(s). In accordance with Section 5.3.2 of the Plan, the General Manager hereby determines that it is necessary to implement Stage 3 of the Plan. The Board hereby authorizes the General Manager, or his/her designee, to make a determination as to when it may be necessary to move to a further Stage, or a lesser Stage, in the Plan. Following said determination by the General Manager, the Board will consider an ordinance, or any other applicable action, to determine whether, and to what extent, to adopt the determination of the

General Manager. Said determinations by the General Manager, and then the Board, may also include a determination that certain prohibitions in this Ordinance are best practices which should stay in effect regardless of what Stage, or any Stage, that may be in effect.

11. CEQA. The Board finds that adopting and enforcing mandatory restrictions on water use in order to comply with SWRCB requirements is exempt from the California Environmental Quality Act ("CEQA") pursuant to State CEQA Guidelines Section 15268 and Public Resources Code Section 21080(b)(1) as a ministerial action. The Regulations mandate that each urban water supplier implement all requirements and actions of the stage of its water shortage contingency plan that imposes mandatory restrictions on outdoor irrigation. Therefore, an action to implement a particular phase of a water shortage contingency plan is not a discretionary action and as such it is statutorily exempt from CEQA.

12. Publication Following Adoption. The President of the Board of Directors shall sign this Ordinance and the Secretary of the Board of Directors shall attest thereto, and this Ordinance shall be in full force and effect immediately upon adoption. Within 15 days after adoption of this Ordinance, a summary of this Ordinance shall be published with the names of the Directors voting for and against this Ordinance and a certified copy of the full text of this Ordinance, along with the names of those Directors voting for and against this Ordinance, shall be posted in the CVWD offices.

13. Severability. If any section, subsection, clause or phrase in this Ordinance is for any reason held invalid, the validity of the remainder of this Ordinance shall not be affected thereby. The Board hereby declares that it would have passed this Ordinance and each section, subsection, sentence, clause, or phrase thereof, irrespective of the fact that one or more sections, subsections, sentences, clauses or phrases or the application thereof be held invalid.

ADOPTED this 12th day of May, 2015, by the Board of Directors of the Coachella Valley Water District.

COACHELLA VALLEY WATER DISTRICT

John P. Powell Jr.
President of the Board of Directors

ATTEST:

Maricela Cabral
Acting Assistant Board Secretary

I, the undersigned Acting Assistant Board Secretary of the Coachella Valley Water District, do hereby certify that the foregoing is a true and correct copy of Ordinance No. 1419 of said District introduced and passed at meeting of said Board held May 12, 2015, and that said Ordinance was passed by the following vote:

Ayes: Five

Directors: Powell, Nelson, O'Dowd, Pack, Estrada

Noes: None

I further certify that said Ordinance was thereupon signed by the President of the Board of Directors of said District.

Acting Assistant Board Secretary

(SEAL)

ORDINANCE NO. 1414

AN ORDINANCE OF THE COACHELLA VALLEY WATER DISTRICT IMPOSING MANDATORY RESTRICTIONS ON WATER USE IN ORDER TO COMPLY WITH STATEWIDE DROUGHT REGULATIONS

WHEREAS, on January 17, 2014, Governor Jerry Brown issued a proclamation declaring a State of Emergency due to drought conditions. On April 25, 2014, the Governor issued an Executive Order calling for a redoubling of efforts to conserve water and directed the State Water Resources Control Board ("SWRCB") to adopt emergency regulations pursuant to Water Code Section 1058.5 which grants the SWRCB the authority to adopt emergency regulations; and

WHEREAS, on July 15, 2014, the SWRCB adopted Resolution No. 2014-0038 which adopted Emergency Regulations For Statewide Urban Water Conservation ("Regulations") which became effective July 28, 2014 and remain in place for up to 270 days (9 months), unless extended due to continued drought conditions or unless the SWRCB determines that the Regulations are no longer necessary. The Regulations are set forth in Title 23, Sections 863-865 of the California Code of Regulations; and

WHEREAS, the Regulations impose certain requirements on "urban water suppliers" that have water shortage contingency plans in place. "Urban water suppliers" are defined as suppliers providing water to over 3,000 municipal customers or providing over 3,000 acre-feet per year to municipal customers. The Coachella Valley Water District ("CVWD") meets the definition of an "urban water supplier" since it provides water to approximately 100,000 customers. CVWD also has a Water Supply Reliability And Water Shortage Contingency Planning document ("Plan") in place as part of its 2010 Urban Water Management Plan; and

WHEREAS, the Regulations require CVWD to move to the stage in its Plan that imposes mandatory restrictions on outdoor irrigation of ornamental landscapes or turf with potable water. The purpose of this Ordinance is to move to the first mandatory level of water use reduction which is Stage 2 of the Plan; and

WHEREAS, Water Code Section 31026 provides that CVWD has the power to restrict the use of water during any emergency caused by drought, or other threatened or existing water shortage, and to prohibit the wastage of water or the use of water during such periods, for any purpose other than household uses or such other restricted uses as may be determined to be necessary by CVWD and may prohibit use of such water during such periods for specific uses which CVWD may from time to time find to be nonessential. CVWD has the authority to impose monetary fines and penalties and take other applicable actions pursuant to Water Code Sections 350-358, 375-377, and 31029); and

WHEREAS, in accordance with Water Code Sections 350 et seq, 375 et seq, and 31027, and as required by Section 5.3.2 of the Plan, at least 10 days before consideration of this Ordinance, a Notice of Public Hearing was published in the Desert Sun, a newspaper of general circulation. A certified copy of the full text of this Ordinance was posted in the CVWD offices at least 5 days prior to the hearing; and

BE IT ORDAINED BY THE BOARD OF DIRECTORS OF THE COACHELLA VALLEY WATER DISTRICT AS FOLLOWS:

1. Incorporation Of Recitals All of the foregoing Recitals are true and correct and the Board so finds and determines. The Recitals set forth above are incorporated herein and made an operative part of this Ordinance.

2. Public Hearing The Board conducted a public hearing on August 12, 2014 at 9:00 a.m., or as soon thereafter as practicable, at the Steve Robbins Administration Building, 75-515 Hovley Lane East, Palm Desert, CA 92236 as part of the Regular Meeting of the Board.

3. Stage 2 The Board hereby implements Stage 2 which is the first mandatory level of water use reduction in the Plan, as revised and implemented by this Ordinance. The water use reduction goal in Stage 2 is 10%. CVWD shall notify the public of this determination by public proclamations. Upon such proclamation, due and proper notice shall be deemed to have been given to each and every person supplied water by CVWD.

4. Mandatory Restrictions Effective immediately upon adoption of this Ordinance, the following mandatory prohibitions shall be in effect for Stage 2:

(a) Outdoor irrigation of ornamental landscapes and turf are limited to the hours between sunset and 10:00 a.m., except as necessary for essential turf maintenance and overseeding;

(b) Customers shall follow the CVWD drought watering guide, a copy of which is attached hereto and can also be found at www.cvwd.org/conservation/wateringguide.php.

(c) Broken sprinklers shall be repaired within 24 hours of notification;

(d) Water shall be served in restaurants only upon request;

(e) A request will be made of hotels to place messaging in hotel rooms asking guests to conserve water;

5. Prohibitions The following actions are prohibited, except where necessary to address an immediate health and safety need or to comply with a term or condition in a permit issued by a state or federal agency:

(a) Applying water to outdoor landscapes in a manner that causes runoff such that water flows onto adjacent property, non-irrigated areas, private and public walkways, roadways, parking lots, or structures;

(b) Using a hose to wash an automobile, windows, solar panels, and tennis courts except where the hose is equipped with a shut-off nozzle;

(c) Applying water to any hard surface including, but not limited to, driveways, sidewalks, and asphalt; and

(d) Using potable water in a fountain or other decorative water feature, except where the water is part of a recirculating system.

6. Fines For Noncompliance The following financial penalties will be imposed when a customer violates the restrictions set forth in this Ordinance.

(a) First Violation – Written notice.

Any notice required under this Ordinance may include, for example and not by way of limitation, the following information: (i) the water conservation stage and restrictions that are in effect; (ii) actions required for compliance in order to prevent future violations; and (iii) penalties and enforcement actions which may be imposed for future violations.

(b) Second Violation – A fine will be imposed in the amount of $50.00 which will be added to the customer's water service bill.

(c) Third Violation – A fine will be imposed in the amount of $100.00 which will be added to the customer's water service bill.

(d) Fourth Violation and any subsequent violation – A fine will be imposed in the amount of $200.00 which will be added to the customer's water service bill.

In the event of any violation after the fourth violation, the General Manager-Chief Engineer, or his/her designee, may determine, in his/her reasonable discretion, that the continued violation of the restrictions set forth in this Ordinance warrant the initiation of procedures for the termination of water service pursuant to CVWD's Regulations Governing Domestic Water Service ("Regulations"), as they may be amended from time to time. For example, and not by way of limitation, CVWD has the right to terminate water service if a customer fails to comply with the Regulations, which hereby include the restrictions set forth in this Ordinance.

7. CVWD Rules And Regulations The procedures for written notice, imposition of penalties, termination of service, and appeal rights shall be the same such procedures as set forth in the Regulations including, but not necessarily limited to, Part 6 – Credit and Billing and Part 7 – Termination and Restoration of Service.

8. Purpose Of Restrictions And Fines The regulatory purposes of imposing the requirements and financial penalties, as set forth in this Ordinance, are to conserve water, deter waste and unreasonable use of water, encourage efficiency, and to help cover the costs incident to the investigation, inspection, and administration of the enforcement of this Ordinance.

9. Future Stage(s) In accordance with Section 5.3.2 of the Plan, the General Manager-Chief Engineer hereby determines that it is necessary to implement Stage 2 of the Plan. The Board hereby authorizes the General Manager-Chief Engineer, or his/her designee, to make a determination as to when it may be necessary to move to a further Stage, or a lesser Stage, in the Plan. Following said determination by the General Manager-Chief Engineer, the Board will

consider an ordinance, or any other applicable action, to determine whether, and to what extent, to adopt the determination of the General Manager-Chief Engineer. Said determinations by the General Manager-Chief Engineer, and then the Board, may also include a determination that the prohibitions in Section 5 of this Ordinance are best practices which should stay in effect regardless of what Stage, or any Stage, that may be in effect.

10. CEQA The Board finds that adopting and enforcing mandatory restrictions on water use in order to comply with SWRCB requirements is exempt from the California Environmental Quality Act ("CEQA") pursuant to State CEQA Guidelines Section 15268 and Public Resources Code Section 21080(b)(1) as a ministerial action. The Regulations mandate that each urban water supplier implement all requirements and actions of the stage of its water shortage contingency plan that imposes mandatory restrictions on outdoor irrigation. Therefore, an action to implement a particular phase of a water shortage contingency plan is not a discretionary action and as such it is statutorily exempt from CEQA.

11. Publication Following Adoption The President of the Board of Directors shall sign this Ordinance and the Secretary of the Board of Directors shall attest thereto, and this Ordinance shall be in full force and effect immediately upon adoption. Within 15 days after adoption of this Ordinance, a summary of this Ordinance shall be published with the names of the Directors voting for and against this Ordinance and a certified copy of the full text of this Ordinance, along with the names of those Directors voting for and against this Ordinance, shall be posted in the CVWD offices.

12. Severability If any section, subsection, clause or phrase in this Ordinance is for any reason held invalid, the validity of the remainder of this Ordinance shall not be affected thereby. The Board hereby declares that it would have passed this Ordinance and each section, subsection, sentence, clause, or phrase thereof, irrespective of the fact that one or more sections, subsections, sentences, clauses or phrases or the application thereof be held invalid.

ADOPTED this 12th day of August, 2014, by the Board of Directors of the Coachella Valley Water District.

COACHELLA VALLEY WATER DISTRICT

John Powell Jr.
President of the Board of Directors

ATTEST:

Julia Fernandez
Secretary of the Board of Directors

I, the undersigned Board Secretary of the Coachella Valley Water District, do hereby certify that the foregoing is a true and correct copy of Ordinance No. 1414 of said District introduced and passed at meeting of said Board held August 12, 2014, and that said Ordinance was passed by the following vote:

Ayes:	Powell, De Klotz, Pack, Nelson, Livesay
Noes:	None
Absent:	None

I further certify that said Ordinance was thereupon signed by the President of the Board of Directors of said District.

Julia Fernandez
Board Secretary

(SEAL)

Irrigation guide

This table shows the approximate amount of water different types of landscaping typically need each month. Individual watering times may vary due to soil and other conditions. Gradually increase or reduce the amount of water you're using to find an adequate amount for your situation without being wasteful. Use this guide as a reminder to change your sprinkler system each month. When there's measurable rain, turn your sprinkler system off and keep it off until the ground has dried.

	Water-efficient shrubs	Water-efficient trees	Non-desert trees	Turf Grass (Preferred drought watering times)
January	.7 gal./day 2 days/week	14 gal./day 2 days/week	45 gal./day 2 days/week	Spray system: 3 min./day; 7 days/week Rotor system: 7 min./day; 7 days/week
February	.9 gal./day 3 days/week	21 gal./day 3 days/week	56 gal./day 3 days/week	Spray system: 5 min./day; 7 days/week Rotor system: 13 min./day; 7 days/week
March	.9 gal./day 4 days/week	16 gal./day 4 days/week	53 gal./day 4 days/week	Spray system: 7 min./day; 7 days/week Rotor system: 18 min./day; 7 days/week
April	1 gal./day 5 days/week	17 gal./day 5 days/week	59 gal./day 5 days/week	Spray system: 10 min./day; 7 days/week Rotor system: 22 min./day; 7 days/week
May	.9 gal./day 6 days/week	18 gal./day 6 days/week	60 gal./day 6 days/week	Spray system: 12 min./day; 7 days/week Rotor system: 27 min./day; 7 days/week
June	.9 gal./day 7 days/week	18 gal./day 7 days/week	59 gal./day 7 days/week	Spray system: 14 min./day; 7 days/week Rotor system: 30 min./day; 7 days/week
July	.9 gal./day 7 days/week	18 gal./day 7 days/week	59 gal./day 7 days/week	Spray system: 13 min./day; 7 days/week Rotor system: 30 min./day; 7 days/week
August	.9 gal./day 6 days/week	17 gal./day 6 days/week	57 gal./day 6 days/week	Spray system: 12 min./day; 7 days/week Rotor system: 27 min./day; 7 days/week
September	1 gal./day 5 days/week	18 gal./day 5 days/week	63 gal./day 5 days/week	Spray system: 10 min./day; 7 days/week Rotor system: 22 min./day; 7 days/week
October	.9 gal./day 4 days/week	16 gal./day 4 days/week	52 gal./day 4 days/week	Spray system: 7 min./day; 7 days/week Rotor system: 14 min./day; 7 days/week
November	.7 gal./day 3 days/week	14 gal./day 3 days/week	44 gal./day 3 days/week	Spray system: 4 min./day; 7 days/week Rotor system: 10 min./day; 7 days/week
December	.7 gal./day 2 days/week	14 gal./day 2 days/week	42 gal./day 2 days/week	Spray system: 3 min./day; 7 days/week Rotor system: 6 min./day; 7 days/week

COACHELLA VALLEY WATER DISTRICT

Board Action Item

Board Meeting Date: August 12, 2014

TO: Board of Directors

SUBJECT: Conduct Public Hearing and Adopt an Ordinance Imposing Mandatory Restrictions on Water Use in order to comply with Statewide Drought Regulations

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Description and Location

On January 17, 2014, with California facing water shortfalls in the driest year in recorded state history, Governor Jerry Brown declared a statewide drought emergency. The severe drought persisted through the first half of the year. On July 15th the SWRCB approved an emergency regulation to require water agencies, their customers, and state residents to increase water conservation in urban settings or face possible fines or other enforcement.

With these SWRCB regulations Californians are required to stop: washing down driveways and sidewalks; watering outdoor landscape in a manner that cause excess runoff; using a hose without a shut-off nozzle to wash a vehicle; and using potable water in a decorative feature where the water is not recirculated.

Urban water suppliers, such as CVWD, are required to activate a mandatory stage of their Urban Water Management Plan (UWMP) Water Shortage Contingency Plans. The mandatory stage must impose mandatory restrictions on outdoor irrigation of ornamental landscapes or turf. The regulations also require urban water suppliers to submit to the SWRCB by the 15th of each month a monitoring report to track progress on the conservation measures. These SWRCB regulations will be in place for a minimum of 9 months.

Because of our severe summer climate, staff has determined limiting irrigation to 3 times weekly would be detrimental to trees and shrubs. A drought watering guide has been developed as an alternative. It will be sent to customers, posted on CVWD's website and promoted through customer outreach. The drought watering guide results in a twenty percent reduction in irrigation water use.

CVWD will comply with the SWRCB regulations by implementing CVWD's first mandatory level of water use reduction (Stage 2) listed in the 2010 UWMP Water Shortage Contingency Plan, as revised and implemented by the proposed ordinance. The water use reduction goal in Stage 2 is 10%. Effective immediately upon approval by the Board of the proposed ordinance, the following mandatory restrictions shall be in effect for Stage 2:

1. Limit outdoor irrigation of ornamental landscapes and turf to the hours between dusk and dawn unless reclaimed water is use, and except as necessary for essential turf maintenance and over seeding;

2. Follow the CVWD drought watering guide, a copy of which is attached to the proposed ordinance and can be found at www.cvwd.org/conservation/wateringguide.php;
3. Repair broken sprinklers within 24 hours of notification;
4. Serve water in restaurants only upon request;
5. Request that hotels place messaging in hotel rooms asking guests to conserve water;
6. The following actions are prohibited, except where necessary to address an immediate health and safety need or to comply with a term or condition in a permit issued by a state or federal agency: (i) Applying water to outdoor landscapes in a manner that causes runoff such that water flows onto adjacent property, non-irrigated areas, private and public walkways, roadways, parking lots, or structures; (ii) Using a hose to wash an automobile except where the hose is equipped with a shut-off nozzle; (iii) Applying water to any hard surface including, but not limited to driveways, sidewalks, and asphalt; and (iv) Using potable water in a fountain or other decorative water feature, except where the water is part of a recirculating system.

In addition to these immediate actions, CVWD staff will work with City and County staff to increase participation in conservation programs and make customers aware of potential violations to SWRCB prohibitions. CVWD will also work with the Cost of Service Study consultant MWH, to develop a drought rate policy and drought rates for board consideration in December or January.

Purpose and Benefit of Project

The purpose of this board item is to adopt an ordinance activating CVWD's water Shortage Contingency Plan to a level where outdoor irrigation restrictions are mandatory in compliance with the SWRCB emergency regulations. The benefit is that the water use reduction goal in Stage 2 is a 10% reduction in urban water use. use.

Procurement and Expenditures

In the future Staff will present justifications and request additional funding for development of a drought policy and drought rates, and for conservation programs necessary to implement mandatory restrictions.

Environmental Impact

☒ No, this item is not a "project" as defined by CEQA; therefore, approval does not require any CEQA action.
☐ Yes, see below.

Legal Review

☒ Reviewed by Counsel
☐ N/A

Fiscal Impact

It is expected that without development of a drought policy and drought rates, a 7%-10% decrease in revenue may occur as a result of adopting this ordinance. In this event, funds will be available from the Rate Stabilization Reserve to cover any revenue shortages in the Domestic Water Fund.

Prior Authorizations

☐Yes, see attachment.
☒ N/A

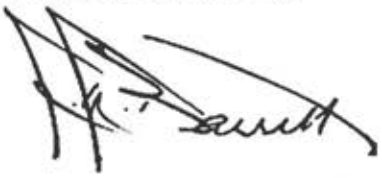
Staff Recommendation

It is recommended that the Board of Directors adopt CVWD's Water Shortage Contingency Ordinance and implement the Stage 2 which requires mandatory restrictions on outdoor irrigation with the water use reduction goal of 10%. It is also recommended to authorize the General Manager to work with local Cities and Counties to determine enforcement methods.

Please see the attached proposed Ordinance.

Prepared by: Patti Reyes
Planning and Special Programs Manager

Submitted by: Mark Johnson
Director of Engineering



Approved by:

J. M. Barrett
General Manager

Attachments/as
FILE: 0541.38 and 0804.

PROJECT ID NO: N/A

Drought Irrigation Guide

Reduce your water usage by another 20% to help reduce demand on the aquifer.

Irrigation guide for turfgrass (in minutes per day)		
Month	**Spray heads**	**Rotary heads**
January	**3**	**7**
February	**5**	**13**
March	**7**	**18**
April	**10**	**22**
May	**12**	**27**
June	**14**	**30**
July	**13**	**30**
August	**12**	**27**
September	**10**	**22**
October	**7**	**14**
November	**4**	**10**
December	**3**	**6**

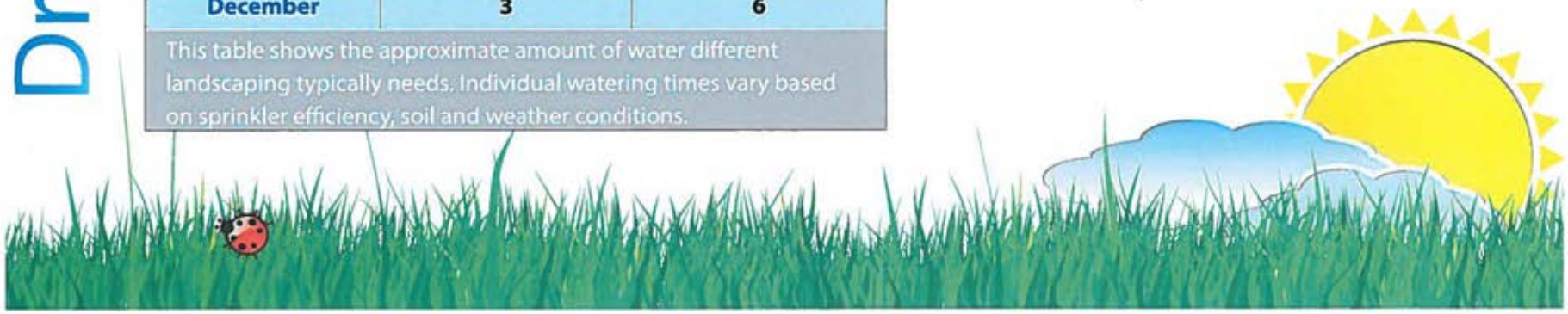
This table shows the approximate amount of water different landscaping typically needs. Individual watering times vary based on sprinkler efficiency, soil and weather conditions.

To help combat California's declared drought all customers have been asked to reduce their water use by 20%.

Here are some tips to help achieve this goal.

- Adjust your irrigation timer monthly according to CVWD's recommended irrigation guide.
- When there's measurable rain, turn your sprinkler system off and keep it off until the ground has dried.
- Check out CVWD's rebate and discount programs for homeowners, HOAs and businesses at www.cvwd.org.
- Attend a CVWD Water Wise landscape workshop to learn more about desert horticulture.

Visit www.cvwd.org for information and water wise tips.



Appendix F

CVWD Landscape Ordinance

(Ordinance No. 1302.2)

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ORDINANCE NO. 1302.2

AN ORDINANCE OF THE
COACHELLA VALLEY WATER DISTRICT
ESTABLISHING LANDSCAPE AND
IRRIGATION SYSTEM DESIGN CRITERIA

WHEREAS, on July 17, 2007, the Riverside County Board of Supervisors declared a local emergency for Riverside County due to severe drought conditions.

WHEREAS, on July 19, 2007, the governor of the State of California, Arnold Schwarzenegger, declared a State of Emergency in Riverside County due to severe and continuing drought conditions.

WHEREAS, on January 14, 2014, the governor of the State of California, Edmund G. Brown Jr., declared a State of Emergency in the State of California due to severe and continuing drought conditions.

WHEREAS, on April 1, 2015, the governor of the State of California, Jerry Brown, issued an executive order in response to drought conditions which required a revision of the Model Landscape Ordinance.

WHEREAS, the District desires to adopt new and revised landscape and irrigation design criteria by way of a new model landscape ordinance in order to comply with the updated version of the State's model ordinance.

WHEREAS, drought conditions in the Colorado River Basin persist, resulting in water levels of Lake Mead and Lake Powell at near-historic lows that could result in reduced water deliveries.

WHEREAS, water supply reliability through the State Water Project and issues associated with the California Bay Delta threaten reduced water deliveries to California State Water Project contractors.

WHEREAS there is an existing water shortage as demonstrated by the continuing overdraft of the groundwater basin.

WHEREAS Sections 31026 and 31027 of the California Water Code state that a district shall have the power to restrict the use of district water during an emergency caused by drought, or other threatened or existing water shortage.

WHEREAS, landscape and outdoor water use account for the vast majority of domestic water use in the Coachella Valley and represent enormous conservation opportunities consistent with the Coachella Valley Water Management Plan.

THEREFORE, BE IT NOW ORDAINED by the Board of Directors of the Coachella Valley Water District that Ordinance No. 1302.2 Landscape and Irrigation System Design Criteria is hereby adopted.

All requirements for landscape design and construction of Ordinance 1302.2 are contained in Attachment A, Landscape and Irrigation System Design Criteria, as revised from time to time.

REPEALS: Ordinance No. 1302.1, 1374 and all other ordinances or parts of ordinances, and codes, in conflict with the provisions of this Ordinance, are hereby expressly repealed.

BE IT FINALLY ORDAINED that is Ordinance shall become effective December 1, 2015.

President

ATTACHMENT A
OF
PROPOSED ORDINANCE 1302.2

LANDSCAPE AND IRRIGATION SYSTEM DESIGN CRITERIA

Sections:

0.00.010 Purpose and Intent

A. The California State Legislature has found:

1. The waters of the state are of limited supply and are subject to ever increasing demands;
2. The continuation of California's economic prosperity is dependent on the availability of adequate supplies of water for future users;
3. It is the policy of the State to promote the conservation and efficient use of water and to prevent the waste of this valuable resource;
4. Landscapes are essential to the quality of life in California by providing areas for active and passive recreation and as an enhancement to the environment by cleaning air and water, preventing erosion, offering fire protection, and replacing ecosystems lost to development;
5. Landscape design, installation, maintenance and management can and shall be water efficient; and
6. Section 2 of Article X of the California Constitution specifies that the right to use water is limited to the amount reasonably required for the beneficial use to be served and the right does not and shall not extend to waste and unreasonable method of use.

B. Consistent with these legislative findings, the purpose of these criteria is to:

1. Promote the values and benefits of landscaping practices that integrate and go beyond the conservation and efficient use of water;
2. Establish a structure for planning, designing, installing, maintaining and managing water efficient landscapes in new construction and rehabilitated projects by encouraging the use of a watershed approach that requires cross-sector collaboration of industry, government and property owners to achieve the many benefits possible;
3. Establish provisions for water management practices and water waste prevention for existing landscapes;

4. Use water efficiently without waste by setting a Maximum Applied Water Allowance (MAWA) as an upper limit for water use and reduce water use to the lowest practical amount; and

5. Promote the benefits of consistent landscape criteria with neighboring local and regional agencies.

C. It is also the purpose of these criteria to implement the requirements of the California Code of Regulations Title 23. Waters Division 2. Department of Water Resources Chapter 2.7. Model Water Efficient Landscape Ordinance, and State of California Water Conservation in Landscaping Act. Authority cited: Section 65593, Government Code, Reference: Sections 65591, 65593, 65596 Government Code.

D. It is the intent of these criteria to promote water conservation through climate-appropriate plant material and efficient irrigation systems, and to create a "Lush and Efficient" landscape theme through enhancing and improving the physical and natural environment.

E. Applicability

1. These criteria shall apply to all of the following landscape projects:

   a. New construction and rehabilitated landscapes for public agency projects and private development projects requiring a building or landscape permit, plan check or design review;

   b. New construction and rehabilitated landscapes which are developer-installed in single-family and multi-family projects requiring a building or landscape permit, plan check or design review;

   c. New construction and rehabilitated landscapes which are homeowner-provided and/or homeowner-hired in single family and multi-family residential projects with a total project landscape area equal to or greater than 2,500 square feet requiring a building or landscape permit, plan check or design review; and

   d. Existing landscapes limited to section 0.00.040 (B).

2. These criteria do not apply to:

   a. Registered local, state or federal historical sites;

   b. Ecological restoration projects that do not require a permanent irrigation system;

   c. Mined-land reclamation projects that do not require a permanent irrigation system; or

   d. Plant collections, as part of botanical gardens and arboretums open to the public.

0.00.020 Definitions

The words used in this section have the meanings set forth below:

ANTIDRAIN VALVE or CHECK VALVE - A valve located under/in a sprinkler head to hold water in the system to eliminate drainage from the lower elevation sprinkler heads.

APPLICATION RATE - The depth of water applied to a given area, usually measured in inches per hour. Also known as precipitation rate (sprinklers) or emission rate (drippers/microsprayers) in gallons per hour.

APPLIED WATER - The portion of water supplied by the irrigation system to the landscape.

AUTOMATIC CONTROLLER - An electronic or solid-state timer capable of operating valve stations to set the days, time and length of time of a water application.

BACKFLOW PREVENTION DEVICE - A safety device used to prevent pollution or contamination of the water supply due to the reverse flow of water from the irrigation system.

BENEFICIAL USE - Water used for landscape evapotranspiration.

BILLING UNITS - Units of water (100 cubic feet = 1 billing unit = 748 gallons = 1 CCF) for billing purposes. To convert gallons per year to 100 cubic feet per year, divide gallons per year by 748. (748 gallons = 100 cubic feet).

CONVERSION FACTOR (0.62) - A number that converts the Maximum Applied Water Allowance from acre-inches per acre to gallons per square foot. The conversion factor is calculated as follows:

(325,851 gallons/43,560 square feet)/12 inches	= (0.62)
325,851 gallons	= one acre-foot
43,560 square feet	= one acre
12 inches	= one foot

DESERT LANDSCAPE - A desert landscape using native plants spaced to look like a native habitat.

DISTRIBUTION UNIFORMITY - A measure of how evenly sprinklers apply water. The low-quarter measurement method (DULQ) utilized in the irrigation audit procedure is utilized for the purposes of these criteria. These criteria assume an attainable performance level of 75% DULQ for spray heads, 80% DULQ for rotor heads and 85% DULQ for recreational turf grass rotor heads.

DISTRICT – Coachella Valley Water District.

DRIP IRRIGATION - A method of irrigation where the water is applied slowly at the base of plants without watering the open space between plants.

ECOLOGICAL RESTORATION PROJECT - A project where the site is intentionally altered to establish a defined, indigenous, historic ecosystem.

EFFECTIVE PRECIPITATION or USABLE RAINFALL - The portion of total natural precipitation that is used by the plants, usually assumed to be three inches annually. Precipitation or rainfall is not considered a reliable source of water in the desert.

ELECTRONIC CONTROLLERS - Time clocks that have the capabilities of multiprogramming, water budgeting and multiple start times.

EMISSION UNIFORMITY - A measure of how evenly drip and microspray emitters apply water. The low-quarter measurement method (EULQ) utilized in the landscape irrigation evaluation procedure is utilized for the purposes of these criteria. These criteria assume 90% EULQ for drippers, microsprays and pressure compensating bubblers.

EMITTER - Drip irrigation fittings that deliver water slowly from the watering system to the soil.

ESTABLISHED LANDSCAPE - The point at which new plants in the landscape have developed roots into the soil adjacent to the root ball.

ESTABLISHMENT PERIOD - The first year after installing the plant in the landscape.

ESTIMATED TOTAL WATER USE (By hydrozone) - The portion of the estimated annual total applied water use that is derived from applied water to a specified hydrozone.

ESTIMATED ANNUAL TOTAL APPLIED WATER USE (Total of all hydrozones) - The annual total amount of water estimated to be needed by all hydrozones to keep the plants and water features in the landscaped area healthy and visually pleasing. It is based upon such factors as the local evapotranspiration rate, the size of the landscaped area, the size and type of water feature, the types of plants, and the efficiency of the irrigation system. The estimated annual total applied water use shall not exceed the Maximum Applied Water Allowance (MAWA).

EVAPOTRANSPIRATION or ET - The quantity of water evaporated from adjacent soil surfaces and transpired by plants expressed in inches during a specific time.

ET ADJUSTMENT FACTOR - A factor of 0.45 that, when applied to reference evapotranspiration, adjusts for plant factors and irrigation efficiency, two major influences upon the amount of water that needs to be applied to the landscape.

FINISHED GRADE – Grade height after surface mulch covering has been installed.

FLOW RATE - The rate at which water flows through pipes, valves and meters (gallons per minute or cubic feet per second).

HARDSCAPE - Concrete or asphalt areas including streets, parking lots, sidewalks, driveways, patios and decks.

HEAD-TO-HEAD COVERAGE - One hundred percent sprinkler coverage of the area to be irrigated, with maximum practical uniformity.

HIGH FLOW CHECK VALVE - A valve located under/in a sprinkler head to stop the flow of water if the spray head is broken or missing.

HYDROZONE - A portion of the landscaped area having plants with similar water needs that are served by a valve or set of valves with the same schedule. A hydrozone may be irrigated or non-irrigated. For example, a naturalized area planted with native vegetation that will not need supplemental irrigation (once established) is a non-irrigated hydrozone.

INFILTRATION RATE - The rate of water entry into the soil expressed as a depth of water per unit of time (inches per hour).

IRRIGATION EFFICIENCY - The measurement of the amount of water beneficially used divided by the amount of water applied. Irrigation efficiency is derived from measurements and estimates of irrigation system characteristics and management practices. The minimum irrigation efficiency for purposes of these regulations is 0.75 or 75 percent and .90 or 90 percent for drip systems.

LANDSCAPE IRRIGATION AUDIT - A process to perform site inspections, evaluate irrigation systems and develop efficient irrigation schedules.

LANDSCAPED AREA - The entire parcel less the building footprint, driveways, non-irrigated portions of the parking lots, hardscapes (such as decks and patios), and other nonporous areas. Water features are included in the calculation of a site's landscaped area.

LATERAL LINE - The water delivery pipeline that supplies water to the emitters sprinklers from a valve.

LOCAL AGENCY – A city, county, or water purveyor responsible for adopting and implementing the ordinance. The local agency is also responsible for enforcement of the ordinance, including, but not limited to, approval of a design review, permit, plan check, or inspection of a project.

MAIN LINE - The pressurized pipeline that delivers water from the water source to a valve or outlet.

MAXIMUM APPLIED WATER ALLOWANCE (MAWA) - For design purposes, the upper limit of annual applied water for the established landscape area as specified in Division 2, Title 23, California Code of Regulations, Chapter 7, Section 492.4. It is based upon the area's reference evapotranspiration, ET adjustment factor, and the size of the landscaped area. The estimated applied water use shall not exceed the Maximum Applied Water Allowance (MAWA).

MICROIRRIGATION - See drip irrigation.

MULCH - Any organic materials such as leaves, bark, straw or inorganic material such as pebbles, stones, gravel, decorative sand or decomposed granite left loose and applied to the soil surface to reduce evaporation.

NATIVE PLANTS - Native plants are low water using plants that are:
1) indigenous to the Coachella Valley and lower Colorado Desert region of California and Arizona, 2) native to the southwestern United States and northern Mexico or 3) native to other desert regions of the world, but adapted to the Coachella Valley.

NATURAL GRADE – Grade height of native soil before application of surface mulch.

OPERATING PRESSURE - The pressure at which an irrigation system's sprinklers, bubblers, drippers or microsprays are designed to operate, usually indicated at the base of an irrigation head.

OVERHEAD SPRINKLER IRRIGATION STATIONS - Sprinklers with high flow rates (spray heads, impulse sprinklers, gear rotors, etc.) that are utilized to apply water through the air to large irrigated areas.

OVERSPRAY - The water which is delivered beyond the landscaped area onto pavements, walks, structures or other non-landscape areas. Also known as hardscape applications.

PLANT FACTOR - A factor that, when multiplied by reference evapotranspiration, estimates the amount of water used by plants. For purposes of these criteria, the average plant factor of very low water using plants ranges from 0.01 to 0.10, for low water using plants the range is 0.10 to 0.30, for moderate water using plants the range is 0.40 to 0.60, and for high water using plants, the range is 0.70 to 0.90. Reference: Water Use Classifications of Landscape Species IV (WUCOLS IV).

PRESSURE COMPENSATING (PC) BUBBLER – An emission device that allows the output of water to remain constant regardless of input pressure. Typical flow rates for this type of bubbler range between 0.25 gpm to 2.0 gpm.

PRESSURE COMPENSATING SCREENS/DEVICES - Small screens/devices inserted in place of standard screens/devices that are used in sprinkler heads for radius and high pressure control.

QUALIFIED PROFESSIONAL - A person who has been certified by their professional organization or a person who has demonstrated knowledge and is locally recognized as qualified among landscape architects due to longtime experience.

RAIN-SENSING DEVICE - A system which automatically shuts off the irrigation system when it rains.

RECYCLED WATER/RECLAIMED WATER - Treated or recycled wastewater of a quality suitable for nonpotable uses such as landscape irrigation. Recycled water is not for human consumption.

RECORD DRAWING or AS-BUILTS - A set of reproducible drawings which show significant changes in the work made during construction and which are usually based on drawings marked up in the field and other data furnished by the contractor.

RECREATIONAL AREA - Areas of active play or recreation such as golf courses, sports fields, school yards, picnic grounds, or other areas with intense foot or vehicular traffic.

RECREATIONAL TURF GRASS - High traffic turf grass that serves as a playing surface for sports and recreational activities. Athletic fields, golf courses, parks and school playgrounds are all examples of areas having recreational turf grass.

RECREATIONAL TURF GRASS ET ADJUSTMENT FACTOR - A factor of 0.82 that, when applied to reference evapotranspiration, adjusts for the additional stress of high traffic on recreational turf grass and the higher irrigation efficiencies of long-range rotary sprinklers. These are the two major influences upon the amount of water that needs to be applied to a recreational landscape. A mixed cool/warm season turf grass with a seasonal average of 0.7 is the basis of the plant factor portion of this calculation. The irrigation efficiency of long-range sprinklers for purposes of the ET adjustment factor is 0.85. Therefore, the ET adjustment factor is 0.82 = 0.7/0.85.

REFERENCE EVAPOTRANSPIRATION or ETo - A standard measurement of the environmental parameters which affect the water use of plants, using cool season grass as a reference. ETo is expressed in inches per day, month or year and is an estimate of the evapotranspiration of a large field of cool-season grass that is well watered. Reference evapotranspiration is used as a basis of determining the Maximum Applied Water Allowances so that regional differences in climate can be accommodated. For purposes of these criteria, CVWD Drawing No. 29523 will be used for ETo zones.

REHABILITATED LANDSCAPE - Any re-landscaping project in which the choice of new plant material and/or new irrigation system components is such that the calculation of the site's estimated water use will be significantly changed. The new estimated water use calculation must not exceed the Maximum Applied Water Allowance (MAWA) calculated for the site using a 0.45 ET adjustment factor.

RIPARIAN PLANTS - Riparian plants are high water using and water-loving plants that are found growing naturally along flowing rivers and lake shores. They may also be native to wet swampy areas with high water tables or poor drainage.

RUNOFF - Irrigation water which is not absorbed by the soil or landscape to which it is applied and which flows from the planted area.

SERVICE LINE - The pressurized pipeline that delivers water from the water source to the water meter.

SMART CONTROLLER – Weather-based or soil moisture-based irrigation controls that monitor and use information about environmental conditions for a specific location and landscape (such as soil moisture, rain, wind, the plants' evaporation and transpiration rates and, in some cases, plant type and more) to automatically control when to water and when not to, providing exactly the right amount of water to maintain lush, healthy growing conditions.

SOIL MOISTURE-SENSING DEVICE - A device that measures the amount of water in the soil.

SOIL TEXTURE - The classification of soil based on the percentage of sand, silt and clay in the soil.

SPRINKLER HEAD - A device which sprays water through a nozzle.

STATIC WATER PRESSURE - The pipeline or municipal water supply pressure when water is not flowing.

STATION - An area served by one valve or by a set of valves that operate simultaneously.

TURF - A surface of earth containing mowed grass with roots.

VALVE - A device used to control the flow of water in the irrigation system.

WATER FEATURE - Any water applied to the landscape for nonirrigation, decorative purposes. Fountains, streams, ponds and lakes are considered water features. Water features use more water than efficiently irrigated turf grass and are assigned a plant factor of 1.1 for a stationary body of water and 1.2 for a moving body of water.

WATER SYSTEM - The network of piping, valves and irrigation heads.

WUCOLS IV - Water Use Classifications of Landscape Species IV

0.00.030 Provisions for new or rehabilitated landscapes

A. Submittal and Approval of a Landscape Documentation Package

1. Prior to construction, the project applicant shall:

   a. Submit two copies of a Landscape Documentation Package to the Coachella Valley Water District (District) that conform to this chapter. No water meter will be issued until the District reviews and approves the Landscape Documentation Package.

   b. Submit one copy of the Landscape Documentation Package to the local agency (city/county).

2. Upon receipt of the Landscape Documentation Package, the District shall:

   a. Review the Landscape Documentation Package.

   b. Approve or deny the Landscape Documentation Package.

3. Upon approval of the Landscape Documentation Package, the District will:

   a. Sign and date the approved plans and return them to the project applicant.

   b. Submit a copy of the project's Water Efficient Landscape Worksheet (Appendix B) to the local agency.

4. Upon approval of the Landscape Documentation Package by the local agency, the project applicant shall:

   a. Receive an approval of the landscape design review or plan check.

   b. Finalize the Certificate of Completion, including recording the date of the approval.

   c. File the Certificate of Completion with the District and the local agency, and provide a copy to the property owner or designee.

   d. Submit a copy of the approved Landscape Documentation Package, along with the record drawings and any other information, to the property owner or designee.

5. Each Landscape Documentation Package shall include the following elements:

   a. A completed Landscape Documentation Package Checklist (Appendix A), which includes the date, project applicant, and project address information. This checklist serves to verify that the elements of the Landscape Documentation Package have been completed.

   b. Total landscaped area (square feet)

   c. Project type (e.g., new, rehabilitated, public, private, cemetery, homeowner-installed, etc.)

   d. Water Efficient Landscape Worksheet (Appendix B), which may be imbedded in the plan sheets of the Landscape Documentation Package, and include the following:

      i. Hydrozone Information Table (reference Appendix C)

   e. Water Budget Calculations (reference Appendix D) that adhere to the following requirements:

      i. The plant factor used shall be from WUCOLS. The plant factors ranges from 0 to 0.3 for the low use plants, from 0.4 to 0.6 for the moderate use plants, from 0.7 to 1.0 for the high use plants and 1.1 to 1.2 for water features.

      ii. All water features shall be included in the 1.1 to 1.2 hydrozone and temporary irrigated areas shall be included in the low water use hydrozone. For the calculation of the Maximum Applied Water Allowance (MAWA) and Estimated Total Water Use, a project applicant shall use ETo values from the Reference Evapotranspiration Table, Appendix C. For geographic areas not covered in Appendix C, use data from other cities located nearby in the same reference evapotranspiration zone.

   f. Landscape Design Plan

   g. Irrigation Design Plan

   h. Grading Design Plan (as required)

   i. Soil Management Report (as required)

   j All plans must contain a signature block for both the local agency and the District.

6. The Landscape Documentation Package shall be submitted by the following procedure:

   a. The applicant or applicant's representative may bring, send or ship copies of the Landscape Documentation Package to the District, and the local agency, as applicable. Appropriate fees must accompany the Landscape Documentation Package.

b. The plans will normally be returned to the applicant or local agency with comments by the District (Water Management Department) within ten working days of receipt.

c. After noted corrections have been made, the applicant shall re-submit the Landscape Documentation Package to the District for approval and signing by the Water Management Department and Development Services Department for the District.

d. Signed plans will be held at the District's Palm Desert office for applicant pick up or sent by certified shipping at the applicant's request and expense.

e. For direct communication:

Telephone No.:	(760) 398-2651 Water Management Department
Mailing Address:	Coachella Valley Water District Attention: Water Management Department Post Office Box 1058 Coachella, California 92236
Hand Delivery or Shipping Address:	Coachella Valley Water District Attention: Water Management Department 85-995 Avenue 52 Coachella, California 92236
Hand Delivery or Shipping Address:	Coachella Valley Water District Attention: Water Management Department 75-525 Hovley Lane East Palm Desert, California 92211

f. The District will inspect the landscaped area(s) for conformance with the approved Landscape Documentation Package. Landscaping that does not conform to the approved Landscape Documentation Package is subject to penalties as provided in Section 0.00.070.

7. Upon review and approval of the Landscape Documentation Package by the District, the project applicant shall:

a. Submit a copy of the District-approved Landscape Documentation Package and Water Efficient Landscape Worksheet to the local agency.

b. Provide the property owner or site manager a copy of the District-approved Landscape Documentation Package, in addition to the record drawings and any other information normally forwarded to the property owner or site manager.

8. Upon review and approval of the Landscape Documentation Package by the local agency, the project applicant shall:

    a. Record the date of the permit on the Certificate of Completion.

    b. Provide the property owner or designee a copy of the local-agency approved Landscape Documentation Package, in addition to the record drawings, and any other information normally forwarded to the property owner or designee.

B. Landscape Design Plan

A landscape design plan meeting the following design criteria shall be submitted as part of the Landscape Documentation package. For the efficient use of water, a landscape shall be carefully designed and planned for the intended function of the project.

1. Any plant may be selected for the landscape, providing the Estimated Total Water Use in the landscape area does not exceed the Maximum Applied Water Allowance (MAWA). To encourage the efficient use of water the following is highly recommended:

    a. Protection and preservation of native species and natural vegetation;

    b. Selection of water-conserving plant and turf species;

    c. Selection of trees based on applicable local tree ordinances or tree shading guidelines; and

    d. Selection of plants from local and regional landscape program plant lists.

2. Specifications for Landscape Design Plan
The landscape design plan shall be drawn on 36-inch by 24-inch project base sheets at a scale that accurately and clearly identifies the following:

    a. Tract name, tract number or parcel map number on cover sheet.

    b. Proposed planting areas.

    c. Plant material location and size.

    d. Plant botanical and common names.

    e. Plant spacing, where applicable.

    f. Natural features including, but not limited to, rock outcroppings, and existing trees and shrubs that will remain incorporated into the new landscape.

    g. Vicinity map showing site location on top sheet or on cover sheet.

    h. Title block on each sheet with the name and address of the project, and the name and address of the professional design company with its signed professional stamp, if applicable.

i. Reserve two 6-inch by 3-inch spaces for a) the local agency signature block and b) a District signature block in lower right corner of the cover sheet and on all of the landscape, irrigation design/detail/specification sheets.

j. Show plan scale and north arrow on design sheets.

k. Show graphic scale on all design sheets.

l. Show all property lines and street names.

m. Show all paved areas, such as driveways, walkways and streets.

n. Show all pools, ponds, lakes, fountains, water features, fences and retaining walls.

o. Show locations of all overhead and underground utilities within project area.

p. Provide an index map, as necessary, showing the overall project, including all 1/4 and 1/16 section lines and section numbers.

q. Show this note on each design sheet stating, "No permanent structures or trees within CVWD and/or USBR easements. CVWD will not be responsible for damage or replacement of any surface improvements, including but not limited to, decorative concrete, landscaping, curb, gutter, sidewalks, planters, gates and related improvements installed within CVWD and/or USBR easements."

In addition, no trees shall be installed within 15' of a CVWD and/or USBR pipeline. Surface improvements may be installed within CVWD and/or USBR easements only upon the prior consent of CVWD, which consent may be granted or denied at CVWD's sole discretion. In the event of such consent, then a Non-interference review letter (NIRL) may apply per Section 3.4 of CVWD's Development Design Manual.

r. Show Maximum Applied Water Allowance (MAWA) for the proposed project. (See formula in Appendix C and Sample MAWA, Appendix D.)

s. Show total landscaped area in square feet. Separate area square footages by hydrozone. Show the total percentage area of each hydrozone. Include total area of all water features as separate hydrozones of still or moving water. Show Estimated Total Water Use, for each major plant group hydrozone and water feature hydrozone expressed in either seasonal (turf grass) or annual (trees, shrubs, groundcovers and water features) billing units.

t. Show Total Estimated Total Water Use for each major plant group hydrozone and water feature hydrozone expressed in either seasonal (turf grass) or annual (trees, shrubs, groundcovers and water features) billing units.

u. Show Total Estimated Water Use for the entire project. (Formula in Appendix C and on Sample Calculation Estimated Water Use, Appendix D.) The Total Estimated Use shall not exceed the Maximum Applied Water Allowance (MAWA).

v. Designate recreational areas and recreational turf areas.

w. When model homes are included, show the Maximum Applied Water Allowance (MAWA) and Estimated Total Water Use (by hydrozone with totals) for each model unit.

3. Landscape Design Criteria

a. The landscape design must be carefully planned and take into account the intended function of the project.

b. Plants' appropriateness shall be selected based upon their adaptability to the climatic, geologic and topographical conditions of the site.

c. Selection of water-efficient and low-maintenance plant material is required.

d. All planted areas must be a minimum of one inch below adjacent hardscapes to eliminate runoff and overflow.

e. Long, narrow or irregularly shaped turf areas shall not be designed because of the difficulty in irrigating uniformly without overspray onto hardscaped areas, streets and sidewalks. Areas less than 10 feet in width shall not be designed with turf. Turf will be allowed in these areas only if irrigation design reflects the use of subsurface irrigation or a surface flow/wick irrigation system.

f. Turf areas irrigated with spray/rotor systems must be set back at least 24 inches from curbs, driveways, sidewalks or any other area that may result in runoff of water onto streets. An undulating landscape buffer area created by the setback shall be designed with rocks, cobble or decomposed granite and/or can be landscaped with drip irrigated shrubs/accents or covered with a suitable ground cover.

g. Plants having similar water use shall be grouped together in distinct hydrozones.

h. The use of a soil covering mulch or a mineral groundcover of a minimum three-inch depth to reduce soil surface evaporation is required around trees, shrubs and on nonirrigated areas. The use of boulders and cobble shall be considered to reduce the total vegetation area.

i. Annual color plantings shall be used only in areas of high visual impact and must be irrigated with drip, microirrigation or other systems with efficiencies of 90 percent or greater. Otherwise, drip irrigated, perennial plantings should be the primary source of color.

j. Native desert plants shall be specified to be planted in a shallow, wide, rough hole two times the root ball width. The root ball will be set on either undisturbed native soil or a firmed native soil. The root ball top will be set even with the finished surface grade or above grade if the soil is poorly drained. The hole must be backfilled with native soil. Extra soil may be used to mound up around plants where the soil is poorly drained.

k. Landscaping must not obstruct or interfere with street signs, lights or road/walkway visibility. Screening may be provided by walls, berms or plantings.

l. High water use plants, characterized by a plant factor of 0.7 to 1.0, are prohibited in street medians.

m. Use locally approved plant materials lists in the selection of appropriate plants.

n. Planter islands in parking lots with canopy trees shall be sized to meet local land use agency requirements.

o. A landscape plan in fire-prone areas shall address fire safety and prevention. A defensible space or zone around a building or structure is required per Public Resources Code Section 4291 (a) and (b). Avoid fire-prone plant material and highly flammable mulches.

p. The use of invasive and/or noxious plant species is prohibited.

q. The architectural guidelines of a common interest development, which includes community apartment projects, condominiums, planned developments and stock cooperatives, shall not prohibit or include conditions that have the effect of prohibiting the use of low-water use plants as a group (California Civil Code, Section 1353.8).

D. Grading Design Plan

1. For efficient use of water, grading of a project site shall be designed to minimize soil erosion, runoff and water waste. A grading plan shall be submitted as part of the Landscape Documentation Package. A comprehensive grading plan prepared by a civil engineer for other local agency permits satisfies this requirement.

2. The project applicant shall submit a landscape grading plan that indicates finished configurations and elevations of the landscape area including;

   a. Height of graded slopes;

   b. Drainage patterns;

   c. Pad elevations;

   d. Finish grade; and

   e. Stormwater retention improvements, if applicable.

3. To prevent excessive erosion and runoff, it is highly recommended, and per local agency requirements, that project applicants:

   a. Grade so that all irrigation and normal rainfall remains within property lines and does not drain on to non-permeable hardscapes;

   b. Avoid disruption of natural drainage patterns and undisturbed soil; and

   c. Avoid soil compaction in landscape areas.

4. The grading design plan shall contain the following statement: "I have complied with the criteria of the ordinance and applied them accordingly for the efficient use of water in the grading plan."

5. Turf is not allowed on slopes greater than 25% where the toe of the slope is adjacent to an impermeable hardscape and where 25% means 1 foot of vertical elevation change for every 4 feet of horizontal length (rise divided by run x 100 = slope percent).

6. Slopes greater than 25% shall not be irrigated with an irrigation system with a precipitation rate exceeding 0.75 inches per hour. This restriction may be modified if the landscape designer specifies an alternative design or technology, as part of the Landscape Documentation Package, and clearly demonstrates no runoff or erosion will occur. Prevention of runoff must be confirmed during an irrigation audit.

7. All grading must retain normal stormwater runoff and provide for an area of containment. All irrigation water must be retained within property lines and not allowed to flow into public streets or public rights-of-way. Where appropriate, a simulated dry creek bed may be used to convey storm drainage into retention areas. A drywell shall be installed if the retention basin is to be used as a recreational area.

8. Mounded or sloped planting areas that contribute to runoff onto hardscape are prohibited. Sloped planting areas above a hardscaped area shall be avoided unless there is a drainage swale at toe of slope to direct runoff away from hardscape.

9. Median islands must be graded to prevent stormwater and excess irrigation runoff.

E. Irrigation Design Plan

For the efficient use of water, an irrigation system shall meet all the requirements listed in this section and the manufactures recommendations. The irrigation system and its related components shall be planned and designed to allow for proper installation, management, and maintenance. An irrigation design plan meeting the following criteria shall be submitted as part of the Landscape Documentation Package.

Separate landscape water meters shall be installed for all projects except single family homes with a landscape area less than 5,000 square feet. Landscape meters for single family homes with a landscape area over 5,000 square feet may be served by a permanent service connection provided by the District or be a privately owned submeter installed at the irrigation point of connection on the

customer service line. When irrigation water is from a well, the well shall be metered. The irrigation design plan shall be drawn on project base sheets. It should be separate from, but use the same format as, the landscape design plan. The irrigation system specifications shall accurately and clearly identify the following:

1. Specifications for Irrigation Design.
    a. Control valves, manufacturer's model number, size and location.
    b. Irrigation head manufacturer's model number, radius, operating pressure, gallons per minute/gallons per hour (gpm/gph) and location.
    c. Piping type, size and location.
    d. Point of connection or source of water and static water pressure.
    e. Meter location and size (where applicable).
    f. Pump station location and pumping capacity (where applicable).
    g. Power supply/electrical access and location.
    h. Plan scale and north arrow on all sheets.
    i. Graphic scaling on all irrigation design sheets.
    j. Irrigation installation details and notes/specifications.
    k. The irrigation system shall be automatic, constructed to discourage vandalism and simple to maintain.
    l. All equipment shall be of proven design with local service available.
    m. Show location, station number, size, and design gpm of each valve on plan. Control valves shall be rated at 200 psi.
    n. Visible sprinklers near hardscape shall be of pop-up design.
    o. All heads should have a minimum number of wearing pieces with an extended life cycle.
    p. Sprinklers, drippers, valves, etc., must be operated within manufacturer's specifications.
    q. Manual shut-off valves shall be fully ported ball valves or butterfly valves. Manual shut-off valves are required upstream of automatic valve manifolds.
    r. Master valves shall be metal, located as close to the point of connection as possible, and be metal piped between the master valve and the water meter.
    s. High flow sensors that detect and report high flow conditions created by system damage or malfunction shall be specified for all projects where a dedicated landscape irrigation meter is required.

t. The following statement "I have complied with the criteria of the ordinance and have applied them accordingly for the efficient use of water in the irrigation design plan;" and

u. The signature of a licensed landscape architect, certified irrigation designer, irrigation consultant, landscape contractor or any other person authorized to design an irrigation system.

2. Specifications for Irrigation Efficiency

The minimum irrigation efficiency shall be 0.75 (75%). Greater irrigation efficiencies are expected from well-designed and maintained systems. The following are required:

a. Design spray head and rotor head stations with consideration for worst wind conditions. Close spacing and low-angle nozzles are required in high and frequent wind areas (ETo Zone No. 5).

b. Spacing of sprinkler heads shall not exceed manufacturer's maximum recommendations for proper coverage. The plan design shall show a minimum of 0.75 (75%) distribution uniformity.

c. Only irrigation heads with matched precipitation rates shall be circuited on the same valve.

d. Valve circuiting shall be designed to be consistent with hydrozones.

e. Individual hydrozones that mix plants that are moderate and low water use may be allowed if:

(i) plant factor calculation is based on the proportions of the respective plant water uses and their plant factor; or

(ii) the plant factor of the higher water using plant is used for the calculations.

f. Individual hydrozones that mix high and low water use plants shall not be permitted.

g. On the landscape design plan and irrigation design plan, hydrozone areas shall be designated by number, letter, or other designation. On the irrigation design plan, designate the areas irrigated by each valve, and assign a number to each valve. Use this valve number in the hydrozone information table. This table can assist with pre-inspection and final inspection of the irrigation system, and programming the controller.

3. Irrigation System Criteria

a. Reduced pressure backflow prevention devices shall be installed behind meter at curb by the District.

b. Show location, station number, size and design gpm of each valve on plan.

c. Smart Controllers shall be specified for all projects. This includes climate based or sensor based controllers, which can automatically adjust for local weather and/or site conditions.

d. High flow check valves shall be installed in or under all heads adjacent to street curbing, parking lots and where damage could occur to property due to flooding, unless controllers with flow sensor capabilities are specified that can automatically shut off individual control valves when excess flow is detected.

e. Pressure compensating screens/devices shall be specified on all spray heads to reduce radius as needed to prevent overthrow onto hardscape and/or to control high pressure misting.

f. All irrigation systems shall be designed to avoid runoff onto hardscape from low head drainage, overspray and other similar conditions where water flows onto adjacent property, nonirrigated areas, walks, roadways or structures.

g. Rotor type heads shall be set back a minimum of 4 feet from hardscape.

h. The use of drip, microirrigation or pressure compensating bubblers or other systems with efficiencies of 90 percent or greater is required for all shrubs and trees. Small, narrow (less than 8 feet), irregularly shaped or sloping areas shall be irrigated with drip, microspray or PC (pressure-compensating) bubbler heads.

i. Trees in turf areas shall be on a separate station to provide proper deep watering.

j. Street median irrigation

   i. No overhead sprinkler irrigation system shall be installed in median strips or in islands.

   ii. Median islands or strips shall be designed with either a drip emitter to each plant or subsurface irrigation. Bubblers used for trees must be fixed-flow pressure compensating type. Adjustable bubblers are prohibited

k. Meter sizing for landscape purposes shall be 33 gpm per planted acre. Maximum design meter flow rates are: 3/4" = 23 gpm, 1" = 37 gpm, 1-1/2" = 80 gpm, 2" = 120 gpm

l. Large projects located outside Improvement District No. 1 of the Coachella Valley Water District shall connect to or provide future connection to recycled water if such water is available. Large projects located inside Improvement District No. 1 may be required to connect to canal irrigation water or recycled water if such water is available. **(See attached boundary map.)**

4. Drip Irrigation System Criteria

   a. The drip system must be sized for mature-size plants.

b. The irrigation system should complete all irrigation cycles during peak use in about 12 hours. Normally, each irrigation controller should not have more than four drip stations that operate simultaneously.

c. Field installed below ground pipe connections shall be threaded PVC or glued PVC. Surface laid hose and tubing is prohibited. Polyethylene tubing is allowed only in subsurface installations. Drip emitter installation shall be directly into polyethylene tubing on a ¼ inch thick-walled riser. Multi-port outlet devices and multi-port distribution is prohibited.

d. Proportion gallons per day per plant according to plant size. The following sizing chart is for peak water use. The low to high end of the range is according to the relative water requirements of the plants. The low end is for desert natives and the high end is for medium water use type plants.

Size of Plant	Gallons Per Day
Large trees (over 30-foot diameter)	58+ to 97+
Medium trees (about 18-foot diameter)	21 to 35
Small trees/large shrubs (9-foot diameter)	6 to 10
Medium shrubs (3.5-foot diameter)	.8 to 1.3
Small shrubs/groundcover	.5 or less

e. Plants with widely differing water requirements shall be valved separately. As an example, separate trees from small shrubs and cactus from other shrubs. Multiple emitter point sources of water for large shrubs and trees must provide continuous bands of moisture from the root ball out to the mature drip line plus 20 percent of the plant diameter. See Appendix C for more information on emitter spacing and wetted area.

f. Most plants require 50 percent or more of the soil volume within the drip line to be wetted by the irrigation system. See Appendix C for more information. For additional information on plant watering and plant relative water needs, see the plant list section of the "Lush and Efficient, Landscape Gardening in the Coachella Valley" or a list provided by the local agency.

5. Recycled Water Specifications

a. When a site has recycled water available or is in an area that will have recycled water available as irrigation water, the irrigation system shall be installed using the industry standard purple colored

or marked "Recycled Water Do Not Drink" on pipes, valves and sprinkler heads.

b. The backup groundwater supply (well water or domestic water) shall be metered. Backup supply water is only for emergencies when recycled water is not available.

c. Recycled water users must comply with all county, state and federal health regulations. Cross connection control shall require a 6-inch air gap system or a reduced pressure backflow device. All retrofitted systems shall be dye tested before being put into service.

d. Where available, recycled water shall be used as a source for decorative water features.

e. Sites using recycled water are not exempted from the Maximum Applied Water Allowance (MAWA), prescribed water audits or the provisions of these criteria.

f. A Recycled Water Checklist (Appendix G) shall be submitted to the District upon submittal of the first plan check of the landscape design plan and the irrigation design plan.

6. Irrigation Water (Nonpotable) Specifications

a. When a site is using nonpotable irrigation water that is not recycled water (from an on-site well or canal water) all hose bibs shall be loose key type and quick coupler valves shall be of locking type with nonpotable markings to prevent possible accidental drinking of this water.

b. Sites using nonpotable irrigation water are not exempted from the Maximum Applied Water Allowance (MAWA), prescribed water audits or the provisions of these criteria.

7. Groundwater Water Specifications

a. Sites using groundwater irrigation water from wells are not exempted from the Maximum Applied Water Allowance (MAWA), prescribed water audits, or the provisions of these criteria.

8. Golf Course Criteria

a. For all new golf courses and additions or renovations to existing golf courses, the area of irrigated turf used for tees, fairways, greens and practice areas shall be limited. The total turf area of the golf course shall be limited to a maximum of four (4) irrigated acres average per golf hole. Practice areas such as driving ranges and short game areas shall not exceed ten (10) acres of turf. The golf course design shall reflect the natural topography and drainage ways of the site, minimize the clearing of vegetation and be flexible and water efficient in design.

b. All nonturf areas such as ponds, lakes, artificial water courses, bunkers and irrigated landscapes within the golf course project area must not exceed the Maximum Applied Water Allowance (MAWA) calculations set forth within these criteria.

00.00.040 Other Provisions

A. Landscape Audit, Irrigation Survey, and Irrigation Water Use Analysis for New Construction and Rehabilitated Landscapes

1. This section shall apply to new construction and rehabilitated landscape projects installed after January 1, 2010 as described in Section 0.00.030.

2. All landscape irrigation audits shall be conducted by a certified landscape irrigation auditor.

3. The project applicant shall submit an irrigation audit report with the Certificate of Completion to the local agency that may include, but not be limited to, inspection, system tune-up, system test with distribution uniformity, reporting overspray or run-off that causes overland flow, and preparation of an irrigation schedule, including configuring irrigation controllers with application rate, soil types, plant factors, slope, exposure and any other factors necessary for accurate programming;

4. The District will administer programs that may include, but not be limited to, irrigation water use analysis, irrigation audits and irrigation surveys for compliance with the Maximum Applied Water Allowance (MAWA).

5. The owner of the landscaped area shall bear the cost of the audit.

B. Irrigation Audit, Irrigation Survey and Irrigation Water Use Analysis for Existing Landscapes

1. This section shall apply to all existing landscapes that were installed before January 1, 2010 and are over one (1) acre in size.

2. The District will administer programs that may include, but not be limited to, irrigation water analysis, irrigation surveys and irrigation audits that verify landscape water use does not exceed the Maximum Applied Water Allowance (MAWA) for existing landscapes. The Maximum Applied Water Allowance (MAWA) for existing landscapes shall be calculated as: MAWA = (.70) (ETo) (LA) (.62/748) unless landscape plans were submitted and approved under a more water conserving ordinance.

C. Water Waste Prevention

1. Water Waste Prevention. Water waste resulting from inefficient landscape irrigation including run-off, low-head drainage, overspray, or other similar conditions where water flows onto adjacent property, nonirrigated areas, walks, roadways, or structures is prohibited. All broken heads and pipes must be repaired within 72 hours of notification. Penalties for violation of these prohibitions are established in Section 0.00.070.

2. Water service to customers who cause water waste may have their service discontinued.

3. Customers who appear to be exceeding the Maximum Applied Water Allowance (MAWA) may be interviewed by the District Water Management Department to verify customer water usage to ensure compliance.

D. Soil Management Report

1. In order to reduce runoff and encourage healthy plant growth, a soil management report shall be completed by the project applicant or designee as follows:

   a. Submit soil samples to a laboratory for analysis and recommendation.

   b. Soil sampling shall be conducted in accordance with laboratory protocol, including protocols regarding adequate sampling depth for the intended plants.

   c. The soil analysis may include:

      i. Determination of soil texture, indicating the available water holding capacity.

      ii. An approximate soil infiltration rate (either) measured or derived from soil texture/infiltration rate tables. A range of infiltration rates shall be noted where appropriate.

      iii. Measure of pH, total soluble salts and percent organic matter.

   d. The project applicant or designee shall comply with one of the following:

      i. If significant mass grading is not planned, the soil analysis report shall be submitted to the local agency as part of the Landscape Documentation Package; or

      ii. If significant mass grading is planned, the soil analysis report shall be submitted to the local agency as part of the Certificate of Completion.

   e. The soil analysis report shall be made available, in a timely manner, to the professionals preparing the landscape design plans and the irrigation plans to make any necessary adjustments to the design plans.

   f. The project applicant or designee shall submit documentation verifying implementation of soil analysis report recommendations to the local agency with the Certificate of Completion.

E. Developer-Provided Documentation

1. The developer/applicant/designee shall provide an approved copy of the Landscape Documentation Package and the following information for the homeowner or irrigation system operator. The package/information shall include a set of drawings, a recommended monthly irrigation schedule, and a recommended irrigation system maintenance schedule as described in Section 0.00.040G.

2. Irrigation Schedules. For the efficient use of water, all irrigation schedules shall be developed, managed, and evaluated to utilize the minimum amount of water to maintain plant health. Irrigation schedules shall meet the following criteria:

   a. An annual irrigation program with monthly irrigation schedules shall be required for the plant establishment period, for the established landscape, and for any temporarily irrigated areas. The irrigation schedule shall:

      i. Include run time (in minutes per cycle), suggested number of cycles per day, and frequency of irrigation for each station.

      ii. Provide the amount of applied water (in hundred cubic feet) recommended on a monthly and annual basis.

      iii. Whenever possible, incorporate the use of evapotranspiration data, such as those from the California Irrigation Management Information System (CIMIS) weather stations, to apply the appropriate levels of water for different climates.

      iv. Whenever possible, be scheduled between 8:00 p.m. and 10:00 a.m. to avoid irrigating during times of high wind or high temperature. Run times and other water efficient requirements may be imposed by the CVWD Board of Directors from time to time.

G. Maintenance Schedules

A regular maintenance schedule satisfying the following conditions shall be submitted as part of the Landscape Documentation Package:

1. Landscapes shall be maintained to ensure water efficiency. A regular maintenance schedule shall include but not be limited to checking, adjusting, cleaning and repairing equipment; resetting the automatic controller, aerating and dethatching turf areas; replenishing mulch; fertilizing; pruning; and weeding in all landscaped areas.

2. Repair of irrigation equipment shall be done with the originally specified materials or their approved equal.

3. A project applicant is encouraged to implement sustainable or environmentally-friendly practices for the overall landscape maintenance.

H. Certificate of Completion

1. The Certificate of Completion (Appendix E) shall include the following:
   a. Submittal and Approval Dates of the Landscape Documentation Package and Submittal Date of the Water Efficient Landscape Worksheet
   b. Project Name
   c. Project Address and Location
   d. Applicant Name, Telephone and Mailing Address
   e. Property Owners Name, Telephone, and Mailing Address
2. Certification by either the signer of the landscape design plan, the signer of the irrigation design plan, or the licensed landscape contractor that the landscape project has been installed per the approved Landscape Documentation Package.
3. Irrigation scheduling parameters used to set the controller. A diagram of the irrigation plan showing hydrozones shall be kept with the irrigation controller for subsequent management purposes.
4. Landscape and irrigation maintenance schedule.
5. Irrigation audit report.
6. Soil analysis report and documentation verifying implementation of soil report recommendations.
7. The project applicant shall:
   a. Submit the signed Certificate of Completion to both the local agency and the District for review and approval.
   b. Ensure that copies of the Certificate of Completion with all approvals are submitted to the local agency, the District, and property owner or his or her designee.
8. The District and the local agency shall:
   a. Receive the signed Certificate of Completion from the project applicant.
   b. Approve or deny the Certificate of Completion. If the Certificate of Completion is denied, the local agency shall provide information to the project applicant regarding reapplication, appeal or other assistance.

I. Stormwater Management

1. Stormwater management practices minimize runoff and increase infiltration which recharges groundwater and improves water quality. Implementing stormwater best management practices into the landscape and grading design plans to minimize runoff and to increase on-site retention and infiltration are encouraged.

2. Project applicants shall refer to the District, the local agency, and/or Regional Water Quality Control Board for information on any applicable stormwater ordinances and stormwater management plans.

3. Rain gardens and other landscape features that increase rain water capture and infiltration are recommended.

J. Public Education

1. Public education is a critical component to promote the efficient use of water in landscapes. The use of appropriate principles of design, installation, management and maintenance that save water is encouraged in the community.

2. The District and the local agency shall provide information to residents regarding the design, installation, management and maintenance of water efficient landscapes.

0.00.050 Review and Program Monitoring Fees

A. Review and Program Monitoring fees are deemed necessary to review Landscape Documentation Packages and monitor landscape irrigation audits and shall be imposed on the subject applicant, property owner or designee.

B. A Landscape Documentation Package review fee will be due at the time of initial project application submission to the District.

C. The Board of Directors, by resolution, shall establish the amount of the above fees in accordance with applicable law.

0.00.060 Appeals

A. Appeal to General Manager-Chief Engineer. An applicant, property owner or designee of any applicable project may appeal decisions made by the Water Management Department or Service Director other than imposition of penalties (see Sections 0.00.070 – 0.00.090 regarding imposition of penalties) to the General Manager-Chief Engineer, in writing, within fifteen (15) days of notification of decision. The General Manager-Chief Engineer's decision shall become final on the fifteenth (15^{th}) day following service of written notification of said decision unless a timely appeal is filed pursuant to 0.00.060 B.

B. Appeal to Board of Directors. An applicant, property owner or designee of any applicable project may appeal decisions made by the General Manager-Chief Engineer pursuant to Section 0.00.060 A. to the Board of Directors. Said appeal must be written and submitted to the Secretary of the Board of Directors within fifteen (15) days of the date of notification of the General Manager-Chief Engineer's decision. The Board of Directors' decision shall be final upon its adoption.

0.00.070 Penalties

A. Violation of any part of Ordinance No. 1302.1 may result in any or all of the following penalties as may be imposed by the District or any other local agency with jurisdiction to take enforcement actions. The following penalties apply when enforcement action is taken by the District:

1. Monetary. See Appendix F for schedule of monetary penalties.

2. Termination of Service.

B. Notice. The District shall issue a written notice of imposition of penalty. The notice shall set forth penalty imposed and the reason for imposition of it. The notice shall be served on the customer by registered or certified mail and shall advise that the customer may request review of the imposition of penalty by filing a written request for a hearing pursuant to the provision of Section 0.00.080.

0.00.080 Hearing Regarding Penalties

A. Request for Hearing. Customers who have received notice of imposition of penalty may make a written request for a hearing. The District must receive the request for hearing no later than fifteen (15) days from the date of the notice of imposition of penalty. The request for hearing shall set forth, in detail, all facts supporting the request. Upon District's receipt of a timely request for a hearing, imposition of penalty shall be stayed until the Statement of Decision after hearing becomes final, or, if the Statement of Decision is timely appealed, the Board of Directors' order on appeal is adopted.

B. Notice of Hearing. Within ten (10) days of the District's receipt of the request for hearing, the District shall provide written notice to the customer of the date, time and place of the hearing. The hearing date shall be within thirty (30) days of the mailing of the notice of hearing, unless the parties agree, in writing, to a later date.

C. Hearing. The General Manager-Chief Engineer, or his designee, shall act as the Hearing Officer. At the hearing, the customer shall have an opportunity to respond to the allegations set forth in the notice of imposition of penalty by producing written and/or oral evidence.

D. Statement of Decision. Within ten (10) days following the hearing, the Hearing Officer shall prepare a written Statement of Decision, which shall set forth the facts upon which the decision is based. The Statement of Decision shall be served by personal delivery or registered or certified mail on the customer. The Statement of Decision shall become final on the sixteenth (16^{th}) day after service on the customer unless a request for appeal is timely filed with the Board of Directors pursuant to Section 0.00.090.

0.00.090 Appeal of Penalties

A. Request for Appeal. A customer may appeal a Statement of Decision by filing a written request for appeal with the Board of Directors before the date the Statement of Decision becomes final, i.e., no later than the fifteenth (15^{th}) day following service of the Statement of Decision on the customer. The request for appeal shall set forth, in detail, all the issues in dispute and all facts supporting the request.

B. Notice of Appeal Hearing. No later than thirty (30) days after receipt of the request for appeal, the Board of Directors shall set the matter for a hearing. Written notice of said hearing of appeal shall be served on the appellant by personal delivery or registered or certified mail. The hearing date shall be a date within thirty (30) days of service of the notice of hearing of appeal, unless the parties agree, in writing, to a later date. If the Board of Directors does not hear

the appeal within the required time due to acts or omissions of the appellant, the Statement of Decision shall become final on the thirty-first (31st) day after service of notice of hearing of appeal on the customer.

C. Determination and Order on Appeal. After the hearing of appeal, the Board of Directors shall issue an order affirming, modifying or reversing the General Manager-Chief Engineer's decision. The Board of Directors shall set forth its Determination and Order, in writing, and shall serve the Determination and Order to the customer by personal delivery or registered or certified mail within thirty (30) days following the hearing. The Determination and Order of the Board of Directors shall be final upon its adoption.

APPENDIX A

LANDSCAPE DOCUMENTATION PACKAGE CHECKLIST

Project Site: _____ Tract or Parcel Number: _____

Project Assessor's Parcel Number (APN): _____

Project Location: _____

Landscape Architect/Irrigation Designer/Contractor and Name and Contact Information: _____

_____

Included in this Landscape Documentation Package are: (Check to indicate completion)

____ 1. Water Efficient Landscape Worksheet (Appendix B)
WATER BUDGET CALCULATIONS (Appendix D)

____ 2. Maximum Applied Water Allowance (MAWA):

Conventional Landscape: _____ 100 cubic feet/year
+ Recreational Turf grass Landscape: _____ 100 cubic feet/year (if applicable)
Maximum Applied Water Allowance: _____ 100 cubic feet/year

____ 3. Estimated Total Water Use by Hydrozone:
Turf grass Hydrozones: _____ 100 cubic feet/year
Recreational Turf grass Hydrozones: _____ 100 cubic feet/year
Low Plant Hydrozones: _____ 100 cubic feet/year
Medium Plant Hydrozones: _____ 100 cubic feet/year
High Plant Hydrozones: _____ 100 cubic feet/year
Water Features: _____ 100 cubic feet/year
Other _____: _____ 100 cubic feet/year
Estimated Total Water Use: _____ 100 cubic feet/year

____ 4. ETWU < MAWA
PLAN SETS

____ 5. Landscape Design Plan

____ 6. Irrigation Design Plan

____ 7. Grading Design Plan

____ 8. Soil Management Report

I agree to comply with the requirements of the water efficient landscape ordinance and submit a complete Landscape Documentation Package.

Date: _____ Applicant: _____

APPENDIX B

SAMPLE WATER EFFICIENT LANDSCAPE WORKSHEET

This worksheet is filled out by the project applicant and is a required element of the Landscape Documentation Package.

PROJECT INFORMATION

Project Name		
Name of Project Applicant	Telephone No.	
	Fax No.	
Title	Email Address	
Company	Street Address	
City	State	Zip Code

SECTION A. HYDROZONE INFORMATION TABLE

Please complete the hydrozone table(s) for each irrigation point of connection. Use as many tables as necessary to provide the square footage of landscape area per valve.

Irrigation Point of Connection (P.O.C.) No. _____					
Controller No.	**Valve Circuit No.**	**Plant Types(s)***	**Irrigation Method****	**Area (Sq. Ft.)**	**% of Landscape Area**
Total					**100%**

***Plant Type**
Cst = Cool Season Turf
WST = Warm Season Turf
HW = High Water Use Plants
MW = Moderate Water Use Plants
LW = Low Water Use Plants

****Irrigation Method**
MS = Microspray
S = Spray
R = Rotor
B = Bubbler
D = Drip
O = Other

APPENDIX C
ET PROFILE AND PLANT FACTORS

	Jan>	<Feb	Mar	Apr>	<May	Jun	Jul	Aug	Sep>	<Oct	Nov	Dec	Totals	Totals
Monthly ETo (inches)	.....												Inches	Feet
Zone No. 1-Coves	1.71	2.84	4.00	5.70	6.84	7.98	7.98	6.27	5.70	4.00	2.28	1.71	57.01	4.75
Zone No. 2-COD	2.00	3.36	4.68	6.68	8.02	9.35	9.35	7.35	6.68	4.68	2.67	2.00	66.82	5.57
Zone No. 3-EMC	2.25	3.75	5.25	7.50	9.00	10.50	10.50	8.25	7.50	5.25	3.00	2.25	75.00	6.25
Zone No. 4-TH	2.64	4.40	6.16	8.80	10.56	12.32	12.32	9.68	8.80	6.16	3.52	2.64	88.00	7.33
Zone No. 5-I10	2.82	4.68	6.57	9.39	11.27	13.15	13.15	10.33	9.39	6.57	3.76	2.82	93.90	7.83
% Annual ETo per Month	3	5	7	10	12	14	14	11	10	7	4	3		

Zone No. 1 = Most protected cove areas with minimum wind, longest mountain shadows, higher rainfall, Palm Can. to La Q. Cove

Zone No. 2 = Lower cove areas, light winds, long afternoon shadows from mountains, typ. Hwy 111 from Cathedral City to La Quinta

Zone No. 3, 4 = Moderate winds, minimum mountain shadows, some blowing sand and dust; 3) Upper valley predominate wind from northwest, 4) Lower valley has lower elevation and more summer southeast wind

Zone No.5 = Frequent strong northwest winds, heavy blowing sand and dust, typical of I-10 corridor to Washington Street

Maximum Applied Water Allowance (CCF) = ETo (in inches for season) X .45 X Area (in square feet) X .62 / 748

ET Adjustment Factor = .45

.62 = gallons per square foot per inch deep

CCF = 100 cubic feet = 1 billing unit = 748 gallons

Estimated Total Water Use (CCF) = $\frac{\text{ETo (in inches for season) X Plant Factor X Area (in square feet) X 0.62 / 748}}{\text{Irrigation System Efficiency}}$

Target Irrigation Efficiency = .80 Turf Rotor

= .75 Sprayheads

= .90 Drip/Micro/PC Bubbler

Emitters per Plant Estimate = $\frac{\text{Area Of Plant In Square Feet X \% Of Area To Be Wet}}{\text{Square Feet Wet Per Emitter}}$

Soil Type	(inches water holding capacity per inch of depth)		Emitter Wetted Area Square Feet Each	Emitter Spacing
Very Coarse Sand	0.05	Typical of high on an alluvial fan	.75 to 1.75	10"
Blow Sand	0.07	Typical of mid valley ridge area	1.75 to 3	18"
Fine Sand	0.10	Typical of low on alluvial fans from Rancho Mirage to Indian Wells	3 to 5	3'
Very Fine Silty Sand	0.15	Typical of lowest alluvial fans from La Quinta, Indio, & Coachella	5 to 10	4'
Silt Loam	0.17	Typical of lower valley agricultural areas located below sea level	10 to 28	4.5'

Plant Factor (Kc)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Avg
Cool Turf 100%**	1.00	1.00	1.00	NR	NR	NR	NR	NR	NR	1.00	1.00	1.00	1.00
Warm Turf 100%**	NR	NR	NR	0.80	0.80	0.80	0.80	0.80	0.80	NR	NR	NR	0.80
Cool Turf 80%*	0.80	0.80	0.80	0.70	NR	NR	NR	NR	NR	0.80	0.80	0.80	0.79
Warm Turf 60%*	NR	NR	NR	0.60	0.60	0.60	0.60	0.60	0.60	0.60	NR	NR	0.60
Combined TurfSav*	0.80	0.80	0.80	0.70	0.60	0.60	0.60	0.60	0.60	0.70	0.80	0.80	0.70
Tree/Shrub/GC L*	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
Tree/Shrub/GC L**	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40
Tree/Shrub/GC M*	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
Tree/Shrub/GC M**	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70
Tree/Shrub/GC H*	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Tree/Shrub/GC H**	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Open WaterFactor	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10

(Approx. Evaporation from a still water surface, higher factor (1.2) with falls and fountains.) Reference; WUCOLS III

CombinedTurfSav = Combination of cool and warm season turf according to normal management in the Coachella Valley

* = Normal irrigation level to maintain established planting

** = Normal irrigation level during plant establishment

GC = Groundcover

L = Low water use Kc .1 to .3

M = Moderate water use Kc .4 to .6

H = High water use Kc .7 to .9

NR = Not Recommended

APPENDIX D

SAMPLE CALCULATION/ESTIMATED TOTAL WATER USE (by Hydrozone)

Using the following formula from Appendix C:

ETWU = (ETo) x (PF) x (LA) x (.62)] / (748) / (IE)
ETWU = Estimated Water Use (hundred cubic feet)
ETo = Reference Evapotranspiration (inches) [for period of estimate]
PF = Plant Factor (Kc)
LA = Landscaped Area (in square feet)
.62 = Conversion Factor (to gallons per square foot)
748 = Conversion Factor (to hundred cubic feet)
IE = Irrigation System Efficiency

Project Site Example: Total landscaped area 60,000 square feet in Palm Desert near the intersection of Cook Street and Country Club Drive in Zone No. 3 (75.0" Annual ETo).

- 12,000 square feet of turf grass overseeded with rye grass in winter, irrigated with low angle rotor sprinklers.
- 32,700 square feet of "low" desert native plantings on drip irrigation.
- 15,300 square feet of "moderate" water using plantings on drip irrigation.

See Appendix C for formula factors. ETo is totaled for season. Turf grass plant factors are the average for the season and tree/shrub/groundcover plant factors are considered constant annually.

Plant Factors

Turf Grass	Low Native Plants	Moderate Shrubs
0.70	0.20	0.50

ETWU = [(ETo) x (PF) x (LA) x (.62) / (748)] / (IE) = CCF

Overseeded Turf Grass: Season = 75.0 x .7 x 12,000 x .62 / 748 /.80 = 653 CCF
Seasonal Turf ETWU = 653 CCF

"Low" Native Plants: Annual = 75.0 x .2 x 32,700 x .62 / 748 / .90 = 451 CCF
"Low" Native ETWU = 451 CCF

"Moderate" Shrubs and Ground Cover: Annual = 75.0 x .5 x 15,300 x .62 / 748 / .90 = 528 CCF
"Moderate" ETWU = 528 CCF
Project Total ETWU = 1,632 CCF

APPENDIX D

SAMPLE CALCULATION

Maximum Applied Water Allowance (MAWA)

Using the following formula:

MAWA = [(ETo) x (0.45) x (LA) x (0.62)] / (748)
MAWA = Maximum Applied Water Allowance (CCF or hundred cubic feet)
ETo = Reference Evapotranspiration (inches per year)
0.45 = ET adjustment factor
LA = Landscaped Area (square feet)
0.62 = Conversion Factor (to gallons per square foot)
748 = Conversion Factor (to hundred cubic feet)

Using the project for the Estimated Total Water Use example:

Landscaped area of 60,000 square feet in Palm Desert near the intersection of Cook Street and Country Club Drive in Zone No. 3 (75.0" Annual ETo).

MAWA = 75.0 (ETo) x (0.45) x (LA) x (0.62) / (748)
= [75.0(.45) (60,000) (0.62)] / (748)
MAWA = 1,678 CCF

ETWU total of 1,632 CCF is < the MAWA of 1,678 CCF

APPENDIX E

SAMPLE CERTIFICATE OF COMPLETION

Project Name:_____

Parcel Map or Tract No.:_____ APN:_____

Project Location:_____

Maximum Applied Water Allowance (MAWA):_____ (in hundred cubic feet)

Estimated Annual Total Applied Water Use:_____ (in hundred cubic feet)

Preliminary project documentation submitted (initials indicate submittal)

_____1. Grading design plan

_____2. Landscape design plan

_____3. Irrigation design plan

_____4. Irrigation schedules

Post Installation inspection (initials indicate completion)

_____1. Plants installed as specified

_____2. Irrigation System installed as designed

Comments:_____

_____

_____

A copy of this certification has been provided to the owner/developer, the local agency and to the District. I certify the work has been completed in accordance with District Ordinance 1302.1, Landscape and Irrigation System Design Criteria.

_____

Landscape Architect/Designee Signature License No. Date

1. Date the Landscape Documentation Package was submitted to the Local Agency: _____

2. Date the Landscape Documentation Package was approved by the Local Agency: _____

3. Date a copy of the Water Efficient Landscape Worksheet (including the Water Budget Calculation) was submitted to the District: _____

APPENDIX F

SCHEDULE OF MONETARY PENALTIES

1. $250 upon receipt of first written Notice of Non-compliance.
2. An additional $250 (for a total of $500) upon receipt of the second Notice of Non-compliance issued thirty (30) days after the receipt of the first Notice of Non-compliance.

APPENDIX G

Recycled Water Checklist

1. Obtain coverage under the general waste discharge requirements for discharge of recycled water for golf course and landscape irrigation Order No. 97-700 or equivalent version of this permit from the California Regional Water Quality Control Board of the Colorado River Basin Region (Regional Board) by submitting a Notice of Intent to the Regional Board and paying application/annual fees.

2. Enter into an agreement with CVWD for receiving nonpotable water for golf course and landscape irrigation. The agreement between discharger and CVWD must be provided to the Regional Board within 90 days of receiving coverage under the permit referenced above in item #1.

3. Landscape and Irrigation system plans must meet regulatory requirements of Order 97-700 or equivalent version of this permit, the State Board's Recycled Water Policy, and California Department of Public Health (CDPH) Statutes and Regulations related to recycled water, such as the Health and Safety Code, the Water Code, Title 17 and Title 22 Code of Regulations. These requirements include but are not limited to the following:

    a. An air-gap separation, a vertically measured distance between supply pipe and receiving vessel must be present and meet the required distance for the size of the supply pipe.

    b. The appropriate type of backflow protection is to be installed for auxiliary water supplies and recycled water.

    c. The required separation distance between recycled water lines and impoundments and application area; and domestic wells and water lines is maintained and approved by CDPH.

    d. The design of the irrigation system shall not cause the occurrence of ponding anywhere in the reuse area, and overspray or mist around dwellings, outdoor eating areas and/or food handling facilities is eliminated. Irrigation runoff shall be confined to the recycled water use area unless authorized by CDPH.

    e. Drinking fountains will be protected from spray, mist or runoff by use of a drinking fountain cover or shelter approved for this purpose.

    f. Hose bibs are not allowed on portions of the recycled water systems accessible to the general public. Quick couplers that differ from those used on the potable water system are allowed.

g. Signs are posted in areas that the public has access to that are no less than 4 inches high by 8 inches wide and include "RECYCLED WATER—DO NOT DRINK" and the international do not drink symbol as indicated in CCR Title 22 Division 4 Chapter 3 Article 4 Section as figure 60310-A. The number and locations of these signs will be approved by CDPH.

h. The recycled water irrigation system is able to be operated during a time of day that will minimize contact with the public.

i. All pipes installed above or below ground on or after June 1, 1993 designed to carry recycled water are to be colored purple or wrapped in purple tape.

j. Golf course pump houses utilizing recycled water are appropriately tagged with warning signs with proper wording of sufficient size to warn the public that recycled water is not safe for drinking. All new and replacement at grade valve boxes shall be purple or appropriately tagged for water reuse purposes. All other appurtenances and equipment used for recycled water must be identified as used for recycled water distribution per the recommendations of CDPH.

4. Prior to construction, landscape and irrigation system plans must be submitted for approval to the following agencies (please allow for a 30 day comment period):
   a. Regional Board Water Quality Control Board,
   b. California Department of Public Health, and
   c. CVWD.

5. Upon approval from the Regional Board and CDPH, the discharger shall provide notification that recycled water will be used for irrigation to people who reside adjacent to the recycled water use area and to golf course patrons though a method approved by the Regional Board's Executive Officer and CDPH at least 30 days prior to use of recycled water.

6. A Use Site Supervisor must be designated and his or her name and contact information must be provided in writing to CVWD and the Regional Board 30 days prior to discharge of recycled water. This person will be available to be contacted and receive periodic education and training on the uses and restrictions of recycled water.

7. A cross-connection control test will be performed on the irrigation and domestic systems prior to the discharge of recycled water and at least once every four years thereafter. This test is to be conducted by an American Water Works Association (AWWA) certified cross-connection control program specialist or equivalent. The results of these tests are to be submitted to CVWD, CDPH, and the Regional Board within 30 days of test completion.

8. "As-Built" plans and specifications showing the domestic and irrigation systems, location of all potable and recycled water connections and location of all on-site and nearby wells to CDPH, as per the CDPH requested time frame.

I, the undersigned Acting Assistant Secretary to the Board of Directors, do hereby certify that the foregoing is a true and correct copy of Ordinance No. 1302.2 of said District introduced and passed at meeting of said Board held November 24, 2015, and that said Ordinance was passed by the following vote:

Ayes:	Three
Directors:	Powell, Pack, Estrada
Nos:	None
Absent:	Nelson, O'Dowd

I further certify that said Ordinance was thereupon signed by the President of the Board of Directors of said District.

Mariela Cabral
Acting Assistant Secretary

(SEAL)

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Appendix G

CVWD Board Resolution of Adoption, Proof of Publication Affidavits, and Public Notices

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APPROVED: 06-14-16
ITEM NO. 4C

RESOLUTION OF THE BOARD OF DIRECTORS OF THE COACHELLA VALLEY WATER DISTRICT (CVWD) TO ADOPT THE 2015 CVWD URBAN WATER MANAGEMENT PLAN

RESOLUTION NO. 2016-26

WHEREAS, The purpose of the Urban Water Management Planning Act (Division 6 Part 2.6 of the Water Code §§10610 - 10656) is to ensure that water supply planning is occurring at the local level, and that the local supplier considers the unique circumstances of its own agency with regard to water supply, and solicits the participation of the community it serves to develop a plan that is tailored to local conditions.

WHEREAS, In accordance with the Urban Water Management Planning Act , every urban water supplier that either provides over 3,000 acre-feet of water annually or serves 3,000 or more connections is required to assess the reliability of its water sources over a 20-year planning horizon considering normal, dry, and multiple dry years.

WHEREAS, This assessment is to be documented in an UWMP, updated every five years and submitted to the Department of Water Resources for review and acceptance in accordance with requirements identified in the Urban Water Management Planning Act.

WHEREAS, As required by the Water Code, a Notice of Intent to Update the CVWD 2010 UWMP was distributed on April 11, 2016 to the cities and counties within CVWD's water service area, and input was requested on completion of the 2015 UWMP.

WHEREAS, As required by the Water Code, prior to the public hearing a public notice was published once a week for two weeks in newspapers which are published at least weekly in Riverside and Imperial Counties. The public notice provided the time and the place of public hearing, and the location where the 2015 UWMP was made publically available for review.

THEREFORE, BE IT RESOLVED by the Board of Directors of the Coachella Valley Water District assembled in regular meeting this 14th day of June 2016, that after making the draft plan available to the public and following a public hearing as required by the Urban Water Management Planning Act, it hereby adopts the Coachella Valley Water District 2015 Urban Water Management Plan prepared by MWH Americas.

PASSED AND ADOPTED by the Board of Directors of the Coachella Valley Water District on this 14th day of June, 2016, by the following vote:

AYES: Powell, Nelson, O'Dowd, Pack, Estrada

NAYES: None

ABSENT: None

John P. Powell, President,
Coachella Valley Water District

ATTEST:

Sylvia Bermudez
Clerk of the Board
Coachella Valley Water District

COACHELLA VALLEY WATER DISTRICT

Board Action Item

Board Meeting Date: June 14, 2016

TO: Board of Directors

SUBJECT: Board Adoption of the Coachella Valley Water District 2015 Urban Water Management Plan

Description and Location

This Board action is to adopt the Coachella Valley Water District 2015 Urban Water Management Plan (2015 UWMP) in accordance with the Urban Water Management Planning Act (Division 6 Part 2.6 of the Water Code §§10610 - 10656). As required by the Water Code, a Notice of Intent to Update the CVWD UWMP was distributed on April 11, 2016 to the cities and counties within CVWD's water service area. Also, as required by the Water Code, a public notice was published once a week for two weeks in newspapers which are published at least weekly in Riverside and Imperial Counties. The public notice provided the time and the place of public hearing, and the location where the 2015 UWMP was made publically available for review.

CVWD also conducted a coordination meeting with the Coachella Valley Regional Water Management Group Agencies to share and discuss water supply planning assumptions and population projections.

Purpose and Benefit of Project

The purpose of the Urban Water Management Planning Act is to ensure that water supply planning is occurring at the local level, and that the local supplier considers the unique circumstances of its own agency with regard to water supply, and solicits the participation of the community it serves to develop a plan that is tailored to local conditions.

In accordance with the Urban Water Management Planning Act , every urban water supplier that either provides over 3,000 acre-feet of water annually or serves 3,000 or more connections is required to assess the reliability of its water sources over a 20-year planning horizon considering normal, dry, and multiple dry years. This assessment is to be documented in an UWMP, updated every five years and submitted to the Department of Water Resources for review and acceptance in accordance with requirements identified in the Urban Water Management Planning Act. This 2015 UWMP has assessed the reliability of CVWD's urban water sources in accordance with the Urban Water Management Planning Act and has determined that they are sufficient.

Procurement and Expenditures

There are no procurement and expenditures associated with this adoption. In a previous Board Action Item, MWH Americas was awarded a consulting contract to prepare the 2015 UWMP.

Environmental Impact

☒ No, this item is not a "project" as defined by CEQA; therefore, approval does not require any CEQA action.

☐ Yes, see below.

Legal Review

☒ Reviewed by Counsel

☐ N/A

Fiscal Impact

There is no Fiscal Impact caused by Adopting the 2015 UWMP

Prior Authorizations

☒Yes, see attachment.

☐ N/A

Staff Recommendation

The 2015 UWMP is due July 1, 2016. Staff has reviewed the 2015 UWMP Dated June 2015, and prepared by MWH and recommends adoption by the Board.

Prepared by: Patti Reyes
Planning and Special Programs Manager

Submitted by: Steve Bigley
Director of Environmental Services

Approved by: 

_____

J. M. Barrett
General Manager

Attachments/as

FILE: 25414.65, 0644.105

PROJECT ID NO: N/A

Established in 1918 as a public agency
Coachella Valley Water District

Directors:
John P. Powell, Jr., President - Div. 3
Peter Nelson, Vice President - Div. 4
G. Patrick O'Dowd - Div. 1
Ed Pack - Div. 2
Cástulo R. Estrada - Div. 5

Officers:
Jim Barrett, General Manager
Julia Fernandez, Board Secretary

Best Best & Krieger LLP, Attorneys

NOTICE OF INTENT TO UPDATE
COACHELLA VALLEY WATER DISTRICT
2010 URBAN WATER MANAGEMENT PLAN

April 11, 2016 File No. 0541.65

Dear Stakeholder:

This is a formal notice that the Coachella Valley Water District is updating its Urban Water Management Plan to comply with the current requirements of the Urban Water Management Planning Act.

The State of California requires urban water purveyors to update their urban water management plans (UWMP) every five years. The previous UWMP was adopted in 2011. Since that time, growth in the Valley has been minimal, but is expected to continue. CVWD continues to implement management programs to eliminate groundwater overdraft and provide a reliable water supply. Consequently, the updated UWMP will reflect the current growth trends and water supplies. The 2015 UWMP will also focus on water conservation within the context of the State's 2009 Water Conservation Act (SB X7-7).

CVWD will be evaluating the 2010 UWMP and considering amendments and changes to the plan as required by the law. We request your input on the contents of the plan, specifically with respect to water conservation measures in your service area. Please provide your written input within 30 days of receiving this notification letter. The 2010 UWMP is available for your reference at www.CVWD.org.

If you have any questions or comments, please contact Patti Reyes, Planning and Special Programs Manager at 760-398-2661, ext. 2270 or via email at preyes@cvwd.org.

Sincerely,

James M Barrett, P.E.
General Manager

Established in 1918 as a public agency
Coachella Valley Water District

Directors:
John P. Powell Jr., President - Div. 3
Peter Nelson, Vice President - Div. 4
G. Patrick O'Dowd - Div. 1
Ed Pack - Div. 2
Cástulo R. Estrada - Div. 5

Jim Barrett, General Manager
Robert Cheng, Assistant General Manager
Sylvia Bermudez, Clerk of the Board

Best Best & Krieger LLP, Attorneys

NOTICE OF INTENT TO UPDATE
COACHELLA VALLEY WATER DISTRICT
2010 URBAN WATER MANAGEMENT PLAN

May 26, 2016 File No. 0541.65

Dear Stakeholder:

This is a second formal notice that the Coachella Valley Water District is updating its Urban Water Management Plan to comply with the current requirements of the Urban Water Management Planning Act. A public hearing will be held by the Board of Directors of the Coachella Valley Water District (District) at the District's office in Palm Desert on June 14, 2016 at 9:00 a.m. in the Steve Robbins Administration Building Board Room located at 75-515 Hovley Lane East in Palm Desert, California.

The State of California requires urban water purveyors to update their urban water management plans (UWMP) every five years. The updated UWMP reflects the current growth trends and water supplies. The 2015 UWMP also focuses on water conservation within the context of the State's 2009 Water Conservation Act (SB X7-7).

A copy of the report entitled "Coachella Valley Water District 2015 Urban Water Management Plan" is available for review at www.cvwd.org, at the District's office located at 85-995 Avenue 52, Coachella, and at the District's Palm Desert office located at 75-525 Hovley Lane East, Palm Desert.

If you have any questions or comments, please contact Patti Reyes, Planning and Special Programs Manager at 760-398-2661, ext. 2270 or via email at preyes@cvwd.org.

Sincerely,

James M Barrett, P.E.
General Manager

Attachment No. 1

2015 Coachella Valley Water District

Urban Water Management Plan

Prior Authorizations

Date	Board Authorization	Description	Amount Authorized
2/09/2016	Approved BAI	Authorize Task Order for Preparation of the 2015 Urban Water Management Plan by MWH Americas	$133,504.28

CVWD Public Hearing

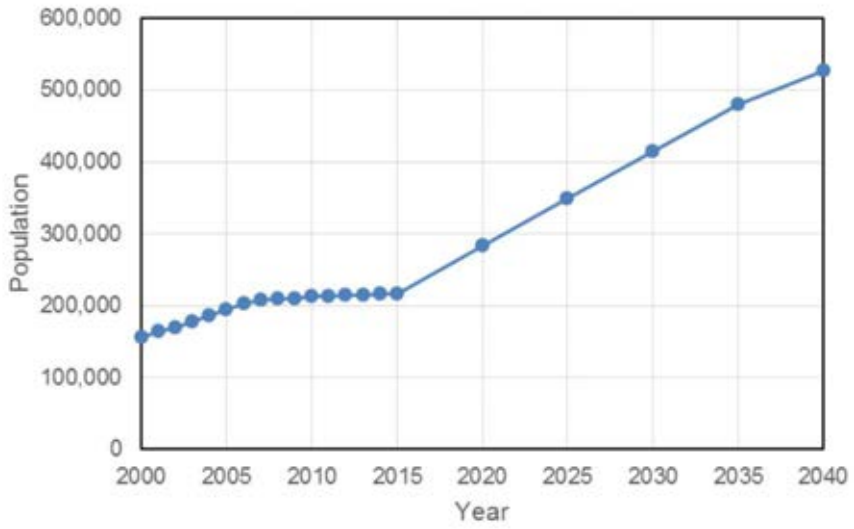
2015 Urban Water Management Plan

June 14, 2016

Background/Objective

- Urban water suppliers (3,000 af or 3,000 connection) are required by the UWMP Act to update their UWMP every 5 years
- Ensures that water supply planning occurs at local level
- The UWMP must:
  - Satisfy the UWMP Act
  - Meet requirements of SB x7-7
  - Demonstrate supply adequacy and reliability for future growth over the next 25 years

CVWD Growth Projections

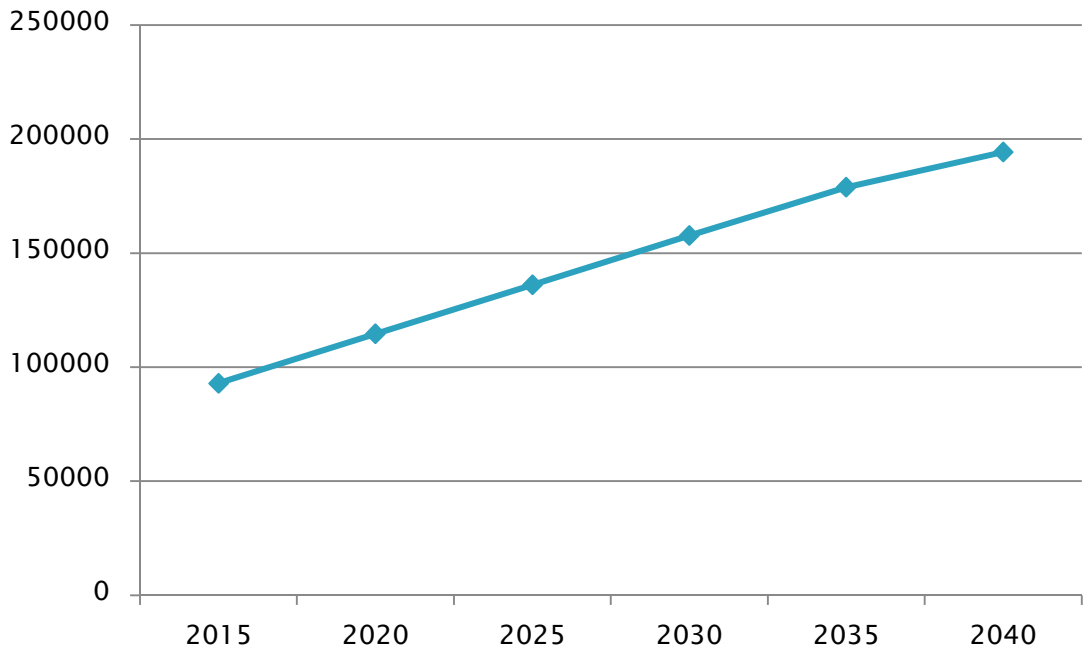


- Based on
  - 2010 US Census
  - 2015 Ca. Dept. of Finance
  - 2012 SCAG Growth Forecast
- 2015 – 216,900
- 2040 – 527,100
  - if development is consistent with SCAG

CVWD Per Capita Demand

Water Use	GPCD	Percent Change from Baseline
10-year baseline	591	
2015 interim target	502	-15%
2015 actual water use	383	-35%
2020 water use target	473	-20%
Estimated Future Demand	291	-50%

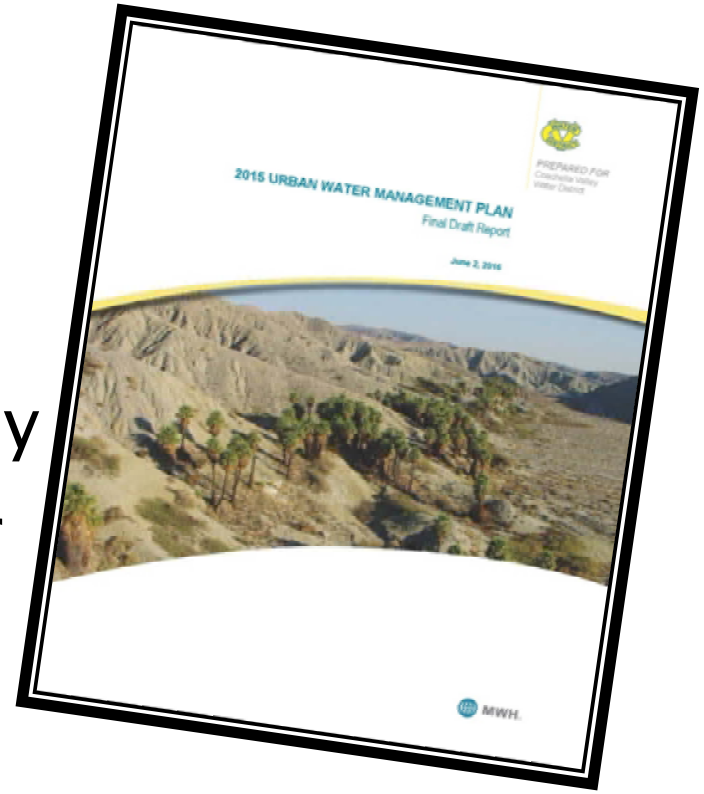
Urban Water Demand



- Based on 2015 water use of 383 GPCD
- 291 GPCD in future years based on new landscape ordinance

CVWD 2015 UWMP

- Groundwater is the Primary Water Source
- Supplies are Sufficient for at Least next 25 years
- CVWD has Exceeded 20 by 2020 Target
- CVWD has CVWMP to Ensure Long-Term Sustainable Supply
- CVWD Coordinates with other Valley Agencies via CVRWMG and other Opportunities



Schedule

- 60 Day Notice to Stakeholders – April 11
- Coordinated with CVRWMG Agencies
- Public Final Draft Report Posted at www.cvwd.org
- Provided a Notice of Availability to Stakeholders
- Published Public Notice Twice – Complete
- Public Hearing and UWMP Adoption – June 14, 2016
- Submit Final Report to DWR – July 1, 2016

Questions ?

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The Desert Sun
750 N Gene Autry Trail
Palm Springs, CA 92262
760-778-4578 / Fax 760-778-4731

Certificate of Publication

State Of California ss:
County of Riverside

Advertiser: CVWD/LEGALS
PO BOX 1058
COACHELLA , CA 92236

Order # 0001311877

I am over the age of 18 years old, a citizen of the United States and not a party to, or have interest in this matter. I hereby certify that the attached advertisement appeared in said newspaper (set in type not smaller than non pariel) in each and entire issue of said newspaper and not in any supplement thereof on the following dates, to wit:

Newspaper: **The Desert Sun**

5/29/2016 6/5/2016

I acknowledge that I am a principal clerk of the printer of The Desert Sun, printed and published weekly in the City of Palm Springs, County of Riverside, State of California. The Desert Sun was adjudicated a Newspaper of general circulation on March 24, 1988 by the Superior Court of the County of Riverside, State of California Case No. 191236.

I declare under penalty of perjury that the foregoing is true and correct. Executed on this **5th day of JUNE, 2016** in Palm Springs, California.

Declarant

NOTICE OF PUBLIC HEARING

Notice is hereby given, pursuant to Government Code Section 6066 and California Water Code Section 10642, a public hearing will be held by the Board of Directors of the Coachella Valley Water District (District) at the District's office in Palm Desert on June 14, 2016 at 9:00 a.m. in the Steve Robbins Administration Building Board Room located at 75-515 Hovley Lane East in Palm Desert, California.

The purpose of the hearing is for the District to receive comments from the public regarding the Coachella Valley Water District Urban Water Management Plan.

A copy of the report entitled "Draft Coachella Valley Water District Urban Water Management Plan" is available for review at www.cvwd.org, at the District's office located at 51-501 Tyler Street, Coachella, and at the District's Palm Desert office located at 75-525 Hovley Lane East, Palm Desert. Additional information may also be obtained by calling Patti Reyes, Planning and Special Programs Manager.

Date: May 25, 2016.

/s/ Sylvia Bermudez
Sylvia Bermudez
Clerk of the Board

DS-0000407582

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AFFIDAVIT OF PUBLICATION
(2015.5 C.C.P.)

STATE OF CALIFORNIA

County of Imperial

I am a resident of the County aforesaid; I am over the age of eighteen years, and not a party to or interested in the above entitled matter. I am the principal clerk* of the printer of the

Imperial Valley Press

a newspaper of general circulation, printed and published daily in the City of El Centro, County of Imperial and which newspaper has been adjudged a newspaper of genera circulation by the Superior Court of the County of Imperial, State of California, under the date of October 9, 1951, Case Number 26775; that the notice, of which the annexed is a printed copy, has been published in each regular and entire issue of said newspaper and not in any supplement thereof on the following dates, to-wit:

05/31 , 06/07 .

all in the year 2016

I certify (or declare) under penalty of perjury that the foregoing is true and correct.

A Singh
SIGNATURE

Name of Account: Coachella Valley Water Dist.
Order Number: 10933827
Ad Number: 31121185

* Printer, Foreman of the Printer, or Principal Clerk of the Printer
Date: 7 th day of June, 2016.
at El Centro, California.

This space is for the County Clerk's Filling Stamp:

Proof of Publication of:

NOTICE OF PUBLIC HEARING

Notice is hereby given, pursuant to Government Code Section 6066 and California Water Code Section 10642, a public hearing will be held by the Board of Directors of the Coachella Valley Water District (District) at the District's office in Palm Desert on June 14, 2016 at 9:00 a.m. in the Steve Robbins Administration Building Board Room located at 75-515 Hovley Lane East in Palm Desert, California.

The purpose of the hearing is for the District to receive comments from the public regarding the Coachella Valley Water District Urban Water Management Plan.

A copy of the report entitled "Draft Coachella Valley Water District Urban Water Management Plan" is available for review at www.cvwd.org, at the District's office located at 51-501 Tyler Street, Coachella, and at the District's Palm Desert office located at 75-515 Hovley Lane East, Palm Desert. Additional information may also be obtained by contacting Patti Reyes, Planning and Special Programs Manager.

Date: May 25, 2016

/s/ Sylvia Bermudez
Sylvia Bermudez
Clerk of the Board

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Established in 1918 as a public agency
Coachella Valley Water District

Directors:
John P. Powell, Jr., President - Div. 3
Peter Nelson, Vice President - Div. 4
G. Patrick O'Dowd - Div. 1
Ed Pack - Div. 2
Cástulo R. Estrada - Div. 5

Officers:
Jim Barrett, General Manager
Julia Fernandez, Board Secretary

Best Best & Krieger LLP, Attorneys

NOTICE OF INTENT TO UPDATE
COACHELLA VALLEY WATER DISTRICT
2010 URBAN WATER MANAGEMENT PLAN

April 11, 2016 File No. 0541.65

Dear Stakeholder:

This is a formal notice that the Coachella Valley Water District is updating its Urban Water Management Plan to comply with the current requirements of the Urban Water Management Planning Act.

The State of California requires urban water purveyors to update their urban water management plans (UWMP) every five years. The previous UWMP was adopted in 2011. Since that time, growth in the Valley has been minimal, but is expected to continue. CVWD continues to implement management programs to eliminate groundwater overdraft and provide a reliable water supply. Consequently, the updated UWMP will reflect the current growth trends and water supplies. The 2015 UWMP will also focus on water conservation within the context of the State's 2009 Water Conservation Act (SB X7-7).

CVWD will be evaluating the 2010 UWMP and considering amendments and changes to the plan as required by the law. We request your input on the contents of the plan, specifically with respect to water conservation measures in your service area. Please provide your written input within 30 days of receiving this notification letter. The 2010 UWMP is available for your reference at www.CVWD.org.

If you have any questions or comments, please contact Patti Reyes, Planning and Special Programs Manager at 760-398-2661, ext. 2270 or via email at preyes@cvwd.org.

Sincerely,

James M Barrett, P.E.
General Manager

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Established in 1918 as a public agency
Coachella Valley Water District

Directors:
John P. Powell Jr., President - Div. 3
Peter Nelson, Vice President - Div. 4
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Ed Pack - Div. 2
Castulo R. Estrada - Div. 5

Jim Barrett, General Manager
Robert Cheng, Assistant General Manager
Sylvia Bermudez, Clerk of the Board

Best Best & Krieger LLP, Attorneys

NOTICE OF INTENT TO UPDATE COACHELLA VALLEY WATER DISTRICT 2010 URBAN WATER MANAGEMENT PLAN

May 26, 2016 File No. 0541.65

Dear Stakeholder:

This is a second formal notice that the Coachella Valley Water District is updating its Urban Water Management Plan to comply with the current requirements of the Urban Water Management Planning Act. A public hearing will be held by the Board of Directors of the Coachella Valley Water District (District) at the District's office in Palm Desert on June 14, 2016 at 9:00 a.m. in the Steve Robbins Administration Building Board Room located at 75-515 Hovley Lane East in Palm Desert, California.

The State of California requires urban water purveyors to update their urban water management plans (UWMP) every five years. The updated UWMP reflects the current growth trends and water supplies. The 2015 UWMP also focuses on water conservation within the context of the State's 2009 Water Conservation Act (SB X7-7).

A copy of the report entitled "Coachella Valley Water District 2015 Urban Water Management Plan" is available for review at www.cvwd.org, at the District's office located at 85-995 Avenue 52, Coachella, and at the District's Palm Desert office located at 75-525 Hovley Lane East, Palm Desert.

If you have any questions or comments, please contact Patti Reyes, Planning and Special Programs Manager at 760-398-2661, ext. 2270 or via email at preyes@cvwd.org.

Sincerely,

James M Barrett, P.E.
General Manager

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Appendix H

2014-15 Annual Review and Water Quality Report

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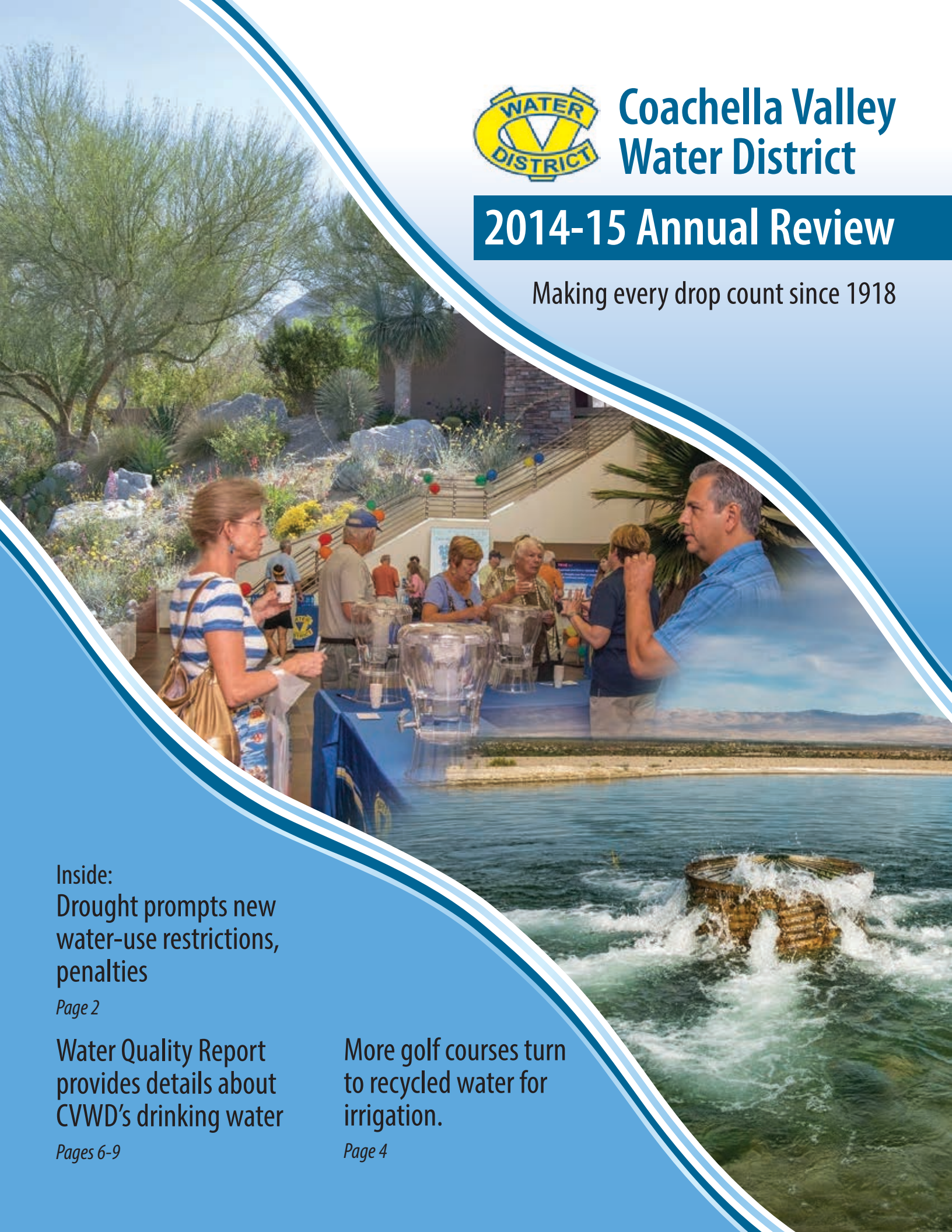
Coachella Valley Water District

2014-15 Annual Review

Making every drop count since 1918



Inside:

Drought prompts new water-use restrictions, penalties

Page 2

Water Quality Report provides details about CVWD's drinking water

Pages 6-9

More golf courses turn to recycled water for irrigation.

Page 4

Board of Directors

John Powell, Jr.
President, Division 3

Peter Nelson
Vice President, Division 4

G. Patrick O'Dowd
Director, Division 1

Ed Pack
Director, Division 2

Cástulo R. Estrada
Director, Division 5

Senior Administration

Jim Barrett
General Manager

Robert Cheng
Assistant General Manager

Julia Fernandez
Board Secretary

Directors

Raul Aguirre
Director of Service

Steve Bigley
Director of Environmental Services

Heather Engel
Director of Communication & Conservation

Dan Farris
Director of Operations

Kay Godbey
Director of Finance

Mark Johnson
Director of Engineering

Heidi Keeran
Director of Human Resources

Luis Maciel
Director of Information Systems

Javier Miranda
Director of Trades & Support

Contact Us

Payment Address
P.O. Box 5000
Coachella, CA 92236

Correspondence Address
P.O. Box 1058
Coachella, CA 92236

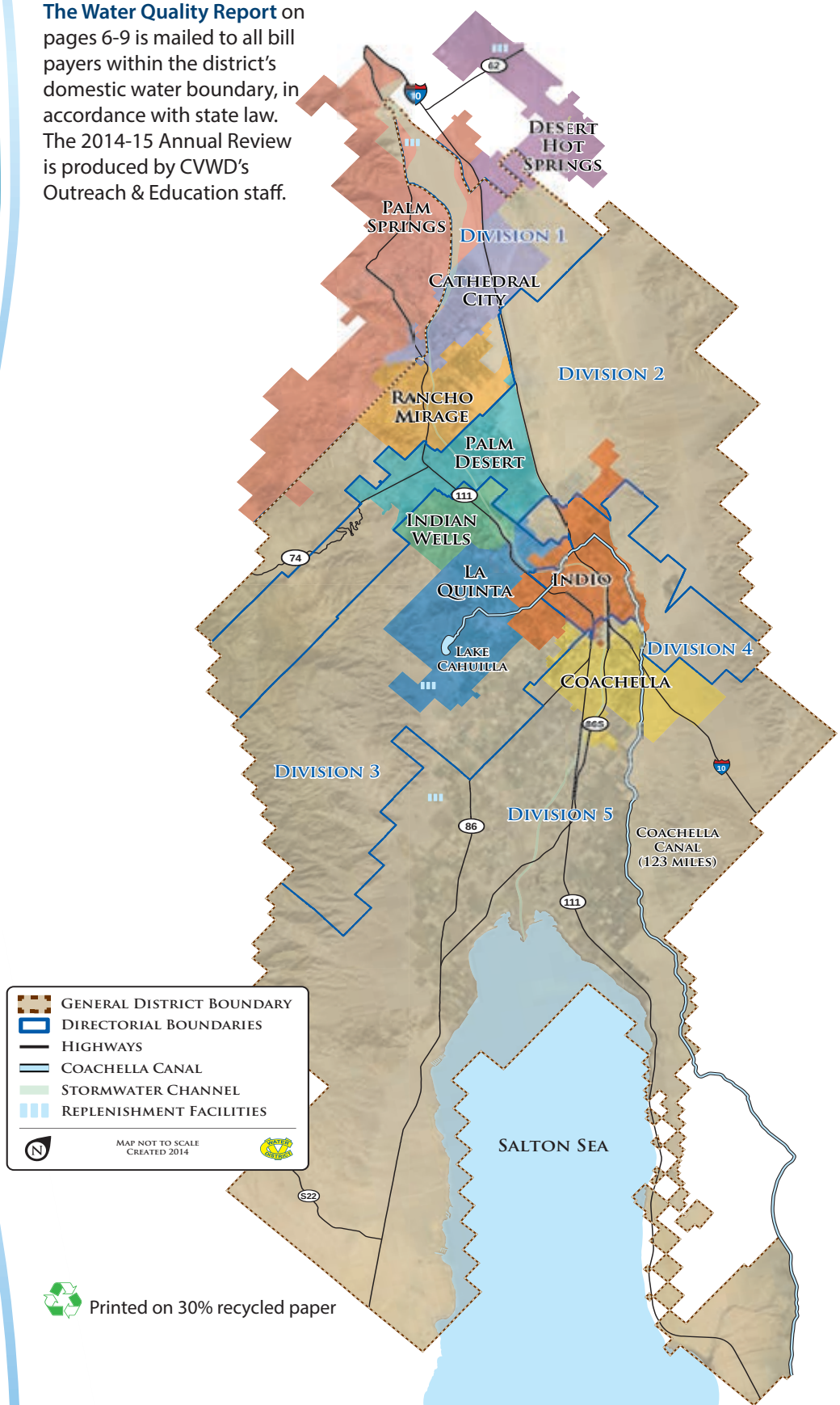
Offices

75-515 & 75-525 Hovley Lane East
Palm Desert
51-501 Tyler Street
Coachella

Established in 1918, the Coachella Valley Water District is a government agency run by a five-member Board of Directors, elected to represent the five divisions within CVWD's service area. The directors serve four-year terms.

Board meetings are open to the public and generally held on the second and fourth Tuesday of each month at 9 a.m. at district offices. The first meeting of the month is typically held in Palm Desert and the second is held in Coachella. To confirm meeting details, call the water district or view the meeting agenda on the website at www.cvwd.org

The Water Quality Report on pages 6-9 is mailed to all bill payers within the district's domestic water boundary, in accordance with state law. The 2014-15 Annual Review is produced by CVWD's Outreach & Education staff.



Printed on 30% recycled paper

Message from the General Manager

The big news this past year has been California's historic drought and all Californians have been asked and are now required to use less water. Here in the Coachella Valley, we're fortunate to have a massive groundwater aquifer, decades of imported and recycled water supplies, a groundwater replenishment program and long-term planning efforts that have contributed to a more reliable water supply than many other areas of the state.

Because pervious calls by the State for conservation went largely unheeded, the State mandated in April 2015 that Coachella Valley Water District (CVWD) reduce districtwide domestic water use by 36% or face fines of up to $10,000 per day. CVWD customers have already reduced water use by 23% since 2007 and should be proud of that success. However, the state's new mandate compares 2015 water use to 2013. During that timeframe, water use has gone down approximately 4%, so we still have quite a bit to do.

In order to meet this target, CVWD is asking all customers to limit Tier 2 water use to 36% below your water budget or pay a new drought penalty. Half of our domestic water customers could pay penalties if they don't take immediate steps to reduce their use above the required Tier 2 reduction. These penalties will go into effect with July water bills and apply to water use above 64% of your Tier 2 budget and all use in Tiers 3, 4 and 5. The drought penalties are included on page 12 of this publication.

This approach was designed to reward customers who have already taken steps to save water. The penalties will remain in place until the State rescinds the emergency regulations and conservation mandates, which could be in February 2016.

CVWD also must enforce the state mandatory water-use restrictions, and has a few restrictions and recommendations of its own.

The good news amidst the drought is that **groundwater levels have improved** in the west valley and continue to rise in the east valley thanks to the successful implementation of the Coachella Valley Water Management Plan. Imported Colorado River water is sent to the Thomas E. Levy Groundwater Replenishment facility in South La Quinta, where it percolates into the aquifer. Monitoring indicates East Valley groundwater levels have risen an average 29 feet since the facility became operational in 2009.

The status of the aquifer is important to the viability of the entire Coachella Valley. While CVWD and Desert Water Agency (DWA) are charged with managing the groundwater, the water belongs to everyone in the valley and we must all take responsibility.

Another big challenge facing CVWD and its customers is the new state standard for chromium-6, a mineral that occurs naturally in areas of the Coachella Valley. CVWD has made significant progress this past year in developing plans to build treatment facilities necessary to comply with the regulation. You can read more details on page 13 of this publication.

Despite these challenges, rest assured that CVWD leadership and staff continue to strive for the highest level of customer service, meet the water-related needs of the community and maintain a sustainable water supply for generations to come.

Sincerely,

Jim Barrett
General Manager

CVWD Mission Statement

To meet the water-related needs of the people through dedicated employees, providing high quality water at a reasonable cost.

New website will help you connect with us

CVWD has launched a new website designed to improve customer service and highlight government transparency.

The website at www.cvwd.org makes key pieces of information, such as how to pay your bill, easy to find. The website provides a wealth of information on such subjects as the district's conservation programs, water-use restrictions during the drought and employment opportunities.

Stay connected!

Main switchboard
(760) 398-2651

Customer Service
(760) 391-9600

Fax
(760) 398-3711

Web sites
www.cvwd.org
www.waterfun4kids.org

CVWD has new water-use restrictions

Current water-use restrictions include:

- Application of water to outdoor landscaping during and within 48 hours after measureable rainfall is prohibited.
- Irrigation of ornamental turf on public street medians is prohibited.
- Broken sprinklers shall be repaired within 24 hours of notification and leaks will be repaired as soon as practical.
- The serving of drinking water other than upon request in eating or drinking establishments, including but not limited to restaurants, hotels, cafes, cafeterias, and bars, is prohibited.
- Hotels and motels shall provide guests with the option of choosing not to have towels and linens laundered daily.
- Applying water to outdoor landscapes in a manner that causes runoff such that water flows onto adjacent property, non-irrigated areas, private and public walkways, roadways, parking lots, or structures is prohibited.
- Applying water to any hard surface including, but not limited to, driveways, sidewalks, and asphalt is prohibited.

Refer to www.cvwd.org for a complete list.

The CVWD board listened to many comments from residents before adopting new water-use restrictions and drought penalties.

Statewide drought prompts drought penalty, water-use restrictions

California is coping with an historic drought. With an executive order on April 1 this year, Gov. Edmund G. Brown Jr. mandated that potable water use be reduced 25% by the end of February 2016.

The State Water Resources Control Board has since issued the most stringent water-use restrictions in California's history. Coachella Valley Water District (CVWD) adopted those as its own and added additional measures to meet SWRCB's conservation target of 36% for the district's domestic water customers.

CVWD is working closely, too, with local municipalities and reaching out to businesses such as restaurants and hotels, landscapers, homeowners associations and others who can play a meaningful role in reducing the Coachella Valley's overall water consumption.

On May 12, CVWD's Board of Directors adopted drought penalties for domestic water customers who do not reduce their water use by 36% of their outdoor water budget. (See the rate summary on Page 12 for additional information.)

Unlike many other water districts, CVWD has opted not to restrict outdoor watering to certain days of the week, giving consumers more freedom to determine how to meet the 36% reduction.

Current water-use restrictions include prohibitions on: irrigating outdoor landscaping during and within 48 hours after measureable rainfall, irrigation of ornamental turf on public street medians, and applying water to outdoor landscapes in a manner that causes runoff such that water flows onto adjacent property. (See complete list in the side column of this page).

Exceptions to the restrictions are available when an immediate health, safety or sanitation need exists.

In addition, there are some recommended adjustments such as watering at night to reduce loss due to evaporation.

Those who ignore the new restrictions will receive a written warning for the first violation, a fine of $50 for second violation, $100 for third violation, and $200 for fourth and subsequent violations.The fines will be added to the customer's water bill.

District emphasizes conservation resources, rebates and education

The district hosts many conservation-related events throughout the year, including the annual Fix a Leak Workshop.

Coachella Valley Water District (CVWD) has again committed significant fiscal resources to conservation as the district guides residents and businesses toward a 36% overall reduction in domestic water use.

Proven water-saving programs include turf buyback for homes, commercial customers and golf courses; continued installation of smart irrigation controllers; additional rebates for water-efficient toilets, sprinklers and specialized equipment for businesses such as restaurants; workshops for residents and professionals; public speaking, tours, publications and a vast array of other community outreach.

CVWD spent nearly $3.2 million this fiscal year on conservation and rebate programs. This is the largest amount of money CVWD has ever dedicated to these programs, in part due to a record number of applications from valley residents, businesses and homeowner associations wanting to do their part to reduce water use.

The most successful program is the turf conversion program, which pays $1 per square foot of grass removed. CVWD customers have removed more than 6 million square feet of grass through this program started in 2010.

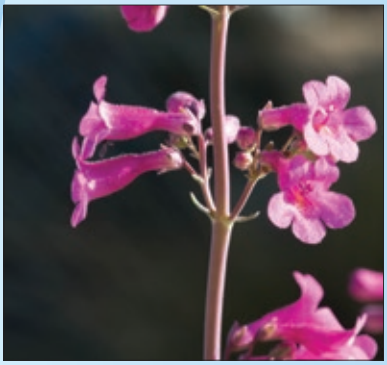
CVWD has also had success with its program to investigate water-use restriction violations and other forms of water waste.

Residents can report water waste using an online form at www.cvwd.org or by calling the Water Waste Helpline at (888) 398-5008.

Since July 2014, staff has investigated nearly 400 reports to help valley residents eliminate water waste.

The district highlighted conservation at many public events and in presentations throughout the year. This year's Toast to Tap Water celebration included a drought information table and an art contest for children with the theme of the importance of conserving water.

Conservation resources



CVWD has added a new searchable database of desert-friendly plants to its website.

The database is ideal for selecting plants that grow successfully in the Coachella Valley. Since up to 80 percent of residential water in the Coachella Valley is used to irrigate landscapes, growing water-conserving plants goes a long way in saving water. More than 330 plants with over 800 photos are shown and described, listed in alphabetical order by their scientific (botanical) name.

The database can be searched by plant type. In addition, a custom search allows you to find plants to fulfill a specific need, such as water use, plant height or width, flower color, bloom season and more.

The database also includes a section outlining the basics of what a plant needs to grow successfully in your yard.

The plant database can be accessed from the CVWD website, www.cvwd.org.

Recycled Water facts

CVWD owns and operates six wastewater reclamation plants capable of treating 18 million gallons of wastewater for recycled water use per day.

Three of the district's six wastewater reclamation plants deliver nonpotable water to 21 customers, mostly golf courses, for irrigation.

Colorado River water from the Coachella Canal supplements the recycled water supply at the wastewater reclamation plants as irrigation demands exceed the recycled water treatment capacity.

52 courses valleywide receive recycled water, Colorado River water, or a blend.

20,054 af — Amount of Colorado River water delivered for golf course irrigation in the east valley in 2014.

15,302 af — Amount of recycled and/or canal water delivered for golf course irrigation in the mid-valley in 2014.

Is recycled water regulated? Yes. The treatment, delivery and use of recycled water is strictly regulated by state agencies.

What are the benefits of recycled water? Using recycled water for irrigation reduces demand on our precious aquifer. In addition, the supply of wastewater isn't affected by drought.

af = acre-feet; 1 acre-foot equals 325,851 gallons;

Additional golf courses turn to recycled water for irrigation

Coachella Valley Water District (CVWD) continues to work with golf courses across the Coachella Valley to expand the nonpotable water supply and relieve courses from relying on groundwater for irrigation.

Currently, 52 golf courses valleywide use recycled water, Colorado River water or a blend of the two sources, depending on their location.

By the end of 2015, the delivery system in the mid-valley is expected to be expanded to provide blended nonpotable water to Desert Falls Country Club, Avondale Country Club and two courses at Palm Valley Country Club. Colorado River water will be delivered off the Coachella Canal to La Quinta Country Club and two courses at La Quinta Resort. This will bring the total number of golf courses using nonpotable water in the valley to 59.

After the connections in 2015 are completed, the long-term plans call for 36 additional golf courses to switch from groundwater to the nonpotable supply.

Using nonpotable water for golf course irrigation benefits the entire Coachella Valley and the aquifer by leaving water in the ground for drinking water and other domestic water uses. This process is referred to as in-lieu recharge.

Expanding the nonpotable system is part of CVWD's Strategic Plan and a key component of the Coachella Valley Water Management Plan, which outlines a strategy for eliminating overdraft of the aquifer in 2021.

Other components of eliminating overdraft include conservation and groundwater replenishment with imported water. CVWD replenishes the aquifer at two facilities in the west valley and one in the east valley, making nonpotable in-lieu recharge efforts especially important in the mid-valley.

In 2014, nearly 35,000 acre-feet of nonpotable water was delivered to golf courses in lieu of groundwater.

In the area of conservation, CVWD representatives meet regularly with leaders from the local golf course industry through the Golf and Water Task Force. That group has pledged to meet or exceed the Water Management Plan goal for golf courses to reduce water use by 10% by maximizing water conservation, education and outreach efforts.

CVWD launched its first turf rebate program for golf courses in 2015, thanks to a state grant. Eighteen courses will be removing more than 100 acres of grass, and CVWD is pursuing additional grant funding to expand the program.

HOAs, other large landscape customers embrace new look

A recently converted front landscape in Palm Valley HOA features beautiful flowering plants and trees.

The Coachella Valley's Homeowner Associations and managers of other large landscaped developments are embracing desert-friendly landscaping that conserves water and saves money over time. Many are using rebates from Coachella Valley Water District (CVWD) to make the conversion more cost-effective.

An example is Palm Valley HOA, which over the past few years has converted medians, common areas, side patio areas and pool surroundings to desert-friendly landscaping. The result is a mix of decomposed granite, river rock and colorful flowering plants.

CVWD rebates helped defray the cost of the conversion, with the rebates ranging from about $9,000 to more than $73,000 per year for the project.

In partnering with the association's homeowners, Palm Valley has completed 450 unit areas along with walkways, driveways and golf course side patio areas. A total of 43 pools have been converted to desert-friendly landscaping with only 5 more to go, which are planned for completion this year.

The association also has retrofitted in-between driveways with drought tolerant plants, replaced irrigation and added decomposed granite and river rock. This has eliminated water spray onto the driveways and cars and again reduced water consumption. This project began the last quarter of 2014 and was completed in March of 2015.

Another example is Monterey Country Club association, which has reduced water consumption by almost half in the past several years by converting turf areas to desert-friendly landscaping.

In 2014, the Monterey Country Club Association board of directors approved and spent more than $150,000 for turf removal renovations. They received rebates from the Coachella Valley Water District totaling more than $43,000. There is also an additional rebate of about $12,000 remaining for additional turf removal areas completed in 2014.

The association also will receive rebates for the new irrigation controllers installed to date totaling more than $82,000. The rebate on the controllers is anticipated to be approximately forty percent or about $33,000 from local agencies.

Groundwater facts

Aquifer overdraft occurs when more water is used over a period of years than can be replaced by natural or artificial means.

311,485 af* — Amount of reported groundwater used in the Coachella Valley in 2014. All drinking water supplied by CVWD comes from the aquifer.

43,888 af — Amount of imported water replenished by CVWD and DWA in 2014

63,000 af — Average annual amount of water naturally replenished by rain and snow melt

3.26 million af — Water replenished by CVWD and DWA since 1973

39 million af — Estimated capacity of Coachella Valley's groundwater basin (first 1,000 feet)

3 — Number of groundwater replenishment facilities in the Coachella Valley.

**af = acre-feet; 1 acre-foot equals 325,851 gallons*

Conservation tips

- Check your toilet for leaks and fix them. A running toilet can waste more than 200 gallons of water per day
- Use a water-efficient showerhead. They can save you up to 750 gallons per month.
- Water your landscaping in the early morning or evening hours to minimize loss through evaporation, especially when temperatures are high.

For more detailed information:

To receive a summary of the district's source water assessments or additional water quality data or clarification, call the district's Water Quality Section at (760) 398-2651.

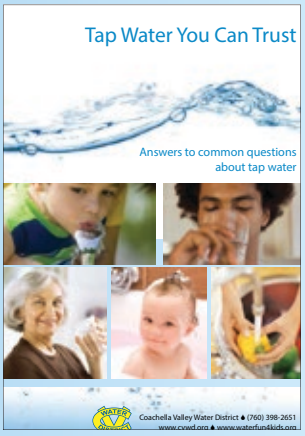
Complete copies of source water assessments may be viewed at the Coachella Valley Water District, 51-501 Tyler St., Coachella, CA 92236.

Este informe contiene información muy importante sobre su agua potable. Tradúzcalo ó hable con alguien que lo entienda bien. También puede llamar al distrito de agua al número de teléfono (760) 398-2651.

For answers to common drinking water questions

CVWD's brochure, *Tap Water You Can Trust*, answers common questions about tap water including fluoridation, water softening and more.

Order this free publication using the postcard inside this annual review or online at www.cvwd.org



2015 Domestic Water Quality Report

Coachella Valley Water District (CVWD) is committed to delivering high quality drinking water that meets stringent government standards. This annual report documents that water served to all CVWD water users (obtained from wells drilled into the Coachella Valley's vast groundwater basin) meets State Water Resources Control Board Division of Drinking Water (DDW) and U.S. Environmental Protection Agency (USEPA) drinking water quality standards.

Highly trained CVWD employees monitor the water systems and collect drinking water samples that are tested at the district's state-certified laboratory. A few specialized tests are performed by other certified laboratories. In addition to the detected constituents listed in the table on pages 8-9, CVWD's Water Quality staff monitors for more than 100 other regulated and unregulated chemicals that are not detected during this monitoring.

CVWD is governed by a locally elected, five-member board of directors who normally meet in public session at 9 a.m., on the second and fourth Tuesdays of each month. Meeting locations rotate between the district's Coachella office at 51-501 Tyler Street and the Steve Robbins Administration Building at 75-515 Hovley Lane East in Palm Desert. Call the district to confirm meeting time, date and location.

The following report is written and provided in accordance with DDW requirements:

While all of CVWD's domestic water supply meets state and federal standards, drinking water supplied to some service areas does contain low levels of naturally occurring arsenic. The arsenic standard balances the current understanding of arsenic's possible health effects against the costs of removing arsenic from drinking water. USEPA continues to research the health effects of low levels of arsenic, which is a mineral known to cause cancer in humans at high concentrations and is linked to other health effects such as skin damage and circulatory problems. All drinking water delivered by CVWD last year, complied with the 10 microgram per liter (ug/L) maximum contaminant level (MCL).

Radon is a naturally occurring, radioactive gas — a byproduct of uranium — that originates underground but is found in the air. Radon moves from the ground into homes primarily through cracks and holes in their foundations. While most radon enters the home through soil, radon from tap water typically is less than two percent of the radon in indoor air.

The USEPA has determined that breathing radon gas increases an individual's chances of developing lung cancer, and has proposed an MCL of 300 picoCuries per liter (pCi/L) for radon in drinking water. This proposed standard is far less than the 4,000 pCi/L in water that is equivalent to the radon level found in outdoor air. The radon level in CVWD wells ranges from none detected to 460 pCi/L, significantly lower than that found in the air you breathe.

Nitrate in drinking water at levels above 45 milligrams per liter (mg/L) is a health risk for infants younger than six months old. High nitrate levels in drinking water can interfere with the capacity of the infant's blood to carry oxygen, resulting in serious illness; symptoms include shortness of breath and blueness of skin. Nitrate levels above 45 mg/L may also affect the ability of the blood to carry oxygen in other individuals, such as pregnant women and those with certain enzyme deficiencies. If you are caring for an infant, or you are pregnant, you should ask for advice from your health care provider.

Nitrate levels in CVWD wells range from no detection to 40 mg/L, which is below the maximum contaminant level.

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing.

CVWD is responsible for providing high quality drinking water, but cannot control the variety of materials used in

customer plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds before using water for drinking or cooking. You can capture this flushed water in a container and use it for watering plants. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at http://www.epa.gov/safewater/lead.

As noted, all drinking water served by CVWD comes from wells. DDW requires water agencies to state, however, "the sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity."

Contaminants that may be present in source water include:

• Microbial contaminants, such as viruses and bacteria, that may come from sewage treatment plants, septic systems, agricultural livestock operations and wildlife.

• Inorganic contaminants, such as salts and metals, that can be naturally occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining or farming.

• Pesticides and herbicides that may come from a variety of sources such as agriculture, urban stormwater runoff and residential uses.

• Organic chemical contaminants, including synthetic and volatile organic chemicals, that are by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff and septic systems.

• Radioactive contaminants that can be naturally occurring or be the result of oil and gas production and mining activities.

In order to ensure that tap water is safe to drink, USEPA and DDW prescribe regulations that limit the amount of certain contaminants in water provided by public water systems.

USEPA and DDW regulations also establish limits for contaminants in bottled water that must provide the same protection for public health. "Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the USEPA's Safe Drinking Water Hotline (1-800-426-4791) or the National Safety Council Radon Hotline (1-800-767-7236)."

Drinking Water Source Water Assessments:

CVWD has conducted source water assessments that provide information about the vulnerability of district wells to contamination. In 2002, CVWD completed a comprehensive source water assessment that evaluated all groundwater wells supplying the district's six public water systems. An assessment is performed on each new well added to CVWD's system.

Groundwater from these CVWD wells are considered vulnerable to activities associated with urban and agricultural uses.

Urban land uses include the following activities: known contaminant plumes, dry cleaners, underground storage tanks, septic systems, automobile gas stations (including historic), automobile repair shops, historic waste dumps/landfills, illegal/unauthorized dumping, sewer collection systems and utility stations' maintenance areas.

Agricultural land uses include the following activities: irrigation/agricultural wells, irrigated crops, pesticide/fertilizer/petroleum and transfer areas.

The following activities have been associated with detected contaminants: known contaminant plumes, dry cleaners and irrigated crops.

Drinking water supplied by CVWD's wells to our communities complies with state and federal drinking water quality standards.

"Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. USEPA/Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by Cryptosporidium (a microbial pathogen found in surface water throughout the United States) and other microbial contaminants are available from the **Safe Drinking Water Hotline 1-800-426-4791 or www.epa.gov/drink/"**

— DDW

Some tips for enjoying tap water

Some people think they don't like the taste of tap water. For most people, tap water tastes best when it is cold. Fill a pitcher or any covered container with tap water and place it in the refrigerator. That way you will have a ready supply of cold drinking water.

A slight smell or taste of chlorine is normal. An easy way to reduce the chlorine smell is to let water sit in a glass for a few minutes. Then put it in a covered container and let it chill in the refrigerator.

Definitions & Abbreviations

AL or Regulatory Action Level — The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

MCL or Maximum Contaminant Level — The highest level of a contaminant that is allowed in drinking water. Primary MCLs are set as close to public health goals or maximum contaminant level goals as economically and technologically feasible. Secondary MCLs are set to protect the odor, taste and appearance of drinking water.

MCLG or Maximum Contaminant Level Goal — Level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs are set by the U.S. Environmental Protection Agency.

mg/L — Milligrams per liter (parts per million). One mg/L is equivalent to 1 second in 11.6 days.

MRDL or Maximum Residual Disinfectant Level — The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

MRDLG or Maximum Residual Disinfectant Level Goal — The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

N/A — Not applicable. The government has not set a Public Health Goal, Maximum Contaminant Level Goal or Maximum Contaminant Level for this substance.

ND — None detected

ng/L — Nanograms per liter (parts per trillion). One ng/L is equivalent to 1 second in 31,700 years.

NL or Notification Level — Health based advisory level established by the DDW for chemicals in drinking water that lack maximum contaminant levels (MCLs) as stated by DDW.

NTU — Nephelometric turbidity units (measurement of suspended material)

pCi/L — picoCuries per liter. For uranium, one pCi/L is equivalent to one second in 21.1 years.

PDWS or Primary Drinking Water Standard — MCLs and MRDLs for contaminants that affect health along with their monitoring and reporting requirements, and water treatment requirement.

PHG or Public Health Goal — Level of a contaminant in drinking water below which there is no known or expected risk to health. Public Health Goals are set by the California Environmental Protection Agency.

Secondary Drinking Water Standard — Based on aesthetics, these secondary maximum contaminant levels have monitoring and reporting requirements specified in regulations.

ug/L—Micrograms per liter (parts per billion). One ug/L is equivalent to 1 second in 31.7 years.

uS/cm — Microsiemens per centimeter

CVWD 2015 Domestic Water Quality Summary

(Covering the reporting period January - December 2014)

CVWD analyzed more than 18,000 water samples last year to ensure that your drinking water meets federal and state standards. Every year, CVWD is required to analyze a select number of these samples for more than 100 regulated and unregulated substances.

This table lists those substances that were detected in CVWD's three service areas. Gray boxes indicate no substance was detected or existing data is no longer reportable. The data on the chart, which summarizes results of the most recent monitoring completed between 2006 and 2014, shows that CVWD continues to deliver drinking water that meets state and federal water quality standards.

To read this table: First, determine in which service area you live (columns 4-6). Then move down the column, comparing the detection level of each chemical or other contaminant with the Public Health Goal, Maximum Contaminant Level Goal and Maximum Contaminant Level (columns 2-3).

For example, if you live in La Quinta and want to know the level of fluoride detected in your service area, you would look down the Cove Communities column and stop at the fluoride row. The average fluoride level in that service area is 0.6 mg/L with the range of results varying between 0.1 mg/L and 1.0 mg/L.

Compare these values to the Maximum Contaminant Level in Column 3. Fluoride levels in this water comply with the Maximum Contaminant Level of 2.0 mg/L. The range can show a level above the Maximum Contaminant Level and still comply with the drinking water standard when compliance is based on average levels found in each water source.

1	2	3	4	5	6	7	8
Detected parameter, units	**PHG or (MCLG)**	**MCL [1]**	**Cove Communities[2] *Range (Average)***	**Indio Hills, Sky Valley & areas adjacent to Desert Hot Springs (ID 8) *Range (Average)***	**Desert Shores, Salton Sea Beach& Salton City(ID11) *Range (Average)***	**MCL Violation (Yes/No)**	**Major source(s)**
Arsenic, ug/L	0.004	10	ND-17[3] (ND)			NO	Erosion of natural deposits
Chloride, mg/L	N/A [4]		7.2-110 (19)	10-26 (16)	250-460 (330)	NO	Leaching from natural deposits
Chlorine (as Cl_2), mg/L [5]	MRDLG 4	MRDL 4.0	ND-3.5 (0.3)	0.2-0.7 (0.4)	ND-1.3 (0.4)	NO	Result of drinking water chlorination
Chromium, ug/L	(100)	50	ND-25 (ND)	15-25 (19)		NO	Erosion of natural deposits
Chromium-6, ug/L	0.02	10[7]	ND-21[12] (8.7)	9.1-23[12] (16)		NO	Erosion of natural deposits
Copper, mg/L [8] [homes tested/ sites exceeding AL]	0.3	AL=1.3	0.11 [51/0]	0.14 [22/0]	0.18 [21/0]	NO	Internal corrosion of household plumbing
Copper, mg/L	N/A	1.0[1]	ND-0.4 (ND)			NO	Leaching from natural deposits
Dibromochloropropane (DBCP), ng/L	1.7	200	ND-67(ND)			NO	Leaching of banned nematocide which may still be in soils
Fluoride, mg/L	1	2.0	0.1-1.0 (0.6)	0.5-0.7 (0.6)	0.6-1.6 (1.3)	NO	Erosion of natural deposits
Gross alpha particle activity, pCi/L	(Zero)	15	ND-11 (ND)	ND-7.3(5.1)	ND-4.6 (ND)	NO	Erosion of natural deposits
Haloacetic Acids, ug/L[5]	N/A	60	(ND-5.1) 2.6	ND-2.0 (2.0) [11]		NO	By-product of drinking water chlorination
Hardness (as $CaCO_3$), mg/L	N/A		11-300 (110)	66-210 (140)	210-400 (290)	NO	Erosion of natural deposits
Iron, ug/L	None	300 [1]	ND-230 (ND)			NO	Leaching from natural deposits
Nitrate (as NO_3), mg/L	45	45	ND-40 (6.3)	ND-9.6 (3.4)	5.6-13 (9.9)	NO	Leaching of fertilizer, animal wastes or natural deposits
Odor as threshold, units	None	3 [1]	ND-1.0 (ND)			NO	Naturally occurring organic materials
pH, units	N/A		7.2-8.4 (8.1)	8.0-8.2 (8.2)	7.3-8.0 (7.7)	NO	Physical characteristic
Sodium, mg/L	N/A		17-120 (30)	58-89 (74)	220-290 (250)	NO	Erosion of natural deposits
Specific conductance, uS/cm	N/A [4]		230-1,100 (390)	530-830 (640)	1,500-2,500 (1,900)	NO	Substances that form ions when in water
Sulfate, mg/L	N/A [4]		ND-270 (47)	150-240 (180)	220-330 (290)	NO	Leaching from natural deposits
Tetrachloroethylene (PCE),ug/L	0.06	5	ND-0.5(ND)			NO	Discharge from dry cleaners and auto shops
Total Coliform bacteria, positive samples/month	(0)	more than 5%[9] or more than 1[10]	ND-1% (ND)			NO	Naturally present in the environment
Total dissolved solids, mg/L	N/A[4]		130-680 (240)	330-540 (410)	920-1,500 (1,100)	NO	Leaching from natural deposits
Total trihalomethanes, ug/L[5]	N/A	80	ND-14 (12)	4.0-12 (12) [11]	5.6-8.5 (8.5) [11]	NO	By-product of drinking water chlorination
Turbidity, NTU	N/A	5 [1]	ND-0.8 (ND)	ND-0.3 (ND)		NO	Leaching from natural deposits
Uranium, pCi/L	0.43	20	ND-15 (4.3)	1.9-4.1 (3.3)	2.4-2.9 (2.6)	NO	Erosion of natural deposits
Vanadium, ug/L [6]	N/A	NL=50	ND-32 (16)	10-28 (19)	24	NO	Erosion of natural deposits

Notes: **(1)** Values with this footnote have fixed Secondary MCLs, remaining values are Primary MCLs unless identified otherwise.

(2) Includes the communities of Rancho Mirage, Thousand Palms, Palm Desert, Indian Wells, La Quinta, Mecca, Bombay Beach, North Shore, Hot Mineral Spa, and portions of Bermuda Dunes, Cathedral City, Indio, Oasis, Riverside County, Thermal and Valerie Jean.

(3) Although an individual sample may exceed the MCL, compliance is based on a running annual average.

(4) This constituent is monitored for aesthetics such as taste and odor. No fixed consumer acceptance contaminant level has been established for this constituent.

(5) The reported average represents the highest running annual average based on distribution system monitoring.

(6) Unregulated contaminants are those for which USEPA and DDW have not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist both regulatory agencies in determining the occurrence of unregulated contaminants in drinking water and whether future regulation is warranted.

(7) California's Chromium-6 drinking water MCL became effective on July 1, 2014; regulatory monitoring shall begin no later than January 1, 2015.

(8) The reported values are 90th percentile levels for samples collected from faucets in water user homes.

(9) Systems that collect 40 or more samples per month (Cove Communities)

(10) Systems that collect less than 40 samples per month. (ID 8, ID 11)

(11) Annual monitoring results.

(12) Results provided include voluntary monitoring performed prior to the effective date of the Chromium-6 (Cr6) MCL; initial regulatory monitoring for Cr6 will be completed in 2015.

Gray boxes in table indicates all results were ND or no reportable data

Tribal lawsuit against districts headed to trial

A federal judge ruled in March that a lawsuit by the Agua Caliente Band of Cahuilla Indians against the Coachella Valley Water District (CVWD) and Desert Water Agency (DWA) will go to trial to determine if the Tribe has a reserved right to groundwater.

The court ruled that the Tribe does not have an aboriginal right to the groundwater in the Coachella Valley, but left for a trial to determine whether the Tribe has reserved rights, in the valley's groundwater basin, and how that right may be quantified.

CVWD and DWA filed a petition to appeal the finding that the Tribe may have a federal reserved right to the groundwater. The appellate court has agreed to review that issue,

The district has argued that the water beneath the Coachella Valley belongs to everyone, not just special interests.

As the largest water agency in the Coachella Valley, nearly 100 wells, 60 reservoirs and almost 2,000 miles of pipeline are needed to deliver in excess of 100,000 acre-feet of domestic water to a population of more than 300,000 residents and several thousand commercial customers. CVWD and DWA cooperate in the operation of three groundwater replenishment facilities, and utilize imported Colorado River water to reduce overdraft of the aquifer.

CVWD has not allowed the litigation to interfere with its role as manager of the region's groundwater, and there have not been and will not be any interruptions in the delivery of water and related services to its customers.

Additional information about is available at http://www.cvwd.org/news/lawsuit.php.

Domestic water pipeline and sewer projects in rural areas remain priority

Coachella Valley Water District (CVWD) continues to make a priority of expanding and improving domestic water and sewer infrastructure to provide service to rural areas of the Coachella Valley.

The district works with federal, state and county partners to extend these services. In recent years, these projects have assisted in the expansion of facilities in unincorporated areas of the county.

One recent project involved replacing aging infrastructure in Sky Valley, including an 18" pipeline and reservoirs in an unincorporated area of the county. The size of the new reservoirs and additional infrastructure will be increased to provide much needed additional storage to help meet the peek demands and fire flow for the Sky Valley Pressure Zone in the Indio Hills area.

CVWD also this year received two United States Department of Agriculture (USDA) Rural Development grants for $4.8 million and $2.1 million to extend water and sewer services for the San Cristobal/Los Vinedos Farm Labor Housing project and the San Antonio Del Desierto (St. Anthony's) mobile home park in Mecca.

Another important project was the sewer rehab project in Palm Desert, which was completed on schedule. CVWD hired CDM Smith to replace the sewer line after extensive deterioration was discovered in August. Some 1,400 feet of sewer pipe underneath Cook Street was replaced and approximately 3 miles of sewer pipe was refurbished on Cook Street, 42nd Avenue, Corporate Way, Hovley Lane East, Portola, Hovley Lane West and Monterey Avenue.

CVWD currently is applying for state revolving loan money for three key projects: the East Valley Water Supply project, the Highway 86 Transmission Main and Pump Station Project and the Chromium-6 Treatment Project.

The East Valley Water Supply Project will provide additional safe, reliable water supplies and storage to areas with deficient private water systems and marginal domestic water infrastructure in the eastern Coachella Valley.

The Highway 86 Water Transmission Main and Pump Station Project will provide additional water supply and improved water quality to the service area that includes communities along the west shore of the Salton Sea.

The Chromium-6 Treatment Project will include design and construction of ion exchange treatment facilities to treat wells with chromium-6 levels above the new state standard. (See additional information on chromium-6, page 13).

Completion of headworks projects aides wastewater efficiency

Work has been completed on new headworks at two of the district's wastewater reclamation plants. Here, a tour examines the massive scale of one of the headworks.

Headworks improvements projects at two wastewater reclamation plants at the Coachella Valley Water District (CVWD) are improving the efficiency of wastewater treatment.

The purpose of the headworks facility is to remove inorganic material including grit from the incoming wastewater.

W. M. Lyles Co. constructed both projects, in Thermal and North Indio. Each facility is virtually identical in terms of materials and equipment.

Each new headworks is removing 15 tons of debris per month. This is material that was going into the plant that was affecting process efficiency as well as frequency of equipment maintenance and number of unplanned process shutdowns.

The completion of the two headworks projects was celebrated this year with a tour of both facilities for members of the Desert Valley Builders Association and the American Public Works Association.

Keep medications out of the water system

Everything CVWD customers flush down their toilets and rinse down drains travels to a wastewater reclamation plant and, in some cases, is treated and sent to golf courses for irrigation use. Not all compounds and drugs are removed with this treatment process and trace amounts can still be detected.

While there is no evidence that trace amounts from medications pose a risk to human health, it's prudent to control what we put into the wastewater system. Limiting what you put down the drain is the easiest way to start!

What you can do to help

Throw medicines in the trash after grinding them up and mixing with an undesirable substance, such as coffee grounds or kitty litter, so they are unrecognizable to children or anyone intentionally searching your trash.

Keep fats, oils and grease out of your pipes

Improperly disposed fats, oils and grease are a common cause of sewer overflows and backups both in the home and throughout the sewer system.

Additionally, they cause expensive damage to CVWD's wastewater reclamation facilities.

What you can do to help

Never put grease down sink drains or garbage disposals.

Scrape hardened grease into the trash can for proper disposal.

Paying your bill

Pay online with a credit card

Customers can now view bills and pay them online using a credit card. Visit the Manage My Account section of the website at www.cvwd.org/service/payment.php.

Automatic electronic payment

The district also offers the convenience of having your monthly payment automatically deducted from your checking account. Simply complete an Automatic Payment Service Form, available at either office or on our website at www.cvwd.org/service/payment.php.

Electronic notification when bill is due

Save paper by enrolling in our electronic notification program and be notified by e-mail when your new bill is available to view online.

Pay by phone

Using what is known as an interactive voice response (IVR) system, you can make a payment and review account information over the phone. You will need your 12-digit account number, located in the upper right-hand corner of your paper billing statement. Call (760) 391-9600

Pay by mail

Mailed payments should be sent to P.O. Box 5000, Coachella, CA 92236.

Pay in person

Drop boxes are available at offices in Palm Desert (75-525 Hovley Lane East) and Coachella (51-501 Tyler Street). The Palm Desert drop box is open 24 hours a day.

Rate Summary

As of July 1, 2014[1]

Domestic Water Base Rate		
Area of service	**Monthly charge per 100 cubic feet**	**Monthly charge 3/4" meter**
Rate Area 1 — Majority of the district, except areas noted below	$1.12	$7.00
Rate Area 2 — Includes Sky Valley & Indio Hills	$1.35	$7.50
Rate Area 3 — Includes east Salton Sea areas of North Shore and Bombay Beach	$1.64	$7.50
Rate Area 4 — Includes Salton City, Desert Beach and Desert Shores	$1.42	$7.50
Rate Area 5 — Areas outside boundaries of the district, but served by the improvement district	$1.69	$17.50
Tiers		
Tier 1: Excellent	90% Base Rate	Customers pay the tier rate for all water used within that tier.
Tier 2: Efficient	Base Rate	
Tier 3: Inefficient	Base Rate x 1.5	
Tier 4: Wasteful	Base Rate x 2	
Tier 5: Excessive	Base Rate x 4	

Drought penalties & your water bill

On May 12, 2015, CVWD Board of Directors approved a drought penalty for all domestic water customers who are not doing their part to help CVWD save 36% by reducing their water use. Starting in June (reflected in your July bill) those who do not meet the conservation target will be penalized.

In order to meet state conservation goals, CVWD is asking all customers to limit Tier 2 water use. Your Water Budget can be found on your monthly bill.

TIER 1

There are no penalties for customers who remain in Tier 1, which was designed to cover all indoor water use.

$1.01 per ccf*

TIER 2

Customers are being asked to limit their Tier 2 water use to 36% below their water budget.

Customers who achieve 36% savings (stay within the first 64%) will not incur a penalty.

Tier 2 water use up to 64%
$1.12 per ccf*

Tier 2 water use above 64%
$1.12 + $2.51* penalty per ccf

Customers using water in Tiers 3,4 and 5 will pay the standard rate for water used in each tier plus a penalty.

TIER 3
Inefficient:
$1.68 + $3.34 penalty per ccf*
105% - 150% of water budget

TIER 4
Excessive:
$2.24 + $5.01 penalty per ccf*
151% - 250% of water budget

TIER 5
Wasteful:
$4.48 + $10.03 penalty per ccf *
250% or more of water budget

	Tier 1	**Tier 2 Up to 64%**	**Tier 2 Above 64%**	**Tier 3**	**Tier 4**	**Tier 5**
Standard Rate (per ccf)*	$1.01	$1.12	$1.12	$1.68	$2.24	$4.48
Drought Penalty (per ccf)			+$2.51	+$3.34	+$5.01	+$10.03

[1] This table represents water rates for the 2014-15 fiscal year. At the time this publication was printed, the water district's Board of Directors had not yet approved the 2015-16 budget.
For confirmation of current rates, call CVWD at (760) 398-2651 or visit www.cvwd.org/service/rates.php.
* Drought penalties are for Area 1. See www.cvwd.org for all areas.
ccf = 1 billing unit, 100 cubic feet or 748 gallons

District moves forward on compliance plan for chromium-6

The Coachella Valley Water District (CVWD) is committed to meeting all water quality regulations and communicating openly and transparently with customers and community partners. The new chromium-6 standard, first announced in April of 2014, makes California the first state to develop a regulation specifically for chromium-6.

Chromium-6 is found in Coachella Valley groundwater as a naturally-occuring mineral and is being regulated for potential health impacts resulting from many years of consumption at high levels. There is no immediate health risk. Tap water can still be used for drinking, cooking, and all other needs.

CVWD has been monitoring for chromium-6 since 2001 and monitors drinking water thousands of times each year. The district began official quarterly monitoring in 2015 to determine compliance with the new drinking water standard. Past monitoring shows chromium-6 levels in wells serving this water system range from less than 1 to 22 parts per billion (ppb) and about 30 percent of these wells are expected to have levels above California's new standard of 10 ppb.

CVWD has done extensive pilot studies and operates facilities that have demonstrated success removing chromium-6. As a result of the new standard, CVWD will likely need to treat about 30 percent of its wells. The district is currently designing treatment facilities as part of its compliance plan. Construction of these facilities will most likely be completed within 5 years. You will be updated of the progress being made along the way.

There will be significant construction throughout the district service area. As a direct result of the compliance costs, CVWD customers could see monthly bills increase by approximately $30 – $50 in coming years. Rates will likely be increased gradually over time. Customers will have an opportunity to weigh in before the Board of Directors considers any rate increases. The district is soliciting grants and looking for solutions to keep costs as low as possible.

CVWD recognized for certification program

Coachella Valley Water District (CVWD) and its Engineering Department this year received a prestigious award from the San Diego chapter of the national Construction Management Association of America (CMAA) in connection with CVWD's work to provide training and certification to its engineers administrating construction projects.

To become a certified construction manager, an engineer must complete 24 hours of training and pass a four-hour exam. In the first phase of the certification program, 11 CVWD engineers were certified. The program requires continuing education to maintain the certification.

Budget presentation praised

The Government Finance Officers Association of the United State and Canada (GFOA) awarded CVWD its Distinguished Budget Presentation award for the distric'ts 2014-15 fiscal year budget.

This is the third year in a row that CVWD has received the Distinguished Budget Presentation award. In order to qualify, CVWD had to satisfy nationally recognized guidelines for effective budget presentation. These guidelines are designed to assess how well an entity's budget serves as a policy document, financial plan, operations guide and communication device.

The document can be viewed online at www.cvwd.org

California agriculture

In 2013, the most recent year for which a full crop year report is available, California's 77,900 farms and ranches received $46.4 billion for their output.

California's agricultural abundance includes more than 400 commodities. The state produces nearly half of US-grown fruits, nuts and vegetables. Across the nation, US consumers regularly purchase several crops produced solely in California.

California's top-ten valued commodities for 2013 are:

Milk — $7.6 billion

Almonds — $5.8 billion

Grapes — $5.6 billion

Cattle, Calves — $3.05 billion

Strawberries — $2.2 billion

Walnuts — $1.8 billion

Lettuce — $1.7 billion

Hay — $1.6 billion

Tomatoes — $1.2 billion

Nursery plants— $1.2 billion

Source: California Department of Food & Agriculture

Crop Report

(Covering the reporting period January - December 2014)

Crop production on Coachella Valley land irrigated with Colorado River water

Value of year's production: $730,487,227

Total acreage irrigated (includes double cropping & planted but non-bearing: 66,431)

Average gross value per acre: $11,705

Crop	Acreage	Yield in tons	Value per acre	Total value
Fruit	**24,367**	**214,602**	**$13,539**	**$329,914,208**
Dates	7,765	18,092	$4,660	$36,184,900
Figs	158	1,327	$7,700	$1,216,600
Grapes - (table)	7,802	61,967	$16,900	$131,852,825
Grapefruit	807	12,265	$9,593	$7,741,244
Lemons & Limes	3,887	59,821	$24,138	$93,824,406
Mangos	117	1,207	$18,567	$2,172,339
Olives	86	650	$9,723	$836,190
Oranges & Tangerines	2,241	15,754	$7,232	$16,205,904
Peaches	119	589	$17,100	$2,034,900
Strawberries	614	13,631	$42,550	$26,125,700
Watermelon	771	29,298	$15,200	$11,719,200
Vegetables	**26,510**	**659,768**	**$9,906**	**$262,617,860**
Artichoke	638	5,136	$11,550	$7,368,900
Basil	235	4,771	$6,090	$1,431,150
Green Bean	1,170	7,371	$9,900	$11,583,000
Bok Choy	244	3,221	$9,200	$2,244,800
Broccoli	942	6,500	$5,700	$5,369,400
Cabbage	30	225	$5,550	$166,500
Carrots	3,930	125,760	$5,536	$21,756,480
Cauliflower	1,008	8,114	$8,050	$8,114,400
Celery	748	23,562	$11,813	$8,835,750
Sweet Corn	1,259	11,331	$4,800	$6,043,200
Eggplant	246	4,305	$21,875	$5,381,250
Kale	58	1,520	$8,892	$515,736
Lettuce	3,234	51,841	$8,665	$28,023,774
Okra	1,117	4,636	$4,150	$4,635,550
Onion - Dry	115	4,456	$16,275	$1,871,625
Onion - Green	205	7,893	$6,600	$1,353,000
Oriental Vegetables	2,112	23,654	$9,200	$19,430,400
Peppers (bell & chili)	4,661	94,386	$19,575	$91,239,075
Potatoes	1,636	39,264	$7,200	$11,779,200
Radish	344	6,773	$7,031	$2,418,750
Spice	1,168	23,710	$6,090	$7,113,120
Spinach	853	14,714	$11,500	$9,809,500
Squash	303	181,800	$7,500	$2,272,500
Tomatoes	254	4,826	$15,200	$3,860,800
Forage	**2,199**	**5,408**	**$717**	**$1,575,880**
Alfalfa hay	607	4,856	$2,080	$1,262,560
Irrigated pasture[1]	1,500	--	$150	$225,000
Sudan grass	92	552	$960	$88,320
Nursery	**1,516**	**--**	**$21,045**	**$31,903,462**
Duck Ponds	**762**	**2**	**$48**	**$36,881**
Fish Farms	**165**	**1,056**	**$29,708**	**$4,901,825**
Golf Courses	**6,007**	**630,735**	**$13,339**	**$80,128,574**
Polo Fields	**473**	**49,665**	**$13,339**	**$6,309,442**
Turf Grass	**982**	**103,110**	**$13,339**	**$13,099,094**

All financial figures are rounded off to the nearest dollar. Crop categories are as established by the Bureau of Reclamation.

[1]Yield is in animal units per month (AUM)

Stormwater improvements continue to protect Coachella Valley

The Coachella Valley Water District (CVWD) is responsible for regional flood protection for the Coachella Valley within its boundary.

CVWD has existing regional stormwater facilities that provide flood protection to developed portions of the Coachella Valley with dense population. Local drainage is the responsibility of the cities and county and flows may be routed into CVWD's regional facilities.

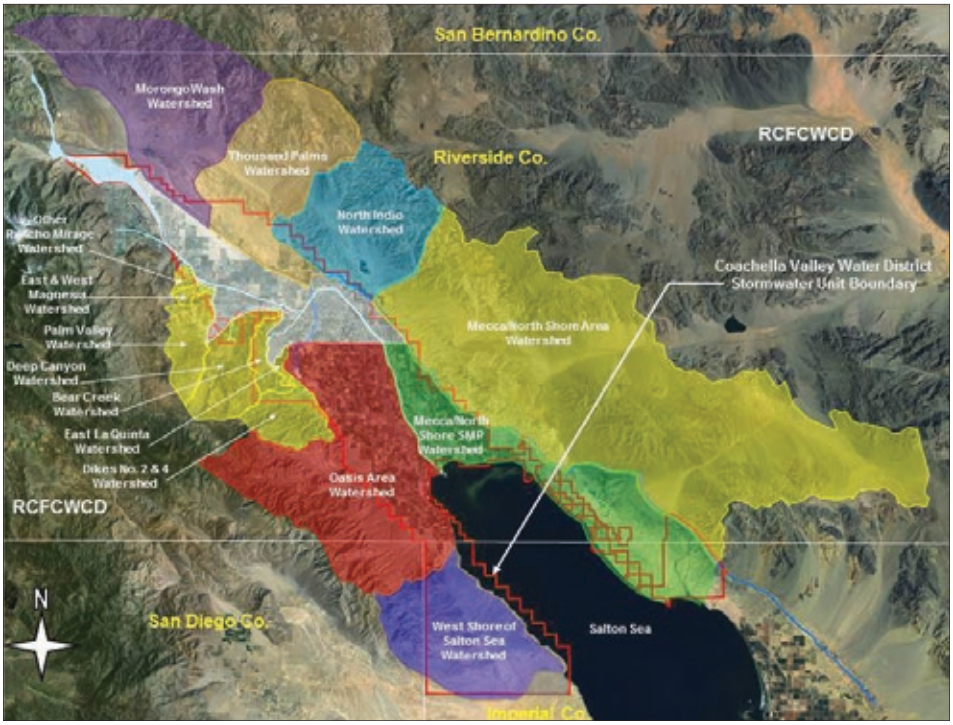
Over the past several years, CVWD has been preparing several stormwater master plans to address the remaining portions of the Coachella Valley. These plans will require extensive capital to construct the improvements and will be built and funded over time as development occurs.

Thousand Palms Flood Control Project — This project will protect more than 2,800 acres of land while providing long-term sand supply for an endangered fringe-toed lizard. The design and environmental documentation is more than 80% complete and the hydraulic studies have been submitted to the Federal Emergency Management Agency (FEMA) for review and approval.

North Indio Regional Flood Control Channel and the East Side Dike — This project will collect flood flows from the outlets of the Sun City Palm Desert stormwater channels and convey them to the Sun City Shadow Hills channels and ultimately to the Coachella Valley Stormwater Channel. The project is currently at the 90% design phase.

Oasis Area Stormwater Master Plan — CVWD has completed the master plan for the Oasis area which will provide protection from alluvial fan and valley floor drainage flooding sources. The document will help to strategically guide future CVWD and developer improvements in the area.

Mecca/North Shore Area Stormwater Master Plan — CVWD has completed the master plan for Mecca/ North Shore area which will provide flood protection from various flooding sources. The document recommends new facilities and upgrades to existing stormwater facilities to convey regional flows and drainage below the East Side Dike to the Coachella Valley Stormwater Channel or the Salton Sea.



Did you know?

For much of its history, protection of life and property through regional stormwater facilities has been an important part of the Coachella Valley Water District.

A stormwater district predated CVWD by about five years but was assimilated by the water district in the mid-1930s.

CVWD's regional stormwater system is composed of 134 miles of flood protection facilities throughout the Coachella Valley.

The backbone of CVWD's flood protection is the 49-mile stormwater channel that conveys rain and snow melt from Whitewater to the Salton Sea. This channel, often referred to as "the wash," is actually the Whitewater River's riverbed. It isn't often thought of as a riverbed, because it's dry most days of the year.

This channel is named the Whitewater River Stormwater Channel to the west of Washington Street and the Coachella Valley Stormwater Channel to the east.

Occasionally, golf courses or roads, may be built within storm protection facilities. However, developers and cities do so knowing that they are building in a river bed and that the facility's main purpose is to protect life an property from flood flows.

Responding to a boil order notice:

Bottled water

In the unlikely event that CVWD's water system is compromised, you could be advised to not use tap water. Your first choice for replacing tap water for drinking and cooking should be bottled water. Everyone should include in their emergency supply kit a 7-day supply of bottled water (at least 1 gallon of water per person per day, plus extra water for pets). You can purchase commercially bottled water or store your own.

Boiled water

If you don't have bottled water, you should use boiled tap water. Boiling water will kill most types of disease-causing organisms. If the water is unusually cloudy, murky or colored, filter it first through a clean cloth or allow it to settle and draw off the clear water for boiling. Then, bring to a rolling boil and leave for one minute.

Bleached water

If you are unable to boil water, your next best choice is to disinfect it with household bleach. Bleach will kill some (but not all) types of disease-causing organisms.

If the water is unusually cloudy, murky or colored, filter it first through a clean cloth or allow it to settle and draw off the clear water for disinfection.

Then, add 1/8 teaspoon (or 8 drops) of regular, unscented liquid household bleach for each gallon of water, stir well and let it stand for 30 minutes before using. Store disinfected water in clean containers with covers.

Never use scented, powdered or swimming pool bleach. These products may contain dangerous amounts of chemicals not intended for consumption. A faint chlorine smell is normal.

Emergency Preparedness & Drinking Water

How do I know if my tap water can be used for drinking and cooking?

In the event of a disaster, CVWD may issue a boil water notice as a precautionary measure if water quality is in doubt. CVWD will inspect and test the water system. If the test results are unacceptable, a boil water notice will be issued and remain in place until the problem is located and solved, and the water system tests are acceptable. Notification will be made through the media or direct contact and door hangers. CVWD's web site (www.cvwd.org) and posted fliers in public spaces may also be used.

Is boiled tap water always safe to use?

It is possible that following a natural disaster, you will be notified that the tap water will need to be boiled before use for drinking and cooking. However, it is possible for tap water to be contaminated with a chemical that is not safe to consume even after boiling and may even be a risk during bathing. In this unlikely event, you will receive specific notification to not use the tap water for any purpose.

Your first choice for replacing tap water for drinking and cooking should be bottled water. Everyone should include in their emergency supply kit a 7-day supply of bottled water (at least 1 gallon of water per person per day, plus extra water for pets). Your next best choice is to disinfect the tap water with household bleach.

Can I use the water inside my water heater?

While bottled water is preferred, the water in your water heater can be used for drinking and cooking, provided that the water heater remains upright and you turn off the main water valve to your home immediately after the disaster occurs. To access this water, turn off the heating element and open the drain faucet at the bottom of the water heater. To start the water flowing, close the water intake valve at the top of the tank and open a hot water faucet in the home.

When CVWD announces that you can resume normal use of your tap water, don't forget to refill the water heater before turning on the heating element.

CVWD's brochure, *Emergency Preparedness & Drinking Water*, is an excellent reference for preparing and responding to an emergency. It is printed in both English and Spanish.

A free copy can be printed from the website at www.cvwd.org/news/publications.php. You also can order a copy by using the postcard inside this *Annual Review*.

Turn off sprinklers

A disaster may result in reduced water pressure and limited water supply, caused by leaks in the distribution system or by wells temporarily out of service. If this happens, it will be important to restrict water use to drinking, cooking and other emergency purposes, such as fire suppression.

Please turn off your irrigation sprinklers so you aren't wasting what may be a limited supply on non-essential uses.

By the Numbers

(covering the reporting period January - December 2014)

Coachella Valley Water District is a local government agency formed in 1918 by the registered voters within the district.

Governing board: Five directors, representing five divisions and elected to four-year terms.

Fields of service: Domestic water supply, treatment and distribution; wastewater collection and treatment; recycled water distribution; regional stormwater/flood protection; irrigation water importation and distribution; irrigation drainage collection; groundwater management and promotion of water conservation.

Property valuation: Property within CVWD boundaries had a total combined assessed value in 2014 of $53,353,605,210 as fixed by Riverside and Imperial County assessors and state officials. This figure is used to determine property tax funding for the district.

General Information

Employees	503
Total service area	639,857 acres

Domestic Water

Service information	
Population served	318,217
Active accounts	108,599
Average daily demand	90.4 mgd
Total water delivered	101,302 af
System information	
Active wells	96
Total well capacity	240 mgd
Distribution reservoirs	61
Storage capacity	135 mg
Distribution piping system	1,996 miles

Canal Water

Service information	
Irrigable acres for service	76,354
Active accounts	1,224
Total water delivered	334,638 af
Average daily demand	917 af
Maximum daily demand	1,461 af
System information	
Reservoirs	2
Storage capacity	1,301 af
Distribution system	485 miles
Pumping plants	16
Length of canal	123 miles

Agricultural Drainage

Total on-farm drains	2,298 miles
Acreage with farm drains	37,425
District open drains	21 miles
District pipe drains	166 miles

Wastewater

Service information	
Population served	272,357
Active accounts	93,797
Average daily flow	17.21 mgd
System information	
Wastewater reclamation plants	6
Total daily plant capacity	33.5 mgd
Collection piping system	1,129 miles

Non-potable Water*

Service information	
Active accounts	46
Non-potable water deliveries	35,356 af
Wastewater System information	
Wastewater reclamation plants producing recycled water	3
Total daily capacity	18 mgd
Distribution piping system	29.5 miles

Groundwater Management

(In cooperation with Desert Water Agency)

Replenishment facilities	3
Replenishment from imported water	43,912 af
Imported supply since 1973	3,271,210 af

Stormwater Protection

Service area	381,479 acres
System information	
Number of stormwater channels	16
Length of Whitewater River/ Coachella Stormwater Channel	49 miles
Length of all regional flood protection facilities	134 miles

***** Includes Colorado River water and/or recycled wastewater.

af = acre-feet. An acre-foot of water is equal to 325,851 gallons, or enough water to cover one acre of land one foot deep.

mgd = million gallons per day.

mg = million gallons.

Coachella Valley Water District
P.O. Box 1058
Coachella, CA 92236

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Palm Desert, CA 92260

Irrigation Guide

If you don't have a self-adjusting irrigation timer, use this guide to determine the approximate amount of water your turf grass needs each month. Gradually reduce the amount of water to find an adequate amount for your situation without being wasteful.

This guide has been adjusted for California's current drought conditions:

January
3 min/day spray heads & 7 min/day rotary

February
5 min/day spray heads & 13 min/day rotary

March
7 min/day spray heads & 18 min/day rotary

April
10 min/day spray heads & 22 min/day rotary

May
12 min/day spray heads & 27 min/day rotary

June
14 min/day spray heads & 30 min/day rotary

July
13 min/day spray heads & 30 min/day rotary

August
12 min/day spray heads & 27 min/day rotary

September
10 min/day spray heads & 22 min/day rotary

October
7 min/day spray heads & 14 min/day rotary

November
4 min/day spray heads & 10 min/day rotary

December
3 min/day spray heads & 6 min/day rotary

Drought penalties and water-use restrictions are now in effect. Please see page 2 and page 12 of this publication for additional information.

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Appendix I

Coachella Valley Water Management Plan Update – Executive Summary

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PREPARED FOR
COACHELLA VALLEY
WATER DISTRICT

Coachella Valley Water Management Plan Update

FINAL REPORT

January 2012

MWH
BUILDING A BETTER WORLD

Water Consult
Engineering and Planning Consultants

COACHELLA VALLEY WATER MANAGEMENT PLAN 2010 UPDATE

Final Report

January 2012

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Executive Summary

The Coachella Valley Water Management Plan was adopted by the Board of Directors, Coachella Valley Water District (CVWD) in September 2002. The goal of the Water Management Plan is to reliably meet current and future water demands in a cost-effective and sustainable manner. The Board recognized the need to update the Plan periodically to respond to changing external and internal conditions. This 2010 Water Management Plan Update (2010 WMP Update) meets that need. It defines how the goal will be met given changing conditions and new uncertainties regarding water supplies, water demands, and evolving federal and state laws and regulations.

ES-1 THE COACHELLA VALLEY

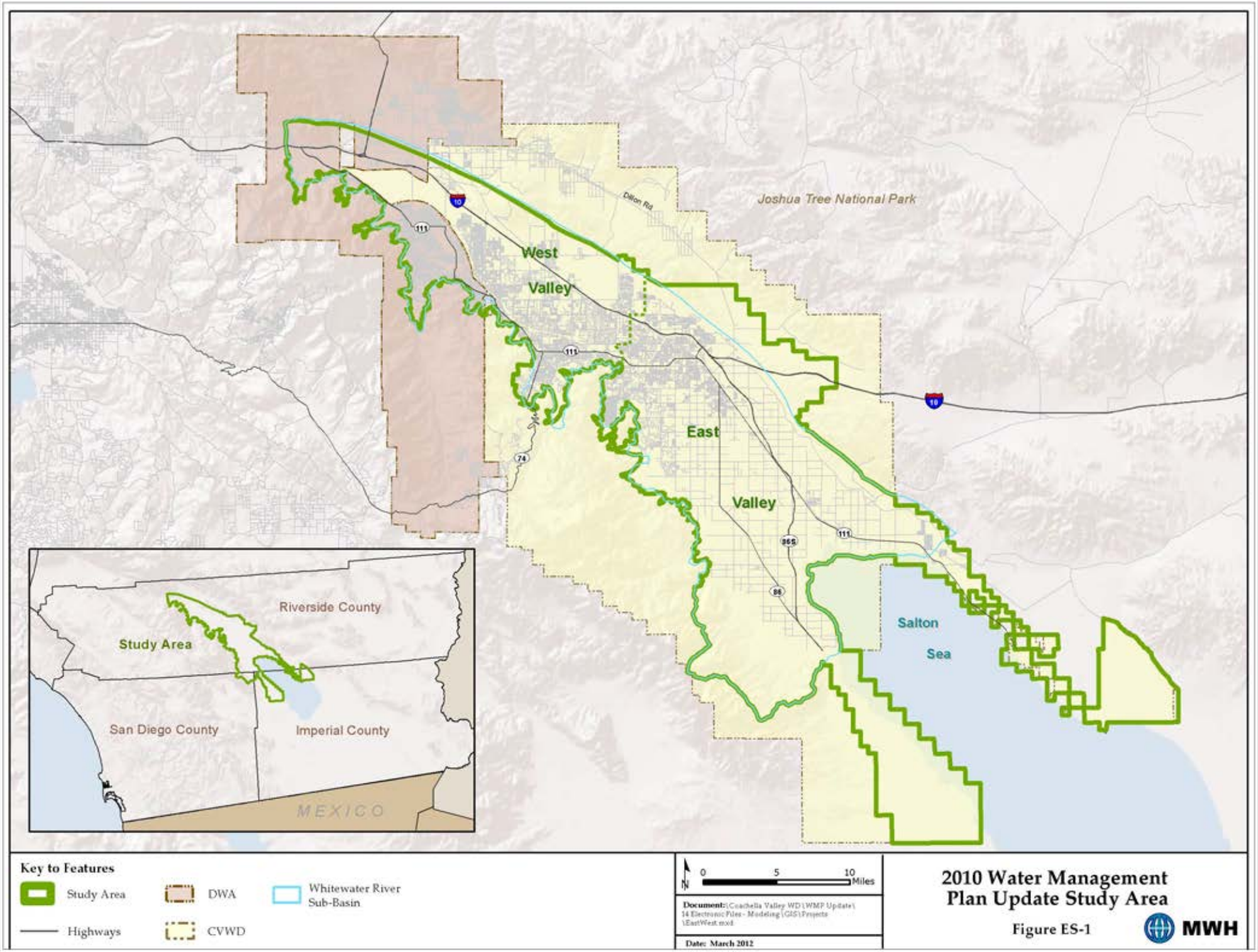
The Coachella Valley is located in the central portion of Riverside County. For purposes of this Water Management Plan, the Coachella Valley is divided into the West Valley and the East Valley. Geographically, the East Valley is southeast of a line extending from Washington Street and Point Happy northeast to the Indio Hills near Jefferson Street, and the West Valley is northwest of this line (**Figure ES-1**).

The West Valley includes the cities of Palm Springs, Cathedral City, Rancho Mirage, Indian Wells, and Palm Desert, a portion of the city of Indio, and the unincorporated communities of Sun City and Thousand Palms. The West Valley has a predominately resort/recreation-based economy. Water demand in the West Valley is supplied by several sources: groundwater, surface water from local streams, and recycled water. The East Valley includes the cities of Coachella, Indio, and La Quinta, and the unincorporated communities of Bermuda Dunes, Mecca, Oasis, Thermal, and Vista Santa Rosa. Historically, the East Valley has had an agricultural-based economy. Urban growth is occurring in the East Valley and is projected to continue in the future. East Valley water sources consist primarily of Coachella Canal water and groundwater, with a small amount of recycled fish farm effluent for agricultural uses.

The Coachella Valley's principal groundwater basin, the Whitewater River (Indio[1]) Subbasin, extends from Whitewater in the northwest to the Salton Sea in southeast. The basin has an estimated storage capacity of approximately 30 million acre-feet[2] (AF) (DWR, 1964). Water placed on the ground surface in the West Valley will percolate through the sands and gravels 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 readily reach the lower groundwater aquifers due to these impervious clay layers. The only outlets for groundwater in the Coachella Valley are through subsurface outflow under the Salton Sea or through collection in drains and transport to the Salton Sea via the Coachella Valley Storm Channel (CVSC).

[1] The California Department of Water Resources (DWR) assigned the name "Indio Subbasin" in its Bulletin 108. CVWD and Desert Water Agency use the designation "Whitewater River Subbasin."

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



Source: DWR, ESRI, County of Riverside

ES-2 WATER MANAGEMENT IN THE COACHELLA VALLEY

Water management in the Valley began as early as 1915. With groundwater levels falling, the need for a supplemental water source was recognized for the Valley to continue to flourish.

The Coachella Valley Stormwater District was formed in 1915 followed by formation of CVWD in January 1918. CVWD's first directors quickly filed paperwork to secure rights to all unclaimed Whitewater River water, an important source for aquifer recharge. In 1918, a contract was awarded for construction of water spreading and recharge facilities in the Whitewater River northwest of Palm Springs.

CVWD next focused on obtaining imported Colorado River water. In 1934, negotiations with the federal government were completed, and plans were put in place for the construction of the Coachella Branch of the All American Canal. Construction of the Canal began in 1938, but was interrupted by World War II. The first deliveries of imported Colorado River water to East Valley growers began in 1949. The service area for Canal water delivery under the CVWD's contract with the U.S. Bureau of Reclamation (Reclamation) is defined as Improvement District No. 1 (ID-1). The impact of imported water on the Valley was almost immediate. By the early 1960s, water levels in the East Valley had returned to their historical high levels.

Although groundwater levels in the East Valley had stabilized, water levels in the West Valley continued to decline as growth occurred. Desert Water Agency (DWA) was formed in 1961 to import State Water Project (SWP) water into the Palm Springs and Desert Hot Springs areas. In 1962 and 1963 respectively, DWA and CVWD entered into contracts with the State of California for 61,200 acre-feet per year (AFY) of SWP water. To avoid the then estimated $150 million cost of constructing an aqueduct to bring SWP water directly to the Valley, CVWD and DWA entered into an agreement with the Metropolitan Water District of Southern California (Metropolitan) to exchange SWP water for Colorado River water.

Starting in 1973, the CVWD and DWA began exchanging their annual SWP allocation with Metropolitan for Colorado River water to recharge West Valley groundwater at the Whitewater River Recharge Facility. CVWD, DWA, and Metropolitan also signed an advance delivery agreement in 1984 that allows Metropolitan to store additional water in the Valley. Since 1973, the spreading facility had percolated in excess of 2.6 million AF of Colorado River water exchanged for SWP water.

By the 1980s, groundwater demand in the East Valley had again exceeded supplies, resulting in significant groundwater level decreases in some parts of the East Valley. Because relatively impervious clay layers in the Valley floor impede groundwater recharge in the East Valley, CVWD began looking for sites sufficiently far away from the main clay layer to allow groundwater recharge. In 1995, the CVWD began operating the Dike No. 4 pilot recharge facility located on the west side of the East Valley in La Quinta. The pilot successfully demonstrated the feasibility of East Valley groundwater recharge. The facility was expanded in 1998 to determine the ultimate recharge capacity at this location. In October 2009, the Thomas E. Levy Groundwater Replenishment Facility (Levy facility, formerly Dike 4) was dedicated. It has a current recharge capacity of 32,000 AFY, upgradable to 40,000 AFY.

Recycled water has been a priority water supply in the Valley since 1965. Currently, CVWD and DWA provide more than 14,000 AFY of recycled water for golf course and greenbelt irrigation purposes from four wastewater treatment facilities. While recycled water is available in the East Valley, it is not currently treated to sufficient levels for unrestricted reuse. Water conservation is also a key element of managing water demands.

ES-3 CURRENT CONDITION OF COACHELLA VALLEY GROUNDWATER BASIN

The demand for groundwater has annually exceeded the limited natural recharge of the groundwater basin. The condition of a groundwater basin in which the outflows (demands) exceed the inflows (supplies) to the groundwater basin over the long term is called "*overdraft.*" Overdraft has caused groundwater levels to decrease in significant portions of the East Valley. Groundwater levels in the West Valley have also decreased substantially, except in the areas near the Whitewater Recharge Facility where artificial recharge has successfully raised water levels.

Overdraft has serious consequences. The immediate and direct effect is increased groundwater pumping costs for all water users. With continued overdraft, wells will have to be deepened, pumps that are more powerful will have to be installed, and energy costs will increase as the pump lifts increase. The need for deeper wells and more powerful pumps will increase the cost of water for agriculture, municipalities, resorts, homes, and businesses. Continued decline of groundwater levels could result in a substantial and possibly irreversible degradation of water quality in the groundwater basin due to the intrusion of lower quality, high TDS water applied at the surface for irrigation and reduced drain flows carrying the salts out of the basin. Continued overdraft also increases the possibility of land subsidence. As groundwater is removed, the dewatered soil begins to compress from the weight of the ground above, causing subsidence. Subsidence can cause ground fissures and damage to buildings, homes, sidewalks, streets, and buried pipelines – all of the structures that make the Valley livable. Subsidence also reduces storage capacity in the aquifer. Continued overdraft would eventually stifle growth in the Valley, as it would not be possible to demonstrate that adequate water supplies exist to support growth.

The 2010 WMP Update uses a calculation of change in storage based on long-term local hydrology and imported water deliveries to estimate long-term overdraft. Since the local hydrology varies significantly from year to year, a long term average provides a better method for estimating the local inflows, which are dampened by the large storage volume of the basin. Because imported water recharge deliveries in the West Valley also vary widely from year to year, recharge is based on estimated long-term average SWP Exchange reliability rather than year-to-year values. Other inflows and outflows are estimated using the groundwater model. This approach dampens the variations in the annual change in storage and gives a more accurate indication of long-term overdraft. Based on these adjustments, the average annual overdraft for 2000 through 2009 is estimated to be 70,000 AFY. When the 2010 WMP Update was adopted in January 2012, CVWD and DWA experienced two years of very high recharge with nearly 461,000 AF recharged at Whitewater (including advanced deliveries).

ES-4 THE 2002 WATER MANAGEMENT PLAN

Continued decline of groundwater levels and ongoing overdraft is unacceptable. CVWD and DWA are charged with providing a reliable, safe water supply now and in the future. In order to fulfill obligations to Valley residents, these agencies must take action to prevent continuing decline of groundwater levels and degradation of water quality on a long-term basis. To meet responsibilities for ensuring adequate water supplies in the future, the CVWD and DWA initiated planning in the early 1990s. The comprehensive Water Management Plan developed in 2002 guides CVWD and DWA in efforts to eliminate overdraft, prevent groundwater level decline, protect water quality, and prevent land subsidence.

The 2002 Water Management Plan clearly identified the significant groundwater overdraft that had occurred over decades and, equally important, the threat of continued overdraft to the economy and quality of life in the Valley. It was based on then current projections of growth and corresponding water demand. The Plan identified the actions needed to eliminate overdraft while maintaining the quality of life and avoiding adverse impacts to the environment. The Plan area originally included the Whitewater River and Garnet Hill Subbasins. Portions of Desert Hot Springs Subbasin east of Indio and Coachella were added to the planning area for this Update, as shown in **Figure ES-1**.

ES-4.1 Goals and Objectives

The goal of the 2002 Water Management Plan is to reliably meet current and future water demands in a cost effective and sustainable manner. To meet this goal, four objectives were identified for the 2002 WMP:

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.

The 2002 WMP included five major elements:

- water conservation (urban, golf course, and agricultural),
- substitution of surface water supplies (Colorado River water, SWP water, recycled water) for urban, agricultural, and golf course uses in lieu of pumping groundwater,
- continued groundwater recharge at the Whitewater Recharge Facility and development of two new groundwater recharge facilities in the East Valley,

- increasing surface water supplies, and
- monitoring of groundwater production, levels, water quality and land subsidence.

Within each element, the 2002 WMP identified specific actions to aid in eliminating overdraft. Many of the elements of the 2002 WMP have been accomplished as described in **Section ES-4.2**.

ES-4.2 Accomplishments Since 2002

The actions to eliminate overdraft pursuant to the 2002 WMP taken by CVWD, DWA, other water agencies, municipalities, and tribes are summarized below.

ES-4.2.1 Water Conservation

A broad range of water conservation actions was included in the 2002 WMP. Most of those actions have been achieved, some ahead of schedule.

Urban Conservation

CVWD first passed a Landscape Ordinance in 2003. The ordinance was updated in 2007, and changes were made in 2009 for consistency with the State's updated model landscape ordinance. The ordinance has been adopted by nearly all Valley cities. The ordinance sets a maximum applied water allowance for new developments, requires efficient irrigation systems, specifies the use of climate appropriate plant materials, reduces applied water runoff and overflow, reduces non-recreational turf at golf courses, and mandates smart irrigation controllers on all new landscapes. The ordinance, in combination with other water conservation measures, results in a significant reduction in existing and new water use.

CVWD established an urban water conservation program in 1988. A water conservation coordinator was appointed in 2007, and the program now has a full-time staff of twelve employees. In 2009, CVWD established tiered domestic water pricing for customers based on individual water budgets. A turf buy-out partnership was established with the cities of Cathedral City, La Quinta, and Palm Desert. CVWD also provides weather-based irrigation controllers to eligible customers in participating cities. CVWD maintains water efficient demonstration gardens at the CVWD offices in Coachella and Palm Desert. CVWD sponsors well-attended semi-annual landscape workshops and tours, and creates displays for special events. CVWD produces the popular book, "*Lush & Efficient: Landscape Gardening in the Coachella Valley*," and various other publications. Analysis of water use for CVWD's 2011 Urban Water Management Plan shows water usage has declined by 18 percent compared to average usage from 1996 through 2005.

DWA offers large water users (condominiums, public parks, and businesses) comprehensive irrigation system water audits at no charge and assists in implementing recommended improvements. In partnership with CVWD and Cathedral City, DWA furnishes irrigation controllers at cost to customers. Free controllers are provided with new water meter installation. In addition, DWA recently installed artificial turf and recycled water drip-irrigation for

xeriscaping at its operations center (DWA website, 2010). The City of Palm Springs also promotes water efficiency programs including landscape water training programs and rebates for water efficient toilets (City of Palm Springs website, 2010). Analysis of per capita water use for DWA's 2011 Urban Water Management Plan indicates a comparable 18 percent reduction in water use. Indio and Coachella have also implemented water conservation programs that are described in their respective Urban Water Management Plans. Their plans show 14 percent and 20 percent per capita demand reductions compared to their respective demand baselines.

Agricultural Conservation

The 2002 WMP established a goal of seven (7) percent agricultural water use reduction through conservation. Based on a comparison of the average water use per acre in the 2000 through 2002 period, agricultural water use has generally declined about 9.9 percent through 2008. While this estimate may be due in part to variations in weather conditions, crop water needs, and crop patterns, it represents a significant decrease in agricultural water use over the period. Agricultural water conservation measures included irrigation scheduling, salinity management, and irrigation uniformity evaluation programs for irrigators.

Golf Course Conservation

The 2002 WMP goal was to reduce water demand at existing courses by at least five percent by 2010 and for new courses by up to 25 percent compared to historical use by existing courses. Actual use per irrigated acre in the West Valley, where data are available, indicates a reduction of about 14 percent compared to the 2000 to 2002 average. Adoption of the 2009 Landscape Ordinance throughout the Valley is expected to reduce water use by new courses through turf limitations by about 22 percent compared to existing courses. CVWD initiated a program of monitoring golf course water use to ensure that maximum water allowances are not exceeded. A symposium for golf course operators to promote golf course water conservation is held each year.

Stakeholder Review and Input

In 2006, CVWD completed, with extensive stakeholder involvement, a Water Management Plan Implementation Program. This effort included review, evaluation, and prioritization of water conservation programs and other elements of the 2002 WMP by stakeholders with recommendations to the CVWD Board (Water Consult, 2006). The Board uses the recommendations in the Implementation Program to guide development of annual budgets.

ES-4.2.2 Additional Water Supplies

The 2002 WMP identified the need for CVWD and DWA to acquire additional water supplies to manage current and future groundwater overdraft. Supplies identified included the Colorado River, State Water Project, other transfers, recycled water, and desalinated drain water.

Quantification Settlement Agreement

In 2003, CVWD, IID, and Metropolitan, along with the State of California and Reclamation, successfully completed negotiation of the Quantification Settlement Agreement (QSA). The QSA quantifies the Colorado River water allocations of California's agricultural water contractors for 75 years and provides for the transfer of water between agencies. Under the QSA, CVWD has a base allocation of 330,000 AFY. In accordance with the QSA, CVWD has entered into water transfer agreements with Metropolitan and IID that increase CVWD supplies by an additional 159,000 AFY as shown in **Table ES-1**.

As of 2010, CVWD received 368,000 AFY of Colorado River water deliveries under the QSA. This includes the base allocation of 330,000 AFY, the Metropolitan/IID transfer of 20,000 AFY, 12,000 AFY of the IID/CVWD First transfer, and 35,000 AFY of Metropolitan/SWP transfer. CVWD's allocation will increase to 459,000 AFY of Colorado River water by 2026. After deducting conveyance and distribution losses, approximately 428,000 AFY will be available for CVWD use.

Table ES-1
CVWD Deliveries under the Quantification Settlement Agreement

Component	2010 Amount (AFY)	2045 Amount (AFY)
Base Allocation	330,000	330,000
1988 Metropolitan/IID Approval Agreement	20,000	20,000
Coachella Canal Lining (to SDCWA)	-26,000	-26,000
To Miscellaneous/Indian PPRs	-3,000	-3,000
IID/CVWD First Transfer	12,000	50,000
IID/CVWD Second Transfer	0	53,000
Metropolitan/SWP Transfer	35,000	35,000
Total Diversion at Imperial Dam	**368,000**	**459,000**
Less Conveyance Losses [1]	-31,000	-31,000
Total Deliveries to CVWD	**337,000**	**428,000**

Note:
1 Assumed total losses after completion of All-American and Coachella Canal lining projects

State Water Project

CVWD and DWA have made significant progress toward meeting the 2002 WMP goal of 140,000 AFY average delivery target (103,000 AFY to Whitewater Recharge Facility; 37,000 AFY via Mid-Valley Pipeline (MVP)) of SWP Exchange water in the Whitewater River Subbasin. CVWD's and DWA's SWP Table A Amounts[3] are used to replenish both the Upper Whitewater River and the Mission Creek subbasins. Per an interagency agreement, water for

[3] Each SWP contract contains a "Table A" exhibit that defines the maximum annual amount of water each contractor can receive excluding certain interruptible deliveries. Table A Amounts are used by DWR to allocate available SWP supplies and some of the SWP project costs among the contractors.

recharge is allocated in proportion to pumping in each subbasin. CVWD's and DWA's Table A water is exchanged with Metropolitan for a like amount of Colorado River water from Metropolitan's Colorado River Aqueduct (CRA).

Under the 2003 Exchange Agreement, CVWD and DWA acquired 100,000 AFY (88,100 AFY and 11,900 AFY, respectively) of Metropolitan's SWP Table A water as a permanent transfer. In any given year, the agreement allows Metropolitan to call-back the 100,000 AFY and assume the entire cost of delivery if it needs the water. This transfer became effective in January 2005.

In 2004, CVWD purchased an additional 9,900 AFY of SWP Table A water from the Tulare Lake Basin Water Storage District (Tulare Lake) in Kings County, CA. In 2007, CVWD and DWA made a second purchase of 7,000 AFY of SWP Table A water from Tulare Lake: 5,250 AFY for CVWD and 1,750 AFY for DWA. In 2007, CVWD and DWA completed the transfer of 16,000 AFY of SWP Table A water (12,000 AFY and 4,000 AFY, respectively) from the Berrenda Mesa Water District (Berrenda Mesa), effective in January 2010. With these transfers, the combined SWP Table A Amounts for CVWD and DWA total 194,100 AFY, with CVWD's portion equal to 138,350 AFY and DWA's portion equal to 55,750 AFY. **Table ES-2** summarizes CVWD and DWA total allocations of SWP Table A water.

Table ES-2
State Water Project Sources

	Original SWP Table A (AFY)	Tulare Lake Basin 2004 Transfer (AFY)	Metropolitan 2003 Transfer[1] (AFY)	Tulare Lake Basin 2007 Transfer[2] (AFY)	Berrenda Mesa 2007 Transfer[2] (AFY)	Total (AFY)
CVWD	23,100	9,900	88,100	5,250	12,000	138,350
DWA	38,100	—	11,900	1,750	4,000	55,750
Total	61,200	9,900	100,000	7,000	16,000	194,100

Notes:
1 Transfer became effective on January 1, 2005.
2 Transfer became effective on January 1, 2010.

SWP supplies vary annually due to weather and runoff variations and regulatory limitations on exports from the Delta. When the 2002 WMP was prepared, average SWP supply reliability was estimated to be about 82 percent. Under current conditions, DWR estimates the SWP can only provide about 60 percent of the Table A Amounts indicated in CVWD's and DWA's contracts based on an 82-year hydrologic average (DWR, 2011). The current availability of SWP Table A Amounts is presented in **Table ES-3.** In the absence of state and federal actions in the Bay Delta to improve supply reliability and to protect and enhance the Delta ecosystem, it is anticipated that long-term average SWP reliability (deliveries) could decrease to 50 percent of the Table A Amounts over the next twenty years. Additionally, growth and associated groundwater production increases in the Mission Creek Subbasin will result in more SWP Exchange water being delivered to that subbasin reducing supplies for the Whitewater River.

Other Water Transfers

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. This program provides dry year supplies. The amount of water available for purchase in a given year varies and is based on DWR's determination of the Water Year Classification. The available water is allocated among participating SWP contractors based on their Table A Amounts. CVWD and DWA may be able to purchase up to 5,600 AFY, and 1,820 AFY, respectively. These agreements provide for the exchange of these supplies with Metropolitan for Colorado River water in accordance with the existing exchange agreements. CVWD and DWA received a total of 5,300 AF of water from this source in 2008 and 2009.

Table ES-3
Current (2010) SWP Supply Availability (60% Reliability)

SWP Components	AFY [1]
Table A Amount (Base)	194,100
Average Deliveries with Current SWP Reliability (60%) [2]	116,500
Less Average Metropolitan Callback [3]	(32,900)
Net Average SWP Supply [4]	83,600
Whitewater River Subbasin Recharge (93% of net) [5]	77,800
Mission Creek Subbasin Recharge (7% of net)	5,800

Notes:
1 Values shown are rounded to nearest 100 AFY.
2 Current reliability is based on California DWR's 2009 SWP Reliability Report.
3 Average supply conservatively assumes Metropolitan calls back its 100,000 AFY transfer in four wet years during a 10-year period.
4 Net supply is calculated by deducting the Metropolitan callback from the Table A Amount with current SWP Reliability.
5 Allocation of SWP water to Upper Whitewater River and Mission Creek subbasins is based on production in each basin.

In 2008, CVWD also executed an agreement with Rosedale-Rio Bravo Water Storage District (Rosedale) in Kern County for a one-time transfer of 10,000 AF of banked Kern River flood water that is exportable to CVWD. Deliveries to CVWD began in 2008 and will be completed by December 31, 2012.

Desalinated Drain Water

The 2002 WMP recommended that a drain water desalination facility commence operation between 2010 and 2015 with a 4,000 AFY facility to treat agricultural drainage water for irrigation purposes. The facility would be expanded to 11,000 AFY by 2025. Product water would be delivered to the Coachella Canal distribution system for non-potable use.

A brackish groundwater treatment pilot study and feasibility study was completed in 2008 (Malcolm-Pirnie, 2008a and 2008b). Reverse osmosis (RO) was recommended to meet water quality goals and provide additional flexibility in the level of water quality produced should the facility's objectives change in the future. The recommended approach to brine management was

to convey the RO concentrate via pipeline to constructed wetlands located at the north shore of the Salton Sea. This study concluded that agricultural drainage water can be treated for reuse as non-potable water and potentially as new potable water.

Recycling of Municipal Effluent

CVWD and DWA currently deliver approximately 14,000 AFY of recycled water in the West Valley for golf course and other large irrigation uses. Wastewater generated in the West Valley that is not reused for irrigation is percolated into the groundwater basin. Current recycled water usage in the East Valley is approximately 700 AFY for agricultural irrigation. East Valley wastewater that is not reused is discharged to the CVSC.

ES-4.2.3 Source Substitution

Source substitution involves the delivery of alternative water supplies, such as Coachella Canal water or recycled water, to replace of groundwater pumping. Significant efforts have been made to implement source substitution projects in the Valley.

Mid-Valley Pipeline (MVP)

In the West Valley, the demand for non-potable water typically exceeds the available recycled water supply, especially in the summer months. Golf courses using recycled water currently must supplement that supply with local groundwater to meet their demands. This limits the amount of overdraft reduction that is possible to the available recycled water supply. Groundwater modeling shows a local pumping deficit (overdraft condition) that cannot be remedied by recharge at Whitewater. The MVP is a pipeline distribution system to deliver Colorado River water to the Mid-Valley area for use with CVWD's recycled water for golf course and open space irrigation. This source substitution project will reduce groundwater pumping for these uses. Construction of the first phase of the MVP from the Coachella Canal in Indio to CVWD's Water Reclamation Plant No. 10 (WRP-10) (6.6 miles in length) was completed in 2009.

At WRP-10, Canal water supplements recycled water for delivery to large irrigators. There are eight golf courses and five other users in the West Valley currently connected to the WRP-10 recycled water system that can receive both recycled water and Canal water via the MVP. If these courses meet at least 90 percent of their irrigation needs with non-potable water, 2,700 AFY of additional groundwater pumping will be eliminated. There are four golf courses adjacent to the MVP that can be connected to the system with minimal construction, thus making them ideal candidates to receive Canal water through the MVP. Construction of Phase 1 of the MVP included outlets along the pipeline to serve these courses. However, pipeline connections to deliver Canal water from the MVP to each course have yet to be constructed. When these four courses are connected, about 4,500 AFY of additional pumping could be eliminated. At least ten additional courses can be connected to the MVP downstream of WRP-10 with relatively simple pipeline connections, reducing pumping by another 11,200 AFY. When fully implemented, the MVP system will be capable of eliminating about 50,000 AFY of groundwater pumping.

Pilot Study of Canal Water Treatment for Urban Use

As projected growth occurs in the East Valley and farms are converted to urban land uses, agricultural demand for Canal water will decrease. To avoid increased urban groundwater pumping and to use the Valley's Colorado River water supply fully, there will be a need to treat Canal water for urban use. The 2002 WMP anticipated this need and proposed that treatment be provided beginning in the late 2020s with about 32,000 AFY being treated by 2035. Present projected domestic water demand coupled with reduced agricultural demand is expected to increase this amount substantially. Potable use will require Canal water treatment to meet drinking water standards. In anticipation of constructing potable water treatment facilities, CVWD completed a pilot treatability study for Canal water in 2008 (Malcolm-Pirnie, 2008c). This study investigated alternative approaches to treatment of Colorado River water delivered for urban use. The study recommended that blending treated Colorado River water with local groundwater be further evaluated to ensure customer satisfaction.

ES-4.2.4 Groundwater Recharge

Groundwater recharge is a critical component of basin management that involves putting water directly into the groundwater basin through surface percolation ponds. The 2002 WMP included continuing recharge at the existing Whitewater Recharge Facility in the West Valley, proposed recharge in the East Valley using Colorado River water at Dike 4, now the Thomas E. Levy Groundwater Replenishment Facility (Levy facility), and recommended another major recharge facility at Martinez Canyon.

Whitewater Recharge Facility – West Valley

The 2002 WMP established a future average annual recharge target at this facility of about 100,000 AFY. The Whitewater River Recharge Facility has a recharge capacity in excess of 300,000 AFY. Because this capacity is enough to capture the full SWP Table A amount with additional capacity for supplemental recharge, no recharge capacity expansion is required. The available capacity is valuable for conjunctive use operations by CVWD and DWA as well as Metropolitan or other interested parties. Currently, the SWP Exchange supply is expected to provide about 78,000 AFY for the Whitewater facility on average. Under future conditions, it is possible that average recharge at Whitewater could be limited to the available future supply of about 61,400 AFY of SWP Exchange, unless it is augmented with other supplies. To reach the 100,000 AFY recharge goal for the Whitewater facility, CVWD and DWA would need to acquire additional SWP Table A Amounts or other imported water sources.

Thomas E. Levy Groundwater Replenishment Facility - East Valley

Construction of the full-scale Levy facility was completed in mid-2009. Located on the west side of the Valley in La Quinta, this facility has an estimated average recharge capacity of 40,000 AFY. The current capacity may be limited by hydraulic, water delivery, and maintenance constraints within the Canal water distribution system to an average of about 32,000 AFY. Construction of an additional pipeline to the Levy facility and pumping station from Lake Cahuilla may be required in the future to reach the 40,000 AFY capacity on a consistent basis.

Martinez Canyon Pilot Recharge Facility Feasibility Assessment – East Valley

The Martinez Canyon pilot recharge facility began operation in 2005 and currently recharges about 3,000 AFY. When this project is expanded to full scale, it is expected to recharge up to 40,000 AFY.

ES-4.2.5 Groundwater/Subsidence Monitoring

CVWD maintains an extensive ongoing groundwater production, level, and water quality monitoring program throughout the Valley. The program includes monitoring of potential saltwater intrusion from the Salton Sea. The data are periodically reviewed to determine impacts of management actions on overdraft and water quality. The data are also applied to re-calibrate the groundwater model that assesses the impact of proposed management actions.

The United States Geological Survey (USGS), working with CVWD, completed subsidence monitoring reports for the Coachella Valley in 2001 and 2007. The reports indicated that subsidence was taking place in varying degrees throughout the Valley.

These studies to date have not confirmed the relationship between land subsidence and declining water levels. The USGS Scientific Investigation Report 2007-5251 states, "Although the localized character of the subsidence signals is typical of the type of subsidence characteristically caused by localized ground-water pumping, the subsidence may also be related to tectonic activity in the valley." This report also concludes additional monitoring is needed to permit meaningful interpretations of the aquifer-system response to water level changes. CVWD's Board of Directors has approved additional funding to continue these cooperative subsidence studies with the USGS. Future studies include additional monitoring designed to evaluate the potential relationship between declining water levels and land subsidence. Potential land subsidence caused by declining water levels was addressed by mitigation measures described in the 2002 Coachella Valley Water Management Plan Programmatic Environmental Impact Report (CVWMP PEIR).

ES-5 2010 WMP UPDATE

Significant actions have been taken since 2002 to alleviate overdraft in the long term. Changes in internal and external factors mandate new activities and increased levels of current activities to eliminate overdraft and assure reliable long term water supplies to the Valley. These new activities are identified in the 2010 WMP Update.

ES-5.1 Population and Water Demand

Since 2002, significant changes have occurred in projections of population and future water demands, including:

- Significantly increased population growth, mainly in the East Valley (**Figure ES-2**);
- Changes in land use from agricultural to urban land use and water demand in terms of both quantity and quality;

- Development on tribal lands and related water demands;
- Potential development located northeast of the San Andreas fault in the spheres of influence (SOI) of the cities of Indio and Coachella;
- Projected urban development outside the 2002 WMP study area and corresponding increases in water demands;
- Uncertainty in the timing of growth and water demands.

Figure ES-2 shows the difference in population projections used in the 2002 WMP and projections used in the 2010 WMP Update. The 2010 WMP Update provides water for approximately 500,000 more people in 2045 than the 2002 WMP.

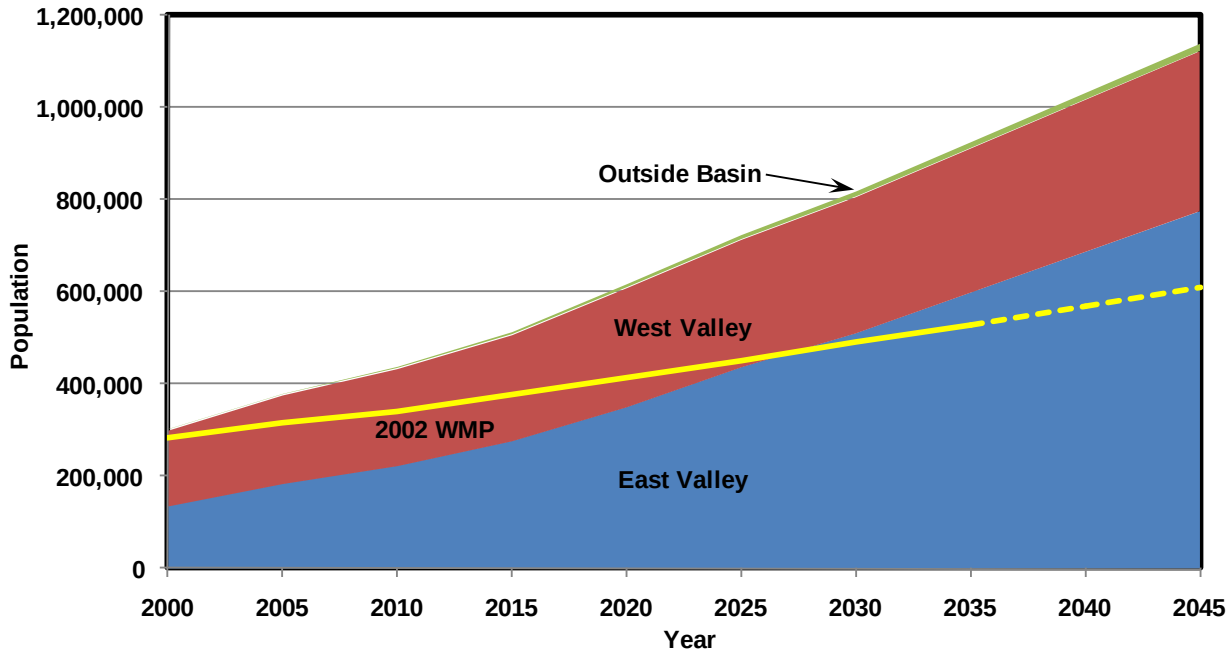


Figure ES-2
Comparison of Population Projections for the Coachella Valley

ES-5.1.1 Future Water Demands

Projected water demands for 2045 resulting from projected population growth and associated assumptions regarding land uses and water demands for land uses are shown by economic sector in **Table ES-4**. Water use by new development is expected to be more efficient due to plumbing code requirements and the Landscape Ordinance. Consequently, water demands are expected to be less than projected in the 2002 WMP. Factoring potential variations in future land use and growth forecasts into these demand projections, water demands in 2045 could range from 793,600 AFY to 971,500 AFY with a mid-range planning value of 885,400 AFY as shown on **Figure ES-3**. If the growth projection in the 2002 WMP, with assumed water conservation measures, were projected to 2045, the projected demand would be approximately 950,000 AFY.

The reduction in projected demand results primarily from the conversion of agricultural lands to urban use and increased water conservation factored into the 2010 WMP Update.

Table ES-4
2045 Baseline Water Demand Projection for the Coachella Valley

Component	2045
Agricultural	
Crop Irrigation	166,300
Total Agricultural Demand	**166,300**
Urban	
Municipal	537,000
Industrial	2,300
Total Urban Demand	**539,300**
Golf Course Demand	**169,500**
Fish Farms and Duck Clubs	
Fish Farms	8,500
Duck Clubs	2,000
Total Fish Farms and Duck Clubs	**10,500**
TOTAL DEMAND	**885,400**

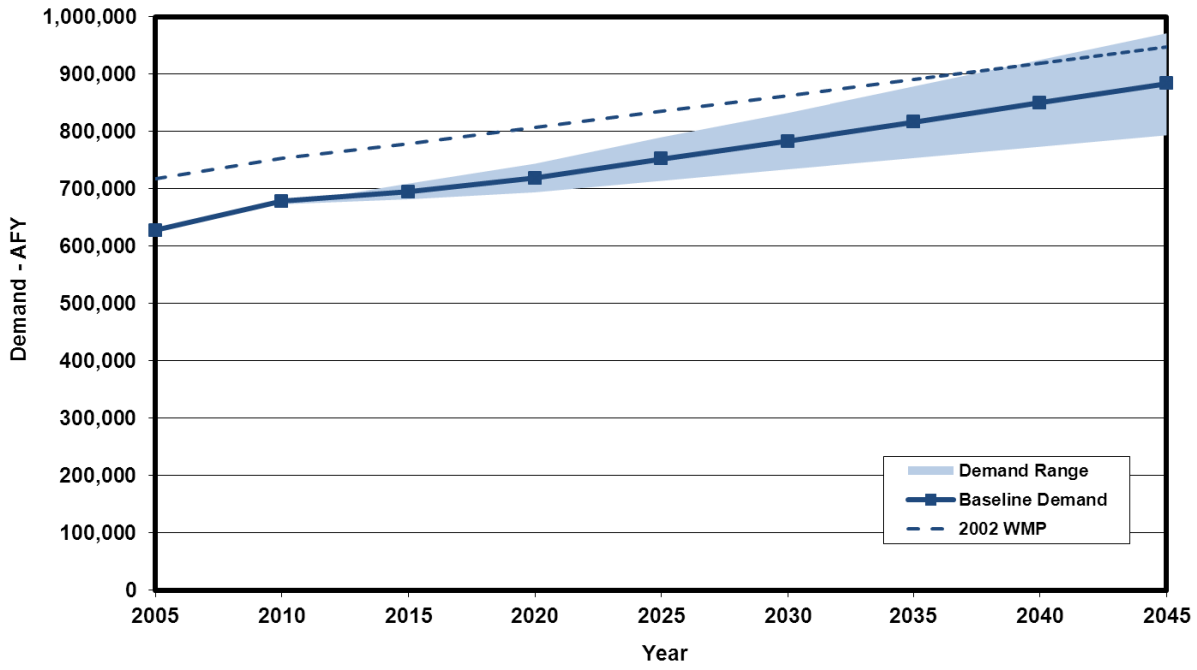


Figure ES-3
Projected Water Demands in the Study Area

ES-5.1.2 Demand Uncertainty

Future water demands are based on the latest approved population growth projections (2006) by Riverside County and assumptions regarding impacts of population growth on land uses, impacts of water conservation on water uses, and resulting water demand associated with each type of land use. There are a number of uncertainties inherent in the demand projections, including:

- Growth forecasts or rates of growth may be too high or too low
- Impacts of economic booms and busts
- Reductions in fish farm operations
- Rates of development on Tribal lands
- Rate of agricultural/vacant land conversion to urban use
- Future water demand factors for various land uses
- Growth outside the Whitewater River subbasin
- Number of future golf courses developed in the East Valley
- Acceptance and effects of water conservation measures

Figure ES-3 shows the range in potential future water demands for the study area.

ES-5.2 Future Water Supply Needs

In addition to changing water demands, changing external factors could affect Valley water supplies:

- SWP allocations fluctuate annually due to snowpack and runoff variations, and the environmental needs in the Bay-Delta.
- Recent environmental rulings have restricted the State's ability to move water through the Delta to the SWP, potentially decreasing supply reliability and deliveries. The degree to which the long-term supply of the SWP will be affected is uncertain.
- The outcome of efforts underway to prepare the Bay-Delta Conservation Plan (BDCP), which is intended to restore the Delta's ecosystem and improve water supply reliability, is uncertain.
- The QSA has been upheld in the appeals court but, as of plan adoption, environmental litigation is still pending, creating uncertainty in future Colorado River supplies.
- Climate change could affect the long term supplies of both the SWP and Colorado River and water demands within the Valley.

These changing conditions and uncertainties reinforce the need for a flexible long term Plan and for updating the Plan periodically.

Additional water supplies needed by 2045 are evaluated for four water supply scenarios that incorporate the uncertainties associated with current supply sources, with the exception of climate change. A 10 percent supply buffer addresses potential climate change impacts and other currently unforeseeable factors affecting future water supplies. **Table ES-5** shows the future water supply needs range from 300,000 to 461,000 AFY. The 2010 WMP Update identifies how this future need will be met through a combination of water conservation measures and new supply development. **Figure ES-4** presents the future water supply plan assuming Scenario 2 without the supply buffer.

Table ES-5
Water Supply Needs – 2045

Scenario	QSA Validated	Delta Conveyance Improvements	Demand (AFY)	Demand with 10% Buffer (AFY)	Available Supply (AFY) [1]	Additional Supply Required (AFY)
1	Yes	Yes	885,400	974,000	674,300	299,700
2	Yes	No	885,400	974,000	640,900	333,700
3	No	Yes	885,400	974,000	546,300	427,700
4	No	No	885,400	974,000	512,900	461,100

Note:
1 Available supplies consist of local runoff and streamflow, recycled water, returns from use, Canal water and SWP Exchange water minus anticipated drain flows and subsurface outflows from the basin as explained in Section 7.2.

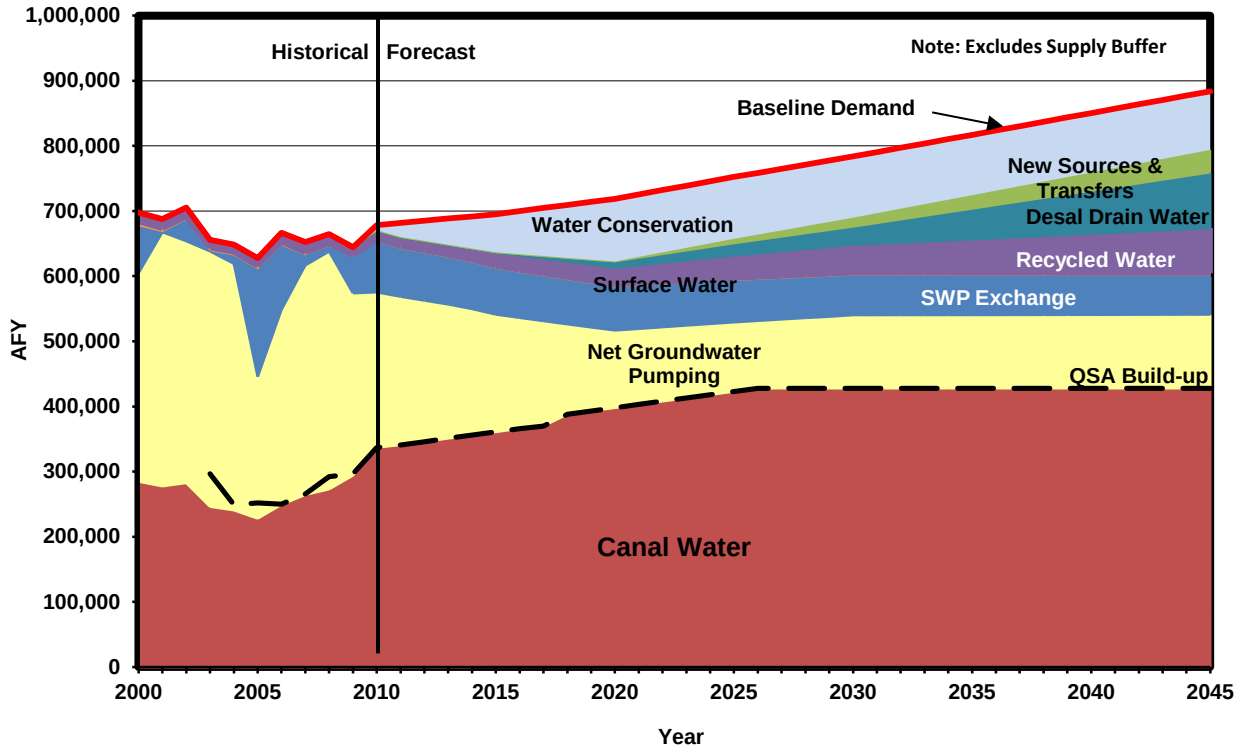


Figure ES-4
Water Supply Mix for 2010 WMP Update

ES-5.3 What is New in the 2010 WMP Update?

The 2010 WMP Update identifies proposed ways and means of meeting future water needs in light of changing conditions and uncertainties. To meet future needs, the 2010 WMP Update includes many new features in the areas of water conservation, source substitution, new supplies, and groundwater recharge. The 2010 WMP Update emphasizes enhanced cooperation in Plan implementation. The 2010 WMP Update incorporates a "bookends" approach to define target ranges for each major supply group and incremental "building blocks" of projects to deal with uncertainties in future demands and supplies.

Revised Goals: The basic goal of the WMP remains the same but has been modified to reflect a more holistic planning approach: "to reliably meet current and future water demands in a cost-effective and sustainable manner." The underlying objectives of the WMP have been refined as follows to reflect the water resources uncertainties facing the Valley:

- Meet current and future demands with a 10 percent supply buffer
- Eliminate long-term groundwater overdraft
- Manage and project water quality
- Comply with state and federal laws and regulations
- Manage future costs
- Minimize adverse environmental impacts

Bookends on Demands and Supplies: To account for the uncertainty and potential variability in demands, the 2010 WMP Update assigns bookend targets (ranges) for each of the major categories of water supplies (see **Section 6)**. The book-ends represent reasonable minimum and maximum amounts for potential supply and 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 incorporates 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 source will only be implemented as other sources of supplies reach practical limits. Therefore, the Plan includes a range of 55,000 to 85,000 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.

Enhanced Cooperation in Plan Implementation: The Plan emphasizes cooperation among municipalities, local water agencies and tribes in regional planning and implementation. This occurs through the implementation of activities described in the 2010 WMP Update,

implementation of related planning activities (see **Section 1.0**), and the development of monitoring and data sharing programs among CVWD, other water agencies, cities, and tribes to better manage Valley water resources.

ES-5.4 2010 WMP Update Elements

In developing the 2010 WMP Update, CVWD evaluated the success of 2002 WMP elements and determined future needs, supplies, and uncertainties. Like the 2002 WMP, the 2010 WMP Update has the same five major elements:

- Water conservation (urban, golf course, and agricultural)
- Increasing surface water supplies for the Valley from outsides sources
- Substitution of surface water supplies for groundwater (source substitution)
- Groundwater recharge
- Monitoring and evaluation of subsidence and groundwater levels and quality to provide the information needed to manage the Valley's groundwater resources

Activities included in the 2010 WMP Update in each of these elements are described below.

ES-5.4.1 Water Conservation

New water conservation targets and actions are included for agriculture, urban, and golf course water users. In addition to the water conservation included in the baseline demand projections, the 2010 WMP Update includes a minimum water conservation target of 117,300 AFY by 2045 as shown in **Table ES-6**. This amount could increase to 147,000 AFY to provide a portion of the supply buffer.

Table ES-6
Ranges of Potential Water Conservation Savings – 2045

Type of Conservation	Low Range [1] (AFY)	High Range [2] (AFY)
Urban	82,400	106,200
Agriculture [3]	23,300	23,300
Golf Courses	11,600	17,400
Total	**117,300**	**146,900**

Notes:
1 The low range represents the minimum amount of demand reduction required assuming successful completion of the BDCP and provides a portion of the supply buffer.
2 The high range represents the amount of demand reduction required if the BDCP is not successful and provides a portion of the 10 percent supply buffer.
3 Agricultural savings decline over time as agricultural land is converted to urban uses.

Agricultural Conservation

The new agricultural conservation target is a 14 percent savings by 2020 utilizing a phased approach. The first phase will involve low cost voluntary programs. Depending on the success of those programs, more expensive and vigorous programs could be implemented, as needed. If the 14 percent target can be achieved, the agricultural conservation program is expected to save about 39,500 AFY of water in 2020, decreasing to 23,300 AFY by 2045 as agricultural land uses transition to urban uses. Progress toward meeting agricultural conservation goals will be evaluated and reported every five years.

Urban Conservation

The urban water conservation program will be expanded and enhanced in order to meet changing demands and to comply with the State's requirement of a 20 percent reduction in per capita water use by 2020 compared to average per capita usage for the period of 1995 through 2004. This program could save at least 39,700 AFY by 2020 and achieve a 39 percent reduction in per capita demand by 2030 as it is applied to new growth.

Achievement of the state's 20 percent conservation target in conjunction with on-going conservation programs could result in urban water savings of 82,400 to 106,200 AFY by 2045 depending on the water supply scenario. Progress toward achieving the urban water conservation goals will be reported in urban water management plans prepared on five year intervals.

Golf Course Conservation

The golf course conservation target is a savings of 11,600 to 17,400 AFY by 2045. For existing courses, the minimum target is a 10 percent reduction in water use through golf course irrigation system audit, and soil moisture monitoring services. The 2009 Landscape Ordinance will apply to all new golf courses with turf limitations of 4 acres of per hole and 10 acres for practice areas. Progress toward meeting golf course conservation goals will be evaluated and reported every five years.

ES-5.4.2 Additional Supplies

Table ES-7 summarizes the range of additional supplies that will be developed.

Acquisition of Imported Supplies

CVWD and DWA will continue to acquire additional imported SWP water supplies by transfer or lease where cost-effective, given Delta environmental restrictions and conveyance capacity limitations. For this update, a planning range of 50,000 to 80,000 AFY of average annual supply has been identified to meet future needs including the supply buffer. This amount includes about 35,000 AFY to meet estimated demand east of the San Andreas fault; the amount will be refined as planning proceeds for this area. Changes to the assumed call-back frequency for the MWD 100,000 AFY SWP transfer could provide up to 33,000 AFY of additional supply to the

Whitewater River Subbasin. Option-type contracts could be considered to meet a portion of the supply buffer.

Table ES-7
Range of Additional Supplies Through 2045

Action	Low Range (AFY)	High Range (AFY)
Bay-Delta Conveyance Improvements	0	33,400
Purchases and Transfers [1]	50,000	80,000
Changes to MWD Call-back Provisions [1]	0	32,700
Increased Recycled Water - East and West Valleys	14,000	63,000
Recycled Water Use East of San Andreas Fault	10,800	10,800
Canal Water Loss Reduction	0	10,000
Desalinated Drain Water	55,000	85,000
Stormwater Capture – East Valley	0	5,000
Groundwater for Non-potable Use East of San Andreas Fault	9,700	9,700
Total	**139,500**	**329,600**

Note:
1 High range represents potential supplies with Bay Delta conveyance improvements and no call-back.

Increased Recycled Water Use

Recycled water in the West Valley is currently used beneficially, either through direct non-potable use or percolation for wastewater disposal. At least 90 percent of all wastewater generated in the West Valley will be recycled for direct non-potable use. All wastewater generated by new growth in the East Valley will be recycled. All wastewater from development east of the San Andreas fault could be recycled for irrigation or groundwater recharge to meet demands in that area and reduce the need for additional imported water supplies. Up to 34,500 AFY of recycled water could be utilized in the West Valley, and 33,000 AFY of recycled water could be utilized in the East Valley. Up to 10,800 AFY of recycled water could be utilized in the new growth area east of the San Andreas fault for direct non-potable uses by 2045.

Canal Water Loss Reduction

Water losses in the All-American Canal in the first 49 miles of the Coachella Canal may be as high as 10,000 AFY. Reducing this loss could increase the amount of water delivered to the Valley. CVWD will determine water lost to leakage in the first 49 miles of the Coachella Canal, evaluate the feasibility of corrective actions to capture the lost water, implement cost-effective water saving measures, and work with IID to share losses.

Desalinated Drain Water

A demonstration scale facility will be constructed to gain operational experience in desalinating drain water and brine disposal. Between 55,000 and 85,000 AFY of drain water and shallow

groundwater will be recovered, desalinated, and distributed for non-potable and potable uses in the East Valley. The amount of desalinated water needed will depend upon the resolution of Bay-Delta issues and the resulting amount of SWP water available.

Stormwater Capture

Stormwater capture has been identified as a potential method for increasing local water available for either groundwater recharge or direct use. CVWD will conduct a study to investigate the feasibility of additional stormwater capture in the East Valley. Feasible stormwater capture projects will be developed in conjunction with new flood control facilities as development occurs in the East Valley. For planning purposes, the potential yield is assumed to be 5,000 AFY based on a reduction in evaporation losses with more efficient capture and percolation.

Development of Local Groundwater Supplies for Non-Potable Use

Growth in the areas northeast of the San Andreas fault will create additional demands for both potable and non-potable water. CVWD, the City of Coachella, and the City of Indio will jointly conduct an investigation of groundwater in Fargo Canyon Subarea of the Desert Hot Springs Subbasin to determine the available supply and suitability for use in meeting non-potable demands (outdoor irrigation) of development east of the San Andreas fault. Based on assumed development, up to 9,700 AFY of groundwater could be developed in this area.

ES-5.4.3 Source Substitution

Due to the expected changes in water use patterns from continued development, source substitution will receive increased emphasis in the future to eliminate overdraft and ensure full use of the Valley's available surface water supplies. The ranges of reduction in groundwater overdraft due to source substitution programs are shown in **Table ES-8**.

Table ES-8
Range of Groundwater Pumping Reductions Due To Source Substitution

Action	Low Range (AFY)	High Range (AFY)
Mid-Valley Pipeline	37,000	52,000
Agricultural Canal Water Conversion	5,300	32,000
Oasis Area Conversion to Canal Water	0	27,000
East Valley Golf Course Conversion	43,900	51,700
West Valley Golf Course Conversion	15,200	17,800
Canal Water for Indoor Urban Use – East Valley	48,000	90,000
Canal Water Use for Outdoor Use – East Valley	95,000	115,000
Total	**244,400**	**385,500**

Mid-Valley Pipeline

The MVP system delivers Canal water and recycled water to golf courses in lieu of their pumping groundwater. Activities to fully implement the MVP include preparing an MVP system master plan to lay out the future pipeline systems, near-term expansions to connect golf courses along the MVP alignment and extensions of the existing non-potable distribution system, and completion of construction of the remaining phases of the MVP system by 2020 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 Use to Canal Water

It is expected that agricultural use of groundwater could decrease from about 66,000 AFY in 2009 to about 7,000 AFY by 2045, a decrease of 59,000 AFY or 89 percent. A large portion of this reduction could come from the Oasis area that does not currently have access to Canal water. The Oasis area distribution system feasibility study will be updated to include future conversion to serve urban non-potable water. Cost-effective facilities will be constructed. If conversion of the Oasis system is feasible, it could deliver up to 27,000 AFY of Canal and desalinated drain water for irrigation.

In the 2010 WMP Update, it is estimated that for existing East Valley golf courses having Canal water access, Canal water use will increase to 90 percent of demand by 2015. Conversion to Canal water by East Valley golf courses will reduce groundwater use by 43,900 AFY or more.

Colorado River Water for Urban Use

In light of the projected increase in population and change of land use from agricultural to urban in the East Valley, treated Colorado River water for indoor residential use will be essential. In addition, untreated Colorado River water will be used in the future in large developments in the East Valley for outdoor purposes, i.e., lawn and park irrigation. These measures are necessary to reduce overdraft and to insure continued full use of the Valley's Colorado River water supplies.

This program will offset the reduced Canal water use by agriculture as agricultural land use transitions to urban development in the East Valley. Canal water will be treated to meet future indoor urban water demands in the East Valley. The target for urban indoor use of Canal water ranges from 48,000 and 90,000 AFY by 2045.

Dual source plumbing systems will be a feature of new development in the East Valley to provide outdoor use of untreated Canal water. Untreated canal water should provide 67 percent to 80 percent of the landscape demand for new development. This will result in the utilization of 95,000 to 115,000 AFY of non-potable Canal water by 2045. Where found to be cost-effective, existing developments will be retrofitted with distribution systems to provide for outdoor use of untreated Canal water.

ES-5.4.4 Groundwater Recharge

Groundwater recharge will be expanded to reduce overdraft. The ranges of groundwater recharge operations at various facilities under the 2010 WMP Update are shown in **Table ES-9**.

Table ES-9
Range of Groundwater Recharge

Facility	Low Range (AFY)	High Range (AFY)
Whitewater	61,000 [1]	100,000
Levy	40,000	40,000
Martinez Canyon [2]	20,000	40,000
Indio	0	10,000
Total	**121,000**	**190,000**

Notes:
1 Recharge is limited by available supply.
2 High range will depend on overdraft conditions and implementation of East Valley source substitution projects.

Whitewater Recharge Facility

Operation of the Whitewater Recharge Facility will continue with the goal of recharging an average of at least 100,000 AFY of SWP exchange water over the long-term. Unused SWP water and available desalinated drain water from the QSA will be transferred to the Whitewater Recharge Facility. Additional water acquired by transfer or lease will augment the existing SWP exchange water.

Thomas E. Levy Recharge Facility

The Levy facility will recharge 40,000 AFY on average. A second pumping station and pipeline will be constructed if needed to achieve and sustain 40,000 AFY of deliveries for recharge.

Martinez Canyon Recharge

Siting studies, land acquisition, environmental compliance, design, and construction will be conducted for the full-scale Martinez Canyon facility. The project will be implemented in phases with an initial capacity of 20,000 AFY with potential future expansion to as much as to 40,000 AFY based on groundwater overdraft conditions and implementation of East Valley source substitution projects.

Groundwater Recharge in Indio

The City of Indio will evaluate the feasibility of a nominal 10,000 AFY groundwater recharge project in Indio and construct if feasible. The final capacity will be based on pilot studies conducted by Indio.

Investigation of Groundwater Storage Opportunities with IID

CVWD will work with IID to identify options for storing Colorado River water on behalf of IID with currently planned Valley recharge facilities or additional facilities, including facilities to recover the stored water for use by Canal water users if necessary when IID calls for its stored water.

ES-6 WATER QUALITY MANAGEMENT

ES-6.1.1 Additional Groundwater Treatment for Arsenic

CVWD will work with other agencies to assist communities having high levels of arsenic in groundwater supplies to connect to the potable water system. As needed, CVWD will expand its arsenic treatment facilities to allow treatment of additional wells and construct water transmission pipelines as needed to meet future demands.

ES-6.1.2 Development of Salt/Nutrient Management Plan

The State Water Resources Control Board (SWRCB) requires preparation of a salt/nutrient management plan by 2014 as part of the 2009 State Recycled Water Policy. As stated in the Policy, its purpose is to "establish uniform requirements for recycled water use and to develop sustainable water supplies throughout the state" (SWRCB, 2009). CVWD will work with other Valley water agencies, tribes, and stakeholders to develop a salt/nutrient management plan that meets the State requirements and allows the cost-effective recycling of municipal wastewater in the Valley.

ES-6.1.3 Drainage Control

For both basin management (groundwater level and salt export), as well as the prevention of adverse impacts, the existing drainage system should be maintained, replaced as needed, or expanded as urban development occurs. CVWD will investigate alternative methods for funding the drainage system, conduct an investigation of the improvements needed to continue system operation in the future, and maintain and expand the drainage system.

ES-7 MONITORING AND DATA MANAGEMENT

Monitoring and data management programs aid in evaluating the effectiveness of the water management programs and projects identified in the Plan and to identify needed changes in management strategy and/or implementation.

The existing hydrologic monitoring program of weather data, streamflow data, well data (drilling logs, production, water levels), surface and ground water quality monitoring, and subsidence monitoring should be maintained and expanded. Key features of the expanded program are described below.

ES-7.1 Water Quality

CVWD will work with water agencies, tribes and cities to develop a coordinated water quality monitoring program to ensure that local water quality concerns and state/federal regulatory issues are addressed.

ES-7.2 Subsidence

CVWD will continue the USGS subsidence monitoring/reporting program and construct additional extensometers at critical locations to monitor subsidence, as needed.

ES-7.3 Water Resources Database

CVWD will work with water agencies, cities and tribes to develop a shared water resources database. The database could include well ownership data, well logs, groundwater production, water level and water quality data.

ES-7.4 Groundwater Model Update and Recalibration

Prior to the next Plan update, the CVWD groundwater model will be updated, recalibrated and peer reviewed.

ES-7.5 Water Quality Model

CVWD will initiate development of a model capable of simulating the water quality changes in coordination with preparation of the salt/nutrient management plan.

ES-7.6 Water Demand and Conservation Monitoring

Water purveyors will monitor and report demands by water use sector and correlate demands with implementation of water conservation measures to determine the effectiveness of water conservation measures in achieving goals and the need for additional measures.

ES-8 PLAN COSTS

The cost of not eliminating overdraft would be far more than the cost of the actions needed for eliminating overdraft identified in the 2010 WMP Update. Cost of overdraft includes increased subsidence with its impacts on individual homes, commercial structures, and infrastructure (streets, highways, water and sewer lines, and other utilities), water quality degradation, and increased pumping costs. Colorado River supplies would go unused as agricultural land is converted to urban land, and groundwater pumping would increase without alternative sources of supplies. At some point, it would not be possible to demonstrate the availability of water supplies to support new growth.

The estimated cost to implement the 2010 WMP Update is shown in **Table ES-10** for the period 2011 through 2045. Capital, operation and maintenance cost, total cost, and average annual cost are shown for each Plan element in 2010 dollars. These are total costs, not incremental costs,

and include the costs of many current activities such as groundwater pumping, acquisition of Colorado River water, current levels of recycling and water conservation, and groundwater recharge. The costs shown are the total costs for the entire Valley.

Table ES-10
Cost by Plan Component
2011-2045

Component	Total Capital Cost $millions	Total O&M Cost $millions	Total Cost $millions	Average Annual Cost[1] $millions
Water Conservation	$ 1	$ 230	$ 231	$ 6.6
Recycled Water	161	153	314	9.0
Colorado River Water		409	409	11.7
SWP Water		1,907	1,907	54.5
Delta Conveyance		472	472	13.5
Desalinated Drain Water	462	277	739	21.1
Groundwater Pumping and Treatment	135	1,950	2,085	59.6
Water Transfers	0	282	282	8.1
Other New Water		262	262	7.5
Source Substitution	1,142	782,	1,924	55.0
Recharge	48	181	229	6.5
Total Cost	**$1,949**	**$6,907**	**$8,856**	**$253.0**
Average Annual Cost [1]	$56	$197	$253	

Note:
1 Average annual cost is the total cost divided by 35 years.

The total estimated capital cost through 2045 is $1.95 billion. Total O & M cost is $6.91 billion bringing the total cost of the Plan implementation to $8.86 billion over 35 years. The average annual cost is $253 million. This annual cost does not reflect the amortized cost of capital projects that may be bond-funded over several decades, thus increasing the annual cost of capital projects.

ES-9 IMPLEMENTATION AND IMPLEMENTATION COSTS

In developing the 2010 WMP Update, CVWD relied on the latest population projections developed by Riverside County. CVWD does not develop population growth projections for use in water management planning. The 2006 Riverside County projections were prepared before the recent recession, which has slowed growth and is expected to have negative effects on growth in the near term. Over the long term, growth will continue. Future population projections will be adjusted in terms of the timing and magnitude of growth. These realities necessitate adjustment of Plan implementation to meet actual near term needs and continued updates of the Water Management Plan in the future to reflect revised population projections.

Near Term Projects to Meet Water Management Needs

Even with the current recession and lack of growth, continuation of existing projects and a few new projects are needed to reduce overdraft and its adverse affects. Ongoing projects that will be continued include:

- Whitewater Recharge with SWP Exchange Water and SWP purchases
- Implementation of the QSA
- Levy Recharge operating at current level of 32,000 AFY
- Martinez Pilot Recharge at current level of 3,000 AFY
- Water conservation programs at current levels, including implementation of the Landscape Ordinance
- 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 production/level/quality monitoring
- Cooperative subsidence monitoring with USGS

Assuming that growth remains relative low during the next five years, CVWD will focus on three new or expanded activities to reduce overdraft and comply with state regulations:

- 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.
- Preparation of a salt/nutrient management plan for the Valley by 2014 to meet SWRCB Recycled Water Policy requirements

Long Term Projects

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

- Additional water conservation.
- Desalinated drain water.
- Additional water transfers.
- Additional recycled water.
- Canal water treatment for urban indoor use.
- Canal water treatment for urban outdoor irrigation.
- Recharge in the Indio area.

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

Implementation Costs

In 2010, Valley water agencies expended approximately $414 million on all water and wastewater management activities. This total cost includes approximately $106 million per year on activities associated with eliminating overdraft. Since 2002, CVWD and DWA have invested over $240 million in water conservation, supply acquisition and facilities to reduce overdraft. During the next five years (2011-2015), it is estimated that Valley water agencies will expend an additional $5.4 million on activities to eliminate overdraft, assuming growth remains slow.

As growth occurs, additional projects to control overdraft will be needed. Ultimately, costs associated with growth to eliminate and control overdraft could approach an additional $100 million per year in capital project and annual operations and maintenance costs.

Much of the future costs, both capital and operation and maintenance, will not be borne by CVWD. These costs will be borne by developers, other water organizations, and Valley municipalities. Capital costs and operation and maintenance costs associated with new growth will be paid by new growth. For example, the entire cost of systems for treating and delivering Colorado River Canal water for indoor use in East Valley developments and development of dual plumbing systems to provide untreated water to those developments for outdoor use will be paid for by new development.

ES-10 CONCLUSION

Groundwater overdraft is a significant problem in the Coachella Valley. The 2002 Water Management Plan was developed to identify and guide the long term implementation of measures to eliminate groundwater overdraft in the Valley. Since completion of the 2002 Water Management Plan, much has been accomplished by Valley water agencies and agricultural, municipal/residential, and golf course water users to reduce overdraft. Water conservation efforts have expanded, out-of-basin water supplies have increased, surface water and recycled water use is being used in lieu of groundwater, and new groundwater recharge facilities are online and an additional facility is being developed.

However, changing future demands and water supply uncertainties require additional actions to eliminate groundwater overdraft in the future, which are identified in the 2010 WMP Update. Continued implementation of the Water Management Plan will result in unavoidable costs for water users and water agencies alike. Each agency, including CVWD, will consider costs, available resources, funding mechanisms and priorities to eliminate overdraft in a timely manner. The success of the Plan to date indicates broad support for eliminating overdraft and the threats to the economy and quality of life in the Coachella Valley.

The CVWD Board of Directors certified the Supplemental Program EIR and adopted the 2010 WMP Update on January 24, 2012.

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Appendix J

Mission Creek-Garnet Hill Water Management Plan – Executive Summary

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MISSION CREEK / GARNET HILL

Water Management Plan
Final Report
January 2013

WATER DISTRICT

DESERT WATER

MSWD
Mission Springs Water District

MWH

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Mission Creek and Garnet Hill Subbasins Water Management Plan

Final Report

January 2013

Prepared for:
Coachella Valley Water District
Desert Water Agency
Mission Springs Water District

Prepared by:
MWH
618 Michillinda Ave, Suite 200
Arcadia, CA 91007

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Executive Summary

BACKGROUND

Water supply is critical to civilization especially in a desert region. The Mission Creek and Garnet Hill subbasins are located in the northern portion of the Coachella Valley and are part of the larger Coachella Valley Groundwater Basin in Riverside County, California. These subbasins are located within the northwestern portion of the hot, arid Colorado Desert sub-region of the Sonoran Desert. The Mission Creek and Garnet Hill Subbasins have been important sources of potable water supply to the City of Desert Hot Springs and surrounding communities. Since the 1940s, the Desert Hot Springs region has been known as a tourist destination with its small spa hotels supplied by hot mineral water from the Desert Hot Springs Subbasin.

Continued pumping of the groundwater from the Coachella Valley in excess of natural recharge resulted in steadily declining groundwater levels since the 1950s. To control this water level decline, the Coachella Valley Water District (CVWD) and Desert Water Agency (DWA) with the support of the Mission Springs Water District (MSWD) embarked on a groundwater replenishment program in 2002 using imported water. Additional water management activities have been implemented since that time.

Participating Agencies

CVWD, DWA and MSWD are the principal water agencies in the Mission Creek and Garnet Hill subbasins. **Table ES-1** summarizes the statutory authority of each agency within its service area.

Table ES-1
Statutory Authority of Participating Agencies

Statutory Authority	CVWD	DWA	MSWD
SWP Contractor (imported water)	♦	♦	
Colorado River Contractor (imported water)	♦		
Groundwater Replenishment and Replenishment Assessments	♦	♦	
Retail Municipal Water Purveyor	♦	♦	♦
Irrigation Water Purveyor	♦		
Wastewater Management	♦	♦	♦
Recycled Water	♦	♦	♦
Flood Control and Drainage	♦		

Purpose and Need

Recognizing the need for additional water supplies, DWA and CVWD entered separate agreements with the State of California to purchase water from the State Water Project (SWP) in 1962 and 1963, respectively, and became responsible for imported water recharge in their service areas. To avoid the estimated $150 million cost to construct a pipeline to convey SWP water into the Valley in the 1970s (now about $1 billion), 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 CVWD's and DWA's SWP water. Deliveries of SWP Exchange water to the Whitewater River subbasin commenced in 1973. Studies to deliver SWP water to the Whitewater River and Mission Creek subbasins were initially performed in the early 1960s. 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, DWA completed construction of spreading basins and a turnout from the CRA and water deliveries began.

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, declaratory and injunctive relief for a physical solution of a groundwater basin and challenging the validity of the replenishment assessment. In December 2004, MSWD, DWA and CVWD reached an agreement to settle the litigation. Among other things, the settlement agreement required the formation of a Management Committee consisting of the general managers of each agency and preparation of a water management plan for the Mission Creek and Garnet Hill subbasins. This WMP was prepared pursuant to that agreement. The purpose of this Water Management Plan (WMP) is to describe existing water management programs, evaluate potential alternative management strategies and recommend additional programs with the goal of ensuring that water resources of these subbasins are sustained and protected in the future.

Mission Statement

To guide the planning and development of the Mission Creek and Garnet Hill WMP, the Management Committee developed the following mission statement:

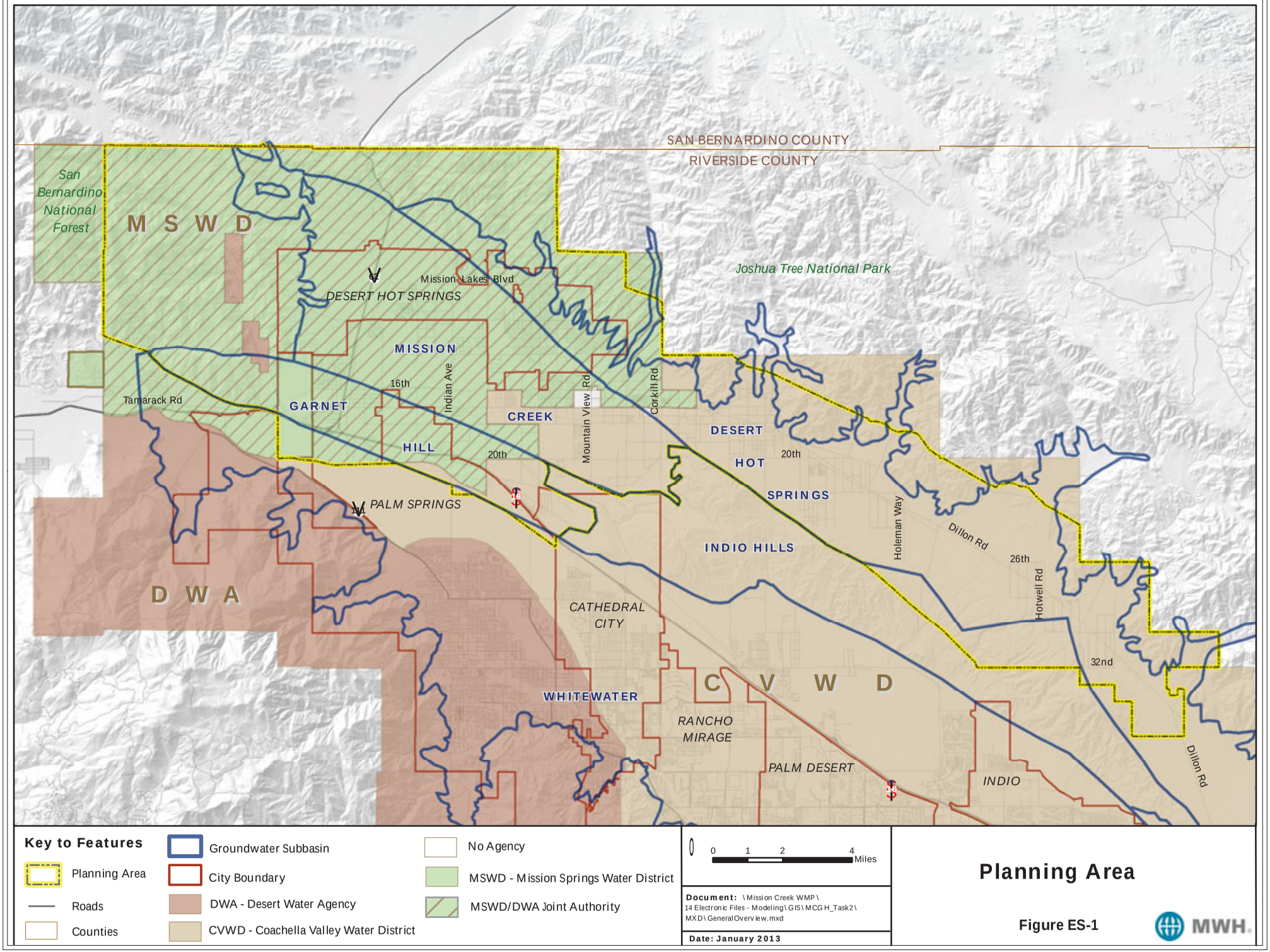
> *The purpose of the Mission Creek and Garnet Hill Water Management Plan is to manage the water resources to meet demands reliably and protect water quality in a sustainable and cost-effective manner.*

Description of Area

The Planning Area for this WMP consists of CVWD's and MSWD's service areas that receive groundwater from the Mission Creek and Garnet Hill subbasins and is shown on **Figure ES-1**. In addition to the above-mentioned areas, portions of MSWD and CVWD that are likely to use groundwater from the Mission Creek and Garnet Hill subbasins in the future are included in the Planning Area.

PLANNING ENVIRONMENT AND WATER DEMANDS

Population, land use and socio-economic trends in the Planning Area may affect water requirements in the Mission Creek and the Garnet Hill subbasins.


SAN BERNARDINO COUNTY
RIVERSIDE COUNTY
San Bernardino National Forest
M S W D
Joshua Tree National Park
Mission Lakes Blvd
DESERT HOT SPRINGS
MISSION
CREEK
GARNET
HILL
16th
20th
Tamarack Rd
Indian Ave
Mountain View Rd
Corkill Rd
DESERT
HOT
SPRINGS
PALM SPRINGS
INDIO HILLS
Holeman Way
Dillon Rd
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Hotwell Rd
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PALM DESERT
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Dillon Rd
Key to Features
Planning Area
Roads
Counties
Groundwater Subbasin
City Boundary
DWA - Desert Water Agency
CVWD - Coachella Valley Water District
No Agency
MSWD - Mission Springs Water District
MSWD/DWA Joint Authority
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Date: January 2013
Planning Area
Figure ES-1
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Population

The population of the Planning Area is estimated to be 44,600 based on the 2010 Census data. The Riverside County Center for Demographic Research (RCCDR) is tasked with developing growth forecasts for the County. The current growth forecast is designated the Riverside County Projects 2010 (RCP-10) growth forecast. This forecast covers the period of 2010 through 2035 and is linearly extrapolated to 2045 for this plan as shown on **Figure ES-2**.

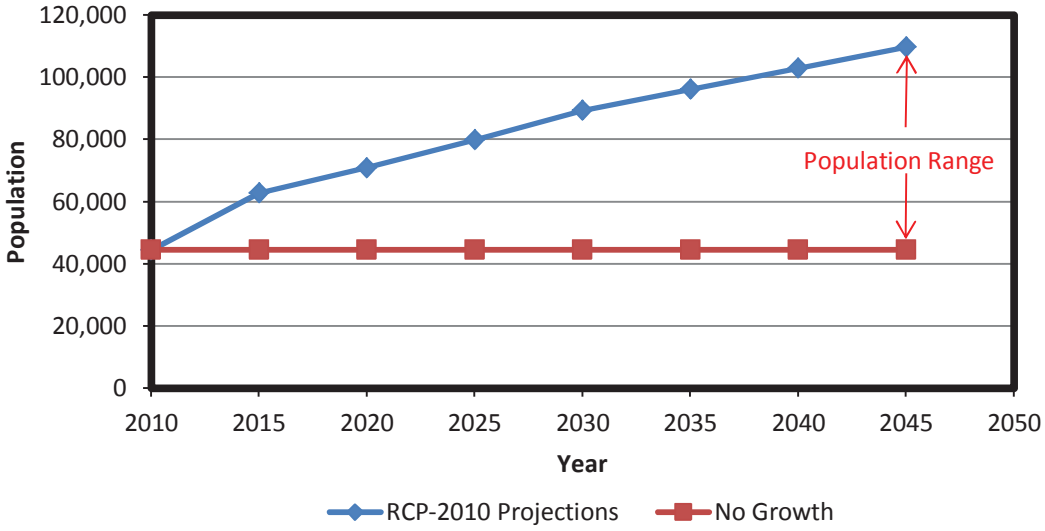

Figure ES-2
Projected Population for the Planning Area

Based on these projections, the Planning Area population is estimated to increase to approximately 110,000 people by 2045, an increase of 65,000 between 2010 and 2045. Since 2008, Riverside County has been particularly hard hit by the recession; it has one of the highest rates of foreclosures and unemployment in the country. Due to this economic downturn, the annual growth rate in the County has significantly moderated over the last four years. It is anticipated that the Planning Area will have a similar slow-paced recovery.

Land Use

Land use within the Planning Area is based on the 2003 Riverside County Integrated Plan (RCIP), Desert Hot Springs's 2007 General Plan, Cathedral City's 2009 General Plan, and Palm Springs' 2007 General Land Use Plan. Although the growth forecasts indicate significant future growth, it should be noted that these forecasts are based on potential development that has not yet been approved by the cities and the County and incorporated in their respective General Plans.

Water Demands

Water demands in the Planning Area have increased significantly over the past 35 years. Demand peaked in 2006 at 17,751 acre-ft/yr[1] and has since declined to 14,533 acre-ft/yr in 2011 because of the recession and conservation efforts. Water demand is projected to increase as shown on **Figure ES-3** due to several factors. Land development and population growth are expected to cause the greatest increase in water demand. This growth is expected to result in three additional golf courses in the planning area. In addition, water use for power plant cooling is expected to increase. All of these factors could result in water demands of 37,700 acre-ft/yr by 2045.

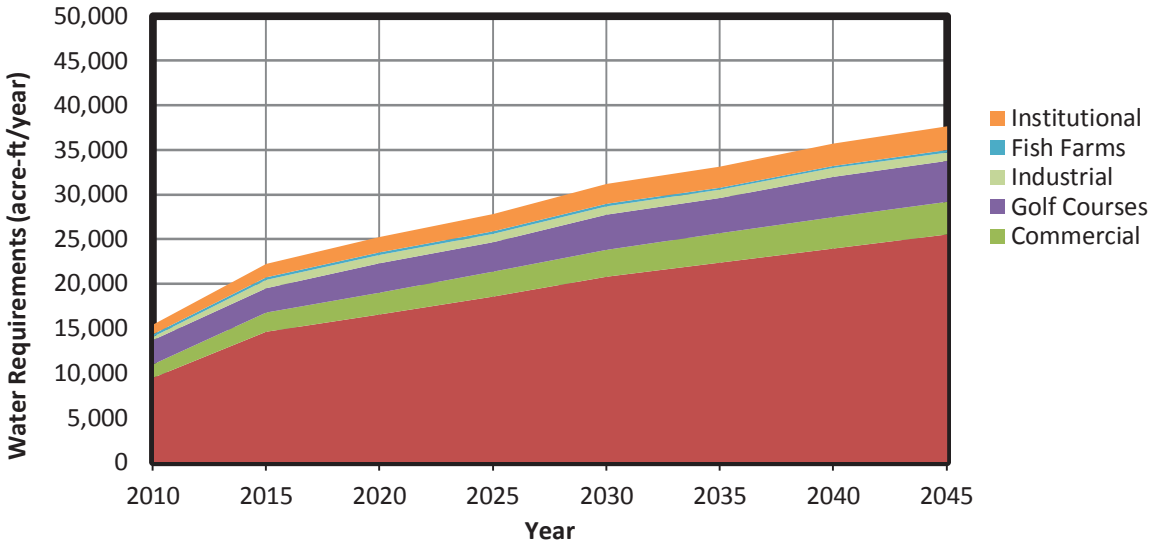

Figure ES-3
Projected Water Demand

WATER RESOURCES

Water supplies for the Planning Area consist of surface water that naturally replenishes the groundwater basins, groundwater extracted from wells and imported water from the State Water Project (SWP) that is exchanged for Colorado River water from the Metropolitan Water District of Southern California's (Metropolitan's) Colorado River Aqueduct (CRA). A detailed description of the water resources is presented in Section 4.

Surface Water

Surface water flow in the Planning Area consists of ephemeral or intermittent streams that originate in the San Bernardino and Little San Bernardino mountains. Mission Creek is the only stream that flows to the valley floor on a relatively consistent basis, but the stream usually disappears underground a short distance from its entrance into the Planning Area.

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

Groundwater

The Coachella Valley Groundwater Basin extends from San Gorgonio Pass on the north to the Mecca Hills and the Salton Sea on the south. The Basin is bounded on the east by the San Bernardino and Little San Bernardino Mountains and on the west by the Santa Rosa and San Jacinto Mountains. Geologic faults that cross the valley form partial barriers to groundwater flow and interrupt the overall flow of groundwater in the valley, which occurs from northwest to southeast. The Mission Creek and Garnet Hill subbasins are separated by these faults.

Mission Creek Subbasin

The Mission Creek subbasin (Basin No. 7-21.02 in DWR Bulletin 118, 2003) is located in the northwestern Coachella Valley in the north-central portion of Riverside County, California. The Mission Creek Fault and the Banning Fault form the northern and southern boundaries of the subbasin, respectively. Groundwater production from this subbasin is principal source of water supply for the Planning Area. Groundwater levels throughout the subbasin declined until about 2002 when imported water recharge commenced. Since that time, water levels near the recharge facility have increased significantly. Water level declines in wells farthest from the recharge facility began to stabilize around 2008 due to normal and advanced recharge water deliveries coupled with reduced pumping and are beginning to show slight increases.

Garnet Hill Subbasin

The area between the Garnet Hill Fault and the Banning Fault is named the Garnet Hill subbasin[2]. Groundwater production is relatively low in Garnet Hill subbasin and is not expected to increase significantly in the future due to relatively low well yields compared to those in the Mission Creek subbasin. Water levels in the western and central portion of the subbasin show response to recharge from the Whitewater River Recharge Facility while levels are relatively flat in the eastern portion of the subbasin. The lack of wells in the subbasin limits the geologic understanding of how this subbasin operates relative to the Mission Creek and Whitewater River subbasins.

Desert Hot Springs Subbasin

The Desert Hot Springs subbasin is located adjacent to the Mission Creek subbasin and trends northwest-southeast along the foothills of Joshua Tree National Park. DWR Bulletin 118 (2003) has designated this subbasin as No. 7-21.03. The water from this subbasin is used for its thermal and mineral qualities but is not a suitable source of potable groundwater use due to high salinity. This WMP does not address water supplies from the Desert Hot Springs subbasin although parts of the Planning Area overlie the Desert Hot Springs subbasin.

[2] DWR Bulletin 118 (2003) considered the Garnet Hill subbasin to be part of the Whitewater River (Indio) subbasin.

Whitewater River (Indio) Subbasin

The Whitewater River subbasin, designated the Indio Subbasin (Basin No. 7-21.01) in DWR Bulletin No. 118 (2003), underlies the major portion of the Valley floor and encompasses approximately 400 square miles. The Whitewater River subbasin extends southeast approximately 70 miles to the Salton Sea. The Whitewater River subbasin is adjacent to the Garnet Hill subbasin, separated by the Garnet Hill Fault. This subbasin is the principal source of groundwater supply to most of the Coachella Valley with total production of about 328,000 acre-ft/yr in 2011[3]. This subbasin is the subject of a separate water management plan initially prepared by CVWD in 2002 and updated in 2012 (CVWD, 2012).

Imported Water

CVWD and DWA use imported water supplies to recharge groundwater supplies in the Planning Area by exchanging their SWP water allocations for CRA water. Initially, CVWD and DWA had SWP Table A Amounts[4] of 23,100 and 38,100 acre-ft/yr respectively. Since 2003, through a series of water transfers, the combined Table A Amount has increased to 194,100 acre-ft/yr effective in 2010. Average SWP delivery reliability is currently estimated to be 60 percent of Table A Amounts, or 116,460 acre-ft/yr. However, environmental requirements in the Delta, climate change and risk of levee failure could reduce reliability to 50 percent in the future. Development of the Bay-Delta Conservation Plan (BDCP) is expected to be completed in mid-2013. If the BDCP is successfully implemented, the water agencies anticipate average SWP reliability could increase to about 77 percent (the pre-environmental restrictions level).

Since there is no conveyance facility to deliver SWP water to the Coachella Valley, CVWD's and DWA's SWP water is delivered to Metropolitan at San Bernardino under the terms of separate exchange agreements whereby Metropolitan delivers an equal amount of CRA water to CVWD and DWA to be recharged at the Whitewater and Mission Creek subbasins. Metropolitan also has an advanced delivery agreement with CVWD and DWA that allows it to deliver water to the Coachella Valley in advance of SWP deliveries at no cost to the Valley. CVWD and DWA allocate available imported water between the Mission Creek and Whitewater River recharge facilities in proportion to pumping within the respective management areas. Since recharge commenced in 2002, an average of 12,000 acre-ft/yr has been recharge at the Mission Creek Recharge Facility.

Recycled Water

Recycled water is a relatively small source of supply within the Planning Area. MSWD operates two wastewater treatment facilities that have a combined capacity of 2.18 mgd. Treated wastewater is percolated into the Mission Creek subbasin. MSWD has been installing sewers within its service area since the early 1970s and expects to construct a third wastewater treatment facility and complete sewering of its service area in the future.

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[3] In 2011, production in the Upper Whitewater River subbasin totaled 183,000 acre-ft; production in the Lower Whitewater River subbasin (south of Point Happy) totaled about 145,000 acre-ft.

[4] Each SWP contract contains a "Table A" exhibit, which defines the maximum annual amount of water each contractor can receive excluding interruptible deliveries. DWR uses Table A Amounts to allocate available SWP supplies and some of the SWP project costs among the contractors.

ISSUES AND STRATEGIES

A clear understanding of the water management issues affecting the Planning Area is essential when developing a water management plan.

Issues

The water management issues identified in this WMP are broadly grouped into the following categories:

- **Water Supply** – climate change, impact of Whitewater River subbasin recharge on Garnet Hill subbasin, imported water recharge volumes, natural recharge, groundwater overdraft, recharge timing and volume, recharge/percolation pond operations and maintenance, source substitution via recycled water, supply reliability, transfers and exchanges, subsurface flows between the subbasins
- **Water Quality** – arsenic, emerging contaminants, fluoride, radionuclides, hexavalent chromium, nitrate, total dissolved solids (TDS), other water quality contaminants , hot water entering Mission Creek subbasin, water quality in the Mission Creek subbasin, salinity management and brine disposal, improperly constructed or abandoned wells
- **Costs and Economics** - cost of water, funding, pumping costs, replenishment assessment
- **Water Demand** – conservation , population growth, socioeconomic conditions
- **Environmental** – greenhouse gas emissions, mesquite hummocks, land subsidence, Coachella Valley Multiple-Species Habitat Conservation Plan, Watershed protection, land use protection for basin recharge
- **Other** – data gaps, monitoring and reporting, stakeholders and regulatory agency coordination

Each of these issues is discussed in more detail in **Section 5** of this Plan.

Strategies

A wide range of strategies is considered for addressing the issues identified in the Planning Area:

- Maximizing the capture of natural recharge
- Increasing local groundwater production
- Increasing imported water recharge
- Participating in local and statewide desalination projects
- Developing a recycled water system
- Constructing sewer systems in unsewered areas
- Exploring availability of additional SWP and non-SWP supplies
- Exploring treatment of imported water used for recharge
- Developing water conservation programs
- Exploring treatment options for water quality contaminants of concern

Many of the strategies require the development of infrastructure projects. The effect of these strategies on water management in the Planning Area is quantified in terms of the additional water supply provided and the cost of implementation in **Section 5**.

Plan Evaluation

The management plan alternatives are based on the potential strategies discussed earlier and the overall management plan objectives. These projects are then grouped together in portfolios such that each portfolio represents an alternative management plan with the goal of either stabilizing long-term average groundwater levels to year 2009 levels or increasing groundwater levels in the basin. A No Action Plan is also developed to serve as a baseline for comparing the impacts of implementing alternative management plans in the Planning Area. The alternative plans considered are:

- Alternative Plan 0: No Management Action
- Alternative Plan 1: Maintain Groundwater Levels at 2009 Levels
- Alternative Plan 2: Increase Groundwater Levels to 15 Feet Above 2009 Levels
- Alternative Plan 3: Maintain Groundwater Levels at 2009 Levels and Minimize Imported Water
- Alternative Plan 4: Maintain Groundwater Levels at 2009 Levels and Maximize Water Quality
- Alternative Plan 5: Maintain Groundwater Levels at 2009 Levels, Minimize Imported Water, and Maximize Water Quality

Five alternative management plans are evaluated in **Section 5**. A groundwater model was used to evaluate basin response to different groundwater management strategies.

Alternative Plan 1 appears to satisfy the overall objectives of the WMP. Not only is Alternative Plan 1 least costly among the management plans, it also meets the objective of eliminating long-term overdraft in the basin. While groundwater TDS concentrations associated with this plan are higher relative to Alternative Plans 4 and 5, the costs associated with implementing this alternative are significantly lower.

WATER MANAGEMENT OBJECTIVES

In order to meet the overall goal of the WMP as described in the Mission Statement for this WMP, the participating agencies (CVWD, MSWD, and DWA) developed the following water management objectives for the Mission Creek and Garnet Hill subbasins:

- Meet current and future water demands with a 10 percent supply buffer – This objective will be fully implemented by 2020.
- Eliminate long-term groundwater overdraft– This objective will be implemented by maintaining 2009 groundwater levels to the extent practicable based on water supply availability by 2015.
- Manage and protect water quality
- Minimize adverse environmental impacts

- Comply with state and federal laws and regulations
- Manage future costs

The water management objectives work together to provide improved supply reliability for the Planning Area. **Section 6** presents a more detailed discussion of each objective.

MANAGEMENT PLAN ACTIONS

Key components of the Management Plan that will be used to meet the Water Management Objectives are described below. Additional detail is presented in **Section 7** of this WMP.

Demand Management

CVWD, DWA and MSWD have already implemented significant water conservation programs in the Planning Area that have resulted in significant decreases in per capita water usage. Consequently, there is limited potential for additional conservation within the Planning Area. However, CVWD, DWA and MSWD should continue to implement the programs to ensure that per capita use does not increase in the future. CVWD, DWA and MSWD will coordinate with the top private producers in the Planning Area, and offer assistance for making efficient use of the water they extract. The Coachella Valley Regional Water Management Group (CVRWMG)[5] agencies have created an umbrella conservation program that allows the region to address conservation needs through a collaborative and united process, but still allows each agency the flexibility to address the specific needs of the communities they serve.

Water Supply Development

To meet projected demands while managing groundwater overdraft, the coordinated use of local groundwater supplies with other water supplies is a critical element of this WMP. Supply development consists of groundwater pumping, imported water supplies and maximum use of feasible local supplies such as recycled water.

As growth occurs consistent with the 2010 Riverside County Projections (and future updates), additional groundwater production wells may be required to meet the water demands of the Planning Area. New wells will be located to minimize their impact on existing adjacent wells while meeting the needs of the water agency. During the development of this WMP, CVWD, DWA and MSWD agreed that overdraft in the Mission Creek subbasin should be eliminated with the goal of maintaining long-term average water levels at year 2009 levels to the extent practicable.

To eliminate overdraft in the groundwater basin and meet future water demands, additional water supplies may be required for the Planning Area. Average future imported water needs could range from essentially zero for no growth conditions with implementation of the BDCP to as much as 14,700 acre-ft/yr if SWP reliability declines to 50 percent. Decisions regarding the amounts and timing of new supply acquisition will be made by CVWD and DWA in their roles as regional imported water suppliers because of need, availability and cost. Due to the lead-time

[5] The CVRWMG consists of CVWD, DWA, MSWD, City of Coachella and Indio Water Authority.

required to acquire or develop additional water supplies, CVWD, DWA and MSWD will closely coordinate their current and projected water demands.

MSWD prepared a recycled water feasibility report that identified several potential recycled water users, principally golf courses and landscape irrigation. The feasibility of a recycled water system is driven by the proximity of suitable users to the recycled water supply source. MSWD plans to develop a recycled water system in phases if construction and operational costs are economically feasible.

Water supply acquisition will be 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 supply buffer serves as a contingency in the event that demands are higher than expected or supplies cannot be implemented at the levels expected. The additional supplies needed to provide the buffer would be implemented when required based on on-going analysis of projected demands and supplies. The supply buffer for the Planning Area should initially be capable of generating about 1,500 acre-ft/yr of water increasing to 3,700 acre-ft/yr by 2045.

Recharge

Because the natural inflows to the basin are not sufficient to sustain the current and future pumping amounts, groundwater replenishment with imported water is required to eliminate overdraft. Additional replenishment is needed to achieve the goal of stabilizing long-term groundwater levels based on 2009 conditions. Under existing conditions, at least 9,100 acre-ft/yr of imported water should be recharged on average. As growth occurs, the amount of imported water recharge may increase to about 25,000 acre-ft/yr by 2045.

CVWD and DWA jointly manage imported water replenishment operations in the Coachella Valley using SWP Exchange water. The goal of the imported water replenishment operations is to deliver as much SWP Exchange water to the Valley as possible given SWP contract and delivery constraints and Metropolitan's Colorado River Aqueduct (CRA) operations. As required by the 2004 Settlement Agreement, cumulative SWP recharge deliveries will be balanced between the two subbasins as determined by the Management Committee but not later than every 20 years. As part of this implementation plan, regardless of the 20-year balance between the Mission Creek and the Whitewater River subbasins, it is the intention of CVWD and DWA to continue annual recharge activities at the Mission Creek Recharge Facility provided SWP Exchange water is available to the Coachella Valley.

Water Quality Protection

The principal water quality parameters of concern for the Planning Area are nitrate, total dissolved solids (TDS) and radionuclides in groundwater. Since municipal wastewater generated by septic systems is a major source of nitrate in the basin, wastewater management is a critical component of water quality protection. Actions to address elevated concentrations of the other contaminants mentioned above in groundwater are also discussed. Other constituents including arsenic and hexavalent chromium have been identified as potential constituents of concern depending on future regulatory actions. The following actions will be taken regarding wastewater management in the Planning Area.

- Continue septic to sewer conversions within MSWD's service area based on available funding;
- Continue with plans for expansion of the Horton Wastewater Treatment Plant (WWTP) including nitrogen removal;
- Support MSWD's existing plans to construct the Regional WWTP;
- Consider percolating treated Regional WWTP effluent in the Mission Creek subbasin at a location that does not adversely impact existing and future production wells; and
- Consider septic to sewer conversions within CVWD's service area subject to development and availability of funding.
- Continue to monitor nitrate concentrations in groundwater wells; and
- Perform additional investigations of nitrate fate and transport as required

The CVRWMG plans to undertake a valley-wide salt/nutrient management plan to meet the State Water Resources Control Board requirements. The CVRWMG obtained grant funding to commence development of a strategy to develop this plan. As members of the CVRWMG, CVWD, DWA and MSWD will participate in the valley-wide salt-nutrient management plan development, which will include the Mission Creek and Garnet Hill subbasins. The Agencies will take the following additional actions to protect water quality in the groundwater basins.

- Continue to monitor basin water quality (See Monitoring and Data Management);
- Continue to track potential regulatory actions of California Department of Public Health and the United States Environmental Protection Agency that could affect CVWD, DWA and MSWD ability to comply with drinking water regulations;
- Coordinate with the appropriate local, state and federal regulatory agencies that are responsible for monitoring and regulating potentially contaminating activities within well capture zones and principal recharge zones including underground storage tank locations and other sources of contamination such as landfills;
- Work cooperatively with Riverside County Department of Environmental Health (DEH) to ensure that existing well construction, destruction and abandonment policies are followed;
- Develop a cooperative program with Riverside County DEH to identify and cap or destroy wells that are no longer being used for groundwater production or monitoring to prevent potential groundwater contamination;
- Review and comment on proposed land developments, environmental documents and land use plans developed by the cities of Desert Hot Springs, Cathedral City and Palm Springs and Riverside County to ensure that groundwater quality is protected; and
- Continue to support the Groundwater Guardian program, a community educational program developed by the non-profit Groundwater Foundation.

Monitoring and Data Management

The following programs/projects should be implemented to improve monitoring and data management in the Planning Area as described in Appendix E:

- Summarize precipitation data from available gauges in the surrounding watershed and report in the Engineer's Reports prepared by CVWD and DWA;
- Install a California Irrigation Management Information System (CIMIS) weather station in Desert Hot Springs area to provide improved data for irrigation scheduling;
- Update the existing canvasses of private wells in the Mission Creek and Garnet Hill subbasins to verify their location, operational status (active, inactive, abandoned, destroyed), whether a meter is installed, and whether production is being reported;
- Make arrangements to install meters on unmetered production wells to provide accurate production records for replenishment assessments and basin management;
- Continue to monitor public and private wells for groundwater levels and quality on a routine basis;
- Install data loggers on selected dedicated monitoring wells to provide more continuous groundwater level data;
- Report pertinent groundwater level data to the State's CASGEM program and in the Engineer's Reports prepared by CVWD and DWA;
- Identify additional existing private wells that could be monitored routinely for groundwater level and quality;
- Evaluate potential locations to construct monitoring wells near the basin boundaries to document natural inflow to and outflow from the basins and near the recharge basin to better track recharge effects;
- Develop a water resources database to facilitate data sharing between participating agencies;
- 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
- Assess the need for periodic ground elevation surveys to determine whether land subsidence is occurring.

Adaptive Management

Adaptive management is the process whereby basin management decisions are made on an incremental basis in response to actual data. In essence, it is learning through implementation. Use of this process avoids the dangers of over-investment in water supplies and infrastructure and unanticipated shortages due to inadequate action. The adaptive management process consists of the following steps: 1) Planning, 2) Implementation, 3) Monitoring, 4) Analysis and 5) Modification. The key to the adaptive management process is one of continual evaluation and program adjustment to meet the overall basin management objectives.

Implementation

CVWD, DWA and MSWD prioritized the water management programs and projects based on:

1. Continuation of existing programs
2. New programs to be implemented
3. New programs requiring further investigation
4. Potential future programs

Table ES-2 presents the management programs including the contribution of each to achieving the Water Management Objectives, additional benefits and implementation category.

Costs

The implementation of the Mission Creek-Garnet Hill Water Management Plan will require significant capital and operating investments to achieve the goals of the plan. total capital costs for plan implementation are expected to be approximately $788 million between 2012 and 2045 averaging $23 million per year, assuming growth is consistent the 2010 CVAG/RCCDR projections. Implementation costs are expected to vary depending on the amount of growth in the study area. Costs are not presented for projects requiring further investigation and for potential future programs. **Figure ES-4** summarizes the total expenditures of existing and new programs over the planning period.

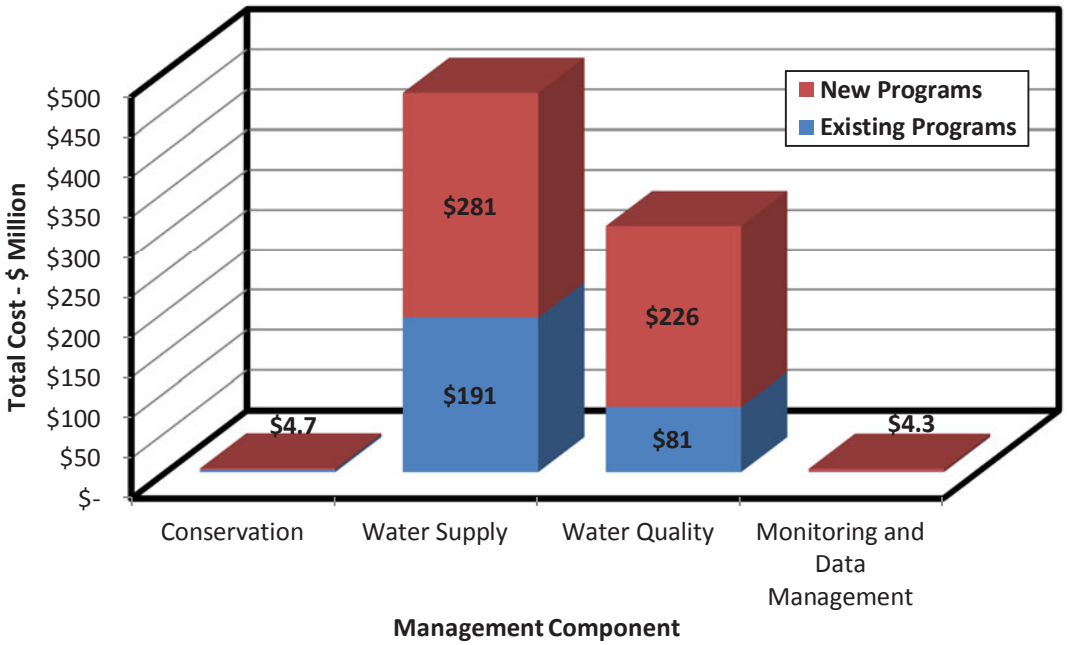

Figure ES-4
Total Projected Water Management Expenditures 2012-2045

Funding

Successful financing of large capital programs consistently depends on optimizing three financing objectives:

- Produce capital in sufficient amounts when needed;
- Produce capital at lowest cost; and
- Produce capital with greatest equity among customers, including the principle that growth-pays-for-growth.

Because the implementation of the Water Management Plan will involve program refinement over the years, financial planning should also have flexibility to accommodate changes in law, system requirements, capital requirements, constituency requirements, and the methodologies available to the water management group to generate funds.

A variety of financing options may be used as presented in **Appendix F** and summarized below:

- Water rates – water purveyor charges to water customers for the purchase of water for urban or agricultural use

Table ES-2
Water Management Plan Projects and Programs

Project/Program	Category	Applicable Goal						Additional Benefits	Provides Multiple Benefits	Readiness to Implement	Recommended Action
		Meet current and future demands with 10% buffer	Eliminate Long-term GW Overdraft	Manage & Protect Water Quality	Comply with State and Federal Laws and Regs	Manage Future Costs	Minimize Adverse Environ. Impacts				
Continue to implement urban water conservation programs	Conservation	x	x		x			Meet 20x2020	Yes	On-going	Continue
Private pumper conservation program	Conservation	x	x						Yes	Near-term	Pursue
Track water conservation effectiveness through UWMPs	Conservation	x	x		x	x			Yes	On-going	Continue
Construct additional wells as needed to meet future demands	Water Supply	x							No	Mid-term	Agency Decision
Locate new wells to minimize interference with adjacent wells	Water Supply	x	x				x		Yes	Mid-term	Agency Decision
Periodically review imported water supply availability and needs	Water Supply	x				x			Yes	Mid-term	Continue
Acquire additional imported water supplies as needed	Water Supply	x				x			Yes	Mid-term	Defer
Develop recycled water system(s) if feasible	Water Supply	x	x	x		x	x		Yes	Mid-term	Phase or Defer
Develop water supply and conservation contingency programs to provide supply buffer	Water Supply	x	x			x			Yes	Mid-term	Pursue
Construct SWP Extension	Water Supply			x					No	Long-term	Defer
Continue existing imported water replenishment program	Imported Water Replenishment	x	x	x			x		Yes	On-going	Continue
Increase imported water replenishment to stabilize groundwater levels	Imported Water Replenishment	x	x						Yes	Near-term	Pursue
Expand recharge basin capacity (if needed)	Imported Water Replenishment		x				x	Improved recharge distribution; more rapid basin level response	Yes	Long-term	Defer
Work with planning entities and RCFCWD on local stormwater capture and low impact development	Imported Water Replenishment	x	x	x	x				Yes	Near-term	Pursue
Convert from septic to sewer in MSWD area	Water Quality Protection	x	x	x	x				Yes	On-going	Continue
Expand Horton WWTP and install nitrogen removal	Water Quality Protection			x	x		x		Yes	Near-term	Continue
Construct Regional WWTP with nitrogen removal	Water Quality Protection	x	x	x					Yes	Near-term	Phase
Recharge Regional WWTP Effluent in MCSB	Water Quality Protection	x	x						Yes	Mid-term	Pursue

Table ES-3 (Continued)
Water Management Plan Projects and Programs

Project/Program	Category	Applicable Goal						Additional Benefits	Provides Multiple Benefits	Readiness to Implement	Recom-mended Action
		Meet current and future demands with 10% buffer	Eliminate Long-term GW Overdraft	Manage & Protect Water Quality	Comply with State and Federal Laws and Regs	Manage Future Costs	Minimize Adverse Environ. Impacts				
Evaluate conversion of septic to sewer in CVWD area	Water Quality Protection	x	x	x	x		x		Yes	Long-term	Pursue
Evaluate occurrence and risk of nitrate migration	Water Quality Protection			x	x				Yes	Mid-term	Agency Decision
Participate in valley-wide salt/nutrient management plan (SNMP)	Water Quality Protection	x		x	x		x		Yes	Near-term	Pursue
Develop and calibrate water quality model in conjunction with SNMP	Water Quality Protection			x	x			Need for salt/nutrient management plan	Yes	Near-term	Part of Salt-Nutrient Mgmt Plan
Manage groundwater levels in MCSB to minimize migration of warm brackish water from DHSSB	Water Quality Protection			x					No	Mid-term	Linked to C-2
Evaluate occurrence and risk of uranium migration	Water Quality Protection	x		x					Yes	Near-term	Agency Decision
Track potential regulatory actions of CDPH and USEPA that could affect drinking water regulation compliance	Water Quality Protection			x					No	Near-term	Pursue
Coordinate with appropriate regulatory agencies responsible for preventing contaminating activities in well capture and recharge zones	Water Quality Protection			x					No	Near-term	Pursue
Work cooperatively with Riverside County DEH to ensure well construction, abandonment, destruction policies are followed	Water Quality Protection			x	x	x			Yes	Near-term	Work with Riverside Co.
Develop a cooperative program with Riverside County DEH to identify and cap/destroy unused wells	Water Quality Protection			x	x				Yes	Near-term	Pursue
Review and comment on development proposals, environmental documents and land use plans to protect water quality	Water Quality Protection										Continue
Support Groundwater Guardian Program to educate public on water quality	Water Quality Protection										Continue
Desalination of Colorado River recharge water	Water Quality Protection			x			x		Yes	Long-term	Defer
Desalination of East MC groundwater	Water Quality Protection			x					Yes	Long-term	Defer
Summarize precipitation data annually to estimate natural inflows to basins	Monitoring	x	x					Improved data on basin supply	Yes	Near-term	Pursue
Install a CIMIS station in DHS area	Monitoring	x	x			x		Improved irrigation scheduling	Yes	Near-term	Pursue

Table ES-4 (Continued)
Water Management Plan Projects and Programs

Project/Program	Category	Applicable Goal						Additional Benefits	Provides Multiple Benefits	Readiness to Implement	Recommended Action
		Meet current and future demands with 10% buffer	Eliminate Long-term GW Overdraft	Manage & Protect Water Quality	Comply with State and Federal Laws and Regs	Manage Future Costs	Minimize Adverse Environ. Impacts				
Update well canvass and determine well operational status	Monitoring		x	x				Improved monitoring	Yes	Near-term	Update Existing
Continue to monitor public and private wells for water level and quality	Monitoring		x	x				Improved monitoring	Yes	On-going	Continue
Incorporate additional private wells in routine water level and quality monitoring	Monitoring		x	x				Improved monitoring and reporting	Yes	Near-term	Pursue
Install production meters on private wells no having meters	Monitoring					x		Improved monitoring and reporting; cost recovery	Yes	Near-term	Pursue
Install water level dataloggers in 5-10 monitoring wells	Monitoring		x					Improved monitoring and reporting	Yes	Near-term	Pursue
Monitor local surface runoff quality	Monitoring			x				Improved monitoring and reporting	Yes	Near-term	Defer
Investigate viability of conducting geophysical survey near recharge basin	Monitoring		x			x		Improved basin understanding and groundwater modeling	Yes	Near-term	Investigate
Construct 1-2 new monitoring wells to document recharge activities	Monitoring		x					Improved monitoring and reporting	Yes	Near-term	Investigate
Construct 1-3 new monitoring wells to document water levels near mesquite hummocks	Monitoring		x				x	Improved monitoring and reporting	Yes	Near-term	By Others
Conduct flow loss study on Whitewater River	Monitoring	x						Document recharge to GHSB	Yes	Near-term	Defer
Periodic groundwater model update and recalibration; combine with Whitewater model	Monitoring						x	Improved monitoring and operational planning	Yes	Near-term	Pursue
Conduct ground surface elevation surveys	Monitoring		x			x	x	Early subsidence documentation	Yes	Near-term	Defer
Construct 1-3 new monitoring wells to document basin inflows	Monitoring	x	x					Improved monitoring and reporting	Yes	Mid-term	Investigate
Investigate additional stream gauging in MCSB	Monitoring	x	x					Document recharge to MCSB	Yes	Mid-term	Defer
Improved reporting of water resources data in Engineers' reports	Data Management and Reporting							Improved reporting and data sharing	No	On-going	Pursue
Develop valley-wide water resources database	Data Management and Reporting	x	x					Improved reporting and data sharing	Yes	Near-term	Investigate, could be done by CVRWMG
Continue existing basin management committee structure	Other							Promote improved communications	No	Near-term	Continue
Develop adaptive management procedures to monitor management progress and adjust as needed	Other	x	x	x	x	x	x	Allows progressive implementation	Yes	Mid-term	Pursue

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- Replenishment assessments – charges for replenishment water to groundwater pumpers based on their annual production
- Developer fees – charges applied to new development on a per-connection basis to cover the capital cost of supply acquisition and water/wastewater system construction
- Assessment districts – charges applied to property tax bills to recover the capital cost of utility construction for new development
- Property taxes – charges applies to property tax bills of land owners to recover bonded indebtedness such as the SWP capital costs and other authorized bonds
- Grants – state or federal money provided for specific water management programs, usually awarded on a competitive basis
- Bonds – voter-authorized (general obligation) or water agency-authorized (revenue) funding for capital facilities

The specific financing mechanisms that will be applied to each WMP element will be determined by the governing bodies of participating agencies. A combination of funding sources will likely be used to meet the needs of the Valley water users.

Opportunities may exist for joint agency participation in project implementation. Several guiding principles will be applied to project implementation:

1. Generally, each agency is responsible for implementation of projects that benefits its customers. However, projects that provide benefits to multiple agencies may be jointly funded if all participants agree.
2. The cost of jointly-funded projects will be allocated based on objectively quantifiable benefits.
3. Opportunities for external funding will be pursued when feasible.

CONCLUSION

Groundwater overdraft and water quality protection are important concern for the Planning Area. Critical drivers for water management in the Planning Area include growth and increased water demands, imported water supply reliability, the need for additional supplies, water quality protection, more stringent regulations, limited financial resources and climate change.

CVWD, DWA and MSWD developed the Mission Creek-Garnet Hill Water Management Plan with the goal of managing the water resources to meet demands reliably while protecting water quality in a sustainable and cost-effective manner. The plan recognizes that continued recharge, development or acquisition of additional water supplies, protection of water quality through wastewater management and other tools, monitoring and data management and continuous communication are vital for the cost-effective management of the water resources of the Planning Area.

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Appendix K

AB 1420 Self-Certification

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DEPARTMENT OF WATER RESOURCES
1416 NINTH STREET, P.O. BOX 942836
SACRAMENTO, CA 94236-0001
(916) 653-5791

File: 0001.3
0541.65
0932.47
0644.105.1

c/m P Reyes
J Barrett
R Cheng

September 5, 2014

Mr. Jim Barrett
General Manager
Coachella Valley Water District
P.O. Box 1058
Coachella, California 92236

Dear Mr. Barrett:

The Department of Water Resources (DWR) has reviewed Coachella Valley Water District's (CVWD) Self-Certification Statement – Tables 1 and 2 submitted on July 17, 2014, regarding implementation of the Urban Best Management Practices (BMPs).

The purpose of DWR's review is to determine CVWD's eligibility to receive water management grant or loan funds. DWR has followed the *AB 1420 Compliance Requirements* dated January 1, 2009. For detailed information, please visit http://www.water.ca.gov/wateruseefficiency/finance/.

Based on DWR's review of the information in Tables 1 and 2, CVWD has and is currently implementing the BMPs consistent with AB 1420 and, therefore, is eligible to receive water management grant or loan funds.

DWR reserves the right to request additional information and documentation, including reports from CVWD to substantiate the accuracy of the information provided in Tables 1 and 2. DWR may reverse or modify its eligibility determination and notify you and the funding agency if inaccuracies are found in the supporting documentation or in Tables 1 and 2.

If you have any questions, please contact me at (916) 651-7034 or Betsy Vail at (916) 651-9667.

Sincerely,

Peter Brostrom
Urban Water Unit
Water Use and Efficiency Branch

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Established in 1918 as a public agency
Coachella Valley Water District

Directors:
John P. Powell, Jr., President - Div. 3
Franz W. De Klotz, Vice President - Div. 1
Ed Pack - Div. 2
Peter Nelson - Div. 4
Debi Livesay - Div. 5

Officers:
Jim Barrett, Acting General Manager
Julia Fernandez, Board Secretary

Redwine and Sherrill, Attorneys

April 24, 2013

File No. 0001.3
0644.105.1
0932.47

Betsy Vail
Office of Water Use and Efficiency
California Department of Water Resources
P.O. Box 942836
Sacramento, CA 94236-0001

Dear Ms. Vail:

Subject: Compliance Tables for Proposition 84
Round 2, Implementation Grant Application

Enclosed, per your instruction, are signed originals of the following:

- AB 1420 Self - Certification Statement Table 1
- AB 1420 Self - Certification Statement Table 2
- Certification for Compliance with Water Metering Requirements for Funding Applications

If you have any questions or need additional information, please call me at extension 2270, or email me at preyes@cvwd.org. Thank you for your assistance.

Sincerely,

Patti Reyes

Patti Reyes
Planning and Special Programs Manager

MAILED
APR 24 2013
CVWD

PR:dd\reyes\13\apr\AB1420 Compliance

California State Water Resources Control Board
California Department of Water Resources
California Department of Public Health

CERTIFICATION FOR COMPLIANCE WITH WATER METERING REQUIREMENTS FOR FUNDING APPLICATIONS

In 2004, Assembly Bill 2572 added section 529.5 to the Water Code, providing that, commencing January 1, 2010, urban water suppliers must meet certain volumetric pricing and water metering requirements in order to apply for permits for new or expanded water supply, or state financial assistance for the following types of projects:

1. wastewater treatment projects
2. water use efficiency projects (including water recycling projects)
3. drinking water treatment projects

For the purposes of compliance with Section 529.5, a "water use efficiency project" means an action or series of actions that ensure or enhance the efficient use of water or result in the conservation of water supplies.

Please consult with your legal counsel and review sections 525 through 529.7 of the Water Code before completing this certification.

Applicants Affected
This requirement applies to urban water suppliers.

"Urban water supplier" means a supplier, either publicly or privately owned, providing water for municipal purposes either directly or indirectly to more than 3,000 customers or supplying more than 3,000 acre-feet of water annually. An urban water supplier includes a supplier or contractor for water, regardless of the basis of right, which distributes or sells for ultimate resale to customers.

When Certification is Required
State Water Resources Control Board (SWRCB): The application for financial assistance must include a completed and signed certification form demonstrating compliance with the water metering requirements.

Department of Water Resources (DWR) funding applications: This certification must be completed and submitted with the funding application. Check the specific proposal solicitation package for directions on applicability and submittal instructions.

Department of Public Health (DPH) Safe Drinking Water State Revolving Fund Program: This certification must be completed and submitted with the executed Notice of Acceptance of Application (NOAA).

California State Water Resources Control Board
California Department of Water Resources
California Department of Public Health

CERTIFICATION FOR COMPLIANCE WITH WATER METERING REQUIREMENTS FOR FUNDING APPLICATIONS

Funding Agency name: Department of Water Resources

Funding Program name: Prop 84, Round 2, Implementation - IRWM

Applicant (Agency name): Coachella Valley Water District

Project Title (as shown on application form): Coachella Valley IRWM Implementation grant proposal, Round 2

Please check one of the boxes below and sign and date this form.

☐ As the authorized representative for the applicant agency, I certify under penalty of perjury under the laws of the State of California, that the agency is not an urban water supplier, as that term is understood pursuant to the provisions of section 529.5 of the Water Code.

☑ As the authorized representative for the applicant agency, I certify under penalty of perjury under the laws of the State of California, that the applicant agency has fully complied with the provisions of Division 1, Chapter 8, Article 3.5 of the California Water Code (sections 525 through 529.7 inclusive) and that ordinances, rules, or regulations have been duly adopted and are in effect as of this date.

I understand that the Funding Agency will rely on this signed certification in order to approve funding and that false and/or inaccurate representations in this Certification Statement may result in loss of all funds awarded to the applicant for its project. Additionally, for the aforementioned reasons, the Funding Agency may withhold disbursement of project funds, and/or pursue any other applicable legal remedy.

Jim Barrett
Name of Authorized Representative (Please print)

Signature

General Manager
Title

4-24-13
Date

AB 1420 Self- Certification Statement Table 2

Provide Schedule, Budget, and Finance Plan to Demonstrate Commitment to Implement All BMP's to Become in Compliance with BMP Implementation - Commencing Within 1st Year of Agreement for Which Applicant Receives Funds.

Self-Certification Statement: The Urban Water Supplier and its authorized representative certifies, under penalty of perjury, that all information and claims, stated in this table, regarding compliance and implementation of the BMPs, including alternative conservation approaches, are true and accurate. This signed AB 1420 Self-Certification Statement Table 1 and Table 2 are the basis for granting funds by the Funding Agency. Falsification and/or inaccuracies in AB 1420 Self Certification Statement Table 1 and Table 2, and in any supporting documents substantiating such claims may, at the discretion of the funding agency, result in loss of all State funds to the applicant. Additionally, the Funding Agency, in its sole discretion, may halt disbursement of grant or loan funds, not pay pending invoices, and/or pursue any other applicable legal remedy and refer the matter to the Attorney General's Office.

Name of Signatory Jim Barrett Title of Signatory General Manager Signature of signatory _____ Date 04/18/2013

Application Date:

Proposal Identification Number:

CUWCC Member? Yes/No: NO

Applicant Name: Coachella Valley Water District as lead agency for the Coachella Vall

Is the UWM Plan Deemed Complete by DWR? Yes/No: YES

Project Title:

Applicant's Contact Information: Name: Patti Reyes, 760-398-2661, preyes@cvwd.org

	Retailer (List Below)		
Participants:	Coachella Valley Water District	Mission Springs Water District	
	City of Coachella		
	Desert Water Agency		
	Indio Water Authority		

C1	C2	C3	C4	C5	*C6	C7	C8	**C9	**C10	**C11	C12			C13	C14	C15	C16	C17	C18	C19
				BMP Implemented by Retailers and/or Wholesalers				Compliance Options / Alternative Conservation Approaches (1)			BMP is Exempt (2)			Implementation Scheduled to Commence within 1st Year of Agreement						
CUWCC 2010 Flex Track BMPs	BMPs required for Wholesale Supplier	BMPs required for Retail Supplier	BMPs	Retailer Yes/No	Wholesaler Yes/No	Regional Yes/No	Alternative Conservation Approaches Yes/No	BMP Checklist	Flex Track	Gallons Per Capita Per Day GPCD	Not Cost Effective	Lack of Funding	Lack of Legal Authority	Start Date (MM/YR)	Completion Level (%)	BMP Completion Date (MM/YR)	Budget (Dollars)	Funding Source & Finance Plan to Implement BMPs	Meets CUWCC Coverage Yes/No	Funds Requested, if Available. (See AB 1420 Compliance Table 3) Yes/No
1. Utility Operations Programs																				
1.11	✓	✓	BMP 12 Conservation Coordinator	Yes						X				2001	100%	2005	$200,000	CVWD Operating Budget	Yes	
1.12		✓	BMP 13 Water Waste Prohibitions	Yes						X				2004	100%	2007	$240,000	CVWD Operating Budget	Yes	
1.13	✓	✓	BMP 10 Wholesale Agency Assistance Programs	exempt																
1.20	✓	✓	BMP 3 System Water Audits, Leak Detection/**Repair**	Yes						X				2005	80%	2013	$100,000	CVWD Operating Budget	Yes	
1.30		✓	BMP 4 Metering with Commodity Rates for All New/**Retrofit of Existing** connections	Yes						X				1960's	100%	1960's	$3,000,000	CVWD Operating Budget	Yes	
1.40		✓	BMP 11 Conservation Pricing	Yes						X				2005	100%	2010	$2,000,000	CVWD Operating Budget	Yes	
2. Educational Programs																				
2.10	✓	✓	BMP 7 Public Information	Yes						X				1992	100%	2005	$350,000	CVWD Operating Budget	Yes	
2.20	✓	✓	BMP 8 School Education	Yes						X				1992	100%	2005	$250,000	CVWD Operating Budget	Yes	
3. Residential																				
3.11		✓	BMP 1 **Indoor** Water Survey for Single/Multi-Family Residential Customers																	
3.12			BMP 1 **Outdoor** Water Survey for Single/Multi-Family Residential Customers																	

CUWCC 2010 Flex Track BMPs	BMPs required for Wholesale Supplier	BMPs required for Retail Supplier	BMPs	BMP Implemented by Retailers and/or Wholesalers				Compliance Options / Alternative Conservation Approaches (1)			BMP is Exempt (2)			Implementation Scheduled to Commence within 1st Year of Agreement						
				Retailer Yes/No	Wholesaler Yes/No	Regional Yes/No	Alternative Conservation Approaches Yes/No	BMP Checklist	Flex Track	Gallons Per Capita Per Day GPCD	Not Cost Effective	Lack of Funding	Lack of Legal Authority	Start Date (MM/YR)	Completion Level (%)	BMP Completion Date (MM/YR)	Budget (Dollars)	Funding Source & Finance Plan to Implement BMPs	Meets CUWCC Coverage Yes/No	Funds Requested, if Available. (See AB 1420 Compliance Table 3) Yes/No
3.20		✓	BMP 2 Residential Plumbing Retrofit																	
3.30		✓	BMP 6 High-Efficiency Washing Machine Rebate Programs																	
3.40		✓	BMP 14 Residential ULFT Replacement Programs																	
4. Commercial, Industrial, Institutional																				
4.00		✓	BMP 9 Conservation programs for Commercial, Industrial, and Institutional (CII) Accounts																	
5. Landscape																				
5.00		✓	BMP 5 Large Landscape Conservation Programs and Incentives																	

*C6: Wholesaler may also be a retailer (supplying water to end water users)
**C9, ** C10, and **C11: Agencies choosing an alternative conservation approach are responsible for achieving water savings equal or greater than that which they would have achieved using only BMP list.
(1) For details, please see http://www.cuwcc.org/mou/exhibit-1-bmp-definitions-schedules-requirements.aspx.
(2) BMP is exempt based on cost-effectiveness, lack of funding, or lack of legal authority, as detailed in the CUWCC MOU.

AB 1420 Self- Certification Statement Table 1

Note: Table 1 documents Status of Past and Current BMP implementation.

Self-Certification Statement: The Urban Water Supplier and its authorized representative certifies, under penalty of perjury, that all information and claims, stated in this table, regarding compliance and implementation of the BMPs, including alternative conservation approaches, are true and accurate. This signed AB 1420 Self-Certification Statement Table 1, and Table 2 are the basis for granting funds by the Funding Agency. Falsification and/or inaccuracies in AB 1420 Self Certification Statement Table 1, and Table 2 and in any supporting documents substantiating such claims may, at the discretion of the funding agency, result in loss of all State funds to the applicant. Additionally, the Funding Agency, in its sole discretion, may halt disbursement of grant or loan funds, not pay pending invoices, and/or pursue any other applicable legal remedy and refer the matter to the Attorney General's Office.

Name of Signatory: Jim Barrett Title of Signatory: General Manger Signature of signatory Date : 04/18/2013

Application Date:

Proposal Identification Number: CUWCC Member? Yes/No NO

Has Urban Water Supplier submitted a 2005 Urban Water Management Plan? Yes/No YES Is the UWM Plan Deemed Complete by DWR? Yes/No YES

Applicant Name: Coachella Valley Water District as lead agency for the Coachella Valley IRWMP

Project Title:

Applicant's Contact Information: Name: Patti Reyes Phone: 760-398-2661 E-mail: preyes@cvwd.org

Participants:

Retailer (List Below)	*Wholesaler (List Below)*
Coachella Valley Water District	
City of Coachella	
Desert Water Agency	
Indio Water Authority	
Mission Springs Water District	

C1	C2	C3	C4	C5	*C6	C7	**C8	**C9	**C10	C11	C12	C13	C14	C15	C16	C17	C18
				BMP Implemented by Retailers and/or Wholesalers / *BMP*			Compliance Options/Alternative Conservation Approaches (1)			BMP Is Exempt (2)			BMP Implementation Requirements Met				
BMPs required for Wholesale Supplier	BMPs required for Retail Supplier	BMPs	Retailer *Yes/No*	Wholesaler *Yes/No*	Regional *Yes/No*	BMP Checklist	Flex Track	Gallons Per Capita Per Day GPCD	Not Cost Effective	Lack of Funding	Lack of Legal Authority	CUWCC MOU Requirement Met: Retailer *Yes/No*	CUWCC MOU Requirement Met: Wholesaler *Yes/No*	Date of BMP Report Submitted to CUWCC for (2007-2008) (MOU Signatories)	Date BMP Implementation Data Submitted to DWR in CUWCC Format (Non MOU Signatories) (3)	All Supporting Documents have been Submitted Yes/No	
	✓	BMP 1 Water Survey for Single/Multi-Family Residential Customers															
	✓	BMP 2 Residential Plumbing Retrofit															
✓	✓	BMP 3 System Water Audits, Leak Detection	yes					X				no			December 2005 UWM Plan and updated in 2010 UWMP	no	
✓	✓	BMP 3 Leak Repairs	yes					X				yes			December 2005 UWM Plan updated in 2010 UWMP	yes	
	✓	BMP 4 Metering with Commodity Rates for All New connections	yes					X				yes			December 2005 UWM Plan updated in 2010 UWMP	yes	

C1	C2	C3	C4	C5	*C6	C7	**C8	**C9	**C10	C11	C12	C13	C14	C15	C16	C17	C18
				BMP Implemented by Retailers and/or Wholesalers / *BMP*			Compliance Options/Alternative Conservation Approaches (1)			BMP Is Exempt (2)			BMP Implementation Requirements Met				
BMPs required for Wholesale Supplier	BMPs required for Retail Supplier	BMPs	Retailer *Yes/No*	Wholesaler *Yes/No*	Regional *Yes/No*	BMP Checkbst	Flex Track	Gallons Per Capita Per Day GPCD	Not Cost Effective	Lack of Funding	Lack of Legal Authority	CUWCC MOU Requirements Met: Retailer *Yes/No*	CUWCC MOU Requirements Met: Wholesaler *Yes/No*	Date of BMP Report Submitted to CUWCC for (2007-2008) (MOU Signatories)	Date BMP Implementation Data Submitted to DWR in CUWCC Format (Non MOU Signatories) (3)	All Supporting Documents have been Submitted Yes/No
	✓	BMP 4 Retrofit of Existing Connections	yes					X				yes			December 2005 UWM Plan updated in 2010 UWMP	yes
	✓	BMP 5 Large Landscape Conservation Programs and Incentives														
	✓	BMP 6 High-Efficiency Washing Machine Rebate Programs														
✓	✓	BMP 7 Public Information	yes					X				yes			December 2005 UWM Plan and updated in 2010 UWMP	yes
✓	✓	BMP 8 School Education	yes					X				yes			December 2005 UWM Plan and updated in 2010 UWMP	yes
	✓	BMP 9 Conservation programs for Commercial, Industrial, and Institutional (CII) Accounts														
✓		BMP 10 Wholesale Agency Assistance Programs	exempt													
	✓	BMP 11 Conservation Pricing	yes					X				yes			Compliance documented in 2010 UWMP	yes
✓	✓	BMP 12 Conservation Coordinator	yes					X				yes			December 2005 UWM Plan and updated in 2010 UWMP	yes
	✓	BMP 13 Water Waste Prohibitions	yes					X				yes			Compliance documented in 2010 UWMP	yes
	✓	BMP 14 Residential ULFT Replacement Programs														

*C6: Wholesaler may also be a retailer (supplying water to end water users)

**C8, **C9, **, and C10: Agencies choosing an alternative conservation approach are responsible for achieving water savings equal or greater than that which they would have achieved using only BMP list.

(1) For details, please see: http://www.cuwcc.org/mou/exhibit-1-bmp-definitions-schedules-requirements.aspx.

(2) BMP is exempt based on cost-effectiveness, lack of funding, and lack of legal authority criteria as detailed in the CUWCC MOU

(3) Non MOU signatories must submit to DWR reports and supporting documents in the same format as CUWCC.

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