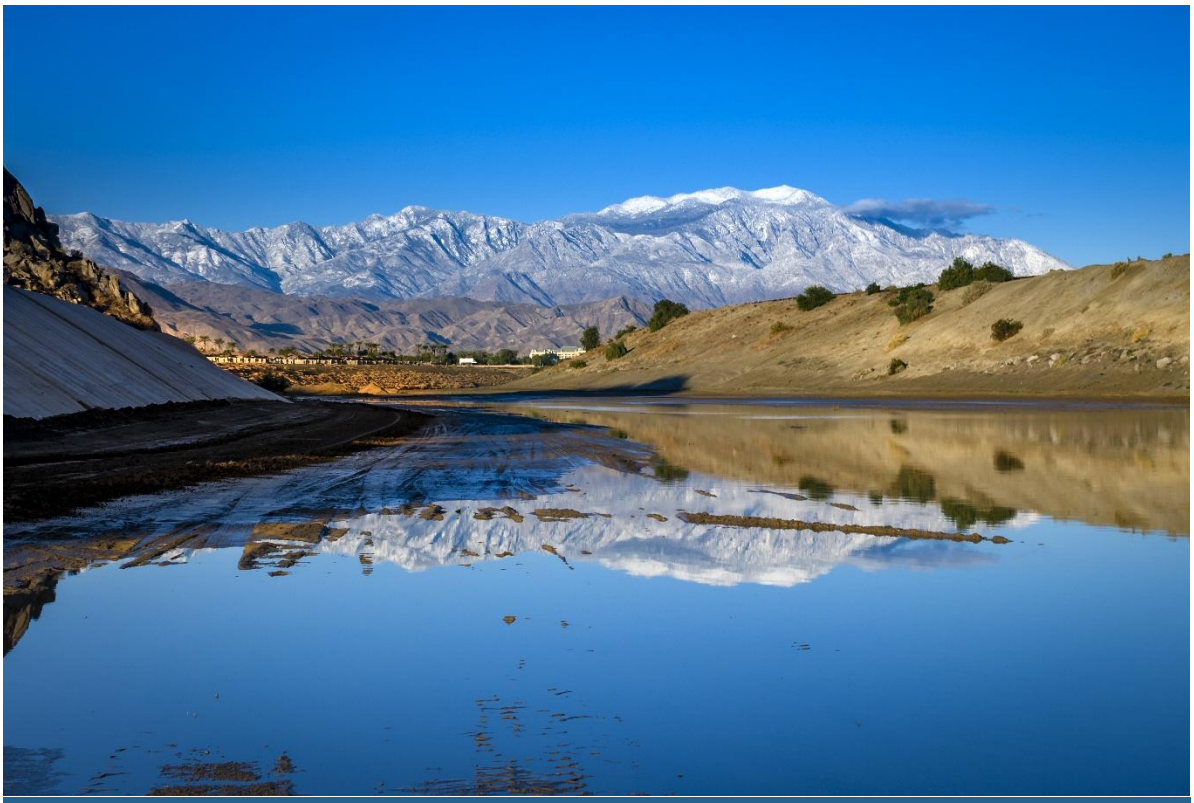

Coachella Valley Water District
Water Shortage Contingency Plan

Final Draft

prepared on behalf of

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WATER DISTRICT

Table of Contents

Tables

Attachments

1 Introduction

This Water Shortage Contingency Plan (WSCP) describes how the Coachella Valley Water District (CVWD) intends to predict and respond to foreseeable and unforeseeable water shortages, which occur when available water supplies are reduced to a level that cannot support typical demand at any given time. The WSCP serves as a planning document to guide the CVWD governing board, staff, and the public by identifying response actions that allow for efficient and accountable management of water shortages with predictability and transparency. While the WSCP does not provide absolute direction, it offers a range of response options to address varying water shortage conditions.

Water shortages may be triggered by hydrologic limitations in supply—such as prolonged periods of below-normal precipitation and runoff—failures or limitations in supply or treatment infrastructure, or a combination of both. Hydrologic or drought-related shortages typically develop and subside gradually, whereas infrastructure-related shortages tend to occur more suddenly and unpredictably. Water supplies may be interrupted or substantially reduced due to events such as drought, earthquakes that damage delivery or storage facilities, regional power outages, or toxic spills that affect water quality.

This WSCP describes the following:

1. **Water Supply Reliability Analysis.** Summarizes the CVWD's water supply analysis and reliability and identifies the key issues that may trigger a shortage condition.
2. **Annual Water Supply and Demand Assessment Procedures.** Describes the key data inputs, evaluation criteria, and methodology for assessing the system's reliability for the coming year and the steps to formally declare any water shortage levels and response actions.
3. **Six Standard Shortage Stages.** Establishes water shortage levels to clearly identify and prepare for shortages.
4. **Shortage Response Actions.** Describes the response actions that may be implemented or considered for each stage to reduce gaps between supply and demand as well as minimize social and economic impacts to the community.
5. **Communication Protocols.** Describes communication protocols under each stage to ensure customers, the public, and CVWD governing board are informed of shortage conditions and requirements.
6. **Compliance and Enforcement.** Defines compliance and enforcement actions available to administer demand reductions.
7. **Legal Authority.** Lists the legal documents that grant CVWD the authority to declare a water shortage and implement and enforce response actions.
8. **Financial Consequences of WSCP Implementation.** Describes the anticipated financial impact of implementing water shortage stages and identifies mitigation strategies to offset financial burdens.
9. **Monitoring and Reporting.** Summarizes the monitoring and reporting techniques to evaluate the effectiveness of shortage response actions and overall WSCP implementation. Results are used to determine if additional shortage response actions should be activated or if efforts are successful and response actions should be reduced.
10. **WSCP Refinement Procedures.** Describes the factors that may trigger updates to the WSCP and outlines how to complete an update.
11. **Special Water Features Distinctions.** Identifies exemptions for ponds, lakes, fountains, pools, and spas, etc.
12. **Plan Adoption, Submittal, and Availability.** Describes the process for the WSCP adoption, submittal, and availability after each revision.

CVWD is one of six agencies in the Coachella Valley participating in the development of a 2025 Regional Urban Water Management Plan (RUWMP). Each agency is adopting the RUWMP to meet its reporting requirements under the Urban Water Management Planning Act (UWMP Act). Each agency is also adopting its own WSCP. The agencies have sought to align their shortage levels and shortage response actions to the extent possible, with the intent of reducing confusion for neighboring customers during a shortage. This document is compliant with the California Water Code (CWC) Section 10632 and incorporated guidance from the California Department of Water Resources (DWR) 2025 UWMP Guidebook (DWR 2026).

2 Water Supply Reliability Analysis

This section provides a summary of the supply reliability analysis presented in Chapter 4 of the RUWMP and highlights key issues that could create a shortage condition.

The water supplies of the agencies in the Coachella Valley generally have a high degree of reliability. The RUWMP participating agencies meet most of their urban demands with groundwater produced from the Indio and Mission Creek Subbasins of the Coachella Valley Groundwater Basin. The groundwater basin is large enough to provide storage that allows continued production during dry periods. Because production exceeds the recharge provided by precipitation and return flows, the agencies use imported water to recharge the groundwater basin. These sources of imported water for replenishment include:

- **Colorado River water** that CVWD receives primarily through the Coachella Canal for replenishment at Thomas E. Levy Groundwater Replenishment Facility (GRF) and Palm Desert GRF, and a small portion through Metropolitan Water District of Southern California's (MWD's) Colorado River Aqueduct for replenishment at Whitewater River GRF.
- **State Water Project (SWP) water** that CVWD and Desert Water Agency (DWA) have rights to receive. Because the SWP infrastructure does not extend into the Coachella Valley, CVWD and DWA have an exchange agreement with MWD to receive Colorado River water from its Colorado River Aqueduct for replenishment at Whitewater River GRF. In return, MWD receives SWP water through the SWP infrastructure based on the annual SWP allocations to CVWD and DWA.

CVWD's Colorado River water supplies meet the demands of agricultural and non-potable customers, as well as groundwater replenishment (to augment the Valley's potable water supply). With the 2007 Interim Guidelines for the Colorado River expiring in 2026, CVWD has been actively participating in the negotiations for the successor agreement. Although the terms of the agreement are still being negotiated, there is a likelihood that supply reductions may be necessary to respond to changes in the Colorado River hydrology. Any impacts to CVWD's supplies and resultant actions will be discussed with the CVWD Board and updated in CVWD's Canal Water Shortage Contingency Plan, which is Chapter 3.10, Article XII of CVWD's administrative code.

Drought conditions in the Sierra Nevada would influence the SWP water allocation; thus, reducing the SWP Exchange water received by CVWD and DWA. Reductions in SWP allocations have occurred during prior droughts and SWP reliability is forecasted by DWR to continue declining with future climate changes (DWR 2025). SWP exchange water is used for replenishment of the Indio and Mission Creek Subbasins and is not a direct source of urban water supply. Consequently, water use restrictions due to drought involving the SWP water supply would likely be implemented only during a prolonged drought.

During dry periods when less imported water is available, groundwater production will exceed the amount of recharge, and the volume of groundwater in storage will be reduced. However, these reductions can be reversed in wet years when additional imported water is available. The Coachella Valley Groundwater Basin is a large basin which provides a buffer during dry periods, thus allowing the agencies to develop long-term plans and programs to manage regional water supplies. The Indio Subbasin Alternative Plan Update (Indio Subbasin GSAs 2021) and Mission Creek Subbasin Alternative Plan Update (Mission Creek Subbasin Management Committee 2021) both address groundwater sustainability considering hydrologic variability of replenishment supplies and other local water sources.

The reliability analysis for CVWD is presented in Section 4.7 of CVWD's chapter of the RUWMP. Although that analysis demonstrates that the region's urban water supply is reliable, there are potential issues that could create a shortage condition. These include:

- An extended drought more severe than historic events, possibly exacerbated by climate change.
- A natural disaster or a malevolent act that leads to prolonged disruption of imported water delivery from the Colorado River or the SWP.
- Reductions in imported water supply due to environmental restrictions related to endangered species or habitat protection.
- Identification of a currently unregulated contaminant that has widespread effects on the region's groundwater supply.
- Regulatory mandates to reduce water use.

Water shortage contingency planning provides a way to plan for these risks and anticipate actions that can be implemented to manage the impacts. This plan describes how CVWD intends to respond to such shortage events. The responses have been aligned with those of other RUWMP participating agencies to the extent possible.

3 Annual Water Supply and Demand Assessment Procedures

CVWD is required to prepare an Annual Water Supply and Demand Assessment (Annual Assessment) and submit it to DWR each year. The Annual Assessment is intended to meet requirements of Water Code Section 10632.1 and assess the likelihood of a water shortage occurring during the next 12 months. This section of the WSCP outlines the procedures that CVWD will use to prepare the Annual Assessment. These are consistent procedures that CVWD will follow annually to determine whether to activate the WSCP.

3.1 Decision-Making Process

DWR requires a defined decision-making process for performing the Annual Assessment. The process and anticipated timeline are presented in Table 1.

Table 1. Annual Assessment Decision-Making Process

Anticipated Timeline of Each Year	Activities
February	CVWD staff review available data related to anticipated supplies and demands.
March	The six agencies participating in the Coachella Valley RUWMP review the data and determine whether a consistent region-wide determination on water supply reliability can be made. If needed, individual agencies may elect to activate their WSCP at different shortage levels than other participating agencies.
April	CVWD staff make a determination whether to recommend implementation of shortage response actions.
May	If shortage response actions are to be implemented, CVWD management present the recommendation to the governing board for consideration. If the governing board decides to implement the WSCP, provide public notice of a hearing to consider changes in the implementation of the shortage response actions.
June	CVWD staff prepare the Annual Assessment and submit to DWR by July 1.

3.2 Data and Methodologies

This section describes the data and methodologies that will be used to evaluate water system reliability for the Annual Assessment.

3.2.1 Evaluation Criteria

CVWD will rely on locally applicable criteria for each Annual Assessment. These criteria will include the findings of the Annual Reports prepared for the Indio Subbasin and the Mission Creek Subbasin for compliance with the Sustainable Groundwater Management Act. Findings from CVWD's annual Engineer's Report on Water Supply and Replenishment Assessment will also be incorporated.

3.2.2 Water Supply

CVWD's anticipated supplies will be quantified for the near-term future, and descriptive text will be used to note any anticipated reductions in supply.

3.2.3 Current Year Unconstrained Customer Demand

CVWD will prepare an estimate of unconstrained demand (as the term is used in Water Code Section 10632(a)(2)(B)(i)). The estimated demand will be calculated using the demand projection approach described in Section 4.7 of CVWD's chapter of the RUWMP, in combination with updated data for connections, climate, changes in land use, and recent water usage history.

3.2.4 Current Year Supply

CVWD will describe the anticipated use of water supplies for the coming year, with the assumption that the following year will be dry. The supplies will be characterized in a manner consistent with the RUWMP, in combination with updated data for climate and recent observations.

3.2.5 Infrastructure Considerations

CVWD will describe any potential infrastructure constraints on the ability to deliver adequate supplies to meet expected customer demands in the coming year. CVWD will verify that its system of wells, pipelines, pump stations, and storage tanks have adequate capacity to deliver the anticipated demands. CVWD will describe any anticipated capital projects that are intended to address constraints in production, treatment, or distribution.

3.2.6 Other Factors

CVWD will describe any specific locally applicable factors that could influence or disrupt supplies. CVWD will also describe unique local considerations that are incorporated as part of the Annual Assessment.

4 Six Standard Water Shortage Levels

The RUWMP participating agencies have elected to use the six standard shortage levels included in guidance documents prepared by DWR. The six standard water shortage levels correspond to progressively increasing estimated shortage conditions (up to 10-, 20-, 30-, 40-, 50- percent, and greater than 50-percent shortage compared to the normal reliability condition). These levels are described in Table 2.

Table 2. Water Shortage Contingency Plan Levels

Shortage Level	Percent Shortage Range	Description	Shortage Response Actions
1	Up to 10%	Normal water supplies	Mandatory prohibitions defined by the state, rebate programs, ongoing restrictions that include water waste, and tiered rates or conservation penalties.
2	Up to 20%	Slightly limited water supplies	Outdoor water use restrictions based on time of day, increased water waste patrols
3	Up to 30%	Moderately limited water supplies	Outdoor water use restrictions on days per week, restrictions on filling swimming pools
4	Up to 40%	Limited water supplies	Limits on new landscaping, expanded public information campaign
5	Up to 50%	Significantly limited water supplies	Limits on watering of parks or school grounds
6	Greater than 50%	Severe shortage or catastrophic incident	No potable water use for outdoor purposes

Each level in Table 2 represents an anticipated reduction in the supplies that would normally be available to CVWD. These supply reductions could be the result of a variety of potential causes including natural forces, system component failure or interruption, regulatory actions, contamination, or any combination of factors. CVWD may need to activate shortage levels across its entire service area or within certain areas that are impacted by an event.

The levels involve voluntary and mandatory conservation measures and restrictions, depending on the causes, severity, and anticipated duration of the water supply shortage. The locally appropriate shortage response actions that would be taken at each level to address the resulting gap between supplies and demands are described in the following section.

5 Shortage Response Actions

This section describes the shortage response actions that would be taken by CVWD at each shortage level. These actions have been grouped into categories including:

- Supply Augmentation Actions
- Demand Reduction Actions and Mandatory Use Restrictions
- Operational Changes

5.1 Supply Augmentation

For long-range planning, CVWD continues to evaluate opportunities for transfers, exchanges, and other purchases of imported water to increase supply reliability. CVWD and DWA collaborate to replenish the Indio and Mission Creek Subbasins with imported water, creating a stored supply that can be used for emergencies or longer-term shortages. CVWD and DWA are also making investments in increasing supply reliability from the SWP through the Delta Conveyance Facility and in securing new supplies like Sites Reservoir.

Additionally, the RUWMP participating agencies continue to implement water conservation measures and increase use of recycled water usage to reduce groundwater demand. CVWD's demand management programs are described in Section 4.9 of CVWD's chapter of the RUWMP.

In their WSCP, agencies have the option of identifying short-term supply augmentation actions that would be taken during a shortage. These actions are intended to be separate from the long-range planning efforts to sustainably manage the groundwater basin. The short-term supply augmentation measures that could be implemented are presented in Table 3.

Table 3. Supply Augmentation and Other Actions

Shortage Level	Supply Augmentation Methods and Other Actions by Water Supplier	How much is this going to reduce the shortage gap?		Additional Explanation or Reference
		Volume or Percentage	Shortage Gap Reduction Value	
1 - 6	Exchanges	Volume	Medium	Emergency connections with neighboring agencies could be activated or constructed to help exchange water with adjoining systems.
5	Increased Non-Potable Water Use	Volume	Medium	In areas where recycled water or other non-potable supply is available, customers could be mandated to use these supplies and cease use of potable water.
6	Other Actions	Volume	Medium	Additional non-potable water sources such as new shallow groundwater wells.

5.2 Demand Reduction Actions and Mandatory Use Restrictions

The RUWMP participating agencies have aligned their demand reduction actions to the greatest extent possible, while allowing each agency to tailor its response to the unique characteristics of its service area. The agencies conducted public workshops to gather input on actions that could be taken during a water shortage. The input from stakeholders was used to select and prioritize actions that reflected the values of the community. Key elements of the input included:

- The importance of recognizing the conservation efforts that many customers have already made and not imposing requirements for all customers to meet the same percentage reduction in water use.
- The importance of involving Homeowner Associations (HOAs) to help implement and communicate response actions to individuals.
- The benefits of tiered rates in allowing customers to pay less for their basic efficient use and more for higher use.
- A balanced program should include incentives (such as expanded rebates for turfgrass removal) as well as penalties (such as drought or conservation penalties).
- A range of approaches is needed to communicate with customers and end users, including social media, web sites, bill inserts, presentations, and virtual tours, ideally in multiple languages.

The demand reduction actions that could be implemented at each shortage level are shown in Table 4. During a shortage, CVWD may implement some or all of the actions as needed, depending on actual conditions.

As described in Section 4.9 of CVWD's chapter of the RUWMP, CVWD implements demand management measures (DMMs) to increase water use efficiency. The RUWMP includes description of water waste prevention ordinances, metering, conservation pricing, and public education and outreach programs for conservation.

CVWD implements mandatory restrictions on water use through its Landscape Ordinance provided in Attachment A. This ordinance includes prohibitions on the installation of non-functional turf in new development and penalties for violation of inefficient landscape irrigation runoff. Through this ordinance, customers who may be exceeding Maximum Applied Water Allowance provided by CVWD may be interviewed for water usage to ensure compliance and may be found to have service discontinued if causing water waste.

Table 4. Demand Reduction Actions

Shortage Level	ID	Demand Reduction Actions	How much is this going to reduce the shortage gap?		Penalty or Enforcement
			Volume or Percentage	Shortage Gap Reduction Value	
1	1.1	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.	Volume	Low	Yes
	1.2	Using any water in a fountain or other decorative water feature is prohibited, unless the water recirculates.	Volume	Low	Yes
	1.3	Applying water to driveways, sidewalks, concrete or asphalt is prohibited unless to address immediate health and safety needs. Reasonable pressure washer or water broom use is permitted.	Volume	Low	Yes
	1.4	Spray irrigation of outdoor landscapes during and within 48 hours after rainfall of 0.10 inches is prohibited.	Volume	Low	Yes
	1.5	Using a hose to wash a vehicle, windows, or solar panels is prohibited unless an automatic shut-off nozzle or pressure washer is used.	Volume	Low	Yes
	1.6	Broken sprinklers shall be repaired within five business days of notification by agency, and leaks shall be repaired as soon as practical.	Volume	Low	Yes
	1.7	Draining and refilling of private swimming pools is discouraged, unless necessary for health and safety or leak repair.	Volume	Low	No
	1.8	Hotels will provide guests the option of choosing not to have towels and linens laundered daily.	Volume	Low	No
	1.9	Agency shall discourage overseeding.	Volume	Low	No
	1.10	Agency shall provide rebates for landscape efficiency.	Volume	High	No
	1.11	Agency shall offer water use surveys/audits.	Volume	Medium	No
	1.12	Agency shall provide rebates on plumbing fixtures and devices.	Volume	Medium	No
	1.13	Agency may impose water budget based tiered rates or conservation penalties to encourage water use efficiency	Volume	Medium	Yes

Shortage Level	ID	Demand Reduction Actions	How much is this going to reduce the shortage gap?		Penalty or Enforcement
			Volume or Percentage	Shortage Gap Reduction Value	
2	2.1	During times designated by the CVWD Board, outdoor water use is prohibited for spray irrigation except for leak checks or with an agency approved conservation alternative plan.	Volume	Medium	Yes
	2.2	Restaurants can serve water only on request.	Volume	Low	No
	2.3	Agency shall encourage use of non-potable water for construction, if available.	Volume	Low	No
	2.4	Agency shall actively discourage overseeding.	Volume	Medium	No
	2.5	Agency shall expand public information campaign.	Volume	Medium	No
	2.6	Agency shall increase water waste patrols.	Volume	Medium	Yes
	2.7	Agency shall reduce hydrant and dead-end line flushing.	Volume	Low	No
3	3.1	Outdoor water use is allowed only three days a week for spray irrigation (Monday, Wednesday, and Friday).	Volume	High	Yes
	3.2	Drip or subterranean irrigation is allowed seven days per week, during non-daylight hours.	Volume	Medium	Yes
	3.3	Commercial nurseries are to use water only on alternate days during non-daylight hours for outside operations.	Volume	Low	Yes
	3.4	Decorative ponds, non-irrigation system golf course water hazards, fountains, and other waterscape features are not to be filled or replenished.	Volume	Low	Yes
	3.5	No filling of swimming pools or landscaping ponds unless necessary for health and safety or leak repair.	Volume	Low	Yes
	3.6	Commercial car washes must use recycled water or recirculating water systems.	Volume	Medium	Yes
	3.7	Spray irrigation of medians and parkways is prohibited.	Volume	Medium	Yes
	3.8	Agency shall encourage counties, cities, Homeowners Associations (HOAs) and other enforcement agencies to suspend code enforcement and fines for brown turfgrass areas and to otherwise comply with new State laws regarding limitations on such enforcement.	Volume	Low	No

Shortage Level	ID	Demand Reduction Actions	How much is this going to reduce the shortage gap?		Penalty or Enforcement
			Volume or Percentage	Shortage Gap Reduction Value	
	3.9	Agency shall strengthen customer billing messages with use comparisons.	Volume	Medium	No
	3.10	Agency shall implement water use audits targeted to key customers to ensure compliance with directives.	Volume	Medium	No
	3.11	Agency shall expand rebate programs.	Volume	Medium	No
	3.12	Agency shall impose mandatory drought penalties	Volume	High	Yes
4	4.1	Turfgrass landscapes may not be watered except where subterranean or non-potable water systems are used	Volume	High	Yes
	4.2	Agency shall increase mandatory drought penalties from 3.12.	Volume	High	Yes
	4.3	Agency shall expand public information campaign.	Volume	Medium	No
5	5.1	Watering turfgrass is prohibited.	Volume	High	Yes
	5.2	The use of misting systems is prohibited.	Volume	Medium	Yes
	5.3	Turfgrass at parks and school grounds are to be watered with recycled water, if available, or not at all.	Volume	Medium	Yes
	5.4	Golf course greens and tees may be watered no more than two times per week during non-daylight hours with recycled water, or not at all.	Volume	Medium	Yes
	5.5	Trees, desert plants and shrubs may be watered only with drip, subterranean or non-adjustable bubbler irrigation systems during non-daylight hours.	Volume	High	Yes
	5.6	Agency shall increase mandatory drought penalties from 4.2.	Volume	High	Yes
	5.7	Agency shall impose moratorium or net zero demand on new connections.	Volume	N/A	Yes
6	6.1	Commercial nurseries shall discontinue all use of potable water for watering and irrigation.	Volume	Low	Yes
	6.2	Watering of livestock is permitted as necessary.	Volume	N/A	Yes
	6.3	Outdoor water use is prohibited.	Volume	High	Yes
	6.4	Restaurants must use disposable cups, plates, and utensils.	Volume	Low	Yes
	6.5	Agency shall implement mandatory rationing.	Volume	High	Yes

5.3 Operational Changes

CVWD has identified potential operational changes that could be made to help address a short-term gap between demands and available supplies. These include improved monitoring and analysis of customer water usage, reductions in flushing of hydrants and dead-end lines, and use of emergency connections with neighboring water agencies. Some of the potential actions are included in Table 4. CVWD may also expedite planned system improvement projects that include reduction in water loss (e.g., replacement of water mains that are experiencing higher rates of leaks and breaks).

5.4 Additional Mandatory Restrictions

CVWD has identified a series of restrictions that could be implemented at different shortage levels. These restrictions are included in the demand reduction actions in Table 4.

5.5 Emergency Response Plan

The Water Code requires that an agency's WSCP address catastrophic water shortages and plans to address them. This information can be addressed in the agency's Emergency Response Plan (ERP). CVWD's ERP contains sensitive information related to potential vulnerabilities or impacts of natural disasters or malevolent acts. Therefore, these documents are not typically made publicly available.

CVWD's ERP outlines specific disaster-related procedures to guide staff in responding efficiently to catastrophic interruptions of water supply.

Five of the RUWMP participating agencies collaborate on planning efforts, including emergency response, through the Coachella Valley Regional Water Management Group (CVRWMG). In addition, CVWD, DWA, Indio, and MSWD are members of the California Water/Wastewater Agency Response Network (CalWARN), which supports and promotes emergency preparedness. More information about CalWARN is available at their web site at www.calwarn.org.

The region's imported water supplies from the Colorado River and the SWP could be disrupted by an earthquake. Because the agencies use local groundwater to meet urban demands, the agencies could continue to meet short-term urban demands with groundwater production. The agencies have installed backup generators at key water production facilities to allow continued operation during a power outage.

DWR has plans in place to make emergency repairs to the SWP, and MWD has plans in place to make emergency repairs to the CRA. CVWD has plans to make emergency repairs to the Coachella Canal. CVWD staff receives regular Incident Command System (ICS) training through the Federal Emergency Management Agency (FEMA), and drills are conducted routinely. CVWD remotely monitors the status of most key facilities at CVWD headquarters, which enables them to detect areas affected by disasters. The other RUWMP participating agencies also participate in ICS training and regularly monitor key water facilities remotely.

If imported water supplies were disrupted for an extended period, it would reduce the water supply available for replenishment of the groundwater basin. It could also lead to increased groundwater pumping by non-urban users who normally use imported canal water. CVWD would implement levels of this WSCP as needed if pumping needed to be decreased while imported water supplies were interrupted.

5.6 Seismic Risk Assessment and Mitigation Plan

Water Code Section 10632.5 requires the agencies to assess seismic risk to water supplies as part of their WSCP. The code also requires a mitigation plan for managing seismic risks. In lieu of conducting their own seismic risk assessment, which can be a lengthy process, suppliers can comply with the Water Code requirement by submitting the relevant local hazard mitigation plan or multi-hazard mitigation plan.

CVWD is a participant in the Riverside County Multi-Jurisdictional Local Hazard Mitigation Plan (MJLHMP) which was updated in 2025 (Riverside County 2023). The Riverside County MJLHMP includes an assessment of the region's vulnerability to a broad range of hazards, including earthquakes. It also describes mitigation strategies and actions to reduce the impacts of a seismic event. The RUWMP

participating agencies continue to include seismic risk assessment in their planning process for system improvements.

Additionally, CVWD has also prepared and implements its own LHMP which was updated in 2024 (CVWD 2024). The CVWD LHMP is used to identify short- and long-term policies, programs, and other activities to reduce risk of CVWD assets and protect residents following hazard events.

5.7 Shortage Response Action Effectiveness

As a standard operating procedure, water is tracked through the production, distribution, and billing systems. During water shortage conditions, water use can be measured in comparison to what is considered to be normal year demand (i.e., current customer base with approximately average rainfall), or in reference to a specific base year as may be dictated by Statewide requirements.

The effectiveness of actions initiated at each shortage response is challenging to measure and can vary significantly. Effectiveness is also impacted by successful communication and outreach efforts. It is also difficult to assess the effectiveness of each activity separately as each stage implements several activities at once. For the purpose of WSCP implementation, it is assumed that the upper end of the water savings would come from the use of multiple demand reduction actions in a stage. Reduction in the shortage gap for Stages 2-6 assumes all measures in the previous stage(s) are implemented and those savings are counted toward the total reduction in the shortage gap.

6 Communication Protocols

Timely and effective communication is a key element of WSCP implementation. CVWD will need to inform customers, the general public, and other government entities of WSCP actions taken during a water shortage (either one determined by the Annual Assessment, an emergency, catastrophic, or other event). An overview of planned communication approaches is provided in Table 5. These protocols have been aligned between the RUWMP participating agencies where possible, but some are tailored to the needs of CVWD's service area. CVWD will adjust its communication strategy as needed to address issues that are impacting the entire service area or limited areas.

Table 5. Communication Plan Outline

Level 1 Up to 10% Voluntary Conservation	Level 2 Up to 20% Mandatory Conservation	Levels 3 and 4 Up to 30% or 40% Mandatory Conservation	Levels 5 and 6 Up to 50% or Over 50% Mandatory Conservation
Standard outreach efforts in effect (media relations, social media, website)	Update conservation messages to generate immediate actions/behaviors by public, include information on enforcement actions	Update conservation messages to raise awareness for more severe water-saving actions/behaviors by public, highlight need for reduced outdoor water use	Update conservation messages to reflect extreme or emergency condition and likely need to focus water use on health/safety needs
Promote ongoing Water Use Efficiency (WUE) programs and tools and partnerships designed to achieve long-term water management goals	Increase promotion of ongoing WUE programs/tools with targeted promotion to highly impacted customers.	Increase promotion of ongoing WUE programs/tools with targeted promotion to highly impacted customers.	Suspend promotion of long-term WUE programs/tools to focus on imminent needs.
Standard conservation campaign including promotion of water efficiency rebate programs.	Supplement Level 1 activities with additional tactics as needed; provide regular condition updates to customers as needed and to the media upon request; promote water assistance programs to vulnerable populations; enhance outreach to impacted industries and customers.	Supplement Level 2 outreach with additional tactics as needed; provide regular condition updates to customers and the media as needed; promote water assistance programs to vulnerable populations; increase outreach to impacted industries and customers.	Supplement Level 3-4 outreach with additional tactics as needed; provide regular condition updates to customers and the media as needed; promote water assistance programs to vulnerable populations; increase outreach to impacted industries and customers.
Board reports on public communication and water-use efficiency outreach activities via the monthly General Manager's Report.	Provide updates to elected officials, civic leaders, and the board as needed.	Provide conservation updates to the board as needed; issue briefings with elected officials, civic and business leaders as needed.	Continue providing board reports and briefings as needed; issue briefings with elected officials, civic and business leaders as needed.
Standard coordination with regional partners including other water agencies.	Enhance coordination with local neighboring agencies, regional partners and local/state/federal policy makers as needed.	Continue enhanced coordination with local neighboring agencies, regional partners and local/state/federal policy makers as needed.	Increase enhanced coordination with neighboring agencies, regional partners, and local/state/federal policy makers as needed (e.g. daily or weekly briefings or email updates, etc.).

7 Compliance and Enforcement

This section describes how CVWD will ensure compliance with and enforce provisions of the WSCP. The RUWMP participating agencies have worked together to align their policies where possible, but each agency implements its compliance and enforcement actions within its service area.

7.1 Penalties

The penalties that could be imposed for non-compliance are summarized in Table 6. As described in Section 4.9 of CVWD's chapter of the RUWMP, CVWD Landscape and Irrigation System Design Ordinance includes prohibitions on the installation of non-functional turf in new development and penalties for non-compliance with the Ordinance. Through this ordinance, customers who may be exceeding Maximum Applied Water Allowance provided by CVWD may be interviewed for water usage to ensure compliance and may be found to have service discontinued if causing water waste.

Table 6. Enforcement Actions

Water Shortage Level	First Three Violations	Fourth Violation (within rolling 12 months)	Fifth Violation (within rolling 12 months)	Subsequent Violations	Additional Information
1 - 6	Notice of non-compliance	$50 Fine	$100 Fine	$200 fine, followed by $500 fine followed by $1,000 fine, followed by $2,000 fine	The General Manager may initiate procedures to terminate water service, 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 more than six violations of the Ordinance in a rolling twelve-month period.

7.2 Appeals and Exemption Process

This section describes the appeals and exemption processes.

Any water user violating the regulations and restrictions on water use may receive a written notice for the violation. The water user shall have seven days from receipt of the notice to submit a written request for a hearing. If no hearing is requested, or at the hearing it is determined that the water user has committed a violation, a civil penalty may be levied.

The government codes and ordinances that are used to implement these policies and processes are discussed in Section 7.

8 Legal Authorities

This section describes the legal authorities that CVWD relies upon to implement the shortage response actions and the associated enforcement actions.

CVWD's District Code Section 3.30 codifies the WSCP (CVWD 2026). A copy of the legal authority is included in Attachment B.

8.1 Declaration of Water Shortage

In accordance with Water Code Chapter 3 (commencing with Section 350) of Division 1 general provisions regarding water shortage emergencies, CVWD shall declare a water shortage emergency in the event of a catastrophic interruption in supply.

8.2 Proclamation of Local Emergency

CVWD shall coordinate with any city or county within which it provides water supply services for the possible proclamation of a local emergency under California Government Code, California Emergency Services Act (Article 2, Section 8558). Table 7 contains a list of contacts for all cities or counties for which the RUWMP participating agencies provide service in the WSCP. Along with developed coordination protocols, this can facilitate compliance with this section of the Water Code in the event of a local emergency as defined in subpart (c) of Government Code Section 8558.

Table 7. City and County Coordination on Proclamation of Emergencies

City or County	Contact	CVWD	CWA	DWA	Indio	MDMWC	MSWD
Imperial County	Office of Emergency Services	X					
Riverside County	Emergency Management Department	X	X	X	X	X	X
City of La Quinta	Emergency Management Division	X			X	X	
City of Indio	Emergency Services Coordinator	X	X		X		
City of Coachella	Emergency Services Coordinator	X	X		X		
City of Palm Desert	Emergency Services Coordinator	X					
City of Cathedral City	Emergency Manager	X		X			
City of Indian Wells	Emergency Services Coordinator	X					
City of Rancho Mirage	Emergency Services Coordinator	X					
City of Palm Springs	Emergency Management Coordinator			X			X
City of Desert Hot Springs	Emergency Services Coordinator			X			X

9 Financial Consequences of WSCP Implementation

This section describes the anticipated financial consequences to CVWD of implementing the WSCP. The description includes potential reductions in revenue due to lower water sales and increased expenses associated with implementing the shortage response actions.

9.1 Financial Impacts and Mitigation Action

Potential financial impacts of implementing the WSCP could include:

- Reduced revenue from reduced water use
- Increased staff costs for tracking, reporting, patrolling, and enforcing restrictions
- Economic impacts associated with water-dependent businesses in the service area Potential mitigation measures include:
- Triggering drought rate structures or surcharges
- Using financial reserves
- Reducing operation and maintenance expenses (expenses related to source of supply and pumping will fall due to reduced imported water availability and/or water production)
- Deferring capital improvement projects
- Reducing future projected operation and maintenance expenses
- Increasing fixed readiness-to-serve charge
- Increasing commodity charge and water adjustment rates to cover revenue shortfalls
- Seeking alternative source of funding, such as state or federal grants or loans
- Other financial management mechanisms

CVWD will monitor financial conditions during a water shortage and take appropriate actions as needed. CVWD maintains financial reserves that can be used to continue operations during a period of reduced water sales. CVWD has the ability to increase water rates or implement surcharges or penalties to increase revenues from water sales.

9.2 Reporting Cost of Compliance with Excessive Water Use Prohibition During Drought Emergency

To ensure customers comply with the restrictions implemented in a water shortage emergency, additional costs may be incurred to monitor and enforce response actions. The incurred cost may vary depending on the shortage stage and duration of the water shortage emergency. The cost of compliance may be tracked when a shortage is declared. CVWD may track staff time and resources used to implement the WSCP, including reduced revenue, implementing and enforcing shortage response actions, and communication and outreach efforts.

CVWD currently has Operating and Capital Improvement Program reserves, funded and available for use as intended. In the short term, the use of these reserves would have no impact on CVWD customers or CVWD. In the long term, rates would possibly be raised to replenish reserves.

10 Monitoring and Reporting

This section describes how CVWD will monitor and report on implementation of the WSCP.

CVWD will gather data on key water use metrics and use the data to evaluate the effectiveness of response actions in achieving their intended water use reduction purposes. CVWD will also gather data on customer compliance to evaluate the effectiveness of enforcement actions. CVWD will gather and report data at frequencies adequate to meet reporting requirements established by the State Water Resources Control Board and other government agencies, as needed.

CVWD will monitor water use by customers using billing systems and operational control systems to monitor production and consumption. Each customer is metered, and billing records will be compiled and used to observe trends in water consumption. Each groundwater well and imported water connection point is also metered, and production records will be used to observe trends in water production. Levels in reservoirs can be monitored using the operational control systems to help identify potential high usage or leaks. CVWD staff may also perform field visits and record observations to monitor water use and identify potential issues for follow-up.

For agencies that have budget-based rates, the consumption by customers will be compared to the water budgets to determine effectiveness of response actions. For agencies without defined water budgets for each customer, the consumption records will be aggregated by customer class to evaluate response actions and identify potential additional measures.

11 WSCP Refinement Procedures

CVWD will monitor the implementation of this plan to evaluate its effectiveness as an adaptive management tool. The monitoring and reporting program described in Section 9 will provide information on the effectiveness of the shortage response actions during any shortage levels that may be invoked. If CVWD determines that the shortage response actions are not effective in producing the desired results, CVWD will initiate a process to refine the WSCP. CVWD will consider the addition of new shortage response actions, or changing the levels when shortage response actions are implemented. Suggestions for refinements will be collected from agency staff, customers, industry experts, and the general public.

The RUWMP participating agencies will share data and suggestions for refinement to identify opportunities to increase the effectiveness of the WSCP while maintaining alignment with other agencies in the region when possible.

12 Special Water Feature Distinction

The RUWMP participating agencies have distinguished swimming pools and spas as recreational water features, while non-pool and non-spa water features are considered decorative water features. This distinction is used in the shortage response actions because decorative water features have the potential to use recycled water, while pools and spas (recreational water features) use potable water for health and safety considerations. However, this distinction does not apply to the hot mineral spring pools and spas throughout the Desert Hot Springs area; while they are recreational, they also do not rely on potable water.

13 Plan Adoption, Submittal, and Availability

This 2025 WSCP was presented for adoption at the CVWD public meeting on May 27, 2026. Notifications were sent to the cities and counties as described in CVWD's 2025 UWMP. To comply with the notice to the public, CVWD published notices in the local newspaper at least two weeks in advance with five days between publications. The WSCP was also made available prior to the public hearing.

The WSCP was formally adopted on May 27, 2026, by CVWD Ordinance, included in the 2025 UWMP. The WSCP was made available to all staff, customers, and any affected cities, counties, or other members of the public at CVWD's office and online within 30 days of the adoption date.

The WSCP was submitted to DWR via the Water Use Efficiency Data Portal at the same time as the 2025 UWMP, but no later than July 1, 2026. A hard copy of the 2025 UWMP and WSCP were submitted to the California State Library within 30 days of adoption. Electronic and/or hard copies were provided to all cities and counties within CVWD's service area within 30 days of adoption.

Based on DWR's review of the WSCP, CVWD will make any amendments in its adopted WSCP, as required and directed by DWR. If CVWD revises its WSCP, then an electronic copy of the revised WSCP will be submitted to DWR within 30 days of its adoption.

14 References

Coachella Valley Water District (CVWD). 2024. *2024 Local Hazard Mitigation Plan Update*. Available: https://www.cvwd.org/611/Local-Hazard-Mitigation-Plan. Accessed: March 2026.

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Riverside County, Emergency Management Department. 2023. County of Riverside Operational Area, *Multi-Jurisdictional Local Hazard Mitigation Plan (MJLHMP).* Revised May 2025. Available: https://rivcoready.org/sites/g/files/aldnop181/files/users/user41/MJLHMP%205.1.25a.pdf. Accessed: March 2026.

California Department of Water Resources (DWR). 2025. *The State Water Project Draft Delivery Capability Report 2025.* Available: https://s3.amazonaws.com/og-production-open-data-cnra-892364687672/resources/5d238ff5-899b-4357-8835-5b043f61f5da/draft_dcr25_mainreport_final_2025-12-17.pdf?X-Amz-Algorithm=AWS4-HMAC-SHA256&X-Amz-Credential=AKIAJJIENTAPKHZMIPXQ%2F20260326%2Fus-east-1%2Fs3%2Faws4_request&X-Amz-Date=20260326T153526Z&X-Amz-Expires=86400&X-Amz-SignedHeaders=host&X-Amz-Signature=e566cc11139e9b5f7a637211d7d4c9398103a10178af68066d0fce98ee10b431. Accessed: March 2026.

_____2026. 2025 *Urban Water Management Plan Guidebook.* Available: water.ca.gov/-/media/DWR-Website/Web-Pages/Programs/Water-Use-And-Efficiency/Urban-Water-Use-Efficiency/Urban-Water-Management-Plans/Final-2025-UWMP-Guidebook/Final-2025-UWMP-Guidebook-Accessible.pdf. Accessed: February 2026.Indio Subbasin Groundwater Sustainability Agencies (GSAs). 2021. *2022 Indio Subbasin Water Management Plan Update: Sustainable Groundwater Management Act Alternative Plan*. Available: https://www.indiosubbasinsgma.org/alternative-plan-update/. Accessed: February 2026.

Mission Creek Subbasin Management Committee. 2021. *2022 Mission Creek Subbasin Alternative Plan Update*. Available: http://www.missioncreeksubbasinsgma.org/alternative-plan-update/. Accessed: February 2026.

Attachment A. Coachella Valley Water District Landscape and Irrigation Design Criteria Ordinance

ORDINANCE NO. 1302.5

AN ORDINANCE OF THE COACHELLA VALLEY WATER DISTRICT ESTABLISHING 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 homeowner-occupied 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).

   e. Any residential project with an aggregate landscape area of 2,500 square feet or less may comply with the performance requirements of this ordinance or conform to the prescriptive measures contained in Appendix H.

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 planting areas, turf areas, and water features in a landscape design plan subject to the Maximum Applied Water Allowance Calculation. The landscape area does not include footprints of buildings or structures, sidewalks, driveways, parking lots, decks, patios, gravel or stone walks, and other non-irrigated areas designated for non-development (e.g., open spaces and existing native vegetation).

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 Total Water Use shall not exceed the Maximum Applied Water Allowance . Special Landscape Areas, include recreation areas, areas permanently and solely dedicated to edible plants such as orchards and vegetable gardens, and areas irrigated with recycled water are subject to the MAWA with an ETAF not to exceed 1. MAWA = (ETo)(0.62)[(ETAF x LA) + ((1-ETAF) X SLA)].

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.

NON-POTABLE WATER – Canal water or treated or recycled wastewater of a quality suitable for non-potable uses such as landscape irrigation. Non-potable water is not for human consumption.

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, excluding private single family residential lots, designated for active play, recreation or public assembly in parks, sports fields, picnic grounds, amphitheaters or golf course tees, fairways, roughs, surrounds and greens.

R

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.

SPECIAL LANDSCAPE AREA (SLA) – An area of the landscape dedicated solely to edible plants, recreational areas, areas irrigated with recycled water, water features using recycled water or water features using non-potable canal water created solely to act as an irrigation reservoir.

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. The District signature block can be found on the Professional Landscaper section of the Conservation page at cvwd.org.

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 (ETWU) 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).

The Estimated Total Water Use (ETWU) for a phase within a tract may exceed the Maximum Applied Water Allowance for that phase so long as the ETWU does not exceed the MAWA within the overall tract. In the event this occurs calculations showing all phase totals should be imbedded within each plan submission for the tract.

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, Desert Friendly Landscaping 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. 1302.5 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 (31^{st}) 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

Monthly Eto (inches)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total Inches	Total Feet
Zone 2	1.77	2.94	4.12	5.89	7.06	8.24	8.24	6.48	5.89	4.12	2.35	1.77	58.87	4.91
Zone 3	1.93	3.21	4.50	6.42	7.71	8.99	8.99	7.06	6.42	4.50	2.57	1.93	64.22	5.35
Zone 4	2.29	3.82	5.35	7.65	9.17	10.70	10.70	8.41	7.65	5.35	3.06	2.29	76.46	6.37
Zone 5	2.50	4.17	5.83	8.33	10.00	11.67	11.67	9.17	8.33	5.83	3.33	2.50	83.34	6.94
Percent Annual ETo	0.03	0.05	0.07	0.10	0.12	0.14	0.14	0.11	0.10	0.07	0.04	0.03		

Zone #2 = ALL coves, upper and lower from Highway 111 South.

Zone #3 = Moderate winds, minimum monthly shadows, some blowing dust and sand, upper valley predominant wind from northwest.

Zone #4 = Moderate winds, minimum monthly shadows, some blowing dust and sand lower valley has lower elevation and more summer southwest wind.

Zone #5 = Frequent strong northwest winds, heavy blowing dust and sand, typical of I-10 corridor.

Maximum Applied Water Allowance (CCF) = ETo (inches) × 0.45× Area (Square feet) × 0.62 ÷ 748

ET Adjustment Factor = 0.45
0.62= gallons per square foot per inch deep
CCF= 100 cubic feet = 1 billing unit= 748 gallons

Target Irrigation Efficiency
0.80= Turf Rotor
0.75= Sprayheads
0.90= Drip/Micro/PC Bubblers

$$\text{Estimated Total Water Use (CCF)} = \frac{\text{ETo (Inches)} \times \textit{Plant Factor} \times \textit{Area (Square Feet)} \times 0.62 \div 748}{\text{Irrigation System Efficiency}}$$

$$\text{Emitters per Plant Estimate} = \frac{\text{Area of Plant (square feet)} \times \textit{Percent of Area to be Wet}}{\text{Square Feet Wet Per Emitter}}$$

Soil Type	Inches Water Holding Capacity per Inch of Depth	Description
Very Coarse Sand	0.05	Typical of high on an alluvial fan
Blow Sand	0.07	Typical of mid valley ridge area
Fine Sand	0.10	Typical of low alluvial fans from Rancho Mirage to Indian Wells
Very Fine Silty Sand	0.15	Typical of lowest alluvial fans from La Quinta, Indio, Coachella
Silt Loam	0.17	Typical of lower valley agricultural areas located below sea level

Emitter Wetted Area Square Feet Each	Emitter Spacing
0.75 to 1.75	10"
1.75 to 3	18"
3 to 5	3'
5 to 10	4'
10 to 28	4.5'

APPENDIX C
ET PROFILE AND PLANT FACTORS

Plant Factor (Kc)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Average
Cool Turf 100% **	1.00	1.00	NR	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	0.60	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 Water Factor	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

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
*** = Approximate evaporation. Reference, WULCOLS IV

GC = Groundcover
L = Low water use, Kc. 0.1 to 0.3
M = Moderate water use, Kc. 0.4 to 0.6
H = High water use, Kc. 0.7 to 0.9
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. 2 (64.0" 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 = 64.0 x 0.7 x 12,000 x 0.62 ÷ 748 ÷0.80 = 557 CCF
Seasonal Turf ETWU = 557 CCF

"Low" Native Plants: Annual = 64.0 x 0.2 x 32,700 x 0.62 ÷ 748 ÷ 0.90 = 385 CCF
"Low" Native ETWU = 385 CCF

"Moderate" Shrubs and Ground Cover: Annual = 64.0 x 0.5 x 15,300 x 0.62 ÷ 748 ÷0.90 = 451 CCF

"Moderate" ETWU = 451 CCF
Project Total ETWU = 1,393CCF

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 (64.0" Annual ETo).

MAWA = 64.0 (ETo) x (0.45) x (LA) x (0.62) ÷ (748)
= [64.0(0.45) (60,000) (0.62)] / (748)
MAWA = 1,432 CCF

ETWU total of 1,393CCF is < the MAWA of 1,432 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 1302.5, 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.

APPENDIX H

Prescriptive Compliance Option

(a) This appendix contains prescriptive requirements which may be used as a compliance option to Ordinance 1302.5, Landscape and Irrigation Design Criteria.
(b) Compliance with the following items is mandatory and must be documented on a landscape plan in order to use the prescriptive compliance option:
    (1) Submit a Landscape Documentation Package which includes the following elements:
        i. Date
        ii. Project applicant
        iii. Assessor's Parcel Number (project address if available)
        iv. Total landscape area (square feet), including a breakdown of turf and plant material
        v. Project type (e.g., new, rehabilitated, single-family residential, home-owner installed)
        vi. Water supply type (e.g., potable, recycled, well)
        vii. Applicant signature and date with statement, "I agree to comply with the requirements of the prescriptive compliance option of Ordinance 1302.5".
    (2) Plant material shall comply with all of the following;
        i. Install climate adapted plants that require occasional, little or no summer water (average WUCOLS plant factor 0.3) for 75% of the plant area excluding edibles.
        ii. A minimum three inch (3") layer of mulch shall be applied on all exposed soil surfaces of planting areas except in turf areas, creeping or rooting groundcovers, or direct seeding applications where mulch is contraindicated.
    (3) Turf shall comply with all of the following:
        i. Turf shall not exceed 25% of the landscape areas;
        ii. Turf shall not be planted on sloped areas which exceed a slope of 1 foot vertical elevation change for every 4 feet of horizontal length;
        iii. Turf is prohibited in areas less than 10 feet wide.
    (4) Irrigation systems shall comply with the following:
        i. Automatic irrigation controllers are required and must use evapotranspiration or soil moisture sensor data and utilize a rain sensor.
        ii. Irrigation controllers shall be of a type which does not lose programming data in the event the primary power source is interrupted.

iii. Pressure regulators shall be installed on the irrigation system to ensure the dynamic pressure of the system is within the manufacturers recommended pressure range.

iv. Manual shut-off valves (such as a gate valve, ball valve, or butterfly valve) shall be installed as close as possible to the point of connection of the water supply.

v. All irrigation emission devices must meet the requirements set in the ANSI standard, ASABE/ICC 802-2014. "Landscape Irrigation Sprinkler and Emitter Standard," All sprinkler heads installed in the landscape must document a distribution uniformity low quarter

vi. Areas less than ten (10) feet in width in any direction shall be irrigated with subsurface irrigation or other means that produces no runoff or overspray.

(5) Prior to final inspection, the permit applicant must provide the owner of the property with a certificate of completion, certificate of installation, irrigation schedule and a schedule of landscape and irrigation maintenance.

Ordinance to be effective on July 28, 2020.

PASSED AND ADOPTED by the Board of Directors of the Coachella Valley Water District, County of Riverside, State of California, this 28th day of July 2020 by the following roll call vote:

AYES: Powell, Nelson, O'Dowd, Estrada

NOES: None

ABSENT: Bianco

ATTEST:

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

John P. Powell, President
Coachella Valley Water District

Attachment B. Legal Authority

3.30.010 Water shortage contingency plan.

Effective immediately upon adoption of the ordinance codified in this chapter, all water use restrictions, enforcement, and fines and shortage level assessments and declarations will be as outlined in the 2021 Water Shortage Contingency Plan. (Ord. 1422.6 § 5, 2021)
