

ORDINANCE NO. 173

**AN URGENCY ORDINANCE OF
THE BOARD OF DIRECTORS OF
THE MONTEREY PENINSULA WATER MANAGEMENT DISTRICT
SUSPENDING AUTHORITY TO ACCEPT WATER PERMIT APPLICATIONS
FOR NEW CONNECTIONS BASED UPON THE PARALTA OR PRE-PARALTA
ALLOCATIONS**

FINDINGS

1. The Monterey Peninsula Water Management District (“District” or “MPWMD”) was authorized in 1977 by the California Legislature (Chapter 527 of the Statutes of 1977, as amended, found at West’s Water Law Appendix Section 118-1, et seq.). Voters of the Monterey Peninsula ratified its creation in June 1978. The District holds comprehensive authority to integrate management of the ground and surface water resources in the Monterey Peninsula area. MPMWD governs the Allocation of limited water supplies distributed by California American Water (“Cal-Am”).
2. The Monterey District of Cal-Am has a continuing water supply deficit. It relies on scarce water resources. A sizeable portion of water demand within the District is based upon water diverted from the Carmel River without any basis in right. Water rights orders limit supply, and physically adequate supplies are available only due to deferred enforcement.
3. MPWMD conceived the Paralta Well in 1989, which was thereafter constructed by Cal-Am based on permits cooperatively acquired by the District and Cal-Am. This well provides water from the Seaside Coastal Ground Water Basin to create a new water supply in accord with District Resolutions 93-11 and 93-12.
4. MPWMD accounted for Water Use Capacity for construction projects and Changes of Use that received but did not complete Water Permits issued prior to the District’s Water Allocation Program Environmental Impact Report in 1990. Water Use Capacity from abandoned or reduced Capacity projects was returned to the Jurisdiction for future use when the Paralta Well Allocations were released.
5. In 1993, the District accounted for water from the Paralta Well by enacting Ordinance No. 70

to modify Jurisdictional Water Allocations and to allow this supply to be used for new and expanded water uses. District Ordinance No. 70 ended the water Connection moratorium previously enacted by District Ordinance No. 52.

6. District Ordinance No. 70 effectively eliminated the previously recognized water use deficit of 230 Acre-Feet (calculated against water available under Supply Option V in the Water Allocation EIR) recognized by District Ordinance No. 52, and allocated 385 Acre Feet of additional Paralta Well production among the District Jurisdictions.
7. In 1995, the State Water Resources Control Board (SWRCB) issued Order WR 95-10 to affirm Cal-Am held rights to divert only 3,376 Acre-Feet annually (“AFA”) from the Carmel River. This order required Cal-Am to reduce former river diversions of 14,106 AFA in 1995 to 11,285 AFA in 1997.
8. District Resolution No. 2004-11 noted Order WR 95-10 directed water production from the Seaside Basin be maximized to serve existing Connections, honor existing Allocation commitments, and to reduce diversions from the Carmel River. Resolution No. 2004-11 also recognized the use of pre-Paralta credits and public credits.
9. In 2007, the Monterey County Superior Court in *California American Water Company v. City of Seaside*, et al. (Case No. M66343) issued a comprehensive order to adjudicate the Seaside Groundwater Basin and impose a declining pumping schedule from the Seaside Groundwater Basin for Cal-Am and others.
10. In 2009, SWRCB Order WR 2009-060 issued a Cease and Desist Order (CDO) on Cal-Am that required Cal-Am to (a) reduce Carmel River diversions from 11,285 AFA to 10,429 AFA until 2017, (b) set 3,376 AFA as the Carmel River diversion limit beginning in 2017, and (c) required Cal-Am to impose a moratorium on new Connections.
11. In 2011, the California Public Utilities Commission (CPUC) issued Decision 11-03-048, entitled “Decision Directing Tariff Modifications to Recognize Moratorium Mandated by State Water Resources Control Board.” D.11-03-048 prohibits new Cal-Am Connections and certain increased uses of water be served by diversions from the Carmel River to the extent such service would violate the terms of Condition 2 of SWRCB Order WR 2009-060.
12. Since adoption of Order WR 2009-0060, Cal-Am’s diversions complied with limits set in that Order, but remained thousands of Acre-Feet per year above the amount available under

Cal-Am's lawful water rights.

13. SWRCB Order WR 2016-0016 superseded requirements of Orders WR 95-10, WR 2009-0060 and other SWRCB orders, and extended to December 31, 2021, the date by which Cal-Am must terminate unlawful diversions from the Carmel River. Order WR 2016-0016 also set an Effective Diversion Limit from the Carmel River of 8,310 AFA starting Water Year 2015-2016.
14. This ordinance is adopted to enhance the District's ability to prevent diminution of waters within the District, to protect environmental values, and is consistent with the District's authority to reasonably regulate all water resources within District boundaries. The Board of Directors Council finds it necessary to adopt this ordinance to protect the public health, welfare and safety of the District by ensuring the continuing water supply is physically adequate to meet demand. This measure is necessary to support moratorium requirements set by the CPUC in Decision 11-03-048, and moratorium requirements set by the SWRCB in its Orders WR 2009-060 and WR 2016-0016.
15. Enactment of this ordinance to suspend acceptance of applications for Water Permits for new Connections based upon the Paralta or pre-Paralta water Allocation does not constitute a "Project" as that term is defined under the California Environmental Quality Act (CEQA), CEQA Guideline Section 15060(c)(2) (the activity will not result in a direct or reasonably foreseeable indirect physical change in the environment) and 15060(c)(3) (the activity is not a project as defined in section 15378). Furthermore, the Board finds that there is no possibility that the adoption of this measure could have a significant effect on the environment; therefore, no further environmental review is necessary in accordance with Section 15061(b)(3) of the CEQA Guidelines.
16. This ordinance shall not amend the Rules and Regulations of the Water Management District.
17. This ordinance has been proposed for urgency enactment and shall take effect immediately upon a single reading provided it is approved by at least five (5) members of the Board. This ordinance shall preserve the health and safety of Cal-Am water users and current Well owners. This ordinance shall sunset one year following its enactment.

NOW THEREFORE be it ordained as follows:

ORDINANCE

Section One: **Short Title**

This ordinance shall be known as the 2016 Water Permit Application Suspension Ordinance of the Monterey Peninsula Water Management District.

Section Two: **Purpose**

This ordinance suspends authority of the District to accept any Water Permit application for a new Connection to the California-American Water Company Water Distribution System based upon either the Paralta or pre-Paralta Allocation.

Section Three: **Publication and Application**

The provisions of this ordinance shall not cause the republication and amendment of the permanent Rules and Regulations of the Monterey Peninsula Water Management District. During the period it has force and effect, however, the full text of this ordinance shall be bound together with those permanent Rules and Regulations, and a reference to this ordinance shall be annotated in each copy of the official set of those Rules and Regulations at Rule 20-B and Rule 21-B.

Section Four: **Effective Date and Sunset**

This ordinance shall take effect immediately upon a single reading provided it is approved by at least five (5) members of the Board.

This ordinance shall become null and void, and cease to have any continuing effect any of the following events, whichever may first occur: (a) the day following a CPUC decision to allow new Connections throughout the Main California American Water System, or (b) one year following enactment of this Urgency Ordinance, or (c) the effective date of any District ordinance that explicitly rescinds or repeals this measure.

Section Five: **Severability**

If any subdivision, paragraph, sentence, clause or phrase of this ordinance is, for any reason, held to be invalid or unenforceable by a court of competent jurisdiction, such invalidity shall not affect the validity or enforcement of the remaining portions of this ordinance, or of any other provisions of the Monterey Peninsula Water Management District Rules and Regulations. It is

EXHIBIT A

the District's express intent that each remaining portion would have been adopted irrespective of the fact that one or more subdivisions, paragraphs, sentences, clauses, or phrases be declared invalid or unenforceable.

On motion of Director _____, and second by Director _____, the foregoing ordinance is adopted upon this ____ day of August 2016, by the following vote:

AYES:

NAYS:

ABSENT:

I, David J. Stoldt, Secretary to the Board of Directors of the Monterey Peninsula Water Management District, hereby certify the foregoing is a full, true and correct copy of an ordinance duly adopted on the ____ day of August 2016.

Witness my hand and seal of the Board of Directors this ____ day of _____, 2016.

David J. Stoldt, Secretary to the Board

TABLE 1: RESIDENTIAL FIXTURE UNIT COUNT VALUES

	Water Fixture Description	Fixture Unit Value
1	Washbasin (lavatory sink), each	1
2	Two Washbasins in the Master Bathroom	1
3	Toilet, Ultra Low Flush (1.6 gallons per flush)	1.8
4	Toilet, High Efficiency (HET) (1.3 gallons maximum)	1.3
5	Toilet, Ultra High Efficiency (UHET) (0.8 gallon maximum)	0.8
6	Urinal, (Pint (0.125 gallon maximum)	0.1
7	Urinal, Zero Water Consumption	0
8	Bathtub, (may be Large with Showerhead above) & Separate Shower in the Master Bathroom	3
9	Bathtub, Large (may have Showerhead above)	3
10	Bathtub, Standard (may have Showerhead above) or Shower Stall (one Showerhead)	2
11	Shower, each additional fixture (including additional Showerheads, Body Spray Nozzles, etc.)	2
12	Shower System, Rain Bars, or Custom Shower (varies according to specifications)	2
13	Kitchen Sink (including optional adjacent Dishwasher) ¹	2
14	Kitchen Sink with adjacent High Efficiency Dishwasher (5.8 gallons maximum per cycle)	1.5
15	Dishwasher, each additional (including optional adjacent sink)	2
16	Dishwasher, High Efficiency, each additional (including optional adjacent sink) [5.8 gallons maximum per cycle]	1.5
17	Laundry Sink/Utility Sink (debit/Capacity Fee applies to only one Laundry/Utility Sink per Residential Site)	2
18	Clothes Washer	2
19	Clothes Washer, High Efficiency (HEW) (Water Factor of 5.0 or less)	1
20	Bidet	2
21	Bar Sink	1
22	Entertainment Sink	1
23	Vegetable Sink	1
24	Swimming Pool (each 100 square-feet of pool surface area)	1
25	For all new Connections -- Refer to Rule 24-A-5, Exterior Residential Water Demand Calculations.	

¹When a Kitchen Sink exists without the benefit of a Dishwasher, a Dishwasher may be added without a Water Permit.

Table Amended by Resolution 2009-11 (8/17/2009); Ordinance No. 140 (11/16/2009); Resolution 2009-13 (12/14/2009); Resolution 2010-15 (12/13/2010); Ordinance No. 151 (11/19/2012); Ordinance No. 156 (11/18/2013); Resolution 2016-04 (2/17/2016)

TABLE 2: NON-RESIDENTIAL WATER USE FACTORS

Group I 0.00007 AF/SF

Auto Uses	Retail	Warehouse	Dental Clinic	Office	Bank	Supermarket
Church	Nail Salon	Family Grocery	Medical Clinic	Wine Tasting Room	Fast Photo	Convenience Store
Dry Cleaner (No On-Site Laundry)			Veterinary Clinic	School	Gym	

Group II 0.0002 AF/SF

Users in this category prepare and sell food/beverages that are primarily provided to customers on disposable tableware. Food with high moisture content and liquid food may be served on reusable tableware. Pizza must be served on reusable platters or on disposable plates. Glassware may be used to serve beverages.

Bakery	Pizza	Coffee House	Ice Cream Shop	Dry Cleaner (On-Site Laundry)
Catering	Deli	Bistro	Sandwich Shop	

Group III

Assisted Living (more than 6 beds) ¹	0.085 AF/Bed
Beauty Shop/Dog Grooming	0.0567 AF/Station
Child/Dependent Adult Day Care	0.0072 AF/Person
Dormitory ²	0.040 AF/Room
Laundromat	0.2 AF/Machine
Meeting Hall/Banquet Room	0.00053 AF/SF
Motel/Hotel/Bed & Breakfast	0.1 AF/Room
w/Large Bathtub (Add to room factor)	0.03 AF/Tub
Irrigated Areas beyond ten feet of any building	ETWU
Plant Nursery	0.00009 AF/SF Land Area
Public Toilet	0.058 AF/Toilet
Public Urinal	0.036 AF/Urinal
Zero Water Consumption Urinal	No Value
Restaurant (including Bar/Brewpub Seats)	0.02 AF/Interior Restaurant Seat
Exterior Restaurant Seats above the “Standard Exterior Seat Allowance” ³	0.01 AF/Exterior Restaurant Seat
Exterior Restaurant Seats within the “Standard Exterior Seat Allowance”	No Value
Restaurant (24-Hour and Fast Food)	0.038 AF/Interior Restaurant Seat
Self-Storage	0.0008 AF/Storage Unit
Skilled Nursing/Alzheimer’s Care	0.12 AF/Bed
Spa	0.05 AF/Spa
Swimming Pool	0.02 AF/100 SF of Surface Area
Theater	0.0012 AF/Seat

Group IV - MODIFIED NON-RESIDENTIAL USES

Users listed in this category have reduced water Capacity from the types of uses listed in Groups I-III and have received a Water Use Credit for modifications. Please inquire for specific property information.

All New Connections: Refer to Rule 24-B, Exterior Non-Residential Water Demand Calculations

Notes: Any Non-Residential water use which cannot be characterized by one of the use categories set forth in Table 2 shall be designated as “other” and assigned a factor which has a positive correlation to the anticipated Water use Capacity for that Site.

¹ Assisted living Dwelling Units shall be permitted as Residential uses per Table 1, Residential Fixture Unit Count Values.

² Dormitory water use at educational facilities is a Residential use, although the factor is shown on Table 2

³ See Rule 24-B-1 and Rule 25.5 for information about the “Standard Exterior Seat Allowance”.

Table amended by Ordinance No. 125 (9/29/2006); Resolution 2008-01 (1/24/2008); Resolution 2010-15 (12/13/2010); Resolution 2013-16 (9/16/13); Resolution 2014-04 (3/17/2014); Resolution 2014-12 (7/21/2014); Ordinance No. 164 (4/20/2015); Resolution 2016-06 (3/21/2016)

History of District Rules for Allocation of Water

The Monterey Peninsula Water Management District (“District” or “MPWMD”) was authorized in 1977 by the California Legislature (Chapter 527 of the Statutes of 1977, as amended, found at West’s Water Law Appendix Section 118-1, et seq.). Voters of the Monterey Peninsula ratified its creation in June 1978. The District holds comprehensive authority to integrate management of the ground and surface water resources in the Monterey Peninsula area. MPMWD governs the Allocation of limited water supplies distributed by California American Water (“Cal-Am”).

Ordinance No. 1 was adopted in September 1980 to establish interim municipal water allocations based on existing water use by the jurisdictions. Resolution 81-7 was adopted in April 1981 to modify the interim allocations and incorporate projected water demands through the year 2000. Under the 1981 allocation, Cal-Am’s annual production limit was set at 20,000 acre-feet.

MPWMD conceived the Paralta Well in 1989, which was thereafter constructed by Cal-Am based on permits cooperatively acquired by the District and Cal-Am. This well provides water from the Seaside Coastal Ground Water Basin to create a new water supply in accord with District Resolutions 93-11 and 93-12.

MPWMD accounted for Water Use Capacity for construction projects and Changes of Use that received but did not complete Water Permits issued prior to the District’s Water Allocation Program Environmental Impact Report in 1990. Water Use Capacity from abandoned or reduced Capacity projects was returned to the Jurisdiction for future use when the Paralta Well Allocations were released.

Ordinance No. 52 was adopted in December 1990 to implement the District’s water allocation program, modify the resource system supply limit, and to temporarily limit new uses of water. As a result of Ordinance No. 52, a moratorium on the issuance of most water permits within the District was established. Adoption of Ordinance No. 52 reduced Cal-Am’s annual production limit.

In 1993, the District accounted for water from the Paralta Well by enacting Ordinance No. 70 to modify Jurisdictional Water Allocations and to allow this supply to be used for new and expanded water uses. District Ordinance No. 70 ended the water Connection moratorium previously enacted by District Ordinance No. 52.

Ordinance No. 70 was adopted in June 1993 to modify the resource system supply limit, establish a water allocation for each of the jurisdictions within the District, and end the moratorium on the issuance of water permits. Adoption of Ordinance No. 70 was based on development of the Paralta Well in the Seaside Groundwater Basin and effectively eliminated the previously recognized water use deficit of 230 Acre-Feet (calculated against water available under Supply Option V in the Water Allocation EIR) recognized by District Ordinance No. 52, and allocated 308 acre-feet of water to the jurisdictions and 50 acre-feet to a District Reserve for regional projects with public benefit.

Ordinance No. 73 was adopted in February 1995 to eliminate the District Reserve and allocate the remaining water equally among the eight jurisdictions. Of the original 50 acre-feet that was

allocated to the District Reserve, 34.72 acre-feet remained and was distributed equally (4.34 acre-feet) among the jurisdictions.

Ordinance No. 74 was adopted in March 1995 to allow the reinvestment of toilet retrofit water savings on single-family residential properties. The reinvested retrofit credits must be repaid by the jurisdiction from the next available water allocation and are limited to a maximum of 10 acre-feet. This ordinance sunset in July 1998.

Ordinance No. 75 was adopted in March 1995 to allow the reinvestment of water saved through toilet retrofits and other permanent water savings methods at publicly owned and operated facilities. Fifteen percent of the savings are set aside to meet the District's long-term water conservation goal and the remainder of the savings are credited to the jurisdictions allocation. This ordinance sunset in July 1998.

In 1995, the State Water Resources Control Board (SWRCB) issued Order WR 95-10 to affirm Cal-Am held rights to divert only 3,376 Acre-Feet annually ("AFA") from the Carmel River. This order required Cal-Am to reduce former river diversions of 14,106 AFA in 1995 to 11,285 AFA in 1997.

Ordinance No. 83 was adopted in April 1996 and set Cal-Am's annual production limit and the non-Cal-Am annual production limit. The modifications to the production limit were made based on the agreement by non-Cal-Am water users to permanently reduce annual water production from the Carmel Valley Alluvial Aquifer in exchange for water service from Cal-Am. As part of the agreement, fifteen percent of the historical non-Cal-Am production was set aside to meet the District's long-term water conservation goal.

Ordinance No. 87 was adopted in February 1997 as an urgency ordinance establishing a community benefit allocation for the planned expansion of the Community Hospital of the Monterey Peninsula (CHOMP). Specifically, a special reserve allocation of 19.60 acre-feet of production was created exclusively for the benefit of CHOMP.

Ordinance No. 90 was adopted in June 1998 to continue the program allowing the reinvestment of toilet retrofit water savings on single-family residential properties for 90-days following the expiration of Ordinance No. 74. This ordinance sunset in September 1998.

Ordinance No. 91 was adopted in June 1998 to continue the program allowing the reinvestment of water saved through toilet retrofits and other permanent water savings methods at publicly owned and operated facilities.

Ordinance No. 90 and No. 91 were challenged for compliance with CEQA and nullified by the Monterey Superior Court in December 1998.

District Resolution No. 2004-11 noted Order WR 95-10 directed water production from the Seaside Basin be maximized to serve existing Connections, honor existing Allocation commitments, and to reduce diversions from the Carmel River. Resolution No. 2004-11 also recognized the use of pre-Paralta credits and public credits.

EXHIBIT C

Ordinance No. 109 was adopted on May 27, 2004, revised Rule 23.5 and adopted additional provisions to facilitate the financing and expansion of the CAWD/PBCSD Recycled Water Project.

Ordinance No. 132 was adopted on January 24, 2008, established a Water Entitlement for Sand City and amended the rules to reflect the process for issuing Water Use Permits.

Ordinance No. 165 was adopted on August 17, 2015, established a Water Entitlement for Malpas Water Company and amended the rules to reflect the process for issuing Water Use Permits.

Ordinance No. 166 was adopted on December 15, 2015, established a Water Entitlement for D.B.O. Development No. 30.

Ordinance No. 168 was adopted on January 27, 2016, established a Water Entitlement for the City of Pacific Grove.

Detail on Jurisdictional Allocations Reported Monthly

ITEM: INFORMATIONAL ITEM/STAFF REPORTS

15. MONTHLY ALLOCATION REPORT

Meeting Date:	August 15, 2016	Budgeted:	N/A
From:	David J. Stoldt, General Manager	Program:	N/A
		Line Item No.:	
Prepared By:	Gabriela Ayala	Cost Estimate:	N/A

General Counsel Review: N/A
Committee Recommendation: N/A
CEQA Compliance: N/A

SUMMARY: As of July 31, 2016, a total of **25.830** acre-feet (**7.5%**) of the Paralta Well Allocation remained available for use by the Jurisdictions. Pre-Paralta water in the amount of **35.561** acre-feet is available to the Jurisdictions, and **30.384** acre-feet is available as public water credits.

Exhibit 15-A shows the amount of water allocated to each Jurisdiction from the Paralta Well Allocation, the quantities permitted in July 2016 (“changes”), and the quantities remaining. The Paralta Allocation had no debits in July 2016.

Exhibit 15-A also shows additional water available to each of the Jurisdictions and the information regarding the Community Hospital of the Monterey Peninsula (Holman Highway Facility). Additional water from expired or canceled permits that were issued before January 1991 are shown under “PRE-Paralta.” Water credits used from a Jurisdiction’s “public credit” account are also listed. Transfers of Non-Residential Water Use Credits into a Jurisdiction’s Allocation are included as “public credits.” **Exhibit 15-B** shows water available to Pebble Beach Company and Del Monte Forest Benefited Properties, including Macomber Estates, Griffin Trust. Another table in this exhibit shows the status of Sand City Water Entitlement.

BACKGROUND: The District’s Water Allocation Program, associated resource system supply limits, and Jurisdictional Allocations have been modified by a number of key ordinances. These key ordinances are listed in **Exhibit 15-C**.

EXHIBITS

- 15-A** Monthly Allocation Report
- 15-B** Monthly Entitlement Report
- 15-C** District’s Water Allocation Program Ordinances

MONTHLY ALLOCATION REPORT
Reported in Acre-Feet
For the month of July 2016

Jurisdiction	Paralta Allocation*	Changes	Remaining	PRE-Paralta Credits	Changes	Remaining	Public Credits	Changes	Remaining	Total Available
Airport District	8.100	0.000	5.197	0.000	0.000	0.000	0.000	0.000	0.000	5.197
Carmel-by-the-Sea	19.410	0.000	1.397	1.081	0.000	1.081	0.910	0.000	0.182	2.660
Del Rey Oaks	8.100	0.000	0.000	0.440	0.000	0.000	0.000	0.000	0.000	0.000
Monterey	76.320	0.000	0.203	50.659	0.000	0.030	38.121	0.000	3.661	3.894
Monterey County	87.710	0.000	10.284	13.080	0.000	0.000	7.827	0.000	1.891	12.175
Pacific Grove	25.770	0.000	0.000	1.410	0.000	0.012	15.874	0.000	0.133	0.145
Sand City	51.860	0.000	0.000	0.838	0.000	0.000	24.717	0.000	23.373	23.373
Seaside	65.450	0.000	8.749	34.438	0.000	34.438	2.693	0.000	1.144	44.331
TOTALS	342.720	0.000	25.830	101.946	0.000	35.561	90.142	0.000	30.384	91.775

Allocation Holder	Water Available	Changes this Month	Total Demand from Water Permits Issued	Remaining Water Available
Quail Meadows	33.000	0.000	32.237	0.763
Water West	12.760	0.053	9.039	3.721

* Does not include 15.280 Acre-Feet from the District Reserve prior to adoption of Ordinance No. 73.

**MONTHLY ALLOCATION REPORT
ENTITLEMENTS
Reported in Acre-Feet
For the month of July 2016**

Recycled Water Project Entitlements

Entitlement Holder	Entitlement	Changes this Month	Total Demand from Water Permits Issued	Remaining Entitlement/and Water Use Permits Available
Pebble Beach Co. ¹	237.560	0.100	25.994	211.566
Del Monte Forest Benefited Properties ² (Pursuant to Ord No. 109)	127.440	0.137	43.710	83.730
Macomber Estates	10.000	0.000	9.595	0.405
Griffin Trust	5.000	0.000	4.809	0.191
CAWD/PBCSD Project Totals	380.000	0.237	84.108	295.892

Entitlement Holder	Entitlement	Changes this Month	Total Demand from Water Permits Issued	Remaining Entitlement/and Water Use Permits Available
City of Sand City	165.000	0.378	2.999	162.001
Malpasos Water Company	80.000	0.096	0.416	79.584
D.B.O. Development No. 30	13.95	0.000	0.000	13.95
City of Pacific Grove	66.000	0.000	0.000	66.000

Increases in the Del Monte Forest Benefited Properties Entitlement will result in reductions in the Pebble Beach Co. Entitlement.

WATER USE FACTORS AND FIXTURE UNIT COUNTS – INDUSTRY PRACTICE

It is nearly impossible to predict the consumer mind-set or socioeconomic ethics on water use. There is usually insufficient data to account for all the factors that may influence the water demands of a particular water system. Defined design criteria are laid out in the ASHRAE guide and the Uniform Plumbing Code (UPC). Both criteria focus on the use of probability theory with a safety factor to compensate for unknown variables. Required flow rates are defined based on a “Fixture Count” method that is determined after appropriate research and analysis of controlling variables. Among a host of other factors, these variables are fixture types, people use factors for structure types, and people socioeconomic factors. (“Design of Potable Water Plumbing Systems” Course No: M04-023; A. Bhatia; Continuing Education and Development, Inc. 9 Greyridge Farm Court Stony Point, NY 10980)

There are two methods that are typically used in the design of water systems. Currently, the plumbing industry uses Hunter’s method for approximating peak demand loadings on a building’s water distribution system. This method was developed in the 1940’s and presented in the National Bureau of Standards published report BMS 65, “Methods of Estimating Loads in Plumbing Systems”. It is still the most widely used procedure and forms the basis for model plumbing codes (e.g. The International Plumbing Code, The Uniform Plumbing Code and ASHRAE guide).

Another method has been developed by the American Water Works Association (AWWA). The “fixture value method” was introduced in 1975 and presented in AWWA’s M22 Manual. This method is an empirical approach based on data obtained from water meter data loggers, field experiments, utility surveys, and other information. This method is primarily used for sizing of water service lines, but has been applied to the development of average usage factors for water supply planning.

Other industry standards for estimating average water consumption by type of residential or business use and by fixture type include Water Supply and Sewerage, Terence J. McGhee. McGraw-Hill. 1991; On-Site Wastewater Treatment: Educational Materials Handbook, National Small Flows Clearinghouse. West Virginia University. 1987; and Water Resources Engineering, Larry W. Mays. John Wiley & Sons. 2001; and others.

The fixture unit concept is a method of calculating maximum probable water demand within large buildings based on theory of probability. The method is based on assigning a fixture unit (f/u) value to each type of fixture based on its *rate of water consumption*, on the *length of time* it is normally in use and on the *average period between successive uses*. All the above factors, together, determine the rate of flow within a plumbing pipe.

Average water consumption is typically based on the probable water demand for a type of use based on fixture unit values factored by the hours of use probabilistically expected for a type of use. Average flow is flow likely to occur in the piping under normal conditions. Average flow is of little concern to the building designer, who designs for conditions under

peak flow, but average flow is typically used for determining the capacity of supply required over time for a type of use.

The use of fixture unit values and user category factors has been industry standard for decades. The District has used non-residential water use factors since 1985 using national methods adapted for the Monterey Peninsula region based on business surveys and water consumption records from Cal-Am.

Use of water use factors is a traditional approach to wastewater capacity sizing, since wastewater is not metered. Wastewater use factors for dischargers are established based on water use factors, adjustments for irrigation, and adjusted for strength of discharge. Wastewater rates and charges are then established converting the water use factors to a revenue requirement for each type of use. Attached are the various monthly rates for Monterey Regional Water Pollution Control Agency by type of use. The variability reflects the differences in water use factor for the type of business use.

A similar methodology is often applied for water rate setting by third party consultants, especially when the water use is not directly metered. Attached is a summary of a study by the City of Roseville which validates their use of unit water demand factors for water supply evaluation.

Also attached is how fixture unit values are used for peak demand sizing under California plumbing code and underscores how fixtures can be counted to determine potential for use. For each type of fixture and each type of use diurnal usage curves can be applied to develop probabilistic daily and then annual average use factors.

Included in the attachments is how the concept of fixture counting is typical across the country, in this example of meter sizing in Virginia is shown.

CONCLUSION

Actual historical and future use for any particular user may be higher or lower than predicted by a water use factor, but the goal in both rate-setting and water supply planning is to capture the averages. By counting fixtures for a site and determining average probable use, or utilizing already statistically calculated water use factors for a type of use, the capacity for use on that site is captured. Whether or not the actual use is reflected for a single business owner is irrelevant. No future actual monitoring, nor enforcement action based on measured use should be required for a single individual user that has been permitted and has had a meter set in this way. Rather, the effects of that user's consumption are averaged out across all users.

APPENDIX A
MONTEREY REGIONAL WATER POLLUTION CONTROL AGENCY
MONTHLY RATE SCHEDULE*
Effective July 1, 2011

CATEGORY CODE	DESCRIPTION	MONTHLY RATES	UNITS
001	Business/Gov't. - 1-10 Employees	8.70	Location/Each
002	Business/Gov't. - 11-20 Employees	17.40	Business
003	Business/Gov't. - 21-30 Employees	26.10	
004-099	Rate Increases - \$8.70/every 10 Employees		
101, 106	Residential-Vacant	7.65	Each living unit
102, 105	Residential/Apartments	12.75	Each living unit
107, 109	Condo/Retirement Community		
211	Minimum/Vacancy	6.65	Location/Each Business
221	Motel/Hotel	5.30	Each room
222	Bed & Breakfast Inn	3.55	Each room
231	Supermarkets	86.15	Location
241	Medical Office	11.15	Each licensed Physician
242	Dental Office	15.10	Each licensed Dentist
243	Rest Home/Convalescent	3.30	Each bed of licensed capacity
244	General Hospital	19.55	Each bed of licensed capacity
245	Animal Hospital	22.90	Location/Each licensed business
261	Restaurant 1 meal/day	.80	
262	Restaurant 2 meals/day	1.25	Each restaurant
263	Restaurant 3 meals/day	2.40	seat
264	Restaurant with Bar	2.40	
265	Bar	19.75	Location/Each bus.
266	Nightclub	57.70	Location/Each bus.
267	Takeout Food - Small	27.15	1 cash register or checkout line
268	Takeout Food - Medium	69.75	2 or 3 cash registers or checkout lines
269	Takeout Food - Large	122.60	4 or more cash registers or checkout lines

**MONTEREY REGIONAL WATER POLLUTION CONTROL AGENCY
Monthly Rate Schedule - Effective July 1, 2011
Page 2**

<u>CATEGORY CODE</u>	<u>DESCRIPTION</u>	<u>MONTHLY RATES</u>	<u>UNITS</u>
270	Bakery	33.55	Location/Each bus.
281	Theater	27.00	Per screen @ each location
282	Bowling Center	81.00	Location Each bus.
283	Gym 1-500 Members	8.70	
284-289	Rate Increases \$8.70/every 500 members		
290	Mortuary	42.20	Location/Each bus.
291	School (Minimum)	8.70	
292	School (Grades 0-6)	.10	
293	School (Grades 7-College)	.20	School population
294	Boarding School	2.55	
295	Instructional Facility	8.70	
296	Church 1-100 Members	8.70	Location/Each
297	Church Over 100 Members	17.40	business
301	Photo Developer	8.70	
311	Laboratory	8.70	
312	Rate Increases \$8.70/every 10 employee		Location/Each business
321	Printer	8.70	
322-326	Rate Increases - \$8.70/every 10 employees		
331	Service Station/Garage	9.25	
341	Auto Painters, Body Shops, Paint Store	8.70	
342-346	Rate Increases - \$8.70/every 10 employees		
353	Dry Cleaner	27.80	Location/Each business
354	Laundromat	7.00	Each washing machine
511	Temporarily Suspended	.00	
351, 352, 361, 366, 367, 401-411	(Special Users)		Individual determination

EXHIBIT E

* These rates do not reflect the city charges assessed on all properties in the following cities:

40.6%	Monterey (Plus Stormwater Utility Fee \$10.88)
185%	Pacific Grove
35%	Salinas
66.4%	Seaside, Sand City and Del Rey Oaks



**City of Roseville
Evaluation of Potential Water Supplies and
Water Delivery Strategy for the MOU Area**

**TM 1 – Unit Water Demand Factor Verification and Water
Demand Evaluation and Update**

September, 2006



TM 1 – Unit Water Demand Factor Verification and Water Demand Evaluation and Update

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Section 1. EXECUTIVE SUMMARY

In 2005, the City of Roseville (City) initiated two new annexation plans in the City/Placer County Memorandum of Understanding Transition Area (MOU Area): the Creek View Specific Plan (CVSP) and Sierra Vista Specific Plan (SVSP). In order to implement the annexation plans, City staff was requested to evaluate the City's ability to provide long-term reliable water supplies to the annexed areas without negatively impacting the City's existing and future customers in terms of water supply reliability and the cost of water service delivery.

In response to the City's need for a water supply evaluation, the City initiated a study to re-confirm the unit water demand factors using the most recent meter data from City customers that includes a longer history than the previous analysis completed by MWH in February 2002. The purpose of this technical memorandum is to verify the unit demand factors established/adopted in the previous studies and to update the City's water demand estimates based on the findings from the recent meter data and the most recent land uses information. The information generated in this technical memorandum (TM) will be used to develop a reliable and sound water supply strategy for the annexation of the two new specific plans.

The new meter data covers the period from January 2001 to April 2005. Unit water demand factors were evaluated for various residential and commercial land use categories and compared to the unit factors developed/used in the past; see **Table 1-1** and the notes below the table for definitions of the land use categories. In summary, the analysis of the longer history of residential meter data compares fairly well to the unit water demand factors developed from the results of the one-year record of residential meter data obtained in year 2002 by MWH. The most noticeable differences between previous and current unit water demand factors were observed for the Commercial Land Use Category.

The unit demand factors used in the 2002 Phase II Report TM 7 (TM 7) were essentially a "compromise" between the MWH (2002) water demand factors developed from limited meter data and those documented in the City's 1993 Water Supply Master Plan, titled, *General Plan Update Water System Study* (Spink, 1993) (Spink Study). With State mandated plumbing devices installed in the homes constructed after year 1992 (post-92 homes) and the inception of the metering program in commercial and some residential properties in year 2000, the water demand factors developed from meter data were approximately 25 percent lower than predicted in the Spink Study. Later, the City asked MWH to compare these two sets of unit demand factors to the unit demand factors for the vicinity areas in the region. Statistical analyses were performed on the unit water demand factors for the vicinity areas, and resulted in a third set of water demand factors that were ultimately adopted by the City.

The methodology and process of developing the third set of the unit water demand factors were documented in the technical memorandum titled "Task 1 - Unit Demand Factors Revision" by MWH in November 2002. This set of unit water demand factors were used in TM 7 to evaluate the water demand for the City and MOU Area except for the pre-92 homes, whose demands were evaluated still using the Spink (1993) unit water demand factors to represent the higher water uses in older homes.

TM 1 – Unit Water Demand Factor Verification and Water Demand Evaluation and Update

Using the same methodology in data handling, aggregation of customer accounts into primary land use categories and subsequent statistical analyses, the longer history meter data verifies and validates the unit water demand factors used in TM 7. Results also show that there is no significant difference in water demand factors between newer (post-92) and older (pre-92) homes as a result of the City’s meter retrofit program. As a result, this TM recommends using a composite set of residential unit water demand factors in place of the current system of having one set of unit water demand factors for pre-92 homes and another set for post-92 homes.

Using the TM 7 unit water demand factors, a “Conservative” Scenario was selected to evaluate the water demands for the City and MOU Area. The water demand estimates for the “Conservative” Scenario are included in **Table 1-2** (the WRSP has been annexed into the City boundary but its demand calculation is shown separately for the sake of comparison).

Table 1-1. Water Demand Factors Developed from Recent Meter Data and Those Developed/Adopted in Previous Studies

RESIDENTIAL LAND USE CATEGORY	DEVELOPED FROM RECENT METER DATA (GPD/DU) ¹	DEVELOPED/USED IN PREVIOUS STUDIES		
		Phase II Report TM 7 (GPD/DU)	MWH (2002) (GPD/DU) ²	Spink (1993) (GPD/DU)
LDR1 (<3.5 DU's/Acre)	833	728	818	922
LDR2 (3.5 to 5 DU's/Acre)	567	600	560	760
LMDR1 (>5.0 to 6.0 DU's/Acre)	501	521	515	685
LMDR2 (>6.0 to 8.0 DU's/Acre)	424	430	438	566
MDR (>8.0 to 12.0 DU's/Acre)	338	323	324	425
HDR1 (>12.0 to 16.0 DU's/Acre)	246	288	218	310
HDR2 (>16.0 DU's/Acre)	179	177	165	190
COMMERCIAL LAND USE CATEGORY	(GPD/Acre)	(GPD/Acre)	(GPD/Acre)	(GPD/Acre)
Commercial/Retail	2,063	2,598	2,294	2,678
Business Professional	2,429	2,598	3,207	2,678
Light Industrial	1,205	2,598	1,203	2,678
Industrial	2,232	2,562	2,597	3,124
Railroad Yard	116	109	131	122
Elementary Schools	1,705	3,454	2,143	3,881
High Schools	1,705	4,068	2,788	4,571
Public (Fire Station, etc)	1,705	1,780	2,249	2,000
Park/Recreation	2,554	2,988	2,377	3,881

Abbreviations:

- LDR – Low Density Residential
- LMDR – Low-Medium Density Residential
- MDR – Medium Density Residential
- HDR – High Density Residential
- GPD/DU – Gallon per Day/Dwelling Unit
- DPD/Ac – Gallon per Day/Acre

Notes:

1. Meter data recorded from Jan 2001 to April 2005.
2. Demand factors developed from approximately one year record of meter data from September 2000 to October 2001.

A second scenario, or “Aggressive” Scenario, was also evaluated but not included in the findings of this study because the results did not provide sufficient redundancy in the City’s water supply planning to account for uncertainties in the demand estimates due to the small population of a land

TM 1 – Unit Water Demand Factor Verification and Water Demand Evaluation and Update

use category. The difference between the “Conservative” Scenario and “Aggressive” Scenario was the use of the lower commercial unit water demand factors developed in this study based on the more recent meter data as shown in **Table 1-1**.

Based on the results presented in **Table 1-2**, the total annual average projected water demand for the City and MOU Area is approximately 64,325 AF/Year. The demand for City only (including the WRSP) is estimated to be 57,689 AF/Year (50,056 AF/Year plus 7,633 AF/Year) as opposed to 59,111 AF/year in TM 7 (51,620 AF/Year plus 7,491 AF/Year). The 1,422 AF/Year of reduced water demand (59,111 AF/Year – 57,689 AF/Year = 1,422 AF/Year) can be attributed to the use of a lower water unit demand factor for pre 1992 homes, the meter retrofit program, extensive City water use efficiency efforts, and updated land uses within the City. The total annual average projected water demand for both the SVSP and CVSP areas is estimated to be 6,636 AF/Year (5,380 AF/Year plus 1,256 AF/Year) based on the most recent land use plan information as of May 2006.

Given the projected water demand summarized above and the City’s available surface water and groundwater entitlements, recycled water use, Aquifer Storage and Recovery (ASR) Program, and dry year water conservation efforts, a water supply portfolio and strategy will be developed for the City to provide long-term reliable water supplies to the City and the MOU Area. This water supply portfolio and strategy will be discussed in a separate technical memorandum, TM 2.

Table 1-2. City of Roseville and MOU Area Demand Estimate at Build-out – “Conservative Scenario”

Land Use	Gross Area (Acres)				Annual Average Demand (AF/Year)				Max Day Demand (MGD) ²			
	City ¹	West Roseville ¹	Sierra Vista	Creek View	City	West Roseville	Sierra Vista	Creek View	City	West Roseville	Sierra Vista	Creek View
LDR1 <3.5	1,675	661			3,664	1,454			6.6	2.6		
LDR2 (3.5 to 5.0)	5,278	779	496		15,991	2,360	1,503		28.5	4.2	2.7	
LMDR1 >5.0 to 6.0	807	38			2,591	121			4.6	0.2		
LMDR2 >6.0 to 8.0	557	113		65	1,876	382		219	3.4	0.7		0.4
MDR >8.0 to 12.0	390	29	609	79	1,412	187	2,204		2.5	0.2	3.9	0.5
HDR1 >12.0 to 16.0	153	54		73	891	242		331	4.2	0.4		0.6
HDR2 >16.0	368	51	75	33	1,466	203	299	129	2.6	0.4	0.5	0.2
Commercial/Retail	1,859	48			5,409	199			9.7	0.2		
Commercial Mixed Use ³			119	29			390	95			0.7	0.2
Business/Professional	813	19			2,366	58			4.2	0.1		
Light Industrial	1,320	80			3,942	333			5.9	0.4		
Industrial	569	32			1,632	92			2.9	0.2		
Railroad Yard	535				70				0.1			
Schools	384	109	60	10	1,617	459	286	42	2.9	0.8	0.5	0.1
Public	427	16	2	10	851	32	4	20	1.5	0.1	0.0	0.0
Park/Recreation	1,512	278	176	33	5,059	891	589	109	9.0	1.7	1.1	0.2
Open Space	1,579	899		154								
Road Right-of-Way	397	114		53								
Urban Reserve			31									
Subtotal	18,822	3,120	1,577	539	48,548	6,810	5,274	1,231	86.7	12.2	9.4	2.2
System Losses (2%)					971	136	105	25	1.7	0.2	0.2	0.0
Demand Adjustment for Rezoned Areas ⁴					537				1.0			
Demand for additional 1,000 units of homes in West Roseville ⁵						685				1.2		
Total					50,056	7,633	5,380	1,256	89.4	13.6	9.6	2.2
Total Demand for City and MOU Area						64,325				114.8		

Notes:

1. The Sierra View Country Club golf course (192 acres) within the City and the proposed Roseville Energy Park (200 acres) in West Roseville are not included because they use insignificant amount of City’s potable water.
2. Assume Maximum Day Demand/Average Day Demand = 2
3. For internal CMU parcels, 50% is assumed for residential, 20% for retail, and 30% for office. For CMU parcels along major roads, 40% is assumed for residential, 40% for retail, and 20% for offices. The composite demand factor for CMU is based on Sierra Vista Land Use information.
4. There are 19 rezoned areas in the City including HP/JMC, Riverside Corridor Redevelopment, Kaiser, Galleria Mall, and other areas.
5. Assume these units are low density single family homes.

2010 California Plumbing Code



**California Code of Regulations
Title 24, Part 5**

**California Building
Standards Commission**

Based on the 2009 Uniform Plumbing Code®



EFFECTIVE DATE: January 1, 2011
(For Errata and supplements, See History Note Appendix)
Public Domain: U.S. Court of Appeals, Fifth Circuit, [99-40632](#)

610.0 Size of Potable Water Piping.

610.1 The size of each water meter and each portable water supply pipe from the meter or other source of supply to the fixture supply branches, risers, fixtures, connections, outlets, or other uses shall be based on the total demand and shall be determined according to the methods and procedures outlined in this section. Water piping systems shall be designed to ensure that the maximum velocities allowed by the code and the applicable standard are not exceeded.

610.3 The quantity of water required to be supplied to every plumbing fixture shall be represented by fixture units, as shown in Table 6-5. Equivalent fixture values shown in Table 6-5 include both hot and cold water demand.

610.4 Systems within the range of Table 6-6 shall be permitted to be sized from that table or by the method set forth in Section 610.5. Listed parallel water distribution systems shall be installed in accordance with their listing, but at no time shall any portion of the system exceed the maximum velocities allowed by the code.

610.7 On any proposed water piping installation sized using Table 6-6, the following conditions shall be determined:

1. Total number of fixture units as determined from Table 6-5, Equivalent Fixture Units, for the fixtures to be installed.
2. Developed length of supply pipe from meter to most remote outlet.
3. Difference in elevation between the meter or other source of supply and the highest fixture or outlet.
4. Pressure in the street main or other source of supply at the locality where the installation is to be made.
5. In localities where there is a fluctuation of pressure in the main throughout the day, the water piping system shall be designed on the basis of the minimum pressure available.

TABLE 6-5
WATER SUPPLY FIXTURE UNITS (WSFU) AND MINIMUM FIXTURE BRANCH PIPE SIZES³

Inch	mm				
½	15				
¾	20				
1	25				
APPLIANCES, APPURTENANCES OR FIXTURES ²		MINIMUM FIXTURE BRANCH PIPE SIZE ^{1,4}	PRIVATE	PUBLIC	ASSEMBLY ⁶
Notes:					
¹ Size of the cold branch pipe, or both the hot and cold branch pipes.					
² Appliances, Appurtenances or Fixtures not included in this Table may be sized by reference to fixtures having a similar flow rate and frequency of use.					
³ The listed fixture unit values represent their load on their cold water service. The separate cold water and hot water fixture unit value for fixtures having both hot and cold water connections may each be taken as three-quarter (¾) of the listed total value of the fixture.					
⁴ The listed minimum supply branch pipe sizes for individual fixtures are the nominal (I.D.) pipe size.					
⁵ For fixtures or supply connections likely to impose continuous flow demands, determine the required flow in gallons per minute (GPM), and add it separately to the demand (in GPM) for the distribution system or portions thereof.					
⁶ Assembly [Public Use (See Table 4-1)].					
⁷ When sizing flushometer systems, see Section 610.10.					
⁸ Reduced fixture unit loading for additional hose bibbs is to be used only when sizing total building demand and for pipe sizing when more than one (1) hose bibb is supplied by a segment of water-distributing pipe. The fixture branch to each hose bibb is supplied by a segment of water-distributing pipe. The fixture branch to each hose bibb shall be sized on the basis of two and one-half (2.5) fixture units.					
⁹ [HCD 2] For water supply fixture unit values related to mobilehome parks in all parts of the State of California, see California Code of Regulations, Title 25, Division 1, Chapter 2, Article 5, Section 1278. For water supply fixture unit values related to special occupancy parks in all parts of the State of California, see California Code of Regulations, Title 25, Division 1, Chapter 2.2, Article 5, Section 2278.					
Bathub or Combination Bath/Shower (fill)	½	4.0	4.0	B	
¾" Bathub Fill Valve	¾	10.0	10.0		
Bidet	½	1.0			
Clothes washer	½	4.0	4.0		
Dental Unit, cuspidor	½		1.0		
Dishwasher, domestic	½	1.5	1.5		
Drinking Fountain or Water Cooler	½	0.5	0.5	0.75	
Hose Bibb	½	2.5	2.5		
Hose Bibb, each additional ⁸	½	1.0	1.0		
Lavatory	½	1.0	1.0	1.0	
Lawn Sprinkler, each head ⁵		1.0	1.0		
Mobile Home, each (minimum) ⁹		12.0			
Sinks					
Bar	½	1.0	2.0		
Clinic Faucet	½		3.0		
Clinic Flushometer Valve with or without faucet	1		8.0		
Kitchen, domestic	½	1.5	1.5		
Laundry	½	1.5	1.5		
Service or Mop Basin	½	1.5	3.0		
Washup, each set of faucets	½		2.0		
Shower, per head	½	2.0	2.0		
Urinal, 1.0 GPF Flushometer Valve	¾	See Footnote ⁷			
Urinal, greater than 1.0 GPF Flushometer Valve	¾	See Footnote ⁷			
Urinal, flush tank	½	2.0	2.0	3.0	
Wash Fountain, circular spray	¾		4.0		
Water Closet, 1.6 GPF Gravity Tank	½	2.5	2.5	3.5	
Water Closet, 1.6 GPF Flushometer Tank	½	2.5	2.5	3.5	
Water Closet, 1.6 GPF Flushometer Valve	1	See Footnote ⁷			
Water Closet, greater than 1.6 GPF Gravity Tank	½	3.0	5.5	7.0	
Water Closet, greater than 1.6 GPF Flushometer Valve	1	See Footnote ⁷			

**TABLE 6-6
FIXTURE UNIT TABLE FOR DETERMINING WATER PIPE AND METER SIZES**

		MAXIMUM ALLOWABLE LENGTH IN FEET (meters)														
METER AND STREET SERVICE, INCHES	BUILDING SUPPLY AND BRANCHES, INCHES	40	60	80	100	150	200	250	300	400	500	600	700	800	900	1000
		(12)	(18)	(24)	(30)	(46)	(61)	(76)	(91)	(122)	(152)	(183)	(213)	(244)	(274)	(305)
		Inch/mm														
		1/2 15														
		3/4 20														
		1 25														
		1 1/4 32														
		1 1/2 40														
		2 50														
		2 1/2 65														
		***Available static pressure after head loss.														
		***Building supply, not less than three-quarter (3/4) inch (20 mm) nominal size.														
		Pressure Range - 30 to 45 psi (207 to 310 kPa)**														
3/4	1/2***	6	5	4	3	2	1	1	1	0	0	0	0	0	0	0
3/4	3/4	16	16	14	12	9	6	5	5	4	4	3	2	2	2	1
1	1	29	25	23	21	17	15	13	12	10	8	6	6	6	6	6
1	1 1/4	36	33	31	28	24	23	21	19	17	16	13	12	12	11	11
1	1 1/2	54	47	42	38	32	28	25	23	19	17	14	12	12	11	11
1 1/2	1 1/4	78	68	57	48	38	32	28	25	21	18	15	12	12	11	11
1	1 1/2	85	84	79	65	56	48	43	38	32	28	26	22	21	20	20
1 1/2	1 1/2	150	124	105	91	70	57	49	45	36	31	26	23	21	20	20
2	1 1/2	151	129	129	110	80	64	53	46	38	32	27	23	21	20	20
1	2	85	85	85	85	85	85	82	80	66	61	57	52	49	46	43
1 1/2	2	220	205	190	176	155	138	127	120	104	85	70	61	57	54	51
2	2	370	327	292	265	217	185	164	147	124	96	70	61	57	54	51
2	2 1/2	445	418	390	370	330	300	280	265	240	220	198	175	158	143	133
		Pressure Range - 46 to 60 psi (317 to 414 kPa)**														
3/4	1/2***	7	7	6	5	4	3	2	2	1	1	1	0	0	0	0
3/4	3/4	20	20	19	17	14	11	9	8	6	5	4	4	3	3	3
3/4	1	39	39	36	33	28	23	21	19	17	14	12	10	9	8	8
1	1	39	39	39	36	30	25	23	20	18	15	12	10	9	8	8
3/4	1 1/4	39	39	39	39	39	39	34	32	27	25	22	19	19	17	16
1	1 1/4	78	78	76	67	52	44	39	36	30	27	24	20	19	17	16
1 1/2	1 1/4	78	78	78	78	66	52	44	39	33	29	24	20	19	17	16
1	1 1/2	85	85	85	85	85	85	80	67	55	49	41	37	34	32	30
1 1/2	1 1/2	151	151	151	151	128	105	90	78	62	52	42	38	35	32	30
2	1 1/2	151	151	151	151	150	117	98	84	67	55	42	38	35	32	30
1	2	85	85	85	85	85	85	85	85	85	85	85	85	85	83	80
1 1/2	2	370	370	340	318	272	240	220	198	170	150	135	123	110	102	94
2	2	370	370	370	370	368	318	280	250	205	165	142	123	110	102	94
2	2 1/2	654	640	610	580	535	500	470	440	400	365	335	315	285	267	250
		Pressure Range - Over 60 psi (414 kPa)**														
3/4	1/2***	7	7	7	6	5	4	3	3	2	1	1	1	1	1	0
3/4	3/4	20	20	20	20	17	13	11	10	8	7	6	6	5	4	4
3/4	1	39	39	39	39	35	30	27	24	21	17	14	13	12	12	11
1	1	39	39	39	39	38	32	29	26	22	18	14	13	12	12	11
3/4	1 1/4	39	39	39	39	39	39	39	39	34	28	26	25	23	22	21
1	1 1/4	78	78	78	78	74	62	53	47	39	31	26	25	23	22	21
1 1/2	1 1/4	78	78	78	78	74	65	54	43	34	26	25	23	22	21	21
1	1 1/2	85	85	85	85	85	85	85	85	81	64	51	48	46	43	40
1 1/2	1 1/2	151	151	151	151	151	151	130	113	88	73	51	51	46	43	40
2	1 1/2	151	151	151	151	151	151	142	122	98	82	64	51	46	43	40
1	2	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85
1 1/2	2	370	370	370	370	360	335	305	282	244	212	187	172	153	141	129
2	2	370	370	370	370	370	370	370	340	288	245	204	172	153	141	129
2	2 1/2	654	654	654	654	654	650	610	570	510	460	430	404	380	356	329

SIZING WATER SERVICE LINES AND METERS

**CITY OF VIRGINIA BEACH
Water Customer Data Sheet**

Customer _____ Address _____
 Building Address _____ Zip Code _____
 Subdivision _____ Lot No. _____ Blk. No. _____
 Type of Occupancy _____

<u>Fixture</u>	<u>Fixture Value 60 psi</u>	<u>No. of Fixtures</u>	<u>Fixture Value</u>
Bathtub	8	x	=
Bedpan Washers	10	x	=
Bidet	2	x	=
Dental Unit	2	x	=
Drinking Fountain - Public	2	x	=
Kitchen Sink	2.2	x	=
Lavatory	1.5	x	=
Showerhead (Shower Only)	2.5	x	=
Service Sink	4	x	=
Toilet – Flush Valve	35	x	=
- Tank Type	4	x	=
Urinal – Pedestal Flush Valve	35	x	=
- Wall Flush Valve	16	x	=
Wash Sink (Each Set of Faucets)	4	x	=
Dishwasher	2	x	=
Washing Machine	6	x	=
Hose (50 ft Wash Down) - 1/2 in.	5	x	=
- 5/8 in.	9	x	=
- 3/4 in.	12	x	=
Combined Fixture Value Total			=

Customer Peak Demand From Fig. 4 –2 or 4 –3 x Press. Factor = _____ gpm

Add Irrigation - _____ Sections* x 1.16 or 0.40+ = _____ gpm

- _____ Hose Bibs x Fixture Value x _____ Press. Factor = _____ gpm

Added Fixed Load = _____ gpm

TOTAL FIXED DEMAND = _____ gpm

* 100 ft² area = 1 section

+ Spray Systems- Use 1.16; Rotary systems- Use 0.40

Figure 4-5 Water customer data sheet

Source: AWWA M22 Sizing Water Service Lines and Meters (Jan. 2004)
 Reprinted from M22 – Sizing Water Service Lines and Meters, by permission. Copyright 2004, American Water Works Association

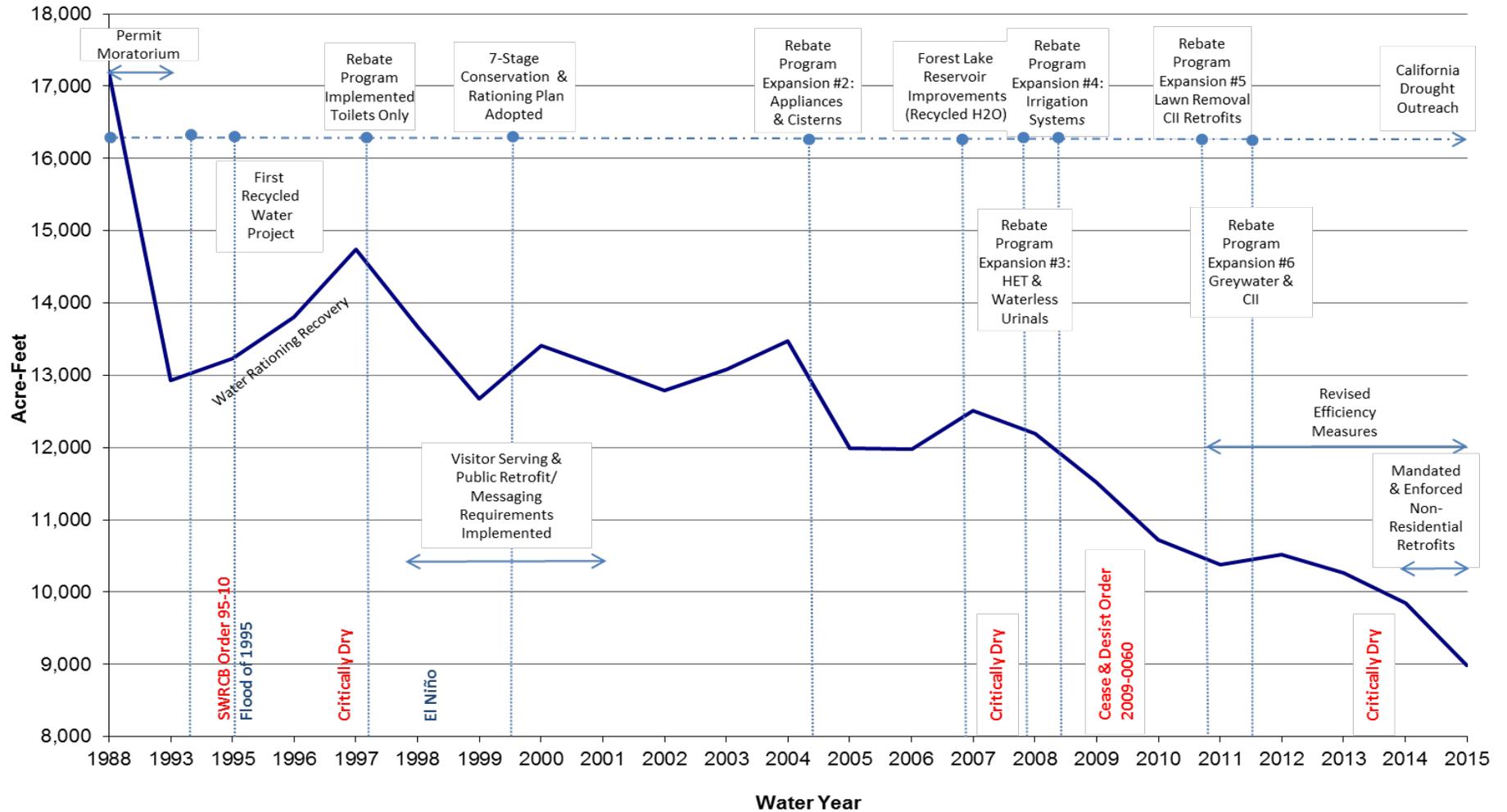
Conservation Activities on the Monterey Peninsula

The Monterey Peninsula has implemented strong conservation practices since the 1980s. MPWMD has regulations that require the most efficient water using devices/appliances and hot water systems, as well as landscaping and irrigation, in new construction and remodels and requires conservation retrofits in homes and businesses upon title transfer. Visitor-serving businesses were required to install water efficient fixtures/toilets by 2001. All businesses were mandated to install water efficient plumbing fixtures, ice machines, and clothes washers, and must display notification to conserve water in every bathroom. In 2015, the District began physical verification audits of businesses. MPWMD and Cal-Am offer a variety of aggressive rebates for an extensive array of equipment, provide water saving devices free to customers, offer on-site audits with water saving recommendations, and sponsor a variety of classes and workshops focused primarily on outdoor water efficiency. MPWMD has representatives in the field on a daily basis to enforce its regulations and to educate the public. The rate designs provide conservation incentives through tiered pricing and rewards for Best Management Practices. Commercial customers can only achieve the lowest water rates by complying with MPWMD requirements and strict outdoor irrigation efficiencies. As a result, the Monterey Peninsula has saved almost 4,000 acre feet of water annually – a medium sized water supply project – and per capita water consumption is among the lowest in the state. Diversions from the Carmel River are 46% lower than they were before Order 95-10. The effect of these aggressive conservation practices is shown in the chart on the next page.

Example Programs:

- Water Permits Required Before Building Permit (1985)
- Retrofit to Low Flow Fixtures Upon Resale, Change of Use (1987)
- Low Flow Fixtures/Appliances Required in New Construction (1987)
- Water Rationing (1989-1992)
- Recycled Water for Golf Course and Open Space Irrigation (1993)
- Toilet Rebate Program (1997)
- Conservation Messaging Requirements for Visitor-Serving Commercial, Public, and Quasi-Public Facilities (1997)
- Mandatory Landscape Water Audits and Water Budgets for Large Irrigators (1999)
- Tiered Rates for Residential and Commercial (2001)
- Visitor-Serving Commercial and Public Retrofit Requirement (2001)
- Expanded Residential and Commercial/Industrial/Institutional, Irrigation Efficiency Rebate Program (2007)
- Towel and Linen Reuse Program Requirement (2009)
- Rain Sensor Requirement Upon Resale, Change of Use, New Construction/Remodels (2010)
- Updated and Intensified Efficiency Requirements for Change of Use, New Construction/Remodels (2010)
- Commercial Rates Tied to Conservation Best Management Practices (2013)
- Mandatory Commercial/Industrial/Institutional Water Efficiency Retrofits (2014)
- Commercial/Industrial/Institutional and Landscape Audits Offered at No Charge (2009-Present)
- Inspection of Properties for Compliance (1987-Present)
- Grant Funding for Large Landscape Retrofits (2009-Present)
- School Retrofit Program (2009-2014)
- Partnership with local water suppliers
- Enforcement authority

**Monterey Peninsula Conservation Program
Cal-Am Main System Consumption
WY 1988 - WY 2015**



Data Source: CAW Customers and Consumption by Political Jurisdiction

Prepared by MPWMD

ITEM: INFORMATIONAL ITEM/STAFF REPORTS

16. WATER CONSERVATION PROGRAM REPORT

Meeting Date:	August 15, 2016	Budgeted:	N/A
From:	David J. Stoldt, General Manager	Program/ Line Item No.:	N/A
Prepared By:	Kyle Smith	Cost Estimate:	N/A

Committee Recommendation: N/A

CEQA Compliance: N/A

I. MANDATORY WATER CONSERVATION RETROFIT PROGRAM

District Regulation XIV requires the retrofit of water fixtures upon Change of Ownership or Use with High Efficiency Toilets (HET) (1.28 gallons-per-flush), 2.0 gallons-per-minute (gpm) Showerheads, 2.2 gpm faucet aerators, and Rain Sensors on all automatic Irrigation Systems. Property owners must certify the Site meets the District's water efficiency standards by submitting a Water Conservation Certification Form (WCC), and a Site inspection is often conducted to verify compliance.

A. Changes of Ownership

Information is obtained monthly from *Realquest.com* on properties transferring ownership within the District. The information is entered into the database and compared against the properties that have submitted WCCs. Details on **135** property transfers that occurred in July 2016 were entered into the database.

B. Certification

The District received **31** WCCs between July 1, 2016, and July 31, 2016. Data on ownership, transfer date, and status of water efficiency standard compliance were entered into the database.

C. Verification

In July, **66** properties were verified to be in compliance with Rule 144 (Retrofit Upon Change of Ownership or Use). Of the **83** inspections, **39** properties verified compliance by submitting certification forms and/or receipts. District staff completed **44** site inspections. Of the **44** properties inspected **27 (61%)** were in compliance. **One** of the properties that passed inspection involved more than one visit to verify compliance with all water efficiency standards.

District inspectors are tracking toilet replacement with High Efficiency Toilets (HET) in place of ULF toilets. These retrofits are occurring in remodels and new construction, and are the toilet of choice for Rule 144 compliance. State law mandated the sale and installation of HET by January 1, 2014, with a phase-in period that began in 2010. The majority of toilets sold in California are HET.

Savings Estimate Water savings from HET retrofits triggered by Rule 144 verified in July 2016 are estimated at **0.150** acre-feet annually (AFA). Water savings from retrofits that exceeded requirements (i.e., HETs to Ultra High Efficiency Toilets) is estimated at **0.150** AFA (15 toilets). Year-to-date estimated savings occurring as a result of toilet retrofits is **7.690** AFA.

D. CII Compliance with Water Efficiency Standards

Effective January 1, 2014, all Non-Residential properties were required to meet Rule 143, Water Efficiency Standards for Existing Non-Residential Uses. To verify compliance with these requirements, property owners and businesses are being sent notification of the requirements and a date that inspectors will be on site to check the property. This month, District inspectors performed **38** inspections. Of the **38** inspections certified, **19 (50%)** were in compliance. **Four** of the properties that passed inspection involved more than one visit to verify compliance with all water efficiency standards; the remainder complied without a reinspection.

MPWMD is forwarding its CII inspection findings to California American Water (Cal-Am) for their verification with the Rate Best Management Practices (Rate BMPs) that are used to determine the appropriate non-residential rate division. Compliance with MPWMD's Rule 143 achieves Rate BMPs for indoor water uses, however, properties with landscaping must also comply with Cal-Am's outdoor Rate BMPs to avoid Division 4 (Non-Rate BMP Compliant) rates. In addition to sharing information about indoor Rate BMP compliance, MPWMD notifies Cal-Am of properties with landscaping. Cal-Am then conducts an outdoor audit to verify compliance with the Rate BMPs. During July 2016, MPWMD referred **14** properties to Cal-Am for verification of outdoor Rate BMPs.

E. Water Waste Enforcement

In response to the State's drought emergency conservation regulation effective June 1, 2016, the District has increased its Water Waste enforcement. The District has a Water Waste Hotline 831-658-5653 or an online form to report Water Waster occurrences at www.mpwmd.net or www.montereywaterinfo.org. There were **six** Water Waste responses during the past month. There were **no** repeated incidents that resulted in a fine.

II. WATER DEMAND MANAGEMENT

A. Permit Processing

District Rule 23 requires a Water Permit application for all properties that propose to expand or modify water use on a Site, including New Construction and Remodels. District staff processed and issued **85** Water Permits in July 2016. **Six** Water Permits were issued using Water Entitlements (Macomber, Pebble Beach Company, Griffin Estates, etc). No Water Permit involved a debit to a Public Water Credit Account.

All Water Permits have a disclaimer informing applicants of the Cease and Desist Order against California American Water and that MPWMD reports Water Permit details to California American Water. All Water Permit recipients with property supplied by a California American Water Distribution System will continue to be provided with the disclaimer.

District Rule 24-3-A allows the addition of a second Bathroom in an existing Single-Family Dwelling on a Single-Family Residential Site. Of the **85** Water Permits issued in July, **four** were issued under this provision.

B. Permit Compliance

District staff completed **54** Water Permit final inspections during July 2016. **Eight** of the final inspections failed due to unpermitted fixtures. Of the **34** properties that were in compliance, **18** passed on the first visit. In addition, **five** pre-inspection were conducted in response to Water Permit applications received by the District.

C. Deed Restrictions

District staff prepares deed restrictions that are recorded on the property title to provide notice of

District Rules and Regulations, enforce Water Permit conditions, and provide notice of public access to water records. In April 2001, the District Board of Directors adopted a policy regarding the processing of deed restrictions. In the month of July, the District prepared **83** deed restrictions. Of the **85** Water Permits issued in July, **53 (62%)** required deed restrictions. District staff provided Notary services for **73** Water Permits with deed restrictions.

III. JOINT MPWMD/CAW REBATE PROGRAM

Participation in the rebate program is detailed in the following chart. The table below indicates the program summary for Rebates for California American Water Company customers.

REBATE PROGRAM SUMMARY		July-2016				2016 YTD	1997 - Present	
		Number of devices	Rebate Paid	Estimated AF	Gallons Saved	YTD Quantity	YTD Paid	YTD Est AF
I. Application Summary								
A.	Applications Received	122				1231	22,066	
B.	Applications Approved	91				978	17,333	
C.	Single Family Applications	108				1140	19,877	
D.	Multi-Family Applications	11				58	1,105	
E.	Non-Residential Applications	3				33	285	
II. Type of Devices Rebated								
A.	High Efficiency Toilet (HET)	18	1765.00	0.751464	244,865	123	12,189.00	5.135004
B.	Ultra Low Flush to HET	33	3267.00	0.330000	107,531	240	23,624.57	2.4
C.	Ultra HET	15	2239.00	0.150000	48,878	163	24,006.80	1.63
D.	Toilet Flapper	2	17.25	0.000000	0	2	17.25	0
E.	High Efficiency Dishwasher	2	250.00	0.006000	1,955	112	14,000.00	0.336
F.	High Efficiency Clothes Washer	36	19999.99	0.981672	319,879	350	176,444.64	6.037072
G.	Instant-Access Hot Water System	0	0.00	0.000000	0	20	3,701.00	0
H.	On Demand Systems	0	0.00	0.000000	0	5	500.00	0
I.	Zero Use Urinals	0	0.00	0.000000	0	0	0.00	0
J.	High Efficiency Urinals	0	0.00	0.000000	0	0	0.00	0
K.	Pint Urinals	0	0.00	0.000000	0	0	0.00	0
L.	Cisterns	4	8437.50	0.000000	0	45	55,913.50	0
M.	Smart Controllers	2	194.12	0.000000	0	5	664.12	0
N.	Rotating Sprinkler Nozzles	0	0.00	0.000000	0	0	0.00	0
O.	Moisture Sensors	0	0.00	0.000000	0	0	0.00	0
P.	Lawn Removal & Replacement	1	710.00	0.058220	18,971	20	24,547.00	2.198174
Q.	Graywater	0	0.00	0.000000	0	0	0.00	0
R.	Ice Machines	0	0.00	0.000000	0	0	0.00	0
III. Totals: Month; AF; Gallons; YTD		113	36879.86	2.277356	742,079	1085	335,607.88	17.73625
						2016 YTD	1997 - Present	
IV. Total Rebated: YTD; Program						335,607.88	5,229,900.94	
V. Estimated Water Savings in Acre-Feet Annually*						17.736250	502.473215	

* Retrofit savings are estimated at 0.041748 AF/HET; 0.01 AF/UHET; 0.01 AF/ULF to HET; 0.003 AF/dishwasher; 0.0161 AF/residential washer; 0.0082 AF/100 square feet of lawn removal.

Local Laws Designed to Ensure Compliance with the CDO and EDL

The District has adopted many ordinances and developed rules and regulations to ensure that the Effective Diversion Limit of the CDO is adhered to, as well as the adjudicated groundwater limits from the Seaside Basin.

This includes an annual determination of legally available production based on the CDO and the Seaside Basin, allocated to monthly amounts, adopted at public hearing annually subject to Rule 160 attached.

These amounts are reviewed with Cal-Am, the National Marine Fisheries Service, California Department of Fish and Wildlife quarterly to establish production budgets for the ensuing 3 months pursuant to Rule 101 D attached.

Daily production reports are required to be submitted to the District by Cal-Am to monitor production against the quarterly budget pursuant to Rule 101 E attached. A sample daily report is shown on the next page. Monthly reports are then compiled and results reported monthly to the District board.

Rule 102 and Rule 103 provide enforcement power to the District to ensure Cal-Am complies with the quarterly budget.

Rule 161 requires Cal-Am to adopt the District's conservation and rationing plan and provide consumption data in order to enable the District to monitor changes or problem areas in demand.

Rules 163, 164, and 165 show that successive phases of the District's Conservation and Ration Plan have "Regulatory Triggers" based on an exceedance of EDL and adjudicated Seaside Basin limits established by the Rule 160 process, or at the direction of a regulatory agency other than the District.

EXHIBIT G

Date	Carmel Valley Wells				Seaside & Santa Margarita Wells				Sand City Desal			
	Target Daily	Actual Daily	Target WYTD	Actual WYTD	Target Daily	Actual Daily	Target WYTD	Actual WYTD	Target Daily	Actual Daily	Target WYTD	Actual WYTD
07/01/16	36.87	21.81	7,031.87	6,031.09	9.68	7.90	1,484.68	1,120.22	0.81	0.77	225.81	104.69
07/02/16	36.87	22.85	7,068.74	6,053.94	9.68	7.44	1,494.35	1,127.66	0.81	0.89	226.61	105.59
07/03/16	36.87	24.42	7,105.61	6,078.36	9.68	6.84	1,504.03	1,134.50	0.81	0.91	227.42	106.50
07/04/16	36.87	22.00	7,142.48	6,100.36	9.68	6.84	1,513.71	1,141.34	0.81	1.21	228.23	107.71
07/05/16	36.87	21.25	7,179.35	6,121.61	9.68	6.87	1,523.39	1,148.21	0.81	0.05	229.03	107.76
07/06/16	36.87	18.38	7,216.23	6,140.00	9.68	6.86	1,533.06	1,155.07	0.81	0.00	229.84	107.76
07/07/16	36.87	22.74	7,253.10	6,162.74	9.68	6.96	1,542.74	1,162.04	0.81	0.00	230.65	107.76
07/08/16	36.87	22.36	7,289.97	6,185.10	9.68	7.36	1,552.42	1,169.39	0.81	0.00	231.45	107.76
07/09/16	36.87	22.40	7,326.84	6,207.50	9.68	7.76	1,562.10	1,177.15	0.81	0.00	232.26	107.76
07/10/16	36.87	22.28	7,363.71	6,229.78	9.68	8.16	1,571.77	1,185.31	0.81	0.00	233.06	107.76
07/11/16	36.87	21.98	7,400.58	6,251.76	9.68	8.16	1,581.45	1,193.48	0.81	0.00	233.87	107.76
07/12/16	36.87	23.62	7,437.45	6,275.38	9.68	8.13	1,591.13	1,201.61	0.81	0.00	234.68	107.76
07/13/16	36.87	21.71	7,474.32	6,297.08	9.68	8.12	1,600.81	1,209.73	0.81	0.00	235.48	107.76
07/14/16	36.87	22.29	7,511.19	6,319.38	9.68	8.13	1,610.48	1,217.86	0.81	0.00	236.29	107.76
07/15/16	36.87	21.38	7,548.06	6,340.75	9.68	8.11	1,620.16	1,225.97	0.81	0.00	237.10	107.76
07/16/16	36.87	22.08	7,584.94	6,362.83	9.68	8.22	1,629.84	1,234.19	0.81	0.00	237.90	107.76
07/17/16	36.87	22.46	7,621.81	6,385.29	9.68	8.37	1,639.52	1,242.56	0.81	0.00	238.71	107.76
07/18/16	36.87	22.80	7,658.68	6,408.09	9.68	8.39	1,649.19	1,250.95	0.81	0.00	239.52	107.76
07/19/16	36.87	21.54	7,695.55	6,429.63	9.68	8.41	1,658.87	1,259.37	0.81	0.00	240.32	107.76
07/20/16	36.87	22.81	7,732.42	6,452.45	9.68	8.39	1,668.55	1,267.76	0.81	0.00	241.13	107.76
07/21/16	36.87	22.37	7,769.29	6,474.82	9.68	8.44	1,678.23	1,276.20	0.81	0.00	241.94	107.76
07/22/16	36.87	22.90	7,806.16	6,497.72	9.68	8.43	1,687.90	1,284.63	0.81	0.22	242.74	107.98
07/23/16	36.87	21.70	7,843.03	6,519.42	9.68	12.94	1,697.58	1,297.57	0.81	0.00	243.55	107.98
07/24/16	36.87	20.23	7,879.90	6,539.64	9.68	13.34	1,707.26	1,310.91	0.81	0.00	244.35	107.98
07/25/16	36.87	18.51	7,916.77	6,558.15	9.68	10.88	1,716.94	1,321.80	0.81	0.00	245.16	107.98
07/26/16	36.87	20.25	7,953.65	6,578.40	9.68	9.22	1,726.61	1,331.02	0.81	0.79	245.97	108.77
07/27/16	36.87	22.15	7,990.52	6,600.56	9.68	8.47	1,736.29	1,339.49	0.81	0.82	246.77	109.59
07/28/16	36.87	20.53	8,027.39	6,621.08	9.68	8.74	1,745.97	1,348.23	0.81	0.96	247.58	110.55
07/29/16	36.87		8,064.26	6,621.08	9.68		1,755.65	1,348.23	0.81		248.39	110.55
07/30/16	36.87		8,101.13	6,621.08	9.68		1,765.32	1,348.23	0.81		249.19	110.55
07/31/16	36.87		8,138.00	6,621.08	9.68		1,775.00	1,348.23	0.81		250.00	110.55
Monthly Total AF	1,143.00	611.80	8,101.13	6,621.08	300.00	235.92	1,765.32	1,348.23	25.00	6.63	249.19	110.55
AF Over/Under Target		-531.20		-1480.05		-64.08		-417.09		-18.37		-138.64
% Over/Under Target		-46.47%		-18.27%		-21.36%		-23.63%		-73.49%		-55.64%

RULE 101 - FORECAST OF WATER SUPPLY

A. GENERAL MANAGER'S WATER SUPPLY FORECAST REPORT

The General Manager shall annually by May 1, compile a summary forecast report which analyzes rainfall in the preceding twelve (12) months and which estimates the amount of water in reservoirs and aquifers and other Sources of Supply available for use by each Water Distribution System. The water supply forecast report shall also include a summary of operation equipment status submitted by each Water Distribution System including, but not limited to: all Wells and pumps, transmission mains, treatment plants, pumping stations, auxiliary reservoirs and tanks. The forecast report shall further evaluate the projected demands of Water Distribution Systems and determine the number of months that the water available for use will support the projected demands. The General Manager's forecast report shall, consistent with the Board's operations plan, set forth a draft Water Supply Management Strategy for use in the following Water Year by each Water Distribution System which derives its Source of Supply from more than one Hydrological Management Unit.

If equipment failures or other emergencies reduce the present or projected long-term delivery capability of any Water Distribution System below current demand rates, the General Manager shall also compile or revise the water supply forecast report for each Water Distribution System which experiences equipment failures or other emergencies that threaten to reduce long-term delivery capabilities of that system below current demand rates.

B. WATER SUPPLY MANAGEMENT STRATEGIES

The Board shall quarterly hold a public hearing to determine District-wide water supply management strategies. The Water Supply Management Strategy adopted for California American Water shall include a goal that no more than 29% of that Water Distribution System's total production be derived from surface diversion and a goal that at least 71% of its total production be derived from subsurface water in Carmel Valley and Seaside. The Board shall review the General Manager's water supply forecast report, information, and models which may be provided by the Owner or Operator of any affected Water Distribution System in the District.

The Board shall further determine if the water in resources projected to be available for use by each Water Distribution System is less than that needed to meet the long-term projected demands of that system. Where such a finding is made, the Board shall direct the General Manager to institute an active conservation program and institute active voluntary rationing for all Users within that system and may declare a Water Supply Emergency. Where the Board determines that the water resources projected to be available for use by any Water Distribution System is inadequate to supply current or near-term demand, the Board shall declare a Water Supply Emergency and follow provisions under Regulation XV, Expanded Water Conservation and Standby Rationing Plan, as set forth in these Rules and Regulations.

C. DRAFT OPERATIONAL WATER SUPPLY BUDGETS PREPARED BY WATER DISTRIBUTION SYSTEMS

Each Water Distribution System which derives its Source of Supply from more than one Hydrological Management Unit shall, in the form and manner set by the General Manager, on or before June 1st, submit a draft Operational Water Supply Budget for the forthcoming water quarter to meet the demand projected in the General Manager's water supply forecast report and to comply with the water supply management strategies adopted by the Board. The draft Operational Water Supply Budget shall forecast the anticipated production by the Water Distribution System from each Hydrological Management Unit for each month of the forthcoming water quarter and shall specify target withdrawals for each Hydrological Management Unit, either as absolute amounts or as percentages to total production.

D. APPROVAL OF OPERATIONAL WATER SUPPLY BUDGETS

The Board shall quarterly hold a public hearing to review the draft Operational Water Supply Budget submitted by each Water Distribution System, and determine if that draft budget complies with District-wide water supply management strategies. Based upon the General Manager's water supply report, each draft Operational Water Supply Budget, information, and models which may be provided by the Owner or Operator of any affected Water Distribution System, and other evidence, the Board shall approve and/or modify an Operational Water Supply Budget for the following Water Year for each Multi-Source Water Distribution System in the District.

E. DAILY PRODUCTION REPORTS PREPARED BY WATER DISTRIBUTION SYSTEMS

On or before the Friday prior to the second Monday of each month, during the Water Year, each Water Distribution System shall report its actual daily production from each Water-Gathering Facility during the preceding month, and if necessary, shall submit a revised draft operational budget for the remainder of the Water Year. Each Water Distribution System shall, in the form and manner requested, further provide operational information to the District upon written request of the General Manager. Each revision of an operational budget shall be submitted to the Board in accord with the process set forth in Subdivision D of this rule.

F. EMERGENCY REVISION OF OPERATIONAL WATER SUPPLY BUDGETS

Where a Water Distribution System provides written notice to the General Manager that immediate revision of the Operational Water Supply Budget is required due to equipment or facilities failure, or when no other Source of Supply is able to meet consumptive demand, then the Water Distribution System may deviate from the Board approved Operational Water Supply Budget upon approval of the General Manager. This notice shall state the reasons for the deviation, the anticipated length of time for the deviation, and the actions to be taken by the Water Distribution System to alleviate the need for the deviation. The General Manager, upon receipt of the notice, shall determine whether to suspend the Operational Water Supply Budget, or to require compliance with the existing budget. Determinations of the General Manager may be appealed pursuant to the provisions of Rule 70 of these Rules and Regulations.

Rule added by Ordinance No. 7 (7/13/81); amended by Ordinance No. 19 (12/10/84); Ordinance No. 41 (3/13/89); Ordinance No. 125 (9/18/2006)

RULE 102 - ADHERENCE TO WATER SUPPLY BUDGETS

Except as permitted by Rule 101 (F), each Water Distribution System shall adhere to the Operational Water Supply Budget as approved by the Board.

Any production by a Water Distribution System which results in the withdrawal of water which exceeds by 10% the target withdrawal for a Hydrological Management Unit as specified in the Board approved Operational Water Supply Budget, for which notice has not been provided in accord with Subdivision F of Rule 101, shall be a misdemeanor punishable by a fine not to exceed five hundred dollars (\$500) per occurrence. Each day of operation for which the Operational Water Supply Budget target is exceeded by 10% for that month shall be deemed a separate occurrence, and be punishable as a separate offense under this rule.

Rule added by Ordinance No. 7 (7/13/81); amended by Ordinance No. 19 (12/10/84)

RULE 103 - REVIEW OF PRODUCTION REPORTS

The General Manager shall review and approve the daily production report submitted by each Water Distribution System pursuant to Rule 101-E.

In the event the prior month daily production report differs substantially (exceeding by 10% the target withdrawal for a Hydrological Management Unit) from the approved Operational Water Supply Budget, the General Manager shall notify that Water Distribution System that it has violated Rule 102, and shall set a public hearing before the Board to determine whether such violation and non-compliance is continuing. In the event the Board determines that the Water Distribution System production substantially deviates from the approved Operational Water Supply Budget, and that non-compliance is unwarranted and continuing, then the Board shall determine that each day of operation following that hearing shall be deemed a violation of the Rules and Regulations, and each day shall constitute a separate offense punishable by a fine not to exceed five hundred dollars (\$500) per occurrence.

Rule added by Ordinance No. 7 (7/13/81); amended by Ordinance No. 19 (12/10/84)

RULE 160 - REGULATORY PRODUCTION TARGETS AND PHYSICAL STORAGE TARGET

The monthly distribution of water production from sources within the Monterey Peninsula Water Resource System (MPWRS), as shown in Tables XV-1, XV-2, and XV-3 shall be approved by the Board of Directors as part of the Quarterly Water Supply Strategy and Budget process. The Board shall hold public hearings during the Board's regular meetings in September, December, March, and June, at which time the Board may modify Tables XV-1, XV-2, and XV-3 by Resolution.

The Physical Storage Target, as shown in Table XV-4 shall be approved as of May 1 each year by the Board of Directors. The Board shall hold a public hearing during the Board's regular meeting in May, at which time the Board may modify Table XV-4 by Resolution.

Rule added by Ordinance No. 92 (1/29/99); amended by Ordinance No. 119 (3/21/2005); Ordinance No. 134 (8/18/2008); Ordinance No. 135 (9/22/2008); Ordinance No. 137 (12/8/2008); Ordinance No. 142 (1/28/2010); deleted by Ordinance No. 169 (2/17/2016); Rule added by Ordinance No. 169 (2/17/2016)

Table XV-1
Regulatory Water Production Targets
for All California American Water Systems from Sources
Within the Monterey Peninsula Water Resource System

(All Values in Acre-Feet)

Month	Monthly Target	Year-to-Date at Month-End Target
October	1,076	1,076
November	904	1,980
December	796	2,776
January	797	3,573
February	748	4,321
March	850	5,171
April	914	6,085
May	1,112	7,197
June	1,157	8,354
July	1,258	9,612
August	1,239	10,851
September	1,151	12,002
TOTAL	12,002	--

Notes:

Monthly and year-to date at month-end production targets are based on the annual production limit specified for the California American Water (Cal-Am) systems for Water Year (WY) 2016 from Carmel River sources per State Water Resources Control Board Order WR 2009-0060 (9,703 acre-feet) and adjusted annual production limits specified for the Cal-Am satellite systems from its Coastal Subarea sources (2,251 acre-feet) and Laguna Seca Subarea sources (48 acre-feet) of the Seaside Groundwater Basin per the Seaside Basin Adjudication Decision. These values do not include consideration of any carryover credit in the Seaside Basin for WY 2016. This combined total (12,002 acre-feet) was distributed monthly based on Cal-Am's reported monthly average production for its main and satellite systems during the WY 2006 through 2013 period.

Table XV-1 amended by Resolution 2007-05 (5/21/2007); Ordinance No. 134 (8/18/2008); Ordinance No. 135 (9/22/2008); Ordinance No. 137 (12/8/2008); Resolution 2009-08 (6/15/2009); Resolution 2009-17 (12/14/2009); Resolution 2010-06 (5/17/2010); Resolution 2011-01 (1/27/2011); Resolution 2011-12 (9/19/2011); Resolution 2012-13 (9/17/2012); Resolution 2013-15 (9/16/2013); Resolution 2014-15 (9/15/2014); Resolution 2015-18 (9/21/2015)

**Table XV-2
Regulatory Water Production Targets
for All California American Water Satellite Systems from Sources
Within the Monterey Peninsula Water Resource System**

(All Values in Acre-Feet)

Month	Monthly Target	Year-to-Date at Month-End Target
October	5	5
November	3	8
December	3	11
January	3	14
February	2	16
March	3	19
April	3	22
May	5	27
June	5	32
July	6	38
August	5	43
September	5	48
TOTAL	48	--

Notes:

Monthly and year-to date at month-end production targets are based on the adjusted annual production limit specified for the California American Water (Cal-Am) satellite systems for Water Year 2016 from its sources in the Laguna Seca Subarea of the Seaside Groundwater Basin per the Seaside Basin Adjudication Decision. This Laguna Seca Subarea total (48 acre-feet) was distributed monthly based on Cal-Am's reported monthly average production for its satellite systems during the 2006 through 2013 period.

Table XV-2 added by Ordinance No. 135 (9/22/2008); amended by Ordinance No. 137 (12/8/2008); Resolution 2009-08 (6/15/2009); Resolution 2009-17 (12/14/2009); Resolution 2010-06 (5/17/2010); Resolution 2011-01 (1/27/2011); Resolution 2011-12 (9/19/2011); Resolution 2012-13 (9/17/2012); Resolution 2013-15 (9/16/2013); Resolution 2014-15 (9/15/2014); Resolution 2015-18 (9/21/2015)

**Table XV-3
Regulatory Water Production Targets
for California American Water Systems from Carmel River Sources
Within the Monterey Peninsula Water Resource System**

(All Values in Acre-Feet)

Month	Monthly Target	Year-to-Date at Month-End Target
October	869	869
November	730	1,599
December	644	2,244
January	645	2,889
February	605	3,494
March	687	4,181
April	740	4,920
May	899	5,820
June	934	6,754
July	1,017	7,771
August	1,002	8,773
September	930	9,703
TOTAL	9,703	---

Notes:

Monthly and year-to-date at month-end production targets are based on the annual production limit specified for California American Water (Cal-Am) for Water Year (WY) 2016 from its Carmel River system sources per State Water Resources Control Board Order WR 2009-0060 (9,703 acre-feet). This amount was distributed monthly based on Cal-Am’s reported monthly average production for its Main system sources during the WY 2006 through 2013 period. These values incorporate consideration of the triennial reductions specified for the Cal-Am systems in the Seaside Basin Adjudication Decision, in setting the monthly maximum production targets from each source as part of the MPWMD Quarterly Water Supply Budget Strategy.

Table XV-3 added by Resolution 2014-15 (9/15/2014); amended by Resolution 2015-18 (9/21/2015)

**Table XV-4
Physical Storage Target
for the Monterey Peninsula Water Resource System
for the Remainder of WY 2015 and all WY 2016**

Producer	May-September Demand	Carryover Storage Needs for Next Year Demand	Total Storage Required on May 1
California American Water (Cal-Am)	6,387	11,712	18,099
<u>Non Cal-Am</u>	<u>1,946</u>	<u>3,046</u>	<u>4,992</u>
Total	8,333	14,758	23,091
			Total Storage Available on May 1
			29,170⁵

Notes:

1. The May-September period refers to the remainder of the current Water Year.
2. Carryover Storage refers to the volume of usable surface and Groundwater that is in storage at the end of the current Water Year and is projected to be available for use at the beginning of the following Water Year.
3. Total Storage refers to the combination of demand remaining from May 1 to the end of the current Water Year and Carryover Storage for the next Water Year that is required to avoid imposing various levels of water Rationing. The value in **bold type** represents the storage trigger that would be used for the system in Water Year 2016. The value is based on the production limits for California American Water (Cal-Am) from Carmel River sources (9,703 Acre-Feet in WY 2016 and 9,461 Acre-Feet in WY 2017) set by State Water Resources Control Board Order WR 2009-0060, the production limit for Cal-Am from the Seaside Groundwater Basin (2,251 Acre-Feet in WY 2016 and 2,251 Acre-Feet in WY 2017) set by the Court in its March 27, 2006 Adjudication Decision, and the production limit specified for non-Cal-Am users from the Monterey Peninsula Water Resource System set in the District's Water Allocation Program (Ordinance No. 87).
4. The rationing trigger are based on physical water availability and do not account for legal or environmental constraints on diversions from the Carmel River system.
5. May 1, 2015 System Storage = 29,170 Acre-Feet (24,040 Acre-Feet Carmel Valley Alluvial Aquifer; 3,460 Acre-Feet Seaside Groundwater Basin; 1,670 Acre-Feet Los Padres Reservoir); this is 93% of average and 77% of System Capacity (37,640 AF).

Table XV-4 added by Resolution 2014-07 (5/19/2014); amended by Resolution 2014-15 (9/15/2014); Resolution 2015-08 (5/18/2015); Ordinance No. 169 (2/17/2016); Resolution 2016-09 (5/16/2016)

RULE 162 - STAGE 1 WATER CONSERVATION: PROHIBITION ON WATER WASTE

- A. Trigger. Stage 1 shall remain in effect at all times and shall apply to all Water Users subject to modification by the Board.
- B. Water Waste Prohibitions. Water Waste shall mean the indiscriminate, unreasonable, or excessive running or dissipation of water. Water Waste shall include, but not be limited, to the following:
 - 1. Waste caused by correctable leaks, breaks or malfunctions. All leaks, breaks, or other malfunctions in a Water User's plumbing or distribution system must be repaired within 72 hours of notification that a leak exists. Exceptions may be granted by the General Manager for corrections which are not feasible or practical.
 - 2. Indiscriminate or excessive water use which allows excess to run to waste.
 - 3. Washing driveways, patios, parking lots, tennis courts, or other hard surfaced areas with Potable water, except in cases where health or safety are at risk and the surface is cleaned with a Water Broom or other water efficient device or method. Water should be used only when traditional brooms are not able to clean the surface in a satisfactory manner.
 - 4. Power or pressure washing buildings and structures with Potable water, except when preparing surfaces for paint or other necessary treatments or when abating a health or safety hazard.
 - 5. Irrigation between 9 a.m. and 5 p.m. on any day, and irrigation on any day other than Saturdays and Wednesdays, except for irrigation overseen by a professional gardener or landscaper who is available on Site and that is not exceeding a maximum two watering days per week. This prohibition applies to hand watering with a hose, and irrigation systems whether spray, drip, or managed by a Smart Controller. Limited hand watering of plants or bushes with a small container or a bucket is permitted on any day at any time. Subsurface Graywater Irrigation Systems may also be operated at any time. An exemption may be given to a Non-Residential establishment whose business requires water in the course of its business practice (e.g. golf courses, nurseries, recreational space, among others) with notification by the business owner to the District, and subject to the approval of the General Manager.
 - 6. Hand watering by a hose, during permitted hours, without a quick acting Positive Action Shut-Off Nozzle.
 - 7. Irrigating during rainfall and for 48 hours after Measurable Precipitation.

8. Use of water for irrigation or outdoor purposes in a manner inconsistent with California's Model Water Efficient Landscape Ordinance (Code of Regulations, Title 23, Water, Division 2, Department of Water Resources, Chapter 2.7, and any successor regulations) where applicable, or in a manner inconsistent with local regulations.
9. Operation of fountains, ponds, lakes or other ornamental use of Potable water without recycling, and except to the extent needed to sustain aquatic life, provided such animals are of significant value and have been actively managed.
10. Individual private washing of cars with a hose except with the use of a Positive Action Shut-Off Nozzle.
11. Washing commercial aircraft, cars, buses, boats, trailers or other commercial vehicles with Potable water, except at water efficient commercial or fleet vehicle or boat washing facilities where equipment is properly maintained to avoid wasteful use.
12. In-Bay or Conveyor Car Washes permitted and constructed prior to January 1, 2014, that do not recycle and reuse at least 50 percent of the wash and rinse water. In-Bay or Conveyor Car Washes that were permitted and constructed after January 1, 2014, that do not either: (1) use and maintain a water recycling system that recycles and reuses at least 60 percent of the wash and rinse water; or (2) use recycled water provided by a water supplier for at least 60 percent of its wash and rinse water.
13. Charity car washes.
14. Use of Potable water for street cleaning.
15. Failure to meet MPWMD Regulation XIV water efficiency standards for an existing Non-Residential User after having been given a reasonable amount of time to comply.
16. Serving drinking water to any customer unless expressly requested, by a restaurant, hotel, café, cafeteria or other public place where food is sold, served or offered for sale.
17. Visitor-Serving Facilities that fail to adopt and promote towel and linen reuse programs and provide written notice in the rooms, whereby towels and linens are changed every three days or as requested by action of the guest.
18. Washing of livestock with a hose except with the use of a Positive Action Shut-Off Nozzle.

19. Transportation of water from the Monterey Peninsula Water Resource System without prior written authorization from the MPWMD.
 20. Delivery, receipt, and/or use of water from an unpermitted Mobile Water Distribution System.
 21. Unreasonable or excessive use of Potable water for dust control or earth compaction without prior written approval of the General Manager where Sub-potable water or other alternatives are available or satisfactory.
 22. Use of unmetered fire hydrant water by individuals other than for fire suppression or utility system maintenance purposes, except upon prior approval of the General Manager.
 23. Water use in excess of a Water Ration.
 24. Non-compliance with Regulations XIV and XV.
- C. The following activities shall not be cited as Water Waste:
1. Flow resulting from firefighting or essential inspection of fire hydrants;
 2. Water applied to abate spills of flammable or otherwise hazardous materials, where water application is the appropriate methodology;
 3. Water applied to prevent or abate health, safety, or accident hazards when alternate methods are not available;
 4. Storm run-off;
 5. Flow from fire training activities during Stage 1 Water Conservation through Stage 3 Water Conservation;
 6. Reasonable quantities of water applied as dust control as required by the Monterey Bay Air Resources District, except when prohibited;
 7. When a Mobile Water Distribution System Permit is not obtained by a State licensed Potable water handler by reason of an emergency or health related situation, authorization for the Mobile Water Distribution System Permit shall be sought from the District by submittal of a complete application compliant with Rule 21, within five working days following commencement of the emergency or health related event.

- D. Prohibitions against Water Waste and Non-Essential Water Use shall be enforced by the District and its designated agents, unless indicated otherwise. All notices and assessments of Water Waste and/or excess water use charges made by a Water Distribution System Operator shall be reported to the District within thirty (30) days.
- E. Each occurrence of Water Waste or Non-Essential Water Use that continues after the Water User has had reasonable notice to cease and desist that type of water use shall constitute a Flagrant Violation.
- E. Repeated occurrences of Water Waste or Non-Essential Water Use, which continue or occur after the Water User has had a reasonable notice to cease and desist that type of water use, or which continues or occurs after the Water User has had a reasonable opportunity to cure any defect causing that type of water use, shall provide cause for the placement of a Flow Restrictor with a maximum flow rate of six (6) CCF/month within the water line or Water Meter. Exemptions to the installation of a Flow Restrictor as a means to enforce the Water Ration shall occur when there are provable risks to the health, safety and/or welfare of the Water User. An exemption shall be made for Master Meters serving three or more Multi-Family Households or Master Meters serving both Residential and Non-Residential Users by substituting an excess water use charge equivalent to the appropriate Water Meter size, Rationing stage, and 4th offense amount times the number of Dwelling Units located on the Water Meter during each month in which a violation of the Water Ration occurs. The Responsible Party shall be liable for payment of all excess water use charges.
- G. Water Waste Fines shall be assessed as shown in Table XV-5. Table XV-5 may be amended by Resolution of the Board. Amendments to this table shall be concurrently made to the Fees and Charges Table found in Rule 60.
- H. In addition to Water Waste fines and fees described in this Rule 162, enforcement of all District Rules and Regulations is subject to District Regulation XI and may include an Administrative Compliance Order, a Cease & Desist Order, or other remedy available to the District under its Regulation XI.

Rule added by Ordinance No. 92 (1/28/99); amended by Ordinance No. 119 (3/21/05); Ordinance No. 125 (9/18/2006); Ordinance No. 134 (8/18/2008); Ordinance No. 135 (9/22/2008); Ordinance No. 137 (12/8/2008); Resolution No. 2009-17 (12/14/2009); Ordinance No. 142 (1/28/2010); deleted by Ordinance No. 169 (2/17/2016); Rule added by Ordinance No. 169 (2/7/2016)

**Table XV-5
Water Waste Fines**

First offense	No fee: Written notice and opportunity to correct the situation
Fine for first Flagrant Violation	\$100*
Fine for second Flagrant Violation within two (2) months	\$250*
Fine for third and subsequent Flagrant Violations within twelve (12) months	\$500*
Fine for Administrative Compliance Order or Cease & Desist Order	Up to \$2,500 per day* for each ongoing violation, except that the total administrative penalty shall not exceed one hundred thousand dollars (\$100,000.00) exclusive of administrative costs, interest and restitution for compliance re-inspections, for any related series of violations
Late payment charges	Half of one percent of the amount owed per month
*Fines triple for customers using over 500,00 gallons/year	

Table XV-5 added by Ordinance No. 169 (2/17/2016)

RULE 161 - GENERAL PROVISIONS

- A. All Water Users within the Monterey Peninsula Water Management District shall comply with the District's Water Waste Prohibitions of Rule 162 and with the requirements of MPWMD Regulation XIV, Water Conservation.
- B. California American Water shall amend its Urban Water Management Plan and its Rule 14.1.1 (Standard Practice U-40-W), Water Shortage Contingency Plan - Monterey County District, to conform to this Regulation. A copy of Rule 14.1.1 shall be filed with the California Public Utilities Commission (CPUC) and the District within thirty (30) days of the effective date of this Regulation and any amendment thereto.
- C. Water Distribution Systems regulated by the CPUC shall amend their Rule 14.1 to conform to this Regulation. A copy of Rule 14.1 shall be filed with the California Public Utilities Commission (CPUC) and the District within thirty (30) days of the effective date of this Regulation and any amendment thereto.
- D. At least ten (10) days prior to a first reading of amendments to Regulation XV, a copy of the proposed changes shall be provided to the CPUC Office of Ratepayer Advocates (ORA).
- E. California American Water shall provide the District with monthly consumption reports by customer classification and jurisdiction in a format approved by the District. A Water Year summary report shall be provided by December 1 of the next Water Year. Monthly reports shall be provided within fifteen (15) days of the close of the preceding month.
- F. Each Water Distribution System Operator shall provide individual consumption data pertaining to any Water User of that Water Distribution System upon written request of the General Manager. Data shall be in the form and manner specified by the General Manager and may be subject to a non-disclosure agreement with the Water Distribution System Owner/Operator. Each failure to respond in full to such written request by the date specified therein shall result in a penalty to the Water Distribution System of five-hundred dollars (\$500) per day for each day or portion thereof that the response is delayed.
- G. The General Manager shall retain and use any data received under this provision for the sole purposes of testing, administering, evaluating or enforcing Water Rationing, Water Waste, or other provisions of the Rules and Regulations.
- H. California American Water shall maintain Non-Revenue Water in its Water District Systems at or below seven (7) percent. Average losses of more than seven (7) percent during the most recent twelve-month period shall be considered Water Waste.
- I. Each Water Distribution System Operator shall provide written notice of any adjustment to a Water Conservation or Rationing Stage to every customer via first class mail at least thirty (30) days before any change in Stage is imposed.

- J. At all times during Stages 2 through 4 each affected Water Distribution System shall send monthly conservation reminders.
- K. During a Water Supply Emergency, or at the direction of the Board of Directors, each Owner or Operator or Extractor of a private water Well, Water Distribution System, or other Water-Gathering Facility shall comply with the provisions of this Regulation, as they relate to such Well, Water Distribution System, or other Water-Gathering Facility.

Rule added by Ordinance No. 92 (1/29/99); amended by Ordinance No. 134 (8/18/2008); Ordinance No. 137 (12/8/2008); Ordinance No. 142 (1/28/2010); deleted by Ordinance No. 169 (2/17/2016); Rule added by Ordinance No. 169 (2/17/2016)

RULE 163 - STAGE 2 WATER CONSERVATION: VOLUNTARY REDUCTION IN USE

- A. Trigger.
1. Physical Shortage Trigger (California-American Water Company Distribution Systems): Stage 2 shall take effect for all California-American Water Company Water Distribution Systems that rely, in whole or in part, on production or production offsets from the Carmel River System or the Seaside Coastal Subareas, on June 1 or such earlier date as may be set by the Board following the District's May Board meeting if Total Storage Available in Table XV-4 is below the Total Storage Required, but at least 95 percent of Total Storage Required. The amount of voluntary reduction shall equal the percentage shortfall in Total Storage Required.
 2. Physical Shortage Trigger (Non-California-American Water Company Distribution Systems): Stage 2 shall take effect for any Water Distribution System, other than California-American Water Company's Water Distribution Systems, that relies in whole or in part on production or production offsets from the Carmel River System or the Seaside Coastal Subareas on June 1 or such earlier date as may be set by the Board following the District's May Board meeting if Total Storage Available in Table XV-4 is below the Total Storage Required. The amount of voluntary reduction shall equal the percentage shortfall in Total Storage Required.
 3. Regulatory Trigger – Production Targets: Stage 2 shall take effect on the California-American Water Company Water Distribution System when the most recent 12 month California American Water production from the MPWRS is greater than the then-current annual production target as determined in Table XV-1 but no greater than 105 percent of the annual production target. The amount of voluntary reduction shall equal the percentage overage of the annual production.
 4. Regulatory Trigger – Regulatory Order: Stage 2 shall take effect in any Water Distribution System when that system is directed to reduce use by a governmental or regulatory agency. The amount of voluntary reduction shall equal the percentage directed by that governmental or regulatory agency relative to a base year determined by the governmental or regulatory agency.
 5. Emergency Trigger: Stage 2 shall take effect for any Water Distribution System, private Well, or Water User when the Board finds that a Water Supply Emergency exists for a Water Distribution System. Stage 2 shall take effect upon adoption of a Resolution of the District Board of Directors, or a declaration of a Water Supply Emergency by the Water Distribution System Operator or a State or County entity, due to a catastrophic event. In that Resolution or declaration, there shall be a finding of an immediate need to reduce production and shall name the Water Distribution System(s) affected. The amount of voluntary reduction shall be determined by the Board, the Water Distribution System

Operator, or the State or County entity.

- B. The Water Distribution System Owner or Operator shall provide notice of the amount of voluntary reduction requested to affected Water Users pursuant to Rule 161. Additional noticing and public outreach may be provided by the District at the direction of its Board of Directors.
- C. The District and its agents shall increase enforcement activities related to Water Waste prohibitions.
- D. Stage 1 shall remain in effect.
- E. Sunset.
 - 1. Without further action of the Board of Directors, Stage 2, when implemented pursuant to Rule 163-A-1 and Rule 163-A-2, shall sunset and water use restrictions shall revert to Stage 1 when remaining Total Storage Available computed consistent with Table XV-4 is greater than remaining Total Storage Required for two (2) consecutive months.
 - 2. Without further action of the Board of Directors, Stage 2, when implemented pursuant to Rule 163-A-3, shall sunset for the California American Water Company and water use restrictions shall revert to Stage 1 when that Water Distribution System's 12 month total production has been less than or equal to its then-current annual production target for two (2) consecutive months.
 - 3. Without further action of the Board of Directors, Stage 2, when implemented pursuant to Rule 163-A-4, shall sunset for that Water Distribution System(s) and water use restrictions shall revert to Stage 1 when the governmental or regulatory agency rescinds the request.
 - 4. Stage 2, when implemented pursuant to Rule 163-A-5, shall sunset and water use restrictions shall revert to Stage 1 when the Board finds that a Water Supply Emergency no longer exists.

Rule added by Ordinance No. 92 (1/28/99); amended by Ordinance No. 119 (3/21/2005); Ordinance No. 125 (9/18/2006); Ordinance No. 134 (8/18/2008); Ordinance No. 135 (9/22/2008); Ordinance No. 137 (12/8/2008); deleted by Ordinance No. 169 (2/17/2016); Rule added by Ordinance No. 169 (2/17/2016)

RULE 164 - STAGE 3 WATER CONSERVATION: CONSERVATION RATES

- A. Trigger.
1. Stage 2 Deemed Unsuccessful: Stage 3 shall take effect for all California-American Water Company Water Distribution Systems if Stage 2 has been implemented pursuant to Rule 163-A-1 or Rule 163-A-3 and has failed to sunset after a period of six (6) months.
 2. Physical Shortage Trigger: Stage 3 shall take effect for all California-American Water Company Water Distribution Systems on June 1, or such earlier date as may be set by the Board following the District's May Board meeting, if Total Storage Available in Table XV-4 is below 95% of Total Storage Required.
 3. Regulatory Trigger – Production Targets: Stage 3 shall take effect for all California-American Water Company Water Distribution Systems when the most recent 12 month California American Water production from the MPWRS is greater than 105 percent of the then-current annual production target as determined in Table XV-1 and Stage 2 has not been implemented.
 4. Regulatory Trigger – Regulatory Order: Stage 3 shall take effect for all California-American Water Company Water Distribution Systems when directed by a governmental or regulatory agency to implement Stage 3.
 5. Emergency Trigger: Stage 3 shall take effect for all California-American Water Company Water Distribution Systems when the Board finds that a Water Supply Emergency exists and upon adoption of a Resolution of the Board of Directors, or a declaration of a Water Supply Emergency by California American Water, or by a State or County entity due to a catastrophic event. In that Resolution or declaration, there shall be a finding of an immediate need to reduce production through the imposition of Stage 3 Conservation Rates.
- B. Stages 1 and 2 shall remain in effect.
- C. If Stage 2 has not already been implemented, Stage 2 shall be triggered simultaneously with Stage 3.
- D. Thirty days prior to implementation of Stage 3, California American Water shall file to implement Level 1 Conservation Rates within its Main California-American Water Company Water Distribution System, the Bishop Water Distribution System, Hidden Hills System, and Ryan Ranch Water Distribution System and shall provide notification to its customers that such rates shall be implemented after thirty (30) days. Prior to an increase to Level 2 Conservation Rates, California American Water shall provide notification to its customers that such rates shall be implemented after thirty (30) days.

1. Level 1 Conservation Rates comprised of a 25 percent surcharge shall be implemented on the then existing rates for a minimum of three (3) months. The surcharge shall not apply to Tier 1 Residential customers.
2. Level 2 Conservation Rates comprised of a 40 percent surcharge shall be implemented on the then existing rates (without the 25 percent Level 1 surcharge) if after the imposition of Level 1 Conservation Rates for three (3) months, the monthly production in the California American Water System exceeds the monthly production target for the previous two (2) consecutive months. The surcharge shall not apply to Tier 1 Residential customers.

E. Sunset.

1. Without further action of the Board of Directors, Stage 3, when implemented pursuant to Rule 164-A-2, shall sunset and water use restrictions shall revert to Stage 1 when remaining Total Storage Available computed consistent with Table XV-4 is greater than remaining Total Storage Required for two (2) consecutive months.
2. Without further action of the Board of Directors, Stage 3, when implemented pursuant to Rule 164-A-3, shall sunset and water use restrictions shall revert to Stage 1 when the 12 month total production has been less than or equal to its then-current annual production target for two (2) consecutive months.
3. Without further action of the Board of Directors, Stage 3, when implemented pursuant to Rule 164-A-4, shall sunset and water use restrictions shall revert to Stage 1 when the governmental or regulatory agency rescinds the request and Rules 164-A-2 and 164-A-3 do not apply.
4. Stage 3, when implemented pursuant to Rule 164-A-5, shall sunset and water use restrictions shall revert to Stage 1 when the Board finds that a Water Supply Emergency no longer exists and Rules 164-A-2 and 164-A-3 do not apply.

Rule added by Ordinance No. 92 (1/28/99); amended by Ordinance No. 119 (3/21/2005); Ordinance No. 125 (9/18/2006); Ordinance No. 134 (8/18/2008); Ordinance No. 135 (9/22/2008); Ordinance No. 137 (12/8/2008); deleted by Ordinance No. 169 (2/17/2016); Rule added by Ordinance No. 169 (2/17/2016)

RULE 165 - STAGE 4: WATER RATIONING

- A. Trigger.
1. Stage 3 Deemed Unsuccessful (California-American Water Company Distribution Systems): Stage 4 shall take effect for all California-American Water Company Water Distribution Systems if Stage 3 has been implemented and has failed to sunset after a period of 8 months.
 2. Physical Shortage Trigger. Stage 3 Deemed Unsuccessful for California-American Water Company Distribution Systems and Stage 2 Deemed Unsuccessful for Non-California American Water Systems: Stage 4 shall take effect for any Water Distribution System that relies, in whole or in part, on production or production offsets from the Carmel River System or the Seaside Coastal Subareas if Stage 2 (Non-California-American Water Company Water Distribution Systems, private Wells, or Water Users) and Stage 3 (California-American Water Company Distribution Systems) have been implemented and have failed to sunset after a period of eight (8) months.
 3. Regulatory Trigger: Stage 4 shall take effect in any Water Distribution System when that system is directed by a governmental or regulatory agency to enact Stage 4.
 4. Emergency Trigger: Stage 4 shall take effect for any Water Distribution System, private Well, or Water User when the Board finds that a Water Supply Emergency exists and upon adoption of a Resolution of the Board of Directors, or a declaration of a Water Supply Emergency by the Company, or a State or County entity, due to a catastrophic event. In that Resolution or declaration, there shall be a finding of an immediate need to reduce production through the imposition of Stage 4 Water Rationing.
 5. Stage 4 shall not be triggered if the General Manager determines upon credible evidence that the production targets associated with a final Cease and Desist Order are likely to be met by adhering to the requirements of a lesser Stage. The General Manager shall record this determination and any amendment thereto, by memorandum which may be appealed to the Board in accord with Regulation VII, Appeals.
 6. Delay of Stage Implementation. The Board may delay implementation of Stage 4 Water Rationing for any Water Distribution System to ensure adequate operation of the program. Delays authorized by the Board shall not exceed sixty (60) days.
- B. Amount of Reduction.
1. The amount of mandatory reduction shall equal the shortfall in Total Storage Available as compared to the Total Storage Required; or

2. The amount of mandatory reduction shall equal the overage of the last 12 months actual production as compared to the then-current annual production target; or
 3. The amount of mandatory reduction shall equal some other amount as reflected in a governmental or regulatory order.
- C. Stages 1, 2, and 3 (if applicable) shall remain in effect.
- D. Additional Prohibitions.
1. The Board shall consider prohibiting all or specific Non-Essential Water Uses. The Board may enact such prohibitions by Resolution.
 2. California American Water shall maintain Non-Revenue Water at or below seven (7) percent.
 3. Moratorium. Upon implementation of Stage 4, the Board shall declare a moratorium on accepting Water Permit applications within the affected Water Distribution System other than those applications that rely upon a Water Credit, Water Use Credit, or Water Use Permit. The Board may amend the moratorium to include the use of Water Credits and/or Water Use Credits if warranted. All pending Water Permits not issued within 120 days of declaration shall be suspended. Water Use Permits shall be exempt from any moratorium on Water Permits.
 4. No New Potable Water Service: Upon declaration of Stage 4 Water Rationing, no new Potable water service will be provided, no new temporary Water Meters or permanent Water Meters will be provided, and no statements of immediate ability to serve or provide Potable water service (e.g. will-serve letters, certificates, or letters of availability) will be issued by the Water Distribution System Operator, except under the following circumstances:
 - a. The project is necessary to protect the public health, safety, or welfare;
 - b. The setting of meters in the California-American Water Company Water Distribution System shall not be terminated or diminished by reason of any water emergency, water moratorium or other curtailment on the setting of meters for holders of Water Use Permits;
 - c. This provision does not preclude the resetting or turn-on of Water Meters to provide continuation of water service or the restoration of service that has been interrupted for a period of one year or less.

5. No New Annexations: Upon the declaration of a Stage 4, California-American Water Company will suspend annexations to its Service Area. This subsection does not apply to boundary corrections and annexations that will not result in any increased use of water, or annexations required by a regulatory agency.
 6. Customers utilizing portable Water Meters or hydrant Water Meters or using hydrants to fill water tanks without the use of a Water Meter, shall be required to cease use of the water, except upon prior approval of the General Manager. Portable Water Meters shall be returned to the Water Distribution System at least thirty (30) days before the implementation of Stage 4.
 7. Draining and refilling of swimming pools or spas except: (a) to prevent or correct structural damage or to comply with public health regulations, or (b) upon prior approval of the General Manager.
 8. Restriction on Watering or Irrigating: Watering or irrigating of Lawn, landscape or other vegetated area with Potable water will be subject to restriction at the direction of the District. This restriction does not apply to the following categories of use, or where the District has determined that recycled Sub-potable Water is available and may be applied to the use:
 - a. Businesses dependent on watering or irrigating in the course of business such as agriculture, nursery, and similar uses;
 - b. Maintenance of existing Landscaping necessary for fire protection;
 - c. Maintenance of existing Landscaping for soil erosion control;
 - d. Maintenance of plant materials identified to be rare or essential to the well-being of protected species;
 - e. Maintenance of Landscaping within active Public parks and playing fields, Day Care Centers and school grounds, provided that such irrigation does not exceed one (1) day per week;
 - f. Actively irrigated environmental mitigation projects.
- E. Residential Rations.
1. Upon adoption of a Resolution by the Board for a specific reduction in Residential water use, daily Household Water Rations shall be set at a level to achieve the necessary reduction. In no case shall daily Household Water Rations be less than 90 gallons per Household. This shall be known as the Minimum Daily Water Ration.

Where two or more Households are served by a Master Meter, it shall be the responsibility of the Water Users to divide the Water Rations among the Water Users.

2. Additional Water Rations for Large Households:

Where four or more Permanent Residents occupy a single Household served by one Water Meter, the Minimum Daily Water Ration may be increased by the amounts listed below:

	Residential Household Gallons per Day
Fourth Permanent Resident	30
Fifth Permanent Resident	25
Sixth Permanent Resident	20
Seven or More Permanent Residents (Per Additional Resident)	15

3. Procedure for Obtaining Additional Water Rations for Large Households:

- a. The Applicant shall complete a Residency Affidavit (obtained from the District) that requests the name, age and verification of full-time Permanent Residents for each resident in the Household for which the additional Water Ration is requested. The information on the application shall be presented under penalty of perjury. The additional Water Ration request shall be submitted to the General Manager, who will approve or disapprove the request within 10 business days of submission of a completed application.
- b. If the application is disapproved, the General Manager will explain in writing the reason for the disapproval, and if the Applicant is not satisfied with the decision of the General Manager, the Applicant may appeal the General Manager's decision to the Board of Directors.

4. Procedure for Obtaining Additional Water Rations Where Two or More Households are Served by a Master Meter:

- a. The Applicant must fill out the required form that lists the number of Residences served by the Master Meter and submit a use permit issued by the Jurisdiction for the Multi-Residential Dwelling Units served by the Master Meter. The District shall retain the right to require Residency Affidavits to determine the appropriate Water Rations. The additional Water Ration request shall be submitted to the General Manager, who will approve or disapprove the request within 10 business days of submission of a completed application. The Application shall be

submitted under penalty of perjury.

- b. If the application is disapproved, the General Manager will explain in writing the reason for the disapproval, and if the Applicant is not satisfied with the decision of the General Manager, the Applicant may appeal the General Manager's decision to the Board of Directors.
5. Additional Water Ration for Special Needs. Where more water than allowed in Sections 3 or 4 above is necessary to preserve the health or safety of a Household, the General Manager may increase the Water Ration during the period of need according to the needs of the Applicant.
 - a. The Applicant or his or her representative may file a request for an additional Water Ration and shall state to the General Manager: (1) the amount of the requested additional Water Ration, and (2) a general statement in support of the need. Where appropriate, Applicant shall provide a letter from a medical doctor stating the need for additional water usage and projected amount and duration of that need, if possible, or other appropriate justification for the special need.
 - b. Additional Water Rations shall require the replacement of inefficient water fixtures to comply with Rule 142-E, Residential and Non-Residential Change of Ownership, Change of Use, and Expansion of Use Water Efficiency Standards.
 - c. Additional Water Rations shall require the Connection have a working Pressure Regulating Valve that maintains water pressure at a maximum of 60 psi.
 - d. If the General Manager does not approve an additional Water Ration, the Applicant may appeal to the Board. An appeal from the General Manager's decision must contain all of the following: (a) a copy of the original application; (b) a copy of the written explanation of the General Manager's decision; and (c) a written explanation of why the Applicant believes the decision should be changed.
6. Misrepresentation. Any Water User intentionally over-reporting the number of Permanent Residents in a Household may be charged with a misdemeanor punishable as an infraction as provided by Section 256 of the Monterey Peninsula Water Management District Law, Statutes of 1981, Chapter 986, as well as fines and penalties set forth in this Regulation. During this Stage 4, whenever there is a change in the number of Permanent Residents, the Water User shall notify the District.

- F. Non-Residential Water Rations.
1. If Residential Water Rationing does not achieve measurable results as expected after a period of six (6) months, upon adoption of a Resolution by the Board for a specific reduction in Non-Residential water use, Non-Residential Water Rations shall be implemented at a level to achieve the necessary reduction in use.
 2. Non-Residential Water Rations shall be determined by selection by the District of a previous year for which Stages 2, 3, or 4 Conservation or Rationing was not in place and then reducing each month's water use by a percentage determined by the District to achieve the Non-Residential reduction in use. Where a previous year history is deemed to be unavailable or inappropriate by the District, a Non-Residential Water Ration shall be established by the District based on type of Non-Residential water use, building design, and water fixtures.
 3. Exemptions: In the Resolution to implement a level of Non-Residential Rationing, the Board shall include an exemption for compliance with District Rule 143 and an exemption for a Non-Residential establishment whose business requires water in the course of its business practice (e.g. laundromats, nurseries, among others).
 4. An Applicant or his or her representative may file a request for an additional Water Ration. The Applicant shall state in a letter to the General Manager: (1) the amount of the requested additional Water Ration, and (2) a general statement in support of the need.
 5. Additional Water Rations shall require the Connection have a working Pressure Regulating Valve that maintains water pressure at a maximum of 60 psi.
 6. If the request for an additional Water Ration is disapproved, the General Manager will explain in writing the reason for the disapproval, and if the Applicant is not satisfied with the decision of the General Manager, the Applicant may appeal to the Board of Directors for a hearing.
- G. Irrigation required by the Mitigation Program adopted when the Water Allocation Program Environmental Impact Report was adopted in 1990, and as required by SWRCB Order No. WR 95-10, shall not be subject to reductions in use. Required irrigation of the Riparian Corridor shall be identified and reported by California American Water separately from other Non-Revenue Water.
- H. CAWD/PBCSD Wastewater Reclamation Project Recycled Water Users. Recycled Water Irrigation Areas receiving water from the CAWD/PBCSD Wastewater Reclamation Project shall be subject to Stage 4 for Potable water used during an Interruption or emergency, in accordance with contractual Agreements between the District and the respective Owners of the Recycled Water Irrigation Areas.

1. The Owners of the Recycled Water Irrigation Areas shall have the respective irrigation requirements thereof satisfied to the same degree as any non-Project Golf Course or open space which derives its Source of Supply from the California American Water system. The irrigation requirements of the Recycled Water Irrigation Areas will be determined based on the most-recent non-Rationed four-year average irrigation water demand, including both Recycled Water and Potable water, for each respective Recycled Water Irrigation Area.
2. Each Recycled Water Irrigation Area shall be entitled to receive the average irrigation requirement determined above, reduced by the percentage reduction required by the current stage of Water Rationing. If the quantity of Recycled Water that is available is less than the quantity of water that the Recycled Water Irrigation Area is entitled to, Potable water shall be provided to make up the difference and satisfy the irrigation requirements of the Recycled Water Irrigation Areas to the same degree that the irrigation requirements of non-Project Golf Course and open space Users are being satisfied. The preceding sentence shall not apply to the extent that the irrigation requirements of any Recycled Water Irrigation Area are met with water legally available to Buyer from any source other than the Carmel River System or the Seaside Groundwater Basin, including percolating Groundwater underlying Buyer's Property, to make up any such difference.
3. When Recycled Water (as defined in Rule 23.5) is available in sufficient quantities to satisfy the irrigation requirements of the Recycled Water Irrigation Areas, such irrigation shall not be subject to Stage 4, and neither Potable water nor any water described in the preceding sentence (whether or not it is Potable) shall be used for irrigation of the Recycled Water Irrigation Areas except to the extent allowed in the circumstances described in the next two sentences.
4. If there is an Interruption in Recycled Water deliveries to any Recycled Water Irrigation Area (as the capitalized terms are defined in Rule 23.5), the temporary use of Potable water for irrigating each such Recycled Water Irrigation Area is authorized in the manner described in Rule 23.5, Subsection F.
5. If the District has adopted an ordinance in response to any emergency caused by drought, or other threatened or existing water shortage pursuant to section 332 of the Monterey Peninsula Water Management Law, said ordinance shall prevail over contrary provisions of this Rule. Notwithstanding the preceding sentence, Potable water shall be made available for irrigating tees and greens of the Recycled Water Irrigation Areas in sufficient quantities to maintain them in good health and condition during an Interruption, without any limitation on the duration.
6. The District shall have no obligation to furnish Potable water for irrigation of the Recycled Water Irrigation Areas except in the circumstances set forth above.

7. If (1) an emergency or major disaster is declared by the President of the United States, or (2) a “state of war emergency,” “state of emergency,” or “local emergency,” as those terms are respectively defined in Government Code section 8558, has been duly proclaimed pursuant to the California Emergency Services Act, with respect to all or any portion of the territory of MPWMD, the provisions of this section shall yield as necessary to respond to the conditions giving rise to the declaration or proclamation.

I. Sunset.

1. Without further action of the Board of Directors, Stage 4, when implemented due to non-compliance with regulatory targets, shall sunset for all California-American Water Company Water Distribution Systems and water use restrictions shall revert to Stage 1 when the 12 month total production has been less than or equal to its then-current annual production target for two (2) consecutive months.
2. Physical Shortage Trigger: Without further action of the Board of Directors, Stage 4 shall sunset and water use restrictions shall revert to Stage 1 when remaining Total Storage Available computed consistent with Table XV-4 is greater than remaining Total Storage Required for two (2) consecutive months.
3. Regulatory Trigger: Without further action of the Board of Directors, Stage 4 shall sunset for that Water Distribution System(s) and water use restrictions shall revert to Stage 1 when the governmental or regulatory agency rescinds the request.
4. Emergency Trigger: Stage 4 shall sunset and water use restrictions shall revert to Stage 1 when the Board finds that a Water Supply Emergency no longer exists.
5. Restoration of Lower Stage. A Resolution causing the sunset of one or more provisions of Stage 4 may also activate any lower Stage as may be warranted for good cause by circumstances affecting a particular Water Distribution System, private Well, or Water User.

Added by Ordinance No. 92 (1/28/99); amended by Ordinance No. 119 (3/21/2005); Ordinance No. 125 (9/18/2006); Ordinance No. 134 (8/18/2008); Ordinance No. 135 (9/22/2008); Ordinance No. 137 (12/8/2008); Ordinance No. 142 (1/28/2010); deleted by Ordinance No. 169 (2/17/2016); Rule added by Ordinance No. 169 (2/17/2016)