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2025 Urban Water Management Plan

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ADVISE • MANAGE • SOLVE

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This 2025 Urban Water Management Plan was prepared under the direction of a California licensed civil engineer.

Chapter 1
Executive Summary

The Marina Coast Water District (MCWD, District) is a county water district established in 1960 that provides potable water, recycled water, and wastewater collection services to approximately 11,200 residential, commercial, industrial, institutional, and irrigation service connections. The District's service area consists of two areas; the historic Marina Service Area and the Ord Service Area, which was added following the closure of Fort Ord. In 2025, MCWD delivered approximately 3,267 acre-feet of potable water and 414 acre-feet of recycled water (a new demand) to its customer base, representing a 23 percent increase in total demand since 2021.

1.1. Land Use

Land use within the service area is governed by ten Land Use Jurisdictions (LUJs); cities of Marina, Seaside, Monterey, and Del Rey Oaks; the County of Monterey; CSU Monterey Bay; UCMBEST; the U.S. Army; Bureau of Land Management; and California State Parks and Recreation. The LUJs plan and approve development, and MCWD coordinates with the LUJs to ensure sufficient water supply availability. During the Fort Ord closure and redevelopment process, the Fort Ord Reuse Authority (FORA) allocated the 6,600 AFY of contractually recognized appropriative groundwater rights assigned by the Monterey County Water Resources Agency to each LUJ. MCWD coordinates with each LUJ to record and track these allocations.

1.2. Water Demand

Projected demands are developed from the most current planning documents of the ten LUJs served by MCWD, applying District unit demand factors to project total water demand. Projections assume LUJ planning document buildout in 2050, a conservative assumption. Actual growth will depend on respective LUJ efforts as well as external regional variables such as economic growth. Total water demand at buildout of the LUJ land use plans is projected at 12,200 acre-feet per year (AFY). Several LUJs have already exceeded or will exceed their allocations at buildout, which will require MCWD to coordinate with those jurisdictions to identify supplemental supplies. Water demand projections in 5-year increments to 2050 are presented in **Table 1-1**.

TABLE 1-1: TOTAL WATER DEMAND PROJECTIONS (AFY)

	2030	2035	2040	2045	2050
Water Demand	6,032	7,649	9,159	10,669	12,179

1.3. Groundwater Management

MCWD overlies portions of the Monterey, 180/400-Foot, and adjudicated Seaside subbasins of the Salinas Valley Groundwater Basin. Upon passage of the Sustainable Groundwater Management Act (SGMA) in 2014, MCWD subsequently became an exclusive Groundwater Sustainability Agency (GSA) within a portion of the Monterey Subbasin. Under an agreement with the Salinas Valley Basin GSA, MCWD has groundwater management authority over the Marina-Ord Management Area within the Monterey Subbasin and the SVBGSA has management authority over the Corral de Tierra Management Area of the Monterey Subbasin. MCWD is also in the 180/400 Subbasin and coordinated in the development of neighboring basin Groundwater Sustainability Plans (GSP) with the Salinas Valley Groundwater Basin GSA.

MCWDGSA produced the Monterey Subbasin GSP in 2022. The GSP's initial estimate of sustainable yield is a range from 4,400 to 9,900 AFY, depending on the management and operational actions of bordering subbasin GSAs. The Monterey Subbasin's current estimate of storage is 1.5 to 3.1 million acre-feet. The GSA will continue to investigate and refine its understanding of basin characteristics and sustainable yield and will update its planning efforts accordingly.

1.4. Water Supply

The District's existing and planned water supply portfolio includes groundwater, recycled water, and desalinated water, with potential future contributions from surface water, stormwater capture, and indirect potable reuse.

The 1993 and 1996 Annexation Agreements established Salinas Valley Groundwater Basin (SVGB) contractually recognized appropriative groundwater rights totaling 11,040 AFY across the Marina and Ord service areas, and 280 AFY of irrigation supply in the Marina Area. These contractually recognized appropriative groundwater rights form the foundation of MCWD's long-term groundwater supply, although their long-term reliability is subject to evolving conditions under the SGMA. To diversify supply and support groundwater sustainability, MCWD is expanding non-groundwater sources.

Recycled water includes Title 22 supply derived from MCWD wastewater delivered to Monterey One Water (M1W) and Advanced Treated Water (ATW). Per Section 12 of the 1989 Annexation Agreement, MCWD maintains contractual rights to receive, as recycled water, volumes equal to what is delivered to M1W by MCWD. MCWD also has a contract for 1,427 AFY of ATW through the Pure Water Monterey agreement, of which 300 AFY is derived from MCWD Section 12 source water. The District is planning to use a portion of this ATW recycled supply for Indirect Potable Reuse by injecting into the groundwater basin for later extraction.

The Reservation Road desalination facility was built in 1996 and operated until 2003 when it was placed on standby. It is currently in renovation to be placed back in service and will provide 300 AFY starting in 2027. Other desalination opportunities identified in the Regional Urban Water Augmentation Project (RUWAP) are being investigated to provide an additional 2,000 AFY by 2035.

Longer term supply sources are also in the investigation and feasibility stages. Surface water from the Salinas River Diversion Facility, indirect potable reuse, stormwater capture, water transfers within the Seaside adjudicated basin, and others are potential future sources. The District will continue to monitor the risks and opportunities to its water supply portfolio and will pursue actions and alternatives as needed.

Projected water supplies are summarized in **Table 1-2**. Supply projections are estimated based on the current understanding of process and status. Projections and volumes will be updated in the future to reflect the current understanding.

TABLE 1-2: PROJECTED SUPPLY SOURCES (AFY)

Source	2030	2035	2040	2045	2050
Groundwater Potable	11,040	11,040	11,040	11,040	11,040
Groundwater Irrigation	280	280	280	280	280
Recycled MCWD Section 12	3,592	4,635	5,609	6,583	7,557
Recycled PWM	1,427	1,427	1,427	1,427	1,427
Desal	800	2,300	2,300	2,300	2,300
Surface Water	0	1,000	2,000	3,000	3,000

Note: Table lists projected availability per specific rights and contracts and expected yields. Projected supply reliability is presented in Chapter 5.

1.5. Water Supply Reliability

The MCWD supply portfolio is resilient to drought because its three primary sources; groundwater, recycled water, and desalination, are largely unaffected by near term droughts.

Table 1-3 presents the projected supplies and demands during a single dry year event out to 2050. Note the demand projections were developed from each respective Land Use Jurisdiction's current land use plans, and do not represent FORA LUJ allocations or capacity allocations. Some of the LUJs are or will exceed their allocation, creating a supply shortage for the specific LUJ until additional recycle, desalination, or other supplies are brought online.

TABLE 1-3: SINGLE DRY YEAR WATER SUPPLY AND DEMAND THROUGH 2050 (AFY)

Single Dry Year	2030	2035	2040	2045	2050
Groundwater	11,040	11,040	11,040	11,040	11,040
Recycled MCWD Section 12	3,592	4,635	5,609	6,583	7,557
Recycled PWM	1,427	1,427	1,427	1,427	1,427
Desalinated Water	800	2,300	2,300	2,300	2,300
Surface Supply	-	1,000	2,000	3,000	3,000
Total Supply:	**16,859**	**20,402**	**22,376**	**24,350**	**25,324**
Demand	6,032	7,649	9,159	10,669	12,179
Differential:	**10,827**	**12,753**	**13,217**	**13,681**	**13,145**

As the table indicates, there is sufficient supply to meet system demands during droughts, with the exception of LUJ-specific FORA allocations, which are not drought-dependent. However, the supply portfolio is also at risk to other factors such as SGMA, water quality, legal action, seawater intrusion, infrastructure limitations, or others that could reduce supply availability. Therefore, MCWD continues to assess its supply risk and investigate options and alternatives to enhance the overall supply portfolio reliability, flexibility, and availability.

1.6. Water Shortage Contingency Plan

MCWD maintains a Water Shortage Contingency Plan (WSCP) to address actions and operations during a supply shortage. The WSCP lists five stages of water shortage and identifies the specific actions to be implemented to achieve the necessary demand reduction to meet the supply availability. Actions include a variety of tools ranging from voluntary efforts to mandatory actions depending on the severity of the water shortage. The WSCP also includes actions to conduct the Annual Water Supply and Demand Assessment (AWSDA) and submit findings to the California Department of Water Resources. The AWSDA analyzes the near-term supply and drought conditions and corresponding projected impacts to demands and supply availability.

1.7. Conservation Program

MCWD maintains a conservation program that includes conservation staff and other staff to support the program including implementation of demand management measures (DMMs). The District implements the mandatory Foundational DMMs including:

- Water Waste Prevention Ordinances;
- Metering;
- Conservation Pricing;
- Public Education and Outreach;
- Programs to assess and manage distribution system real loss.

Together, these elements form the operational backbone of the District's conservation activities. MCWD also offers other DMM programs including retrofits, rebates, irrigation support, turf replacement, and visits and surveys. The District's conservation program continually reviews customer demand data, regulations, and service area characteristics to develop and refine its offerings to achieve efficient water use.

1.8. UWMP Adoption Process

The District conducted a public meeting to present the UWMP and subsequently adopted the plan on June 15, 2026. The adoption resolution is included in Appendix A. Notifications to cities and counties of the District's intent to prepare the UWMP are presented in Appendix B. Appendix B also includes the notification of the UWMP public hearing as required. The District's Water Shortage Contingency Plan is described in this UWMP document and included in Appendix C.

Chapter 2
Water Service and System Description

2.1. Overview

The Marina Coast Water District ("MCWD" or "District") is a county water district that provides public water supply to ten land use jurisdictions centered around the cities of Marina and Seaside. Situated along the Pacific Ocean, centrally located on Monterey Bay, MCWD provides potable water, recycled water, and wastewater services to residential, commercial, institutional, and industrial users in its service area. Its primary water supply source is groundwater extracted from the Monterey Subbasin of the Salinas Valley Groundwater Basin, supplemented by recycled water for non-potable uses. Desalination is also being developed to enhance supply reliability and availability.

The District owns and operates a potable distribution system of eight production wells, eight storage facilities, six booster pump stations, and a network of pipelines to ensure reliable water delivery and adequate system pressures. The service area overlies the Monterey Subbasin, 180/400-Foot Aquifer Subbasin, and the Seaside Subbasin; all three of which are part of the larger Salinas Valley Groundwater Basin (SVGB). These subbasins are characterized by a combination of unconfined, semi-confined, and confined aquifers, with groundwater generally flowing towards the coast. SVGB groundwater conditions in the area are heavily influenced by agricultural and to a lesser degree, municipal pumping, which in turn affects seawater intrusion. In response to long-term overdraft and seawater intrusion, discussed further in Chapter 4, MCWD is a responsible agency in groundwater sustainability management and planning and is actively pursuing supply diversification strategies to enhance long-term supply reliability and resilience.

The District was formed in 1960 to provide potable water service for municipal, environmental, and fire protection uses in the unincorporated community of Marina. Since that time, the service area and services have expanded to meet the local community needs. The District now provides potable water distribution, wastewater collection, and recycled water supply services to its community. The current water service area encompasses two historic areas – Marina Service Area and Ord Service Area. The Ord Service Area was added in 2001 after the Fort Ord base closure. In 2025, MCWD provided water service to 11,207 residential, commercial, industrial, institutional, and irrigation service connections.

Much of the development is low-density, single-family housing and retail related commercial use. A notable number of commercial and institutional customers are located within the service area, such as California State University Monterey Bay and the United States Army. **Table 2-1** presents the historical and current breakdown of service connections by customer class.

Potable production of groundwater is managed by MCWD, as is the collection and transport of wastewater. MCWD is a member of the Joint Powers Authority that owns and operates M1W. While MCWD is responsible for collecting wastewater, it does not treat or dispose of it, rather it delivers wastewater to Monterey One Water ("M1W") for treatment and processing, which in turn creates recycled water. The District continues to add more recycled water meters as supply becomes available.

TABLE 2-1: CUSTOMER WATER SERVICE CONNECTIONS

Customer Class	2021	2022	2023	2024	2025
Single-Family Residential	6,233	6,143	6,890	7,012	7,211
Multi-Family Residential	2,320	2,662	2,540	3,003	3,097
Commercial/Institutional	446	630	516	545	554
Industrial	4	4	5	5	6
Irrigation - Potable	262	265	266	266	338
Irrigation - Recycled	0	0	1	1	1
Total:	**9,265**	**9,704**	**10,218**	**10,832**	**11,207**

2.2. Service Area Climate

The MCWD service area has a cool, Mediterranean climate moderated by the Pacific Ocean and California Current. Temperatures are mild throughout the year, with cool summers and relatively mild winters compared to inland areas, and daily temperature ranges that are generally narrow due to marine moderation. Temperatures range from the low 40s to low 70s, with summer months regularly seeing average highs in the upper 60s, and average winter lows hovering in the low-50s. Annual precipitation averages about 19 inches. Most precipitation falls between November and March, delivered by Pacific storm systems, while summers are characteristically dry with minimal precipitation. Another locally important climate characteristic is coastal fog that significantly suppresses daytime heating, keeping summer temperatures cool and reducing temperature extremes compared to inland areas just a few miles away. Coastal fog is most common from late spring through early autumn. **Figure 2-1** shows the average min and max temperature and rainfall from 2000 through 2025 from weather station Monterey Station 045795.

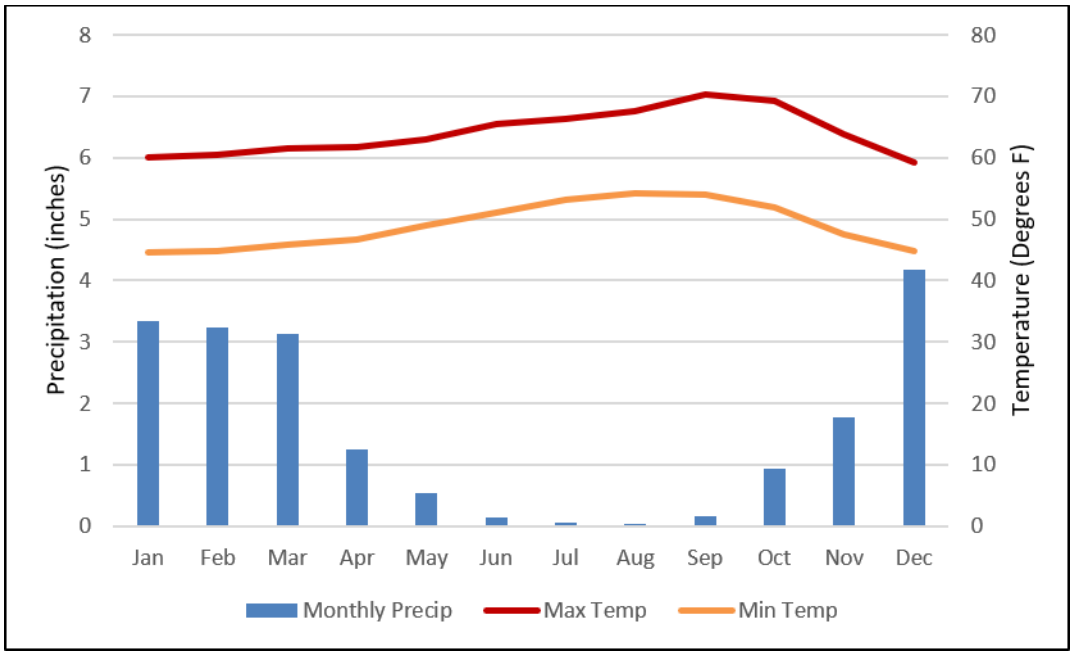


FIGURE 2-1: AVERAGE CLIMATIC CONDITIONS

2.3. Service Area

MCWD operates an integrated potable water distribution, recycled water, and wastewater collection system. Its service area boundaries encompass the City of Marina and all the former Fort Ord. Immediately to the north of its service area, MCWD also maintains a 2.2 square-mile sphere of influence. As discussed earlier, MCWD's service area is sub-divided into two distinct service areas for jurisdictional planning purposes. The Marina Service Area primarily comprises the City of Marina's historic area, Armstrong Ranch, and CEMEX property. The Ord Service Area consists of all areas conveyed through a federal economic development service contract for the former Fort Ord. The Ord Service Area is located immediately south of the Marina Service Area. A portion of the City of Marina is also situated in the Ord Service Area and is differentiated as the Marina Ord Service Area. It is important to note that MCWD does not allocate water supply to Land Use Jurisdictions (LUJs) or specific projects. The District advises LUJs as to the current and historic water use within their boundaries and the estimated remaining supply available for new developments per the groundwater supply allocated by FORA. Further information regarding LUJ developments, FORA process, resulting groundwater allocations, and subsequent tracking of allocations is provided in Chapter 4.

2.3.1. Marina Service Area

The Marina Service Area primarily serves the historic portion of the City of Marina. Historically, MCWD only served Marina, until Fort Ord's closure in 1996 and the subsequent service

contract for the former Fort's water and wastewater collection system. In addition to the historic Marina area, the Marina Service Area also comprises the undeveloped Armstrong Ranch (Marina Station SPA) and CEMEX properties. While these lands have yet to develop, they nonetheless may receive water from MCWD.

2.3.2. Ord Service Area

The Ord Service Area occupies the former Fort Ord (see **Figure 2-2**). The Ord Service Area is the site of multiple major redevelopment projects. Of the 44 square miles, 20 square miles are designated for redevelopment with the balance allocated to parks and recreation (e.g., Fort Ord National Monument). All or portions of the following land use jurisdictions are provided potable water and wastewater collection services by the Ord Service Area: Cities of Marina (Marina Ord), Seaside, Monterey, Del Rey Oaks; County of Monterey; UCMBEST; CSU Monterey Bay; State Parks and Recreation; the U.S. Army; and the Bureau of Land Management (BLM).

2.3.3. Land Use Jurisdictions

Ten land use jurisdictions exist within the District's service area, each with its own specific planning development goals. MCWD reached out to each LUJ in developing this UWMP to update respective land use plans and other information to support water demand projections. The District utilized existing information and data, coupled with updates provided, to project development and subsequent water demands for this UWMP. Specific land use development and water demand projections are presented in Chapter 3.

2.4. Population, Economy, and Demographics

Service area population and land use projections are central to the development of a useful planning framework as population dynamics and demographic change are primary drivers of water use. These projections directly influence planning decisions related to system supply, delivery, infrastructure, and demand management strategies. Similarly, understanding the service area's economic, social, and demographic trends provides valuable insight into water management and planning.

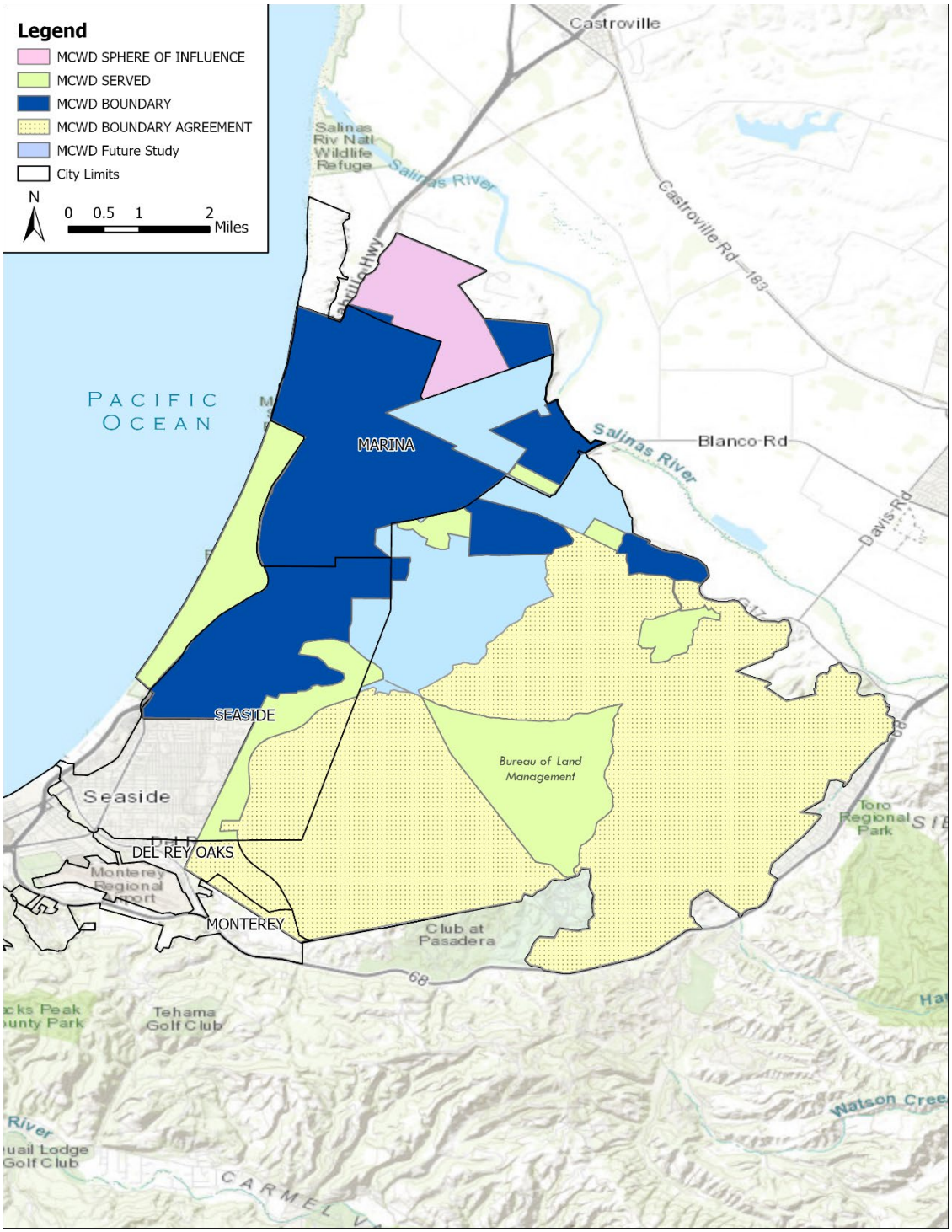


FIGURE 2-2: MCWD SERVICE AREA MAP

2.4.1. Current and Projected Land Use

Land use patterns in MCWD reflect its evolution from a former military installation to a burgeoning coastal city with a mix of residential, commercial, institutional, and recreational uses. Large swaths of the service area are devoted to low- and medium-density residential neighborhoods, including significant redevelopment of the former Fort Ord lands, which now support residential housing developments, CSU Monterey Bay, and parks and open spaces.

Much of the region's projected land use will focus on residential redevelopment and agriculture. Large-scale mixed-use developments, including the Dunes and Marina Station, will significantly expand the region's residential land use. The Marina Station is particularly relevant as it will transform Armstrong Ranch, formerly irrigated agriculture, into a mixed-use neighborhood in the northern part of MCWD's service area. The majority of other land use changes will be concentrated in the Ord Service Area as most of the Marina Service Area is already built out, with limited infill development opportunities.

Additionally, commercial and industrial land use have increased alongside residential development. These activities are concentrated along major corridors such as Reservation Road and Del Monte Boulevard, where retail, services, and light industrial sectors abound. These retail centers and light industry zones provide services to the growing local population.

2.4.2. Economic Trends and Other Social and Demographic Factors

The Monterey Bay area economy has historically relied on three pillars – agriculture in the Salinas Valley, tourism along Monterey Bay and Big Sur Coast, and military installations including the Presidio of Monterey and the Naval Postgraduate School. Higher education, innovation, and residential growth have replaced the military as a primary economic driver. The former Fort Ord is the site of extensive development plans of each respective LUJ. Key institutions have established campuses on the former Fort Ord, the largest being California State University Monterey Bay, followed by the Monterey College of Law, Monterey Peninsula College, and University of California Monterey Bay Education, Science, and Technology Center. Notably, the Department of Defense also operates the Naval Post Graduate School and Defense Language Institute nearby.

The MCWD service area has experienced steady population growth relative to other Monterey County cities. Driven largely by new housing development availability, in-migration from higher-cost coastal cities, students and early-career professionals, the residents are younger and more ethnically diverse than its neighbors. The younger population is also attributable to the presence of multiple universities in its service area. Demographically, the District is

ethnically more diverse than other coastal cities. Median household income increased from around $49,836 in 2015 to about $68,943 by 2023. The main challenge is managing growth and affordability in an effective manner.

2.4.3. Existing and Projected Population

The population served by MCWD is projected to grow substantially through 2050, primarily due to the ongoing LUJ developments in the Ord Service Area as discussed above. Most future growth is projected to occur in the Ord Service Area, as development opportunities in the Marina Service Area are limited primarily to infill, while the Ord Service Area has significantly more open land to expand. According to a 2024 California Department of Finance report, the household population of MCWD's service area was 32,227 persons, accompanied by 12,805 households, resulting in an average occupancy of 2.517 persons per household. However, because there are legacy multifamily units within MCWD that do not individually meter every unit, the DOF housing unit count does not match the MCWD residential meter count. Therefore, MCWD analyzes resident population by using the most recent DOF report of total population and then using the corresponding capita/household factor. Resident population is projected by applying 2.517 persons per household to the projected dwelling units represented in the respective LUJ development plans presented in Chapter 3. Served population also includes student enrollment population at CSUMB. The current CSUMB Master Plan projects a 2035 student enrollment of 12,700. The 2025 enrollment is listed as 8,233. Student enrollment is held at 12,700 past 2035 and will be updated pending future CSUMB planning efforts. **Table 2-2** presents the existing and projected population.

TABLE 2-2: MCWD SERVICE AREA PROJECTED POPULATION.

2025	2030	2035	2040	2045	2050
47,151	52,516	57,880	61,012	64,143	67,274

2.5. Delivery System Details

MCWD operates a municipal water system to provide water, recycled water, and wastewater services to its customers. The system is designed to distribute potable and non-potable water from a diversified supply portfolio of groundwater, recycled water, and desalinated water through an interconnected network of transmission and distribution facilities.

The District's potable distribution system is a robust network of approximately 245 miles of water mains and eight storage tanks. Groundwater is produced from eight wells. Of the eight wells, three are in the Marina Service Area and draw groundwater from the 900-foot aquifer. The remaining five supply wells are in the Ord Service Area and deliver groundwater from the

lower 180-foot, 400-foot, and 900-foot aquifers. Groundwater is chlorinated for disinfection prior to distribution.

MCWD owns and operates the wastewater collection system consisting of 162 miles of collection pipeline, 3,066 manholes, and 20 lift stations. Wastewater is delivered to the M1W transmission facilities that deliver the flow to the M1W treatment facilities (of which MCWD is a member of the JPA). MCWD owns 4.22 mgd capacity in the tertiary M1W treatment plant and 1.0 mgd capacity in the Advanced Treated Water facility. MCWD owns and operates a recycled water system consisting of one storage tank and 30 miles of transmission and distribution mains. The system receives recycled water from M1W and distributes the recycled supply to customer connection points.

2.6. Energy Intensity

California Water Code Section 10631.2(a) defines energy intensity for urban water retailers as the total amount of energy expended in kilowatt-hours (kWh) by the urban retail agency on a per acre-foot basis to take water from the location where the urban water retailer acquires the water to its point of delivery. For the purposes of the 2025 UWMP, MCWD uses the Total Utility Approach for reporting its energy intensity. This method sums the annual energy consumed for all water management processes, divided by total volume of water in acre-feet. These processes include diversion, treatment, and distribution, as applicable. The District continues to monitor energy usage to ensure operational efficiency. The total energy intensity is reported in **Table 2-3**.

TABLE 2-3: ENERGY INTENSITY – TOTAL UTILITY APPROACH

Element	Value
Volume of Water Entering Process (acre-feet)	3,634
Energy Consumed (kWh)	2,731,803
Energy Intensity (kWh/acre-foot)	752

Chapter 3
Water Use

The comprehensive analysis of water use characteristics is fundamental to ensuring Marina Coast Water District's ability to reliably and cost-effectively manage its water supplies. This section characterizes the District's current and forecasted retail customer demands over a multi-decadal planning horizon. This chapter projects water demand utilizing the land use jurisdiction (LUJ) land use planning documents, projected and historic growth rates, and water use trends.

3.1. Current Customer Water Use

MCWD's potable water system distributes potable water to over 11,207 customer service connections as of December 2025. MCWD's 2025 customer demand is 3,267 acre-feet potable water, 414 acre-feet recycle water, and 1,833 acre-feet of conservation. A breakdown of service connections in MCWD's service area is in Chapter 2.

3.1.1. Customer Water Use (2021-2025)

Table 3-1 presents the District's historical water use by customer classification for the years 2021 through 2025. The entirety of MCWD's service area is fully metered and classified into seven primary customer categories: Single-Family Residential (SFR), Multi-Family Residential (MFR), Commercial, Institutional, Industrial, Irrigation – Potable, and Irrigation – Recycled. The total service area demand increased by 680 AFY between 2021 and 2025, or a 23% increase.

TABLE 3-1: HISTORIC CUSTOMER CLASSIFICATION WATER DEMANDS 2021-2025 (VALUES IN AFY)

	2021	2022	2023	2024	2025
Single-Family Residential	1,146.4	1,150.5	1,112.9	1,168.6	1,199.3
Multi-Family Residential	867.8	841.8	833.7	895.5	920.7
Commercial/Institutional	476.8	497.3	492.7	562.8	610.1
Industrial	0.7	2.5	3.6	5.1	4.3
Landscape Irrigation	509.1	500.1	467.0	438.2	532.8
Recycled Irrigation	0.0	0.0	412.5	387.8	414.0
Total:	**3,000.8**	**2,992.2**	**3,322.4**	**3,458.0**	**3,681.2**

Note: Metered demand does not include system losses that increase total water supplied.

3.1.2. Existing Distribution System Losses

MCWD has quantified its distribution system losses using the American Water Works Association Method. These annual audits are submitted to the DWR by October 1st of each year for the prior year's estimated distribution system losses, using DWR's online submittal tool pursuant to California Code of Regulations §638.5. The 2025 estimate has not yet been officially filed but is projected to be approximately 9.4% of the total water produced.

Table 3-2 presents the water loss values from 2021 through 2025. Given the dynamic nature of a pressurized potable water distribution system, annual and monthly distribution losses will fluctuate. Such losses are attributed to factors such as climate, consumption patterns, and system operations. The increase in water loss from 2021 to 2022 is primarily due to the installation of new well production meters that allowed District staff to more accurately measure the water pumped into the distribution system. Since then, District staff have continuously improved on identifying and addressing distribution system leaks and increasing data reliability, resulting in a continual decline in water loss.

TABLE 3-2: DISTRIBUTION SYSTEM LOSS AS PERCENTAGE OF TOTAL SUPPLY

2021	2022	2023	2024	2025
8.1%	14.0%	12.7%	9.3%	9.4%

3.2. Compliance with Water Use Targets and Objectives

This section examines MCWD's derivation and compliance with state-mandated water use targets and objectives. The Water Conservation Act of 2009, also known as SBX7-7, introduced water conservation targets that served as a valuable measure of progress through 2020 and beyond.

3.2.1. Compliance with 2020 Urban Water Use Target

SBX7-7, also known as the Water Conservation Act of 2009, introduced sustainable water use and demand reduction legislation requiring MCWD to make incremental progress in reducing per capita water use. Specifically, urban retail water suppliers were tasked with achieving a 10% reduction in per capita water use by December 31, 2015, and a 20% reduction by December 31, 2020. Beyond 2020, although reporting on compliance is no longer required, this target remains valuable as a baseline for the District to measure progress on achieving water efficiency goals.

MCWD's 2020 GPCD target was established in the 2015 UWMP as 117 GPCD, derived as the "gross water use" divided by the population during a defined baseline period, and reduced pursuant to one of four methods defined under California Water Code §10608.20(b). As was demonstrated in the 2020 UWMP, MCWD was in compliance with the CWC water use targets and compliance objectives. Although reporting on compliance is not required in the 2025 UWMP Cycle, MCWD's 2025 GPCD was 69 GPCD. MCWD currently remains in compliance with all water use targets and objectives set in the Water Code.

3.2.2. Urban Water Use Objective Compliance

In 2018, the California Legislature passed Senate Bill 606 and Assembly Bill 1668, directing the SWRCB to adopt standards to encourage more efficient urban water use. This legislation, known as "Making Conservation a California Way of Life," was adopted in 2024, establishing individualized Urban Water Use Objectives (UWUOs) for each urban retail water supplier. In contrast to SBX7-7 per-capita targets, this legislation functions as a water budget tailored to a supplier's service area, considering residential indoor use, residential and commercial/institutional outdoor use based on local evapotranspiration and irrigable landscape area, water loss, and bonus incentives for potable reuse. In addition to the volumetric UWUO, the legislation established performance measures for commercial, industrial, and institutional (CII) sectors. The standards become progressively more stringent through 2040. Compliance with efficiency-based UWUOs aligns with both MCWD's Demand Management Measures (discussed in Chapter 5) and the adaptive management strategies outlined in MCWD's Water Shortage Contingency Plan (WSCP) in Chapter 6. In each of the initial three reporting years, MCWD submitted its required annual reports to the SWRCB demonstrating that actual water use remained below its calculated UWUO, confirming compliance in 2023, 2024, and 2025.

3.2.3. Water Loss Control Standard

The California Water Code §10608.34 required the State Water Resources Control Board to develop water loss control and performance standards (Real Water Loss Standards) applicable to urban retail water suppliers. Prompted by Senate Bill 555, Real Water Loss Standards became a requirement for urban retailers in 2023. These audits are designed to quantify both apparent losses and real losses. Such audits are developed using information submitted as part of MCWD's annual water loss reporting to the State, specifically for the period from 2017 through 2020.

The California Department of Water Resources issued its latest water loss standard for MCWD in January 2026. MCWD's current assigned standard is 19.9 gallons per service connection per day (gpscd) for real losses, and 5.5 gpscd for apparent losses, for a total of 25 gpscd, or the

equivalent of 8.5% for 2025. MCWD has not fully reviewed these values yet for accuracy but is using the values for this UWMP and may change them upon further review. This value is applied to projected number of connections to estimate projected water loss values, which are then included in the total water demand projections summarized in Section 3.3.3.

3.3. Projected Water Demand

Accurate water demand forecasting requires an evaluation of current usage trends alongside projected population growth. By considering the long-term factors that influence customer behavior—specifically those driving water efficiency—MCWD can better anticipate the needs of both current and future residents. This section utilizes existing water use trends and known LUJ planning documents to project demands over the 25-year planning horizon. All planned development projections employ updated water demand unit factors as identified in Marina Coast Water District Code Appendix C, and reflect MCWD's most recent efficiency standards.

3.3.1. Demand Projection Methodology

MCWD provides potable water service to ten Land Use Jurisdictions (LUJs) within its service area: the Cities of Marina, Seaside, Del Rey Oaks, and Monterey; County of Monterey; U.S. Army; California State University Monterey Bay (CSUMB); University of California Monterey Bay Education Science and Technology Center (UCMBEST); State Parks and Rec; and Bureau of Land Management (BLM). Because MCWD lacks land use authority over these LUJs, it does not dictate growth or development but does use the available LUJ land use plans to project future demands and respective supply needs. In preparing this UWMP, MCWD utilized the current available planning documents from each LUJ as summarized below in Section 3.2.2.

After identifying planned growth from the available documents, the resulting counts of anticipated dwelling units, non-residential square footage, and irrigation acreage are multiplied by MCWD's unit water demand factors (MCWD Code Appendix C) to produce a full buildout demand projection for each LUJ. All full buildout projections are assumed to align with the 2050 planning horizon. These projections reflect the full development potential of each LUJ's approved and pending planning documents, subject to the caveat that actual buildout timing may vary.

As part of the FORA process, FORA allocated the appropriative Salinas Valley Groundwater Basin supply of 6,600 AFY to respective Ord Service Area LUJs (see Chapter 4, Water Supplies). MCWD maintains tracking of these allocations to identify existing and remaining allocation amounts and works with each LUJ to coordinate proposed development water demands and respective impact to allocations. These values are incorporated into the existing demand and demand projections for each LUJ.

3.3.2. LUJ Projections and Demands

City of Marina – Marina Service Area

City of Marina within the Marina Service Area represents the City of Marina's urban core – a mostly built-out community of residential neighborhoods and established business corridors. Because significant vacant land is no longer available, forecasted future demand growth in Central Marina will be driven by infill development and the redevelopment of existing parcels rather than by new greenfield construction. The City of Marina's Downtown Vitalization Specific Plan ("DVSP"), 2045 Marina General Plan Update Water Supply Assessment (February 2026), and smaller-scale infill projects – including Infill/SB9 and GPLU – American Legion were utilized, in addition to existing customer connections, to project future demands. The City of Marina within the Marina Service area water demand is projected to be 2,428 AFY at full buildout.

The Armstrong Ranch was an undeveloped property located north of Marina. The Marina Station Specific Plan now represents the planned development for this area. As part of the 1996 Annexation Agreement (see Chapter 4), MCWD was assigned a total of 920 acre-feet groundwater supply for the Armstrong Ranch property (now Marina Station SPA), to be assigned in 150 AFY increments every two years, with the current total at 470 AFY. To date, the Marina Station SPA has been allocated 139 AFY. Marina Station SPA full build out water demands is assumed at 920 AFY.

The CEMEX Property (formerly RMC Lonestar) is a large industrial use property located north of Marina, currently not served potable water by MCWD. Under the terms of the property's annexation agreement, CEMEX holds a Salinas Valley Groundwater Basin (SVGB) allocation of 500 AFY. A subsequent Settlement Agreement with the Coastal Commission (CCC-17-CD-02 2017) identifies that supply is dedicated to recreation purposes, which has been estimated at 10 AFY. Upon annexation into MCWD service area, the full 500 AFY of groundwater supply will be added to MCWD supply portfolio, with the initial 10 AFY available for recreation uses. For planning purposes, MCWD assumes the 10 AFY will be added by 2030, and the full 500 AFY will be beyond this UWMP planning period.

City of Marina - Ord Service Area

The City of Marina also has jurisdiction over a portion of Ord Service Area. Hereinafter, identified as the Marina Ord Area, it is distinct from City of Marina within the Marina Service Area. Primary planning documents include the 2045 Marina General Plan Update and 2023 Visioning Plan. The full buildout demand is projected at 2,042 AFY by 2050.

US Army

The US Army LUJ encompasses the portion of the former Fort Ord retained by the federal government, primarily for use as the Presidio of Monterey Annex and the Ord Military Community. The US Army currently retains 1,562 AFY of its original 1993 Annexation Agreement-recognized groundwater rights. MCWD is not aware of any specific plans or projects that would change this supply or demands for additional supply. Demand growth is assumed to proceed gradually over the planning horizon. The US Army's full buildout demand is assumed as 1,562 AFY.

Department of Interior BLM

The BLM manages the Fort Ord National Monument that consists of approximately 14,650 acres within the former Fort Ord area. The BLM has authority of the land use designations and development of any facilities within their jurisdiction. The BLM does currently have a connection with MCWD to provide water for visitor facilities. All existing and future BLM demands are served by MCWD via the Army-MCWD Potable Water Supply Contract using the US Army's retained groundwater rights.

CSU Monterey Bay

CSU Monterey Bay ("CSUMB") is located in the Ord Service Area. The university's 2020 Master Plan (released in 2022) serves as the primary planning document for demand projections. Demand is calculated from this plan using MCWD's unit demand factors for a projected buildout demand of 800 AFY, reflecting updated unit demand factors.

City of Del Rey Oaks

The City of Del Rey Oaks provided projected development information and data resulting in a projected full buildout demand of 226 AFY. To date, Del Rey Oaks has yet to develop its portion of the Ord Service Area, but is in the process of selecting a developer with redevelopment anticipated to commence after 2030 and ramp up through 2050.

City of Monterey

The City of Monterey provided MCWD updated development plans that include a total of 1,200 residential units as part of the City's Regional Housing Needs Allocation. The City's buildout plans estimate 300 SFR and 900 MFR, resulting in a projected full buildout demand of 273 AFY.

County of Monterey

The County of Monterey ("County") covers the East Garrison development and the surrounding unincorporated county lands. The East Garrison Specific Plan (November 2023) is the primary planning document for this area. This area has already been assigned an allocation of 470 AFY. Combined with other County developments, the projected full buildout demand for the County LUJ is 594 AFY.

UCMBEST

The UC Monterey Bay Education, Science, and Technology Center ("UCMBEST") Center is a research and technology park situated adjacent to the Marina Airport. The current planning document is the Marina Municipal Airport Business & Park/UC MBEST Center Specific Plan (June 2020). Using this plan, the projected buildout demand is 159 AFY. Though there is existing demand in 2025 at 1 AFY, significant demand growth is not assumed to start until 2035. Recent communication with UCMBEST indicates potential for additional development including residential housing and medical facilities that may exceed the allocation.

City of Seaside

The City of Seaside LUJ is one of the Ord Service Area's main drivers of growth, with several major developments planned or underway. Demand projections for this LUJ draw from multiple planning documents, including the 2040 Seaside Draft EIR, the Seaside Resort Final EIR, and Campus Town WSA. The full buildout demand is projected at 1,823 AFY for the portion of the City within MCWD's service area.

State Parks and Recreation

The State Parks and Recreation LUJ serves a variety of institutional users including the California State Parks and federal Bureau of Land Management. It was assigned an SVGB allocation of 39.5 AFY. As MCWD is not aware of any specific plans or projects that would change this demand, the projected full buildout demand is expected to equal its SVGB allocation at 39.5 AFY.

3.3.3. Summary of LUJ Demand Projections

Table 3-3 summarizes the demand projections based on the current understanding of LUJ land use plans and projection assumptions as described above.

TABLE 3-3: WATER DEMAND BY LUJ OR AREA (AFY)

	2030	2035	2040	2045	2050
Ord Service Area					
U.S. Army	617	853	1,089	1,326	1,562
CSUMB	376	482	588	694	800
Del Rey Oaks	127	226	226	226	226
City of Monterey	55	109	164	218	273
County of Monterey	288	365	441	517	594
UCMBEST	32	64	96	128	159
City of Seaside	1,023	1,223	1,423	1,623	1,823
State Parks and Rec.	8	16	24	32	39.5
Marina Ord Area	945	1,219	1,493	1,767	2,042
Operational Reserve	349	349	349	349	349
Marina Service Area					
Marina Station SPA	184	368	552	736	920
CEMEX	10	10	10	10	10
Marina Area	1,546	1,767	1,987	2,207	2,428
Totals					
Subtotal - Ord	**3,819**	**4,905**	**5,893**	**6,880**	**7,867**
Subtotal - Marina	**1,740**	**2,145**	**2,549**	**2,953**	**3,358**
Total	**5,560**	**7,050**	**8,442**	**9,833**	**11,225**

Note: Table presents land use plan-based demand projections that do not represent capacity or FORA allocations.

The Ord Service Area FORA allocations (see Chapter 4) present a unique situation, as they are a restriction on the SVGB groundwater supplied to the LUJ, and not on the total development demand. **Table 3-4** presents the land-use plan buildout projected demand versus the allocations for Ord Service Area, and versus the contractual rights for the Marina Service Area (see Chapter 4). As indicated in the table, three LUJs are projected to exceed their groundwater supply allocation; City of Monterey, City of Seaside, and City of Marina Ord Service Area. Therefore, as development occurs, and an LUJ requests supply that exceeds its groundwater allocation, MCWD will work with the respective LUJ to identify and develop additional supplies as needed.

TABLE 3-4: ORD SERVICE AREA LUJ DEMAND VERSUS FORA ALLOCATION/RIGHTS (AFY)

	2050 (Buildout) Demand	FORA Allocation
Ord Service Area		
U.S. Army	1,562.0	1,562.0
CSUMB	800.0	1,035.0
Del Rey Oaks	225.8	242.5
City of Monterey	273.0	65.0
County of Monterey	593.9	710.0
UCMBEST	159.2	230.0
City of Seaside	1,823	1,017.5
State Parks and Rec.	39.5	39.5
Marina Ord Area	2,041.7	1,350.0
Operational Reserve	349.0	349.0
Marina Service Area	**2050 (Buildout) Demand**	**Contractual Right**
Marina Station SPA	920.0	920.0
CEMEX	10.0	500.0
Marina Area	2,428.0	3,020.0
Totals	**Demand**	**Supply**
Subtotal - Ord	7,867	6,600
Subtotal - Marina	3,358	4,440
Total	11,225	11,040

Note: CEMEX 2050 demand estimated at 10 AFY, but parcel may use up to 500 AFY for future demands to be identified.

Table 3-5 presents the total water demand for supply, factoring in projected customer demand plus water loss. As described above, water loss is based on the loss standard as assigned through the Urban Water Use Objective process.

TABLE 3-5: TOTAL WATER DEMAND PROJECTIONS (AFY)

	2030	2035	2040	2045	2050
Total Customer Demand	5,560	7,050	8,442	9,833	11,225
Water Loss	473	599	718	836	954
Total Water Demand	6,032	7,649	9,159	10,669	12,179

Note: Demand includes potable, recycle, and conservation.

3.4. Lower Income Housing Demands

California Water Code §10631.1 requires urban retail water suppliers consider the projected water use of lower income households in 2025 UWMPs. The California Department of Housing and Community development currently identifies lower income households as an income below 80% of the median area household income. For the purposes of this UWMP, the annual median household income of the Cities of Marina and Seaside are averaged to provide a representative figure for the MCWD service area. The annual median household income for both cities is derived from the 2024 American Community Survey Five Year estimates. The annual median incomes for Marina and Seaside are $95,955 and $85,311, respectively. Therefore, 80% of these median incomes are estimated at $76,764 and $68,249, respectively. The average lower household income of the two sample cities is $72,506. Per the Survey data, approximately 42% of households earn at or below this 80th percentile income.

Lower income housing demands are assumed to be the residential housing water demands of households making at or below the 80th percentile income of the Cities of Marina and Seaside. Total residential units are projected assuming linear growth to buildout of LUJ projections. **Table 3-6** presents the projected lower income housing demand.

TABLE 3-6: LOWER INCOME HOUSING DEMAND (AFY)

	2030	2035	2040	2045	2050
Total Residential Units (DU)	15,247	17,732	20,216	22,701	25,185
Total Residential Demand (AFY)	3,812	4,433	5,054	5,675	6,296
Lower Income Household Demand (AFY)	1,601	1,862	2,123	2,384	2,644

Chapter 4
Water Supply

The District's existing supply includes groundwater and recycled water. Groundwater is pumped locally with MCWD-owned wells, and recycled water is generated at the nearby Monterey One Water (M1W) treatment facility. The District will soon bring back online its desalination facility to add to its supply portfolio. The District is investigating multiple supply sources and management strategies to enhance groundwater sustainability, minimize costs to the customer, and maintain supply reliability and availability.

4.1. Service Area Water Sources - "The Annexation Agreements"

Starting in the 1990s, MCWD and the Monterey County Water Resources Agency (MCWRA), along with other parties, entered into various agreements to address water supply sources and long-term planning, beginning with the 1993 and 1996 Annexation Agreements for Zones 2 and 2A. The 1996 Annexation Agreement established "a contractual process for the exercise of regulatory authority by the MCWRA under Water Code App. Section 52-22, and the MCWD under Water Code section 31048."[1] The purpose of the 1996 Annexation Agreement was to "establish a groundwater mitigation framework for the lands to be annexed, and will provide money from the Marina area for the MCWRA's Basin Management Plan and for Zones 2 and 2A, for management protection of the groundwater resource in the Salinas Valley Groundwater Basin and to reduce seawater intrusion."[2] Zone 2 was formed as a benefit and assessment zone to finance the construction and operation of Lake Nacimiento, and Zone 2A was formed as a benefit and assessment zone to finance the construction and operation of Lake San Antonio.

Under the 1993 and 1996 Annexation Agreements, MCWRA assigned contractually recognized appropriative groundwater rights for municipal purposes to the Ord Area and Marina Area. The respective rights per area are summarized in **Table 4-1**. Under the Annexation Agreements, MCWRA is to develop a supply project to offset the

[1] MCWRA Negative Declaration re: Annexation of Marina Area Lands to Zones 2/2A, dated February 21, 1996, at p. 4.

[2] Purpose section, Attachment B-1 to Initial Study for Marina Lands Annexation.

groundwater demands. MCWRA has not yet implemented a project to provide replacement supply.

TABLE 4-1: MCWRA-RECOGNIZED APPROPRIATIVE GROUNDWATER RIGHTS IN THE 1993 AND 1996 ANNEXATION AGREEMENTS

Annexation Agreement	Appropriative GW Right (AFY)
Marina Area Potable – 1996 Marina Area Lands Annexation Agreement	3,020
Marina Area Irrigation – 1996 Marina Area Lands Annexation Agreement	280
Armstrong Ranch (now Marina Station SPA) – 1996 Marina Area Lands Annexation Agreement + MCWRA's 6/25/2021 Annexation Fees Letter	920
CEMEX Property (formerly RMC Lonestar) – 1996 Marina Area Lands Annexation Agreement (recognized when property is annexed to MCWD)	500
Ord – 1993 Fort Ord Annexation Agreement (total 6,600 AFY)	MCWD 5,038 Army 1,562
	MCWD Total – 9,758

Note: Volumes reflect subsequent agreements that re-allocated some supply between the Army and LUJs.

The 1996 Annexation Agreement identifies 3,020 AFY of potable demand for the Marina Area (as defined in Section 2.14) as estimated per the MCWD Water Plans at that time. However, the Agreement allows for this demand to be modified based on the latest information from the MCWD Water Plans (Section 5.1.1). Therefore, this demand may be modified in the future with subsequent changes to the allowable supply volume.

The FORA process subsequently further divided the 6,600 AFY contractually recognized appropriative groundwater right into allocations for each LUJ. These LUJ-respective groundwater supply values were initially developed over 30 years ago. Since that time, additional data, analysis, and understanding of the groundwater basin have been developed to further understand the basin and sustainable yields. However, a significant impact to groundwater basin management is the passage of the Sustainable Groundwater Management Act (SGMA). SGMA introduced regulations and requirements for sustainable management of the groundwater basin that will significantly impact actual groundwater supply availability as it becomes the controlling management and regulatory directive.

Table 4-2 presents these LUJ Ord Area allocations. **Table 4-3** presents the Marina Area potable rights. Totaled together, the potable contractually recognized appropriative groundwater rights are 11,040 AFY.

TABLE 4-2: ORD AREA ANNEXATION AND SUBSEQUENT AGREEMENTS GROUNDWATER SUPPLY PER LUJ

Land Use Jurisdiction	LUJ Supply, AFY
CSUMB	1,035.0
Del Rey Oaks	242.5
City of Monterey	65.0
County of Monterey	710.0
UCMBEST	230.0
City of Seaside	1,017.5
State Parks	39.5
City of Marina	1,350.0
Operational Reserve	348.5
Army Ord Lands	1,562.0
Total:	**6,600.0**

Note: Volumes reflect subsequent agreements that re-allocated some supply between the Army and LUJs as of January 1, 2026.

TABLE 4-3: MARINA AREA ANNEXATION AGREEMENT POTABLE GROUNDWATER SUPPLY

Service Area	LUJ Supply, AFY
MCWD Marina Area	3,020.0
Armstrong Ranch Annex (Marina Station SPA)	920.0
CEMEX Annex	500.0
Total:	**4,440.0**

4.2. Sustainable Groundwater Management Act

On September 16, 2014, Governor Edmund G. Brown Jr. signed three bills into law, which are collectively known as the Sustainable Groundwater Management Act (SGMA), effective January 1, 2015. SGMA created a framework for sustainable, local groundwater management for the first time in California history. SGMA's core principles[3] are:

[3] CalEPA, DWR, SWRCB, et al., Groundwater Legislation Implementation Fact Sheet, December 4, 2014.

- Groundwater should be locally and collaboratively managed to address unique basin conditions and challenges.
- Groundwater should be managed sustainably.
- The state's role should complement and support the goal of local sustainable groundwater management.
- Water rights should be protected.

Implementation includes the establishment of Groundwater Sustainability Agencies (GSAs), which are then responsible for developing and implementing Groundwater Sustainability Plans (GSPs) to achieve the SGMA and subsequent regulatory goals and requirements.

The SGMA "sustainability goal" is defined as "the existence and implementation of one or more groundwater sustainability plans that achieve sustainable groundwater management by identifying and causing implementation of measures targeted to ensure that the applicable basin [or subbasin] is operated within its sustainable yield." (Water Code, § 10721, subd. (t).) The sustainability goal is to be achieved in the subbasin or basin within 20 years of the implementation of the groundwater sustainability plan. (Water Code, § 10727.2, subd. (b).) "Sustainable yield" is defined as "the maximum quantity of water, calculated over a base period representative of long-term conditions in the basin and including any temporary surplus, that can be withdrawn annually from a groundwater supply without causing an undesirable result." (Water Code, § 10721, subd. (v), emphasis added.)

The groundwater sustainability agency (GSA) is the primary local agency responsible for achieving SGMA's groundwater sustainability goals. Several GSAs have been formed to manage subbasins of the Salinas Groundwater Basin (see **Figure 4-1**). The Marina Coast Water District GSA (MCWDGSA) manages the Marina-Ord Management area of the Monterey Subbasin and developed a GSP in 2022, which was subsequently approved by the California Department of Water Resources in 2023. The MCWDGSA also manages the portion of the 180/400 subbasin that includes the MCWD service area boundary. The Salinas Valley Basin Groundwater Sustainability Agency (SVBGSA) covers all the Salinas Valley Groundwater Basin (SVGB) within Monterey County not covered by subbasin GSAs or the adjudicated Seaside Subbasin.

4.2.1. Groundwater Supply

Detailed characterization and analysis of the Monterey Subbasin and the overall Salinas Valley Groundwater Basin is provided in the District's GSP and supporting documents. This section summarizes the characterization and findings from those documents, as well as

historic and current use by MCWD supply strategies. The current GSP and other GSA documents are available at www.mcwd.org.

4.2.2. Groundwater Basin

The groundwater supply source is the Salinas Valley Groundwater Basin (SVGB). DWR Bulletin 118 identifies multiple subbasins of the SVGB as shown in **Table 4-4** and on **Figure 4-2**. MCWD GSA is responsible for the Monterey Subbasin (identified as Medium priority by DWR), as detailed on **Table 4-4**. **Figure 4-3** illustrates MCWD's existing service area and sphere of influence, which also extends north into the 180/400 Subbasin.

TABLE 4-4: DWR SUBBASINS WITHIN THE SALINAS VALLEY GROUNDWATER BASIN

DWR Basin/Subbasin No.	DWR Designation	Area (acres)	DWR Priority Ranking	Sustainability Plan Status
3-4	Salinas Valley Groundwater Basin			
3-004.01	180/400 Foot Aquifer	88,700	High/Critical	Updated GSP Submitted 2025
3-004.02	East Side Aquifer	57,500	High	Submitted 2022
3-004.04	Forebay Aquifer	94,100	Medium	Submitted 2022
3-004.05	Upper Valley Aquifer	98,200	Medium	Submitted 2022
3-004.06	Paso Robles (Monterey & SLO Counties)	577,400	High/Critical	Revised GSP Submitted 2022
3-004.08	Seaside	14,500	Medium	Adjudicated
3-004.09	Langley	17,600	Medium	Submitted 2022
3-004.10	Monterey	30,900	Medium	Submitted 2022
3-004.11	Atascadero (SLO County)	19,700	Medium	Submitted 2022

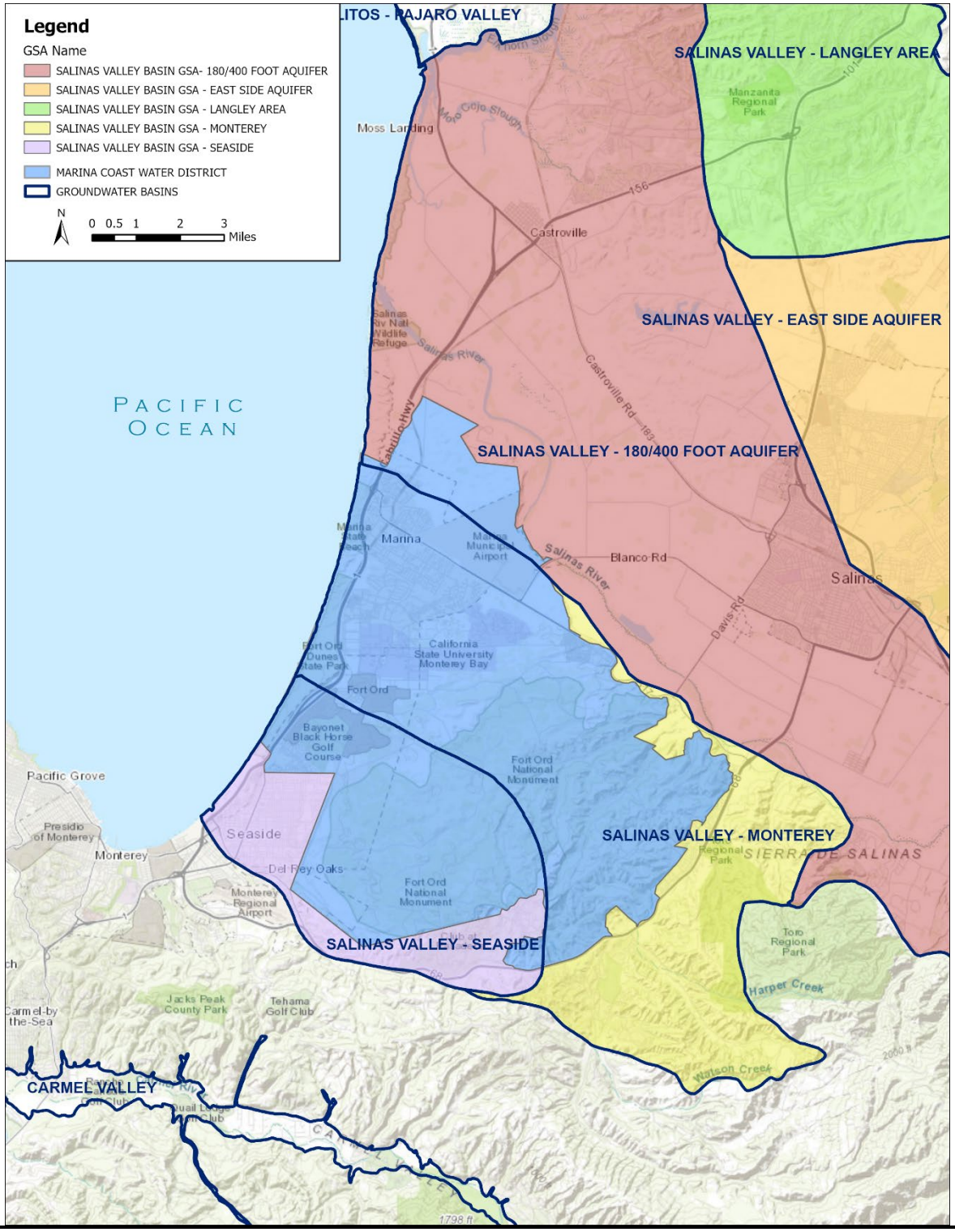


FIGURE 4-1: GROUNDWATER SUSTAINABILITY AGENCIES

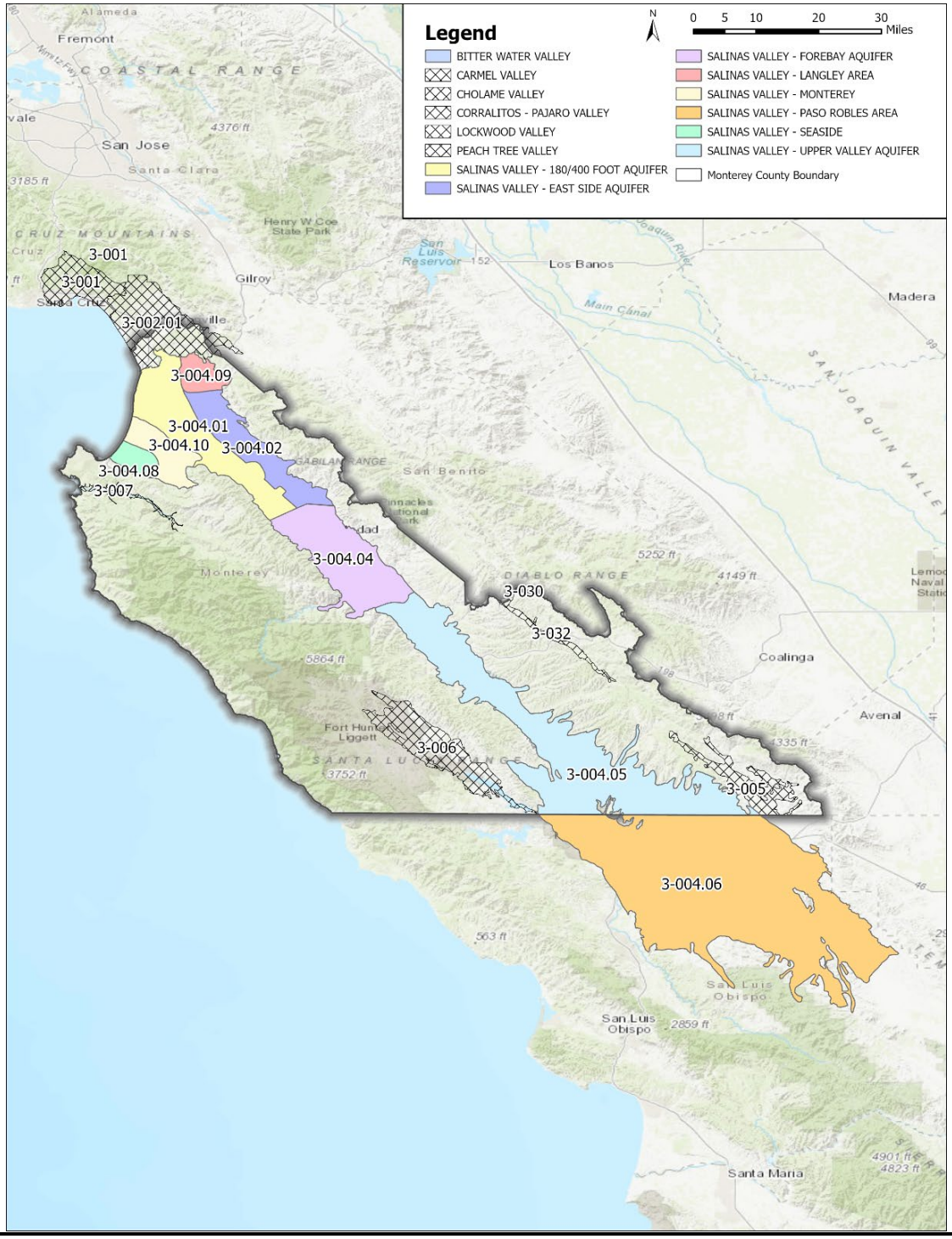


FIGURE 4-2: MONTEREY COUNTY GROUNDWATER BASINS AND SUBBASINS

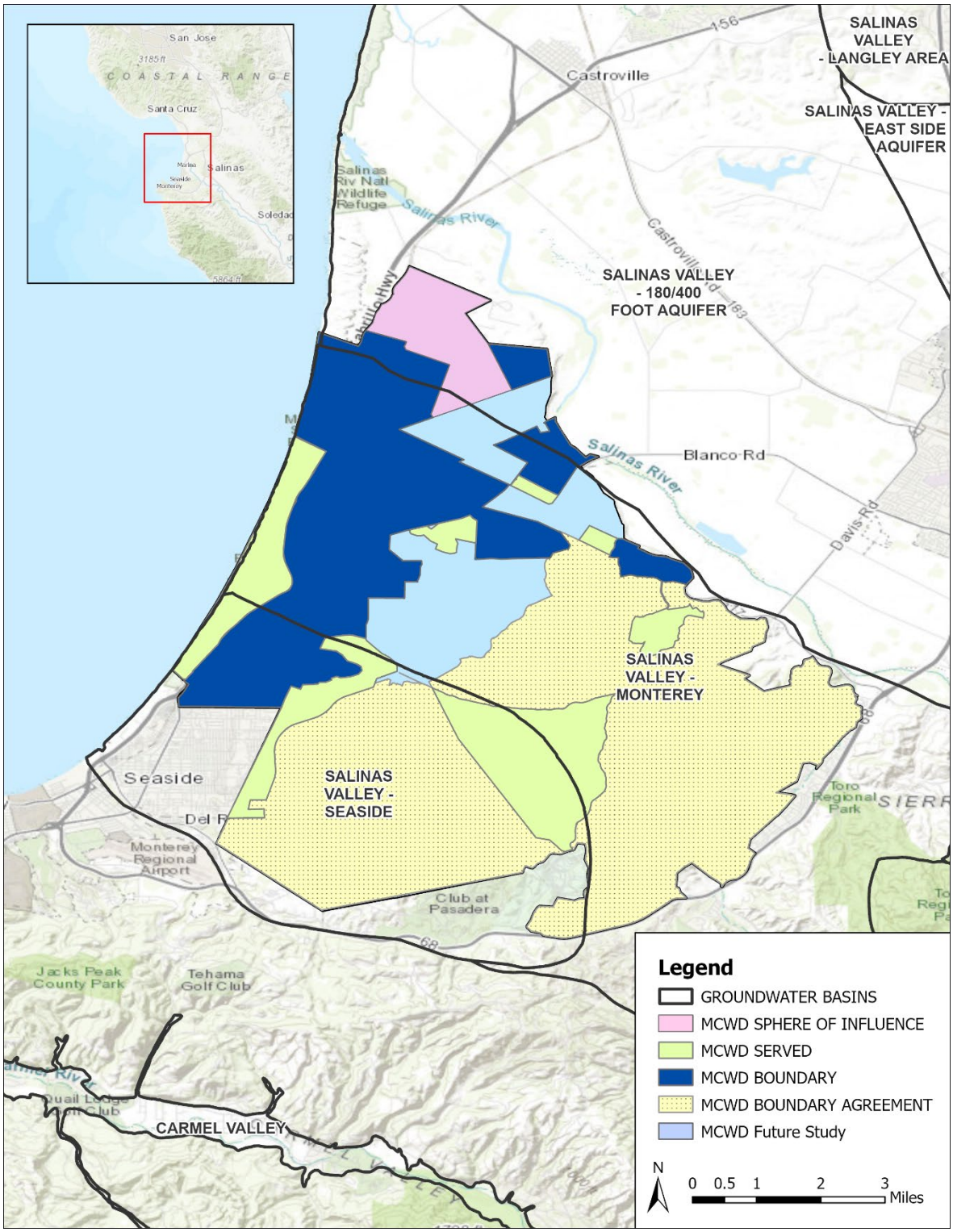


FIGURE 4-3: SUBBASIN BOUNDARIES AND MCWD SERVICE AREA

The Monterey Subbasin is adjacent to the adjudicated Seaside subbasin and 180/400 subbasin. Hydrostratigraphy in the Marina-Ord Area consists of a series of laterally continuous aquifers consistent with the aquifers that form the distinguishing features of the northern Salinas Valley. The principal aquifers within the Monterey Subbasin include the unconfined Dune Sand Aquifer and the confined aquifers known as the 180-Foot Aquifer, the 400-Foot Aquifer, and the Deep Aquifers. Hydraulic conductivity of the aquifers underlying the Marina-Ord Area varies by aquifer and location. Groundwater production generally occurs from the 180/400-Foot Aquifers and the Deep Aquifers. Natural groundwater recharge occurs through infiltration of surface water, recharge from the Dune Sands Aquifer, deep percolation of excess applied irrigation water, and deep percolation of infiltrating precipitation. Most of the Marina-Ord Area has good recharge potential due to the high permeability of the Dune Sand Aquifer which subsequently recharges the underlying 180-Foot and 400-Foot Aquifers.

Groundwater conditions in the Subbasin are described for each of DWR's six sustainability indicators identified below.

- Chronic Lowering of Groundwater Levels – Groundwater elevations have generally been stable for over three decades in the Dune Sand Aquifer, the 180-Foot Aquifer, and the 400-Foot Aquifer within the northern Marina-Ord Area. Since the mid-2000s, groundwater levels have been declining in 400-Foot Aquifer production and monitoring wells located in the southwestern portion of the Marina-Ord Area and in Deep Aquifer wells. Decreases in groundwater elevations in the Deep Aquifers are the result of increased production from the Deep Aquifers in the 180/400 Foot Subbasin. Groundwater level declines observed in the Deep Aquifers range from about 20 ft to 80 ft over the last two decades.
- Changes in Groundwater Storage – Results from the Monterey Subbasin Model presented in the GSP indicate an average annual loss of storage of 4,434 acre-feet per year (AFY) over the historical period (Water Year [WY] 2004-2018) in the Monterey Subbasin. According to the GSP analysis, this loss in storage is due to declining groundwater levels and/or seawater intrusion. There has been a minimal loss in storage due to seawater intrusion during the historical period as there has been negligible expansion of the seawater intrusion front. Seawater that enters the Monterey Subbasin from the ocean flows toward the 180/400-Foot Aquifer Subbasin boundary, where groundwater levels are lower in the seawater intruded aquifers.
- Seawater Intrusion – Seawater intrusion has been documented in the northern portion of the Monterey Subbasin in the lower 180-Foot and 400-Foot Aquifers. MCWRA and others have implemented a series of engineering projects and management actions to address seawater intrusion within the Salinas Valley Groundwater Basin. These

projects and actions include the development of the Castroville Seawater Intrusion Project (CSIP) and the Salinas Valley Water Project (SVWP), among other actions. Although these actions have managed to slow the advancement of the seawater intrusion front and reduce its impacts, seawater intrusion remains an ongoing threat. To date, seawater intrusion has not been reported in the Deep Aquifers.

- Groundwater Quality – Known groundwater quality concerns in the Marina-Ord Area include elevated chloride and TDS concentrations and legacy point-source contamination from former Fort Ord. Such point source contamination is being addressed by the United States Army Corps of Engineers (Army) and includes contaminants such as Volatile Organic Compounds (VOCs) and per- and poly-fluoroalkyl substances (PFAS). The primary source of high TDS and chloride concentrations in groundwater within the Marina-Ord Area is seawater intrusion.
- Subsidence – No significant subsidence has been recorded anywhere in the Monterey Subbasin.
- Depletion of Interconnected Surface Waters – Surface water streams within the Subbasin are generally small intermittent streams that flow only after storm events, and are unlikely to be connected to groundwater.

4.2.3. Basin Management and Sustainability

The Monterey Subbasin GSP and supporting documents present extensive analysis and development of management objectives and efforts to achieve basin sustainability. As the Monterey Subbasin is directly impacted by adjacent subbasins, MCWD is coordinating with the SVGBGSA and Seaside Basin Watermaster, and projected sustainability is dependent upon implementation of the adjacent management programs. Projected sustainable yield is estimated in the GSP assuming a range of adjacent boundary conditions and climate conditions. The current estimate of sustainable yield ranges from 4,400 AFY up to 9,900 AFY.(Monterey Subbasin GSP (2021), Section 6.5.6). It is noted this is an early estimate of sustainable yield, and will be modified in the future as understanding of the basin and affecting variables continues to be refined.

To manage and increase basin understanding, MCWDGSA has developed management actions linked to each sustainability indicator with identified measurements, minimum thresholds, measurable objectives, undesirable results, and interim milestones (see GSP Executive Summary, Table ES-3). MCWD has also identified and developed 27 programs, projects, and management actions to achieve basin sustainability (see GSP, Table 9-1).

4.2.4. Groundwater Supply Usage and Availability

All MCWD groundwater supply is currently pumped from the Monterey Subbasin. **Table 4-5** presents the pumping volumes over the last five years. For future availability, the upper sustainability estimate of 9,900 AFY is assumed.

TABLE 4-5: MCWD GROUNDWATER PUMPING (AFY)

Groundwater Subbasin	2021	2022	2023	2024	2025
Monterey	3,446	3,544	3,394	3,368	3,634

Note: Table presents only groundwater pumped which includes system losses but does not include recycled water demands.

4.3. Recycled Water Supply

MCWD owns and operates a wastewater collection system. Collected wastewater flows are transmitted to the regional facilities, owned by Monterey One Water (M1W). MCWD is also an owner in M1W through a JPA. M1W treats wastewater to three levels: secondary for ocean discharge, Title 22 for irrigation use, and Advance Treated Water (ATW) for irrigation use and groundwater recharge. The District maintains contracts for Title 22 recycled water and ATW supplies as described below.

4.3.1. Title 22 Recycled Supply

Per the 1989 Annexation Agreement Section 12, MCWD owns the right to obtain wastewater for reuse in quantities equal to what MCWD delivers to the treatment facility. Supply volume is determined by projecting future wastewater flows. In 2025, potable water demand was 3,267 AF, and wastewater delivered to M1W was 2,295 AF, for a wastewater generation factor of 0.70. Recycled supply is therefore estimated by applying this factor to projected potable water demands from Chapter 3. The Title 22 supply subtracts the 300 AFY amount that MCWD must contribute to the ATW as discussed below. In 2025, MCWD did not use any Title 22 supply, but did use its ATW recycle supply, as discussed below.

4.3.2. Advanced Treated Water Volume

The Pure Water Delivery and Supply Project and Amendment agreement between MCWD and M1W provides for advanced treated water treatment (ATW) capacity and supply for MCWD. The agreements provide ATW supply to MCWD in two phases for a total of 1,427 AFY. Per the 1996 Annexation Agreement, MCWD is responsible to supply 300 AFY of source water. M1W is responsible to provide the rest of the source supply. In 2025, MCWD delivered 414 AF of ATW to one irrigation customer – the Bayonet and Black Horse Golf Course.

4.3.3. Recycled Supply Summary

Existing and projected recycled supply through 2050 is presented in **Table 4-6**. Future infrastructure and operational strategy enhancements may be necessary to utilize the full volumes.

TABLE 4-6: EXISTING AND PROJECTED RECYCLED SUPPLIES (AFY)

	2025	2030	2035	2040	2045	2050
MCWD Section 12	2,295	3,592	4,635	5,609	6,583	7,557
PWM	1,427	1,427	1,427	1,427	1,427	1,427
Total:	3,722	5,019	6,062	7,036	8,010	8,984

Note: Supplies include both Title 22 and ATW qualities.

4.4. Desalinated Water Supply

Desalination water supply has been part of the District's supply portfolio since 1997 when the 300 AFY Reservation Road Desalination facility was placed online. Since that time, desalination has been included in many state policy initiatives (Governor's Water Resilience Portfolio, Ocean Plan Amendment, California Department of Water Resources Desalination Resource Management Strategy) and local and regional plans to enhance supply reliability and resiliency, and to support groundwater basin sustainability. The District continues to incorporate current and future desal supply alternatives in its water supply portfolio.

4.4.1. Reservation Road Facility

The 300 AFY Reservation Road Desalination facility was placed online in 1997. It was operated until the early 2000s, when it was put in standby. Since that time, changing water supply issues and regulations such as SGMA and subsequent subbasin sustainability estimates, Regional Housing Needs Assessment, sea water intrusion status, LUJs exceeding the FORA allocations, and LUJ development plans impact previous planning assumptions. These changes highlight the importance of desal supply to the District's portfolio. As stated above, SGMA legislation and subsequent regulation has introduced significant requirements on the management and use of groundwater basins. As MCWDGSA implements its GSP to achieve groundwater basin sustainability, utilizing the Reservation Road desal supply supports GSA initiatives and enhances supply reliability and availability.

The facility is currently in renovation to include more efficient membrane treatment processes and ancillary equipment. The plant is expected to be operating and providing 300 AFY of supply by early 2027.

4.4.2. Planning and RUWAP

The Regional Urban Water Augmentation Project (RUWAP) was initiated in the early 2000s to provide a portion of supply needs for the respective Land Use Jurisdiction (LUJ) general plans and other development plans. RUWAP ultimately was approved by MCWD to provide 1,427 AFY of recycled water and 1,500 AFY of desalination supply. The recycled water supply has been partially implemented (see recycled supply above). The District is still working on the planning and implementation to provide the full 1,500 AFY of desal supply. The District is also pursuing additional supply sources above the RUWAP volumes to address SGMA and groundwater sustainability efforts. The District has identified and owns the necessary property rights at Armstrong Ranch and Garrison sites and is investigating options and alternatives to increase its planned desal supply greater than 1,500 AFY. The District projects the RUWAP Armstrong supply of 500 AFY is available in 2030, and 1,500 AFY supply from RUWAP Garrison will be available by 2035. District plans will be updated as the desalination planning progresses.

4.4.3. Desal Supply Summary

Existing and projected desal supply through 2050 is presented in **Table 4-7**.

TABLE 4-7: EXISTING AND PROJECTED DESAL SUPPLY (AFY)

Desal Supply	2025	2030	2035	2040	2045	2050
Reservation Road	--	300	300	300	300	300
RUWAP Garrison	--	--	1,500	1,500	1,500	1,500
RUWAP Armstrong		500	500	500	500	500
Total:	--	800	2,300	2,300	2,300	2,300

4.5. Surface Water Supply

The greater Monterey region has been investigating groundwater supply offset or replacement for decades. The Monterey County Water Resources Agency (MCWRA) identified this need in the Annexation Agreements. The Agreements identified provisional groundwater pumping allocations for each LUJ until such time when MCWRA could develop and deliver project(s) to offset groundwater pumping on behalf of Zone 2 beneficiaries.

MCWD annexed into the MCWRA Zones 2 and 2A in the 1996 Annexation Agreement and Groundwater Mitigation Framework for Marina Area Lands. Zones 2 and 2a are the benefit assessment zones for Nacimiento and San Antonio Reservoirs and are collecting funds to implement supply projects around the two reservoirs, develop alternatives to groundwater pumping, and other Basin Management Plan benefits that include the Marina Area. Since

agreement execution, the annexation fees and annual assessment fees have and continue to be paid.

MCWRA maintains and operates the Nacimiento and San Antonio reservoirs, and the Agency investigated changes to the reservoirs and interconnectivity to develop additional surface water volumes and accompanying water rights. This effort is still ongoing with minimum progress. However, MCWRA does maintain four water rights filings that could support use of surface water to serve the MCWD service area, should the project be developed. MCWD continues to consider these options in its water resource portfolio strategy. At this time, the District is not projecting any supply availability above the amount from the Salinas River Diversion Facility (see below).

MCWRA did implement a reservoir re-operation project that provides additional flow in the Salinas River. An inflatable rubber dam was installed on the Salinas River near Marina to allow for re-diversion. MCWRA's water right Permit 21089 was amended in 2008 to allow up to 17,500 AFY of delivery at the diversion. This project, the Salinas River Diversion Facility (SRDF), was placed in operation in April 2010. Since 2015, approximately 4,000-8,000 AFY has been diverted, with three years at zero diversions.

MCWD continues to investigate surface water volume availability and use of the currently available capacity from the SRDF as well as Ranney collector diversions. Initial investigations have identified the ability to divert up to 3,000 AFY from the Salinas River for treatment or recharge. As these efforts progress, MCWD will update its planning documents with project descriptions and projected supply yield. For this UWMP, MCWD is projecting surface water supplies of 3,000 AFY as presented in **Table 4-8**.

TABLE 4-8: EXISTING AND PROJECTED SURFACE WATER SUPPLY (AFY)

	2025	2030	2035	2040	2045	2050
Surface Water	--	0	1,000	2000	3,000	3,000

4.6. Other Supply Opportunities

The District is investigating other supply opportunities to offset groundwater pumping and enhance its overall supply reliability, resiliency, and availability. Potential supply alternatives include stormwater capture and indirect potable reuse. Stormwater recapture conducted at or near the existing SRDF facility will utilize the surface supplies to either treat or recharge the groundwater basin. This option is in conceptual stage and will be updated with progress.

Indirect potable reuse will use MCWD's existing recycled, ATW, and inter-aquifer groundwater supplies and either inject into an aquifer or infiltrate into the groundwater basin through recharge basins in an aquifer storage and recovery strategy. These options are under investigation to identify existing agreements that support this strategy and the feasibility, available supply volumes, groundwater basin impacts, regulatory framework, and other issues. As indirect potable reuse through direct injection is utilized throughout California, the District is utilizing this experience to more fully develop this supply alternative, with the goal of implementation pending study and permitting outcomes. For this UWMP, the District assumes that any additional supply generated is included in the previous recycled water supply quantification as recycled water is expected to be the first source.

Existing conservation and water efficiency programs can also offset supply needs (acting as an in-lieu supply). The District maintains an existing conservation program (see Chapter 7). However, future advances in water use, demand management, and operational strategies could reduce demands even further. The District will continue to implement its conservation program and investigate other demand management and operational strategies to further reduce overall system demand.

Per Section 5.5 of the 1996 Annexation Agreement, MCWD is pursuing new water supplies, including but not limited to wastewater reclamation and desalination, as well as other sources. This UWMP has identified the current alternatives and concepts for additional supplies. The District will continue to pursue options as they arise and update its supply strategy accordingly.

4.7. Water Transfer and Exchange Opportunities

Under the current Monterey County Water Resources Agency Act (52-21), water supply from the Salinas Valley Groundwater Basin cannot be exported to other basins, eliminating options for direct transfers (apart from the Seaside Basin Adjudication provisions). However, this requirement applies to the larger SVGB. Within the Marina area, the SGMA process and the Seaside adjudication created subbasins of the SVGB. MCWD does have the opportunity to provide additional groundwater and recycled water supply within the Seaside adjudication boundaries. Beginning in 2023, MCWD provided supply for irrigation for the Bayonet/Blackhorse Golf Course within the Seaside adjudicated basin. In turn, the irrigation wells that previously supplied the area were taken offline, effecting an in-lieu groundwater substitution. This supply strategy is expected to continue with a maximum annual supply of 407 AFY.

4.8. Supply Summary

Table 4-9 presents the projected supply availability by source throughout the planning period. The District will manage its water supply portfolio to enhance basin sustainability, minimize costs to the customer, and maintain supply reliability and availability. The supply volumes in **Table 4-9** are shown as individual projected availability or contracted right and assume timing of implementation of infrastructure and agreements to utilize the source. Timing assumptions will be updated as more information is available during feasibility and implementation phase of each project. Each supply source will be cycled or managed in overlapping strategies to account for supply availability throughout the year. Projected supplies and demands by normal year and drought years are presented in Chapter 5.

TABLE 4-9: PROJECTED SUPPLY SOURCES (AFY)

Source	2030	2035	2040	2045	2050
Groundwater Potable	11,040	11,040	11,040	11,040	11,040
Groundwater Irrigation	280	280	280	280	280
Recycled MCWD Section 12	3,592	4,635	5,609	6,583	7,557
Recycled PWM	1,427	1,427	1,427	1,427	1,427
Desal	800	2,300	2,300	2,300	2,300
Surface Water	0	1,000	2000	3,000	3,000

Note: Table lists projected availability per specific rights and contracts and expected yields. Projected supply reliability is presented in Chapter 5.

Chapter 5
Water System Reliability

This chapter provides MCWD's water system reliability findings as required under California Water Code §10635 and provides reliability information that the District may use in completing an annual supply and demand assessment pursuant to CWC §10632.1. This chapter presents the two UWMP Act reliability analyses:

- Five Year Drought Risk Assessment: the 2026 through 2030 Drought Risk Assessment ("DRA").
- Long-Term Service Reliability: the reliability findings for a *Normal Year*, *Single Dry Year*, and *Five Consecutive Drought Years* in five-year increments through 2050.

Each year, the District considers current supply and demand conditions and performs an Annual Water Supply and Demand Assessment pursuant to CWC Section 10632.1 to evaluate real time or near-term circumstances that are different than the DRA scenario. This assessment evaluates actual current water supply and use conditions for a prescribed 12-month forecast (July through the following June). Procedures for conducting the Annual Assessment are contained in the District's Water Shortage Contingency Plan (WSCP) in Chapter 6. The District has conducted the assessment as required by the CWC and will continue this planning exercise to provide a reliability assessment for then-current conditions regarding supplies and expected demands.

5.1. Drought Impacts to Supply and Demand

Water demand during drought events can vary depending on a range of external and internal factors. Type and extent of drought, age of housing stock , type and extent of landscape, regional and local messaging, and impacts of coastal climate are examples of external functions. Internal factors include MCWD messaging, water shortage contingency stage declaration, and ongoing conservation program results. Depending on the combination of factors, demand response varies. MCWD will carefully monitor demands through its soon-to-be-installed automated metering infrastructure system to trend demand response and act accordingly in line with supplies. For the drought analysis required in this UWMP, the District assumes no change in demand during the required one-year and one to five year drought types. This presents a conservative approach to the drought analysis and factors in the District's unique supply drought availability.

As noted in Chapter 4, MCWD maintains a unique water supply portfolio sourced primarily from the Salinas Valley Groundwater Basin, complemented by recycled and desalination supplies. These supplies are unique in that near-term drought events have very little impact on the supply availability. The Monterey Subbasin's current estimate of storage is 1.5 to 3.1 million acre-feet (Monterey Subbasin GSP, January 2022). With such a large storage capacity, and MCWD pumping (3,634 AF in 2025) representing over 90 percent of the basin pumping, MCWD projects no significant impacts to groundwater availability during one to five year droughts. The assumed supply availability during a drought is the 11,040 AFY as designated by the MCWRA in the annexation agreements.

The District's current desalination supply of 300 AFY and all future desal supply volumes are also assumed to be completely available during one to five year drought periods. Recycled supply is derived from the wastewater collected in the area. It is assumed the recycled supply is reduced consistent with any demand reductions assumed from water shortage stage declarations (see Chapter 6).

All supplies are vulnerable to external impacts. The groundwater supply can be affected by water quality, mechanical failure, SGMA regulation, legal actions, and other factors. Seawater intrusion can affect water quality, but in that case, new wells can be placed further inland to mitigate impacts per the 1996 Annexation Agreement. The probability of other impacts (regulation, legal, etc.) to all the supply sources is unknown. Therefore, this assessment does not incorporate these potential future impacts in UWMP drought analysis tables. However, the District's water resources strategy is contemplating these potential impacts and looks to enhance supply reliability and availability through multiple sources and management efforts. The District will continue to investigate its supply strategy as presented in Chapter 4 to be prepared should any of these external issues impact supplies.

Five Year Drought Risk Assessment

The Drought Risk Assessment ("DRA") is a specific evaluation required under CWC §10635(b) that mandates water agencies assess the reliability of its water supply sources and water uses under an assumed drought period that lasts five consecutive years.

Table 5-1 below presents MCWD's DRA that integrates all its water supplies and projected demands for 2026 through 2030 (assuming linear growth). As shown in the table, MCWD has surplus water assets available for each year of a five-year drought starting in 2026.

TABLE 5-1: FIVE YEAR DROUGHT RISK ASSESSMENT (AFY)

	2026	2027	2028	2029	2030
Groundwater	11,040	11,040	11,040	11,040	11,040
Recycled MCWD Section 12	2,794	2,994	3,193	3,393	3,592
Recycled PWM	1,427	1,427	1,427	1,427	1,427
Desalinated Water	-	300	300	300	800
Total Supply:	**15,261**	**15,761**	**15,960**	**16,160**	**16,859**
Demand	4,445	4,842	5,238	5,635	6,032
Differential:	**10,817**	**10,919**	**10,722**	**10,524**	**10,827**

5.2. Long-Term Service Reliability

The Urban Water Management Planning Act directs urban water purveyors to analyze water supply reliability in a normal, single dry, and five consecutive dry years over a 20-year planning horizon, and optionally up to a 25-year timeline. The following subsections describe the long-term water service reliability for MCWD through a 25-year planning horizon (2025-2050).

5.2.1. Normal and Single Dry Conditions (2030-2050)

MCWD's future water supplies in normal and single dry conditions reflect the same hydrological assumptions described above.

Table 5-2 presents the projected normal year and single dry year supplies and demands in five-year timesteps from 2030 through 2050. Due to the District's unique water supplies, MCWD anticipates having adequate water supplies to meet unconstrained demands during a normal year and single dry year through this UWMP planning horizon.

TABLE 5-2: NORMAL AND SINGLE DRY YEAR WATER SUPPLY AND DEMAND THROUGH 2050 (AFY)

Normal Year	2030	2035	2040	2045	2050
Groundwater	11,040	11,040	11,040	11,040	11,040
Recycled MCWD Section 12	3,592	4,635	5,609	6,583	7,557
Recycled PWM	1,427	1,427	1,427	1,427	1,427
Desalinated Water	800	2,300	2,300	2,300	2,300
Surface Supply	-	1,000	2,000	3,000	3,000
Total Supply:	**16,859**	**20,402**	**22,376**	**24,350**	**25,324**
Demand	6,032	7,649	9,159	10,669	12,179
Differential:	**10,827**	**12,753**	**13,217**	**13,681**	**13,145**

Single Dry Year	2030	2035	2040	2045	2050
Groundwater	11,040	11,040	11,040	11,040	11,040
Recycled MCWD Section 12	3,592	4,635	5,609	6,583	7,557
Recycled PWM	1,427	1,427	1,427	1,427	1,427
Desalinated Water	800	2,300	2,300	2,300	2,300
Surface Supply	-	1,000	2,000	3,000	3,000
Total Supply:	**16,859**	**20,402**	**22,376**	**24,350**	**25,324**
Demand	6,032	7,649	9,159	10,669	12,179
Differential:	**10,827**	**12,753**	**13,217**	**13,681**	**13,145**

5.2.2. Five Consecutive Dry years (2030-2050)

MCWD's future water supplies in multiple dry year conditions reflect the same hydrological assumptions described above. However, for this analysis of longer time frame droughts, it is assumed that a WSCP Stage 2 will be declared after year 2 (25% reduction), Stage 3 declared after year 3 (35% reduction), and a Stage 4 will be called after year 4 (50% reduction). See Chapter 6 for WSCP stages. Demands are therefore reduced per these assumptions. Recycled supplies are also reduced equally to the Stage declarations to reflect reduced wastewater generation.

Table 5-3 presents the projected demands and available supplies during a multi-year drought five-year timesteps from 2030 through 2050. Due to the District's unique water supplies, MCWD anticipates having adequate water supplies to meet demands during each year in the planning horizon.

TABLE 5-3: FIVE CONSECUTIVE DRY YEARS WATER SUPPLY AND DEMAND THROUGH 2050 (AFY)

		2030	2035	2040	2045	2050
Year 1	Supply	16,859	20,402	22,376	24,350	25,324
	Demand	6,032	7,649	9,159	10,669	12,179
	Differential	10,827	12,753	13,217	13,681	13,145
Year 2	Supply	16,859	20,402	22,376	24,350	25,324
	Demand	6,355	7,951	9,461	10,971	12,179
	Differential	10,503	12,451	12,915	13,379	13,145
Year 3	Supply	15,604	18,887	20,617	22,348	23,078
	Demand	5,009	6,190	7,322	8,455	9,134
	Differential	10,595	12,697	13,295	13,893	13,944
Year 4	Supply	15,102	20,402	22,376	24,350	25,324
	Demand	4,551	5,561	6,542	7,524	7,916
	Differential	10,551	14,841	15,834	16,826	17,408
Year 5	Supply	14,350	17,371	18,858	20,345	20,832
	Demand	3,663	4,429	5,184	5,939	6,090
	Differential	10,687	12,942	13,675	14,407	14,743

Note: Table assumes demand and subsequent recycled supply reductions from WSCP Stage 2 in Year 3, Stage 3 in Year 4, and Stage 4 in Year 5.

5.3. Water Supply Reliability Summary

MCWD has a robust water supply portfolio. As the above analysis indicates, supply is sufficient to meet demands during the various drought scenarios considered. However, other external factors could affect water supply availability (infrastructure, water quality, regulatory, legal, etc.). Should these other factors reduce available supply, MCWD will enact its Water Shortage Contingency Plan as described in Chapter 6.

Chapter 6
Water Shortage Contingency Plan

The Water Shortage Contingency Plan ("WSCP") addresses the requirements in California Water Code §10632 of the Urban Water Management Planning Act. MCWD's WSCP consists of two elements; a separate WSCP Board policy document, and this UWMP chapter. Combined, these two documents are the District's WSCP and fulfill the UWMP Act requirements. The WSCP addresses possible conditions in which the water supply available to customers of MCWD is insufficient to meet the normally expected customer water use at a given point in time due to drought, regulatory action constraints, mechanical failures, and natural and man-made disasters. This WSCP describes the District's strategy for responding to varying levels of shortages and actions implemented to mitigate the impacts. The WSCP consists of the following elements:

1. An analysis of water supply reliability.
2. Procedures for conducting an annual water supply and demand assessment.
3. Six standard water shortage levels corresponding to progressive ranges of up to 10, 20, 30, 40, and 50 percent shortages and greater than 50 percent shortage.
4. Shortage response actions that align with the defined shortage levels.
5. Communication protocols and procedures.
6. Customer compliance, enforcement, appeal, and exemption procedures.
7. A description of legal authorities.
8. A description of financial consequences.
9. Monitoring and reporting requirements.
10. Reevaluation and improvement procedures.
11. Special Water Feature Distinction.
12. Plan Adoption, Submittal, and Availability.

6.1. Water Supply Reliability Analysis

Water supply reliability is conducted on an ongoing basis. Results are identified in this UWMP in Chapter 5, as well as in the Annual Water Supply and Demand Assessment reported to the state annually as described below. As described in Chapter 5 of this UWMP, MCWD projects sufficient supplies during droughts to meet demands through 2050. However, other external factors could affect water supply availability (infrastructure, water quality, regulatory, legal, etc.). Should these other factors reduce available supply, MCWD will enact its Water Shortage Contingency Plan as described herein.

6.2. Annual Water Supply and Demand Assessment Procedures

The WSCP describes the District's procedural methodology for managing shortages and conducting its required Annual Water Supply and Demand Assessment ("Annual Assessment"). The Annual Assessment is to be submitted to the CA Department of Water Resources ("DWR") by July 1 each year with the first Annual Assessment due July 1, 2022. The Annual Assessment examines MCWD's anticipated water reliability for the current year and one additional dry year. The Annual Assessment will be prepared at the beginning of each calendar year to evaluate near-term water supply reliability and determine what, if any, water shortages stages may be triggered during the required period. The Annual Assessment will be used by MCWD to prepare for and initiate implementation of any needed response actions, as well as to inform customers, the general public, interested parties, and local, regional, and state governmental entities to prepare for such required actions.

6.2.1. Analytical and Decision-Making Processes

MCWD plans to conduct its Annual Assessment according to the following timeline and process:

By February 1 Initial data collection and analysis.

By March 1 Preliminary Draft Annual Assessment internal review and revisions.

By April 1 Draft Annual Assessment and results briefing for District decision-makers.

By May 1 Public Notification and Release of Draft Annual Assessment.

By June 1 Approval of Annual Assessment by District decision-makers.

By June 15 Submit Annual Assessment to DWR in advance of July 1 deadline.

MCWD will prepare its Annual Assessment using the following key data and analytical procedures (which may be modified as needed):

- Prepare supply estimates for each water source on a monthly basis for the analysis period.
- Update unconstrained customer demand and estimate anticipated actual water use on a monthly basis for the analysis period.
- Update infrastructure assessment, including estimated water supply production capability on a monthly basis for the analysis period.
- Identify and quantify any locally applicable factors that may influence or disrupt supplies during the analysis period.
- Refine the definition of "dry year" as relevant to dry conditions like water year 2015.
- Identify any shortfall between projected supply and anticipated demand.
- Identify and incorporate any applicable constraints (infrastructure, regulatory, etc.).
- Develop, analyze, and propose water resource management strategies to address any shortfall between projected supply and anticipated demand with reference to the water shortage stages identified in this WSCP.
- Present the Annual Assessment (and resulting water shortage stage declaration, if applicable) to the District decision-makers.

If the results of the Annual Assessment indicate the need for any alternative water shortage response actions which may be in addition to those specified in Section 6.4, below, the alternative response actions will be described and submitted in the Annual Assessment, as mandated by CWC §10632.2.

6.2.2. Submittal Procedure

MCWD will submit its Annual Assessment to DWR by June 15th each year, but in no case later than July 1st of each year. Upon submittal to DWR, MCWD will also notify neighboring purveyors, the public, and other stakeholders concerning the results of the Annual Assessment and where it is available for review.

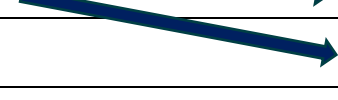
6.3. Water Shortage Stages and Actions

The District maintains a separate policy document entitled Water Shortage Contingency Plan (as included in Appendix C). The separate document includes all UWMP Act requirements regarding shortage response levels, actions, responses, and financial impacts. The separate document is adopted by the Board and updated accordingly as necessary. See the separate WSCP policy document for detailed discussion of each stage, triggers, response, actions, water use prohibitions, estimated financial impacts, and monitoring procedures. The following presents the additional UWMP Act requirements for water shortage contingency planning.

6.3.1. Six-Stage Crosswalk

State requirements identify a six-stage plan corresponding to progressively severe water shortage conditions (up to 10%, 20%, 30%, 40%, 50%, and greater than 50% shortage), as compared to the normal service reliability condition. An entity is also allowed to use their own level of stages if it is cross-walked to the 6-stage levels. MCWD utilizes a 5-stage response that is cross-walked to the 6-stage as presented in **Table 6-1**.

TABLE 6-1: SHORTAGE STAGE CROSSWALK

MCWD Stages	Crosswalk	6 Stages
Stage 1 – up to 10%		Stage 1 – up to 10%
Stage 2 – 10-25%		Stage 2 – 10-20%
Stage 3 – 25-35%		Stage 3 – 20-30%
Stage 4 – 35-50%		Stage 4 – 30-40%
Stage 5 – above 50%		Stage 5 – 40-50%
		Stage 6 – above 50%

6.3.2. Emergency Operations Plan for Catastrophic Water Shortages

MCWD maintains an Emergency Response Plan for emergency and disaster occurrences with guidelines and agreements for cooperative efforts with other State and local agencies, as required by the SWRCB Division of Drinking Water ("DDW"). The ERP contains specific actions

MCWD would initiate in the event of a catastrophic reduction in its water supply. In addition to specific actions to be undertaken during catastrophic events, MCWD performs regular maintenance and inspection activities to identify any issues or elements that need to be addressed to improve emergency preparedness.

6.3.3. Seismic Risk Assessment and Mitigation Plan

The Monterey County Multi-Jurisdictional Hazard Mitigation Plan[4] ("MJHMP") is included by reference in this UWMP. The MJHMP identifies seismic and other risks for the entire Monterey County. Specific to MCWD, it identifies water and wastewater infrastructure at risk from seismic events. MCWD's water shortage stages, emergency response plan, and other efforts will be utilized to mitigate any loss of infrastructure due to a seismic event or any other cause.

6.3.4. Financial Impact

Table 6-2 presents the projected financial impacts from each stage of the WSC based on 2025 usage data, existing 24/25 rate structure, and assumed demand reduction percentages. Although there is reduction in cost of pumping energy, the lost revenue in water sales overrides resulting in a net loss of projected revenue for each stage. MCWD maintains emergency reserves to address these short term losses and will implement other rate and policy changes per the WSCP if the shortage becomes long term.

TABLE 6-2: FINANCIAL IMPACTS DURING STAGE DECLARATION

	Stage 1	Stage 2	Stage 3	Stage 4	Stage 5
Assumed Reduction	10 %	20 %	30 %	40 %	50 %
Water Sales Loss, $	1,116,811	2,233,622	3,350,433	4,277,536	5,204,640
Revenue Source: Pumping savings at $389/AF, $	136,306	272,611	408,917	545,222	681,528
Net Revenue Reduction, $	980,505	1,961,011	2,941,516	3,732,314	4,523,112
Percent of Total Annual Water System Revenue	6%	11%	17%	21%	25%

6.3.5. Communication Protocols

MCWD maintains an established and effective communications program to inform its customers, neighbors, and other stakeholders of water service issues, updates, and policies. Implementation of the WSCP will utilize the existing communication program structure to

[4] County of Monterey Multi-Jurisdictional Hazard Mitigation Plan. (Monterey County Office of Emergency Services, 2022)

inform customers and others of the declared shortage stage and respective actions and restrictions in place.

The District Board meetings addressing the Annual Assessment and any potential water shortage declaration will be noticed using normal Board meeting public notification procedures. The meeting will also be announced through regular press release protocols.

Once a water shortage stage has been declared by the Board of Directors, the District will notify its customers and others through a range of efforts. The stage and restrictions will be identified in a press release, customer billing statements, and posted on MCWD's website. Specifically, MCWD's website will be updated to feature the shortage declaration, restrictions, and resources available to customers from the District and other entities to help meet the restrictions. Subsequent District Board meetings will include a review of the shortage condition, customer response results, and discussion and recommendations for potential modifications. The District will also coordinate with the neighboring public agencies to declare a local emergency with respect to anticipated water supplies and demands.

MCWD's communication protocols may include, but are not limited to, some or all of the following locally relevant actions. These communication protocols will be used at the discretion of District staff based on then-current and anticipated water shortage conditions:

- Publishing information on the MCWD website.
- Staffing a telephone hotline.
- Providing bill inserts and direct mailings above and beyond those legally required.
- Directly calling and/or emailing customers.
- Developing materials for non-English speaking customers.
- Preparing social media posts to communicate District actions.
- Advertising actions on other local audio and video media.
- Coordinating voluntary and mandatory water conservation activities with other local and regional governing bodies.

6.3.6. Legal Authorities

MCWD is empowered to implement and enforce its WSCP under its organizing statutes and Chapter 3.36.035 of the MCWD Code of Ordinances. Chapter 2.09 of the Code of Ordinances contains a sample ordinance which may be adopted in the event of a local emergency, including a water shortage condition. In addition, MCWD is able to exercise general powers granted to water distributors pursuant to CWC §350-359. CWC §350 authorizes the governing

body of a distributor of a public water supply to declare a water shortage emergency whenever it finds and determines that the ordinary demands and requirements of water consumers cannot be satisfied without depleting the water supply of the distributor to the extent there would be insufficient water for human consumption, sanitation, and fire protection. Upon a finding of such an emergency condition, the distributor can adopt such regulations and restrictions on the delivery and consumption of water as will conserve the water supply for the greatest public benefit, with particular regard to domestic use, sanitation, and fire protection[5]. The regulations and restrictions remain in force and effect until the supply of water available for distribution within such area has been replenished or augmented, and restrictions may include the right to deny new service connections and discontinue service for willful violations (CWC §355 and §356). The District also coordinates with the County of Monterey within which it provides water supply services for the possible proclamation of a "local emergency" under California Government Code, California Emergency Services Act (Article 2, §8558).

6.3.7. Plan Adoption, Submittal, and Availability

The WSCP has been adopted, submitted, and is available as required by the Urban Water Management Planning Act. The separate WSCP Board policy document is also subject to the following separate adoption, submittal, and availability processes, and whenever it is separately amended or revised in the future. MCWD may refine or amend either part of the WSCP as necessary and in compliance with the normal public notice and adoption. The current UWMP and separate WSCP Board policy document is available to MCWD customers and all other entities through the MCWD website.

[5] California Water Code §353

Chapter 7
Demand Management Measures

The District implements Demand Management Measures ("DMMs") as part of its Water Conservation Program to sustainably manage its water resources. This chapter presents MCWD's historic and existing water conservation program.

7.1. Water Conservation Program Overview

Marina Coast has implemented a comprehensive, long-standing water conservation program designed to reduce potable water demand, enhance long-term supply reliability, and comply with statewide efficiency mandates. MCWD's program combined regulatory measures – such as water waste prohibitions and rate structures – with customer-focused initiatives including a myriad of consumer rebates for high-efficiency fixtures and complimentary leak detection assistance. MCWD also promotes outdoor landscape water efficiency through public outreach, irrigation scheduling guidance, and support for climate-friendly plants. Water conservation is further integrated into MCWD's Water Shortage Contingency Plan and codified into its District Code of Ordinances. Collectively, these efforts have helped MCWD lower per-capita water use while supporting sustainable management of its groundwater and recycled water supplies.

The implementation of MCWD's water conservation actions and measures have proved highly successful and resulted in MCWD surpassing its 2020 per capita water use target. To comply with the Water Conservation Act of 2009 (SBX7-7), MCWD set a 2020 baseline target of 117 GPCD. Actual 2020 per capita water use was 80.2 GPCD, well below the required conservation target and underscoring the success of MCWD's comprehensive water conservation program.

The Water Conservation Program consists of two types of DMMs; Foundational and Other. Foundational elements are required per the UWMP Act, and an agency can also offer other additional programs as desired.

7.2. Foundational Demand Management Measures

The foundational DMMs represent adopted ordinances, policies, and long-standing budgeted conservation programs including:

- Water Waste Prevention Ordinances;
- Metering;
- Conservation Pricing;
- Public Education and Outreach;
- Programs to assess and manage distribution system real loss;
- Water conservation program coordination and staffing support.

7.2.1. Water Waste Prevention Ordinances

In 1993 MCWD enacted an ordinance addressing water waste and establishing limitations on how and when watering/irrigation can occur, and how water can be used outside (Section 3.36.030 of the District Code of Ordinances). This section of District Code was updated in 2004 and 2005 to add additional restrictions and incorporate the Model Water Efficient Landscape Ordinance (MWELO). The 2015 update to the Model Water Efficient Landscape Ordinance adopted by the Legislature is incorporated by reference into the District Code. Sections 3.36.040 through 3.36.060 of the District Code address enforcement of the waste prevention ordinances.

7.2.2. Metering

MCWD is fully metered with a volumetric billing component. Meters with automatic meter reading (AMR) are being installed in a phased program and are required for all new customers. A feature of the AMR equipment is that each meter will identify abnormal water use. District staff can then contact the customer, inform them of the possible leak and, schedule a follow-up assistance visit, if requested.

7.2.3. Conservation Pricing

Water conservation is encouraged through rate structure. MCWD charges customers a fixed monthly fee and a commodity charge for water used. The commodity rates are on a tiered scale. The Marina and Ord service areas are operated as separate cost centers and have different customer fee schedules. The water rate tiers and prices are reviewed in a regular schedule and updated as necessary.

7.2.4. Public Outreach and Education

MCWD provides water conservation information to the public through a wide variety of public outreach tools: information booths at conferences, fairs and community events; flyers, newsletters and inserts; e-mailed announcements; video; website; and printed material to

the media. More details on available resources and educational material can be viewed on the MCWD's webpage.

The District also promotes water conservation within the local schools by providing educators with handouts, internet links, and classroom activities when requested. Staff visits local schools upon request, teaching students about how to conserve water, local water sources, and careers in the water sector.

7.2.5. Programs to Assess and Manage Distribution System Real Loss

MCWD performs an annual prescreening system audit per AWWA standards and submits results to the California DWR as required. The District responds to leaks or known trouble spots to make repairs and replacements as needed. The District tracks unmetered water use within the work order management system, so that activities such as line flushing, hydrant testing and fire department training are accounted for.

MCWD also uses its Supervisory Control and Data Acquisition ("SCADA") system to identify main breaks and system leaks in real time. The District's service area is predominantly coastal dune with sandy soils. Small water leaks percolate easily and can go unnoticed for long periods of time. Alarms alert the staff to overflowing water tanks and/or failing equipment. System operators monitor the operational patterns of wells, booster pumps and water tanks, and investigate when water use exceeds typical norms.

7.2.6. Water Conservation Program Coordination and Staffing Support

The District's Conservation department is included within the larger Water Resources department. The Water Resources department also consists of the Marina Coast Water District Groundwater Sustainability Agency (MCWDGSA). Conservation staff currently includes a Water Conservation Specialist III and a Water Conservation Intern. Within the Water Resources Department and MCWDGSA, staff includes a Water Resources Manager, Water Resources Analyst, Water Resources Engineer, and Water Resources Technician. Although Conservation staff is largely responsible for implementing the conservation program, Water Resources staff may assist with data analysis and reporting requirements, among other tasks such as attending public events.

7.3. Other Demand Management Measures

The District also implements other DMMs to further support efficient water use. The following describes the additional programs and the rebate offerings as presented in Table 7-1.

7.3.1. Water Survey Programs for Residential Customers

The District has implemented a revised water survey program developed in response to the Covid-19 pandemic. Rather than provide in-person auditing, the program requires all single-family and multi-family residences to submit forms upon property transfer to verify the property is in compliance with District Code. The Water Use Survey includes both indoor and outdoor components. The indoor component includes verifying the flush rate and brand of all toilets to ensure they are not above the District approved 1.6 gpf, checking the type and count of all water appliances and fixtures such as washers and dishwashers, and offering incentives or devices to upgrade fixtures to be more water efficient. The outdoor component includes checks of the irrigation system and control timers, and review or development of a customer's irrigation schedule. The District also provides water use surveys if requested in addition to contacting the top water users to offer assistance in reducing water consumption. Customer's who receive an unusually high water bill can request assistance through an on-site survey.

7.3.2. Residential Plumbing Retrofits

Upon the transfer of property ownership and for all new construction and renovations, the District requires residential properties to be retrofitted with high-efficiency water fixtures, including showerheads, faucets, and toilets. Plan reviews are performed by District staff for new construction and renovations to ensure high-efficiency fixtures are installed. When a property is transferring ownership, District staff require a Water Use Survey detailing all water fixtures and existing landscaping to determine if a property is up to District code, or if additional retrofitting must occur to install high efficiency water fixtures.

To assist customers in reducing their water consumption, low-flow showerheads, aerators, and other water saving devices are available free of charge. These devices are available at the District's office in addition to community events District staff attends. Article 3.36 of MCWD Code of Ordinances requires the installation of hot-water recirculation systems or point-of-use water heaters for new construction and renovation, which is an additional water saving measure not required in the State Plumbing Code. The District offers rebates for those adding a hot-water recirculation pump as part of a renovation.

7.3.3. Residential High-Efficiency Toilet Rebate Program

One of the rebate programs the District offers is replacement of low-flow (1.6 gpf and higher) to high-efficiency toilets (1.28 gpf and lower). As of 2025, about 3,000 toilets have been retrofitted to high-efficiency toilets (HETs) or ultra-high-efficiency toilets (UHETs). As mentioned previously, all new construction and property transfers must meet District code by installing HETs. The program also includes commercial, institutional, and industrial properties. Rebate rates are listed in **Table 7-1**, below.

7.3.4. High-Efficiency Washing Machine Rebate Programs

The District also offers an incentive for the purchase of high-efficiency (HE) Energy Star clothes washers. Throughout the program, more than 2,000 HE washers have been purchased. The installation of HE washers is required in all new construction. Water savings for these washers range from 10-20 gallons per load of laundry when transitioning from a low water efficient washing machine to a HE washer.

The District continues to review program participation and consider refinements to the program elements to ensure the program is effective in encouraging the replacement of inefficient washers for HE washers.

7.3.5. Commercial, Industrial, and Institutional (CII) Accounts

All conservation incentive programs are available to CII customers, including water use surveys that evaluate water use efficiency of properties and recommend measures to reduce water consumption. Staff maintain a list of all top water users and best management practices offered to CII customers, as reported in the Urban Water Use Objective Annual Report, to encourage the reduction of water waste and inefficient water use practices.

7.3.6. Landscape Conservation Programs and Incentives

Both indoor and outdoor water use are equally important to analyze when evaluating water use efficiency. The District offers several landscape incentives, listed in **Table 7-1** below. These incentives have been developed to reduce water waste in landscape irrigation by implementing devices such as a rain shut-off switch and weather-based ET controllers that ensure irrigation is applied to meet landscaping needs. These incentives are available for both residential and CII customers; those with dedicated irrigation meters and those with a shared water meter. The incentive process includes an initial on-site survey to verify existing landscape and irrigation condition, and a follow-up inspection to ensure all devices were installed and are operating correctly.

The District has adopted the Model Water Efficient Landscape Ordinance (MWELO) and requires review and approval of all landscapes 500 square-feet or larger. Each dedicated irrigation meter (DIM) requires a water budget calculated pursuant to MWELO and the District's Appendix C. Staff maintains a record of all landscape water budgets to ensure compliance.

The landscape incentives offered by the District include irrigation controllers and devices, as mentioned above, in addition to conversion of lawn to low water use plantings, rainwater catchment, and installation of a flow sensor. Irrigation controllers covered under the incentive program include the capability of modifying schedules based on ET factors, ensuring plants only receive the amount of irrigation needed. Additional devices such as shut-off switches and soil moisture sensors can be attached to enhance the automatic irrigation scheduling, developing the most efficient water scheduling for the landscape. The installation of rain barrels to collect rainwater is encouraged; this water can be used to supplement landscape irrigation. Flow sensors are devices that are attached to the water meter and provide real-time information about water consumption, with some devices providing evaluations of water use from individual appliances.

TABLE 7-1: CURRENT REBATES

Indoor Programs	Up to	Landscape Programs	Up to
High Efficiency Toilets		ET-Based Irrigation Controller	
1.28 gpf	$50 each	System Conversion	$150
1.28 gpf, entire property	$75 each	Additional per Station	$20 each
1.1 gpf	$100 each	Rain/Moisture Shut-Off Switch	$100 each
1.1 gpf, entire property	$200 each	Lawn & Sprinkler Replacement	
Water-Free Urinal	$200 each	Lawn replacement	$1.00/SF
WF Urinal entire property	$300 each	Convert sprinkler to drip	$0.50/SF
Clothes Washers		Rainwater Catchment	
3.5 to 3.8 gal/CF laundry	$50 each	First 250 gallons	$1.00/gallon
3.0 to 3.4 gal/CF laundry	$100 each	Added storage up to 2500 gal.	$0.50/gallon
Under 2.9 gal/CF laundry	$150 each	Master Shut-Off Valve	$100 each
Hot Water Recirc. System	$250	Flow Sensor Rebate	$100 each

7.3.7. DMM Summary

Table 7-2 summarizes MCWD's water conservation program over the past five years and highlights the 2025 activities. Notable actions include a Rate Study completed in 2024, establishing a new tiered rating system, including a flat rate for all commercial, institutional, and industrial (CII) customers and a winter-average flow-based sewer rate to encourage the conservation of water. Additionally, the District continues to replace old, aging meters

throughout the system to address system leakage and prepare the system for the implementation of Advanced Metering Infrastructure (AMI).

In addition to ongoing water conservation commitments, MCWD will continue to evaluate the need for additional programs and actions necessary to achieve water use objectives in compliance with California Water Code Section 10609.20. Special consideration in selecting appropriate DMMs will be taken regarding changing urban water use patterns in the service as well as the configuration of anticipated new residential customers to ensure water use remains efficient.

7.4. Planned Implementation to Achieve Water Use Targets

The District prioritizes water conservation efforts, promoting and implementing conservation measures throughout the service area to reduce water waste and assist customers with their water consumption. Implementation of conservation measures within the past few years has reduced the per capita demand, reducing from 123 gallons per capita day (GPCD) in 2013 to 69 GPCD in 2025.

With the adoption of the state regulation Making California a Conservation Way of Life in 2024, the District staff has been working towards ensuring compliance with its urban water use objective (UWUO). This regulation establishes specific water budgets for every water district, tailored to their water distribution system and service area to encourage water use efficiency. Each budget includes several factors, including a residential standard GPCD for the indoor water budget, and a landscape efficiency factor for the outdoor water budget. Since adoption, the District has met the calculated UWUO every year.

Reduction in water use through conservation measures has improved mainly through new water use technologies that are introduced and through customers modifying water use behaviors in response to factors such as drought, water rates, and community education.

TABLE 7-2: SUMMARY OF DMM IMPLEMENTATION

Demand Management Measure	5-Year Program	2025 Activity
Water Waste Prohibition	On-going monitoring for violations.	District has a water waste reporting webpage, and responds to issues as reported.
Metering with Commodity Rates	Last of the flat rate accounts were metered in 2019. Increased expenditures and effort to replace older and largest AMR meters and meter registers with new AMI-ready meters.	Increased efforts to utilize AMR leak detection equipment to detect leaks early, notify customers, and assist in stopping leaks.
Conservation Pricing	New, increasing water and winter-average sewer rates based on a Rate Study adopted in 2024.	Implemented a winter-average sewer rate, flat rate for multi-family, and a tiered rate for single family.
Public Information	Expenditures increased to hire professional public outreach firms and expand the type and frequency of outreach including e-flyers, social media posts, and others.	Expanded the type and frequency of outreach. Increased participation at public events.
School Education	Offered water educational material for use in schools.	Participated in a local elementary school's after-school program to teach students about water conservation.
System Water Audits, Leak Detection, Repair	Annual prescreening system audit. Staff contacts customers when alerted by AMR loss detectors.	Conducted large meter testing and replacement. Efforts to improve and validate water loss data is on- going.
Conservation Staffing	One Water Conservation Specialist and a Student Intern.	One Water Conservation Specialist and a Student Intern.
Water Survey Programs for Residential Water Customers	On-site surveys performed by request. Residential use surveys are required upon transfer of property ownership to ensure compliance.	Staff issued Water Conservation Certifications for properties transferring ownership, and continued to use online water use surveys.
Residential Plumbing Retrofits	Residential plumbing retrofits program included in annual budget (shower heads, leak detector kits, rebate budgets).	Free high-efficiency retrofit devices provided. Promotional efforts are on-going.
High-Efficiency Toilet Rebates	Consideration given to increasing rebate amounts to incentivize ongoing toilet replacements.	30 rebates approved with 51 HET in 2020.
High-Efficiency Washing Machine Rebates	MCWD continues to increase the budget to meet increasing demand for rebates.	38 rebates approved

Demand Management Measure, continued	5-Year Program	2025 Activity
Commercial Industrial and Institutional Water Conservation	On-site surveys were performed upon request. Highest use CII customers were offered surveys.	Staff contacted top water users and continuously offers incentives for water conservation.
Large Landscape Conservation	On-site surveys performed by request. Rebate programs for controllers, drip systems, and turf replacement.	High usage monitored monthly. Notification and assistance with leaks and high use is on-going. Water use/water budget analysis provided to large users.

Appendix A
Resolution of Urban Water Management Plan Adoption

June 15, 2026

Resolution No. 2026-39
Resolution of the Board of Directors
Approving the Marina Coast Water District
2025 Urban Water Management Plan

RESOLVED by the Board of Directors ("Directors") of the Marina Coast Water District ("MCWD"), at a regular meeting duly called and held on June 15, 2026 at 920 Second Avenue, Marina, California as follows:

WHEREAS, the California Legislature enacted Assembly Bill 797 (Water Code Section 10610 et seq, known as the Urban Water Management Plan Act) during the 1983-84 Regular session, and as amended subsequently, which mandates that every supplier providing water for municipal purposes to more than 3,000 customers or supplying more than 3,000 acre-feet of water annually, prepare an Urban Water Management Plan (UWMP), the primary objective of which is to plan for conservation and efficient use of water; and,

WHEREAS, the District is an urban supplier of water providing water to more than 3,000 customers; and, WHEREAS, the Plan must be adopted, after a public review and hearing, and must be filed with the California Department of Water Resources within thirty days of adoption; and,

WHEREAS, pursuant to Water Code §10642 the District mailed notices to affected cities and to Monterey County Water Resources Agency in April 2026, solicited input from affected land use jurisdictions in which the District serves water, prepared and circulated the 2025 UWMP in June 2026 and published notice of the public hearing in accordance with Gov't. Code §6066; and

WHEREAS, the MCWD Board of Directors conducted a public hearing to receive public comments regarding the 2025 UWMP on June 15, 2026; and,

WHEREAS, pursuant to Water Code §10632, the UWMP must also contain a Water Shortage Contingency Plan, which the Board of Directors has adopted by separate resolution; and,

WHEREAS, copies of the adopted 2020 UWMP will be transmitted to land use jurisdictions in which the District serves water and the plan shall be made available on the District's website.

NOW, THEREFORE, BE IT RESOLVED, that the Board of Directors of the Marina Coast Water District does hereby:

1. adopt Resolution No. 2026-39 approving the 2025 Urban Water Management Plan; and,
2. authorize and direct the General Manager to file the 2025 Urban Water Management Plan with the California Department of Water Resources within 30 days after this date; and,
3. authorize and direct the General Manager to make such revisions and edits to the 2025 Urban Water Management Plan as the General Manager determines to be in the best interests of the District.

PASSED AND ADOPTED on June 15, 2026, by the Board of Directors of the Marina Coast Water District Groundwater Sustainability Agency by the following roll call vote:

Ayes: Directors Imamura, Moore, Smith, Shriner, Morton

Noes: Directors None

Absent: Directors None

Abstained: Directors None

Gail Morton, President

ATTEST:

Remleh Scherzinger, Secretary

CERTIFICATE OF SECRETARY

The undersigned Secretary of the Board of the Marina Coast Water District hereby certifies that the foregoing is a full, true and correct copy of Resolution No. 2026-39 adopted June 15, 2026.

Remleh Scherzinger, Secretary

Appendix B
Notices and Letters to Public Agencies

MONTEREY HERALD
Serving Monterey County

Published by The Monterey Herald
2555 Garden Road, Suite J., Monterey CA 93940
(831) 726-4382

This space is reserved for the County Clerk's Filing Stamp

MARINA COAST WATER DISTRICT
Account No. 2141283
920 2ND AVE STE A
MARINA, CA 93933

Legal No. 0006971394
May & June 2026 - Public Hearing on 06-15-2026
Total Cost: $255.88
Ordered by: KLampkin@mcwd.org

PROOF OF PUBLICATION

STATE OF CALIFORNIA
County of Monterey

I am a citizen of the United States and a resident of the County aforesaid. I am over the age of eighteen years, and not a party to or interested in the above-entitled matter. I am the principal clerk of the printer of The Herald, a newspaper of general circulation, printed and published daily and Sunday in the City of Monterey, County of Monterey, and which newspaper has been adjudged a newspaper of general circulation by the Superior Court of the County of Monterey, State of California; that the notice, of which the annexed is a printed copy (set in type not smaller than 6 point), has been published in each regular and entire issue of said newspaper and not in any supplement thereof on the following dates, to wit:

05/31/26, 06/07/26

I certify (or declare) under penalty of perjury that the foregoing is true and correct.

Executed on 06/07/2026 at Monterey, California.

Romaine Rogue

Signature

NOTICE OF PUBLIC HEARING
Marina Coast Water District

Notice is hereby given that the Marina Coast Water District (MCWD) will hold a public hearing to receive public comments and consider adoption of MCWD's 2025 Urban Water Management Plan.

The Urban Water Management Plan addresses water supply and water demands within MCWD's service area for the next 20 years.

Monday, June 15, 2026, at 6:00 pm
Marina Coast Water District Conference Room, 920 Second Avenue, Marina, CA 93933

If you need special assistance to participate in this public meeting, please contact MCWD at (831) 384-6131. Notification 48 hours prior to the meeting will enable the District to make reasonable arrangements to ensure accessibility to this public meeting. [28 CFR 35.102-35.104 ADA Title II]

FOR ADDITIONAL INFORMATION CONTACT:
Remleh Scherzinger, General Manager
Marina Coast Water District
920 Second Avenue, Marina, CA 93933
(831) 384-6131 or rscherzinger@mcwd.org

MONTEREY HERALD
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Ordered by: KLampkin@mcwd.org

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STATE OF CALIFORNIA
County of Monterey

I am a citizen of the United States and a resident of the County aforesaid. I am over the age of eighteen years, and not a party to or interested in the above-entitled matter. I am the principal clerk of the printer of The Herald, a newspaper of general circulation, printed and published daily and Sunday in the City of Monterey, County of Monterey, and which newspaper has been adjudged a newspaper of general circulation by the Superior Court of the County of Monterey, State of California; that the notice, of which the annexed is a printed copy (set in type not smaller than 6 point), has been published in each regular and entire issue of said newspaper and not in any supplement thereof on the following dates, to wit:

05/31/26, 06/07/26

I certify (or declare) under penalty of perjury that the foregoing is true and correct.

Executed on 06/07/2026 at Monterey, California.

Adrianna Rogue

Signature

NOTICE OF PUBLIC HEARING
Marina Coast Water District

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FOR ADDITIONAL INFORMATION CONTACT:
Remleh Scherzinger, General Manager
Marina Coast Water District
920 Second Avenue, Marina, CA 93933
(831) 384-6131 or rscherzinger@mcwd.org

MARINA COAST WATER DISTRICT
& GROUNDWATER SUSTAINABILITY AGENCY

920 2nd Ave., Ste A, Marina, CA 93933
District Office: 831-384-6131 www.mcwd.org

Marina Coast Water District – Notice of Public Hearing for the 2025 Urban Water Management Plan

April 14, 2026
Mr. David J. Stoldt
General Manager
Monterey Peninsula Water Management District

Dear Mr. Stoldt,

The Marina Coast Water District (District) is preparing its 2025 Urban Water Management Plan (UWMP) pursuant to the California Water Code (CWC). All urban water suppliers serving more than 3,000 service connections are required to prepare an UWMP every five years. The District's updated UWMP must be adopted and submitted to the California Department of Water Resources by July 1, 2026.

The UWMP is the District's long-term planning document for ensuring water supply reliability. It evaluates projected water demands, supply availability, and water conservation measures, and includes the District's Water Shortage Contingency Plan (WSCP).

In accordance with CWC §10620(d)(3), the District is coordinating the preparation of its plan with other appropriate agencies in the area. In addition, CWC §10642 encourages the active involvement of diverse social, cultural, and economic elements of the population during preparation of both the UWMP and the WSCP.

A draft UWMP will be made available for review in advance of the District's public hearing on June 15, 2026.

If you have any questions regarding this notification or the District's 2025 UWMP process, please contact Charly Liscomb, Interim Water Resources Manager, at (831) 883-5937 or by email at bliscomb@mcwd.org.

Sincerely,

Charly Liscomb, EIT
Interim Water Resources Manager

MARINA COAST WATER DISTRICT
& GROUNDWATER SUSTAINABILITY AGENCY

920 2nd Ave., Ste A, Marina, CA 93933
District Office: 831-384-6131 www.mcwd.org

Marina Coast Water District – Notice of Public Hearing for the 2025 Urban Water Management Plan

April 14, 2026
Mr. Spencer Vartanian
Director of Operations
California American Water

Dear Mr. Vartanian,

The Marina Coast Water District (District) is preparing its 2025 Urban Water Management Plan (UWMP) pursuant to the California Water Code (CWC). All urban water suppliers serving more than 3,000 service connections are required to prepare an UWMP every five years. The District's updated UWMP must be adopted and submitted to the California Department of Water Resources by July 1, 2026.

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A draft UWMP will be made available for review in advance of the District's public hearing on June 15, 2026.

If you have any questions regarding this notification or the District's 2025 UWMP process, please contact Charly Liscomb, Interim Water Resources Manager, at (831) 883-5937 or by email at bliscomb@mcwd.org.

Sincerely,

Charly Liscomb, EIT
Interim Water Resources Manager

MARINA COAST WATER DISTRICT
& GROUNDWATER SUSTAINABILITY AGENCY

920 2nd Ave., Ste A, Marina, CA 93933
District Office: 831-384-6131 www.mcwd.org

Marina Coast Water District – Notice of Public Hearing for the 2025 Urban Water Management Plan

April 14, 2026
Mr. Daniel Shaw
Monterey District Superintendent
CA State Parks & Recreation, Monterey District

Dear Mr. Shaw,

The Marina Coast Water District (District) is preparing its 2025 Urban Water Management Plan (UWMP) pursuant to the California Water Code (CWC). All urban water suppliers serving more than 3,000 service connections are required to prepare an UWMP every five years. The District's updated UWMP must be adopted and submitted to the California Department of Water Resources by July 1, 2026.

The UWMP is the District's long-term planning document for ensuring water supply reliability. It evaluates projected water demands, supply availability, and water conservation measures, and includes the District's Water Shortage Contingency Plan (WSCP).

In accordance with CWC §10620(d)(3), the District is coordinating the preparation of its plan with other appropriate agencies in the area. In addition, CWC §10642 encourages the active involvement of diverse social, cultural, and economic elements of the population during preparation of both the UWMP and the WSCP.

A draft UWMP will be made available for review in advance of the District's public hearing on June 15, 2026.

If you have any questions regarding this notification or the District's 2025 UWMP process, please contact Charly Liscomb, Interim Water Resources Manager, at (831) 883-5937 or by email at bliscomb@mcwd.org.

Sincerely,

Charly Liscomb, EIT
Interim Water Resources Manager

MARINA COAST WATER DISTRICT
& GROUNDWATER SUSTAINABILITY AGENCY

920 2nd Ave., Ste A, Marina, CA 93933
District Office: 831-384-6131 www.mcwd.org

Marina Coast Water District – Notice of Public Hearing for the 2025 Urban Water Management Plan

April 14, 2026
Ms. Julia Sibilla
Deputy to the Garrison Commander
U.S. Army

Dear Ms. Sibilla,

The Marina Coast Water District (District) is preparing its 2025 Urban Water Management Plan (UWMP) pursuant to the California Water Code (CWC). All urban water suppliers serving more than 3,000 service connections are required to prepare an UWMP every five years. The District's updated UWMP must be adopted and submitted to the California Department of Water Resources by July 1, 2026.

The UWMP is the District's long-term planning document for ensuring water supply reliability. It evaluates projected water demands, supply availability, and water conservation measures, and includes the District's Water Shortage Contingency Plan (WSCP).

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A draft UWMP will be made available for review in advance of the District's public hearing on June 15, 2026.

If you have any questions regarding this notification or the District's 2025 UWMP process, please contact Charly Liscomb, Interim Water Resources Manager, at (831) 883-5937 or by email at bliscomb@mcwd.org.

Sincerely,

Charly Liscomb, EIT
Interim Water Resources Manager

MARINA COAST WATER DISTRICT
& GROUNDWATER SUSTAINABILITY AGENCY

920 2nd Ave., Ste A, Marina, CA 93933
District Office: 831-384-6131 www.mcwd.org

Marina Coast Water District – Notice of Public Hearing for the 2025 Urban Water Management Plan

April 14, 2026
Mr. Stephen Matarazzo
Planning Director
UCMBEST

Dear Mr. Matarazzo,

The Marina Coast Water District (District) is preparing its 2025 Urban Water Management Plan (UWMP) pursuant to the California Water Code (CWC). All urban water suppliers serving more than 3,000 service connections are required to prepare an UWMP every five years. The District's updated UWMP must be adopted and submitted to the California Department of Water Resources by July 1, 2026.

The UWMP is the District's long-term planning document for ensuring water supply reliability. It evaluates projected water demands, supply availability, and water conservation measures, and includes the District's Water Shortage Contingency Plan (WSCP).

In accordance with CWC §10620(d)(3), the District is coordinating the preparation of its plan with other appropriate agencies in the area. In addition, CWC §10642 encourages the active involvement of diverse social, cultural, and economic elements of the population during preparation of both the UWMP and the WSCP.

A draft UWMP will be made available for review in advance of the District's public hearing on June 15, 2026.

If you have any questions regarding this notification or the District's 2025 UWMP process, please contact Charly Liscomb, Interim Water Resources Manager, at (831) 883-5937 or by email at bliscomb@mcwd.org.

Sincerely,

Charly Liscomb, EIT
Interim Water Resources Manager

MARINA COAST WATER DISTRICT
& GROUNDWATER SUSTAINABILITY AGENCY

920 2nd Ave., Ste A, Marina, CA 93933
District Office: 831-384-6131 www.mcwd.org

Marina Coast Water District – Notice of Public Hearing for the 2025 Urban Water Management Plan

April 14, 2026
Ms. Julie Wyrick
Associate Vice President for Facilities Management
California State University, Monterey Bay

Dear Ms. Wyrick,

The Marina Coast Water District (District) is preparing its 2025 Urban Water Management Plan (UWMP) pursuant to the California Water Code (CWC). All urban water suppliers serving more than 3,000 service connections are required to prepare an UWMP every five years. The District's updated UWMP must be adopted and submitted to the California Department of Water Resources by July 1, 2026.

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Sincerely,

Charly Liscomb, EIT
Interim Water Resources Manager

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Marina Coast Water District – Notice of Public Hearing for the 2025 Urban Water Management Plan

April 14, 2026
Mr. Paul Scuito
General Manager
Monterey One Water

Dear Mr. Scuito,

The Marina Coast Water District (District) is preparing its 2025 Urban Water Management Plan (UWMP) pursuant to the California Water Code (CWC). All urban water suppliers serving more than 3,000 service connections are required to prepare an UWMP every five years. The District's updated UWMP must be adopted and submitted to the California Department of Water Resources by July 1, 2026.

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Sincerely,

Charly Liscomb, EIT
Interim Water Resources Manager

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District Office: 831-384-6131 www.mcwd.org

Marina Coast Water District – Notice of Public Hearing for the 2025 Urban Water Management Plan

April 14, 2026
Mr. Ara Azhderian
General Manager
Monterey County Water Resources Agency

Dear Mr. Azhderian,

The Marina Coast Water District (District) is preparing its 2025 Urban Water Management Plan (UWMP) pursuant to the California Water Code (CWC). All urban water suppliers serving more than 3,000 service connections are required to prepare an UWMP every five years. The District's updated UWMP must be adopted and submitted to the California Department of Water Resources by July 1, 2026.

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Sincerely,

Charly Liscomb, EIT
Interim Water Resources Manager

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Marina Coast Water District – Notice of Public Hearing for the 2025 Urban Water Management Plan

April 14, 2026
Mr. Craig Spencer
Director, Housing and Community Development
County of Monterey

Dear Mr. Spencer,

The Marina Coast Water District (District) is preparing its 2025 Urban Water Management Plan (UWMP) pursuant to the California Water Code (CWC). All urban water suppliers serving more than 3,000 service connections are required to prepare an UWMP every five years. The District's updated UWMP must be adopted and submitted to the California Department of Water Resources by July 1, 2026.

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Interim Water Resources Manager

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District Office: 831-384-6131 www.mcwd.org

Marina Coast Water District – Notice of Public Hearing for the 2025 Urban Water Management Plan

April 14, 2026
Mr. Dante Hall
City Manager
City of Monterey

Dear Mr. Hall,

The Marina Coast Water District (District) is preparing its 2025 Urban Water Management Plan (UWMP) pursuant to the California Water Code (CWC). All urban water suppliers serving more than 3,000 service connections are required to prepare an UWMP every five years. The District's updated UWMP must be adopted and submitted to the California Department of Water Resources by July 1, 2026.

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Sincerely,

Charly Liscomb, EIT
Interim Water Resources Manager

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District Office: 831-384-6131 www.mcwd.org

Marina Coast Water District – Notice of Public Hearing for the 2025 Urban Water Management Plan

April 14, 2026
Mr. John Guertin
City Manager
City of Del Rey Oaks

Dear Mr. Guertin,

The Marina Coast Water District (District) is preparing its 2025 Urban Water Management Plan (UWMP) pursuant to the California Water Code (CWC). All urban water suppliers serving more than 3,000 service connections are required to prepare an UWMP every five years. The District's updated UWMP must be adopted and submitted to the California Department of Water Resources by July 1, 2026.

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Charly Liscomb, EIT
Interim Water Resources Manager

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Marina Coast Water District – Notice of Public Hearing for the 2025 Urban Water Management Plan

April 14, 2026
Mr. Greg McDanel
City Manager
City of Seaside

Dear Mr. McDanel,

The Marina Coast Water District (District) is preparing its 2025 Urban Water Management Plan (UWMP) pursuant to the California Water Code (CWC). All urban water suppliers serving more than 3,000 service connections are required to prepare an UWMP every five years. The District's updated UWMP must be adopted and submitted to the California Department of Water Resources by July 1, 2026.

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Charly Liscomb, EIT
Interim Water Resources Manager

MARINA COAST WATER DISTRICT
& GROUNDWATER SUSTAINABILITY AGENCY

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District Office: 831-384-6131 www.mcwd.org

Marina Coast Water District – Notice of Public Hearing for the 2025 Urban Water Management Plan

April 14, 2026
Mr. Layne Long
City Manager
City of Marina

Dear Mr. Long,

The Marina Coast Water District (District) is preparing its 2025 Urban Water Management Plan (UWMP) pursuant to the California Water Code (CWC). All urban water suppliers serving more than 3,000 service connections are required to prepare an UWMP every five years. The District's updated UWMP must be adopted and submitted to the California Department of Water Resources by July 1, 2026.

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Sincerely,

Charly Liscomb, EIT
Interim Water Resources Manager

Appendix C
Water Shortage Contingency Plan

MARINA COAST WATER DISTRICT
WATER SHORTAGE CONTINGENCY PLAN

1.0 INTRODUCTION AND BACKGROUND

This Water Shortage Contingency Plan is developed in compliance with California Water Code Section 10632. Requirements of subsections (a)(1)-(a)(9) and (b) are identified below and are accompanied by the required elements and information.

The Marina Coast Water District (MCWD) obtains its water supply from the Salinas Valley Groundwater Basin (SVGB). The SVGB is not adjudicated and provides water for growers, municipalities and other municipal and industrial uses in the Salinas Valley. Due to cumulative basin pumping, coastal aquifers are experiencing seawater intrusion. MCWD continues to work with Monterey County Water Resources Agency (MCWRA) in developing plans to coordinate and encourage preservation of the SVGB aquifers by all municipal and agricultural users.

In 2005, MCWD interconnected its two service areas, Central Marina and the Ord Community. The interconnection has improved system-wide reliability, making maximum use of available water storage tanks in the Ord Community and allowing both areas to be served by any of the eight District wells. In 2007, the District consolidated the two systems under a single Public Water System Permit.

The District continues its participation as a member of the Water Awareness Committee of Monterey County (WAC). Through the WAC, representatives from several agencies throughout Monterey County work together coordinating conservation and other water awareness efforts including education programs, information booths for special events and public understanding of Monterey County water challenges and opportunities.

California Water Code Section 10632(a)(3) Actions to be undertaken by the urban water supplier to prepare for, and implement during, a catastrophic interruption of water supplies, including but not limited to, a regional power outage, an earthquake or other disaster.

The MCWD developed and adopted an Emergency Response Plan[1] for emergency and disaster occurrences with guidelines and agreements for cooperative efforts with other State and local agencies, as required by the State Water Resources Control Board, Division of Drinking Water (DDW). This Plan contains actions MCWD would initiate in the event of a catastrophic reduction in its water supply.

2.0 STAGES OF ACTION

California Water Code Section 10632(a)(1) Stages of action to be undertaken by the urban water supplier in response to water supply shortages, including up to a 50 percent reduction in water supply and an outline of specific water supply conditions which are applicable to each stage.

[1] Ordinance 44, adopted in 2007

The MCWD has developed a five-stage Water Conservation Plan that includes two voluntary and three mandatory stages. Table 1 generally describes the various stages. Specific water supply conditions applicable to each stage, referred to as "triggering mechanisms" herein, are discussed in the next section.

Table 1: Water Conservation Stages and Demand Reduction Goals

Stage	Water Shortage Level	Demand Reduction Goal	Type Program
Stage 1	0 – 10%	10% reduction	Voluntary Compliance
Stage 2	>10 - 25%	20% reduction	Voluntary Compliance
Stage 3	>25 - 35%	30% reduction	Mandatory Compliance
Stage 4	>35 – 50%	40% reduction	Mandatory Compliance
Stage 5	>50%	50%+ reduction	Mandatory Compliance
Priorities for use of available water, based on California Water Code Chapter 3 are: 1. Health and Safety - interior residential and fire fighting 2. Commercial, Industrial, and Governmental - maintain jobs & economic base 3. Existing Landscaping - especially trees and shrubs 4. New Demand - projects without permits when shortage declared			

California Water Code Section 10632(a)(2) An estimate of the minimum water supply available during each of the next three water years based on the driest three-year historic sequence for the agency's water supply.

This requirement is oriented toward water supply systems that are primarily supplied with surface water and are therefore directly affected by short-term fluctuations in hydrology (i.e., drought conditions). MCWD's current water supply is produced through groundwater pumping from the large SVGB. MCWD supply availability from this basin has not historically varied due to short-term hydrologic conditions. MCWD's wells are located in the Pressure Sub-Area of the SVGB. Within the Pressure Sub-Area, the historic difference between water levels under average and drought conditions is only 10- to 20-feet. The minimum water supply available during the driest three-year sequence is expected to match demands as discussed in the Urban Water Management Plan.

3.0 TRIGGERING MECHANISMS

The SVGB is currently the most important source of water for MCWD. In 2004, the MCWD's groundwater withdrawals of about 4,600 acre-feet accounted for less than one percent (1%) of the estimated basin-wide annual extractions of roughly 550,000 acre-feet. Given this relatively small percentage, MCWD conservation and contingency management activities can play only a small part within the SVGB. The foremost concern in developing appropriate triggers is achieving the maximum practical protection of an adequate long-term water supply of acceptable quality for MCWD customers. To that end, triggering mechanisms should be tied to factors that, directly or indirectly, have the greatest potential effect on the quality and quantity of available groundwater. Two general types of threats could cause MCWD to experience water shortages:

1. Unanticipated catastrophic system failure due to an earthquake, terrorist attack or sudden contamination of water supply, or
2. Chronic system shortage due to seawater intrusion reaching water supply wells in

concentrations such that those wells would have to be removed from service.

In the case of a catastrophic failure, the MCWD would assess the nature and extent of the failure, and the General Manager would identify the appropriate Conservation Stage in accordance with the expected level of water supply shortage. Should shortages be anticipated in amounts beyond fifty percent of normal demands, emergency actions will be taken in accordance with the MCWD's Emergency Response Plan, including enacting emergency ordinances as may be required by MCWD Board of Directors.

The chronic system threat to MCWD's present water supplies is seawater intrusion, which has occurred along the coastal margin of the Salinas Valley in response to historic over-drafting of the basin. Contamination from volatile organic compounds (VOCs) has also affected MCWD wells and could pose additional problems. Although seawater intrusion has not yet affected the deep zone (900-Foot Aquifer) of the SVGB (which is the source of supply for District Wells No.10, 11, 12 and 34), it is possible that continued extractions in the 900-Foot Aquifer could ultimately lead to contamination of these water supplies by seawater. MCWD monitors the rate of seawater intrusion and plans to develop alternative water resources that would be insulated from intrusion. However, it is possible for intrusion to appear in a relatively short time span and reduce overall supplies available. Consequently, the MCWD has structured this Water Shortage Contingency Plan with the primary goal of reducing water demands to allow time for alternative water supply measures, including the drilling of alternate wells in areas unaffected by intrusion and/or contamination. A specific triggering mechanism for various levels of conservation is tied to concentrations of chlorides in MCWD wells and possible concentrations of VOCs, such as trichloroethylene (TCE) which was previously observed at low levels in Well No. 9 (no longer in service) in Central Marina and is occasionally detected at Wells No. 29, 30 and 31 in the Ord Community. Chloride concentration is directly related to the seawater intrusion problem, and both parameters (chloride and VOCs) are related to the overall basin viability as a secure source of water supply.

Chloride concentration is a key indicator of water quality degradation due to seawater intrusion. Tests for statistically significant changes in chloride concentrations assist in the detection of the earliest stages of intrusion and are appropriate indicators of a water supply emergency. In addition, MCWD currently monitors its Ord Community wells for the presence of TCE and other organic compounds, and works with the U.S. Army regarding the Army's groundwater cleanup actions in the Ord Community.

Climate conditions are monitored by the State of California and by Monterey County. Monterey County specifically monitors water levels in the Salinas Valley Groundwater Basin. During prolonged or extended periods of drought, the State of California, acting through the Legislature, the State Water Resources Control Board (SWRCB) and/or the Department of Water Resources may enact rules or legislation directing urban water suppliers to implement demand reduction measures. Similarly, the County of Monterey, acting through the Board of Supervisors and/or the Monterey County Water Resources Agency may enact rules or ordinances directing urban water suppliers to implement demand reduction measures. Such legislation, rules or ordinances shall be considered as triggering mechanisms under this Plan.

TRIGGERING MECHANISMS FOR CONSERVATION STAGES

These Triggering mechanisms shall be interpreted as guidelines and are summarized in Table 2. The General Manager and/or Board of Directors may impose any of the following conservation stages based upon facts and circumstances which may not have been otherwise anticipated in this plan.

Table 2 Conservation Level Triggering Mechanisms

Conservation Stage and Water Shortage Level	Triggering Mechanism
Stage One 0-10% Water Shortage Voluntary Compliance	1) system malfunction resulting in up to 10% shortage 2) increase in chlorides which do not threaten to exceed drinking water quality standard 3) increase in VOC concentrations which do not threaten to exceed standards with blending 4) directive by the State of California or the County of Monterey to implement demand reduction measures in response to drought conditions
Stage Two >10-25% Water Shortage Voluntary Compliance	1) system malfunction resulting in greater than10% shortage 2) increase in chlorides which may threaten to exceed drinking water quality standard 3) increase in VOC concentrations which do not threaten to exceed standards with blending 4) directive by the State of California or the County of Monterey to implement demand reduction measures in response to drought conditions
Stage Three >25-35% Water Shortage Mandatory Compliance	1) system malfunction resulting in greater than 25% shortage 2) increase in chlorides which are expected to exceed drinking water quality standard 3) increase in VOC concentrations which do not threaten to exceed standards with blending or when remaining capacity is reduced by up to 25% 4) directive by the State of California or the County of Monterey to implement demand reduction measures in response to drought conditions
Stage Four >35-50% Water Shortage Mandatory Compliance	1) system malfunction resulting in greater than 35% shortage 2) increase in chlorides which are expected to exceed drinking water quality standard 3) increase in VOC concentrations which do not threaten to exceed standards with blending or when remaining capacity is reduced more than 35% 4) directive by the State of California or the County of Monterey to implement demand reduction measures in response to drought conditions
Stage Five >50% Water Shortage Mandatory Compliance	1) system malfunction resulting in greater than 50% shortage 2) increase in chlorides which are expected to exceed drinking water quality standard

	3) increase in VOC concentrations which do not threaten to exceed standards with blending or when remaining capacity is reduced more than 50% 4) directive by the State of California or the County of Monterey to implement demand reduction measures in response to drought conditions

STAGE 1 Triggers: Up to 10% Water Supply Shortage

Stage 1 conservation measures may be called for as a result of malfunction of all or portions of the water system that reduces supplies by up to 10% on a daily, peak seasonal or annual basis. It also may be called due to prolonged drought conditions that result in legislation, rules or ordinances enacted by the State of California and/or the County of Monterey, and/or the determination that there is a need to focus public attention on water conservation.

Further triggering could also be based on:

1) detection of a statistically significant increase in chloride concentrations but where such concentrations do not threaten to exceed the DDW "Upper Level" secondary (aesthetics) drinking water standard currently set at 500 mg/l at the well(s) in question, or

2) detection of a statistically significant increase in VOC concentrations but where such concentrations do not threaten to exceed the primary drinking water maximum contaminant level (MCL) for each VOC at the well(s) in question and/or blending of this supply with other well supplies cannot maintain a distribution system concentration(s) below these standards.

STAGE 2 Triggers: >10% to 25% Water Supply Shortage

Stage 2 conservation measures may be called for due to malfunction or failure of all or portions of the water system that reduces supplies by greater than 10% on a daily, peak seasonal or annual basis. It also may be called due to prolonged drought conditions that result in legislation, rules or ordinances enacted by the State of California and/or the County of Monterey, and/or the determination that there is a need to focus public attention on water conservation.

Further triggering could also be based on:

1) detection of a statistically significant increase in chloride concentrations where such concentrations may threaten to exceed the DDW "Upper Level" secondary (aesthetics) drinking water standard currently set at 500 mg/l at the well(s) in question, or

2) detection of a statistically significant increase in VOC concentrations, but where such concentrations do not threaten to exceed the primary drinking water MCL for each VOC at the well(s) in question and/or blending of this supply with other well supplies cannot maintain a distribution system concentration(s) below these standards.

STAGE 3 Triggers: >25% to 35% Water Supply Shortage

Stage 3 conservation measures may be called for due to malfunction or failure of all or portions of the water system that reduces supplies by greater than 25% on a daily, peak seasonal or annual basis. It also may be called due to prolonged drought conditions that result in legislation, rules or ordinances enacted by the State of California and/or the County of Monterey.

Further triggering could also be based on:

1) detection of an increase in chloride concentrations where such concentrations are expected to exceed the DDW "Upper Level" secondary (aesthetics) drinking water standard currently set at 500 mg/l at the well(s) in question, or

2) detection of VOC concentrations, but where such concentrations do not threaten to exceed the primary drinking water MCL for each VOC, and/or blending of this supply with other well supplies cannot maintain a distribution system concentration(s) below these standards, and/or when gross reduced well production of up to 25% is necessary to maintain adequate water quality.

STAGE 4 Triggers: >35% to 50% Water Supply Shortage

Stage 4 conservation measures may be called for due to malfunction or failure of all or portions of the water system that reduces supplies by greater than 35% on a daily, peak seasonal or annual basis. It also may be called due to prolonged drought conditions that result in legislation, rules or ordinances enacted by the State of California and/or the County of Monterey.

Further triggering could also be based on:

1) detection of an increase in chloride concentrations where such concentrations are expected to exceed the DDW "Upper Level" secondary (aesthetics) drinking water standard currently set at 500 mg/l at the well(s) in question, or

2) detection of VOC concentrations, but where such concentrations do not threaten to exceed the primary drinking water MCL for each VOC, and/or blending of this supply with other well supplies cannot maintain a distribution system concentration(s) below these standards, and/or gross reduced well production of up to 35% is necessary to maintain adequate water quality.

STAGE 5 Triggers: >50% Water Supply Shortage

Stage 5 conservation measures may be called for due to in malfunction or failure of all or portions of the water system that reduces supplies by 50 % or more on a daily, peak seasonal or annual basis. It also may be called due to prolonged drought conditions that result in legislation, rules or ordinances enacted by the State of California and/or the County of Monterey.

Further triggering could also be based on:

1) detection of an increase in chloride concentrations where such concentrations are expected to exceed the short term primary drinking water standard of 600 mg/l at

the well(s) in question, or

2) detection of VOC concentrations but where such concentrations do not threaten to exceed the primary drinking water MCL for each VOC, and /or blending of this supply with other well supplies cannot maintain a distribution system concentration(s) below these standards, and/or gross reduced well production of over 50% is necessary to maintain adequate water quality.

4.0 CONSERVATION REQUIREMENTS AND APPEAL PROCEDURES

The following are MCWD's conservation requirements by customer type and stage and the appeal procedures. These requirements and procedures are adopted as part of MCWD's Water Shortage Contingency Plan.

STAGE 1 Actions: Voluntary – Minimal Conservation Requirement, 10% Demand Reduction Goal

MCWD shall:

- notify all customers of the water shortage
- mail information to every customer and reasonably available potential water user explaining the importance of significant water use reductions
- provide technical information to customers on ways to improve water use efficiency
- conduct media campaign to remind consumers of the need to save water
- publicize the showerhead, toilet rebate and other efficiency programs
- enforce mandatory restrictions on water waste as provided in MCWD Code, Chapter 3

Stage 1 actions shall apply under any triggering event.

STAGE 2 Actions: Voluntary – Moderate Conservation Requirement, 20% Demand Reduction Goal

In addition to the actions listed in Stage 1, MCWD shall call for voluntary reductions of up to 25% for each connection based on the average use during a base period proposed by the Water Conservation Commission and adopted by MCWD's Board of Directors. Stage 2 actions shall apply under any triggering event.

STAGE 3 Actions: Mandatory – Severe Conservation Requirement, 30% Demand Reduction Goal

In addition to the actions listed in Stage 1 and 2, MCWD shall establish mandatory annual allotments for each connection based on the average use of all connections within that category during a base period proposed by the Water Conservation Commission and adopted by MCWD's Board of Directors. When Stage 3 use reductions become necessary, administration and enforcement of the District's mandatory restrictions on water waste become the major focus of MCWD. If necessary, additional temporary personnel may be hired and special meetings of the Water Conservation Commission and /or Board of Directors may be scheduled.

Stage 3 actions shall be applied based upon triggering event, as noted below.

1. Each water service connection shall receive an allotted quantity of water, typically specified in hundred cubic feet (hcf) units per billing cycle. The Board of Directors may elect not to impose this action in response to a drought if the supply reduction trigger is not met.

2. The Board of Directors may pass an emergency ordinance increasing the usage rate for potable water consumed over a connections allocation, and/or in order to ensure stable revenues for operation and maintenance of MCWD. The Board of Directors may elect not to impose this action if water service allocations are not imposed.

3. As individual customers are notified of allotments, it is expected that many requests for special consideration will be received. These petitions must be processed rapidly, efficiently and fairly. Every application for waiver must be heard, evaluated and acted upon by the Water Conservation Commission as rapidly as possible. Every action by the Water Conservation Commission shall be referred to MCWD's Board of Directors for consideration. The procedures for appeal are defined, below. Appeals shall be considered under any Stage in which mandatory restrictions or allocations are imposed.

4. No building permits will be issued or meters installed for new accounts that had not received building permits before the "Severe Shortage" was declared. The Board of Directors may elect not to impose this action in response to a drought if the supply reduction trigger is not met.

5. The following water use restrictions shall be imposed.

Stage	Type Use	Restriction	Applies
3	Existing, Irrigated Landscapes Commercial Complexes, Residential Units, Public Parks, and Athletic Fields	Landscape watering with recycled water or other non-potable water sources may continue without restriction. Landscape watering with potable water shall be subject to the following limits: (1) Landscape watering using sprinklers or automated irrigation systems is permitted only two days per week, Wednesdays and Saturdays, before 10:00 a.m. or after 5:00 p.m. The Board of Directors may choose to assign different watering days to specific areas if daily system-wide usage limits are required. (2) With on-site supervision, including supervision by a professional gardener/landscaper, landscapes may be manually watered with drip irrigation, a soaker hose, a handheld hose with a positive action shut-off nozzle, or a watering can/bucket at any time, on any day, not more than 2 days per week. (3) Irrigation of ornamental turf in roadway medians and parkway strips is prohibited. Plantings of trees, shrubs, ornamental grasses, and ground covers with low water demand, watered by drip irrigation, are encouraged.	During both Water Shortage and Drought Conditions
3	New, Irrigated Landscapes Commercial Complexes, Residential units, Public Parks, and Athletic Fields	Landscape watering with recycled water or other non-potable water sources may continue without restriction. Landscape watering with potable water shall be subject to the following limits: (1) Landscape watering is permitted three (3) days a week to maintain adequate growth on newly installed landscapes, for a period generally up to five (5) weeks. Watering days for new landscapes are Monday, Wednesday, and Saturday. Property owners must notify the District of the address where new landscape is installed and the date of installation. (2) Following the initial establishment period, landscape watering using sprinklers or automated irrigation systems is permitted only on the days associated with the current conservation stage in effect.	During both Water Shortage and Drought Conditions

Stage	Type Use	Restriction	Applies
3	Golf Courses	Landscape watering with recycled water or other non-potable water sources may continue without restriction. Landscape watering with potable water shall be subject to the following limits: (1) All landscape out-of-play areas such as may be found around a clubhouse or entryway shall follow the general landscape irrigation restrictions. (2) All in-play areas may be irrigated during the standard watering hours (before 10:00 a.m. or after 5:00 p.m.). (3) Course operators shall implement a plan to achieve a twenty (20) percent reduction in monthly irrigation water use.	During both Water Shortage and Drought Conditions
3	Hotels, motels and bed and breakfasts	Hotels, motels and B&B's must offer and clearly notify guests of a "limited linen/towel exchange" program.	During both Water Shortage and Drought Conditions
3	Swimming pools, hot tubs	Initially filling new and existing swimming pools is prohibited. Draining and refilling existing swimming pools is permitted only if repairing a pool leak or repairing, maintaining or replacing a pool component that has become hazardous. All pools and tubs shall be covered when not in use to reduce evaporation.	During both Water Shortage and Drought Conditions
3	Decorative fountains, ponds and waterfalls over 20 gallons in size	Initially filling new and existing decorative fountains, ponds and waterfalls is prohibited. Adding water to make up for evaporative loss is allowed only for ponds and fountains that serve as aquarium tanks for fish or aquatic animals.	During both Water Shortage and Drought Conditions
3	Industrial and Commercial	Reduction of water use by any means is encouraged. Compliance with mandatory demand reduction measures is required for outdoor water uses including landscape irrigation, swimming pools, and vehicle washing.	During both Water Shortage and Drought Conditions
3	Vehicle and Equipment Washing	Washing of vehicles and mobile equipment (e.g., washing vehicle at a residence) is permitted on any day, any time of the day, with the use of a positive action shut-off nozzle. All customers are encouraged to only wash those vehicles as is necessary for health and safety utilizing commercial car wash facilities.	During both Water Shortage and Drought Conditions

Stage	Type Use	Restriction	Applies
3	Heavy Construction	The use of potable water for dust control shall be reduced to the greatest extent possible.	During both Water Shortage and Drought Conditions

STAGE 4 Actions: Mandatory – Critical Conservation Requirement, 40% Demand Reduction Goal

In addition to the actions listed in the previous stages, MCWD shall establish allotments based upon a 35% -50% curtailment of water use. All new and previous appeals for waiver shall be evaluated by field audit and shall be reheard by the Water Conservation Commission, if necessary, upon recommendation of MCWD staff. Water rates may be increased by the Board of Directors.

The following water use restrictions shall be imposed.

Stage	Type Use	Restriction	Applies
4	Existing, Irrigated Landscapes Commercial Complexes, Residential units, Public Parks, and Athletic Fields	Landscape watering with recycled water or other non-potable water sources may continue without restriction. Landscape watering with potable water shall be subject to the following limits: (1) Landscape watering using sprinklers or automated irrigation systems is permitted only one day per week, on Wednesdays before 10:00 a.m. or after 5:00 p.m. The Board of Directors may choose to assign different watering days to specific areas if daily system-wide usage limits are required. (2) With on-site supervision, including supervision by a professional gardener/landscaper, landscapes may be manually watered with drip irrigation, a soaker hose, a handheld hose with a positive action shut-off nozzle, or a watering can/bucket at any time, on any day, not more than 1 day per week. (3) Irrigation of ornamental turf in roadway medians and parkway strips is prohibited. Plantings of trees, shrubs, ornamental grasses, and ground covers with low water demand, watered by drip irrigation, are encouraged.	During both Water Shortage and Drought Conditions
4	New, Irrigated Landscapes	Landscape watering with recycled or other non-potable water sources water may continue without restriction.	During both Water

Stage	Type Use	Restriction	Applies
	Commercial Complexes, Residential units, Public Parks, and Athletic Fields	The installation of new landscapes irrigated with potable water is discouraged. Landscape watering with potable water shall be subject to the following limits: (1) Landscape watering is permitted three (3) days a week to maintain adequate growth on newly installed landscapes, for a period generally up to five (5) weeks. Watering days for new landscapes are Monday, Wednesday, and Saturday. Property owners must notify the District of the address where new landscape is installed and the date of installation. (2) Following the initial establishment period, landscape watering using sprinklers or automated irrigation systems is permitted only on the days associated with the current conservation stage in effect.	Shortage and Drought Conditions
4	Golf Courses	Landscape watering with recycled water or other non-potable water sources may continue without restriction. Landscape watering with potable water shall be subject to the following limits: (1) All landscape out-of-play areas such as may be found around a clubhouse or entryway shall follow the general landscape irrigation restrictions. (2) All in-play areas may be irrigated during the standard watering hours (before 10:00 a.m. or after 5:00 p.m.). Course operators shall implement a plan to achieve a thirty (30) percent reduction in monthly irrigation water use.	During both Water Shortage and Drought Conditions
4	Hotels, motels and bed and breakfasts	Hotels, motels and B&B's must limit linen/towel changes to once every two (2) nights or for the entire stay, whichever is shorter, except for health and safety.	During both Water Shortage and Drought Conditions
4	Swimming pools, hot tubs	Initially filling new and existing swimming pools is prohibited. Draining and refilling existing swimming pools is permitted only if repairing a pool leak or repairing, maintaining or replacing a pool component that has become hazardous. All pools and tubs shall be covered when not in use to reduce evaporation.	During both Water Shortage and Drought Conditions

Stage	Type Use	Restriction	Applies
4	Decorative fountains, ponds and waterfalls over 20 gallons in size	Filling or refilling new and existing decorative fountains, ponds and waterfalls is prohibited. Adding water to make up for evaporative loss is allowed only for ponds and fountains that serve as aquarium tanks for fish or aquatic animals. Owners are encouraged to move fish and aquatic animals to indoor tanks less subject to evaporation.	During both Water Shortage and Drought Conditions
4	Vehicle and Equipment Washing	Washing of vehicles and mobile equipment (e.g., washing vehicle at a residence) is permitted on any day, any time of the day, with the use of a positive action shut-off nozzle. All customers are encouraged to only wash those vehicles as is necessary for health and safety utilizing commercial car wash facilities.	During both Water Shortage and Drought Conditions
4	Industrial and commercial	Reduction of water use by any means is encouraged. The Board of Directors may establish mandatory use reduction targets, if needed. Compliance with mandatory demand reduction measures is required for outdoor water uses including landscape irrigation, swimming pools, and vehicle washing.	During both Water Shortage and Drought Conditions
4	Heavy Construction	The use of potable water for dust control shall be reduced to the greatest extent possible.	During both Water Shortage and Drought Conditions

STAGE 5 Actions: Mandatory – Emergency Conservation Requirement, 50% Demand Reduction Goal

Appropriate 50% water shortage allotments shall be calculated and noticed to customers. Appropriate administration and enforcement of this stringent program shall be the highest priority of MCWD activity. All resources of MCWD will be directed toward improvement and increase of water supply to the system. Water rates may be further increased by the Board of Directors.

The following water use restrictions shall be imposed:

Stage	Type Use	Restriction	Applies
5	Existing, Irrigated Landscapes Commercial Complexes, Residential units, Public Parks, and Athletic Fields	Landscape watering with recycled water or other non-potable water sources may continue without restriction. Landscape watering with potable water is prohibited.	During both Water Shortage and Drought Conditions
5	New, Irrigated Landscapes Commercial Complexes, Residential units, Public Parks, and Athletic Fields	Landscape watering with recycled water or other non-potable water sources may continue without restriction. The installation of new landscapes irrigated with potable water is prohibited during Conservation Stage 5. New landscapes installed prior to declaration of Conservation Stage 5 may water two (2) days a week to maintain adequate growth on newly installed landscapes, for the remainder of the initial five (5) week establishment period. Watering days for new landscapes are Wednesday and Saturday. Property owners must notify the District of the address where new landscape is installed and the date of installation	During both Water Shortage and Drought Conditions
5	Golf Courses	Landscape watering with recycled water or other non-potable water sources may continue without restriction. Landscape watering with potable water shall be subject to the following limits: (3) All landscape out-of-play areas such as may be found around a clubhouse or entryway shall follow the general landscape irrigation restrictions. (4) All in-play areas may be irrigated during the standard watering hours (before 10:00 a.m. or after 5:00 p.m.). Course operators shall implement a plan to achieve a forty (40) percent reduction in monthly irrigation water use.	During both Water Shortage and Drought Conditions
5	Hotels, motels and bed and breakfasts	Hotels, motels and B&B's must limit linen/towel changes to once every three (3) nights or for the entire stay, whichever is shorter, except for health and safety.	During both Water Shortage and Drought Conditions

Stage	Type Use	Restriction	Applies
5	Swimming pools, hot tubs	Filling new swimming pools and/or draining and refilling existing swimming pools is prohibited. All pools and tubs shall be covered when not in use to reduce evaporation. Contact District conservation staff if an existing swimming pool must be repaired and refilled during Conservation Stage 5.	During both Water Shortage and Drought Conditions
5	Decorative fountains, ponds and waterfalls over 20 gallons in size	Filling or refilling new and existing decorative fountains, ponds and waterfalls is prohibited. Adding water to make up for evaporative loss is allowed only for ponds and fountains that serve as aquarium tanks for fish or aquatic animals. Owners are encouraged to move fish and aquatic animals to indoor tanks less subject to evaporation.	During both Water Shortage and Drought Conditions
5	Vehicle and Equipment Washing	Washing of vehicles and mobile equipment is prohibited. Only commercial facilities with water recycling systems may be used.	During both Water Shortage and Drought
5	Industrial and commercial	Reduction of water use by any means is encouraged. The Board of Directors may establish mandatory use reduction targets, if needed. Compliance with mandatory demand reduction measures is required for outdoor water uses including landscape irrigation, swimming pools, and vehicle washing.	During both Water Shortage and Drought Conditions
5	Heavy Construction	The use of potable water for dust control shall be reduced to the greatest extent possible. The District may establish mandatory construction water budgets, if needed.	During both Water Shortage and Drought Conditions

Appeals Procedure

1. Any person who wishes to appeal a customer classification or allotment shall do so in writing by using the forms provided by MCWD.

2. Appeals will be reviewed by the District staff. Site visits may be scheduled if required.

3. A condition of granting an appeal shall be that all plumbing fixtures or irrigation systems be replaced or modified for maximum water conservation.

4. Examples of appeals that may be considered are as follows:

a. Substantial medical requirements.

b. Commercial/Industrial/Institutional accounts where any additional water supply reductions will result in unemployment or inappropriate hardship, after confirmation by the MCWD staff that the account has instituted all applicable water efficiency improvements.

5. In the event an appeal is requested for irrigation of trees or vegetation, MCWD staff may use the services of a qualified consultant in determining the validity of the request. Costs for such consulting services shall be paid by the party or parties making the request.

6. District staff shall refer all appeals to the Water Conservation Commission. The Water Conservation Commission may refer appeals to MCWD's Board of Directors.

7. If the Water Conservation Commission and the applicant are unable to reach accord, then the appeal shall be heard by the MCWD Board of Directors, who will make the final determination.

8. All appeals shall be reported monthly to the Board as a part of the Water Supply Report.

5.0 MANDATORY PROHIBITIONS ON WATER USE

California Water Code Section 10632(a)(4) Additional, mandatory prohibitions against specific water use practices during water shortages, including, but not limited to, prohibiting the use of potable water for street cleaning. Section 10632(b) Commencing with the urban water management plan update due December 31, 2015, for purposes of developing the water shortage contingency analysis pursuant to subdivision (a), the urban water supplier shall analyze and define water features that are artificially supplied with water, including ponds, lakes, waterfalls, and fountains, separately from swimming pools and spas, as defined in subdivision (a) of Section 115921 of the Health and Safety Code. Section 10632(a)(5) Consumption reduction methods in the most restrictive stages. Each urban water supplier may use any type of consumption reduction methods in its water shortage contingency analysis that would reduce water use, are appropriate for its area, and have the ability to achieve a water use reduction consistent with up to a 50 percent reduction in water supply.

The MCWD adopted a "Water Waste/Water Conservation" Ordinance (Ordinance No. 20) in April of 1990, which prohibits water waste and promotes water conservation. Since the initial adoption, revisions were adopted by the Board of Directors on April 14, 1992 and October 4, 1993. The ordinance has most recently been revised on and now appears as Chapter 3.36 of MCWD Code. Section 3.36.030, Mandatory Restrictions on Water Waste, details the applicable prohibitions of use. These prohibitions are in force at all times. Additional water use reduction methods available to water users or MCWD to adopt in order to comply with use reductions during the more restrictive stages of water shortages (Stages 4 and 5) include, but are not limited to, the following:

a) elimination of turf irrigation with potable supplies;

b) restriction of landscape watering to shrubs and trees by hand or drip irrigation only;

c) elimination of vehicle washing except in car washes that have water recirculation

systems;

d) prohibition on filling or topping off of swimming pools where damage to pumping equipment will not result;

e) elimination of the issuance of construction meters;

f) shut-off of dedicated landscape irrigation meters; and

g) moratorium on provision of new supply meters.

If water use reductions called for in Stages 3-5 are not achieved, the MCWD may amend this Water Shortage Contingency Plan to make any of the above available conservation tactics mandatory.

6.0 PENALTIES OR CHARGES FOR EXCESSIVE USE

California Water Code Section 10632(a)(6) Penalties or charges for excessive use.

Section 3.36.050 of MCWD Code provides for a system of violations and notices. Violation of provisions of this Water Shortage Contingency Plan shall be enforced under Section 3.36.050 of MCWD Code.

7.0 REVENUE AND EXPENDITURE IMPACTS

California Water Code Section 10632(a)(7) – An analysis of the impacts of each of the actions and conditions described in subdivisions (a)(1) to (a)(6), inclusive, on the revenues and expenditures of the urban water supplier, and proposed measures to overcome those impacts, such as the development of reserves and rate adjustments.

Enforcement of the Water Shortage Contingency Plan is assumed to be covered by enhanced revenues from application of excess use charges and penalties. MCWD reserves may be used temporarily should revenues remain below expectations. MCWD's rate structure is based upon adopted rate ranges and allows for modification of rates on short notice within those ranges. MCWD retains the ability to modify rates to meet all legitimate MCWD needs. Revenue impacts from water sales losses are estimated as follows, based upon Tier 2 rates of $2.79/hcf in Central Marina and $3.27/hcf in the Ord Community, and recognizing approximately 10% of MCWD's customers are not metered as of 2013.

Table 3: Potential Revenue Impacts of Implementation of WSCP

	Stage 1	Stage 2	Stage 3	Stage 4	Stage 5
Assumed Reduction	10 percent	20 percent	30 percent	40 percent	50 percent
Water Sales Loss	$579,804	$1,159,607	$1,739,411	$2,319,215	$2,899,018
Revenue Source: Pumping savings at $135/af	$57,807	$115,614	$173,421	$231,228	$289,035
Net Revenue Reduction	$521,997	$1,043,993	$1,565,990	$2,087,987	$2,609,983

Percent of Total Annual Water System Revenue	6%	12%	18%	24%	30%

* Table based on FY2012-13 water sales, $8,839,268 for 4,282 acre-feet

8.0 WATER SHORTAGE CONTINGENCY PLAN IMPLEMENTATION

California Water Code Section 10632 (a)(8) A draft water shortage contingency resolution or ordinance.

MCWD Board of Directors adopted the Water Shortage Contingency Plan in Resolution No. 2014-__, which enables implementation of the Plan upon advice of staff based in part on the triggering mechanisms discussed herein. The resolution is attached as Appendix A to this Plan.

Chapter 3.36.035 of the MCWD Code of Ordinances[2] provides for enforcement of the current Water Shortage Contingency Plan. Chapter 2.09 of the Code of Ordinances[3] contains a sample ordinance which may be adopted in the event of a local emergency, including a water shortage.

9.0 WATER USE MONITORING PROCEDURES

California Water Code Section 10632* (a)(9) *A mechanism for determining actual reductions in water use pursuant to the urban water shortage contingency plan.

Normal Monitoring Procedure:

In normal water supply conditions, production figures are recorded daily by MCWD O&M personnel. Totals are reported monthly to the O&M Superintendent. Production figures are reported in the Annual Report to the Drinking Water Program, which is submitted to the SWRCB Division of Drinking Water each year.

Stage 1 and 2 Water Shortages

During a Stage 1 or 2 water shortage, daily production figures will be reported to the O&M Superintendent. The O&M Superintendent compares the weekly production to the target weekly production to verify that the reduction goal is being met. Monthly reports are forwarded to the District Engineer and the General Manager, the Water Conservation Commission and the MCWD Board of Directors. If reduction goals are not met, the General Manager may notify the Board of Directors so that corrective action can be taken.

Stage 3 and 4 Water Shortages

During a Stage 3 or 4 water shortage, the procedure listed above will be followed, with the addition of a daily production report to the General Manager and weekly reports to the Water Conservation Commission and Board of Directors. Special meetings may be called for administration of the

[2] Ordinance 41, adopted in 2005
[3] Ordinance 44, adopted in 2007

Water Shortage Contingency Plan.

Stage 5 Water Shortage

During a Stage 5 shortage, production figures will be reported to the O&M Superintendent hourly, and to the General Manager daily. Reports will also be provided to MCWD's Board of Directors, the Monterey County Office of Emergency Services, and land use jurisdictions located within MCWD's service territory.