

Monterey Peninsula Water Supply Augmentation Projects 2024 - 2027

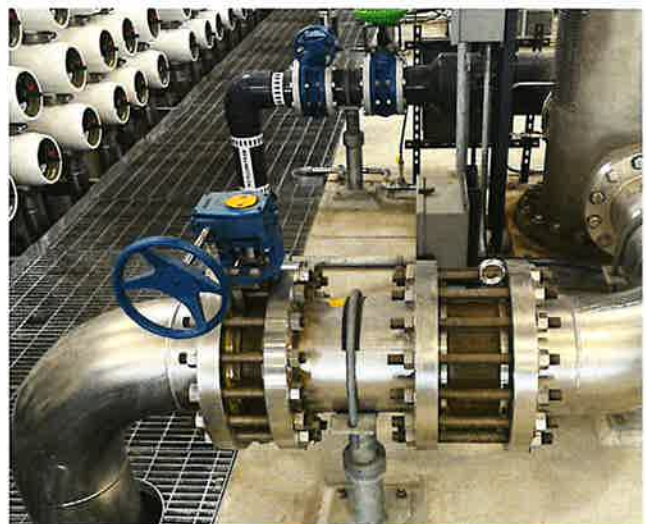
Monterey Peninsula Water Management District (District) secured \$20 million of funding authorization for water and wastewater projects on the Monterey Peninsula under section 8375(a)(292) of Public Law 117-263 which included the Water Resources Development Act (WRDA) of 2022. Such projects qualify for Environmental Infrastructure assistance from the U.S. Army Corps of Engineers under Section 219 of the 1992 WRDA.

The District has identified a portfolio of projects requiring either design assistance or construction assistance to augment water supply and improve water security that fall into three categories:

- **Increased potable supply** through stormwater and wastewater diversion and recycling
- **Improved water security** through system interconnection and back-up, and
- **Climate resiliency projects** to protect against drought, flooding, or sea-level rise

Monterey Peninsula Stormwater Diversion and Recycling Program

Water recycling and recharging the region's sole ground-water basin are critical for our water supply security. Water recycling via the Pure Water Monterey indirect potable reuse project will provide 50-60% of the region's potable water supply beginning in 2025; it currently provides over 1/3 of the region's water supply. There are multiple locations throughout the region where runoff discharges to the Monterey Bay National Marine Sanctuary during wet and dry times. Diverting the untreated runoff to the sanitary sewer provides source water for water recycling. A suite of small diversion and recharge projects have been selected for development to augment existing sources of supply.



Oliver Street Stormwater Diversion

The project would divert flows from Monterey's downtown tunnel and Oliver Street storm drain gravity pipe to the sanitary sewer for recycling instead of discharging it untreated into Monterey Bay National Marine Sanctuary. A flow diversion structure will redirect dry weather flows from a 60-inch storm drain system on Oliver Street to a 24-inch sanitary sewer main behind the Custom House Museum via a new pipe. The new pipe will be located in the right-of-way along Oliver Street and convey flows northeast to connect with the sanitary sewer main by gravity. The project would remove dry weather flows that are currently discharged untreated to Monterey Bay, thereby partially restoring natural drainage patterns and treating any urban pollutants associated with the diverted flows. The project is estimated to achieve from 10 to 20 acre-feet per year (AFY) of water supply from the approximately 150-acre tributary drainage area.



Cost: Seeking additional construction assistance of \$300,000. To date, project has secured \$725,000 (District grant of \$25,000; State Department of Water Resources grant of \$500,000; \$200,000 local funding)

Feasibility and Design of Other Diversion and Recycling Projects



City of Monterey Coast Guard Pier Diversion: Runoff from the Coast Guard Pier will be diverted to the water reclamation plant for recycling. Storage may be required as part of the project.

City of Monterey San Carlos Beach Diversion Storage: Underground storage could be constructed below the lawns next to San Carlos beach. The Reeside wastewater pump station is adjacent to the lawns and could convey stored water to the water reclamation plant for recycling.

City of Seaside Laguna Grande Wells' Diversion: The City of Seaside owns two wells, Laguna Grande Park and one near Chili's Grill. The Chili's well is artesian and was capped due to high sulfur. The Laguna Grande well is used for irrigation. Neither well provides potable water. The well water could be pumped to the sanitary sewer in the summer when source water is most needed for recycling. Wells could be pumped at night when sewer flows and power cost is lower.

City of Seaside Stormwater Capture near Echo Avenue in Seaside: Urban surface water runoff would be diverted to underground infiltration chambers. Diversion to underground storage. Water would infiltrate into the groundwater basin.

City of Del Rey Oaks Stormwater Capture: The proposed Del Rey Oaks Urban Diversion Project consists of two sites: Natural springs located on Rosita Road and Calle de Oaks that have been observed to maintain continuous flow throughout the year, including during recent drought years. Rosita Road flow currently drains from a natural spring, down the curb to a pipe and into Canyon Del Rey Creek. Similarly, the Calle de Oaks spring is diverted through a pipe and deposited into the municipal separate storm sewer system where it is directed to Canyon Del Rey Creek. A sanitary sewer line runs through the center of both Rosita Road and Calle de Oaks. The project envisions depositing the flow directly into the sanitary sewer line to be fed into the Pure Water Monterey project during the dry season and between storms throughout the wet season.

Naval Postgraduate School Del Monte Lake Stormwater: Stormwater flows from the Del Monte Lake to the ocean. Prior to storms, the top 4 feet of the lake could be pumped to the Pure Water Monterey project. With a surface area of 11 acres, approximately 44 AF could be diverted. Diversion could be available November to March when the Monterey Pines Golf Club does not require water from Del Monte Lake. There have been no observed migratory fish nor aquatic species. There is an existing wastewater pump station in the proximity.

Cost: Seeking design assistance of \$350,000.

Carmel Highlands Wastewater Diversion and Recycling Program

The project would convert 55 parcels currently on septic systems to the Carmel Area Wastewater District (CAWD) centralized sewer system which recycles about 90% of the water it receives for reuse. The proposed sanitary sewer collection system will consist of three (3) separate gravity sewer mains totaling about 4,400 ft in length. A new sanitary sewer pumping station is proposed to be constructed to collect the sewage and pump it into an existing conveyance pipeline that goes to the CAWD treatment facilities. The pumping station will be entirely underground, except for the electrical service facilities and the pumping station control panel. The pumping station will have a wet well to temporarily store the raw sewage from the collection system in the times between pump operations. The impacts of failing septic systems can include illness, environmental degradation, and economic loss in communities that rely on healthy waters for industry, business, and tourism. The centralized wastewater plant recycles its wastewater for irrigation use, freeing up potable water supply for human consumption. Water recycling reduces wastewater discharges and pollution to Areas of Special Biological Significance located adjacent to the region. Additionally, sewage is a relatively constant source of water for recycling which increases the security of the recycled water supply.



Cost: Seeking design and construction assistance of \$4 million.

Castroville Pipeline Water Security Project

The project proposes to construct a water supply pipeline between the Marina Coast Water District (MCWD) and Castroville Community Services District (CCSD) systems for use in emergencies. This project would enable MCWD to wheel CCSD water from a more sustainable location using CCSD existing Zone 2 water rights. CCSD has a small water system with approximately 2,400 service connections and relies solely on groundwater to provide its potable water. CCSD is primarily a Disadvantaged

Community facing a severe threat to their water supply due to diminishing well water quality.

Protecting the water supply for these residents directly aligns with the mission of the US EPA and specifically the objectives of the FY 2022-2026 US EPA Strategic Plan related to Goal 5: Ensure Clean and Safe Water for All Community Members. The CCSD has four domestic water production wells that are susceptible to salt-



water intrusion, three of which are currently impacted. The unimpacted well produces water that is too hot to deliver to customers, and it must be blended with water from the impacted wells to reduce the temperature. The emergency intertie is of paramount importance to increasing the water resiliency for the CCSD and the surrounding community.

The entire CCSD has a staff of 6 to provide essential services to its customers. In comparison, MCWD has approximately 9,700 service connections with a staff of approximately 50 to provide similar services. Having the emergency intertie would be beneficial for both agencies' given the size of the agencies and the proximity of the service areas. MCWD's commitment to CCSD as a regional partner provides a collaborative framework and commitment to solving long-standing water supply issues in our regional community.

Cost: Seeking construction assistance of \$7 million. MCWD's board approved \$50,000 for an initial design for the intertie, which includes determining the ideal route.

Seaside Municipal Well Water Security Project

To ensure an adequate supply of clean, affordable, and reliable water for residents, the Seaside Municipal Water System (SMWS) must design and construct a back-up potable water well to their sole water supply well. The SMWS serves 2,947 residents and has one active potable water well. The well is over 20 years old and experiences reliability problems. The State Division of Drinking Water requires that any community water system using only groundwater shall have a minimum of two approved sources. SMWS does not have a second drinking water well. The City has contracted with a consulting firm to locate and design a new potable water well. An assessment of possible well locations was performed. A preferred location of the well has not yet been confirmed, and design of the new well needs to be completed. A test well will need to be drilled in advance of proceeding with ordering and installation of the well pump. The well, appurtenances, wellhead treatment, and connection to the distribution

system is required. Historically, when SMWS had a problem with its potable well, it obtained water from California American Water (Cal-Am) through an emergency intertie. In May 2023, Cal-Am indicated that it cannot guarantee water to SMWS because Cal-Am may not have capacity and its first obligation is to provide water to its own customers. SMWS has no reliable backup water supply for its customers.

Cost: Seeking design and construction assistance of \$4 million.

ASR Well #5 Climate Resiliency Project

The Aquifer Storage and Recovery (ASR) project diverts water from the Carmel River when certain permit criteria are met. The water is conveyed to the Seaside Groundwater Basin (SGB) for storage and produced by Cal-Am wells for customer use. The stored ASR water can be accumulated year-to-year for use in droughts. The ASR project is the least expensive potable-water project on the Monterey Peninsula. ASR project performance is presently constrained to approximately 13 acre-feet per day (AFD). Under this proposal, a 5th ASR well (ASR-5) could be constructed at the



Santa Margarita site, for a total of 3 ASR wells located at that site. The injection capacity of all 3 ASR wells could be approximately 20 AFD. The conveyance from the Carmel River to the ASR injection wells is presently constrained to approximately 17-18 AFD. Thus, the proposed ASR-5 well at the Santa Magarita site would enhance ASR project performance by as many as 5 AFD or 900 AFY in wet years, which is just under 10% of the total annual water consumed in the service area.

Cost: Seeking design and construction assistance of \$6 million.

Coral Street Pump Station Climate Resiliency Project

The Coral Street Pump Station is a subsurface wastewater pump station located less than 40 feet from the shoreline of the Pacific Ocean. As a result of its location, the station is subject to climate change effects; including sea level rise, coastal erosion, and storm surges. The Coral Street Pump Station Climate Resiliency Project will waterproof the facilities by relocating key electrical components to a new aboveground location to be determined in collaboration with the City of Pacific Grove. Moving the electrical equipment provides defense against an equipment failure making the station inoperable spilling sewage into the ocean's Monterey Bay National Marine Sanctuary and Pacific Grove Area of Special Biological Significance. In October 2018, the City of Pacific Grove and Monterey One Water met to begin to formalize a land transfer agreement to make the relocation feasible.

Cost: Seeking design and construction assistance of \$4 million.

Salinas Valley Winter Recycled Water Production Efficiency Project

Our changing climate is an imminent and unavoidable threat. Specifically for Monterey County, located along California's central coast, drought exacerbates the region's complex water challenges and industries must work together to identify and implement solutions. Monterey County is isolated from state and federal water projects and must rely solely on its limited local water resources (e.g. groundwater and local rainfall). Despite limited water supplies, the fertile soils of Monterey County have established the region as the "Salad Bowl of the World." Supplying fresh produce throughout the United States and the world requires significant water supplies. In the northern part of the County, which neighbors the Pacific Ocean, an extended water supply-to-demand imbalance has led to declining groundwater levels and seawater intrusion.

In response, Monterey One Water (M1W) and the Monterey County Water Resources Agency developed a non-potable recycled water project to provide a supplemental water source for 12,000 acres of farmland in the seawater intruded area of Castroville. The project came online in 1998 and has produced more than 115 billion gallons of recycled water for the irrigation of organic and conventional food crops and subsequently has decreased groundwater pumping in equal measure.



To support this effort, M1W proposes to design modifications to its non-potable water recycling facility to increase production. The existing facility, known as the Salinas Valley Reclamation Project, can only operate within the range of 5 to 29.6 million gallons per day (mgd). In winter months, when off-peak irrigation demands fall below the minimum facility capacity of 5 mgd, the facility cannot operate and growers must rely on groundwater. Proposed modifications to the facility aim to meet grower demands as low as 0.5 mgd and produce an additional 1,100 acre feet of recycled water per year. The current annual average for non-potable recycled water production is 12,300 acre feet per year. The proposed project will design facility modifications to increase recycled water production that will directly offset groundwater pumping in the project area.

Cost: Seeking design assistance of \$1.2 million, approximately 80% of estimated design and regulatory expense.



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