



Pure Water Monterey
A Groundwater Replenishment Project

An Environmentally Sound Solution for Monterey Peninsula's Water Crisis



State Water Mandates Threaten Monterey Peninsula Water Supply

The Monterey Peninsula is a scenic coastal region located 125 miles south of San Francisco. Its population is about 105,000, but its local economy serves almost 9 million visitors a year. That economy, however, and the livelihoods of many of its residents, is threatened by a chronic and ongoing water shortage that is only exacerbated by the current drought.

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Through a combination of State Water Resources Control Board (SWRCB) actions and legal decisions, the local water supply is facing an imposed reduction of almost 70%. Clearly, the Peninsula is in a water crisis.

But now, Monterey Peninsula water officials and community leaders have embarked on a path to replace restricted surface and groundwater diversions with a portfolio of new projects including a desalination facility, a water recycling facility (Pure Water Monterey), and Aquifer Storage and Recovery (ASR). The desalination facility is expected to be owned and operated by California American Water Company (Cal-Am), the investor-owned water retailer. Pure Water Monterey is an advanced water recycling project, jointly developed by two public

agencies – Monterey Peninsula Water Management District (MPWMD) and the Monterey Regional Water Pollution Control Agency (MRWPCA.)

Pure Water Monterey is a multi-benefit, integrated, regional solution that will provide a water recycling model for other regions in California.

State and Federal Funding Needed to Solve Water Crisis

Local ratepayers and jurisdiction are caught in a dilemma: The projects needed to solve their water crisis will cost more than \$300 million. Yet, the water rates on the Monterey Peninsula are already among the highest in the State.

The SWRCB's Order 95-10 and the subsequent Cease and Desist Order are State actions which require an expensive local solution for ratepayers. These same ratepayers have dutifully voted in favor of water bond issues – Proposition 50, Proposition 84, and Proposition 1 – yet they have received almost zero benefit from those bond measures. It is imperative that the State provide loan and grant assistance that will enable the Monterey Peninsula to solve its water crisis.

Order 95-10 and the Cease and Desist Order were driven primarily by a desire to mitigate environmental damage and protect threatened species. Arguably, protecting public trust assets is a benefit that extends beyond the local borders of the Monterey Peninsula. The beauty and bounty of the Monterey Peninsula attracts 9 million visitors each year from throughout the state and nation, hence there is broad interest in ensuring continued allocation of scarce resources such as water.

Finally protecting the jobs and incomes that would be lost in the event of a "regulatory drought" is more than just a Monterey Peninsula issue. The loss of tax revenues to the local jurisdictions would cripple public safety services and the impact on the local economy would have a ripple effect on the entire region. Impacts would be felt in the Salinas Valley where many Monterey Peninsula employees live and to other commercial and institutional areas such as the \$1.7 billion educational sector including the federal Defense Language Institute, Naval Postgraduate School, California State University Monterey Bay, and others.



How the Monterey Peninsula's Water Crisis Happened

The Monterey Peninsula faces a serious water crisis that is the result of a series of State and Federal actions to severely limit the use of existing surface and groundwater. The Monterey Peninsula region currently uses 11,000 to 13,000 acre-feet of water annually, which is a significant reduction from its historical usage (in 1988 it used 17,000 acre-feet). More than 75% of its water supply comes from the Carmel River, 20% from the Seaside Groundwater Basin, and less than 5% from other sources (desalination and conjunctive use.) Under the current State order, those sources will be cut by more than half.

In the early 1990's the State Water Resources Control Board (SWRCB),

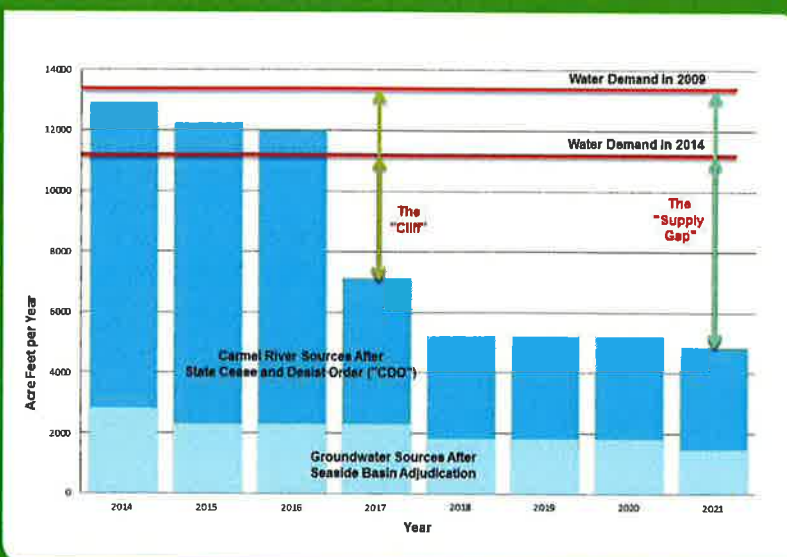
responding to challenges from several public interest groups citing environmental damage to riparian habitat, determined that the California American Water Company's (Cal-Am) withdrawals from the Carmel River far exceeded its legal water rights. In 1995 the SWRCB ordered Cal-Am to implement actions to terminate unlawful diversions from the Carmel River. Concerns were heightened by the 1997 listing of the California red-legged frog and the steelhead trout as threatened species under the Federal Endangered Species Act.

A Cease and Desist Order (CDO) issued by the SWRCB in 2009 reduces Cal-Am's production from the Carmel River System from 2010 through December 2016 to

30% of previous levels. In addition, a moratorium issued by the California Public Utilities Commission (CPUC) prohibits any new water connections, and customers may be subject to water rationing and/or fines if water production limits are exceeded.

The ability to produce water from the Seaside Groundwater Basin has been limited by adjudication by the Superior Court, which imposed a series of pumping reductions designed to limit production of natural basin water to its safe yield. The court judgment will reduce available supplies from the groundwater basin to less than half of previous levels. Clearly, a solution is needed quickly to address the region's water shortage.

What Will Happen Without a Solution



The Cease and Desist Order requires river supplies to be drastically reduced in 2017. The adjudication requires groundwater supplies to be reduced every three years through 2021. The regulatory reduction in available supplies is shown in the graphic to the left.

Pure Water Monterey: Multiple Benefits for the Region

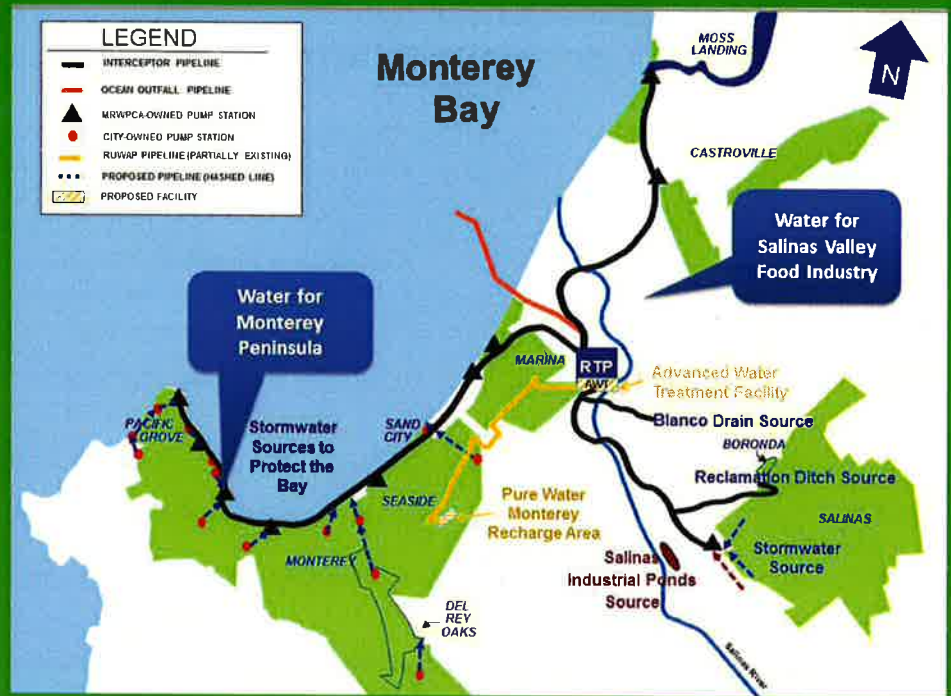
The Pure Water Monterey Project will provide environmental and economic benefits to the entire Monterey Peninsula region, with an emphasis on advanced water recycling, protection of groundwater and the environment. Because it supports both economic health and the environment, it is a deserving candidate for Proposition 1 grant and loan funding.

The project provides both purified potable water for domestic use, as well as a supply for irrigating one of the state's most fertile agricultural areas in the Salinas Valley.

The project will be the first of its kind to utilize not just wastewater, but storm water, food industry processing water, and impaired surface waters of the State.

Pure Water Monterey will provide benefits to five public agencies, eight cities, urban water users, and agriculture. Successful implementation of the project will provide a broad array of benefits that extend beyond the boundaries of the Monterey Peninsula.

Using proven, advanced, multi-stage treatment to provide a safe, reliable and sustainable drinking water supply that will comply with or exceed strict state and federal drinking water standards, the project will reduce water taken from the Carmel River and the Seaside Basin. In doing so, it will help meet regulatory orders and enhance water supply reliability by diversifying local water sources.



The project will provide water for Salinas valley growers, recharge the groundwater basin and provide water for the Monterey Peninsula.

More importantly, the project meets several State policy goals:

- Supports the SWRCB Recycled Water Policy "to move toward clean, abundant, local water for California by emphasizing appropriate water recycling."
- Helps meet the SWRCB Ocean Plan from the dual benefit of reducing wastewater discharge and, by decreasing the size of the desalination plant required, reducing the discharge of brine waste to the National Marine Sanctuary.
- Satisfies the goals of AB 32, the Global Warming Solutions Act of 2006, because the project requires 1/6th to 1/8th the electric energy that desalination requires.
- By intercepting and treating stormwater, the project is a significant step in meeting the SWRCB goal of water quality protection for Areas of Special Biological Significance, the Monterey Bay.

And the project promises many inter-regional benefits:

- Deliver up to 5,000 acre-feet of recycled water to Salinas Valley growers helping combat seawater intrusion
- The City of Salinas will be better able to meet its industrial wastewater and stormwater permit requirements and receive advantages which will help attract and keep businesses and jobs.
- Impaired agricultural runoff waters will be intercepted, improving water quality in Monterey Bay.
- The Marina Coast Water District can utilize a stranded investment in pipeline facilities and have the opportunity to use reclaimed water for irrigation in the future.
- Provides recharge of the overdrafted Seaside Groundwater Basin and establishes a drought reserve.
- A dilution source for the desalination plant discharge, an environmental mitigation to the desalination project.
- Is expected to have lower lifecycle costs than a larger desalination plant, reducing cost and rate increases exposure to ratepayers.

Local Agencies Partner for Pure Water Monterey Project

The MPWMD and MRWPCA have created Pure Water Monterey to develop a source of environmentally sustainable potable water for Monterey County's residential, commercial and agricultural communities.

Additional project stakeholders include: Monterey County Water Resources Agency, Monterey County Board of Supervisors, City of Salinas, Marina Coast Water District and Salinas Valley Agricultural Interests

Economic Impact of Rationing to Meet the CDO Would Be Disastrous

Monterey County hosts 9 million visitors a year, generating \$2.3 billion in revenue, and 22,000 jobs in the hospitality sector, the primary economic driver on the Monterey Peninsula. Because of past robust conservation efforts, there will be a strong correlation between further water reduction and reduced economic activity in the hospitality sector, adversely impacting public health and safety.

Industrial and commercial customers will be forced to reduce output and employment to cope with reduced water supplies. We estimate that annual industrial sales losses within the Cal-Am service territory will be \$261 million, annual commercial sales losses will be \$742 million."

In 2010, the economic consulting firm The Brattle Group concluded "a conservatively-

Each 10% reduction in hotel occupancy translates to a loss of \$180 million dollars in direct local spending per year.

For example, 27 percent of the City of Monterey's budget is generated from transient occupancy tax (TOT), and close to 50 percent of its general fund budget is attributable to tourism. In 2009 the Marriott hotel estimated that in order to achieve a 10% savings in water use it would require a 10% decrease in business, leading to about \$200,000 lost TOT to the City of Monterey from that one hotel.

estimated 50% water supply reduction will have negative consequences for residential customers. A reduction of this magnitude will create substantial hardships including reduced bathing, clothes washing, waste removal, and eliminate recreational and aesthetic benefits of water use. A conservative quantification of this hardship is between \$17 and \$51 million annually.

Now, 5 years later, that figure would be even higher. The Monterey County Hospitality Association also determined a 30% regulatory reduction in water use could cause the loss of 10,000 to 12,000 jobs in the sector.

The Pure Water Monterey Project is supported through the CPUC Settlement Agreement by the following parties:


SIERRA CLUB • CALIFORNIA-AMERICAN WATER COMPANY • CITIZENS FOR PUBLIC WATER • CITY OF PACIFIC GROVE • COALITION OF PENINSULA BUSINESSES • COUNTY OF MONTEREY • CPUC DIVISION OF RATEPAYER ADVOCATES • LANDWATCH MONTEREY • COUNTY MONTEREY COUNTY FARM BUREAU • MONTEREY COUNTY WATER RESOURCES AGENCY • MONTEREY PENINSULA REGIONAL WATER AUTHORITY • MONTEREY PENINSULA WATER MANAGEMENT DISTRICT • MONTEREY REGIONAL WATER POLLUTION CONTROL AGENCY • PLANNING AND CONSERVATION LEAGUE FOUNDATION • SALINAS VALLEY WATER COALITION • SURFRIDER FOUNDATION



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Partners for Pure Water Solutions



The Peninsula Cannot Conserve Its Way Out of the Predicament

As shown in the graphic below, the Monterey Peninsula has implemented strong conservation practices since the 1980s. MPWMD has regulations in effect that require conservation retrofits in homes upon title transfer. Businesses have been required to implement retrofits at various times during the past two decades. Both MPWMD and Cal-Am offer a variety of rebates for conservation practices and provide water saving devices free to customers.

The rate design provides conservation incentives through tiered pricing and rewards for Best Management Practices. As a result, the Monterey Peninsula has saved almost 4,000 acre feet of water annually – a medium sized water supply project – and per capita water consumption is among the lowest in the state as shown in the table.

AVERAGE WATER USE PER CAPITA

60 gallons – Monterey Peninsula

61 gallons – San Francisco

79 gallons – Contra Costa WD

82 gallons – San Diego

95 gallons – Los Angeles DWP

104 gallons – San Jose

167 gallons – Sacramento

254 gallons – US

Source: CUWCC January 2014, except for US and Monterey values

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