Monterey Peninsula Water Supply Project
Progress Report
October 31, 2013

CALIFORNIA AMERICAN WATER

Settlement Agreement Reached on Monterey Peninsula Water Supply Project Proposal

On July 31, 2013 sixteen of the parties participating in the California Public Utilities Commission's (CPUC) review of the Monterey Peninsula Water Supply Project (MPWSP) Application signed a settlement agreement covering many of the key issues associated with the project.

California American Water president Rob MacLean called the agreement "a major step forward," and praised the parties for their "dedication to the community and willingness to work together to help solve this complex water crisis."

Parties to the settlement included leading environmental groups, local elected representatives, consumer advocates and business groups.

In signing the agreement the parties have aligned their positions on issues previously argued in the case. The settlement is subject to approval by the CPUC which has set hearings on the agreement December 2nd and 3rd in San Francisco. Parties will be able to file written briefs on the settlement in January and February of next year. The CPUC's ultimate decision will come when they vote whether to approve the project, which they are expected to do in August of 2014.

One of the key issues addressed in the settlement is project financing. California American Water has agreed to reduce its shareholder investment in the project. Depending on the final project cost and configuration, the company will accept a $44–119 million public financing contribution, described as a tax-exempt securitization, which may lower the overall cost of the project.

Another financing issue resolved in the agreement is the use of Surcharge 2, a direct contribution from California American Water customers that will likely come in the form of a percentage fee on water bills. The amount generated in this manner is also not subject to shareholder return and represents a significant cost savings. In the settlement, the parties agreed to set Surcharge 2 collections at $71.5 million, half of which will be applied to the pipeline portion of the project.

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Bill Impact Analysis Based on Settlement Agreement

Based on these conditions and assuming $66.4 million in State Revolving Fund loans at an interest rate of 2.5%, California American Water recently re-evaluated the projected cost impact of the project to its customers.

The average customer's water bill today is $75.74. The average customer's bill will increase approximately 41% in 2018 to $106.73.

"Our initial rate impact estimates were performed very early on the in the application before the mayor's joint-power authority had begun their process," said California American Water Director of Rates Dave Stephenson. "With the settlement in place, including the public contribution, we have conditionally revised our bill impact estimates downward in the likelihood costs will be reduced."

Other issues addressed in the settlement include criteria the CPUC should employ to determine when and if to move forward with the Groundwater Replenishment (GWR) portion of the project. On September 25, Commissioner Peevey ruled, in agreement with the settlement, that the Commission's review of this component will be separated into a second phase of the proceeding, scheduled to take place between December 2014 and July 2015.

The settlement also looks at contingency plans for the desalination facility intake, discharge and plant location. It commits the company to develop, with the help of hydrologists representing Salinas Valley groundwater pumpers, a hydro-geological study and technical report on pumping from the proposed slant wells, which will guide the project's use of source water. Also agreed to is the development of a plan to address beach erosion as well as an Energy Conservation Plan designed to reduce greenhouse gas emissions and save energy costs.

The parties to the settlement are:

- California American Water
- The Monterey Peninsula Regional Water Authority
- The Monterey Peninsula Water Management District
- The Monterey Regional Water Pollution Control Agency
- The Monterey County Board of Supervisors
- The Monterey County Water Resources Agency
- The City of Pacific Grove
- The CPUC's Division of Ratepayer Advocates
- The Salinas Valley Water Coalition
- The Monterey County Farm Bureau
- The Coalition of Peninsula Businesses
- LandWatch Monterey County
- The Sierra Club
- Surfrider Foundation
- The Planning and Conservation League
- Citizens for Public Water

A smaller settlement concerning the size of the project was also reached between California American Water, the Monterey Peninsula Regional Water Authority, Monterey Peninsula Water Management District (MPWMD), the Monterey Regional Water Pollution Control Agency (MRWPCA), the City of Pacific Grove, Division of Ratepayer Advocates, Coalition of Peninsula Businesses and the Planning and Conservation League.

Both settlement agreements are available in their entirety at **www.watersupplyproject.org.**

The parties who did not sign the agreement are WaterPlus, Marina Coast Water District and the Public Trust Alliance.

Borehole Drilling Begins!

In late September, California American Water began its drilling of boreholes, a key part of the MPWSP contingency planning and environmental review.

Boreholes are 6-inch diameter vertical holes drilled to a depth of 200 feet. What emerges from these holes is a core sample of the ground beneath, which for a water project can help answer many questions about the size and locations of aquifers that store water underground.

The boreholes were prompted in part by the State Water Resources Control Board's (SWRCB) recent report on water rights pertaining to the project. The report, released July 31, was developed at the request of the CPUC. One of its recommendations was that additional geotechnical investigations take place. A hydrologist for the Salinas Valley Water Coalition echoed the need for additional study in a technical memo he submitted to the state board. California American Water has undertaken the borehole project to address these concerns.

"The boreholes should indicate if there is a defined separation between various layers of the aquifer and indicate the size of each layer," explained California American Water Director of Engineering Rich Svindland.

The boreholes will be analyzed to help determine if California American Water could limit the location of its wells to the shallow aquifer, or if it will need to go into the lower 180-foot aquifer, a concern for Salinas Valley groundwater pumpers who also draw from the 180-foot aquifer. They will show if there is an aquatard separating the aquifers and, if there is, will show its location, thickness and how porous it is. The boreholes may also provide preliminary information on the mix of groundwater and seawater in these locations.

The boreholes will be drilled at the preferred site, on the Cemex cement plant property north of Marina as well as at Potrero Road, Salinas River State Beach, Sandholdt Pier and at various locations in Moss Landing.

"The data from the boreholes will enable the first round of groundwater modeling to begin," said Svindland. "It will also allow us to optimize the spacing of monitoring wells related to the test well."

The slant test well, proposed at the Cemex site, has faced delays due in part to its proximity to critical Snowy Plover habitat. The precise location of the well, be it in the disturbed mining area of the site, or on its edges, has been a topic of dispute among permitting agencies and the property owner. Because of the Plover, work on the well can only take place between October 1st and March 1st.

On July 2, California American Water submitted an application for the well to the City of Marina. After the City approves the well, additional permits will be needed from the California Coastal Commission and the State Lands Commission. In an effort to save time, applications have already been submitted to both of these agencies.

Snowy Plover

Procurement Schedule Advances

The process to award the design and construction contract for the desal plant continues to move forward with a major milestone being reached this month, the submission of proposals from the five shortlisted firms.

"The proposals help us to further refine our cost estimates for the project," said Rich Svindland.

The five firms that have reached this stage in the procurement process are Black and Veatch Construction, Inc., CDM Constructors, Inc., CH2M Hill Engineers, Inc., Kiewit Infrastructure West Co. and MWH Constructors, Inc.

In creating their proposals, the submitting firms relied on an architectural layout for the plant created by a team of Cal-Poly architecture students. The students' design incorporates sustainable building products and is configured to easily allow for educational tours. Drought tolerant and native landscaping are also included in the students' plans, which were presented to the project governance committee earlier this year.

The selection of a preferred proposer is anticipated by November 15. A draft agreement and all proposals will be presented to the project's governance committee, which includes representatives from Monterey County, the Monterey Peninsula Regional Water Authority and the MPWMD on December 6, 2013. A final agreement with the selected contractor is expected by the end of December.

About the Project

The Monterey Peninsula is facing a severe water supply problem. That's because the SWRCB has ordered California American Water to significantly reduce its pumping of water from the Carmel River. This order coupled with pumping restrictions in other parts of the county means that nearly 70% of the Monterey Peninsula community's water supply must be replaced.

Since 2004, the company has pursued a multi-source solution to the Peninsula's water needs, which includes desalination. In 2010, the CPUC, which regulates private utilities, approved a joint project with local Monterey County public agencies, termed the Regional Project, to solve the area's water shortage. However, California American Water withdrew from that project in January of 2012 because it faced serious legal and financial challenges that prevented it from advancing.

After examining 11 potential alternatives to the Regional Project in October 2011, California American Water filed an application for the MPWSP.

The current project is comprised of three elements:

- ✓ **Desalination**
- ✓ **Aquifer Storage and Recovery (ASR)**
- ✓ **Groundwater Replenishment (GWR)**

This multi-faceted approach brings numerous advantages over a single-source solution. For one, it will enable California American Water to build a smaller desalination plant, which is the most costly element and with the most environmental impacts. Secondly, this strategy will build in redundancy that enables the water system to continue to provide water should one component become temporarily unavailable.

Desalination
The MPWSP will consist of sub-surface slant intake wells, the desalination plant, and related facilities including source water pipelines, product water pipelines and brine disposal facilities. Depending on the availability of water from the GWR project, the desalination plant will be sized at 9.6 million gallons per day (mgd), 6.9 mgd or 6.4 mgd.

California American Water has secured a 46-acre parcel of land located off of Charles Benson Road in Marina as the site for the proposed desalination plant. California American Water is also working to secure permanent easements for locations to situate the slant intake wells.

California American Water will be using a series of slant wells located west of the sand dunes in North Marina to draw ocean water. The slant wells will be approximately 700 to 800 feet in length and will feature several hundred feet of screen below the ocean floor and seaward of the mean high tide mark. The final layout and configuration will be based on the results of additional groundwater modeling that will be completed.

In addition to the plant and its intake wells, various other pipeline, storage and pump facilities will need to be constructed to ultimately deliver water to customers on the Monterey Peninsula.

Aquifer Storage and Recovery


South-Central California Coast Steelhead Trout

California American Water will expand its current ASR project – a partnership with the MPWMD, which captures excess winter flows from the Carmel River and stored in the Seaside Aquifer for withdrawal during the dry summer months. Winter flows are considered excess only when they exceed what is needed to protect the river's threatened population of Steelhead trout.

For the MPWSP, the company plans to construct two additional ASR wells that will increase capacity of the program and allow the desal plant to be smaller than would be needed without the wells.

Groundwater Replenishment

The proposed GWR project recycles wastewater through an advanced treatment process. The resulting highly purified drinking water will be injected into the Seaside groundwater basin. A new advanced wastewater treatment plant will be constructed for the project in addition to a number of supporting facilities. The project is expected to be online by the end of 2016.

MRWPCA's source water for this project will be put through an additional three-step treatment and purification process of microfiltration, reverse osmosis and oxidation with ultra violet light and hydrogen peroxide — all commonly used in numerous industries and food manufacturing.

The first step in the treatment process is microfiltration, in which treated wastewater is pushed through a filter with highly fine pores. The second step is reverse osmosis, which pushes water through semi-permeable membranes under high pressure. Reverse osmosis is commonly used to remove salts from seawater for human consumption. The third stage of the proposed Advanced Water Treatment facility is an insurance step to remove any molecules that may have slipped through. This is done by oxidizing the water with hydrogen peroxide in the presence of ultraviolet light. Together, these break apart any chemical bonds that may be present. This three-step process ensures complete water disinfection and purity.

The resulting purified water would be pH-adjusted and piped to the aquifer recharge area in Seaside where it is planned to be either injected into the groundwater or deeper into the aquifer itself.

Budget: Major Portions of the Project

Subsurface Intake System and Supply Return Facilities: $91M (0% spent to date)

Desalination Plant: $164M (0% spent to date)

Pipeline Facilities: $128M (Approximately 1% spent to date)

Pre Construction Cost:** $8M (Approximately 40% spent to date)

***** Note pre-construction costs are included in the $383M project total. Further breakdown of the above components will occur after the CPUC issues a Certificate of Public Convenience and Necessity permit for the MPWSP.*

Timeline

The Desalination Project is expected to be completed in the second quarter of 2018. Ground water replenishment is expected to be completed at the end of 2016. Below is a chart depicting the major components of the project and their expected delivery dates.

TASK NAME	START	FINISH	DURATION
CPUC Approvals: Draft EIR	2/2014	2/2014	
CPUC Approvals: Final EIR	6/2014	6/2014	
CPUC Approvals: CPUC Decision	8/2014	8/2014	
Boreholes	9/2013	2/2014	
Test well: Permitting	8/2013	5/2014	
Test well: Construction	5/2014	12/2014	
Test well: Operation	1/2015	12/2015	
Desal facility & intakes: Design Build firm selected	1/2014	1/2014	
Desal facility & intakes: Design & Permitting	1/2014	6/2016	
Desal facility & intakes: Construction	7/2016	5/2018	
Piplelines: Design & Land Acquisition	2/2013	6/2014	
Piplelines: Permitting	6/2014	12/2014	
Piplelines: Construction	1/2015	1/2017	
Project Start-Up	5/2018	5/2018