Monterey Peninsula Water Supply Project
Progress Report
October 31, 2014

CALIFORNIA AMERICAN WATER

Project Awarded $1-Million State Grant for Desalination Test Well

The desalination test well project has been selected to receive a $1-million Proposition 50 grant by the California Department of Water Resources. The grant will help pay for the installation of an approximately $6-million slant test well, which is intended to prove the viability of subsurface beach wells as feed water for the Monterey Peninsula Water Supply Project. One million dollars is the maximum award for which the test well project was eligible.

Proposition 50, the Water Security, Clean Drinking Water and Coastal and Beach Protection Act, is a $3.4 billion bond passed by voters in 2002, which allocates $50 million in grants for brackish water and ocean water desalination projects throughout the state.

"This award provides a direct financial benefit to our customers," said California American Water President Robert MacLean. "The test well project is not only important for the future of the Monterey Peninsula's water supply; it also tests technology which is critical to the future of desalination as an alternative water source for our state."

Slant Test Well Project Advances

During the November 12-14 California Coastal Commission meeting, California American Water expects the Commission to consider approving its proposed slant test well.

A first-level application to construct the slant test well was recently denied by the City of Marina. The City's decision was contrary to its environmental report and the recommendations of the City's Planning Department staff and outside experts. California American Water is appealing that decision to the California Coastal Commission, which has the express authority to overrule the City under the Coastal Act.

"The City of Marina did not make any findings in their denial as to whether our project is consistent with its Local Coastal Program or the coastal access policies established by the Coastal Act," said California American Water engineering manager Ian Crooks, "although the City's staff and outside experts specifically found that the project was consistent with the Local Coastal Program and did not restrict coastal access in any way. Conformity with these policies is the basis on which the Coastal Commission will make its decision. We are hopeful they will approve the project in November, which should allow construction to begin this year."

In order to avoid disturbance to the Snowy Plover, the U.S. Fish and Wildlife Service requires the test well construction take place between the months of October to February, which is outside of the birds' nesting season. To remain within this window, construction of the test well needs to begin as soon as possible.

The schedule constraints necessitated by the sensitive plover habitat have also driven California American Water's recent action in Superior Court to obtain a temporary easement on portions of property owned by CEMEX, Inc. where it plans to install the test well. After nearly two years of successful negotiations and reaching substantial agreement with CEMEX, Inc., CEMEX reversed course in September and opted not to proceed with final agreement. California American Water is now requesting the court grant access to the site to construct the test well when approvals are granted.

"Advancement of the water project is of utmost importance to protect the people, economy, and environment of the Monterey Peninsula," said Crooks. "We must continue to do everything within our power to avoid delays and obstructions to ensure progress continues on the development of a reliable water supply."

The slant test well head will be buried about 10 feet underground and the well itself will extend approximately 800 feet at a 19-degree angle aimed towards the ocean floor. It will draw seawater through the sand into the well. The well will operate for up to 24 months and, beginning in early 2015, will produce valuable data that will be used to further inform and develop the Monterey Peninsula Water Supply Project design.

The test well data was found to be critical in a settlement agreement reached last year between sixteen parties, including the California Public Utilities Commission's Division of Ratepayer Advocates, the Monterey Peninsula Water Management District, the Monterey Peninsula Regional Water Authority, LandWatch Monterey County, the Sierra Club, and the Surfrider Foundation. The use of slant well technology, as opposed to open ocean intakes, is supported by the National Oceanic and Atmospheric Administration, the Monterey Bay National Marine Sanctuary, the California Coastal Commission and the State Water Resources Control Board.

Value Engineering Update

In our last edition of this newsletter, we reported the Value Engineering (VE) study recently commissioned by the Monterey Peninsula Regional Water Authority (MPRWA) for the desalination plant design had been released and recommended several design alternatives that have the potential to improve efficiency or the process or reduce costs.

The VE study was independently reviewed at the direction of MPRWA by an outside engineering firm, SPI Consulting Engineers, Inc., which agreed with some, but not all of its findings.

"Some recommended alternatives around electrical design, pump selection, and chemical systems for the desalination plant are being evaluated in more detail for consideration," said California American Water engineering manager Ian Crooks. "Other alternatives, such as those that significantly change the water treatment process, would increase risks to water quality and reliability, and potentially overall project delivery."

The Monterey Peninsula Water Supply Project's desalination plant is currently at 60% design. Any changes to the design from the value engineering recommendations will be finalized next year upon further evaluation of recommended alternatives. California American Water will author a letter to the MPRWA explaining which of the recommendations it will choose to implement and why others were ruled out. **A copy of the VE report is available at www.watersupplyproject.org/documents.**

About the Project

The Monterey Peninsula is facing a severe water supply problem. That's because the State Water Resources Control Board (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.

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 may enable California American Water to build a smaller desalination plant that is less expensive and produces a smaller environmental footprint than a larger desalination plant. Secondly, this strategy offers built-in redundancy that allows the water system to continue to provide water if one component becomes temporarily unavailable.

Desalination

The Monterey Peninsula Water Supply Project consists of sub-surface slant intake wells, a 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 either 9,750 acre-feet per year (afy) or 6,250 afy. One acre-foot is equal to one acre filled with a foot of water, which is typically more than enough water to support a family of four for a year.

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

California American Water's project will use a series of slant wells located near the coastline in North Marina area to draw ocean water. The slant wells will be up to 1,000 feet long. The final location, layout and configuration will be based on the results of the slant test well and groundwater modeling work.

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

Aquifer Storage and Recovery

California American Water will expand its current ASR project – a partnership with the Monterey Peninsula Water Management District – which captures excess winter flows from the Carmel River for storage in the Seaside Aquifer and 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.

For the Monterey Peninsula Water Supply Project, the company plans to construct two additional ASR wells that will increase capacity of the program and allow the desalination plant to be smaller than would be needed without the wells.

Pure Water Monterey: A Groundwater Replenishment Project
The proposed Pure Water Monterey 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 water treatment plant will be constructed for the project in addition to a number of supporting facilities.

Source water for this project will go through a three-step treatment and purification process of microfiltration, reverse osmosis and oxidation with ultraviolet light and hydrogen peroxide — all commonly used in numerous industries and food manufacturing.


South-Central California Coast Steelhead Trout


Desalination plant rendering

Budget: Major Portions of the Project

Subsurface Intake System and Supply Return Facilities: $51M (3% spent to date)

Desalination Plant: $95M (3% spent to date)

Pipeline Facilities: $131M (3% spent to date)

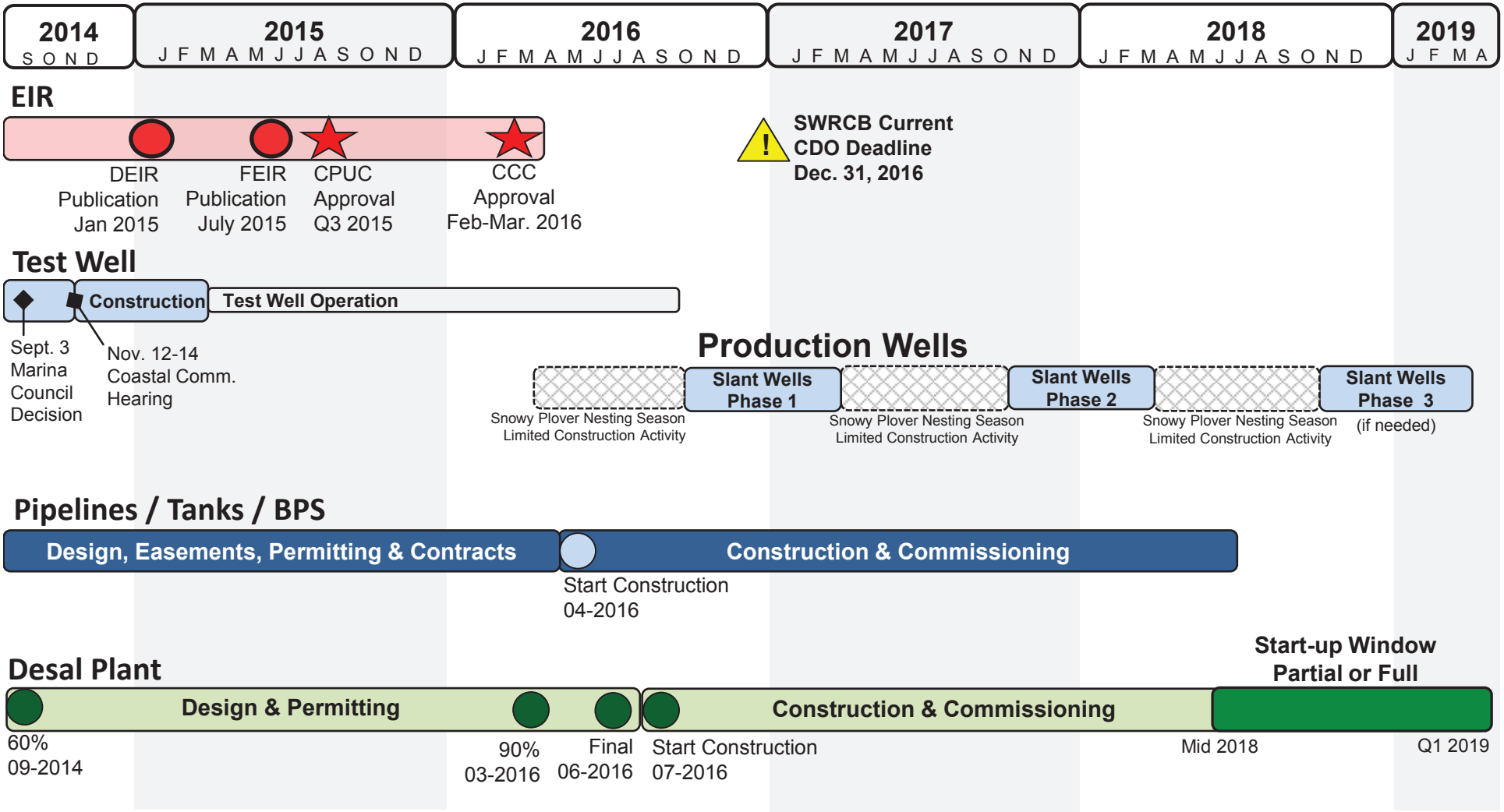
Pre-Construction Cost*: $8M (100% spent to date)

Note: ***These figures are based on a 6.4 MGD desalination facility. Pre-construction costs are included in the $277M 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.***

**** These figures include financing and some contingency costs and therefore differ from the capital costs listed in the settlement.***

Timeline

The desalination plant is expected to be completed in 2019. Below is a timeline chart depicting the major components of the project and their expected delivery dates.



Note: The schedule is based on the information and assumptions available at time of update and is accurate to +/-6 months.

Updated September 16, 2014