MONTEREY PENINSULA WATER SUPPLY PROJECT

PROGRESS REPORT

October 31, 2015

CALIFORNIA AMERICAN WATER

Coastal Commission Approves Test Slant Well Permit Amendment; Operation and Data Collection Resumes

The California Coastal Commission voted unanimously on October 6 to approve an amendment to California American Water's permit to operate a test slant well for its proposed seawater desalination project. The amendment allowed operation of the well to resume.

Construction of the test well was completed in March and operated from late April to early June. At that time, California American Water turned off the well in accordance with the original California Coastal Commission permit conditions.

Issued in November 2014, the original permit called for the company to turn off the well if nearby groundwater levels dropped by more than a foot and a half. Such conditions were observed during the test well operation this summer. Hydrogeologic experts determined that the drop was predominantly due to regional pumping in the area. The permit amendment allows pumping to continue under drawdown conditions that are shown to be unrelated to operation of the test well.

According to a June 22 report by the Hydrogeologic Working Group, "Even under a 'worst case scenario'… it seems clear from the data collected so far that any drawdown [related to the test well at the compliance monitoring point] …is less than 0.5 feet and probably closer to 0.2 to 0.3 feet. Given the allowable drawdown of 1.5 feet, the water levels are well within the allowable limit."

Operation of the test well resumed at the end of October after California American Water conducted an interior video survey of the well and performed maintenance work. The test well, which was awarded a $1 million construction grant from the Department of Water Resources, is permitted to operate for up to two years.

California American Water Guarantees Success of Test Slant Well

Demonstrating confidence in a successful outcome for its test slant well program, California American Water announced in September that if the well proves unable to meet the demands of its proposed desalination facility, the company will not pass the cost of the program on to its customers.

California American Water president Rob MacLean said that the company's pledge **"shows our belief in slant well technology as a viable and environmentally preferable approach to seawater desalination in the Monterey Bay."**

Both production levels and water quality results from the test slant well have so far exceeded expectations. Slant wells are a form of subsurface intake, which are the preferred technology for drawing seawater for desalination among environmental groups and permitting agencies such as the California Coastal Commission, State Water Resources Control Board, the Monterey Bay National Marine Sanctuary and the National Oceanic and Atmospheric Administration.

California American Water Issues RFPs for Source Water Slant Wells and Project Pipeline

California American Water issued a Request for Proposals (RFP) for construction of the Monterey Peninsula Water Supply Project's source water slant wells on September 25, with proposals due on October 23. An RFP for the project pipeline and related conveyance facilities was issued on August 17, with proposals due November 2.

"Issuance of these RFPs is an important milestone because once we've selected a contractor and reached an agreement, we will have significantly more refined cost estimates for all major components of the project," said project manager Ian Crooks.

After the proposals are received, an evaluation of each and a recommendation for the preferred proposer will be sent to the project's Governance Committee, consisting of representatives from the Monterey Peninsula Regional Water Authority, the Monterey Peninsula Water Management District, the County of Monterey, and California American Water. It's expected the committee will provide its recommendation in December, and the final contract will be executed and signed in early 2016.

The slant well project will include up to ten subsurface wells (up to eight active and two on standby) located at the coast that will draw seawater through the ocean floor for use as source water for the Monterey Peninsula Water Supply Project desalination plant. All wells will be constructed on the CEMEX facility located in Marina, California.

Conveyance facilities will link the wells to the desalination plant and deliver the treated water to the existing Monterey water distribution system. In all, the project calls for more than 20 miles of pipeline at an estimated cost of more than $130 million.

About the Project

The Monterey Peninsula is facing a severe water supply problem. The State Water Resources Control Board (SWRCB) has ordered California American Water to significantly reduce its pumping 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 historic water supply must be replaced.

The Monterey Peninsula Water Supply Project consists of three components:

- **Desalination**
- **Aquifer Storage and Recovery (ASR)**
- **Pure Water Monterey: 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 that will reduce the project's carbon footprint. Secondly, this strategy will build in redundancy that allows the water system to continue providing water if one component becomes temporarily unavailable.

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 customers.

DESALINATION

The desalination plant will be sized at either 9,750 acre-feet per year (afy) or 6,250 afy, depending on the availability of water from the GWR project. One acre-foot is equal to one acre filled with a foot of water, which is typically enough water to support four households on the Monterey Peninsula for one year.

The desalination plant treatment process is composed of pre-treatment, first-pass reverse osmosis trains, partial second-pass reverse osmosis trains, post-treatment and finished water pumping. The design is at 60% completion and is awaiting finalization of the project's Environmental Impact Report to reach full design.

Desalination plant rendering

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


South-Central California Coast Steelhead Trout

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 Groundwater Basin and 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, a partnership between the Monterey Regional Water Pollution Control Agency and the Monterey Peninsula Water Management District, 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.

Budget: Major Portions of the Project

Subsurface Intake System and Supply Return Facilities: $51M (35% spent to date)

Desalination Plant: $95M (5% spent to date)

Pipeline Facilities: $131M (6% spent to date)

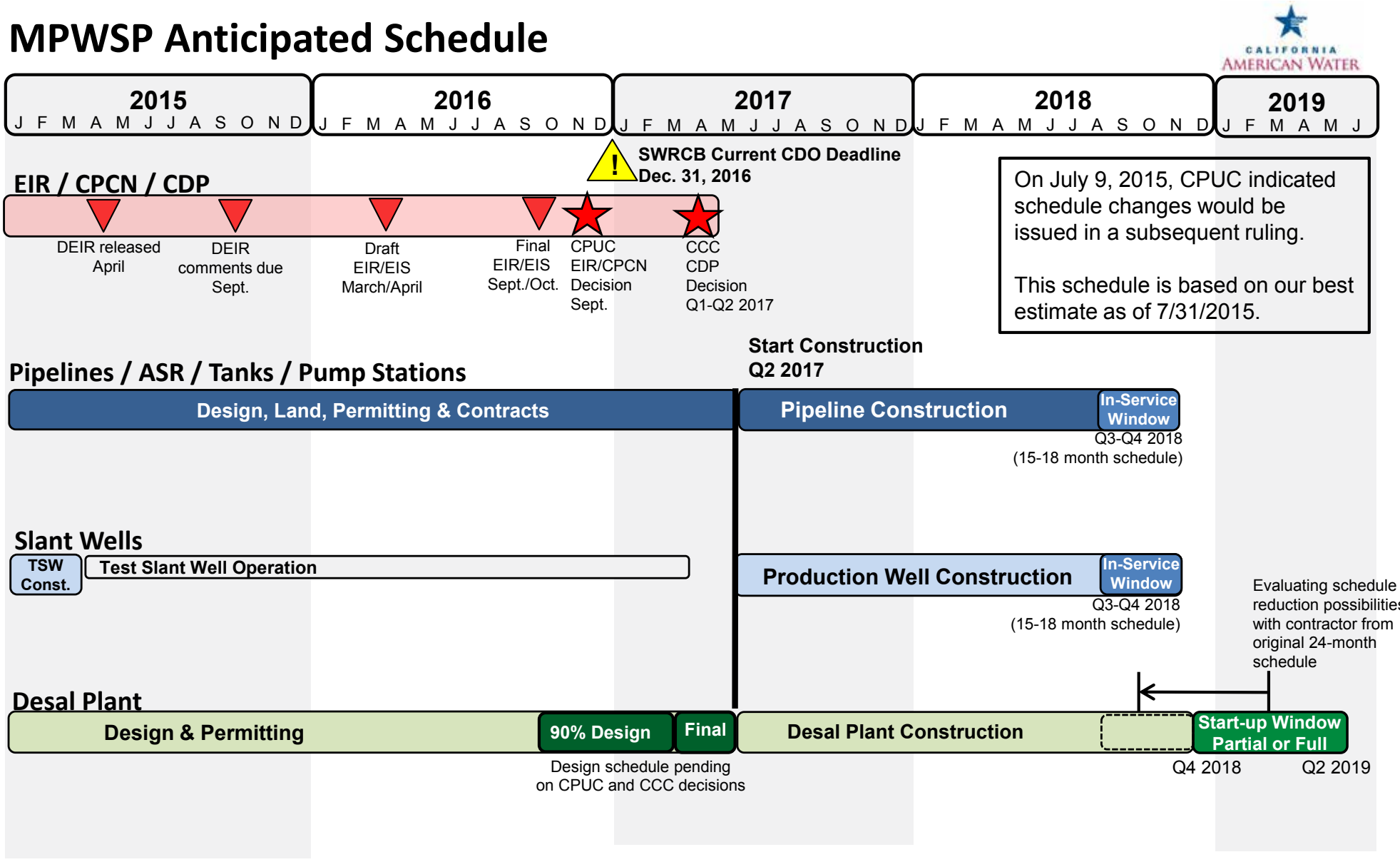
Pre-Construction Cost*: $8M (100% spent to date)

NOTE: *These figures are based on a 6.4-MGD (million gallons a day) 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 Monterey Peninsula Water Supply Project.*

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

Timeline

Below is a timeline 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 October 18, 2015