

WEST BASIN MUNICIPAL WATER DISTRICT

AUGUST 15, 2005-Water Resources
Little, Baker
AUGUST 22, 2005 – Board Meeting
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INFORMATION CALENDAR

BREWER DESALTER EXTRACTION WELL
AND BARRIER MONITORING WELL

SUMMARY:**Brewer Desalter Extraction Well**

The Brewer Desalter Extraction Well construction was completed on August 12, 2005. The construction included drilling and installing a new extraction Well and all appurtenant equipment. The Brewer Well is 560-feet deep with two screened intervals for shallow and deep extraction ranging between 355 to 395-feet and 500 to 540-feet, respectively. The new Well is expected to pump a rate of approximately 1,250 gallons per minute.

Two pump tests were completed in April utilizing a temporary pump at shallow and deep aquifer levels. The results indicated chloride levels ranging from 350 mg/L to 1,300 mg/L in the shallow zone and 1,200 mg/L to 1,500 mg/L in the deep zone. A hydrogeologic analysis was performed using these chloride values to determine the final pump placement and suction depth. The pump intake is set at 200-feet below ground surface. Suction piping was added to the pump intake, from 200 to 500-feet below ground surface to allow for more water to be drawn from the deeper screen and, consequently recover the more brackish water for reverse osmosis (RO) treatment.

In early August, on-site pump testing was completed with the permanent pump. Water samples were collected and tested for a variety of constituents at this time, including chloride. This water quality data is a preliminary prediction of Well operations. These sample results will be presented at the August 22, 2005 Board meeting. After approximately three months of operation, the water quality is expected to stabilize and operation points can be set for the pump and RO units.

In addition to the Well construction, new discharge piping was installed to supply the RO units with water from the new Well. A control panel was also added for the new variable frequency drive pump, allowing for operational changes, if water quality or pump performance varies over time.

West Coast Basin Barrier Monitoring Well

The purpose of this new monitoring Well is to track groundwater quality as increased amounts of recycled water are injected into the West Coast Seawater Barrier. The Department of Health Services (DHS) requires monitoring of water quality data after the injected water is present in the aquifer for a travel period of three to six months. Geological studies determined this travel period to be located approximately 100-feet from the West Coast Basin Barrier Wells. The new monitoring Well is located within this three-to-six month travel time, in Del Amo Boulevard, near the Prospect Avenue intersection in the City of Redondo Beach.

The monitoring Well was completed in April 2005 and consists of three nested Wells extending to different depths. The shallowest of the three Wells is screened from 345 to 365-feet. The next deepest Well is screened from 461 to 481-feet. The deepest Well is screened from 611 to 631-feet. The first sampling event for the new monitoring Well is scheduled for late August.

FISCAL IMPACTS:

Funds for the Brewer Desalter Well Project were included in the FY 2004-05 Capital Improvements Program Budget under "Minor Facilities Improvements". Total cost of the Brewer Well is approximately \$921,000. Funds for the Barrier Monitoring Well Project were included in the FY 2004-05 Capital Improvements Program Budget under "WBWRP Phase IV Expansion". Total cost of the Monitoring Well is approximately \$334,000.

ENVIRONMENTAL COMPLIANCE:

Environmental compliance specifics have been addressed with DHS for the construction phase. Additional specifics regarding the operations of the Brewer Desalter Well Project are being addressed with DHS and California Water Service Company, Inc. Permits for construction of the Brewer Desalter Well Project and the Barrier Monitoring Well Project were acquired from the Los Angeles County Clerk and the California Regional Water Quality Control Board.

COMMITTEE STATUS:

This item was reviewed by the Water Resource Committee on August 15, 2005 and was agendaized to the August 22, 2005 Board meeting as information for discussion.

RECOMMENDED MOTION:

This item is for information only.

LIST OF EXHIBITS:

None.