

**WEST BASIN MUNICIPAL WATER DISTRICT**

**MARCH 8, 2005 - Water Resources**  
 Little, Dear  
**MARCH 21, 2005 - Board Meeting**  
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 Approved by: Rich Nagel

INFORMATION CALENDAR

BREWER DESALTER EXTRACTION WELL AND BARRIER MONITORING WELL

SUMMARY:

The Brewer Desalter Project was originally constructed in the early 1990's to remove salt from brackish groundwater in the Torrance area. Two wells, both constructed over 40 years ago, were used to extract this brackish water. These Wells had reached the end of their useful life.

In October, 2004, the Board authorized the Co-General Managers to execute an agreement with Bakersfield Well and Pump, Inc. Since the "Notice to Proceed" was issued on January 25, 2005, these existing Wells have been demolished. A conductor casing has been set to 75-feet below ground surface. This casing helps keep the borehole open during drilling. A pilot hole was drilled to 590-feet to sample soil conditions and determine where the best water-producing aquifers are located.

Two aquifers were identified; both aquifers were also screened in the original Brewer Desalter Wells. Comparing the soil characteristics of the new Brewer Desalter Well with the old Well data and data collected during the Water Replenishment District's project, Madrona Well No. 2, field hydrogeologists have confirmed the aquifer locations.

Four zone isolation tests were performed to assist in identifying the chloride levels in each of the aquifers. The zone isolation tests include collecting water samples from twenty-foot sections, which are isolated in such a way that water is primarily drawn from that specific zone test depth. The table below summarizes the zone sample results.

<b>Zone I.D.</b>	<b>Zone Test Depth (feet below ground surface)</b>	<b>Chloride (mg/L)</b>
4	350-370	200
3	385-405	350
2	495-515	310
1	525-545	4,700

The Well is being constructed to maximize chloride removal while maintaining cost efficient treatment and operations of the desalting facility. Based on these sample results, two screening intervals were chosen, one, forty-foot screen at a depth from 355-395 feet and the second, forty-foot screen from 500-540 feet. These screen intervals are similar to the original Wells at the Brewer Desalter.

Staff is working with our consulting team and field hydrogeologists to optimize pump placement in order to target an optimum chloride range between 1,500 mg/l to 2,000 mg/l. One or two

pump tests will be performed at different suction depths to determine which depth provides the blended water ideal for the current Reverse Osmosis treatment design. Once the Well is fully constructed and developed, samples that are collected will provide an accurate chloride concentration for the Brewer Desalter treatment. This project is scheduled to be completed by early June, 2005.

### **West Coast Basin Barrier Monitoring Well**

The purpose of this new monitoring Well is to track the groundwater quality as increased amounts of recycled water are injected into Seawater Barrier. The Department of Health Services is requiring 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 site working area extends into the City of Torrance.

“Notice to Proceed” was issued on February 28, 2005, after the traffic plan was agreed upon by the City of Redondo Beach and the City of Torrance. Prior to work beginning, construction notices were distributed to the surrounding residents. An outreach firm coordinated these notices as well as door-to-door communication. This project is scheduled for completion by early June, 2005.

### **FISCAL IMPACTS:**

Funds for the Brewer Desalter Well Project are included in the Capital Improvements Program Budget, under the items “Minor Facilities Improvements” for fiscal year 2004-05. Funds for the Barrier Monitoring Well Project are included in the Capital Improvements Program Budget, under the item “WBWRP Phase IV Expansion” for fiscal year 2004-05.

### **ENVIRONMENTAL COMPLIANCE:**

Environmental compliance specifics have been addressed with the Department of Health Services for the construction phase. Additional specifics regarding the operations of the Brewer Desalter Well Project will be addressed upon construction completion. Permits for construction of the Brewer Desalter Well Project and the Barrier Monitoring Well Project have been acquired from the Los Angeles County Clerk and the California Regional Water Quality Control Board.

### **COMMITTEE STATUS:**

This item was reviewed by to the Water Resource Committee on March 8, 2005 and agendized to the March 21, 2005 Board meeting as information for discussion.

### **RECOMMENDED MOTION:**

This item is for information only.

### **LIST OF EXHIBITS:**

None.