

WEST BASIN MUNICIPAL WATER DISTRICT**JULY 14, 2005 - Water Resources**

Little, Kwan

JULY 25, 2005 - Board Meeting

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INFORMATION CALENDAR

WATER SUPPLY TO THE SEAWATER BARRIER – IMPACT OF THE
DOUGLAS STREET TRANSPORTATION IMPROVEMENTSSUMMARY:

Over the past couple of years, there have been several items that have affected recycled water deliveries to the West Coast Seawater Barrier (Barrier). First, water quality from Hyperion has deteriorated greatly since the Water Recycling Plant was first placed into service. The solids loading on the Title 22 filters has more than doubled as measured by turbidity. Turbidity of the secondary effluent has increased from 3 NTU to 5 NTU when the Plant was first started up to 8 NTU to 20 NTU over the last couple of years. Hyperion staff stated that the changes in quality of the secondary effluent were due to process changes at Hyperion. During periods of poor secondary effluent quality, water from the Barrier trains lime clarifier/tri-media filter pre-treatment process is diverted to the Title 22 process to supplement the water being produced in the Title 22 filters. This results in less flow going to the Barrier. To help deal with the poor secondary effluent quality from Hyperion, the District is constructing a high-rate clarifier upstream of the filters to reduce the solids loading on the filters as part of the Phase IV Expansion Project.

Last year, the County had to prepare their injection Wells to accept future telemetry equipment. This required Wells to be shutdown as they were worked on, thus reducing flows to the Barrier. This work started last June and is taking much longer than expected because the County's crews were re-assigned to work in Malibu as a result of the heavy rains. Work on the injection Wells is expected to be finished by the end of this month.

Earlier this year, the County had to replace valves in the pressure control structure delivering potable water to the Barrier. This also required the Barrier to be shutdown and took about two months to complete.

More recently, the City of El Segundo (City) is proceeding with various transportation improvements along Douglas Street in the vicinity of Park Place and Alaska Avenue. The improvements, which will be completed in two years, include the extension of Douglas Street, the construction of a transit center and pedestrian bridge, and a railroad grade separation.

Water supply to the Barrier will be impacted when Douglas Street is re-graded to a lower elevation. The County's water supply line to the southern portion of the West Coast Basin Barrier Project lies in this street and will need to be lowered along with the street. This will involve the temporary shutdown of the pipeline as 1,100 feet of the pipeline is relocated.

Shutdown Scenario No. 1

Two shutdown scenarios have been identified. The first scenario, consistent with the City's advertised bid package, would impact water supply to the Barriers for about one month as follows:

Week	Activity
1	valve closure operations initiated
2	all valves closed and supply halted for pipeline tie-in
3	valve opening operations initiated after tie-in completed
4	valve opening operations completed and operations returned to normal

The above schedule includes seven working days of complete supply shutdown and a curtailment of supply for valve operations during the week preceding and week following the shutdown. However, the impact may extend beyond four weeks if the contractor does not complete the tie-in within the seven working days, or if valve operations by the County are delayed. The bid documents did not include any language to penalize the contractor if the tie-in is not completed within a timely fashion.

Shutdown Scenario No. 2

The City is investigating the possibility of requesting that the County's water supply pipeline to the Barrier be shutdown for the majority of the construction period during which time the City would supply water to the Barrier through its potable system. In such case, the City would charge the recycled water rate to the Water Replenishment District, though potable water would be supplied.

This scenario presents a potential overall construction cost savings to the City. By taking the County's Barrier pipeline out of service, the ease of construction greatly increases that may result in a credit being issued by the contractor to the City. This scenario also addresses potential concerns about safely protecting in place the Barrier supply line during construction.

Recycled Water Impacts

Under this scenario, there will be no recycled water deliveries to the Seawater Barrier for up to two years and supply to the Barrier would be on 100% potable water until the Douglas Street improvements are completed. Additionally, West Basin's Phase IV Expanded Membrane Treatment System to the Barrier would need to be stored away or utilized for Title 22 treatment to keep the membranes from fouling.

Alternative Being Sought

Staff has been meeting with the City concerning the shutdown scenarios. Staff is pursuing an alternative that will still meet the City's objectives and yet be more favorable to West Basin's goal of maximizing recycled water usage whenever possible.

FISCAL IMPACTS:

Under Scenario No. 1, about 800 acre-feet (AF) of water delivery to the Barrier would be lost (\$272,000 in recycled water revenue and \$218,000 in potable revenue) during the four week period.

Under Scenario No. 2, an 18-month shutdown would result in projected recycled water sales loss of \$8.2 million. Approximately 12,000 AF of replacement potable water would be provided to the Barrier.

ENVIRONMENTAL COMPLIANCE:

Not required.

COMMITTEE STATUS:

The item was reviewed by the Water Resources Committee on July 14, 2005 and was agendaized to the July 25, 2005 Board meeting as information for discussion.

RECOMMENDED MOTION:

This item is for information only.

EXHIBITS:

None.