

WEST BASIN MUNICIPAL WATER DISTRICT**JULY 2, 2002 – Water Resources**

McDonald, Little

JULY 22, 2002 – Board Meeting

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INFORMATION CALENDAR

HYPERION SECONDARY EFFLUENT PUMPING CAPACITY EXPANSIONSUMMARY

Secondary effluent is pumped to the West Basin Water Recycling Plant from the Hyperion Wastewater Treatment Plant (Hyperion) through West Basin's Hyperion Secondary Effluent Pump Station (HSE Pump Station) and a 60-inch diameter transmission main. Currently the Water Recycling Plant requires deliveries of secondary effluent of up to 32 MGD. This number is expected to increase in the near future with the expansion of the West Basin Water Recycling System.

Though West Basin's secondary effluent force main has been sized for maximum deliveries of 120 MGD, the existing HSE Pump Station (now fully built-out) has a reliable pumping capacity of 51 MGD. Staff estimates that within three years, West Basin's demand for secondary effluent from Hyperion will exceed the current capacity of the existing HSE Pump Station. It is staff's recommendation to begin the pre-design effort to secure the means to supply additional secondary effluent to the Water Recycling Plant at this time.

Staff has begun evaluating alternatives for expanding the secondary effluent pumping capabilities as well as improved system reliability. Preliminary analysis indicates that an additional 72 MGD of pumping capacity will be required to meet the Water Recycling Plant's ultimate demand projections. Staff met with the Hyperion Plant Manager and other Hyperion staff on June 11, 2002 to discuss potential alternatives for constructing another secondary effluent pump station. Given the lack of available land near Hyperion, alternatives within and adjacent to Hyperion property were considered. Described below are some of the alternatives considered at this meeting, along with some of the challenges and benefits associated with each alternative:

Alternative No 1 – Expand the Existing West Basin Secondary Effluent Pump Station:

Expanding the existing Secondary Effluent Pump Station would require the acquisition of additional property from Hyperion, as well as a major rework of the existing discharge manifold. Space limitations are complicated by the issue of maintaining the flow of secondary effluent to the Water Recycling Plant.

Alternative No 2 – Construct Pump Station within Scattergood Generating Station:

This option consists of procuring property rights to pipe effluent to and from a new pump station to be built somewhere within the Scattergood Electrical Generating Station, owned and operated by LADWP. This pump station could be below grade, potentially below a parking lot near the existing HSE Pump Station. Coordination from multiple agencies would be required, including Hyperion, the LADWP, and the Coastal Commission, to name a few.

Alternative No 3 – Construct New Pump Station in Hyperion:

A new pump station could be constructed within Hyperion, such that the effluent channels with the higher quality effluent could be pumped into the West Basin secondary effluent force main, then to the Water Recycling Plant. With available property at a premium, Hyperion staff did not have any suggestions for locating such a facility within the Plant.

Alternative No 4 - Utilize Existing Service Water Pump Station:

An existing Service Water Pump Station (located inside Hyperion) pumps disinfected secondary effluent for use within Hyperion. These pumps are high-volume low-head type pumps (10,000 gpm @12 psi head) that would need to be retrofitted. A challenge associated with this alternative is retrofitting an operating facility.

Alternative No 5 - Utilize "Old" Service Water Pump Station:

Hyperion staff brought up the potential of utilizing a de-commissioned Service Water Pump Station. Hyperion staff recalled this station having a 48-inch discharge header (similar to the discharge manifold of the existing West Basin HSE Pump Station). This alternative appears feasible, as the facility was not in use. The automatic strainers would need to be removed from the system and replaced with equipment that is more suitable.

Alternative No 6 – Construct Pump Station on Dockweiler Beach:

This option consists of procuring property rights to pipe effluent to and from a new subterranean pump station to be built somewhere within Dockweiler Beach, potentially below a parking lot. Coordination from multiple agencies would be required, including Hyperion, the State of California Parks, County of Los Angeles, and the Coastal Commission, to name a few.

Staff is currently preparing a "Request for Proposals" (RFP) to retain engineering services for the preparation of a Pre-Design/Feasibility Study to further evaluate these alternatives and provide a recommendation that will ultimately serve a basis to develop detailed design documents. The results of this RFP will be presented to the Board at the August 2002 meeting along with a recommendation from staff.

FISCAL IMPACTS

Funds for the engineering phase of this work are included in the fiscal year 2002-03 budget.

ENVIRONMENTAL COMPLIANCE

Environmental compliance measures will be address as part of the project pre-design effort.

COMMITTEE STATUS

This Item was reviewed at the Water Resources Committee meeting on July 2, 2002 and agendized to the July 22, 2002 Board meeting as information.

RECOMMENDED MOTION

This Item is for information only.

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