

SEWER AUTHORITY MID-COASTSIDE
Staff Report

Subject / Title

Receive Report And Possibly Take Action On the Wet Weather Flow Management Program (WWFMP) Project

Staff Recommendation:

Receive Report And Possibly Take Action on the WWFMP Project

Fiscal Impact:

None.

Discussion/Report:

Status

Work continues on the preliminary design for the 205,000 gallon offline storage facility at Burnham strip. The site survey has been completed and was received on August 3, 2009. The surveyor's site survey encompasses the necessary area on the Burnham Strip property where major excavation will take place. Data still needed are the elevations of the adjacent manholes directly upstream of Portola Pump Station. These sections are part of the GSD collection system and have been known to overflow. These manholes will be surveyed and tied in to the existing survey.

The geotechnical investigation is currently underway by Romig Engineers. The Phase 1 assessment is complete and has been reviewed (a copy will be available for review at the meeting). This assessment showed no significant contamination at the Burnham strip site. The geotechnical field work has also been completed. The report will provide information on soil suitability, structural criteria for foundations and recommendations for placing large diameter storage pipes. The report should be completed in approximately two weeks.

Work continues on the Coastal Development Permit (CDP) with the San Mateo County Planning Department.

Conceptual Layout

At present, the layout for the current design would place five parallel 300-foot-long, 60-inch-diameter reinforced concrete pipes (RCP) in the field at the Burnham Strip property. Placing five pipes would observe the 100-foot buffer zone from the existing natural drainage ditch as required by the adopted Mitigated Negative Declaration (MND) for the project. The pipes would be sloped at 0.5 percent towards a junction box that would then drain into a new manhole in Obispo Road and from there tie-in to the existing manhole adjacent to Portola Pump Station. This configuration would allow self draining and filling.

The junction structure would be constructed of reinforced concrete. The invert or floor of the junction box would be level with the invert of the RCP at the entrance to the storage pipes and would also be equal to the invert of the 24-inch diameter inlet/outlet pipe. This would allow the pipes to drain completely when not in use. A hatch would allow access to the inside of the junction box. A gate would be installed on the 24-inch diameter pipe to close off the storage facility when needed.

The storage facility would essentially function as an extension of the wet well at Portola Pump Station. During wet weather flows it would fill naturally from the rising hydraulic head. All hydraulically connected manholes upstream would be above the maximum water level in the 60 inch RCP pipes or converted to accept surcharges. This would prevent overflowing of adjacent manholes when the pipes have reached capacity. Air release valves would also be placed at the high ends of each 60 inch RCP pipe to allow air to escape as the structure fills. Draining would occur by gravity to the interceptor pipes leading into Portola Pump Station once the level in the wet well has subsided.

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