

Project: 831730 - WPCP Oxidation Pond Levee Rehabilitation

Category:	Capital	Project Type:	Wastewater	Project Manager:	Leonard Espinoza
Year Identified:	2016	Project Phase:	Implementation	Project Coordinator:	Leonard Espinoza
Est. Completion Year:	Ongoing	Department:	270 - Environmental Services	Fund - Sub-Fund:	6085 - Wastewater Infrastructure Subfund

Project Description/Scope/Purpose:

The Water Pollution Control Plant (WPCP) Oxidation Pond Levee Rehabilitation project provides funding for site assessments, weed abatement, levee repairs, levee maintenance, levee road maintenance, and other levee related work to keep this critical asset sound for the next 20 years. These levees form the containment, flow paths, and pumping structures that make-up the WPCP Secondary Treatment Process. These levees and the associated roads allow WPCP Operations and Maintenance staff access to critical wastewater treatment equipment. Additionally, these levee roads allow the public to enjoy access to the lower south bay slough systems. Lastly, these Levees keep the Bay and Storm water from entering the WPCP Secondary Treatment process, it is imperative that regular maintenance and levee related projects are conducted in manner that keeps the WPCP Secondary Treatment system viable for the next two decades.

The oxidation ponds are contained by approximately eight miles of earthen levees formed by clamshell dredging and compaction. The WPCP levee system has not had any significant rehabilitation since the ponds were commissioned in the late 1960s. These eight miles of levees contain approximately 440 acres of Ponds used in the WPCP Secondary Treatment Process and have been subject to significant erosion, subsidence, footing loss, inundation of vegetation, blockage of conveyance systems, severe potholing, and rodent derived failures.

The network of levees has become significantly overgrown with emergent and established vegetation, placing increased risk of damaging pumping equipment when mats dislodge. The proposed weed abatement will remove all vegetation (estimated at approximately eight acres) from the levees and manage regrowth overtime. Removal of the vegetation is required to expose areas of significant erosion along the levees to aid levee maintenance repair efforts.

Project Evaluation and Analysis:

A City-wide condition assessment study was conducted of City structures. WPCP oxidation pond levees were included in this study. Areas along the levees were identified for repair in this condition assessment study. The information in the condition assessment was used to create the WPCP Pond Levee Operations and Maintenance manual. Rehabilitation projects may include, but is not limited to, structurally reinforcing the levees, repairing rodent breaches, cracks, removing weeds and raising subsided sections of the levees. Public Works resources are not anticipated to be needed. On-call engineering firms will provide construction management support and outside contractors will perform the repair work. Segments with the highest likelihood of impact will be given priority.

Fiscal Impact:

Initial cost estimate indicated up to \$27 million would be needed for all repairs identified. The budget will be adjusted based on actual construction costs. This project is funded by the Wastewater Management Fund.

Funding Sources:

Wastewater Management Fund

Plans and Goals:

EM - Environmental Management - EM-7: Effective Wastewater Treatment

EM - Environmental Management - EM-8: Protection of Creeks and Bay

Project Financial Summary

	Project Costs	Revenues	Transfers In	Operating Costs
Prior Actual	797,161	-	-	-
2021 - 22	6,178,665	-	-	-
2022 - 23	495,013	-	-	-
2023 - 24	482,828	-	-	-
2024 - 25	427,500	-	-	-
2025 - 26	32,914	-	-	-
2026 - 27	123,233	-	-	-
2027 - 28	35,601	-	-	-
2028 - 29	37,025	-	-	-
2029 - 30	38,505	-	-	-
2030 - 31	40,046	-	-	-
2031 - 32	149,932	-	-	-
2032 - 33	43,313	-	-	-
2033 - 34	45,047	-	-	-
2034 - 35	46,848	-	-	-
2035 - 36	48,722	-	-	-
2036 - 37	182,415	-	-	-
2037 - 38	189,711	-	-	-
2038 - 39	197,299	-	-	-
2039 - 40	56,998	-	-	-
2040 - 41	58,754	-	-	-
2041 - 42	61,104	-	-	-
20 Year Total	2,792,809	-	-	-
Grand Total	9,768,635	-	-	-