

CITY OF COOS BAY CITY COUNCIL
Agenda Staff Report

MEETING DATE	AGENDA ITEM NUMBER
June 17, 2014	

TO: Mayor Shoji and City Councilors

FROM: Jim Hossley, Public Works & Development Director
Jennifer Wirsing, Engineering Service Coordinator



THROUGH: Rodger Craddock, City Manager *see*

ISSUE: Emergency Replacement of Mechanical Bar Screen for Plant 1

BACKGROUND:

Plant 1 was upgraded in the early 1980s, at that time a mechanical bar screen was installed at the headworks. The bar screen is used to remove large objects such as rags, plastics bottles, bricks, solids, and toy action figures from the waste stream entering the treatment plant. Bar screens are vital to the successful operation of a plant, they reduce the damage to valves, pumps, and other appurtenances. Floatables are also removed so they do not end up in the primary or aeration tanks.

At the end of May of this year, the mechanical bar screen came off its track and was damaged. Upon further investigation it was determined that major corrosion of both the tracks and the apparatus have deteriorated beyond repair. Because of this failure, operators have to "rake" the bar screen and remove the debris described above manually. This has to be done several times a day, seven days a week. During the summer, this can be achieved. However, when the rainy season is upon us the operators have serious concerns with keeping up with the flows if they have to maintain the bar screen manually. If the bar screen is not kept free of debris on a regular basis it will interfere with the treatment process and has the potential to cause damage to valves, pumps, and other appurtenances. Because the failure of the mechanical bar screen may cause the Plant to exceed permit limits, this has been deemed an emergency project.

Per the 20-year takedown list, the Plant is scheduled for an upgrade in 2019. A mechanical bar screen is designed for the ultimate 20-year build out flow rate for the project. In 2019, when the plant is upgraded, calculations will be performed to size a new mechanical bar screen that will be designed for the new 20-year build out flow rate.

City Staff has coordinated with the wastewater contractor, CH2M HILL-OMI, and two alternatives were analyzed; 1) Purchase a brand new mechanical bar screen from a factory and 2) Manufacture and purchase parts to rebuild the mechanical bar screen. The purchase, delivery, and installation of a brand new mechanical bar screen (Option 1) will most likely exceed \$200,000. Upon investigation of Option 2, it was determined that the City could rebuild the bar screen for an amount not to exceed \$100,000.

Option 2 has four components; 1) A crane to remove and replace the mechanical bar screen, 2) Purchase of a motor to operate the bar screen, 3) Purchase of the rack and pinion, and 4) Manufacturing of necessary parts (tracks and sidewalls). Currently Staff is working with our

wastewater contractors to obtain quotes that meet the City's procurement requirements for Option 2. All of the quotes had not been obtained at the time this Staff Report was written but will be available for review and approval by June 17, 2014 (the night of the Council Meeting).

ADVANTAGES:

Rebuilding the mechanical bar screen is a more cost effective option than purchasing a new one, especially since whatever is purchased or rebuilt today will be replaced at the next upgrade. Rebuilding the bar screen will help ensure that treatment process is not interfered with during the rainy season and thus eliminate the potential for permit violations, and fines. The rebuilt bar screen has the potential of be sold to another treatment plant when Plant #1 is upgraded.

DISADVANTAGES:

Other than cost staff sees none.

BUDGET IMPLICATIONS:

Based on the operator's investigation, it is anticipated that the rebuilding of the mechanical bar screen will not exceed \$100,000. It is recommended that the funds to rebuild the mechanical bar screen be obtained from the Wastewater Emergency fund, 29-810-530-3010.

RELATED CITY GOAL:

Infrastructure and Services: To maintain and improve the City's physical infrastructure and provide quality services for current and future citizens.

ACTION REQUESTED:

If it pleases the City Council, approve the purchase to rebuild the mechanical bar screen for Plant 1 for an amount not to exceed \$100,000.