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WATER POLLUTION CONTROL

MEMORANDUM

To: Gregg Mandsager, City Administrator

CC: Nancy Lueck, Finance Director
Fran Donelson, Secretary

From: Jon Koch, WPCP Director

Date: August 10, 2017

Re: Papoose Lift Station Bar Screen Rake Assembly

INTRODUCTION: The bar screen rake assembly at the Papoose Lift Station on the riverfront was damaged during heavy rains this summer and needs to be replaced. The manufacturer, Vulcan Industries, can replace the entire assembly for \$22,396.00 delivered. Plant staff will install the assembly and use parts that were not damaged to complete the project.

BACKGROUND: During several heavy rain events, construction debris including man sand, gravel and bricks overwhelmed the Papoose Creek Lift Station. The bar screen rake assembly that runs down a track into the water to clear debris from the screen was not able to handle the amount of debris on the screen and was bent. The screen has been in place since 2008 and routinely removes creek sand from upstream but was not designed for the heavier man sand, gravel and bricks which is assumed came from construction on Mississippi Drive. There are several fail safe mechanisms that should prevent the machine from putting undo stress on the assembly but they did not fully protect it in this instance. The sensitivity of these protections will be changed for future installations. WPCP staff was able to remove the rake assembly and replace several parts to get the screen functioning for several cleaning events a day but the bearings and shafts are already showing wear and will not last long. A new rake assembly will be put in and the damaged one sent back to Vulcan to be repaired as a back-up. Vulcan estimates the cost of a re-built assembly will not exceed \$10,000.00 but will not have a final estimate until the damaged screen is evaluated in their shop. These are non-budgeted emergency repairs that will be taken from the Operations and Maintenance Budget with possible amendment later.

RECOMMENDATION/RATIONALE: City staff recommend issuing a PO to Vulcan Industries in the amount of \$22,396.00 for a new bar screen rake assembly at the Papoose Creek Lift Station.