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Department of Utilities
Wastewater Treatment Plant
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To: Chairperson William Siebers and Members of the Finance Committee

From: Utilities Deputy Director, Chris Stempa

Date: January 29, 2022

Re: **Action Item:** Approve positive fund balance transfer of \$38,000 from the 2021 Secondary Clarifier Drive Removal, Rebuild, and Reinstallation Project

Action Item: Award the Sole Source Purchase of Primary Sludge Pump through WasteCorp Pump in the amount of \$28,200

BACKGROUND:

The Appleton Wastewater Treatment Plant (AWWTP) utilizes four piston style pumps to remove sludge which settles and is collected at the base of each of the six circular primary clarifiers. Only one these the primary sludge pump remains from the early 1980's. Following mechanical failure in 2021, the adjacent redundant pump, of the same vintage, was upgraded with a new direct drive style unit. Now the other pump requires the same consideration for either replacement or rebuild.

The cost to procure the necessary original equipment manufacturer (OEM) replacement components as part of a wholesale rebuild totals approximately \$18,000. The considerations with a rebuild option on this particular style pump is the age (42 years old), potential future component obsolesce, and the cost associated with rebuilding vs. replacement. The risk of undesirable gap tolerances where new piston parts interact with older existing parts/pieces would decrease pumping efficiency and increase wear potential, contributing to a domino effect of component failure. Transitioning to the newer, more efficient OEM style replacement pump identical to the one procured in 2021 would cost \$28,200. The replacement unit will match up to existing pipe connections (surge tanks and checks) but would require replacement of the concrete pump base. The replacement pump is powered by a direct drive motor and enclosed "euro" style gear box instead of the existing belt driven large gear assembly. The modern design would not only run quieter but operate more efficiently.

RECOMMENDATION:

To facilitate the primary sludge pump replacement work, the Utilities Department requests a positive fund balance transfer of \$38,000 from the 2021 Secondary Clarifier Drive Removal, Rebuild, and Reinstallation Project. These funds would be used for the sole source purchase of a new primary sludge pump through WasteCorp. Dollars outside of sole source purchase would be applied to contractor fees associated with removal and reinstallation services.

If you have any questions or require additional information regarding this project please contact Chris Stempa at 920-832-5945.