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MEMORANDUM

WATER & RESOURCE RECOVERY FACILITY

To: Gregg Mandsager, City Administrator

CC: Nancy Lueck, Finance Director  
Cinda Hilger, Secretary

From: Jon Koch, WRRF Director

Date: August 13, 2019

Re: Membrane Disc Diffusers Purchase

**INTRODUCTION:** The WRRF has received a quote from Xylem Water Solutions for 5000 9" membrane disc diffusers for \$22,500.00 to replace all membranes in both aeration tanks. Xylem is the only manufacturer of these membranes so no other quotes are available. This is unbudgeted but will be an offset purchase for not doing the approved Roughing Filter Top Layer capital item for \$113,000.00.

**BACKGROUND:** The WRRF installed the new aeration system in 2009 which changed air to the basins from mixers to diffused air through round membranes attached to PVC pipe laid out along the bottom of the tanks. There are 2500 9" round membranes for each of the two basins. Xylem recommends replacement of the membranes every five years. In 2014 we drained the tanks and cleaned the membranes while doing other repairs but only replaced a few damaged membranes. The membranes are beginning to calcify around the air openings and are becoming inefficient. The membranes will be 10 years old when we replace them this year.

The top layer of the roughing filter was budgeted for replacement based on the conditions we could see during the winter of 2018. During the spring of 2019 the top layer was removed by City staff. It was then determined that the next layer was in very good condition and that the top layer did not need to be replaced. The \$113,000.00 budgeted will be used for other projects as the need arises. The entire roughing filter media is scheduled for complete replacement in approximately 10 years.

**RECOMMENDATION/RATIONALE:** Staff recommends the purchase of 5000 9" Silver Series II Membrane Disc Diffusers from Xylem Water Solutions for \$22,750.00 utilizing unused budgeted funds for the top layer of the roughing filter.