



"...meeting community needs...enhancing quality of life."

Department of Utilities
Wastewater Treatment Plant
2006 E Newberry Street
Appleton, WI 54915
920-832-5945 tel.
920-832-5949 fax

TO: Chairperson Vered Meltzer and Members of the Utilities Committee

FROM: Chris Stempa, Utilities Deputy Director

DATE: March 17, 2023

RE: *Approve: Award purchase of Primary Digester Circulation Pump from Crane Engineering in the amount of \$27,774*

BACKGROUND:

The Appleton Wastewater Treatment Plant (AWWTP) operates two 2.2-million gallon primary anaerobic digesters which biologically convert organic materials in sludges to methane and carbon dioxide. The contents of each digester is circulated by dedicated 1,200 gallon per minute capacity rated centrifugal pumps. The pump operation of these pumps is critical for sustaining contact time between microbes and incoming feed wastes (includes primary sludge, thickened waste sludge, and receiving station wastes). The previously described stabilization process also reduce the volume of sludge solids that is subsequently dewatered and then land applied per our DNR Wisconsin Pollutant Discharge Elimination System (WPDES) permit. In addition to constant circulation facilitating contact time and permit compliance, it prevents the settling of heavier solids which would otherwise occur under stagnant conditions. If that were to occur, irreversible plugging of the circulation piping could occur.

The AWWTP inventory does not currently have a spare pump on hand in the event of a catastrophic failure. Given the criticality of this equipment to operation and compliance, quotes were solicited from regional distributors to secure a spare unit.

QUOTATIONS

Four reputable pump distributors provided quotes for an in-kind replacement pump. However, only two could match the specifications of the existing Wemco® circulation pump which included a stainless-steel vs. carbon steel impeller flange. It was also specified that the replacement pump would not require any modification as part of installation. Crane Engineering provided the least cost quote which met the required specifications. The result of the quotation process is summarized in Table 1.

Table 1: Digester Circulation Pump Quotes

Vendor	Quote	Comment
Crane Engineering	\$27,774	In-kind replacement
LAI, Ltd	\$28,500	In-kind replacement
Trillium	\$20,000	Did not meet required specifications
William & Reed	\$16,338	Did not meet required specifications

RECOMMNDATION

Approval of primary digester circulation pump from Crane Engineering in the amount of \$27,774

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