



DEPARTMENT OF  
**UTILITIES**

**Department of Utilities**  
Wastewater Treatment Plant  
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## MEMORANDUM

**Date:** September 5, 2024  
**To:** Chairperson Brad Firkus and Members of the Finance Committee  
**CC:** Ryan Rice, Deputy Director of Utilities  
Kelli Rindt, Enterprise Accounting Fund Manager  
**From:** Chris Stempa, Director of Utilities  
**Subject:** **Finance Committee Action: Sole Source Engineering Services Contract to McMahon as part of the AWWTP Hauled Waste Station Tank Upgrades in the amount of \$45,700 with a 10% contingency of \$4,570 for a total not to exceed \$50,270**

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### BACKGROUND:

The Appleton Wastewater Treatment Plant (AWWTP) Hauled Waste Program generates approximately \$2.5 million dollars annually. The wastes hauled to the AWWTP are primarily generated outside the Appleton Sewer Service Area include leachate and various food process wastes. High strength wastes (e.g. cheese whey, brine, and wash water) are discharged to converted Diffused Air Floatation (DAF) tanks that provide storage and equalization prior being pumped to anaerobic digestion for treatment. The hauled wastes treated in the primary anaerobic digesters generate a substantial amount of methane or biogas which in turn fuels on site boilers that produce building and process heat. This renewable energy source offsets purchased natural gas which translates in an annual savings of approximately \$500,000 per year.

Evidence of coating deterioration has been observed in the original carbon steel receiving station tank (1998 vintage). A one-foot-thick sloped concrete floor used to mitigate solids deposition at tank base still resides in this tank. The protective concrete epoxy coating has also shown signs of deterioration which has resulted in excessive spalling of the underlying concrete. Temporary spot repairs (external patches) were completed on one of the active DAF tanks in 2023. Coating deterioration, the inability to homogenize high strength hauled waste, the lack redundancy (only one location to discharge high strength waste), and the absence of hauled waste tank covers (presently open tanks) incentivized staff to find an opportunity to reconcile needs as part of parallel project occurring in L-Building associated with HVAC improvements. McMahon Associates, Inc. (McMahon) is presently contracted to complete HVAC upgrades at the AWWTP L-Building and was asked to provide a proposal for this work as part of an independent contract.

### PROPOSAL

McMahon was asked to provide a proposal for professional engineering services that would deliver the following deliverables:

1. Provide new hauled-in waste loading pipe on opposite side of building.

2. Provide baffle (rock/grit trap) in Hauled-In-Waste Receiving Tank #1.
3. Add submersible mixers in the two exclusive hauled-in-waste tanks.
  - a. Provide provisions for two in each tank, only install one with project.
4. Provide covers on the two exclusive hauled-in-waste tanks.
5. Modify hauled-in waste inlet pipes to reduce splashing.
6. Provide the following Hauled-In-Waste Receiving Tank #1 Improvements:
  - a. Remove concrete floor
  - b. Recoat interior of tank
7. Provide the following Dissolved Air Flootation Thickener (DAF) #3 (current operating DAF) Improvements:
  - a. Blast and coat interior of tank
  - b. Replace baffle wall
  - c. Patch corroded steel on west side of tank near the subnatant trough
8. Provide a new pipe connection between Receiving Tank #2 and DAFT #2.

The McMahon proposal detailed each aspect of the preliminary design work and the associated services required to provide the necessary deliverables that would allow AWWTP staff to advance the needed repairs and upgrades concurrently with the L-Building HVAC work. The proposed cost of design, bidding, and construction management phase services totaled \$45,700.

## **JUSTIFICATION**

The AWWTP budget has available funds from the Primary Clarifiers #1-#4 Rehabilitation Project to cover the proposed \$45,700 in professional engineering services. McMahon's fee is consistent with the scope of work required to provide the necessary deliverables outlined in their proposal. McMahon has institutional knowledge dating back to the original 1998 construction of the receiving station tanks and offload containment area. They were subsequently involved with alternative evaluations, operations and maintenance, and capital improvements program projects in 2010, 2012, 2014, and 2018 that pertained to L-Building DAF processes and Hauled Waste Program infrastructure. If this sole source contract with McMahon is approved, the intent would be to fold the plans and specs associated with this scope of work into the L-Building HVAC project. This would facilitate a single public bid process and one construction contract. Savings realized by consolidating those efforts would also be realized by streamlining construction management services and staff efforts to facilitate construction.

The McMahon project manager that is assigned to the current HVAC project work and this proposed scope of work is the same lead engineer assigned to the projects listed from 2010 through 2018. This individual has extensive experience at the AWWTP dating back to the late 1990's including hundreds of other Midwest municipal wastewater treatment projects. He and his team are extremely familiar with the AWWTP and are trusted to provide the services necessary for a successful project. That statement is supported by other recent contracts the city has engaged in with McMahon in recent years including currently active contracts.

## **RECOMMENDATION:**

I am recommending the approval of a sole source engineering service contract to McMahon as part of the AWWTP Hauled Waste Station Tank Upgrades in the amount of \$45,700 with a 10% contingency of \$4,570 for a total not to exceed \$50,270

Finance Committee Memorandum

Sole Source Engineering Services Contract to McMahon: L-Building

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

**Encl:** Finance Department Sole Source Request Form