



DEPARTMENT OF  
**UTILITIES**

**Department of Utilities**  
Wastewater Treatment Plant  
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[www.appleton.org/government/utilities](http://www.appleton.org/government/utilities)

## MEMORANDUM

**Date:** March 22, 2024

**To:** Chairperson Vered Meltzer

**CC:** Ryan Rice, Utilities Deputy Director / Interim Wastewater Operations Supervisor

**From:** Chris Stempa, Utilities Director

**Subject: Utilities Committee Action: Sole Source Purchase Award of Wash Press #3 Auger Assembly Replacement Equipment from Vulcan Industries in the amount of \$25,666 with a 10% contingency of \$2,566 for a project total not to exceed \$28,232**

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### BACKGROUND:

The first step in wastewater treatment is normally the removal of solids from the wastewater flow by some type of screening process. The mechanical fine screen equipment used at the Appleton Wastewater Treatment Plant (AWWTP) are designed to remove objects larger than 1/4 inch in diameter from raw wastewater entering the facility which protects downstream equipment and processes. The material removed from the fine screen is then conveyed to an integral wash press unit where it is flushed using reclaimed final effluent. That step removes organics which are further treated in downstream processes. The washed screenings are then compacted to dewater prior to being conveyed to a large roll off box which is ultimately sent to a landfill for final disposal.

In December 2022, the gear reducer on the #3 wash press unit failed. Maintenance staff discovered during the removal of the failed gear reducer that the auger assembly was also damaged. A replacement gear reducer was purchased in 2023 and a replacement auger assembly quote was solicited from Vulcan Industries. The lead time for a replacement auger assembly was 40 weeks at the time the quote was solicited while the associated replacement gear reducer was significantly less than that. Based on the excessive lead time of the auger, the decision was made to evaluate repair alternatives in lieu of procuring a new assembly. In October 2023 staff replaced the gear reducer and installed the repaired auger assembly to return the mechanical screen and wash press to service.

In February 2024, water was found leaking from the auger assembly. The investigation performed by Maintenance Specialist staff revealed a crack in the repaired auger shaft. Immediate steps were taken to remove and repair the auger assembly again, but the repairs were found to be short-lived. The auger shaft was found leaking water a second time the week of March 18<sup>th</sup> which is indicative that the repair failed again. The second failure demonstrates that the forces being applied to the auger during wash cycles exceed the tolerances of what a welded repair can support.

**JUSTIFICATION**

Vulcan Industries is the Original Equipment manufacturer (OEM) of the AWWTP wash press equipment. The replacement components being sought are specifically engineered for this wash press. No known alternative parts suppliers are available. Wash Press #3 is installed on the second largest capacity mechanical fine screen unit and critical to operations during high influent flow events. AWWTP staff desire to expedite appropriate repairs with OEM components to mitigate the potential risk of high influent flow hydraulic excursions to downstream treatment equipment and processes.

**RECOMMENDATION:**

I am requesting a sole source purchase award of wash press auger assembly replacement equipment from Vulcan Industries in the amount of \$25,666 with a 10% contingency of \$2,566 for a project total not to exceed \$28,232. Funding for the purchase would come from the AWWTP general O&M budget.

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

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



## SOLE SOURCE REQUEST

The undersigned certifies that the commodity/service shown below qualifies as a sole source request and meets one or more of the following requirements. The department has demonstrated, and the Purchasing Manager concurs that only one source exists, the price is equitable, and/or noncompetitive negotiation is in the best interests of the City.

- Unique, proprietary, or one-of-a-kind:** Specific commodity/service is required and available from only one source, giving the City a superior and necessary benefit that cannot be obtained from other sources.
- Inadequate competition:** Purchasing solicitation (bid, proposal, or quote) did not result in any qualified vendor responses and competition is determined to be inadequate.
- Health or Safety Concern:** When a health or safety concern exists that is **not** an immediate threat but needs to be addressed in a period that does not allow for formal competitive procurement procedures.
- Continuity of design:** Consistency with current commodity or service.
- Emergency procurement:** A risk of human suffering or substantial damage to real or personal property exists requiring immediate attention.
- Cooperative purchase:** Purchase from another governmental unit contract or state approved purchasing association.
- Other:** Description provided below

PROPOSED DETAILS
Requesting dept: Wastewater Treatment Plant
Product/service: Auger assembly
Vendor name: Vulcan Industries
Total cost: \$25,666

Justification and price quotation provided by the department, for the items to be considered and approved as a sole source purchase attached for review.

*Jenifer Huss*

3/21/2024

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Purchasing Manager

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Date