

COUNCIL ACTION FORM

SUBJECT: **WATER TREATMENT PLANT LIME POND UNDERDRAIN IMPROVEMENTS**

BACKGROUND:

The Water Treatment Plant is a lime softening plant. Lime residuals from the water softening process are stored and dewatered in large storage ponds. The material is removed annually and recycled by applying it to farm fields as an agricultural liming agent. The cost of the annual removal is based on the weight of the lime as removed including any remaining water. The storage ponds have underdrains that aid in dewatering and thus reduce the overall cost of lime removal. For FY 2020/21, the cost for lime removal is budgeted at \$381,900.

In 1997, a project was undertaken to improve the dewatering of the three oldest ponds and thus reduce the cost of disposal. Over time, these improvements have become plugged with fine lime particles and have been damaged due to the excavation of lime from the cells so that they are no longer operating as intended.



A lime pond cell after having one half of the contents excavated.

This project will consist of installing two additional underdrains down the mid-line of one pond. These new drains are expected to aid in the dewatering process. Staff plans to monitor the water content and removal costs after this project is completed to confirm that dewatering has improved. If the new underdrains prove not to be cost-effective, staff will forego similar improvements to the two other ponds included in the projected FY 2025/26 CIP.

City Council issued a Noticed to Bidders for this project on January 12, 2021. On February 10, 2021, bids were opened. Five bids were received and are summarized below.

Bidder	Total Project Bid
<i>Engineer's Estimate</i>	\$110,000.00
RW Excavating Solutions, LC	\$86,635.56
Ames Trenching & Excavating	\$86,900.00
Con-Struct, Inc.	\$90,210.00
Minturn, Inc.	\$97,450.00
On Track Construction, LLC	\$119,500.00

RW Excavating Solutions, LC is the lowest responsible bidder. As shown in the table above, four of the five bids received fell below the Engineer's Estimate. The FY 2020/21 CIP budget includes \$125,000 for Lime Lagoon Improvements. The project was designed in-house, so there are no engineering fees. As shown below, there is sufficient funding to accomplish this project.

<u>Project Budget</u>	
FY 2020/21 CIP	\$125,000.00
<u>Estimated Project Expenses</u>	
Construction Cost	86,635.56
<u>Contingency (10% of construction)</u>	<u>8,663.56</u>
Total Estimated Expense	\$ 95,299.12

ALTERNATIVES:

1. Award the Water Treatment Plant Lime Pond Underdrain Improvements Project to RW Excavating Solutions, LC of Prairie City, IA, in the amount of \$86,635.56.
2. Award the Water Treatment Plant Lime Pond Underdrain Improvements Project to one of the other bidders.
3. Do not award a contract. This would save capital costs, but would result in increased expenses in the operations budget as a result of hauling wetter lime residuals.

CITY MANAGER'S RECOMMENDED ACTION:

The lime pond underdrains are critical to the lime sludge dewatering process. Adding additional underdrains will improve the overall dewatering of the lime sludge. The project was budgeted in the FY 2020/21 CIP as a part of the Lime Lagoon Expansion Project. The lowest bid received was below the Engineer's Estimate and within the approved budget.

Therefore, it is the recommendation of the City Manager that the City Council adopt Alternative No. 1, as described above.