CITY OF
FAYETTEVILLE
ARKANSAS

MEETING AGENDA

Water, Sewer, and Solid Waste Committee

14 September 2021

5:30 P.M.

(Or immediately following Equipment Committee Session)

This is a Virtual Meeting

Committee: Chairman Mark Kinion; Council Member Sloan Scroggin, Council Member Teresa Turk, Council Member D'Andre Jones,

Copy to: Mayor Lioneld Jordan, Paul Becker, Kara Paxton, Susan Norton, Chris Brown, Alan Pugh, Terry Gulley, Peter Nierengarten, Jeff Coles, Brian Pugh, Mark Rogers, Corey Granderson, Aaron Watkins, Greg Weeks, Monty Sedlak, Nick Batker, Chris Hall

From: Tim Nyander, Utilities Director

CALL TO ORDER

ROLL CALL

UPDATES

OLD BUSINESS:

NEW BUSINESS:

1. **Rate Study Presentation**
Discussion by Black & Veatch Consultants about the City's proposed Water & Sewer Rate Study.

FOR DISCUSSION

2. **Aeration Mixer Bid Award**
In the last five years, the Utility has spent $234,756 in repairs to keep the Noland aeration mixers operable. The repairs are all from the same root cause failure. While the mixers keep biology and solids suspended for biological nutrient removal, fibrous material (rags) are introduced into the basins from the sanitary sewer and a portion of those rags will flow through preliminary screening. The rags become entangled on the mixer blades and create an unbalanced condition. This unbalance causes mechanical failure of bearings, gears and seals. Long term, it can lead to structural failure of metal supports and concrete.

The current mixers are vertical mixers with shafts and mixing blades suspended from the center of 12 anoxic basins. The attached picture represents an example of the problem. The first picture is from the project and the second picture represents the problem in the industry.

We are proposing horizontal mixers to replace the vertical mixers. The horizontal mixers are called “banana blade mixers because of the composition and shape of the blades. The blades are long, curved and rotate at a slow speed. The size of the blade creates excellent mixing of the basin and the shape does not accumulate rags. The rags cannot cling to the smooth blade. An additional benefit of the new mixers is the energy consumption. The old mixers are 5HP motors and the new mixers are 1.5HP motors. The energy consumption is less than one third of the old mixers. The current mixers are original equipment that was installed when the plant was constructed. They have reached their usable life, and the maintenance costs will continue to rise if the mixers are not replaced with the horizontal mixers.

On July 13th, 2021 the City of Fayetteville accepted sealed competitive bids for replacing six of the 12 Anoxic Mixers at the plant. Jack Tyler Engineering, Inc. submitted the best bid of $220,384 plus taxes. All bids are shown here:

Jack Tyler Engineering, Inc.	$220,384
Instrument & Supply, Inc.*	$151,980

*Instrument & Supply did not meet all the required specifications.

Staff is proposing replacing six mixers in 2021 and six mixers in 2022. The energy savings are estimated to be approximately $8,000 per year if 6 of the 12 mixers are replaced. This equipment qualifies for State tax exemption, and staff will request the tax exemption from the Arkansas Department of Finance and Administration.

Funds are available in the Plant Pumps and Equipment account within the Water & Sewer fund.

STAFF REQUESTS THIS BE FORWARDED TO THE CITY COUNCIL FOR CONSIDERATION FOR APPROVAL

3. South School Ave Waterline Replacement Design

The City’s 2017 Water Master Plan identified a hydraulic bottleneck in the City’s water distribution system along S. School Avenue in the vicinity of the Fulbright Expressway. Upgrading this line from an 8-inch Cast Iron to a 12-inch PVC pipe will improve system hydraulics into south Fayetteville, the airport, Greenland, and West Fork.

This project design consists of approximately 3,000 linear feet of 8-inch Cast Iron Pipe being replaced by 12-inch PVC pipe. In addition to hydraulic improvements, this improvement will reduce the likelihood and impacts of waterline leaks in the vicinity and along Willoughby Road. The 2017 Water Master Plan identified two feasible alternatives for relieving this bottleneck, however, the option along S. School Avenue presents the most economical option, and furthermore replaces an aging waterline. McClelland Consulting Engineers, Inc.

was selected for this project on March 30, 2021 at a formal engineering selection committee (RFQ 21-01, Selection #8).

Staff recommends approval of an Engineering Services Agreement with McClelland Consulting Engineers, Inc. for design of a waterline upgrade to relieve a bottleneck in S. School Avenue in an amount not to exceed $85,160.00. Funds are available in the Water System Rehabilitation/Replacement account.

STAFF REQUESTS THIS BE FORWARDED TO THE CITY COUNCIL FOR CONSIDERATION FOR APPROVAL

4. Skyler/Evening Shade/Willowbrook Service Line Replacement Design

Frequent water service line leaks, breaks, and associated repairs occur in the Skyler Place Subdivision (W. Skyler Dr., N. Willowbrook Dr., and N. Evening Shade Dr.). There have been over 50 of these repairs since 2012 which has led to the need for complete service line replacement throughout the neighborhood.

The existing service lines in this neighborhood are made from a plastic pipe material (PE tubing) which has displayed frequent breaking/leaking problems throughout West Fayetteville. The City changed requirements to prohibit this material several years ago, now requiring coated copper service lines. However, many of these plastic lines are still in place as they were prevalent in the 90's and 2000's. A formal engineering selection committee was held on March 30, 2021 and Olsson, Inc. was selected to perform these services (RFQ 21-01, Selection #7).

Staff recommends approval of an Engineering Services Agreement with Olsson, Inc. for design of water service line replacements in Skyler Place Subdivision in an amount not to exceed $31,420.00. Funds are available in the Water System Rehabilitation/Replacement account.

STAFF REQUESTS THIS BE FORWARDED TO THE CITY COUNCIL FOR CONSIDERATION FOR APPROVAL

5. Cultural Arts Corridor Utility Relocations Change Order

Phase 1 of the Cultural Arts Corridor project included $718,585.00 of water and sewer line reconstruction and relocation. Much of this work was located along West Avenue, with a smaller portion on Gregg Avenue, west of the Fay Jones park land. The intent of the utility scope was to replace old lines in order to prevent future disturbances to the streetscape improvements with typical repairs on aging lines. Work planned on Gregg Avenue included 310-feet of sanitary sewer reconstruction and 270-feet of waterline reconstruction.

During construction it was found that the sewer along Gregg Avenue would conflict with an existing natural gas line and would also impact many mature trees in adjacent property owners' yards. City Staff, Olsson Engineers, and the contractor met onsite to consider alternatives. The sewer is now planned to be constructed in the roadway, away from the gas line and trees. However, this will require the waterline to also be reconstructed for approximately 170-feet in order to maintain proper heath code separation distances from the sewer. The existing waterline is aging 6-inch cast iron and will benefit the utility to be replaced with 8-inch PVC. The change order price quoted from the contractor is $75,325.78.

Staff recommends approval of a change order with Oelke Construction Co. for additional water/sewer line replacement work necessary on Gregg Avenue in the amount of $75,325.78. Funds are available in the Water/Sewer Relocations – Bond Projects account.

STAFF REQUESTS THIS BE FORWARDED TO THE CITY COUNCIL FOR CONSIDERATION FOR APPROVAL

6. Lead Testing in Accordance with the Lead & Copper Rule

On June 10, the U.S. Environmental Protection Agency (EPA) signed a final rule to extend the effective date of the lead and copper rule revisions to December 16, 2021. This rule requires water suppliers to complete a comprehensive water service line inventory and begin a rotating five-year school and child-care facility water testing program to identify lead in plumbing systems.

The school testing program is targeted on grades K through 8, will require we take and analyze approximately 55 samples per year, and conduct an education program with school personnel. The Fayetteville water service area encompasses about 27 K-8 schools and 70 child-care facilities. High school testing may be done on request.

A link on the city's web page will be required to document testing accomplishments and results. The legislation requires that a lead water service line list be published by address. As these lead lines are located, mitigation steps are required, including water filtration. This is a huge undertaking and we are beginning efforts now to meet the October 16, 2024 deadline.

INFORMATION ONLY

7. Overview of WWTP Monthly Report

Discussion of July's Monthly WWTP Report

PRESENTATIONS

Proposed Water & Sewer Rate Study – Black & Veatch

ATTACHMENTS

Rate Study Presentation
Aeration Mixer Bid Tab
Mixer Pictures
S School Avenue Engineering Agreement
Skyler Engineering Agreement
Cultural Arts Corridor Change Order Plans
July WWTP Monthly Report

ADJOURN

Next Water, Sewer, Solid Waste Committee meets on Tuesday, October 12, 2021, 5:30 p.m.