



Water, Sewer, and Solid Waste Committee

April 9, 2019

5:30 P.M.

(Or immediately following Equipment Committee Session)

City Hall – Room 326

Committee: Chairman Mark Kinion; Council Member Sonia Gutierrez, Council Member Sloan Scroggin, Council Member Teresa Turk

Copy to: Mayor Lioneld Jordan, Don Marr, Paul Becker, Sondra Smith, Susan Norton, Chris Brown, Alan Pugh, Terry Gulley, Peter Nierengarten, Jeff Coles, Brian Pugh, Mark Rogers, Corey Granderson, Aaron Watkins, Greg Weeks, Mayo Miller, Tim Luther, John Turley

From: Tim Nyander, Utilities Director

CALL TO ORDER

ROLL CALL

OLD BUSINESS:

NEW BUSINESS:

1. Annual Sanitary Sewer Manhole Rehabilitation \$500,000.00

This is a new program to address aging sanitary sewer manhole infrastructure. Manholes that are no longer water-tight are a major source of *infiltration* from groundwater and *inflow* during storm events (called "I&I"). This I&I causes additional pumping, sanitary sewer overflows, and additional plant influent volume. Like the City's Cured-In-Place-Pipe contract, this rehabilitation project would be awarded based on lowest unit price bid items and work would be scheduled so as to spend approximately \$500,000.00 in 2019. The contract will be renewable on an annual basis for up to four renewal terms for a total of 5-years.

In 2016, RJN Group performed a Sewer System Evaluation Survey (SSES) on sewer basins SFM-05 and SFM-18/19. This survey included detailed inspection of all manholes within the basins and a line-by-line cost/benefit calculation for highest priority manhole rehabilitations. This list will be utilized to generate a "buffet" of options for manhole repair, based on the known needs of each manhole.

FOR INFORMATION ONLY

2. Noland Aerator Gearbox Rebuild (1 unit)

The Noland WWTP uses a biological nutrient removal system to treat the City's wastewater. Each of the two basins uses a series of six mixers and eight large mechanical aerators to provide the mixing and necessary oxygen for the microorganisms to treat the wastewater. In the past few years, eleven units (gearboxes) have been rebuilt with approximately one-half still needing to be evaluated for repair. Recently one of the mixers failed and was removed and sent to Automatic Engineering for disassembly, inspection and repair. At the time of preparing this agenda, the City has not received an inspection report nor a repair quote. It is estimated that the repairs would not exceed \$26,000.

Because it was necessary to have the certified repair facility disassemble the units to determine the extent of hidden and unknown damage to equipment already purchased, a bid waiver and/or formal sealed bidding is not necessary according to Arkansas Procurement Law R6:19-11-203, Subsection 14 (EE) "hidden or unknown damages." City Administration recommends approving the repair with Automatic Engineering.

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

3. Lift Station Controller Assemblies (12 Units)

A lift station controller activates pumps whenever it detects the lift station wet well is full and shuts them off whenever the wet well is pumped down and empty. The proposed Productivity 2000 (P2000) Controllers will allow several outdated lift-station controllers to be replaced with updated and serviceable technology. Additionally, transitioning more lift-stations to the P2000 Controllers models will increase over-all system standardization as P2000 system are used at the water stations. The cost is \$19,517.84 for 12 controllers.

FOR INFORMATION ONLY

4. Noland Influent KSB™ Pump Critical Spare Parts

The Noland Treatment Facility utilizes a series of nine pumps to feed influent through the treatment process. Under normal daily flow conditions, not all the influent pumps will be needed. However, there are certain high flow events, such as following large spring storms, which can demand the availability of all influent pumps. On-the-shelf availability of critical spare parts for the submersible pumps will minimize extended downtimes due to lengthy order times or limitations of influent pump capacity in the case of unexpected pump failure.

Pump Solutions, Inc. (Hot Springs AR), the region's certified KSB-brand pump representative recently submitted a quote of \$13,389.00 for a critical spare parts kit for the facility's KSB-brand 65 HP submersible pumps. The availability of critical spare parts will prevent extended downtimes in the case of an unexpected pump failure. Staff recommends the purchase of the proposed spare parts for the influent pump.

A budget adjustment from capital project No. 11010 Irrigation Reels – WWTP and 14018 Sewer Rehab-Ramsey and Overcrest will be necessary to fund the purchase of the critical spare parts kit. The budgeted funds being transferred are cost savings left over after completing the Irrigation Reels and the Ramsay-Overcrest project.

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

5. Replace Variable Frequency Drives at Westside Biological Basins (4 Units)

The Wastewater Treatment staff is currently working on transferring the biological process bio-unit reactors such that Bio-Units #3 & #4 will be those online for the foreseeable future.

The primary driver for the basin switch is to take Bio-Units #1 & #2 offline prior to completing electrical conduit repairs. Bio-Units #3 & #4 Aerators are operating off the older model, 18-pulse, VFD unit. The 18-pulse design is currently obsolete (replacement parts/repairs/services unavailable) leading to some operational issues such as non-functioning PLC screens and inability to adjust the equipment set-points to match site specific demands. Additionally, updated VFD technology has available a design that can be paired with an advanced passive filter that can significantly lower the Harmonic Noise Distortion of the Aerator drives, which translates to a minimized Power Factor value in terms of electrical facility charges.

The AP Filter-VFD Drive packages will bid out soon. The City is looking for a supplier to offer an on-site field technician to provide site specific programmable adjustments as part of VFD install/start-up.

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

6. Replace Clarifier Scum Pump at Noland (1 Unit)

The Noland Treatment Facility utilizes a series of four secondary clarifiers to remove floating scum and settleable solids following the biological treatment process and return it to the beginning of the treatment process for re-treatment

Recent inspections of a failed scum pump found the extent of normal wear damage extensive enough that full pump replacement is recommended over overhaul rebuild. JCI Industries, Inc out of Rogers, AR recently submitted a low bid of \$20,707.00 for replacement of the Tuthill-brand scum pump for the facility's secondary clarifier No. 4. Staff recommends purchase of the replacement scum pump for \$20,707.00 plus applicable taxes.

A budget adjustment from capital project No.11010 Irrigation Reels - WWTP will be necessary to fund this pump replacement. The budgeted funds being transferred are cost savings left over after completing the Irrigation Reels project.

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

7. Oxidation Exhaust Catalyst for Noland WWTP

The Noland Treatment Facility utilizes a 2,000-kilowatt Caterpillar-brand generator system for emergency power and load-shedding management during the summer season. Recent inspections found the generator's diesel oxidation catalyst in need of replacement to meet EPA emissions standards. The catalyst system was initially installed in 2013 in response to EPA amendments to the National Emissions Standards for Hazardous Air Pollution for Reciprocal Internal Combustion Engines (RICE). The purpose of the exhaust catalyst system is to reduce the amount of carbon monoxide released in the atmosphere. Replacement of the exhaust catalyst and completion of emissions testing will ensure compliance with air quality standards ahead of regular generator operation for load-shedding management.

Riggs Power Systems is the region's certified Caterpillar dealer and service representative, and they have extensive experience servicing the Noland Facility's generator system. Riggs Power Systems recently submitted a quote in the amount of \$31,503.35 plus tax for replacement of the exhaust catalyst and completion of EPA emissions testing.

A budget adjustment from capital project No.11010 Irrigation Reels - WWTP will be necessary to fund this catalyst replacement and completion of the emissions testing. The budgeted funds being transferred is cost savings left over after completing the Irrigation Reels project.

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

Capital Projects Update

Number	Project Description	Contractor	Cost	% Complete
1	Water Audit (loss) Study	Black & Veatch	\$83,691	100%
2	Annual Cured in Place Pipe (sewer) contract (2019)	Insituform	\$528,694	0%
3	Gregg, Poplar and Easy Street Sewer Improvements (Construction)	Goodwin & Goodwin	\$562,862	100%
4	Electrical Improvements for the Noland WWTP (Design)	Allgeier Martin	\$480,049	93%
5	Utility Relocates Hwy 16 (Design)	McClelland	\$117,859	90%
6	Kitty Creek Sewer Line Project (Design)	McClelland	\$250,793	90%
7	Goshen/Benson Mtn. Water Tank Improvements (Design)	Hawkins-Weir	\$133,980	95%
8	I-49/Wedington Interchange water and sewer relocations (Design)	Burns & McDonnell	\$203,269	90%
9	Hickory/Skelton Water Line Replacement (Construction)	Tri-Star	\$743,492	76%
10	2018 Water Tank inspection and water quality analysis (Study)	Garver	\$154,000	85%
11	North College Water Main Evaluation (Study)	McClelland	\$128,930	40%
12	East Service Area water system (Design)	MWY/Olsson	\$630,635	67%
13	Hwy 170 Water & Sewer Relocations, Farmington (Study)	Garver	\$19,900	100%
14	Rupple Road Water Line – Owl Creek and South (Construction)	Goodwin & Goodwin	\$245,082	80%
15	Fulbright/Gregg Sewer Main Replacement (Study)	Hawkins-Weir	\$19,900	45%
16	Masters Lift Station Removal (Construction)	Kajacs	\$1,067,000	18%
17	Sang Avenue/Pleasant Woods/Maple-Oliver (Construction - Pre Bid)	Kajacs	\$1,458,000	0%

PRESENTATIONS

Manhole Rehabilitation – Corey Granderson

ATTACHMENTS

MH Rehab Pictures

MH Rehab Specs

LS Controller Quote

Noland Clarifier Scum Pump

Emission Catalyst Quote

ADJOURN

Next Water, Sewer, Solid Waste Committee meets on
Tuesday, May 14th, 2019, 5:30 p.m., Room 326.