

MINUTES
MURFREESBORO WATER RESOURCES BOARD
May 25, 2021

The Murfreesboro Water Resources Board met on Tuesday, May 25, 2021 in the conference room at the Operations and Maintenance Building, 1725 S. Church Street. Present at the meeting were Board members: Dr. Al Carter, Mr. Ron Crabtree, Mr. Brian Kidd, Ms. Sandra Trail, and Ms. Madelyn Scales-Harris. Also present were Darren Gore, Michele Pinkston, Valerie Smith, Doug Swann, Roman Hankins, Mary Lancaster, Steve Tate, Matt Powers, Joe Russell, John Strickland, Randy McCullough, Travis Wilson, Linda Sullivan, Brent Fowler, and Ronnie Martin along with other members of the public.

The Consent Agenda was presented for the following considerations:

A. Consider engineering proposal from Griggs & Maloney for Town Creek Daylighting project –

Staff received a proposal for Engineering Design Services from Griggs & Maloney, Inc. (G&M) pertaining to the Town Creek Daylighting project. G&M is the design Engineer for the Daylighting of Town Creek on the southwestern property of the intersection of S. Church Street and Broad Street. At the time of this project, the 16” water main will have to be lowered under the creek, so it makes sense for the water main lowering to be under the same construction contract. Staff will also specify a sewer main repair along the edge of the McDonalds parking lot.

Staff recommended the Board recommend to the City Council approval of the Engineering Proposal from G&M in an amount not to exceed \$14,500.

Funding for this design was not funded through the Operating Budget so it is requested to come from Working Capital Reserves.

B. Consider Water/Wastewater System Mechanical/Electrical Services Contract Agreement Extension No. 3 –

Staff accepted bids on February 21, 2018 for one base-bid task order (18-01) along with supplemental unit prices for outside labor and equipment services. The bid was awarded to John Bouchard and Sons Co. (JB&S), and the agreement was executed on May 17, 2018. The agreement allowed for the provision of extending the supplemental unit prices an additional three, 12-month terms. Staff is requesting approval from the Board to extend the agreement with JB&S an additional 12 months to June 30, 2022.

Task order 18-01 was the basis for awarding the bid. Task Orders 18-02 through 21-03 are task orders using the supplemental unit pricing provided by JB&S over the last three years. Staff has been satisfied with JB&S. They have been able to complete work MWRD maintenance staff could not due to lack of resources.

Staff recommended the Board recommend to the City Council to extend the agreement with John Bouchard & Sons Co., the Water/Wastewater System Mechanical/Electrical Services Contract, for an additional 12-month period.

A lot of the costs associated with John Bouchard's help can be classified as reactive maintenance due to unforeseen repairs and equipment breakdowns and will likely be requested as funded from working capital reserves. However, the Department's 5-yr capital improvements plan does account for \$1.5M in rate funded vehicle and equipment replacement that may fund a portion of the costs associated with JB&S services.

C. Consider purchase of UV parts –

The Trojan ultraviolet (UV) system provides disinfection of the effluent water discharged at the WRRF. Components that make up the system have a limited life expectancy and require periodic replacement. The current usage of the system requires that the lamps be replaced about every two years. Since 2002, staff has replaced approximately half of the lamps and other parts every year.

New Original Equipment Manufacturer (OEM) parts are only available from a single source. The manufacturer's distributor for this area is Southern Sales Company in Nashville.

Staff recommended the Board recommend to City Council approving the purchase of UV parts from Southern Sales Company in the total amount of \$60,342.10 with funding from the Department's rate funded capital budget.

D. Consider WRRF elevators modernization –

Maintenance staff determined that the over 30-year-old Admin./Lab buildings elevator and the over 20-year-old Main Pump Station elevator needed to be modernized.

The City's Purchasing Department issued an Invitation to Bid with a bid opening on May 5, 2021. United Elevator Services, LLC. provided the only bid which is fully qualified.

Staff recommended the Board recommend to City Council approving the modernizations of the WRRF's elevators by United Elevator Services, LLC at a cost of \$190,000 with funding from the Department's rate funded capital budget.

E. WRRF Operations roof replacement information –

Maintenance staff determined that the over 30-year-old roof of the WRRF's Operations building needed to be replaced.

The City's Purchasing Department issued an Invitation to Bid with a bid opening on April 28, 2021. Of the five bidders, Perry Roofing Co. provided the lowest qualified bid.

An amount of \$130,000 was budgeted in the Department's rate funded capital budget. The remaining \$16,438 of the \$146,438 total cost will come from Working Capital Reserves.

A motion was made by Ron Crabtree to accept the Consent Agenda as presented and it was seconded by Madelyn Scales-Harris. The Board voted unanimously to approve.

The April 27, 2021 Board Minutes were unanimously approved as presented.

The Board reviewed sewer pump station wetwell cleaning.

At last month's meeting staff notified the Board that Travis Wilson with LJA, at the request of staff, had submitted a proposal in the amount of \$8,500 to put together bid specifications and to advertise and bid the cleaning of five wetwells at these SPS's:

1. Wilkinson Pike SPS #50
2. County Farm Road SPS #41
3. Dejarnette Lane SPS #14
4. Thompson Lane SPS #10
5. Overall Creek SPS #38

The wetwells of these stations are large and deep. Cleaning these with the "mat" that has formed on the top of the wetwell liquid level is a little more than our Operations & Maintenance staff can handle especially coupled with the requirement of by-passing these stations during the work. The bid opening was May 18th; however, staff did not receive any bids.

Instead of recommending rebidding the project, staff requested that this scope of work be added to the next sewer rehabilitation contract with approval to exceed the targeted \$3M rehab project since this is maintenance work and not sewer rehabilitation. Funding was recommended to come from Working Capital Reserves, same as the Sewer Rehabilitation Contract.

The Board considered sole source purchase of Lidar/Sonar/CCTV of Hobas pipe with Vortex Services and engineering task order with LJA for preparing contract documents & project management.

In August 2019, after having repaired two interceptor sewer failures, the Board approved a Task Order with S&ME (now LJA) to prepare contract documents to perform Lidar/Sonar/CCTV of portions of the existing Southwest Interceptor and Lytle Creek Interceptor Sewer Mains. This televising was completed under contract by Vortex Services (VS) in order to determine the condition of a portion of the remaining lines. The criteria for this televising was the Hobas Pipe material and any section of sewer main 15 feet deep or deeper.

At this time, almost two years later, staff would like to re-televising a portion of the previously televised lines, that had an ovality of 6% or greater as well as the remaining Hobas lines that meet the same depth criteria. The total length of lines to televise is 22,611 feet with 5808 feet of this amount being the portion that was televised previously. The total cost of mobilization and the televising of these lines are not to exceed \$174,330.16. To complete this work, the Department would like to contract directly with VS through a Sole Source purchase. They have agreed to hold their prices from the previous contract. The thought, since accuracy is key with regard to deflection and ovality, is to have the same crew performing the work as well as the same equipment. This will allow LJA and staff to determine if the existing portion

of sewer mains have deteriorated any further with regard to ovality and determine if there are additional mains to be concerned about.

Along with the Sole Source purchase, staff has requested and received a task order through the Master Services Agreement with LJA. Their services would include developing the contract documents, coordinating, and managing VS, compare the existing and new videos against each other, as well as evaluate the new video and provide a summary of the results to staff. Their proposal is in an amount not to exceed \$48,250.

Staff recommended this work be funded from Working Capital Reserves in the total amount of \$222,580.16.

Staff recommended the Board recommended to City Council approval of the Engineering Task Order with LJA.

Brian Kidd made a motion to approve. Ron Crabtree seconded. The motion unanimously passed.

Staff also recommended the Board recommend to City Council approval for Sole Source Purchase of Lidar/Sonar/CCTV with Vortex Services.

Brian Kidd made a motion to approve. Sandra Trail seconded. The motion unanimously passed.

The Board considered purchase of HACH equipment and control software.

TDEC and the EPA require proper disposal of solids removed from the treatment process. In 2000, the WRRF began dewatering sludge. From the beginning, Fournier dewatering presses using Polymer have been effectively used to accomplish this task. The estimated annual cost for polymer is \$190,000.

The system is currently optimized by an operator. However, the HACH system will utilize probes and electronic data acquisition to optimize the system with continuous Real Time Control (RTC). By monitoring the system and making precise adjustments thousands of times per day, polymer usage will be significantly more efficient.

New Original Equipment Manufacturer (OEM) parts are only available from a single source, HACH Inc.

Staff recommended the Board recommend to City Council approving the purchase of equipment and control software from HACH Inc. in the total amount of \$74,434.96 with funding from the Department's rated funded capital account.

Brian Kidd made a motion to approve. Sandra Trail seconded. The motion unanimously passed.

The Board reviewed the 2021 AWWA Benchmarking Survey.

In March 2021, MWRD participated in the AWWA Utility Benchmarking Survey. The objective of the survey is to assess the performance of water and wastewater utilities using a variety of performance indicators. MWRD received our preliminary results on April 6, 2021.

Benchmarking is key to identifying best practices, innovative ideas and approaches, and highly effective operating procedures. In concert with our focus on Effective Utility Management (EUM), MWRD

uses this data to re-focus our strategic planning progress and annual investment needs toward continuous improvement.

The Board reviewed the 2021 NPDES Permit Application update.

March 1, 2021, MWRD staff submitted the application for renewing NPDES Permit No. TN0022586 for the period of 2021 through 2026 for the City's Water Resource Recovery Facility (WRRF). The renewal application was submitted requesting an increase in the WRRF's permit limits on several constituents due to our City's anticipated growth over the next 20-years. While TDEC has not officially denied the request, all indicators from subsequent correspondence from them lead to that conclusion.

The fundamental cornerstones that were stated to TDEC as foundational in moving forward in expanding the WRRF's NPDES permit limits were:

- **The City of Murfreesboro's WRRF effluent improves the water quality of the West Fork Stones River.** The WRRF adds more dissolved oxygen to the West Fork Stones River (WFSR) than our effluent demands or consumes out of the stream. This is a very good thing.
- **The City of Murfreesboro will never discharge the permitted mass loadings at the time the West Fork Stones River is at its lowest flow.** Murfreesboro has invested in the largest reclaimed water system in the State of Tennessee. Murfreesboro's effluent is land applied to the greatest degree (i.e., highest flowrate) during the lowest flow periods in the West Fork Stones River. Murfreesboro has the flexibility to offset millions of gallons of effluent from the West Fork Stones River to City-owned or controlled property during the summer months.

TDEC has come back and stated that Water quality is known to be poor both upstream and downstream from Murfreesboro's WRRF due to the WFSR not being capable of maintaining a continuous instream dissolved oxygen standard of 5.0 mg/L (parts per million). This is an incorrect assertion and MWRD is prepared to challenge this characterization.

MWRD staff has verbally relayed to TDEC staff and is prepared to solicit a meeting with TDEC's Commissioner pointing out the following water quality standard conflicts and inconsistencies with other southeastern states (USEPA Region IV) water quality standards:

- MWRD has conducted biological assessments in the WFSR since 2014. We have demonstrated excellent TN Macroinvertebrate (TMI) scores. Excellent TMI scores are difficult to achieve and therefore set a very high standard because the TMI quantifies actual in-stream aquatic life populations, diversity, and health.
- On the other hand, numeric standards such as dissolved oxygen (DO) or any other in-stream constituent can only presume to protect aquatic life. Using a DO standard to state the WFSR has poor water quality when TMI scores demonstrate otherwise is irrational and allows presumption to trump reality.
- Tennessee's in-stream dissolved oxygen standard is overly restrictive and not consistent with other neighboring southeastern states. The following table demonstrates the disadvantages to TN communities that must adhere to an overly restrictive standard compared to other states:

Table 1: Comparison of Dissolved Oxygen Criteria for USEPA Region IV States

<i>State</i>	<i>Daily Average DO (mg/L)</i>	<i>Minimum DO (mg/L)</i>
Tennessee	none	5.0
Kentucky	5.0	4.0
Alabama	none	4.0-5.0*
Georgia	5.0	4.0
South Carolina	5.0	4.0
North Carolina	5.0	4.0

* may range between 4.0 and 5.0 under extreme natural conditions

As you can see from Table 1, Tennessee has the most restrictive DO standard compared to all other states studied. The State of Tennessee's overly restrictive in-stream DO standard is no small thing in that it could well hinder Tennessee's economic competitiveness with other southeastern states. Murfreesboro is a prime example of a potential economic loss to the state of Tennessee by discontinuing our growth due to our inability to discharge additional effluent within our watershed.

Murfreesboro's repurified water system along with our stormwater control measures are also not being appropriately acknowledged in allowing more flexibility for effluent disposal and nutrient crediting, respectively.

Without some level of recognition and adjustment by TDEC of their disparate standards, Murfreesboro will be forced to start considering a pipeline to the Cumberland River to relieve us from an untenable regulatory burden, or convince our judicial and/or legislative systems to overturn TDEC's ostensible standard.

Staff presented and discussed the Water Resources Dashboard Performance for April 2021.

Staff presented the Financial Reports for the year ending April 30, 2021.

There being no further business, the meeting was adjourned.

Alphonse Carter, Jr., Vice Chairman