

WATER RESOURCES BOARD

Tuesday, March 24, 2020
Operations & Maintenance Facility
1725 South Church Street
3:30 PM

AGENDA

1. Consent Agenda:
 - A. Consider JB&S Task Order 20-01, Silo Flex Connectors and Sunbelt Rental 2
 - B. Consider 2018/19 Sanitary Sewer Rehab Contract Change Order No. 2 10
 - C. Consider Access Control System upgrade 15
 - D. Consider Rucker Lane Widening sewer main extensions award of contract 37
2. Consider minutes from the March 3, 2020 meeting 41
3. Consider SRWTP Pall Membrane G3 Numatics upgrades sole source quote 49
4. Consider SRWTP Granular Activated Carbon Media replacement 60
5. Consider S&ME Task Order for 2020 Sanitary Sewer Rehab project design 61
6. Consider FY2024 Pro Forma & FY2021 Rate Recommendation 70
7. Dashboard
8. Financials
9. Other business
10. Adjourn



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MEMORANDUM

DATE: March 10, 2020

TO: Water Resources Board

FROM: Alan Cranford

SUBJECT: Water/Wastewater Mechanical/Electrical Services Contract Task Order No. 20-01
Stones River Water Treatment Plant

Background

Staff submits Task Order No. 20-01 for the Water/Wastewater Mechanical/Electrical Services Contract to replace lime silo flex connectors. This work requires equipment that staff maintenance personnel do not have and is not practical to purchase.

Task Order includes the rental of scaffolding to gain access to the flex connectors, assembling and disassembling scaffolding, removing existing flex connectors and replacing with new flex connectors.

Fiscal Impact

The cost for the project is estimated at \$6,985.51. Funding to come from FY20 Operating Budget.

Recommendations

Staff requests the Water Resources Board recommend to the City Council approving JBS Task Order 20-01 in accordance with the JBS estimate.

Attachments

SRWTP – JBS Task Order 20-01 – Silo Flex Connectors

SRWTP – JBS Task Order 20-01 – Sunbelt Rental



...

TASK ORDER NO. – 20-01

March 10, 2020

BETWEEN

**JOHN BOUCHARD & SONS COMPANY AND CITY OF MURFREESBORO
acting by and through the Murfreesboro Water and Sewer Department**

UNDER

Water/Wastewater System Mechanical/Electrical Services Contract

DATED

June 6, 2019 thru June 6, 2020

FOR

Silo Flex Connectors

Task Order – 20-01
Silo Flex Connectors
Murfreesboro Water Plant

BACKGROUND

JBS has been asked to replace the existing Silo flex connectors at the water plant.

SCOPE OF WORK

Subcontract Sunbelt to erect and dismantle a scaffold system to gain access to the two flex connectors. The flex connectors and flange packs will be provided by Murfreesboro Water personnel. JBS will remove the existing flex connectors and install the two (2) owner-provided flex connectors.

FISCAL IMPACT

Murfreesboro Service Contract Rate Sheet - 2020
Silo Flex Connectors

Description	Qty (hrs)	Rate	Extended
Project Mgr (RT)	4	\$75.00	\$300.00
Project Mgr (OT)		\$110.00	\$0.00
Superintendent (RT)	2	\$67.00	\$134.00
Superintendent (OT)		\$100.50	\$0.00
Pipefitter/Welder (RT)	24	\$52.00	\$1,248.00
Pipefitter/Welder (OT)		\$78.00	\$0.00
Sprinkler Fitter (RT)		\$44.00	\$0.00
Sprinkler Fitter (OT)		\$66.00	\$0.00
Electrician (RT)		\$52.00	\$0.00
Electrician (OT)		\$78.00	\$0.00
Apprentice/Helper (RT)	24	\$37.00	\$888.00
Apprentice/Helper (OT)		\$55.50	\$0.00
Expediter/Delivery (RT)		\$29.00	\$0.00
Expediter/Delivery (OT)		\$43.50	\$0.00

Equipment	Qty (hrs)	Rate/Hr	Extended
Welder		\$15.00	\$0.00
Power Threader		\$10.00	\$0.00
Mini/Midi Hammer		\$10.00	\$0.00
Variable Reach Forklift		\$27.00	\$0.00
Pickup Truck		\$15.00	\$0.00
15 ton Boom Truck*		\$115.00	\$0.00
30-50 Ton RT Crane*		N/A	
80 Ton Crawler Crane*		N/A	
3" Submersible Pump		\$12.00	\$0.00
6" Hydraulic Pump		\$17.00	\$0.00

Materials & Subcontractors		
Scaffolding - Sunbelt Quoted		\$4,014.10
Markup on Material & Subcontractors	10.00%	\$401.41

TOTAL ESTIMATE	\$6,985.51
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Contractor:

John Bouchard and Sons Company

City:

City of Murfreesboro

By: David Proctor IV

By: _____

Name: David Proctor

Name: Shane McFarland

Title: Project Manager

Title: Mayor

Date: 3/10/20

Date: _____

Approved as to Form:

Adam F. Tucker, City Attorney

CONTRACTOR NOTICE CONTACT INFORMATION

CITY NOTICE CONTACT INFORMATION

John Bouchard and Sons Company

Murfreesboro Water and Sewer Dept.

Mailing address 1024 Harrison St.
Nashville, TN 37203

Mailing address 300 NW Broad St.
Murfreesboro, TN 37130

Phone number 615-256-0112

Phone number 615-890-0862

Fax number 615-256-2427

Fax number 615-896-4259

Company Contact David Proctor

Company Contact Darren Gore

E-mail David.Proctor@jbouchard.com

E-mail dgore@murfreesborotn.gov



SYSTEM SCAFFOLD QUOTE

Branch #128
131 CADEN DR
NASHVILLE, TN 37210 4422
Office: (615) 248-6060
www.sunbeltrentals.com

Timothy Lange
Cell: (317) 224-7685
timothy.lange@sunbeltrentals.com

March 08, 2020

Customer **JOHN BOUCHARD & SONS CO. (#6148248)**
1024 HARRISON STREET
ATTN: JOHN BOUCHARD
NASHVILLE, TN 37203

Quote **Q200128TL0302** (Active R0)
QUO-164518-N1W4R1
3/16/2020 to 4/13/2020

Job Site **Murfreesboro Waste Water Plant**
5528 Sam Jared Dr
Murfreesboro, TN 37130

Contact **David Proctor**
(615) 256-0112
David.Proctor@jbouchard.com

Introduction

Introduction

INTRODUCTION

Sunbelt Rentals Scaffold Services ("Sunbelt") is thankful for the opportunity to do business with John Bouchard & Sons ("Customer"). We are happy to support you with a wide variety of installation services for your access needs such as: Frame & Brace Scaffold, System Scaffold, Shoring of Existing Structures, Re-Shoring, Trash Chutes, Scaffold Mounted Hoisting Options, Swing Stage, Man/Material Hoists, Mast Climbers, Interior/Exterior Vessel Access, Stair Towers and Overhead Protection Systems. In addition, we offer various training sets, for your lead men and crews that will apply to each of the products we provide.

We constantly advance the idea of what an equipment rental company can do for its customers, through unmatched customer solutions, uncompromising customer safety, and continuous innovation.

The latest equipment rental technology, more than 900 locations throughout the U.S. and Canada for pick-up or delivery, 550,000 units in our rental fleet, over 15,000 passionate employees with a "make it happen" attitude, and a culture of safety...

THIS IS THE POWER OF SUNBELT.

Thank you for considering Sunbelt Rentals Scaffold Services,
Tim Lange

Specifications

Sunbelt Scaffold Services will supply a scaffold for the replacement of the flex connectors that are approximately 23' off the ground on the third floor area of the Waste Water Treatment Plant. This scaffold will be approximately 3'10 W x 8'6" L x 17'H. This scaffold will have a ladder access with guard rail and toe boards.

Scope

Sunbelt Scaffold Services will supply labor to erect and dismantle scaffold tower for the replacement of the flex connectors.

Customer Responsibility

Customer Responsibility

CUSTOMER RESPONSIBILITY

Return an executed copy of this quote along with a PO number (for tracking purposes ONLY-no terms) prior to the commencement of any labor associated with this job.

Have a customer representative on-site to sign off with the acceptance of the equipment and upon the completion of the build that it is to their satisfaction.

Customer shall be responsible for daily inspections after initial Sunbelt inspection.

Customer shall notify Sunbelt IMMEDIATELY if any possible damages have occurred to the scaffold that would affect the structural integrity.

Customer agrees to the following:

- Customer shall have all work permits in place prior to Sunbelt's arrival.
- Customer to provide a minimum of two-week's notice for scheduling of any labor phase.
- Customer shall maintain awareness of scaffold load capacities provided by Sunbelt.
- Customer shall provide all necessary floor protection (as applicable).
- Customer shall provide a barricade around the work area prior to Sunbelt's arrival on-site.
- Customer shall remove any obstructions from the scaffold work area.
- Customer shall provide a dedicated lay-down area for scaffold equipment prior to Sunbelt's arrival.
- Customer shall provide a clear and direct passageway from lay-down area to scaffold site.
- Customer shall be responsible for unloading/loading the truck of equipment and placing equipment in the location where the scaffold will be erected.
- Customer is responsible for patching and/or painting all penetration repairs where scaffold was secured to the building.
- Customer shall provide exclusive and interrupted access to elevator during both installation and removal phase of the work.
- Customer accepts that interruption of crane availability shall be as minimal as possible to avoid downtime which may result in a Time and Material charge in addition to this quote (as applicable).
- Customer shall provide logistics for efficient crane load-in upon delivery (as applicable).
- Customer shall provide the crane's maximum capacity for hoisting to required radius (as applicable).
- Customer shall provide signal man for hoisting & crane operation (as applicable).

Pricing Details

Equipment Rental: <i>(4 week min.)</i>	\$346.59 *
Daily Rental: <i>(after initial 4 weeks)</i>	\$12.38 *
Erection Price:	\$1,903.38 *
Dismantle Price:	\$1,268.92 *
Move Price: <i>(see above)</i>	\$0.00 *
Misc./Sales: <i>(see above)</i>	\$89.25 *
Rental Protection Plan:	\$0.00
Freight: <i>(P/U-Del)</i>	\$405.96 *

Quote Total:

\$4,014.10*

*Plus applicable taxes

Terms and Conditions

PROJECT CONTRACT SPECIFICATIONS (a) Customer must be present at time of delivery to sign, inspect, count, and accept responsibility of equipment via Sunbelt Erection Inspection Checklist; (b) If Customer dismantles equipment, any equipment missing is Customer's responsibility and will be charged at replacement cost; (c) Should PE Stamped Drawings be required, additional charges apply. All such engineering work is limited to the Scaffold Design and Leg Loads and does not include analysis of job site structures; (d) Price herein assumes Sunbelt shall be exempted from participating in OCIP/CCIP requirements. If not exempted, additional charges apply; (e) Our quoted price is based on the written terms of this Quote. If we are requested to sign an agreement you prepare, this Quote in its entirety or, must be incorporated into that agreement. If there is a conflict between your agreement and the written and included terms of our Quote, the terms of our Quote shall govern; (f) Both parties shall accept this Quote within 30 days of Date of Quote (above) or it may, at our option, be considered null and void; (g) It is a condition precedent to work being scheduled that this Quote is signed and received by the Scaffold Services Branch listed below; (h) Allow two (2) week lead times for scheduling all labor phases. (i) All work will be performed during straight time hours on day shift, Monday through Friday 7:00 am to 3:30 pm, unless specifically noted otherwise; (j) All work beyond the scope of work outlined above will be reimbursed based on Sunbelt Rentals, Inc. current Man-Hour Rates. These rates shall be made available upon request. The Customer will be responsible for verifying all time sheets. Delays (over 30 minutes), remobilizations, and unacceptable work conditions not attributable to Sunbelt, will be charged at the current Man-Hour Rates and may include a 4 hour minimum and/or additional travel time charges; (k) Scaffolds to be erected to meet or exceed OSHA 1926.451 Subpart L (or as indicated herein).

SCAFFOLD PRICE EXCLUSIONS. The pricing of this Quote does not include the following, unless specifically described on the front of this Quote: (a) expenses incurred if the Customer's or the Job Site Physical Address safety requirements exceed State and Federal codes; (b) toeboards, screens and nets; (c) costs associated with providing a firm, compacted and level grade for all scaffolding; (d) any foundations or re-shoring required below sidewalk level or sub-basement level; (e) tarpaulins or other sheeting (scaffolding must be modified to withstand the additional wind loads, with such sheeting); (f) any costs for proof of drug testing or employment drug screening whether it be pre-employment, site required, or otherwise; (g) moving rolling towers; (h) lodging, meals, travel, transportation, or other extraordinary expenses; (i) performance bond, and/or OCIP/CCIP requirements, if required; (j) sales taxes, use taxes, or tariffs; (k) sealed shop drawings, if required; and (l) any other costs incurred due to the Job Site Physical Address conditions, delays, or safety considerations not attributed to Sunbelt will be invoiced to Customer on a time and material basis.

CUSTOMER RESPONSIBILITIES. Unless otherwise noted herein, Customer shall be responsible for the following, all at Customer's sole expense: (a) compliance with all laws and regulations related to the proper possession and use of scaffolding; (b) provide qualified, experienced, and adequate supervision of any and all users of the scaffolding including a competent person; (c) provide all training of all users as required by 29CFR1910, 29CFR1926, and other applicable local, state, and federal governing bodies, and all accepted industry standards; (d) all scaffold users have read and understand the Codes of Safe Practices; (e) provide a firm, compacted and level grade for all scaffolding; (f) provide suitable crane and forklift support, or other material handling, as needed for the Work; (g) verify that the existing structure will safely support the additional vertical and horizontal loading from the scaffold; (h) repair all holes in existing structure left as a result of concrete anchors or other ties necessary to stabilize scaffold structure; (i) arrange with the Utilities Authority for all necessary safeguards, notifications and process lock-outs prior to erection date; (j) provide electric power and lighting to suit Sunbelt requirements; (k) supply any necessary flagmen or temporary barriers or signs, etc.; (l) if Sunbelt will be working in the vicinity of water, necessary boatmen and boat as defined in OSHA regulations; (m) any ground protection, i.e. for furniture, machines, carpets, landscaping, etc; (n) toilets and wash facilities; (o) a firm, compacted and level grade laydown yard during both erection and dismantling; (p) security of Sunbelt equipment and materials within laydown yard; (q) restoration of the laydown yard following completion of the Work; (r) all permits; (s) Falling Object Protection and any citations and/or fines OSHA may impose for failure to do so; (t) Customer's fall protection systems and methods during the use of the scaffolding that comply with all laws and be at Customer's risk; (u) assume all risks associated with the possession, custody and operation of and full responsibility for, the equipment, including but not limited to, personal injury, death, rental charges, losses, damages and destruction, including customer transport, loading and unloading; and (u) maintain general and auto liability insurance of not less than \$2,000,000 per occurrence, including coverage for Customer's contractual liabilities herein (such as the indemnification clause); property insurance against loss by all risks to the Equipment, in an amount at least equal to the fair market value thereof; and worker's compensation insurance. Such policies shall be primary (and not on an excess basis), on an occurrence basis, name Sunbelt as an additional insured and loss payee. Customer shall provide Sunbelt with certificates of insurance evidencing the coverage required above prior to any rental and any time upon Sunbelt's request.

SCAFFOLD CONDITIONS AND ASSUMPTIONS. Unless otherwise specified herein to the contrary: (a) the scaffolding will be erected and dismantled one time only; (b) any alterations not described herein will be charged at the applicable time and material rates; (c) any overtime work shall be invoiced at the applicable time and material rates; and (e) the work performed by Sunbelt will be done in accordance with applicable state and federal codes.

INDEMNIFICATION. Sunbelt indemnifies, releases, defends and holds Customer harmless from and against any third party claims including any and all liabilities, losses, damages, claims, penalties, fines and expenses, including attorney's fees, for any damages to property and/or persons including death ("Claims") to the proportionate extent caused by Sunbelt or any of its contractors, suppliers, officers, agents, or employees negligent acts or omissions in the performance of this Agreement. Customer will (i) give Sunbelt prompt notice of any such Claim, and (ii) at Sunbelt's reasonable request, cooperate with Sunbelt in the defense and settlement of the Claim. Customer indemnifies, releases, defends and holds Sunbelt harmless from and against any third party claims including any and all Claims to the proportionate extent caused by Customer's or any of its contractors, suppliers, officers, agents, or employees negligent acts or omissions in the performance of this Agreement. Sunbelt will (i) give Customer prompt notice of any such Claim, and (ii) at Customer's reasonable request, cooperate with Customer in the defense and settlement of the Claim. Notwithstanding anything contained in any agreement between the parties to the contrary, Sunbelt's requirement to provide additional insured, primary, non-contributory and waiver of subrogation status shall be limited to the extent of Sunbelt's indemnification obligations herein.

SCAFFOLD CHANGE ORDERS. If Customer requests a change in the Work, Sunbelt shall send Customer's "Point of Contact" a change order request in written form. Customer shall return a signed copy of the change order to Sunbelt; provided however, if no objection to the change order is received by Sunbelt, the change order shall be deemed approved by Customer.

INSPECTION AND ACCEPTANCE. On Customer's acceptance of the erected scaffold, Customer will be responsible for the maintenance, control, proper use and supervision of the scaffold until such time as the scaffold is fully dismantled and returned to Sunbelt for removal from the Job Site.

OTHER TERMS. The remaining provisions of this Quote are shown on the following page and incorporated herein by reference and can also be found at: <https://www.sunbeltrentals.com/services/scaffold/termsandconditions>

Quote Acceptance

JOHN BOUCHARD & SONS CO.

David Proctor

Acceptance Signature of Customer's Authorized Representative

Date

Sunbelt Rentals, Inc.

Timothy Lange

Acceptance Signature of Sunbelt Rentals Authorized Employee

Date



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MEMORANDUM

DATE: March 18, 2020
TO: Water Resources Board
FROM: Valerie H. Smith
SUBJECT: Sanitary Sewer Rehabilitation
Change Order #2
Project File #18043

SUMMARY

Recommend approval of Change Order #2 to the 2018/19 Sanitary Sewer Rehabilitation Contract.

BACKGROUND

At the December 6, 2018 Board meeting the Board approved the Engineering, Construction Administration & Resident Inspection necessary for this next sanitary sewer rehabilitation project with S&ME. Bids were received July 11, 2019 and the project was awarded to SBW Constructors in the amount of \$3,842,301. At the January 28, 2020 meeting, Change Order #1 was approved in the amount of \$150,812 to be added to the project along with an additional 73 days for the construction.

At this time, staff requested S&ME to prepare Change Order #2 for the project to add additional time to the project, open-cut sewer point repairs, lining and plugging of manholes per the description on the recommendation from S&ME. This additional work was determined as necessary either through field verification by SBW prior to performing work, pre-rehab videos performed by a sub-contractor to SBW and/or recent video by Operations & Maintenance. The additional time added to the project is due to the wet weather inhibiting the ability to by-pass pump the sewer necessary to install the CIPP liners on large sewer mains.

RECOMMENDATION

Staff recommends that the Board recommend to the City Council approval of Change Order #2 in the amount of \$79,645 to be added to the project along with an additional 44 days for the construction.

FISCAL IMPACT

Funding for the Engineering, Construction Administration, Inspection and Construction was approved from a combination of 2018/2019 and 2019/2020 Budget & Working Capital Reserves.

Funding Source	Budgeted Amount	Engineering Expenditures	Construction Expenditures	Remaining
Rate Funded Operating Budget 2018-19	\$1,000,000	\$(432,000)	\$0	\$568,000
Working Reserves 2018-19	\$1,500,000		\$0	\$1,500,000
Rate Funded Operating Budget 2019-20	\$1,000,000	\$0	\$(3,842,301)	\$1,000,000
Working Reserves 2019-20	\$1,000,000	\$0		\$(2,842,301)
Change Order #1			\$(150,812)	\$(150,812)
Change Order #2			\$(79,645)	\$(79,645)
Total	\$4,500,000	\$(432,000)	\$(4,072,758)	\$(4,758)

The total contract amount with this change order will be \$4,072,758.

ATTACHMENTS

S&ME Recommendation
Change Order #2



March 16, 2020

Ms. Valerie Smith, PE
Assistant Director
Murfreesboro Water Resource Department
220 NW Broad Street
Murfreesboro, TN 37130

**RE: Murfreesboro 2019 Rehabilitation Project
Murfreesboro, Tennessee
Proposed Change Order No. 2**

Dear Ms. Smith:

As part of the open cut work currently being performed, additional repairs not originally in the contract scope have been identified. This additional work is summarized below.

- Add footage of point repairs beyond 20-feet for segments 002A0230_002A0220 to replace additional pipe in disrepair.
- Additional asphalt paving overruns for repairs on Trinity Drive at segment 002A230_002A0220.
- Tree removal efforts for point repairs on segment 018Z0010_018AA0030 near Parkview Terrace.

Additional items have also been identified by MWRD staff that should be addressed and added to the project scope based on recent findings (excessive wet weather I/I observed and an emergency repairs). This additional work is summarized below.

- Point repair of segment 045C0020_045C0010 on Racquet Clube Drive.
- Point repair, inside drop installation, fence removal and replacement, tree removal and potential concrete excavation of segment 045J0020_045J0010 off Wellington Place.
- Service lateral open cut replacement of segment 001H0070_001H0080 on Riverview Drive.
- Lining manholes 012S0080 and 024A0040.
- Plugging abandoned incoming line to the south at MH 024A0040 on Johnson Street.

Additional construction time (44 calendar days) associated with the added scope of work is included in the Change Order. The revised contract end date is October 10, 2020. The total net change of work is an increase of \$79,645.00 (see attached change order for details). S&ME staff recommends approval for Change Order No. 2. If you have any questions regarding this change order, please contact me to discuss at your convenience.



Sincerely,

S&ME, INC.

A handwritten signature in blue ink that reads "Gary Heusser, Jr." in a cursive script.

Gary Heusser, Jr., PE
Project Manager

Cc: Mr. Darren Gore, PE – Director, Murfreesboro Water Resource Department

Attachment – Proposed Change Order No. 2

CHANGE REQUEST FORM (CRF)

Owner Contract No. **Project No. 18043**
 Project Name: **Murfreesboro 2019 Rehabilitation Project**
 Engineer: **S&ME, Inc.**
 Contractor: **SBW Constructors, LLC**

Requested By: **Murfreesboro Water & Sewer Department**
 Drawing:
 Problem Desc: **This CRF is to add additional quantities and time to repair defects discovered Internal operation and maintenance inspections and unforeseen conditions in the field during construction.
 See attached map**

Revised Scope Description/Details

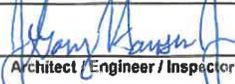
Item No.	Description	Qty	Unit	Unit Price	Item Total
ADD					
3h	15-inch Mainline Sewer Point Repair 12-foot to 18-foot depth - Open Cut Repair beyond 20 Feet in Length - Paved	1	EA	\$11,000.00	\$11,000.00
5n	10-inch Mainline Sewer Point Repair 12-foot to 18-foot depth - Open Cut Repair beyond 20 Feet in Length - Paved	7	LF	\$345.00	\$2,415.00
5o	10-inch Mainline Sewer Point Repair 18-foot to 20-foot depth - Open Cut Repair up to 20 Feet in Length - Paved	1	EA	\$20,000.00	\$20,000.00
6j	8-inch - Service Lateral Replacement - Open Cut up to 25-Linear Feet - 12-foot to 18-foot depth	1	EA	\$5,200.00	\$5,200.00
6p	8-inch Mainline Sewer Point Repair 12-foot to 18-foot depth - Open Cut Repair up to 20 Feet in Length - Unpaved	1	EA	\$8,500.00	\$8,500.00
11a	Lining 48-inch Diameter Manhole	17	VF	\$340.00	\$5,780.00
11c	Plug Abandoned Line at Manhole	1	EA	\$400.00	\$400.00
11h	Install Inside Drop Bowl and Associated Piping	8	VF	\$325.00	\$2,600.00
13a	Asphalt	900	SF	\$15.00	\$13,500.00
15o	Tree Removal at Segment 018Z0010_018AA030 for Point Repairs	1	LS	\$1,000.00	\$1,000.00
15p	Fence Removal and Replacement and Tree Removal at Segment 045J0020_045J0010	1	LS	\$5,000.00	\$5,000.00
16a	Concrete Excavation	10	CY	\$425.00	\$4,250.00

DEDUCT				
CHANGE IN CONTRACT VALUE				
\$79,645.00				
ORIGINAL CONTRACT VALUE				
\$3,842,301.00				
REVISED CONTRACT VALUE AFTER CHANGE ORDER #1				
\$3,993,113.00				
REVISED CONTRACT VALUE AFTER CHANGE ORDER #2				
\$4,072,758.00				

Contractor Acknowledgement:

No Change in Contract Amount is required. A Change in Contract Amount is required: **\$79,645.00**

No Change in Contract Time is required. A Change in Contract Time is required: **44**

 **Architect / Engineer / Inspector / RPR**  **Contractor**

<p>Change in Contract Amount is within the Contingency Amount authorized under Resolution No. <u>NA</u></p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No _____</p> <p>_____ Engineer / Architect Project Manager</p>	<p style="text-align: center;">Proceed with Execution</p> <p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No _____</p> <p>_____ Owner's Representative</p>
--	--

Distribution: Engineer, Owner; Central Files



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MEMORANDUM

DATE: March 18, 2020
TO: Water Resources Board
FROM: Ryan Potts
SUBJECT: Access Control System Upgrade

Background

Software House is no longer supporting our current version of CCure as of December 31, 2019. Our current CCure system has not been upgraded (hardware & software) since year 2006/2007 when it was installed.

Our current CCure license is expired and cannot be renewed since it is no longer supported. If the current running server is powered off or rebooted due to user interaction, utility power failure, etc. the doors within the Water Department will no longer be functional with a badge.

Staff obtained quotes from three vendors, listed here:

Convergent Technologies	\$20,776.53
Johnson Controls	\$47,317.00
ADS Security	\$85,540.00

Recommendation

Staff recommends upgrading to current CCure system with Convergent Technologies.

Fiscal Impact

Funding will come from FY20 rate-funded capital.

Attachments

Convergent Quote MK06258761P.pdf
JCI Quote_P40631-000028.pdf
ADS Proposal.pdf



1420 Donelson Pike Unit A10, Nashville, Tennessee 37217
Phone Mobile 8125848449
molly.kraisinger@convergent.com

March 4, 2020

Murfreesboro Water Resources
Murfreesboro Water Resources
300 NW Broad St Murfreesboro, Tennessee 37130
Attention:

Quotation: MK06258761P
RFP#:
License/Cert TN-1160

Reference: CCURE 9000 Migration

On behalf of our thousands of global colleagues, I want to personally thank you for considering Convergent Technologies for this project and for providing us with the opportunity to present this proposal addressing your electronic security needs. We are confident that this proven solution is both comprehensive and customized to meet your needs today and in the years ahead.

Convergent has developed a strong reputation for service excellence and is the only company recognized twice as the Systems Integrator of the Year by SDM Magazine. Most recently, Convergent was ranked the 4th largest global systems integrator. This recognition is, in part, a reflection of the strong relationships Convergent has developed with the industry's top technology manufacturers. Convergent Technologies has a strong history of success with similar solutions provided to other clients and would be happy to provide these references upon request.

Our guiding principal has always been to be a customer-focused and service-based company, supported by dedicated and certified professionals who strive to make a daily difference. Our vision of becoming our customers' best service provider is what drives everything we do. After achieving a successful on-time and on-budget project installation, Convergent will provide you with the industry's best on-going service. This service includes our 24/7 customer portal (iCare), designed to track service work orders, project progress, and provide you with detailed metric reporting for continuous improvement.

The following security proposal is specifically designed to meet your needs. As your single point of contact, please feel free to contact me with any additional questions you may have. Thank you again for considering Convergent Technologies as your partner for your electronic security needs.

Scope of Work

This scope of work is for the migration of the current CCURE 800 system over to CCURE 9000 at the Murfreesboro Water Resource plant. This quote includes all the material and labor which is detailed below.

Convergint assumes that the database will be clean.

Convergint assumes that the customer will provide the necessary client and server that meets the minimum requirements for the CCURE 9000.

This scope of work includes all the installation, testing and commissioning of the new system.

Materials

Line	Qty	Part	Description	Manufacturer
1	1.00	CCSM80-30S	Standard Service for C-CURE 800 Model 30	Software House
2	1.00	CCSM80-V	C•CURE 800 Badging Client uplift, per workstation	Software House
3	1.00	CC9000-MTR	Migration of a single C•CURE 800 Model 30 to a single C•CURE 9000 Series R (Migration Tool DVD and C•CURE 9000 Series R USB and license Included)	Software House

Total Project Price	\$	20,776.53
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Clarifications and Exclusion

1. All work proposed herein, shall be performed during normal business hours Monday through Friday 8:00 am - 5:00 pm.
2. Low voltage wiring shall be installed via open air code approved methods.
3. Provision or installation of conduit, wire, boxes, fittings or other electrical installation materials unless specifically listed under Inclusions or Bill of Materials.
4. Permits or associated fees are not included.
5. Customer to provide static IP addresses and network connections at panel locations.
6. Customer to provide a secured staging & storage area for project related materials.
7. Pricing assumes that electronic Auto CAD files are available from customer for our use in creating submittal drawings.
8. Twenty-Five percent (25%) of the proposed sell price shall be payable to Convergent Technologies for project mobilization. Mobilization shall be invoiced and due upon customer acceptance of this proposal.
9. Proposal does not include sales tax unless otherwise noted.
10. Anything in the Contract Documents notwithstanding, in no event shall either Contractor or Subcontractor be liable for special, indirect, incidental or consequential damages, including commercial loss, loss of use, or lost profits, even if either party has been advised of the possibility of such damages.
11. Convergent Technologies reserves the right to negotiate mutually acceptable contract terms and conditions with customer by making mutually agreeable changes to the formal contract included in the Bid Documents.

Performance Items

Items Included	
Items Excluded	
120 VAC Power and Fused Disconnect Switch	120 VAC Power Receptacles
Additional Lighting Requirements for Cameras	Applicable Taxes
Attend General Contractor Project Meetings	Attend Owner Project Meetings
Authority having Jurisdiction permit drawing (requires customer CAD)	Cable
Ceiling Tiles and Ceiling Grid Repairs	Connection to Building Fire Alarm Panel
Correction of Wiring Faults Caused by Others	Door wiring typical connections
Electrical Installation Permit	Electrified Door Locking Hardware
Engineering and Drawings	Equipment rack layout drawing
FA Permit and Plan Review Fees	Fire Stopping (Excludes Existing Penetrations)
Fire Watch	Floor Coverings for Lifts
Floor plan with device placement and numbering (requires customer CAD)	Freight (prepaid)
Horizontal Core Drilling	Installation of Bridle Rings
Installation of CCTV Cameras	Installation of Conduit, Boxes and Fittings
Installation of Control Equipment Enclosures	Installation of Control Panels
Installation of Intercom Systems	Installation of Intrusion Panels
Installation of Low Voltage Wire	Installation of Network Cabling to Card Readers
Installation of Network Cabling to IP Cameras	Installation of Network Cabling to IP Intercoms
Installation of Specialty Backboxes	Installation of Terminal Cabinets
Installation of Video Recorders (DVR/NVR)	Installation of Wire and Cable
Installation of Wire Hangars	Lifts
Loading Software on Customer Provided Computer Material (listed in the BOM)	Low Voltage Permits
On-Site Lockable Storage Facility	Mounting/Termination of Proposed Devices
One-Year Warranty on Parts	One-Year Warranty on Labor
Owner to Provide DHCP Lease Reservations for Network Connected Devices	Operations & Maintenance Manuals
Owner Training	Owner to Provide Static IP Addresses
Panel wiring with point to point connections	Panel Wall Elevation drawing (may require customer CAD)
Payment & Performance Bonds	Patch and Paint
Record Documentation (As-Built)	Project Management
Servers by Convergent	Riser drawing with home run wiring
Specialty Backboxes	Servers by Others
System Engineering	Submittal Drawings
System Meets Plans/Drawings	System is Design-Build
Terminal Cabinets	System Programming
Testing of all Proposed Devices	Termination of Control Equipment Enclosures
Wire	Vertical Core Drilling
Workstations by Others	Workstations by Convergent

Total Project Investment:

\$ 20,776.53

Thank you for considering Convergent Technologies for your Security needs. If you have any questions or would like additional information, please don't hesitate to contact me immediately. If you would like to proceed with the scope of work as outlined in this proposal, please sign below and return to my attention.

Sincerely,

Molly Kraisinger

Convergent Technologies

Molly Kraisinger

By signing below, I accept this proposal and agree to the Terms and Conditions contained herein

March 4, 2020

Customer Name (Printed)

Date

Authorized Signature

Title

Throughout this Installation Proposal, the term, "Convergent" refers to the Convergent Technologies' affiliate operating in the state/province in which the work is being performed, specifically, "Convergent Technologies LLC" or "Convergent Technologies LTD".

SECTION 1. THE WORK

This Installation Proposal takes precedence over and supersedes any and all prior proposals, correspondence, and oral agreements or representations relating to the work set forth in the attached scope of work ("Work"). This Installation Proposal commences on the Start Date as specified in the attached scope of work, and represents the entire agreement between Convergent and Customer (the "Agreement") and it may only be amended by a written document signed by both Convergent and Customer. In the event any provision of this Agreement is held to be invalid or unenforceable, the remaining provisions of this Agreement shall remain in full force.

Convergent agrees in accordance with the mutually agreed project schedule:

- a. To submit shop drawings, product data, samples and similar submittals if required in performing the Work;
- b. To pay for all labor, materials, equipment, tools, supervision, programming, testing, startup and documentation required to perform the Work in accordance with the Agreement;
- c. Secure and pay for permits and governmental fees, licenses and inspections necessary for proper execution and completion of the Work; and
- d. Hire subcontractors and order material to perform part of the Work, if necessary, while remaining responsible for the completion of the Work.

Customer agrees in accordance with the mutually agreed project schedule, and at no cost to Convergent:

- a. To promptly approve submittals provided by Convergent;
- b. To provide access to all areas of the facility which are necessary to complete the Work;
- c. To supply suitable electrical service as required by Convergent; and
- d. That in the event of any emergency or systems failure, reasonable safety precautions will be taken by Customer to protect life and property during the period of time from when Convergent is first notified of the emergency or failure and until such time that Convergent notifies the Customer that the systems are operational or that the emergency has cleared.

SECTION 2. PRICING

Pricing and amounts proposed shall remain valid for 30 days unless otherwise specified. Price includes only the material listed based on Convergent's interpretation of plans and specifications unless noted otherwise. Additional equipment, unless negotiated prior to order placement, will be billed accordingly. Sales taxes, (and in Canada GST/PST) and any other taxes assessed on Customer shall be added to the price upon invoice to Customer.

SECTION 3. INVOICE REMITTANCE AND PAYMENT

Customer agrees to pay Convergent twenty-five (25%) percent of the total price as a mobilization fee at the time of executing this Agreement.

If the Work is performed over more than a month, Convergent will invoice Customer each month for the Work performed during the previous month. Customer agrees to pay the amount due to Convergent as invoiced, within thirty (30) days of the date of such invoice. If the Work is completed in less than one month, Customer agrees to pay Convergent in full after the Work has been performed within thirty (30) days of the date of being invoiced. Invoices shall not include or be subject to a project retention percentage. If Customer is overdue in any payment to Convergent, Convergent shall be entitled to suspend the Work until paid, and charge Customer an interest rate 1 and 1/2% percent per month, (or the maximum rate permitted by law), and may avail itself of any other legal or equitable remedy. Customer shall reimburse Convergent costs incurred in collecting any amounts that become overdue, including attorney fees, court costs and any other reasonable expenditure.

SECTION 4. WARRANTY

Convergent provides the following warranty to the Customer:

For the period of one (1) year, commencing at the earlier of substantial completion of the Work, or first beneficial use, ("Warranty Period"):

- a. That Work performed under this Agreement will be of good quality;
- b. That all equipment will be new unless otherwise required or permitted by this Agreement;
- c. That the Work will be free from defects not inherent in the quality required or permitted; and
- d. That the Work will conform to the requirements of this Agreement.

The Customer's sole remedy for any breach of this warranty is that Convergent shall remove, replace and/or repair at its own expense any defective or improper Work, discovered within the Warranty Period, provided Convergent is notified in writing of any defect within the Warranty Period.

Any equipment or products installed by Convergent in the course of performing the Work hereunder shall only carry such warranty as is provided by the manufacturer thereof, which Convergent hereby assigns to Customer without recourse to Convergent. Upon request of Customer, Convergent will use all reasonable efforts to assist Customer in enforcing any such third party warranties. This warranty excludes remedy for damage or defect caused by abuse, modifications not executed by Convergent, improper or insufficient maintenance, improper operation, or normal wear and tear under normal usage. **NO FURTHER WARRANTIES OR GUARANTIES, EXPRESS OR IMPLIED, ARE MADE WITH RESPECT TO ANY GOODS OR SERVICES PROVIDED UNDER THIS AGREEMENT, AND ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE ARE EXPRESSLY DISCLAIMED.**

SECTION 5. CHANGES

Without invalidating this Agreement or any bond given hereunder, Customer or Convergent may request changes in the Work. Any changes to the Work and any adjustment to the Agreement Price or the time for completion of the Work shall be in writing signed by both Customer and Convergent. If Customer orders any additional work or causes any material interference with Convergent's performance of the Work, Convergent shall be entitled to an equitable adjustment in the time for performance and in the Agreement Price, including a reasonable allowance for overhead and profit.

SECTION 6. FORCE MAJEURE

Neither Customer nor Convergent shall be responsible or liable for, shall incur expense for, or be deemed to be in breach of this Agreement because of any delay in the performance of their respective obligations pursuant to this Agreement due solely to circumstances beyond their reasonable control ("Force Majeure") and without the fault or negligence of the party experiencing such delay, provided that the party experiencing the delay shall promptly give written notification to the other party within five (5) days after such party has learned of the Force Majeure. A Force Majeure event shall include,

but not be limited to: accident, fire, storm, water, flooding, negligence, vandalism, power failure, installation of incompatible equipment, improper operating procedures, source current fluctuations or lighting. If performance by either party is delayed due to Force Majeure, the time for that performance shall be extended for a period of time reasonably necessary to overcome the effect of the delay. Any Services required by Convergent due to reasons set forth in this Force Majeure Section shall be charged to Customer in addition to any amounts due under this Agreement.

SECTION 7. INSURANCE

Convergent shall have the following insurance coverage during the term of this Agreement, and shall provide certificates of insurance to the Customer prior to beginning work hereunder:

Worker's Compensation	Statutory Limits
Employer's Liability	\$1,000,000 per occurrence /aggregate
Commercial General Liability	\$1,000,000 per occurrence/aggregate \$2,000,000 general aggregate
Automobile Liability	\$1,000,000 per occurrence/aggregate
Excess/Umbrella Liability	\$4,000,000 per occurrence/aggregate

All insurance policies carried by Convergent hereunder shall be primary to and noncontributory with the insurance afforded to Customer, and shall name the Customer as "additional insured", with respect to liability arising out of work performed by Convergent, as applicable, but only to the extent of liabilities falling within the indemnity obligations of Convergent, pursuant to the terms of this Agreement. Convergent shall provide to the Customer no less than thirty (30) days notice prior to the termination or cancellation of any such insurance policy.

SECTION 8. INDEMNIFICATION

Convergent shall indemnify and hold Customer harmless from and against claims, damages, losses and expenses, (including, but not limited to, reasonable attorney's fees), attributable to bodily injury, sickness, disease or death, or to destruction of tangible property, but only to the extent caused by: a) the negligent or willful acts or omissions of Convergent or Convergent's employees or subcontractors while on Customer's site, or b) the malfunction of the equipment supplied by Convergent, or c) Convergent's breach of this Agreement.

IN NO EVENT SHALL EITHER CONVERGENT OR CUSTOMER BE LIABLE TO THE OTHER PARTY HERETO FOR SPECIAL, INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES, INCLUDING COMMERCIAL LOSS, LOSS OF USE OR LOST PROFITS, EVEN IF THAT PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. IN NO EVENT WILL CONVERGENT BE LIABLE TO CUSTOMER FOR ANY AMOUNTS IN EXCESS OF THE AMOUNTS PAID BY CUSTOMER TO CONVERGENT.

It is understood and agreed by the parties hereto that Convergent is or may be providing monitoring and or intrusion products which are designed to provide notification of certain events but are not intended to be guarantees or insurers against any acts for which they are supposed to monitor or inform. As required by the monitoring and intrusion industry and the manufacturers thereof, Convergent's indemnification obligation pursuant to Section 8 herein, does not apply to the extent the loss indemnified against is caused by any monitoring or intrusion product or software provided by but not manufactured by Convergent. Convergent shall have **no** liability to Customer for any losses to the extent such losses are caused by the monitoring or intrusion product or software. Customer shall indemnify, defend, and hold harmless Convergent, from and against all claims, lawsuits, damages, losses and expenses by persons not a party to this Agreement, but only to the extent caused by such monitoring or intrusion product or software provided by but not manufactured by Convergent.

SECTION 9. COMPLIANCE WITH LAW, EEO & SAFETY

This Agreement shall be governed and construed in accordance with the laws of the state/province in which the Work is being performed. Convergent agrees to comply with all laws and regulations relating to or governing the Work. Convergent agrees to comply with all reporting requirements imposed by law or this Agreement. Convergent shall comply with all safety related laws and regulations and with the safety program of the Customer, provided such program is supplied to Convergent prior to beginning work.

In the event that Convergent discovers or suspects the presence of hazardous materials, or unsafe working conditions at Customer's facility where the Work is to be performed, Convergent is entitled to stop the Work at that facility if such hazardous materials, or unsafe working conditions were not provided by or caused by Convergent. Convergent in its sole discretion shall determine when it is "safe" to return to perform the Work at Customer's facility. Convergent shall have no responsibility for the discovery, presence, handling, removing or disposal of or exposure of persons to hazardous materials in any form at the Customer's facility. Customer shall indemnify and hold harmless Convergent from and against claims, damages, losses and expenses, including but not limited to, reasonable attorney's fees, arising out of or resulting from undisclosed hazardous materials, or unsafe working conditions at Customer's facility.

SECTION 10. DISPUTES

In the event of any dispute between Convergent and Customer, Convergent and Customer shall first attempt to resolve the dispute in the field, but if that is not successful, then in a meeting between authorized officers of each company. If settlement attempts are not successful, then the dispute shall be subject to and decided by mediation or arbitration. Such mediation or arbitration shall be conducted in accordance with the Construction Industry Mediation or Arbitration Rules of the American Arbitration Association currently in effect and shall be a final binding resolution of the issues presented between the parties.

SECTION 11. MISCELLANEOUS

Neither party to this Agreement shall assign this Agreement without the prior written consent of the other party hereto. Convergent may assign this Agreement to any of its parents, subsidiary or affiliated companies or any entity majority owned by Convergent.

Notices shall be in writing and addressed to the other party, in accordance with the names and addresses of the parties as shown above. All notices shall be effective upon receipt by the party to whom the notice was sent.

A waiver of the terms hereunder by one party to the other party shall not be effective unless in writing and signed by a person with authority to commit the Customer or Convergent and delivered to the non-waiving party according to the notice provision herein. No waiver by Customer or Convergent shall operate as a continuous waiver, unless the written waiver specifically states that it is a continuous waiver of the terms stated in that waiver.

The Sections regarding invoicing, warranty and indemnity shall survive the termination of this Agreement.



2005 ELM HILL PIKE
NASHVILLE, TN 37210-3807
(615) 256 8919
FAX: (615) 493 2996

FOR INTERNAL USE ONLY

Johnson Controls Quotation

TO:
Murfreesboro Water and Sewer D
PO Box 1477
MURFREESBORO, TN 37133

Site: Murfreesboro Water and Sewer D
Project: Mboro water Ccure upgrade only
Customer Reference:
Johnson Controls Reference: 289424302
Proposal #: P38673-000580
Date: 03/18/2020
Page 1 of 5

Johnson Controls Fire Protection LP is pleased to offer this quote for products and services priced in accordance with the State of Tennessee SWC 172 Facility Fire Security Contract # 59509.

Johnson Controls is pleased to offer for your consideration this quotation for the above project.

Comments

Upgrade existing Ccure800 to Ccure9000.

Ccure9000 software to be install on client supplied VM. Database to be copied and existing panels migrated to new server.

THIS QUOTATION AND ANY RESULTING CONTRACT SHALL BE SUBJECT TO THE GENERAL TERMS AND CONDITIONS ATTACHED HERETO.

Fire, Security, Communications, Sales & Service
Offices & Representatives in Principal Cities throughout North America



Project: Mboro Water Ccure upgrade only
 Customer Reference:
 Johnson Controls Reference: 289424302
 Date: 03/18/2020
 Page 2 of 5

FOR
INTERNAL
Johnson Controls Quotation
USE ONLY

Access Control

QUANTITY	MODEL NUMBER	DESCRIPTION
Ccure upgrade only		
Ccure upgrade only		
1	CC9000-SR	C-CURE 9000 SERIES R SYSTEM SO
1	CC9000-KIT	CCURE9000 KIT
1	CC9000-ADD5CLI	CC9000 ADDITIONAL 5 CLIENT SEAT
1	CC9000-IDB-NM	CC9000 BADGING WS BDLE, NO MON
1	CC9000-DRU-LIC	License,DataReplicationUtility
1	CC9000-DRU-CD	S/W,CD,DATA REPLICATION UTILTY
Professional Services - Ccure upgrade only		
	PM LAB	PROJECT/CONSTRUCTION MGMT
Technical Services - Ccure upgrade only		
	COMM LAB	COMMISSIONING LABOR

Net selling price for Access Control, \$47,317.00
State of Tennessee SWC 172 Facility Fire Security

Total net selling price, \$47,317.00



Project: Mboro Water Cure upgrade only
Customer Reference:
Johnson Controls Reference: 289424302
Date: 03/18/2020
Page 3 of 5

FOR INTERNAL USE ONLY

TERMS AND CONDITIONS (Rev. 3/11)

1. Payment. Payments shall be invoiced and due in accordance with the terms and conditions set forth above. Work performed on a time and material basis shall be at Company's then-prevailing rate for material, labor, and related items, in effect at the time supplied under this Agreement. Company shall invoice Customer for progress payments to one hundred (100%) percent based upon equipment delivered or stored, and services performed. In the event project duration exceeds one month, Company reserves the right to submit partial invoices for progress payments for work completed at the project site. Customer agrees to pay any progress invoices in accordance with the payment terms set forth herein. In exchange for close-out documents to be provided by Company, Customer agrees to pay Company the remaining project balance when on-site labor is completed and prior to any final inspections. Customers without established satisfactory credit shall make payments of cash in advance, upon delivery or as otherwise specified by Company. Where Customer establishes and maintains satisfactory credit, payments shall be due and payable thirty (30) days from date of invoice. Company reserves the right to revoke or modify Customer's credit in its sole discretion. Customer's failure to make payment when due is a material breach of this Agreement. If Customer fails to make any payment when due, in addition to any other rights and remedies available, Company shall have the right, at Company's sole discretion, to stop performing any Services and/or withhold further deliveries of materials, until the account is current. In the event payment is not received when due, Company may, at its discretion, assess late fees at the rate of 1.5% per month or the maximum rate allowed by law. Customer agrees to pay all costs of collection, including without limitation costs, fees, and attorneys' fees.

2. Deposit. Customer agrees to pay a deposit equal to 30% of the project sell price (pre-tax) prior to Company providing any labor or materials on the project. Company will generate an invoice for the 30% deposit within three (3) business days after Company's receipt of a written agreement or order from Customer. Company will not commence work until receipt of the deposit.

3. Pricing. The pricing set forth in this Agreement is based on the number of devices to be installed and services to be performed as set forth in the Scope of Work ("Equipment" and "Services"). If the actual number of devices installed or services to be performed is greater than that set forth in the Scope of Work, the price will be increased accordingly. If this Agreement extends beyond one year, Company may increase prices upon notice to the Customer. Customer agrees to pay all taxes, permits, and other charges, including but not limited to state and local sales and excise taxes, however designated, levied or based on the service charges pursuant to this Agreement. Prices in any quotation or proposal from Company are subject to change upon notice sent to Customer at any time before the quotation or proposal has been accepted. Prices for products covered may be adjusted by Company, upon notice to Customer at any time prior to shipment, to reflect any increase in Company's cost of raw materials (e.g., steel, aluminum) incurred by Company after issuance of Company's applicable proposal or quotation.

4. Alarm Monitoring Services. Any reference to alarm monitoring services in this Agreement is included for pricing purposes only. Alarm monitoring services are performed pursuant to the terms and conditions of Company's standard alarm monitoring services agreement.

5. Code Compliance. Company does not undertake an obligation to inspect for compliance with laws or regulations unless specifically stated in the Scope of Work. Customer acknowledges that the Authority Having Jurisdiction (e.g. Fire Marshal) may establish additional requirements for compliance with local codes. Any additional services or equipment required

will be provided at an additional cost to Customer.

6. Limitation of Liability; Limitations of Remedy. It is understood and agreed by the Customer that Company is not an insurer and that insurance coverage shall be obtained by the Customer and that amounts payable to company hereunder are based upon the value of the services and the scope of liability set forth in this Agreement and are unrelated to the value of the Customer's property and the property of others located on the premises. Customer agrees to look exclusively to the Customer's insurer to recover for injuries or damage in the event of any loss or injury and that Customer releases and waives all right of recovery against Company arising by way of subrogation. Company makes no warranty or Warranty, including any implied warranty of merchantability or fitness for a particular purpose that equipment or services supplied by Company will detect or avert occurrences or the consequences therefrom that the equipment or service was designed to detect or avert. It is impractical and extremely difficult to fix the actual damages, if any, which may proximately result from failure on the part of Company to perform any of its obligations under this Agreement. Accordingly, Customer agrees that, Company shall be exempt from liability for any loss, damage or injury arising directly or indirectly from occurrences, or the consequences therefrom, which the equipment or service was designed to detect or avert. Should Company be found liable for any loss, damage or injury arising from a failure of the equipment or service in any respect, Company's liability shall be limited to an amount equal to the Agreement price (as increased by the price for any additional work) or where the time and material payment term is selected, Customer's time and material payments to Company. Where this Agreement covers multiple sites, liability shall be limited to the amount of the payments allocable to the site where the incident occurred. Such sum shall be complete and exclusive. IN NO EVENT SHALL COMPANY BE LIABLE FOR ANY DAMAGE, LOSS, INJURY, OR ANY OTHER CLAIM ARISING FROM ANY SERVICING, ALTERATIONS, MODIFICATIONS, CHANGES, OR MOVEMENTS OF THE COVERED SYSTEM(S) OR ANY OF ITS COMPONENT PARTS BY THE CUSTOMER OR ANY THIRD PARTY. COMPANY SHALL NOT BE LIABLE FOR INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES OF ANY KIND, INCLUDING BUT NOT LIMITED TO DAMAGES ARISING FROM THE USE, LOSS OF THE USE, PERFORMANCE, OR FAILURE OF THE COVERED SYSTEM(S) TO PERFORM. The limitations of liability set forth in this Agreement shall inure to the benefit of all parents, subsidiaries and affiliates of company, whether direct or indirect, company's employees, agents, officers and directors.

7. Reciprocal Waiver of Claims (SAFETY Act). Certain of Company's systems and services have received Certification and/or Designation as Qualified Anti-Terrorism Technologies ("QATT") under the Support Anti-terrorism by Fostering Effective Technologies Act of 2002, 6 U.S.C. §§ 441-444 (the "SAFETY Act"). As required under 6 C.F.R. 25.5 (e), to the maximum extent permitted by law, Company and Customer hereby agree to waive their right to make any claims against the other for any losses, including business interruption losses, sustained by either party or their respective employees, resulting from an activity resulting from an "Act of Terrorism" as defined in 6 C.F.R. 25.2, when QATT have been deployed in defense against, response to, or recovery from such Act of Terrorism.

8. General Provisions. Customer has selected the service level desired after considering and balancing various levels of protection afforded, and their related costs. All work to be

performed by Company will be performed during normal working hours of normal working days (8:00 a.m. – 5:00 p.m., Monday through Friday, excluding Company holidays), as defined by Company, unless additional times are specifically described in this Agreement. Company will perform the services described in the Scope of Work section ("Services") for one or more system(s) or equipment as described in the Scope of Work section or the listed attachments ("Covered System(s)"). The Customer shall promptly notify Company of any malfunction in the Covered System(s) which comes to Customer's attention. This Agreement assumes the Covered System(s) are in operational and maintainable condition as of the Agreement date. If, upon initial inspection, Company determines that repairs are recommended, repair charges will be submitted for approval prior to any work. Should such repair work be declined Company shall be relieved from any and all liability arising therefrom. UNLESS OTHERWISE SPECIFIED IN THIS AGREEMENT, ANY INSPECTION (AND, IF SPECIFIED, TESTING) PROVIDED UNDER THIS AGREEMENT DOES NOT INCLUDE ANY MAINTENANCE, REPAIRS, ALTERATIONS, REPLACEMENT OF PARTS, OR ANY FIELD ADJUSTMENTS WHATSOEVER, NOR DOES IT INCLUDE THE CORRECTION OF ANY DEFICIENCIES IDENTIFIED BY COMPANY TO CUSTOMER. COMPANY SHALL NOT BE RESPONSIBLE FOR EQUIPMENT FAILURE OCCURRING WHILE COMPANY IS IN THE PROCESS OF FOLLOWING ITS INSPECTION TECHNIQUES, WHERE THE FAILURE ALSO RESULTS FROM THE AGE OR OBSOLESCENCE OF THE ITEM OR DUE TO NORMAL WEAR AND TEAR. THIS AGREEMENT DOES NOT COVER SYSTEMS, EQUIPMENT, COMPONENTS OR PARTS THAT ARE BELOW GRADE, BEHIND WALLS OR OTHER OBSTRUCTIONS OR EXTERIOR TO THE BUILDING, ELECTRICAL WIRING, AND PIPING.

9. Customer Responsibilities. Customer shall furnish all necessary facilities for performance of its work by Company, adequate space for storage and handling of materials, light, water, heat, heat tracing, electrical service, local telephone, watchman, and crane and elevator service and necessary permits. Where wet pipe system is installed, Customer shall supply and maintain sufficient heat to prevent freezing of the system. Customer shall promptly notify Company of any malfunction in the Covered System(s) which comes to Customer's attention. This Agreement assumes any existing system(s) are in operational and maintainable condition as of the Agreement date. If, upon initial inspection, Company determines that repairs are recommended, repair charges will be submitted for approval prior to any work. Should such repair work be declined Company shall be relieved from any and all liability arising therefrom. Customer shall further:

- supply required schematics and drawings unless they are to be supplied by Company in accordance with this Agreement;
- Provide a safe work environment, in the event of an emergency or Covered System(s) failure, take reasonable safety precautions to protect against personal injury, death, and property damage, continue such measures until the Covered System(s) are operational, and notify Company as soon as possible under the circumstances.
- Provide Company access to any system(s) to be serviced,
- Comply with all laws, codes, and regulations pertaining to the equipment and/or services provided under this agreement.

10. Excavation. In the event the Work includes excavation, Customer shall pay, as an extra to the contract price, the cost of any additional work performed by Company dues to water, quicksand, rock or other unforeseen condition or obstruction encountered or shoring required.

11. Structure and Site Conditions. While employees of Company will exercise reasonable care in this respect, Company shall be under not responsibility for loss or damage

due to the character, condition or use of foundations, walls, or other structures not erected by It or resulting from the excavation in proximity thereto, or for damage resulting from concealed piping, wiring, fixtures, or other equipment or condition of water pressure. All shoring or protection of foundation, walls or other structures subject to being disturbed by any excavation required hereunder shall be the responsibility of Customer. Customer shall have all things in readiness for installation including, without limitation, structure to support the sprinkler system and related equipment (including tanks), other materials, floor or suitable working base, connections and facilities for erection at the time the materials are delivered. In the event Customer fails to have all things in readiness at the time scheduled for receipt of materials, Customer shall reimburse Company for all expenses caused by such failure. Failure to make areas available to Company during performance in accordance with schedules that are the basis for Company's proposal shall be considered a failure to have things in readiness in accordance with the terms of this Agreement.

12. Confined Space. If access to confined space by Company is required for the performance of Services, Services shall be scheduled and performed in accordance with Company's then-current hourly rate.

13. Hazardous Materials. Customer represents that, except to the extent that Company has been given written notice of the following hazards prior to the execution of this Agreement, to the best of Customer's knowledge there is no:

- "permit confined space," as defined by OSHA,
- risk of infectious disease,
- need for air monitoring, respiratory protection, or other medical risk,
- asbestos, asbestos-containing material, formaldehyde or other potentially toxic or otherwise hazardous material contained in or on the surface of the floors, walls, ceilings, insulation or other structural components of the area of any building where work is required to be performed under this Agreement.

All of the above are hereinafter referred to as "Hazardous Conditions". Company shall have the right to rely on the representations listed above. If hazardous conditions are encountered by Company during the course of Company's work, the discovery of such materials shall constitute an event beyond Company's control and Company shall have no obligation to further perform in the area where the hazardous conditions exist until the area has been made safe by Customer as certified in writing by an independent testing agency, and Customer shall pay disruption expenses and re-mobilization expenses as determined by Company. This Agreement does not provide for the cost of capture, containment or disposal of any hazardous waste materials, or hazardous materials, encountered in any of the Covered System(s) and/or during performance of the Services. Said materials shall at all times remain the responsibility and property of Customer. Company shall not be responsible for the testing, removal or disposal of such hazardous materials.

14. OSHA Compliance. Customer shall indemnify and hold Company harmless from and against any and all claims, demands and/or damages arising in whole or in part from the enforcement of the Occupational Safety Health Act (and any amendments or changes thereto) unless said claims, demands or damages are a direct result of causes within the exclusive control of Company.

15. Interferences. Customer shall be responsible to coordinate the work of other trades (including but not limited to ducting, piping, and electrical) and for and additional costs incurred by Company arising out of interferences to Company's work caused by other trades.

16. Modifications and Substitutions. Company reserves the right to modify materials, including substituting materials of later design, providing that such modifications or substitutions will not materially affect the performance of the Covered System(s).

17. Changes, Alterations, Additions. Changes, alterations and additions to the Scope of Work, plans, specifications or

construction schedule shall be invalid unless approved in writing by Company. Should changes be approved by Company, that increase or decrease the cost of the work to Company, the parties shall agree, in writing, to a change in price prior to performance of any work. However, if no agreement is reached prior to the time for performance of said work, and Company elects to perform said work so as to avoid delays, then Company's estimate as to the value of said work shall be deemed accepted by Customer. In addition, Customer shall pay for all extra work requested by Customer or made necessary because of incompleteness or inaccuracy of plans or other information submitted by Customer with respect to the location, type of occupancy, or other details of the work to be performed. In the event the layout of Customer's facilities has been altered, or is altered by Customer prior to the completion of the Work, Customer shall advise Company, and prices, delivery and completion dates shall be changed by Company as may be required.

18. Commodities Availability. Company shall not be responsible for failure to provide services, deliver products, or otherwise perform work required by this Agreement due to lack of available steel products or products made from plastics or other commodities. In the event Company is unable, after reasonable commercial efforts, to acquire and provide steel products, or products made from plastics or other commodities, if required to perform work required by this Agreement, Customer hereby agrees that Company may terminate the Agreement, or the relevant portion of the Agreement, at no additional cost and without penalty. Customer agrees to pay Company in full for all work performed up to the time of any such termination.

19. Project Claims. Any claim of failure to perform against Company arising hereunder shall be deemed waived unless received by Company, in writing specifically setting forth the basis for such claim, within ten (10) days after such claims arises.

20. Backcharges. No charges shall be levied against Company unless seventy-two (72) hours prior written notice is given to Company to correct any alleged deficiencies which are alleged to necessitate such charges and unless such alleged deficiencies are solely and directly caused by Company.

21. System Equipment. The purchase of equipment or peripheral devices (including but not limited to smoke detectors, passive infrared detectors, card readers, sprinkler system components, extinguishers and hoses) from Company shall be subject to the terms and conditions of this Agreement. If, in Company's sole judgment, any peripheral device or other system equipment, which is attached to the Covered System(s), whether provided by Company or a third party, interferes with the proper operation of the Covered System(s), Customer shall remove or replace such device or equipment promptly upon notice from Company. Failure of Customer to remove or replace the device shall constitute a material breach of this Agreement. If Customer adds any third party device or equipment to the Covered System(s), Company shall not be responsible for any damage to or failure of the Covered System(s) caused in whole or in part by such device or equipment.

22. Reports. Where inspection and/or test services are selected, such inspection and/or test shall be completed on Company's then current Report form, which shall be given to Customer, and, where applicable, Company may submit a copy thereof to the local authority having jurisdiction. The Report and recommendations by Company are only advisory in nature and are intended to assist Customer in reducing the risk of loss to property by indicating obvious defects or impairments noted to the system and equipment inspected and/or tested. They are not intended to imply that no other defects or hazards exist or that all aspects of the Covered System(s), equipment, and components are under control at the time of inspection. Final responsibility for the condition and operation of the Covered System(s) and equipment and components lies with Customer.

23. Limited Warranty. Subject to the limitations below, Company warrants any equipment (as distinguished from the

Software) installed pursuant to this Agreement to be free from defects in material and workmanship under normal use for a period of one (1) year from the date of first beneficial use or all or any part of the Covered System(s) or 18 months after Equipment shipments, whichever is earlier, provided however, that Company's sole liability, and Customer's sole remedy, under this limited warranty shall be limited to the repair or replacement of the Equipment or any part thereof, which Company determines is defective, at Company's sole option and subject to the availability of service personnel and parts, as determined by Company. Company warrants expendable items, including, but not limited to, video and print heads, television camera tubes, video monitor displays tubes, batteries and certain other products in accordance with the applicable manufacturer's warranty. Company does not warrant devices designed to fail in protecting the System, such as, but not limited to, fuses and circuit breakers. Company warrants that any Company software described in this Agreement, as well as software contained in or sold as part of any Equipment described in this Agreement, will reasonably conform to its published specifications in effect at the time of delivery and for ninety (90) days after delivery. However, Customer agrees and acknowledges that the software may have inherent defects because of its complexity. Company's sole obligation with respect to software, and Customer's sole remedy, shall be to make available published modifications, designed to correct inherent defects, which become available during the warranty period. If Repair Services are included in this Agreement, Company warrants that its workmanship and material for repairs made pursuant to this Agreement will be free from defects for a period of ninety (90) days from the date of furnishing.

EXCEPT AS EXPRESSLY SET FORTH HEREIN, COMPANY DISCLAIMS ALL WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE WITH RESPECT TO THE SERVICES PERFORMED OR THE PRODUCTS, SYSTEMS OR EQUIPMENT, IF ANY, SUPPORTED HEREUNDER.

Warranty service will be performed during Company's normal working hours. If Customer requests warranty service at other than normal working hours, service will be performed at Company's then current rates for after hours services. All repairs or adjustments that are or may become necessary shall be performed by and authorized representative of Company. Any repairs, adjustments or interconnections performed by Customer or any third party shall void all warranties.

24. Indemnity. Customer agrees to indemnify, hold harmless and defend Company against any and all losses, damages, costs, including expert fees and costs, and expenses including reasonable defense costs, arising from any and all third party claims for personal injury, death, property damage or economic loss, including specifically any damages resulting from the exposure of workers to Hazardous Conditions whether or not Customer pre-notifies Company of the existence of said hazardous conditions, arising in any way from any act or omission of Customer or Company relating in any way to this Agreement, including but not limited to the Services under this Agreement, whether such claims are based upon contract, warranty, tort (including but not limited to active or passive negligence), strict liability or otherwise. Company reserves the right to select counsel to represent it in any such action.

25. Insurance. Customer shall name Company, its officers, employees, agents, subcontractors, suppliers, and representatives as additional insureds on Customer's general liability and auto liability policies.

26. Termination. Any termination under the terms of this Agreement shall be made in writing. In the event Customer terminates this Agreement prior to completion for any reason not arising solely from Company's performance or failure to perform, Customer understands and agrees that Company will incur costs of administration and preparation that are difficult to estimate or determine. Accordingly, should Customer terminate this Agreement as described above, Customer agrees to pay all



charges incurred for products and equipment installed and services performed, and in addition pay an amount equal to twenty (20%) percent of the price of products and equipment not yet delivered and Services not yet performed, return all product and equipment delivered and pay a restocking fee of twenty (20%) percent the price of products or equipment returned. Company may terminate this Agreement immediately at its sole discretion upon the occurrence of any Event of Default as hereinafter defined. Company may also terminate this Agreement at its sole discretion upon notice to Customer if Company's performance of its obligations under this Agreement becomes impracticable due to obsolescence of equipment at Customer's premises or unavailability of parts.

27. Default. An Event of Default shall be 1) failure of the Customer to pay any amount within ten (10) days after the amount is due and payable, 2) abuse of the System or the Equipment, 3) dissolution, termination, discontinuance, insolvency or business failure of Customer. Upon the occurrence of an Event of Default, Company may pursue one or more of the following remedies, 1) discontinue furnishing Services, 2) by written notice to Customer declare the balance of unpaid amounts due and to become due under this Agreement to be immediately due and payable, provided that all past due amounts shall bear interest at the rate of 1 1/2% per month (18% per year) or the highest amount permitted by law, 3) receive immediate possession of any equipment for which Customer has not paid. 4) proceed at law or equity to enforce performance by Customer or recover damages for breach of this Agreement, and 5) recover all costs and expenses, including without limitation reasonable attorneys' fees, in connection with enforcing or attempting to enforce this Agreement.

28. Exclusions. Unless expressly included in the Scope of Work, this Agreement expressly excludes, without limitation, testing inspection and repair of duct detectors, beam detectors, and UV/IR equipment; provision of fire watches; clearing of ice blockage; draining of improperly pitched piping; replacement of batteries; recharging of chemical suppression systems; reloading of, upgrading, and maintaining computer software; system upgrades and the replacement of obsolete systems, equipment, components or parts; making repairs or replacements necessitated by reason of negligence or misuse of components or equipment or changes to Customer's premises, vandalism, corrosion (including but not limited to micro-bacterially induced corrosion ("MIC")), power failure, current

fluctuation, failure due to non-Company installation, lightning, electrical storm or other severe weather, water, accident, fire, acts of God or any other cause external to the Covered System. Repair Services provided pursuant to this Agreement do not cover and specifically excludes system upgrades and the replacement of obsolete systems, equipment, components or parts. All such services may be provided by Company at Company's sole discretion at an additional charge. If Emergency Services are expressly included in the scope of work section, the Agreement price does not include travel expenses.

29. No Option to Solicit. Customer shall not, directly or indirectly, on its own behalf or on behalf of any other person, business, corporation or entity, solicit or employ any Company employee, or induce any Company employee to leave his or her employment, for a period of two years after termination of this Agreement.

30. Force Majeure; Delays. Company shall not be liable for any damage or penalty for delays or failure to perform work due to acts of God, acts or omissions of Customer, acts of civil or military authorities, Government regulations or priorities, fires, epidemics, quarantine, restrictions, war, riots, civil disobedience or unrest, strikes, delays in transportation, vehicle shortages, differences with workmen, inability to obtain necessary labor, material or manufacturing facilities, defaults of Company's subcontractors, failure or delay in furnishing complete information by Customer with respect to location or other details of work to be performed, impossibility or impracticability of performance or any other cause or causes beyond Company's control, whether or not similar to the foregoing. In the event of any delay caused as aforesaid, completion shall be extended for a period equal to any such delay, and this contract shall not be void or voidable as a result of the delay. In the event work is temporarily discontinued by any of the foregoing, all unpaid installments of the contract price, less an amount equal to the value of material and labor not furnished, shall be due and payable upon receipt of invoice by Customer.

31. One-Year Limitation on Actions; Choice of Law. It is agreed that no suit, or cause of action or other proceeding shall be brought against either party more than one (1) year after the accrual of the cause of action or one (1) year after the claim arises, whichever is shorter, whether known or unknown when the claim arises or whether based on tort, contract, or any other legal theory. The laws of Massachusetts shall govern the validity, enforceability, and interpretation of this Agreement.

32. Assignment. Customer may not assign this Agreement without Company's prior written consent. Company may assign this Agreement to an affiliate without obtaining Customer's consent.

33. Entire Agreement. The parties intend this Agreement, together with any attachments or Riders (collectively the "Agreement") to be the final, complete and exclusive expression of their Agreement and the terms and conditions thereof. This Agreement supersedes all prior representations, understandings or agreements between the parties, written or oral, and shall constitute the sole terms and conditions of sale for all equipment and services. No waiver, change, or modification of any terms or conditions of this Agreement shall be binding on Company unless made in writing and signed by an Authorized Representative of Company.

34. Severability. If any provision of this Agreement is held by any court or other competent authority to be void or unenforceable in whole or in part, this Agreement will continue to be valid as to the other provisions and the remainder of the affected provision.

35. Legal Fees. Company shall be entitled to recover from the customer all reasonable legal fees incurred in connection with Company enforcing the terms and conditions of this Agreement.

36. License Information (Security System Customers): AL Alabama Electronic Security Board of Licensure 7956 Vaughn Road, Pmb 392, Montgomery, Alabama 36116 (334) 264-9388; AR Regulated by: Arkansas Board of Private Investigators And Private Security Agencies, #1 State Police Plaza Drive, Little Rock 72209 (501)618-8600; CA Alarm company operators are licensed and regulated by the Bureau of Security and Investigative Services, Department of Consumer Affairs, Sacramento, CA, 95814. Upon completion of the installation of the alarm system, the alarm company shall thoroughly instruct the purchaser in the proper use of the alarm system. Failure by the licensee, without legal excuse, to substantially commence work within 20 days from the approximate date specified in the agreement when the work will begin is a violation of the Alarm Company Act; NY Licensed by N.Y.S. Department of the State; TX Texas Commission on Private Security, 5805 N. Lamar Blvd., Austin, 78752-4422, 512-424-7710. License numbers available at www.jci.com or contact your local Johnson Controls office.

IMPORTANT NOTICE TO CUSTOMER

In accepting this Proposal, Customer agrees to the terms and conditions contained herein including those on the following pages of this Agreement and any attachments or riders attached hereto that contain additional terms and conditions. It is understood that these terms and conditions shall prevail over any variation in terms and conditions on any purchase order or other document that the Customer may issue. Any changes in the system requested by the Customer after the execution of this Agreement shall be paid for by the Customer and such changes shall be authorized in writing. **ATTENTION IS DIRECTED TO THE LIMITATION OF LIABILITY, WARRANTY, INDEMNITY AND OTHER CONDITIONS ON THE FOLLOWING PAGES. This proposal shall be void if not accepted in writing within thirty (30) days from the date of the Proposal.**

Offered By: Johnson Controls Fire Protection LP License#: 2005 ELM HILL PIKE NASHVILLE, TN 37210-3807 Telephone: (615) 256 8919 Representative: _____ _____	Accepted By: (Customer) Company: _____ Address: _____ Signature: _____ Title: _____ P.O.#: _____ Date: _____
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February 25, 2020

Dear Ryan Potts,

Thank you for giving ADS Security, LP the opportunity to be your security provider.

Proposal to replace all Software house controllers and card readers. ADS will reuse existing door hardware and power supplies.

Proposal assumes wiring and devices are in good condition and functional. Should we have to rewire or reinstall the existing devices not covered in this proposal, the total amount will be increased to reflect any additional costs. Proposal includes Operations and Maintenance bldg. If this is acceptable, please let us know so we can get you the official paperwork for processing and scheduling.

Due to the size and multiple locations, ADS will proceed per location. If you would prefer a specific order of conversion, please let us know that as well.

Please review the attached document that explains this proposal for your custom security needs in detail. Below is a general summary of your proposal and a list of documents you will find attached.

Site (the protected premises)
Murfreesboro Water Department
300 NW Broad Street
Murfreesboro, TN 37130
Contact: Ryan Potts
Phone: (615) 890-0862

	Installation	Monthly
Totals	\$85,540.00	\$0.00

Documents included in this proposal:

Coverletter

Proposal Details

- System: Administration Building
- System: Auxiliary Lake Building
- System: Water Treatment Facility
- System: River Water Intake
- System: Waste Water Facility
- System: Water Towers Access Control (7)
- System: Operations And Maintenance Building
- Financial Summary

If you have any questions, please do not hesitate to call.

Thank you for the opportunity to earn your business,

Chuck Phipps
(615) 977-8512
cphipps@adssecurity.com

Proposal ID: 97513 • February 25, 2020

3001 Armory Drive, Suite 100 • Nashville, TN 37204 • PHONE (615) 269-4382 WEB adssecurity.com

AL 6998 0001 0629 1562 073 0273 0231 0625 080 094 S-47409 072 0299, FL EF20000867 17582-0001-2008 EF20000960 217434-0001-2011 EG0000097, GA LVU406710 LVA205166 LVU205838 LVA206076 LVA206037, IL 127001654, MS 15008579 15005720, NC 2554-CSA SP,FA/LV:31868, SC BAC.5181 FAC.3321 BAC.13626 FAC.13633 BAC.13696 FAC.13663 FAC.13749 FAC.13733 BAC.13777 FAC.13731, TN 685 1571 183 1951 1417 LV00599 LV00511



System - Administration Building

Type: Access Control

	Qty.
Parts:	
Access Control Board	1.00
ACB-HWL-PW6K1IC	
ACCESS CONTROL HID READER	3.00
ACR-HON-OP40	
Access Control Reader	2.00
ACR-HWL-PW6K1R2	
Enclosure	2.00
ENC-HWL-PW5K1ENC3	
Prowatch Software Addition	1.00
SFT-HWL-PWRDR32	
Software	1.00
SFT-HWL-PW42CESW	
Special Conditions:	
Panel Programming	1.00
Program new system and software to replace existing access control	
Panel Build-out	1.00
Replace existing controllers	

Notes: Replace access control panels and readers



System - Auxiliary Lake Building

Type: Access Control

	Qty.
Parts:	
Access Control Board ACB-HWL-PW6K1IC	1.00
Access Control HID Card Reader ACR-HON-OP40 HID	3.00
Access Control Reader ACR-HWL-PW6K1R2	2.00
Special Conditions:	
Panel Programming	1.00
Replace control boards. Reuse existing network drop to put controllers on system.	

Notes: Replace existing readers and control boards. Reuse existing hardware and power supplies.

Use existing network drop to put controllers on network.



System - Water Treatment Facility

Type: Access Control

	Qty.
Parts:	
Access Control Board	1.00
ACB-HWL-PW6K1IC	
Access Control Reader	24.00
ACR-HWL-PW6K1R2	
ACR-HONOP40 HID	23.00
HON-OP40 HID READER	

Special Conditions:

Panel Programming	1.00
Replace software house system	
Panel Build-out	1.00
Replace existing controllers and program into new system.	

Notes: Replace existing controllers and building readers. Reuse the current hardware, gate readers , and power supplies.

System will tie into the software purchased in the main admin building proposal



System - River Water Intake

Type: Access Control

	Qty.
Parts:	
Access Control Board	2.00
ACB-HWL-PW6K1ICE	
HID CARD READER	2.00
ACR-HON-OP40HID	
Special Conditions:	
Panel Programming	1.00
ICE controller to be attached to existing network drop	

Notes: Replace existing controllers and readers. Reuse existing hardware and power supplies



System - Waste Water Facility

Type: Access Control

	Qty.
Parts:	
Access Control Board	1.00
ACB-HWL-PW6K1IC	
Access Control HID Card Reader	4.00
ACR-HON-OP40	
Access Control Reader	2.00
ACR-HWL-PW6K1R2	
Special Conditions:	
Panel Programming	1.00
Control panels in empty building. Insure network drop functionality for system integration.	
Panel Build-out	1.00
Replace gate readers for all three gates	

Notes: Replace existing controllers and readers. Reuse hardware and power supplies and Network connection to put controllers on system



System - Water Towers Access Control (7)

Type: Access Control

	Qty.
Parts:	
Access Card Reader HID ACR-HON - OP40	7.00
Access Control Board ACB-HWL-PW6K1ICE	7.00
Special Conditions:	
Panel Programming	1.00
Panel to use existing netwrk drop to communicate with main control panel at water treatment facility.	
Notes: Replace access control on seven (7) existing water towers.	

Proposal ID: 97513 • February 25, 2020

3001 Armory Drive, Suite 100 • Nashville, TN 37204 • PHONE (615) 269-4382 WEB adssecurity.com



System - Operations And Maintenance Building

Type: Access Control

	Qty.
Parts:	
Access Control Board ACB-HWL-PW6K1IC	1.00
Access Control Reader ACR-HWL-PW6K1R2	5.00
HID Card Reader ACR-HON-OP40	9.00
Special Conditions:	
Panel Programming	1.00
Program new controllers in to main system through existing network drop	

Notes: Replace existing access control system with new Prowatch. Integrate system into main server located at water treatment building. Reuse existing hardware and power supplies.



Financial Summary

Murfreesboro Water Department

Systems	Installation	Monthly	
Administration Building	\$13,470.00	\$0.00	
Auxiliary Lake Building	\$5,510.00	\$0.00	
Water Treatment Facility	\$34,280.00	\$0.00	
River Water Intake	\$3,150.00	\$0.00	
Waste Water Facility	\$6,415.00	\$0.00	
Water Towers Access Control (7)	\$10,875.00	\$0.00	
Operations And Maintenance Building	\$11,840.00	\$0.00	
	Proposal Totals*	\$85,540.00	\$0.00



... creating a better quality of life

MEMORANDUM

DATE: March 17, 2020
TO: Water Resources Board
FROM: Valerie H. Smith
SUBJECT: Rucker Lane Widening
Sewer Main Extensions
Award of Contract
Project File #19052

BACKGROUND

At the December 2018 Board meeting the Board approved the Engineering necessary for the roadway widening in an amount not to exceed \$4,669 to Wisser Consultants (Wisser). Typically, the Department's policy is to replace and possibly upgrade the existing water and sewer mains with new roadway reconstruction projects to avoid having old lines within a new road. However, in this case, the water is owned by Consolidated Utility District and our sewer mains do not run the length of the roadway so there will not be old sewer mains to replace.

Staff does want to take this opportunity to extend sewer mains from the east side of Rucker Lane to the west side for future development as the roadway is being reconstructed. There are only three points where the sewer mains have been extended, by development, to Rucker Lane from the Interceptor sewers to the west and east as you can see on the attached exhibit.

Five bids were received by the City. A recommendation from Wisser along with the bid tabulation is attached. Wisser and the City recommend awarding the project to Rogers Group, Inc. in the amount of \$74,095.25 for the sewer portion of the project.

RECOMMENDATION

Staff recommends that the Board recommend to the City Council awarding the contract to Rogers Group, Inc. in the amount of \$74,095.25.

FISCAL IMPACT

Funding for the Engineering and Construction was approved from Working Capital Reserves. The original estimate for the sewer construction cost was \$30,000. Staff believes the increase is due to the high demand for construction services.

ATTACHMENTS

Wisser Recommendation
Bid Tabulation
GIS Exhibit



425 Jayhawk Court
 Murfreesboro, TN 37128
 W wiserconsultants.com
 T 615-278-1500
 F 615-217-8130

March 17, 2020

Mr. Chris Griffith
 City Engineer, City of Murfreesboro
 111 W. Vine St.
 Murfreesboro, TN 37130

**RE: Rucker Lane Roadway Widening Phase 1 & 2, Murfreesboro, TN
 Recommendation to Award**

Dear Mr. Griffith:

Bids were opened for the Rucker Lane Roadway Widening Phase 1 & 2 project on March 10, 2020. Below is a summary of the attached bid tabulation for the above referenced project.

Contractor	Total Bid Price
Rogers Group, Inc.	\$11,180,000.00
Rawso, LLC	\$11,644,611.75
Civil Constructors, LLC	\$14,143,271.48
Jones Bros. Contractor, LLC	\$15,009,253.52
Vulcan Construction Materials, LLC	\$15,095,637.90
Engineer's Estimate	\$10,914,847.11

Table 1: Bid Tabulation Summary for the Rucker Lane Widening project

After reviewing Rogers Group, Inc. opened bid and associated documentation, WISER recommends that the City of Murfreesboro award the Rucker Lane project to Rogers Group, Inc. The opened bid exceed the Engineers Estimate by approximately 2.4%. After reviewing the individual priced items we found the unit prices from all bidders to be generally higher than expected for the Atmos gas quantities. The overall price of the work appears to reflect local market conditions for this type of work.

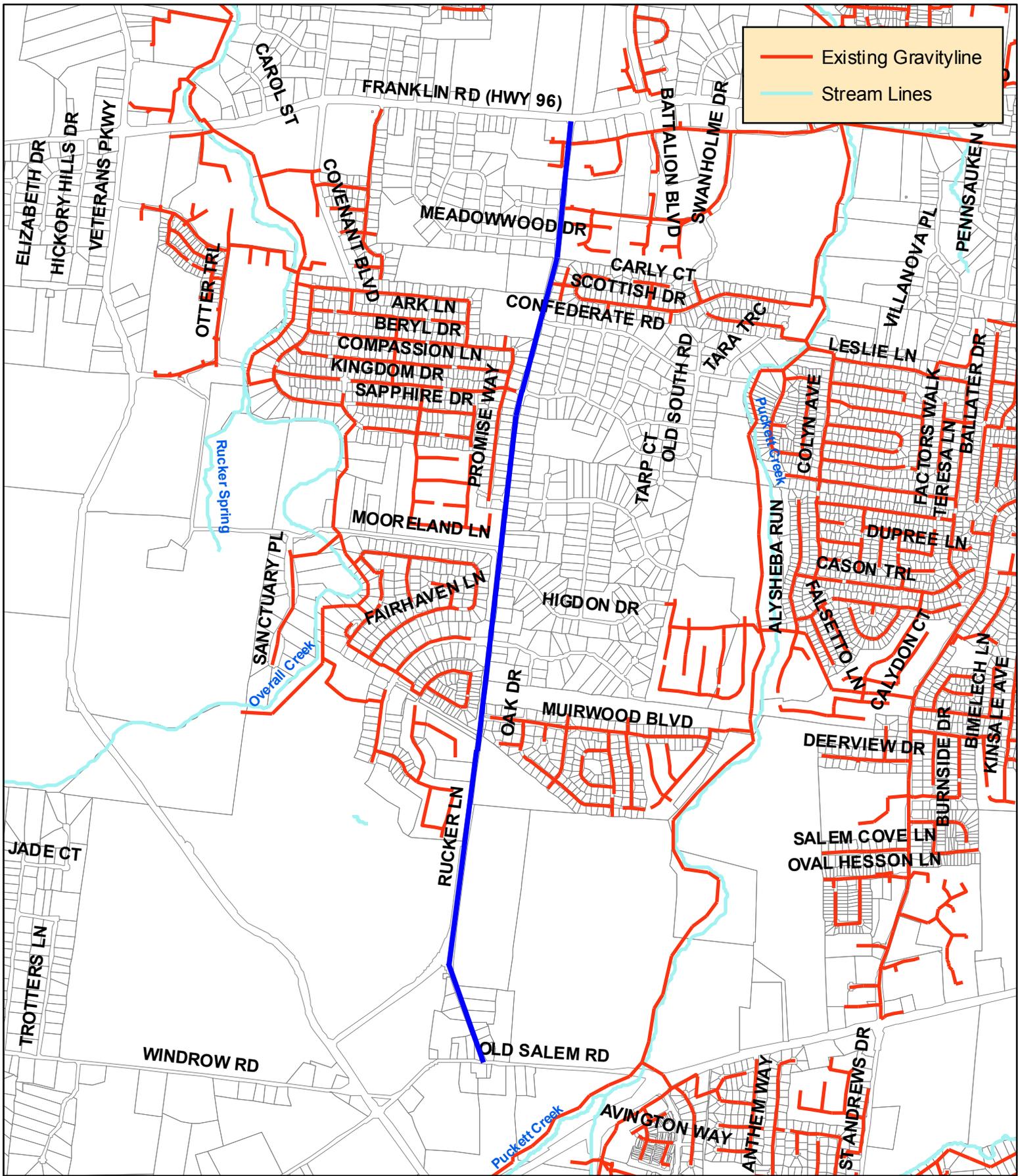
Please feel free to call me if you have any questions or require additional information.

Sincerely,

Jeremy A. Langford
 Wiser Consultants

RUCKER LANE ROADWAY PHASE I & II PROJECT BID TABULATION

ESTIMATED ROADWAY QUANTITIES				Engineer's Estimate		Rawso, LLC		Jones Bros. Contractor, LLC		Vulcan Construction Materials, LLC		Civil Constructors		Rogers Group, Inc.	
ITEM NO.	DESCRIPTION	UNIT	QUANTITY	UNIT COST	TOTAL COST	UNIT COST	TOTAL COST	UNIT COST	TOTAL COST	UNIT COST	TOTAL COST	UNIT COST	TOTAL COST	UNIT COST	TOTAL COST
CITY ROADWAY BIDS					\$ 8,571,309.81		\$ 8,996,611.75		\$ 11,726,243.52		\$ 12,004,066.90		\$ 10,978,774.48		\$ 8,901,698.75
797-05.52	8IN PVC GRAVITY SEWER 6FT-12FT DEPTH (SDR 35)	L.F.	241	\$ 100.00	\$ 24,100.00	\$ 250.00	\$ 60,250.00	\$ 370.00	\$ 89,170.00	\$ 336.00	\$ 80,976.00	\$ 442.00	\$ 106,522.00	\$ 100.00	\$ 24,100.00
797-05.53	8IN PVC GRAVITY SEWER 12FT-18FT DEPTH (SDR 35)	L.F.	94	\$ 200.00	\$ 18,800.00	\$ 370.00	\$ 34,780.00	\$ 375.00	\$ 35,250.00	\$ 340.00	\$ 31,960.00	\$ 630.00	\$ 59,220.00	\$ 116.00	\$ 10,904.00
797-07.04	48IN MANHOLE 8FT-10FT DEPTH	EACH	1	\$ 5,000.00	\$ 5,000.00	\$ 5,500.00	\$ 5,500.00	\$ 15,900.00	\$ 15,900.00	\$ 14,300.00	\$ 14,300.00	\$ 7,239.00	\$ 7,239.00	\$ 5,300.00	\$ 5,300.00
797-07.05	48IN MANHOLE 10FT-12FT DEPTH	EACH	3	\$ 5,200.00	\$ 15,600.00	\$ 6,000.00	\$ 18,000.00	\$ 17,700.00	\$ 53,100.00	\$ 15,900.00	\$ 47,700.00	\$ 8,371.00	\$ 25,113.00	\$ 5,800.00	\$ 17,400.00
797-07.06	48IN MANHOLE 12FT-14FT DEPTH	EACH	1	\$ 5,600.00	\$ 5,600.00	\$ 6,000.00	\$ 6,000.00	\$ 19,100.00	\$ 19,100.00	\$ 17,200.00	\$ 17,200.00	\$ 8,551.00	\$ 8,551.00	\$ 6,850.00	\$ 6,850.00
797-07.61	ADJUST EXISTING MANHOLE CASTING	EACH	3	\$ 500.00	\$ 1,500.00	\$ 500.00	\$ 1,500.00	\$ 1,200.00	\$ 3,600.00	\$ 1,100.00	\$ 3,300.00	\$ 893.00	\$ 2,679.00	\$ 800.00	\$ 2,400.00
797-07.80	REMOVE SEWER MANHOLE	EACH	1	\$ 1,000.00	\$ 1,000.00	\$ 1,500.00	\$ 1,500.00	\$ 2,150.00	\$ 2,150.00	\$ 1,940.00	\$ 1,940.00	\$ 957.00	\$ 957.00	\$ 1,600.00	\$ 1,600.00
797-10.02	CONNECT 8IN SEWER TO EXIST. MANHOLE	EACH	3	\$ 3,500.00	\$ 10,500.00	\$ 2,500.00	\$ 7,500.00	\$ 13,100.00	\$ 39,300.00	\$ 11,820.00	\$ 35,460.00	\$ 4,969.00	\$ 14,907.00	\$ 700.00	\$ 2,100.00
797-10.09	CONNECT EX. 8IN SEWER TO NEW MANHOLE	EACH	1	\$ 1,450.00	\$ 1,450.00	\$ 6,000.00	\$ 6,000.00	\$ 7,900.00	\$ 7,900.00	\$ 7,170.00	\$ 7,170.00	\$ 2,849.00	\$ 2,849.00	\$ 1,850.00	\$ 1,850.00
797-11.39	TV INSPECTION	L.F.	335	\$ 3.50	\$ 1,172.50	\$ 8.00	\$ 2,680.00	\$ 8.00	\$ 2,680.00	\$ 8.00	\$ 2,680.00	\$ 3.70	\$ 1,239.50	\$ 4.75	\$ 1,591.25
MWRD SEWER BIDS					\$ 84,722.50		\$ 143,710.00		\$ 268,150.00		\$ 242,686.00		\$ 229,276.50		\$ 74,095.25
CUD WATER BIDS					\$1,625,764.80		\$ 1,816,730.00		\$ 1,800,260.00		\$ 1,697,605.00		\$ 2,184,603.00		\$ 1,300,265.00
ATMOS GAS BIDS					\$ 633,050.00		\$ 687,560.00		\$ 1,214,600.00		\$ 1,151,280.00		\$ 750,617.50		\$ 903,941.00
TOTAL BID					<u>\$ 10,914,847.11</u>		<u>\$ 11,644,611.75</u>		<u>\$ 15,009,253.52</u>		<u>\$ 15,095,637.90</u>		<u>\$ 14,143,271.48</u>		<u>\$ 11,180,000.00</u>



MURFREESBORO WATER AND SEWER DEPARTMENT

Rucker Lane Widening



MINUTES
MURFREESBORO WATER RESOURCES BOARD
March 3, 2020

The Murfreesboro Water Resources Board met on Tuesday, March 3, 2020 in the conference room at the Operations and Maintenance Building, 1725 S. Church Street. Present at the meeting were Board members: Mr. John Sant Amour, Dr. Al Carter, Mr. Brian Kidd, Ms. Sandra Trail, Mr. Kirt Wade, and Ms. Madelyn Scales-Harris. Also present were Darren Gore, Valerie Smith, Doug Swann, Michele Pinkston, Adam Tucker, Roman Hankins, Anita Heck, Steve Tate, Jimmy Stacey, Matt Powers, Joe Russell, Brent Fowler, Jay Bradley, Lynda Sullivan, Randy McCullough, Adam Todd, Andy McCrary, and Travis Wilson along with other members of the public.

The Consent Agenda was presented for the following considerations:

- A. Consider SRWTP Commercial Structures & Facilities Painting Contract Extension and SSR RPR Task Order 19-41-024.0 –*

In December 2018, staff brought the bids for repainting of the Stones River Water Treatment Plant and Auxiliary Intake Building over the next four years. The approved bidder was Commercial Painting, Inc. They started their painting in FY19 and this is the extension for the painting during FY21. FY21 is budgeted at \$445,000. The work will start after July 1, 2020.

The current cost of the FY21 project is \$397,200 for painting and \$43,100 for coating inspection from SSR and \$4,700 for contingency.

Staff recommended that the Board recommend to the City Council accepting Commercial Painting, Inc. second amendment for the painting contract and SSR coating inspection RPR task order.

- B. Consider SRWTP Chemical Bid Extensions –*

Bids were publicly opened on July 1, 2017 for water treatment chemicals to be used at the Stones River Water Treatment Plant. Section 1.3.4 of the bid documents states “the successful bidder shall provide the chemical(s) as specified. Pricing shall be effective for the term of the contract, which is through June 30, 2018 with the option to renew for up to three additional one-year terms.” The following companies have now renewed their contract for the third term through June 30, 2021. The bids are as follows:

American Development Company:

CHEMICAL	UNIT PRICE	EST. ANNUAL EXPENSE
Sodium Hydroxide	\$0.168/lb	\$ 5,000.00

Brenntag Mid-South:

CHEMICAL	UNIT PRICE	EST. ANNUAL EXPENSE
Citric Acid 50%	\$5.58/gal	\$ 16,000.00

Univar:

CHEMICAL	UNIT PRICE	EST. ANNUAL EXPENSE
Sodium Chloride	\$0.16/lb	\$ 70,000.00

Bids were publicly opened on April 9, 2018 for water treatment chemicals to be used at the Stones River Water Treatment Plant. Section 1.3.4 of the bid documents states “The successful bidder shall provide the chemical(s) as specified. Pricing shall be effective for the term of the contract, which is through June 30, 2019 with the option to renew for up to three additional one-year terms.” The following companies have now renewed their contract for the second term through June 30, 2021. The bids are as follows:

American Development Company:

CHEMICAL	UNIT PRICE	EST. ANNUAL EXPENSE
Hydrogen Peroxide	\$0.33/lb	\$ 26,000.00

Gulbrandsen Technologies, Inc.:

CHEMICAL	UNIT PRICE	EST. ANNUAL EXPENSE
Polyaluminum Hydroxichloride	\$0.1977/lb	\$ 20,000.00

Bids were publicly opened on March 25, 2019 for water treatment chemicals to be used at the Stones River Water Treatment Plant. Section 1.3.4 of the bid documents states “The successful bidder shall provide the chemical(s) as specified. Pricing shall be effective for the term of the contract, which is through June 30, 2020 with the option to renew for up to three additional one-year terms.” The following companies have now renewed their contract for the first term through June 30, 2021. The bids are as follows:

American Development Company:

CHEMICAL	UNIT PRICE	EST. ANNUAL EXPENSE
Calcium Thiosulfate	\$0.508/lb	\$ 12,000.00

American Development Company:

CHEMICAL	UNIT PRICE	EST. ANNUAL EXPENSE
Phosphate	\$0.842/lb	\$ 45,000.00

American Development Company:

CHEMICAL	UNIT PRICE	EST. ANNUAL EXPENSE
Sodium Permanganate	\$0.762/lb	\$ 285,000.00

Polydyne:

CHEMICAL	UNIT PRICE	EST. ANNUAL EXPENSE
Polyelectrolyte Coagulant Aid	\$0.91/lb	\$ 40,000.00

The price of the chemicals will be reflected in the FY 2020-21 Operating Budget. The contract price will be good through June 30, 2021.

Staff recommended the Board recommend to City Council approving the renewal of the chemical bid extensions as provided.

C. Consider AMI Server Software Upgrades –

The AMI servers are currently running on Windows Server Edition 2008 which has met its end of life effective January 14, 2020.

Also, MWRD is currently running Itron Fixed Network version 5.1. We need to upgrade to version 5.4 to resolve communication and time sync issues between the servers and the field devices.

Staff recommended upgrading the Windows Server Operating System from 2008 to 2016 (end of life 1/11/2027) and Fixed Network from version 5.1 to 5.4.

Fiscal impact will be a total of \$63,780 from FY20 rate-funded capital budget. This will replace a SAN (Storage Area Network) budgeted at \$60,000 which is not necessary at this time.

D. Consider a Proposal from Jobe, Hastings & Associates for the Water Resources Department Audit and the Stormwater Fund Audit for the Year Ending June 30, 2020 –

Jobe, Hastings & Associates submitted a proposal to perform the annual audits of Murfreesboro Water Resources Department and the Murfreesboro Stormwater Fund as of June 30, 2020.

The proposed fee is \$28,500. As the audit is performed during the subsequent fiscal year, funding will come from the Professional Services expense account in the FY21 budget year. This quote reflects no increase in the audit fee from FY19.

Staff recommended the Board recommend to City Council accepting the proposal as presented.

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

The January 28, 2020 Board Minutes were unanimously accepted as submitted.

Staff presented the FY2019 Cost of Service for Water and Sewer Funds to the Board for their review.

The Murfreesboro Water Resources Department was provided a cost of service study (COSS) from Jackson Thornton Utilities Consultants for FY2019. Jackson Thornton provided a presentation to the Board summarizing the FY19 COSS. Next month, a pro forma for FY24 will be presented in conjunction with a discussion and analysis on rate design to meet the Department's 5-yr projected revenue requirements. The COSS was reviewed in a historical perspective; looking back at where the Department was in 2007, 2011, 2013, 2015 and 2017 and where the Department is as of 2019. The objectives of the COSS are to make sure there is enough revenue to meet the needs of the system, ensure fair and equitable rates as well as customers' ability to pay; thereby making the rates defensible. The COSS develops the process to determine revenue requirements, develops revenue requirements by rate class, develops recommended rate designs, and recommends potential rate changes.

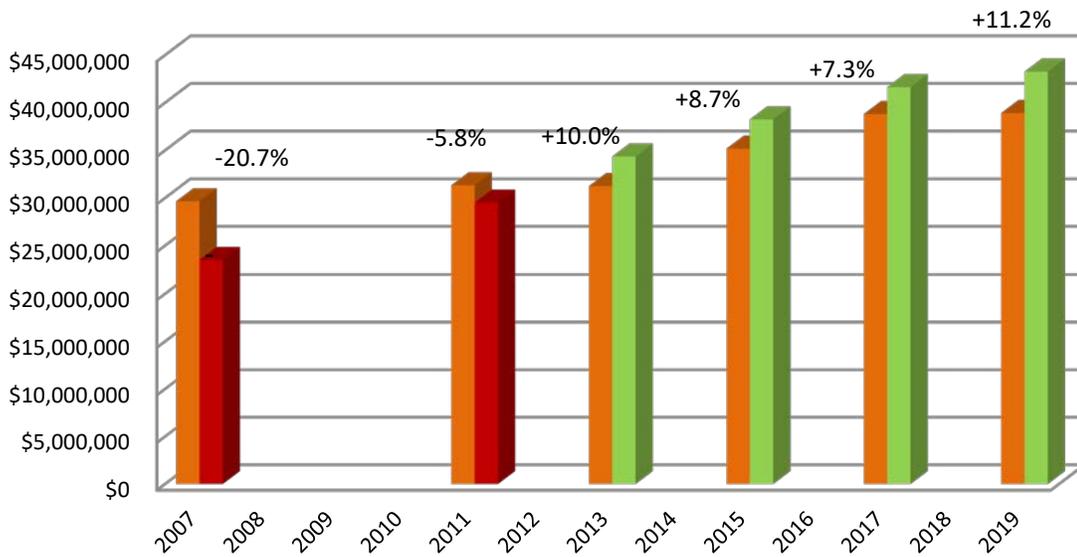
MWRD defines five customer classes. The customer classes are generally defined as follows:

- 1) Residential class includes detached and attached residential units, duplexes, mobile homes and apartments.

- 2) Small Commercial includes churches, hotel/motel and other retail/service establishments that have a meter smaller than 1 ½”.
- 3) Large Commercial includes Middle Tennessee Medical Center (MTMC) as well as the same categories as defined in small commercial but having a water meter 1 ½” or larger.
- 4) Industrial includes all industrial water and sewer users in MWRD’s water service area and all sewer users in CUD’s water service area.
- 5) Government includes MTSU, the VA hospital, schools and all internal Murfreesboro accounts.

When reviewing the Department’s recovery of cost in total, the following chart summarizes the Department’s history over FY07, FY11, FY13, FY15, FY17 and FY19 as pertaining to Total Rate Requirements and Total Rate Revenue. The Department started in a 20.7 percent under recovery in 2007 and is currently in an 11.2% over recovery (in total). When looking at the increase annual sales in sewer, staff believes the reason it only shows a 3.7% increase is due to General Mills discharging 49% less sewer on average to the City’s collection system after installing a new irrigation system in April 2017 to land apply their highly treated effluent on Indian Hills Golf Course.

TOTAL WATER AND SEWER RATE REQUIREMENTS AND RATE REVENUE



	2007 COSS	2011 COSS	2013 COSS	2015 COSS	2017 COSS	2019 COSS
Total Rate Requ'mnt	\$29,650,005	\$31,328,535	\$31,244,197	\$35,175,522	\$38,816,282	\$38,916,760
Total Rate Revenue	\$23,498,628	\$29,507,833	\$34,353,148	\$38,243,420	\$41,639,144	\$43,265,652

The Department is well positioned in understanding the cost, funding and rate structure to construct future improvements to meet customer demands and regulatory requirements. The FY24 pro forma will be presented in the Board’s March meeting and the associated 5-yr revenue requirements. Staff will also review potential rate designs that will ensure future cost of service is recovered through rate revenue.

Continued cost of service studies conducted biannually will guide management in making adjustments to rates so as to ultimately attempt to recover 100% from all customer classes; thereby preventing to the greatest degree possible any subsidies from one class to another or from the water utility to the sewer utility.

The Board considered sewer charges in CUD dual meter billing.

MWRD uses the following guidance on billing for multiple meters on a service:

- If there is a large meter and a small meter (Compound or High-Low), MWRD charges water and sewer minimums for the larger meter and consumption on both meters.
- If meters are similar size, MWRD charges based on whether each meter serves a single service line to the customer.

With regard to CUD billing for multiple meters on a service:

- CUD also has High-Low meters. They charge only one minimum on those configurations.
- On dual meters of a similar size, CUD charges the minimum charge on both meters, the assumption being that the customer would need a larger meter if only one was being used.

This question arose when it was determined that CUD was not being consistent in charging the MWRD sewer minimum for dual meters. On a new customer, CUD began charging two minimums on a dual 6" meter customer. When billing was questioned, and after conversation with MWRD, CUD began charging only one minimum to cover both 6" meters. The customer then asked about a refund for the period that two minimums were charged.

Staff feels that dual meter configurations serve as a redundancy for customers and the department, allowing the customer to continue to receive water if one meter fails.

Staff requested confirmation (as policy) of our current practice to charge only one minimum on a dual meter configuration. Additionally, in the absence of an adopted MWRD policy regarding charging minimum monthly bills on the dual meter configuration set up by CUD, staff recommended that no refunds be issued by MWRD based on customers being charged sewer per CUD's policy.

CUD currently has nine pairs of 6" dual meters that are affected by MWRD policy. Charging the full minimum on both meters in each pair would result in an additional \$9,000+ in monthly sewer income for MWRD.

Madelyn Scales-Harris made a motion to approve. Dr. Carter seconded. The motion unanimously passed.

The Board considered SSR Engineering Task Order 1941016.0, Biosolids Polymer System Replacement and Upgrade.

SSR submitted a task order to design the biosolids polymer system replacement and upgrade for the Murfreesboro Water Resource Recovery Facility (WRRF).

MWRD introduced to the Board at the December 2019 meeting the need to replace two existing dry polymer feed systems originally built in 2001 and 2008 that have met the end of their useful life. This

project has been included in the Department's 5-yr CIP and requires approval of an engineering task order to begin work. The polymer feed system injects polymer into the Water Resource Recovery Facilities biosolids in order to optimize their dewatering in the Fournier rotary presses.

In addition to the age of the system, the current arrangement compromises the overall capacity and effectiveness of the dewatering system. The polymer system upgrades will address these issues by designing an upgraded system, sized for future solids production loadings with 100-percent redundancy. Equipment planned includes the following:

- 2 sets of mixing/aging tanks, each sized for all 8 rotary presses
- 2 disperser/mixers (feeders), each sized for all 8 rotary presses
- 2 bag unloaders, each sized for all 8 rotary presses
- 10 polymer feed pumps (8 duty and 2 spare)

MWRD will procure the equipment and develop task orders for John Bouchard and Sons to install the polymer system using the City's master services agreement. Additionally, MR Systems will provide the integration of local controls and field instrumentation into the WRRF's Supervisory Control and Data Acquisition System (SCADA) using the City's master services agreement.

The Department has earmarked \$1,450,000 in FY20-21 from our working capital reserves to fund this project. Staff has increased that by \$150,000 based on the updated summary of costs provided by SSR.

Staff recommended the Board recommend to the City Council approval of SSR Task Order 1941016.0 in the amount of \$112,235.

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

The Board considered development restrictions within Flow Monitoring Basin 10-Upper Reaches.

Based on recent temporary flow studies conducted in MWRD's sanitary sewer service area, surcharge conditions occurred under wet weather conditions that require staff to implement restricted connections to the sewer system. Staff recommended limiting density to 2.5 single family unit equivalents in the following areas:

- Flow monitoring basin 10A-3; area south of MTSU encompassing areas south of East Lytle St. to north of East Castle St.
- Flow monitoring basin 10A-4; area south of MTSU encompassing areas south of Alumni Dr. to north of John Bragg Hwy and north of University Ridge Apartments.

Between December 13, 2018 to January 21, 2019, the Department requested ADS, through our professional services agreement, to install three temporary sewer flow monitors within flow monitor Basin MF10 because a developer was interested in building a hotel north of E. Main Street along Rutherford Blvd. Staff was uncertain whether the downstream sewer main could handle the additional flow from a hotel.

Between the dates of December 23 to December 31, 2018, Murfreesboro received a total of 3.24" with the heaviest rain during this period being December 31st of 1.91". This rain produced sewer depths

from 5” to 20” at the temporary monitor locations. With these depths of flow, the surcharge elevations can be determined within the sewer main and manholes up and/or downstream of the monitor locations.

In 2011, upon receiving a Commissioners Order from the State of Tennessee Department of Environment and Conservation, staff created a Capacity Assurance Program (CAP) to explain the basis for coordinating capacity decision criteria for each sewer basin within our sewer system. The objective of the CAP was to enable the Department to authorize new sewer service connections or increases in flow from existing sewer service connections while not increasing the likelihood of creating sanitary sewer system overflows (SSO’s). Within the CAP the below table of Collection System Surcharge Condition Criteria was created to give guidelines as to when to disallow additional connections to the system.

Collection System Area/ Monitor Basin	Surcharge Condition Criteria
Area of Limited or No Backup	Sewer Hydraulic Gradeline within 1’ of MH Rim
Area of Significant Backup Complaints	Sewer Hydraulic Gradeline within 2’ of MH Rim
Siphon or Other Unique Structure	Evaluate Based on Design Criteria

Since the creation of this CAP, EPA Region 4 has created a little different guideline specified within different consent decrees given to municipalities within the southeast. The guideline is to disallow additional sewer connections and sewer extensions when sewer surcharges within three feet of the manhole rim.

Using this new surcharge guideline specified by EPA, and the recent flow monitoring study information, staff realizes the necessity to restrict development in the temporary flow monitor areas of 10A-3 and 10A-4. The recently passed Sewer Allocation Ordinance and supporting Resolution has reduced the allowed densities based on the current zonings, however, staff feels the results of the flow monitoring warrant the need to restrict development densities even further in order to allow the vacant properties within these areas to continue to develop.

Staff recommended restricting the development in Basins 10A-3 & 10A-4 to those allowable for a Commercial Zoning at 2.5 single family units per acre (sfu/acre) or 650 gallons per day per acre (gpd/acre) no matter the current zoning.

Brian Kidd made a motion to approve. Kirt Wade seconded. The motion unanimously passed.

The Board considered a proposal from CIA for Mercury Boulevard Pump Station and Flow Monitor Basin 9A Study.

With the recommendation to limit the density of development within Basin 10A-3 & 10A-4 the Department would like to study the Mercury Blvd Station, within Basin 10A-4, as well as gravity sewer mains and Pump Station #13, within Basin 9A, to determine whether the flow coming to the Mercury Blvd station could be pumped to Basin 9A in order to free up capacity within Basins 10A-3 & 10A-4.

Between the dates of December 23 to December 31, 2018, Murfreesboro received a total of 3.24” with the heaviest rain during this period being December 31st of 1.91”. This rain produced sewer depths

from 5” to 20” at the temporary monitor locations. These surcharge depths came within 3’ of the manhole rim at or near the temporary monitor locations within Basins 10A-3 & 10A-4. This depth, within 3’ of the manhole rim, is a guideline set by EPA to disallow additional sewer connections. Instead of disallowing connections staff would like CIA to study whether flow can be redirected to Basin 9A, and this basin handle the additional flow, in order to free up capacity in Basin 10A-4.

Staff recommended the Board recommend to Council approval of the Engineering Proposal from CIA in an amount not to exceed \$30,000.

This study is not included in the Department’s Capital Improvement Plan (CIP). It is therefore recommended that the cost come from working capital account.

Kirt Wade made a motion to approve. Dr. Carter seconded. The motion unanimously passed.

The Board reviewed Customer Service and credit card trends.

With the adoption of our IT Strategic Plan in 2012, Murfreesboro Water Resources Department embarked on an ambitious plan to improve various Customer Service systems, including our billing system (CIS.Infinity), online access (Infinity.Link), account access via telephone (Interactive Voice Response – IVR) and mobile service order system (CIS.Mobile).

Some of the key benefits achieved through implementation of the products and customer options include:

- MWRD has seen a 31% decrease in over-the-counter payments by customers
- MWRD has seen a 45+% decrease in payments via mail and night deposit
- Of all calls to the Customer Service department in 2019, over 75% were handled via the IVR and did not initially require Customer Service Clerk interaction
- In 2019, a total of \$8.3 million in credit card and e-check payments were processed
- Credit card and e-check payments increased by 15% from 2018 to 2019
- Average credit card/e-check transaction in 2019 was \$96.77 vs \$88.90 in 2018
- 90% of credit card/e-check payments were made online or via IVR
- Customer office visits are down over 30% on average from March 2013 to December 2019

Staff presented and discussed the Water Resources Dashboard Performance for January 2020.

Staff presented the Financial Reports for the year ending January 31, 2020.

There being no further business, the meeting was adjourned.

John Sant Amour, Chairman



... creating a better quality of life

MEMORANDUM

DATE: March 5, 2020
TO: Water Resources Board
FROM: Alan Cranford
SUBJECT: Pall Membrane G3 Numatics Upgrades
Stones River Water Treatment Plant

Background

The Stones River Water Treatment Plant commissioned the Pall Corporation membranes on December 18, 2008. There are ten (10) racks with 56 modules each. This is the 0.1 microfiltration system is used to remove particles, protozoa, colloidal silica and reduces turbidity. This is a critical system that if it fails, no water is produced. The Pall membranes have operated since that time with the only upgrade recently approved to the electronics and operating system. The pneumatics system (G2 Numatics) that operates the racks are obsolete and there is no direct replacement to the system. The replacement that Pall does for the system is the upgrade to G3 Numatics. This upgrade requires some modification to both wiring and control software. This is one of several upgrades to the Pall system that will be coming to the Board. They are staged to prevent negatively impacting the production of water.

The Pall Corporation has provided a quote for the upgrade from G2 Numatics to G3 Numatics with all associated work. All work related to the Pall Membrane system is sole source due to its complexity and support from the manufacturer.

Fiscal Impact

The cost for the upgrade is \$107,833. The amount in FY20 capital budget is \$250,000.

Recommendations

Staff requests the Water Resources Board recommend to the City Council approving the upgrading of the Pall G2 Numatics system and related work for the membrane system in accordance with Pall Corporation's quote.

Attachments

Pall G3 Numatics Upgrade Proposal – OPP1401052
Pall Sole Source Procurement Form

Pall Proposal No.: OPP1401052
Date: March 4, 2020

Stones River WTP
5528 Sam Jared Drive
Murfreesboro, TN 37133
Attn: Alan Cranford
Email: acranford@murfreesborotn.gov

Re: On-Demand Service Support for Pall Filtration System at Stones River WTP
Equipment no: Large Water; WBS#: 01.00048; SAP:1381

As a follow up to your discussion with Pall, we are pleased to offer a proposal for technical services. We will arrange onsite support pending receipt of your purchase order, at which time site visit details will be confirmed.

Scope of Services

Pall Water proposes to replace the existing electronics for the Numatics solenoid banks for the Microfiltration Rack Controls, CIP #1 Controls, CIP #2 Controls and the CIP Chemical Transfer Controls. The existing electronics, Numatics type G2, has been obsoleted by the manufacturer who has named the G3 type as its replacement. The G3 is not a direct replacement for the G2 type, and some modifications to both wiring and control software is required to complete the upgrade.

Once an order for this work is accepted, Pall Water will:

- purchase the required materials to complete the change-over
- design electrical wiring changes, and
- begin creating an updated version of the PLC program to support the Numatics G3 electronics.

Parts to be supplied as part of this order include:

- (10) fully-built 22-valve Numatics solenoid banks with G3 electronics for the microfiltration rack controls
- (2) fully-built 22-valve Numatics solenoid bank with G3 electronics for the CIP controls
- (1) fully-built 9-valve Numatics solenoid bank with G3 electronics for the CIP Transfer controls

Pall anticipates three weeks time for materials to be received and preliminary engineering work to be completed. Once the materials are received and engineering is complete, Pall will work with the customer to schedule a Field Service Engineer (FSE) to the customer's site to

- complete the physical change-out of the Numatics hardware
- complete necessary wiring changes for power connections to the new Numatics hardware,
- install the updated programming,
- test the new installation and make any needed adjustments.

Work will be considered complete when the FSE demonstrates that the new manifolds are working as intended. Pall expects the FSE will require up to eight (8) full working days to complete this work. Withing two weeks of completion, Pall will send updated electrical drawings to the customer for their records and use.

Travel Time is included in this proposal.

Schedule:

Pall anticipates the following preliminary schedule (subject to change):

Week 0 - Order is accepted by Pall. Materials placed on order with vendors.

Week 1 - Electrical drawing red-lines (for use by FSE) begin. Off-site programming work begins

Week 2 - Electrical drawing red-lines (for use by FSE) completed. Off-site programming work complete.

Week 3 - Last of materials received by Pall from vendors. Pall to initiate contact to schedule FSE to site (please allow one

week advance for scheduling purposes)

Week 4 - Materials consolidated at Pall and shipped to site.

Week 5 - FSE travels to customer site, begins installation work as outlined

Week 6 - FSE finishes installation work as outlined, demonstrates functionality,

Week 7 - FSE sends any electrical drawing mark-ups back for updating. Final electrical drawing updates are begun at Pall's offices

Week 8 - Final electrical drawing updates are completed, released and sent to the customer for their records (Adobe Acrobat

format). Final billing is completed.

Assumptions:

- Field Service Engineer may need to travel to site Monday morning to arrive around midday, depending on carrier availability. Travel is subject to unanticipated delays.

- Because of the nature of this work, partial or full shutdown of the microfiltration system may be required. Pall will strive to minimize

disruptions to production. However, some unexpected shutdowns may occur during the course of the work.

- At least one representative of the water treatment plant will be available for coordination purposes for the duration of the performance of the work described.

Freight charges are not included.

Disclaimer: This proposal is based on information and conditions known at the time of quotation. Pall Water reserves the right to revise this proposal through change order(s) should conditions vary significantly from those known at the time of quotation and require additional work or materials.

On Demand Service

On demand, onsite service is provided only when requested by the customer. The service is scheduled based Palls' ability to accommodate the customer's requested date. Lead time from notification of need by the Customer, to dispatch is to be negotiated prior to contract order.

Our proposal, based on time and materials, is calculated using Pall's Service Rate. Should additional time beyond the quoted value be required to successfully complete the scope; we will request a revision to your Purchase Order, while onsite, or recommend arrangements be made for a future site visit.

PROPOSAL SUMMARY

On-Site Technical Support: MM# WH017463 - On Demand \$107,833.00

Travel Expense Reimbursement - Expenses: MM# 25662 Included in above

Total amount for purchase order: \$ 107,833.00

Service Reports: If service reports are required by your site to comply with your company or state regulations, please indicate on your order that service report documents are required. Service reports detailing the visit and recommendations will then be provided.

Materials: This proposal covers parts and services.

Validity: This proposal is valid for 30 days.

Terms of Sale: Pall Standard Terms and Conditions of Sale of Services.

Terms of Service:

- Regular minimum service charge is for a 10-hour day. Maximum workday is 12 hours including travel time.

Service Order acceptance and payment terms: Pall Water requires all accounts outstanding beyond 30 days to be paid in full prior to order acceptance. Your account status will be verified at the time of order placement, and you will be notified if you have a balance due. To avoid order processing, goods shipment or service scheduling delays, please insure your account is up to date in advance of placing your order. Charges per the proposal will be billed automatically upon completion of the service, and sign-off of the service report, and become payable within 30 business days of receipt of the invoice.

Changes: Pall shall not implement any changes in the scope of services described in Pall's proposal unless the Customer and Pall agree to the details of the change. Any resulting price, schedule or other contractual modifications, will require a verbal change called into Pall's Customer Service Department, with a follow up written confirmation. This includes any changes necessitated by a change in applicable law.

A Purchase Order or written authorization to accept the contract of work as described, along with a signed copy of the attached Customer authorization for service is required in advance of PASS providing the service defined in this proposal.

Please direct your purchase order to:

Pall Water
Pall System Services
P.O. Box 5630
839 State Route 13
Cortland, New York 13045-5630
Tel: 866-475-0115 / Fax: 607.758.4526
Email: Pall_Technology_csc@pall.com
Attn: Customer Service

Pall Systems Support

To obtain support for your Pall systems installation, our Customers can contact Pall via our toll free number at 866-475-0115 or by email to pall_technology_csc@pall.com. Through this channel, you gain access to warranty assistance, technical support as well as our service and spares team.

Pall Customers have access to this 24/7 Service Hotline. Pall System Engineers are on full-time rotation to provide around-the-clock availability of live technical support. This service is charged at \$250 for support time for the first 30 minutes, during normal workday hours between 9:00-AM and 4:00-PM EST, excluding weekends and holidays.

If your system is out of warranty or does not have a 24/7 service support contract, there will be a charge when technical support is to be provided for intervals longer than 30 minutes, or after-hours technical support to resolve the issue. Extensive off-site support will require a purchase order or credit card. Billing is based on a minimum 1-hour charge at Pall's off-site hourly service rate. You will be asked to provide your credit card number or service contract purchase order number that will be billed at Pall's Off-Site Service Rates, with a minimum 1-hour charge. If the problem cannot be resolved over the telephone, the

Customer can request a Pall System Service Representative to visit the site location. You will be quoted an Emergency Service Rate and billed for last-minute travel expenses.

Please feel free to call me at your convenience with any questions or comments. We look forward to providing you with field services to assist you with system operation, and await your purchase order.

Sincerely,

Rafael Fernandez
Regional Sales Manager
Mobile 305-240-0415

E-mail: Rafael_Fernandez@pall.com

Pall Proposal No.: OPP1401052
Date: March 4, 2020

Customer Authorization for Service

I am an authorized representative of the customer, and I accept the Terms and Conditions of this Service Agreement on behalf of the customer. I authorize Pall Corporation to perform the work defined in this agreement, and accept the costs and charges defined in this agreement.

Company: _____

Print Name

Title/Position

Signature

Date

Purchase Order No. or Reference for Billing: _____

Circle Service Visit Frequency: Annual Semi-Annual Quarterly Single Emergency

Requested Date(s) to Schedule Service Visit(s): _____
(unless deemed emergency service, please allow a 4-week window to accommodate scheduling by Pall.)

Pall Proposal No.: _____

Effective Date and Duration: This Agreement will be effective as of the date signed below, and will remain in effect:

- until on site service work has been completed by Pall,
- or until 30 days after receipt of notice of termination by either party.

Customer Billing Address: _____

Customer Comments: _____

Pall Standard Terms and Conditions of Sale of Services

1. **Acceptance:** Acceptance by Pall Corporation ("Seller") of Buyer's order is limited to Seller's express terms and conditions of sale contained herein and on the face of any order acknowledgment form, Seller's quotation, proposal or similar document delivered by Seller to Buyer (the "Seller's Acknowledgment Form") and any terms incorporated herein or therein by reference ("Seller's Terms and Conditions of Sale"). Any additional or different terms or any attempt by Buyer to vary in any degree any of Seller's Terms and Conditions of Sale are hereby objected to and shall be deemed material and not binding on Seller.
2. **Services:**
 - 2.1 Seller will provide such services ("Services") as are expressly described in its quotation, proposal, statement of work or other document executed by Seller (the "Quote") during normal business hours and will charge Buyer in accordance with Seller's then current schedule of rates, unless otherwise specified in the Quote. Services requested or required by Buyer to be performed outside of normal business hours or in an expedited manner or in addition to the Services included in the Quote will be charged at Seller's then current schedule of rates, including any applicable overtime or expediting charges, and will be in addition to the charges outlined in the Quote.
 - 2.2 The schedule for the provision of Services is the best estimate possible based on conditions existing at the time of Seller's acceptance of the order or Seller's Quote and receipt of all specifications, as applicable, and in the case of non-standard Services, any such date is subject to Seller's receipt of complete information necessary for completion of Services. Seller assumes no liability whatsoever, including loss of use or for any other direct, indirect, or consequential damages, due to delays.
 - 2.3 It is understood that the Services provided by Seller are not to be considered Professional Engineering Services or Works-for-Hire. In the event design documentation requires a Professional Engineering Stamp, a written scope and definition of responsibility must be executed by Buyer and Seller.
3. **Prices:** Except as may be specifically provided in Seller's quotation, all prices are subject to change without notice.
4. **Taxes:** All prices are exclusive of any applicable U.S.A. federal, state or local sales, use, excise or other similar taxes. All such taxes will be for Buyer's account and will be paid by Buyer to Seller upon submission of Seller's invoices. Buyer agrees to make tax accruals and payments to the tax authorities as appropriate. If Buyer is exempt from any applicable sales tax or equivalent but fails to notify Seller of such exemption or fails to furnish its Sales Tax Exemption Number to Seller in a timely manner and Seller is required to pay such tax, the amount of any such payment made by Seller will be reimbursed by Buyer to Seller upon submission of Seller's invoices.
5. **Payment:**
 - 5.1 Payment for U.S. and Puerto Rico billing shall be made by Buyer in U.S. Dollars net thirty (30) days after the of date of invoice. Payment for non-U.S. billing shall be in accordance with Seller's written instructions.
 - 5.2 A monthly interest charge at the rate of 1.5% or the maximum legal rate allowed by applicable law, whichever is lower, will be assessed on all past due payments calculated from the date of invoice.
 - 5.3 Seller may, at any time or times, suspend performance of any order or require payment in cash, security or other adequate assurance satisfactory to Seller when, in Seller's opinion, the financial condition of Buyer or other grounds for insecurity warrant such action.
 - 5.4 All sales are subject to the approval of Seller's credit department.
 - 5.5 Buyer may not setoff any amounts that may be claimed by Buyer against any amounts that are owed to Seller.
6. **Warranty, Limitation of Liability and Remedies:**
 - 6.1 SELLER MAKES NO WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE WITH RESPECT TO ANY OF THE SERVICES, NOR IS THERE ANY OTHER WARRANTY, EXPRESS OR IMPLIED, EXCEPT AS PROVIDED FOR HEREIN.
 - 6.2 Seller further warrants that all Services will be performed in a workmanlike manner and that Seller will use suitably qualified personnel (this warranty shall survive for 90 days following Seller's completion of the Services). Seller's liability under any service warranty is limited (in Seller's discretion) to repeating the Service that during the foregoing 90-day period does not meet this warranty or issuing credit for the nonconforming portion of the Service.
 - 6.3 If Seller determines that any warranty claim is not, in fact, covered by the foregoing warranties, Buyer shall pay Seller Seller's then customary charges for any additionally required Services. Buyer shall notify Seller promptly in writing of any claims and provide Seller with an opportunity to inspect and test the Service claimed to fail to meet the above warranty. Buyer shall provide Seller with a copy of the original invoice for the Service. All claims must be accompanied by full particulars, including system operating conditions, if applicable.
 - 6.4 In no event will Seller be liable for any damages, incidental, special, consequential, indirect, punitive or otherwise, including loss of profit, remanufacturing costs and rework costs, and lost Buyer product costs (other than price of Seller service) whatever the claim (tort, breach of contract or warranty or otherwise) and whatever the forum, whether arising out of or in connection with the manufacture, packaging,

delivery, storage, use, misuse or non-use or resale of any of its Services or any other cause whatsoever. Without limiting the generality of the foregoing, in no event will Seller be liable for any losses or damages in excess of the price paid to Seller with respect to the Services sold to Buyer hereunder which are claimed to fail to meet above warranties.

- 6.5 In no event shall Buyer be entitled to claim under the above warranty if Buyer is in breach of its obligations, including but not limited to payment, hereunder.
7. **Cancellation:** Buyer may not cancel its order after Seller's acceptance unless all the details are approved in writing by the parties, including Buyer's agreement to pay a stated amount of termination charges.
8. **Ownership of Materials:** All devices, equipment, designs (including drawings, plans and specifications), estimates, prices, notes, electronic data and other documents or information prepared or disclosed by Seller in connection with Services provided, and all related intellectual property rights, shall remain Seller's property. Buyer is not authorized to use information supplied by Seller for other purposes unless agreed to in writing by Seller. Buyer shall not disclose any such material to third parties without Seller's prior written consent.
9. **Entire Agreement:** Seller's Terms and Conditions of Sale and the Confidentiality Agreement, if any, constitute the entire agreement between the parties hereto and supersede all prior agreements and understandings, oral and written, between the parties relating to the subject matter hereof. Seller's Terms and Conditions of Sale shall be binding on the parties and their successors and permitted assigns. No change, addition to or waiver of any of the terms of Seller's Terms and Conditions of Sale shall be binding as to the parties hereto unless approved in writing by the parties hereto or their authorized representatives.
10. **Quotation:** All quotations by Seller are subject to change or withdrawal without prior notice to Buyer, unless otherwise specifically stated in the quotation. Quotations are made subject to approval by Seller of Buyer's credit. All sales, contracts and orders become effective only if and when approved and accepted in writing by Seller by the issuance of the Seller Acknowledgment Form and shall be subject to these terms and conditions.
11. **Confidentiality:** If Seller discloses or grants Buyer access to any research, development, technical, economic, or other business information or "know-how" of a confidential nature, whether reduced to writing or not, Buyer will not use or disclose any such information to any other person or company at any time, without Seller's prior written consent. In the event that Buyer and Seller have entered into a separate confidentiality agreement ("Confidentiality Agreement"), the terms and conditions of such agreement shall take precedence over the terms of this paragraph.
12. **No Waiver:** Seller's failure to insist on Buyer's strict performance of the terms and conditions contained herein at any time shall not be construed as a waiver by Seller of performance in the future.
13. **Force Majeure:** Whenever performance by Seller of any of its obligations hereunder, is substantially prevented by reason of any act of God, strike, lock-out, or other industrial or transportation disturbance, fire, lack of materials, law, regulation or ordinance, war or war conditions, or by reason of any other matter beyond its reasonable control, then such performance shall be excused, and deemed suspended during the continuation of such event and for a reasonable time thereafter, delayed, or adjusted accordingly.
14. **Validity:** If any provision of Seller's Terms and Conditions of Sale is held invalid by any competent authority to be illegal or unenforceable in whole or any part, such provision shall be ineffective, but only to the extent of such invalidity or unenforceability, without invalidating the remainder of such provision, nor the other provisions, which shall not be affected.
15. **Governing Law, Service of Process:** Seller's Terms and Conditions of Sale and the parties' agreement for the sale of Services shall be governed by the laws of the State of New York, regardless of conflict of laws principles, and the parties hereby unconditionally and irrevocably submit to (and waive any objection on the grounds of inconvenient forum or otherwise) the jurisdiction of the Supreme Court of the State of New York, County of Nassau or the United States District Court for the Southern District of New York, which courts shall have exclusive jurisdiction to adjudicate and determine any suit, action or proceeding regarding or relating to the Seller's Terms and Conditions of Sale and the purchase and supply of the Services. A judgment, order or decision of those courts in respect of any such claim or dispute shall be conclusive and may be recognized and enforced by any courts of any state, country or other jurisdiction. Each party hereby waives personal service of process, and irrevocably submits to service of process by mail.
16. **Jurisdiction.** Each party hereby waives all objections to the jurisdiction specified herein on the grounds of inconvenient forum or otherwise. A judgment, order or decision of those courts in respect of any such claim or dispute shall be conclusive and may be recognized and enforced by any courts of any state, country or other jurisdiction.
17. **Survival:** All payment, confidentiality and indemnity obligations, warranties, limitations of liability, product return, and ownership of materials provisions together with those Sections the survival of which is necessary for the interpretation or enforcement of these terms and conditions, shall continue in full force and effect for the duration stated in such provisions or the applicable statute of limitations.



Department		PO Number:	
Requester Name:			
Department Director/Manager:			
Dept. Dir/Mgr Signature:		Approval:	Yes or No

1. State the use/purpose and location of the product, service, or equipment being asked to source as a sole procurement.

2. Identify Items or Services to be Approved for Sole Procurement/Source:

3. Name of Manufacturer/Item(s) or Service:

4. Name of Single Source Supplier:

Mailing Address:

Phone Number:

Fax Number:

Web Site Address (if available):

5. If Purchase Related To Compatibility With Existing Equipment or Items under Warranty, Then Identify the Item(s) or Equipment and the ITB or Contract Details:

6. SOLE SOURCE CONSIDERATIONS - (Mark The One That Best Qualifies)

- | | | |
|-----------|--|---|
| A. | | Enhancements of Existing Equipment . . . The purchase is for accessories sought for enhancement of existing equipment where compatibility with equipment from original manufacturer is paramount. (Complete Section 5, 7 & 8) |
| B. | | Replacement Equipment . . . The purchase is for equipment associated with use of existing equipment where compatibility is essential for integrity of results. (Complete Sections 5, 7 & 8) |
| C. | | Replacement Parts . . . The purchase is for replacement parts needed for repair of existing equipment where compatibility with equipment from the original manufacturer is paramount. (Complete Sections 5, 7 & 8) |
| D. | | Technical Service . . . The purchase is for technical services associated with the assembly, installation or servicing of equipment of a highly technical or specialized nature. (Provide detail in Section 8) |
| E. | | Continuation Or Prior Work . . . Additional item, service or work required, but not known to be have been needed when the original order was placed with vendor. (Provide detail in Section 8) |
| F. | | Other . . . (Complete Sections 7 & 8)
State <input style="width: 600px; height: 20px;" type="text"/> |

7. SOLE SOURCE DISTRIBUTION - (Mark One That Qualifies)

- | | | |
|-----------|--|---|
| A. | | The item is manufactured or produced by entity, or entity holds exclusive rights to item, and entity solely transacts (sells) direct to the customer. (There are no dealers or distributors for entity) |
| B. | | The item is manufactured or produced by entity, or entity holds exclusive rights to item, and entity does not sell direct to the customer. Entity solely distributes the item through only one dealer or distributor. |

Note: If item available from more than one source, the item may be treated as proprietary, but must be competitively solicited from multiple (two or more) sources of supply.

Attach Current Dated And Signed Letter From Manufacturer, Producer Or Rights Holder Or Include Statement On Firm Price Quotation Substantiating Selection "A" Or "B" Above.

8. DETAILED JUSTIFICATION FOR NOT BIDDING - (Precise Explanation Required)

A. Explain the unique functional or performance requirements that must be met for the use of the items. Brand preference, preferred favorite or "only source known" are not qualifying sole source explanations. Please be brief, but concise. Space below is limited to size of cell.

B. Detail the item's component parts that must meet requirements outlined above and why, if applicable, competing products are not equivalent. Please be brief, but concise. Space below is limited to size of cell.

9. FIRM PRICE QUOTATION NEEDED

Attach dated firm price quotation from sole source or sole dealer/distributor pricing the product(s) or service(s) identified in section 2. Quoted prices shall be firm and inclusive of all costs including transportation.

10. SIGNATURE REQUIRED

I hereby declare the information provided herein to be true and accurate to the best of my knowledge. I understand any false or misleading information may be considered a violation under Procurement Code.

Name	Signature	Date
-------------	------------------	-------------



... creating a better quality of life

MEMORANDUM

DATE: March 4, 2020
TO: Water Resources Board
FROM: Alan Cranford
SUBJECT: Granular Activated Carbon (GAC) Media Replacement
Stones River Water Treatment Plant

Background

The final extension of the contract for GAC media will expire on June 30, 2020. The Department has been working with Calgon Carbon Corporation since 2017. It is likely the cost will go up on virgin carbon during the next bid. As a result, staff would like to utilize the existing contract to replace the media in June 2020 instead of July 2020. Following this installation, the GAC will be bid in early 2021.

Fiscal Impact

The cost for removing the existing GAC media, cleaning the contactor and replacing the GAC media is \$111,000. Funding is requested to come from reserves.

Recommendations

Staff requests the Board recommend to City Council approving funding from reserves for replacement of GAC.

Attachments

None



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MEMORANDUM

DATE: March 18, 2020
TO: Water Resources Board
FROM: Valerie H. Smith
RE: 2020 Sanitary Sewer Rehabilitation – Project Design
S&ME Task Order No. 20200318

Background

S&ME has been advising the Department regarding our sewer CCTV (closed-circuit TV) databases and our sewer rehabilitation under a Master Services Agreement since 2012. They continue to demonstrate their expertise in all aspects, of project design, inspections and quality control measures as well as as-built information that will easily merge into our GIS system. Staff believes that having S&ME to design, bid, provide construction administration and resident project inspection, has enhanced our program.

Staff has delivered defective sewer main, sewer lateral and manhole information to S&ME and we have requested a Task Order for the design, construction administration and resident inspection for this work. They have preliminary estimates for their work, based on a construction project size of \$4.0M, in an amount not to exceed \$448,000 total. Of this total, \$127,500 lump sum is for design, \$7,500 is for surveying only as directed by staff, \$98,000 for construction administration and \$215,000 for resident inspection. Staff also intends to have a staff inspector assigned to the project since at times up to 4-5 crews can be working in different locations at the same time.

By the time the project is bid, approved by the Board and Council, contracts are executed, and a pre-construction meeting is held, the next fiscal year funding will be available.

Recommendation

Staff recommends that the Board recommend to the City Council approval of Task Order No. 2020200318 under the Master Service Agreement with S&ME, to design, bid, and provide construction administration and inspection not to exceed \$448,000. Bids for construction will be brought back to the Board for approval at a later date.

Fiscal Impact

Funding for the Engineering, Construction Administration, Inspection and Construction is proposed from a combination of the 2020/2021 Budget & Working Capital Reserves.

Attachments

S&ME Task Order No. 20200318

TASK ORDER NO. 20200318

To the AGREEMENT BETWEEN OWNER AND ENGINEER FOR PROFESSIONAL SERVICES

For 2020 SANITARY SEWER REHABILITATION PROJECT

This Task Order made and entered into by and between **MURFREESBORO WATER RESOURCE DEPARTMENT**, hereinafter called the "OWNER" and **S&ME, INC.**, hereinafter called the "ENGINEER," shall be incorporated into and become a part of the Agreement Between Owner and Engineer for Professional Services entered into by the parties hereto on the 28th of August 2012, (the "AGREEMENT").

PURPOSE

This Task Order authorizes and directs the ENGINEER to proceed in providing to the OWNER professional engineering services for assisting OWNER in the development of rehabilitation project within priority areas of the sanitary sewer collection system.

ENGINEER'S SCOPE OF SERVICES

The Scope of Services, dated March 18, 2020, is enumerated in Exhibit A. It is entitled "2020 Sanitary Sewer Rehabilitation Project" and consists of 4 pages.

COMPENSATION

As consideration for providing the services enumerated within Exhibit A of this Task Order, the OWNER shall compensate the ENGINEER in accordance with the AGREEMENT. The specific method and/or amount of compensation for this Task Order is enumerated in the attached Exhibit C.

TASK ORDER NO. 20200318

Exhibit A

Date: March 18, 2020

Owner: Murfreesboro Water Resource Department

Project Title 2020 Sanitary Sewer Rehabilitation Project

Project Location Murfreesboro, TN

SCOPE OF SERVICES

Task 1 – Design and Bidding Services

ENGINEER will prepare the design, associated contract documents, technical specifications and plans necessary to convey to prospective contractors the extent and scope of work to be performed in conducting manhole, service lateral connection, and pipeline rehabilitation within priority areas of the collection system. It is anticipated that the construction value of this project will be approximately \$4.0 million and will require a contract time of approximately 390 days. Specific sub-tasks to be performed by ENGINEER include:

- Receiving CCTV files and NASSCO PACP database from OWNER, review data files and CCTV videos to make preliminary selections and rehabilitation assessments.
- Integrate CCTV videos and database files (received from OWNER) into the existing GIS rehabilitation map such that an evaluation can be made regarding pipelines to be included (and that were not included in previous projects).
- Prepare a preliminary recommendation plan and submit to OWNER. Conduct a meeting with OWNER to review the preliminary rehabilitation, receive comments from OWNER and incorporate information.
- Prepare and assemble mainline pipes, manholes, and service lateral connections in a final design package within the GIS mapping system along with a PDF copy of an 11x17 map book showing associated rehabilitation illustrated via symbology. These maps will be included on a CD within the contract documents.
- Prepare GIS maps with Master Spreadsheet with CCTV videos for bid package
- Prepare the RPR application with design information to be used for RPR in the field during construction
- Prepare an Engineer’s opinion of probable costs.
- Conduct two (2) preliminary design meetings with OWNER to discuss design
- Conduct one (1) final design meeting with OWNER to review final design
- Provide invitation to bid for qualified contractors
- Coordinate with OWNER’s Purchasing Department to finalize front-end bidding documents
- Provide complete bid documents (plans & specifications) to qualified contractors.

- Conduct a mandatory Pre-bid meeting for the prospective contractors
- Receive and respond to Requests for Information (RFI's) during the bid process
- Conduct a bid opening and prepare certified bid tabulations
- Evaluate bids and make recommendation of award
- Prepare Contract Documents for Execution. A total of eight (8) hard bound copies will be produced (2-OWNER, 2-Contractor, 2-ENGINEER)
- Coordinate execution of contract documents between OWNER and contractor

Task 2 – Surveying

During the course of the design phase, it may be necessary to gather surveying data in order to complete the design. Tasks that may need to be performed may include but not limited to the following (as required by the design):

- To provide field surveying services for mainline profiles, topo surveys, property boundary surveys to locate property corners and mark in the field.
- Topographic surveys may include:
 - o Set a minimum of two permanent benchmarks on site, provide a description, and an elevation to nearest one tenth foot (0.1')
 - o Generate contours at two (2) foot intervals; error shall not exceed one half contour interval
 - o Locate and plot location of structures, man-made and natural features, all finished floor elevations and elevations at each entrance of buildings on the property
 - o Provide the approximate location of underground utilities
 - Locate underground utilities as marked by representatives from local utilities as a result of an 811 utility locate request.
 - Collect invert elevations for each accessible storm and sanitary structure will measured and depicted to the nearest 0.01'
 - o Provide the name of the operating authority of each utility
 - o Plot the location of flood plain as per FEMA FIRM maps, and flood level of streams or adjacent bodies of water
 - o Locate all trees with a diameter greater than ten inches (10") and landscaped areas within the surveyed area
- Boundary surveys may include:
 - o Provide a boundary survey, in accordance with the rules and regulations set forth by the TN Board Examiners for Land Surveyors, for the property
 - o Replace lost or obliterated property corners with new boundary markers
 - o Prepare a legal description of the property
 - o Plot the approximate location of all easements that encumber the subject property
- General survey drawing requirements include:
 - o Surveys, unless otherwise directed, will be reference to TN State Plane Coordinate System (NAD 83 Conus) horizontally, and NAVD88 (Geoid 12B) for elevations
 - o Drawing sheets shall be plotted at a scale of 1" = 50' or larger and will include a graphic scale
 - o Show North arrow

- Include legend of symbols and abbreviations used on the drawing
- Depict spot elevations on paving or other hard surfaces to the nearest 0.05', on all other surfaces to the nearest 0.10'
- Information shall be shown on the same drawing
- State elevation datum and provide the location of benchmark used
- A digital copy of the drawing in .dwg format and three prints of each drawing will be furnished
- The licensed surveyor shall sign and seal each drawing and shall certify that to the best of the Surveyor's knowledge, information and belief, all information thereon is true and accurately shown

Task 3 – Construction Administration Services

ENGINEER staff will provide Construction Administration (CA) services throughout the project as described below for a 390 day construction period.

- Conduct a pre-construction conference with contractors and OWNER
- Review submittals prior to commencement of work
- Conduct monthly progress meetings by creating agendas, compiling meeting minutes, distributing meeting minutes, and assisting OWNER with coordinating contractor work flow schedules
- Provide project coordination with OWNER staff and contractor
- Incorporate additional repair items into the project as directed by OWNER
- Respond to inquiries from subcontractor on project specifics during the project
- Review and approval of monthly pay applications from the contractor
- Update RPR app throughout construction
- Review documentation for each repair to evaluate condition
- Formulate punch list items as work is completed
- Formulate change orders as needed by providing revised maps and updating the Master Spreadsheet.

Task 4 – Resident Project Representation Services

ENGINEER will provide Resident Project Representation (RPR) services throughout the project as described below for a 390 day construction period. NOTE: The budgeted fees in Exhibit C are based on OWNER providing one (1) full-time RPR dedicated to the project.

- Provide one (1) Senior Resident Project Representative (SR RPR) to supervise the RPR team and interface with OWNER, Contractor and other significant Stakeholders identified by OWNER.

The SR RPR will provide QA/QC of the associated reports and conduct briefings to the OWNER as necessary throughout the project.

- Provide one (1) Resident Project Representative (RPR) to observe work as required throughout the project and coordinate with the local Superintendent on the project site. The RPR will serve as the SR RPR assistant on the project site and as such will coordinate all other RPR's on the project site to facilitate work.
- Coordinate with OWNER regarding RPR duties and flow of work
- Assist with review submittals prior to commencement of work
- Keep daily records of construction activities completed by documentation through photos and work description
- Update online RPR application as work is performed and coordinate with OWNER staff to facilitate use of construction maps (RPR application) to document work completed
- Interface with contractor's superintendent as required to facilitate work
- Monitor site restoration and ensure fairness in resolving complaints
- Coordinate with OWNER'S staff regarding anticipated construction schedules
- Provide recommendations to the ENGINEER and OWNER regarding site conditions and construction issues
- Coordinate and communicate with the general public regarding construction work, schedules and related issues
- Assist with review and reconciliation of monthly pay applications from contractor
- Assist with facilitating change orders for additional work or change in scope

Schedule

Upon execution of the agreement, ENGINEER will begin the review and design of the prioritized areas of the collection system. Upon completion of the design, ENGINEER will begin assembling the contract documentation and coordinate the advertisement and construction schedule with OWNER. At that time, a final project schedule will be determined. It is anticipated that the construction project will be bid out and commence during the Fall of 2020 in order to allow for construction along key areas during dry weather periods.

TASK ORDER NO. 20200318

Exhibit B

OWNER'S RESPONSIBILITIES

The OWNER shall provide the ENGINEER with CCTV inspection videos and databases of any prospective mainlines or manholes that may be considered for repair. OWNER shall provide ENGINEER with any pertinent documentation from OWNER's legal department relating to bidding of sanitary sewer collection system rehabilitation projects and provide assistance, direction, and comments regarding the OWNER's purchasing procedures. OWNER shall make available any necessary staff to provide pertinent information in the development of project design. OWNER shall provide one (1) full-time RPR throughout the project or provide advanced notice when additional RPR services will be required by ENGINEER.

TASK ORDER NO. 20200318

Exhibit C

COMPENSATION

The ENGINEER will be compensated for the Scope of Services as follows:

The fee for **Task 1 – Design and Bidding Services**, will be billed a lump sum amount of \$127,500.

The fee for **Task 2 – Surveying**, will be billed on an hourly basis at standard rates with a not-to-exceed maximum of \$7,500.00. All expenses incurred as part of completing this task will be billed at a rate of cost plus ten percent (10%). Expenses may include but are not limited to project mileage, postage, printing, lodging, sustenance, etc.

The fee for **Task 3 – Construction Administration**, will be billed on an hourly basis at standard rates with a not-to-exceed maximum of \$98,000.00. All expenses incurred as part of completing this task will be billed at a rate of cost plus ten percent (10%). Expenses may include but are not limited to project mileage, postage, printing, lodging, sustenance, etc.

The fee for **Task 4 – Resident Project Representation**, will be billed on an hourly basis at standard rates with a not-to-exceed maximum of \$215,000.00. All expenses incurred as part of completing this task will be billed at a rate of cost plus ten percent (10%). Expenses may include but are not limited to project mileage, postage, printing, lodging, sustenance, etc.

The ENGINEER will bill monthly, based on the percentage of work completed each month. Unpaid invoices after 30 days will accrue service charges at 1 1/2% per month and include any costs of collections and reasonable attorney's fees.

IN WITNESS WHEREOF, the parties hereto have executed Task Order No. – 20200318 as a part of the “Agreement between Owner and Engineer for Professional Services-Task Order Edition” on this, the 18th day of March 2020.

S&ME, INC.



By: _____

Printed: Travis E. Wilson

Title: Principal Project Manager

CITY OF MURFREESBORO

MURFREESBORO WATER RESOURCE DEPARTMENT

By: _____

Printed: Mayor Shane McFarland

Title: Mayor

APPROVED AS TO FORM:

By: _____

Printed: Adam Tucker

Title: City Attorney



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MEMORANDUM

DATE: March 18, 2020
TO: Water Resources Board
FROM: Darren Gore
SUBJECT: FY2024 Pro Forma Review and
 FY2021 Rate Ordinance Recommendation

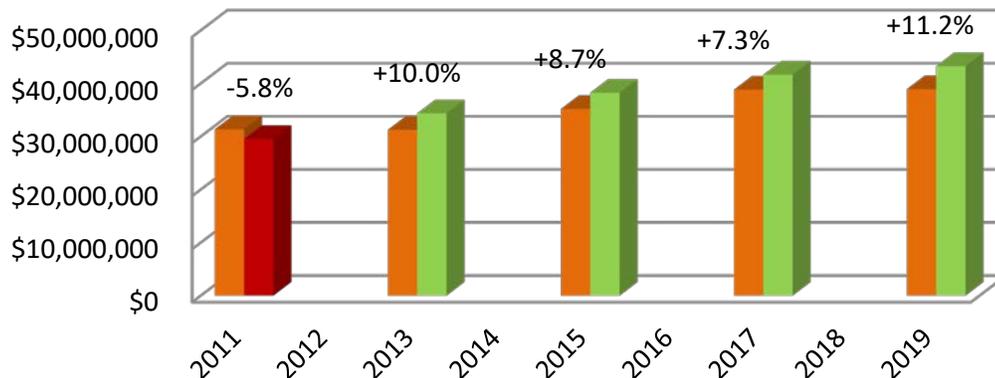
BACKGROUND

The Murfreesboro Water Resources Department was provided a cost of service study (COSS) from Jackson Thornton Utilities Consultants for FY2019. That study was presented at the March 3, 2020 Board meeting. Jackson Thornton has since that time provided staff a pro forma for FY2024. The FY2024 pro forma was run using two scenarios:

- 1) Scenario "A" that assumes no new debt was added between FY19 and FY24. This assumes using reserves on hand to pay for \$49,000,000 in capital projects.
- 2) Scenario "B" where \$49,000,000 in debt (20-yr @ 3%) is incurred to pay for the Northeast Regional Pumping Station and Force main, Overall Creek Pump Station upgrades, as well as the necessary capital equipment to perform full scale biosolids drying at the Water Resource Recovery Facility (WRRF). Full payback of the total loan amount was assumed to start in FY2024.

The following chart summarizes the historical cost of service studies conducted by the Department from FY11 to FY19, illustrating the total rate revenue requirements and the actual rate revenue collected as an under or over recovery:

Chart 1: Total Water and Sewer Rate Requirements and Actual Rate Revenue



	2011 COSS	2013 COSS	2015 COSS	2017 COSS	2019 COSS
Total Rate Requirement	\$31,328,535	\$31,244,197	\$35,175,522	\$38,816,282	\$38,916,760
Total Rate Revenue	\$29,507,833	\$34,353,148	\$38,243,420	\$41,639,144	\$43,265,652

Chart 2 contains a lot of information and is a combined look at both water and sewer revenues. The most relevant number to note is the \$3,049,614 “excess revenues” over and above anticipated expenses, or \$45,831,260 minus \$42,781,646 (on the upper right hand of the chart). The assumptions of the No Debt scenario demonstrate a 7.1% over-recovery in FY24.

Chart 2: Historical COS Studies and FY24 Pro Forma (No Debt Scenario)

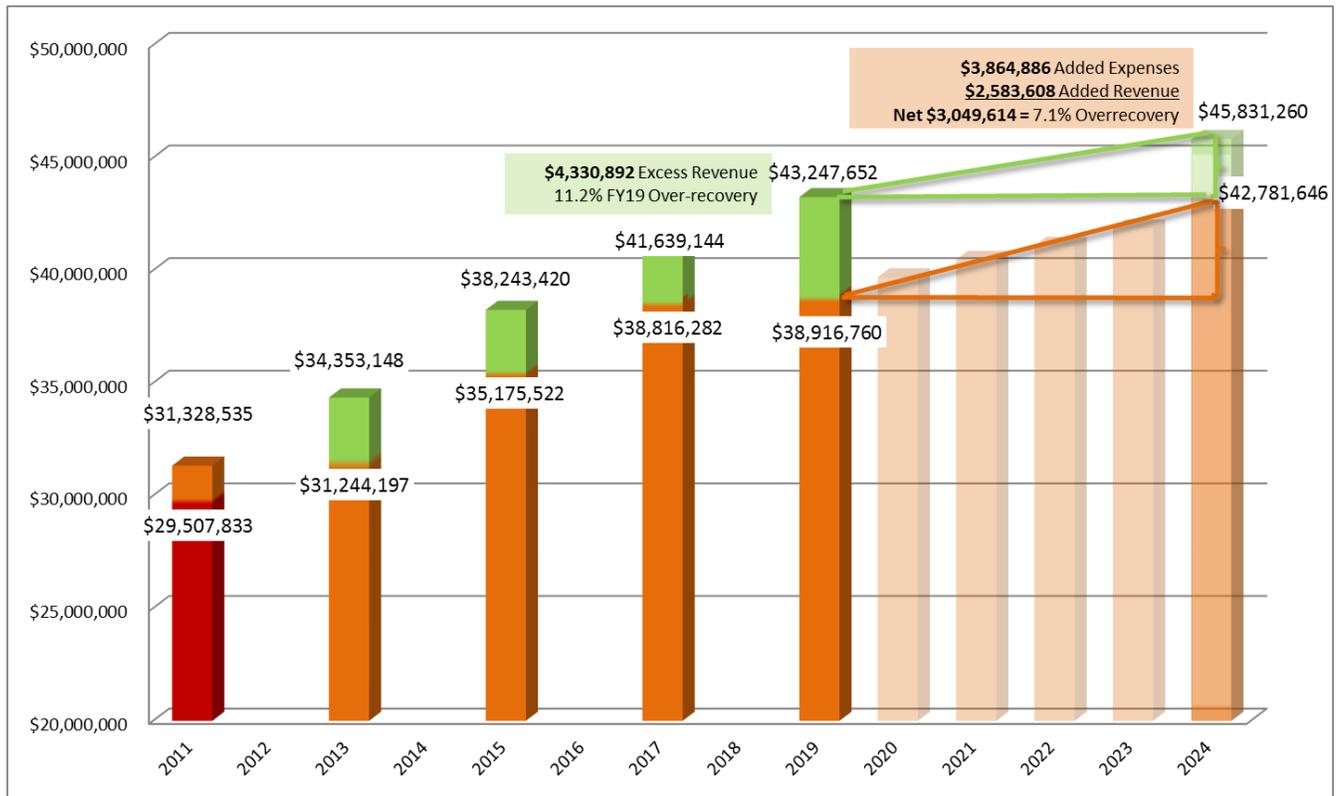
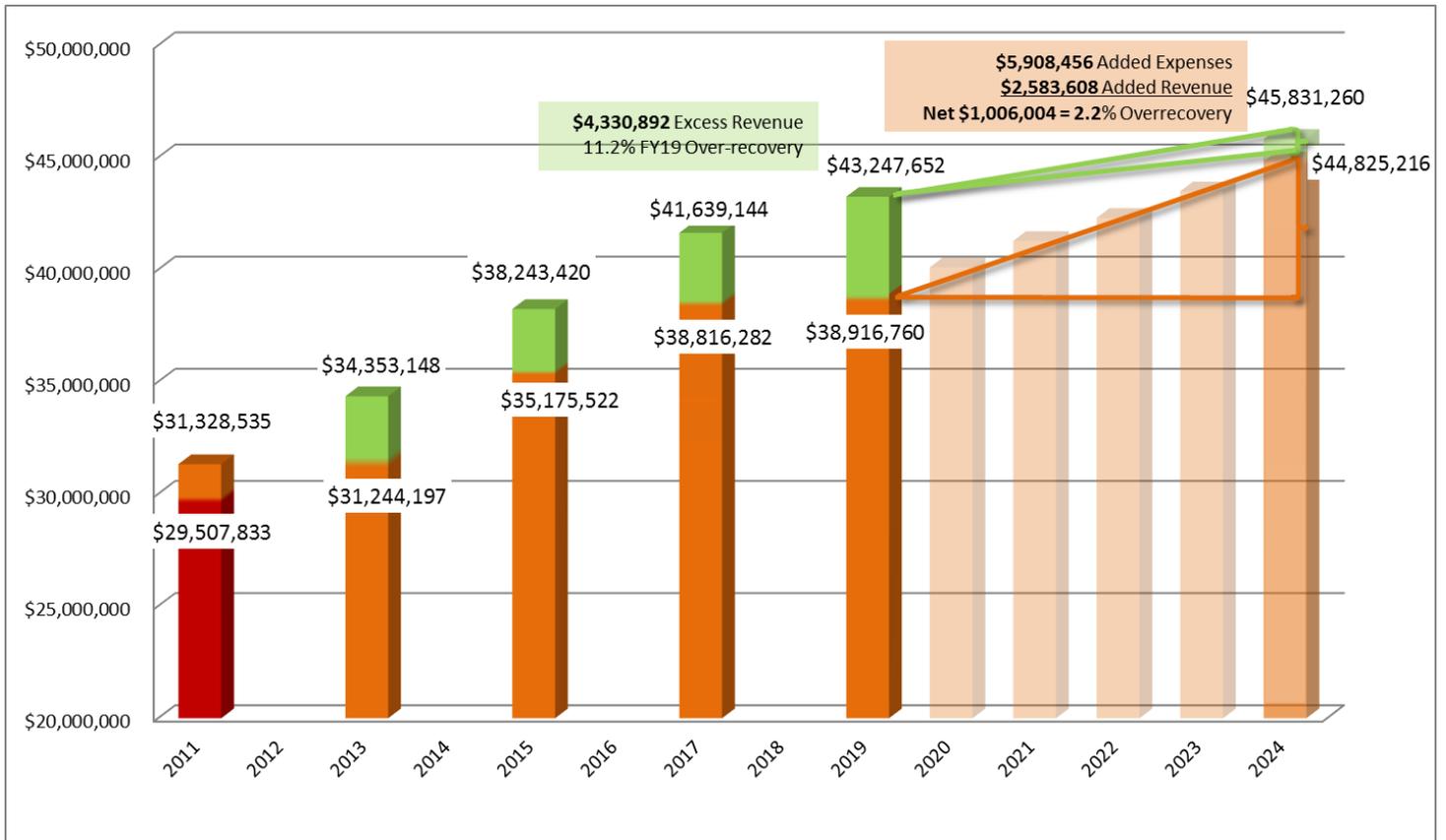


Chart 3 is also a combined look at both water and sewer revenues with the assumption of \$49,000,000 in debt service (20-yrs @ 3% fixed interest). The most relevant number to note is the \$1,006,004 “excess revenues” over and above anticipated expenses, or \$45,831,260 minus \$44,825,216 (on the upper right hand of the chart). The assumptions of the \$49M in debt scenario demonstrate a 2.2% over-recovery in FY24.

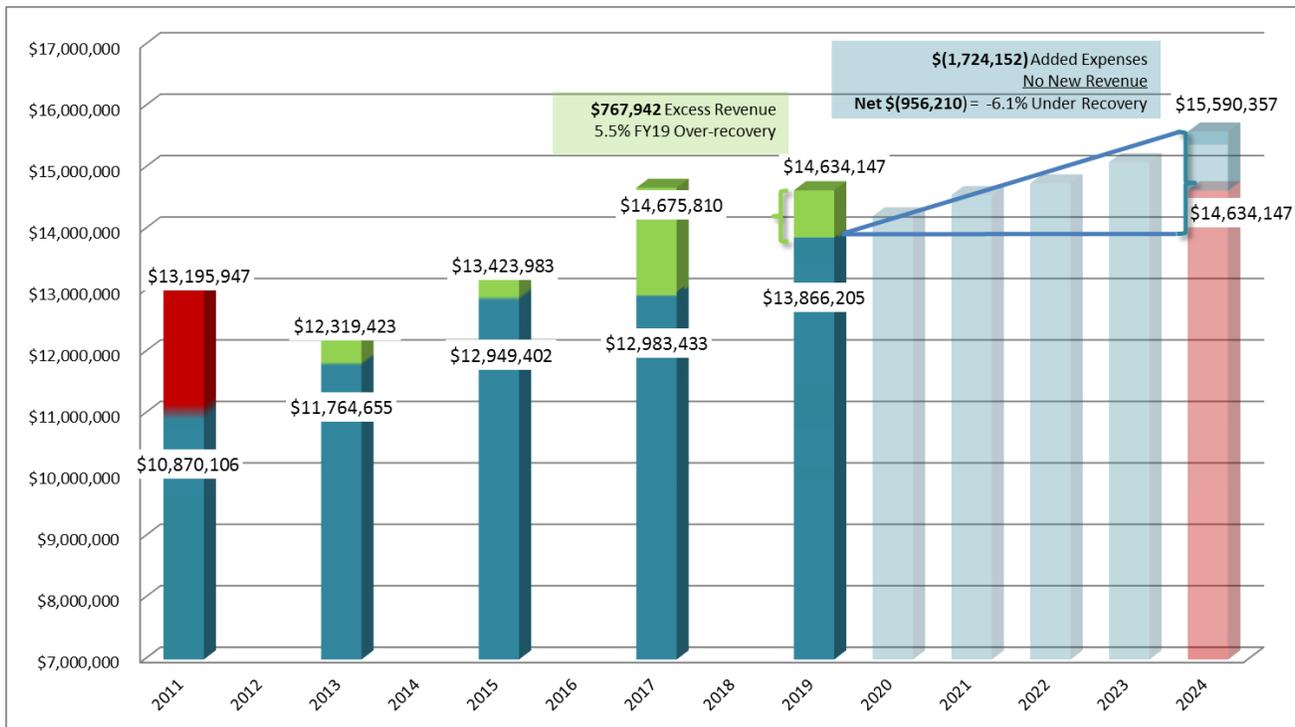
Chart 3: Historical COS Studies and FY24 Pro Forma (\$49M Debt Scenario)



While both of these scenarios demonstrate an over-recovery of anticipated revenue to cost of service expenses, there is a small issue associated with water rates not fully supporting the cost of service associated with water related expenses in FY24. The over-recoveries charted above entail a subsidization of sewer related revenue covering water related expenses. From a cost of service standpoint, this is not an ideal position and staff recommends avoiding it from occurring.

Chart 4 looks at water revenues and cost of service only. No new debt is associated with water expenses during the timeframe between FY19 and FY24, so debt service does not affect increased expenses; therefore, the increase of \$1,724,152 is associated with operations and maintenance only. Also, MWRD's water system is encompassed by Consolidated Utility District of Rutherford County; therefore, no new revenue derived from growth has been integrated into the FY24 pro forma. Using these assumptions, the water revenues are expected to fall short in an amount of \$(956,210) as compared to expenses in FY24, under-recovering (6.1)%.

Chart 4: Historical COS Studies and FY24 Pro Forma (Water Only)



A proposed rate design for meter sizes 5/8" to 2" below by adjusting the minimum annually as tabulated below recovers approximately 20% of the under-recovery anticipated for FY24. Making these adjustments over a 5-yr period would make up the "gap" of the anticipated (\$956,210) shortfall.

Table 1: Proposed Minimum Monthly Charge Adjustments

Meter Size (INCH)	FY20 Total minimum	FY21 Proposed minimum	Difference	# of Accounts	Added Revenue
5/8"	\$8.22	\$8.72	\$0.50	24,917	\$149,501.00
1"	\$19.18	\$20.71	\$1.53	688	\$12,668.01
1-1/2"	\$41.10	\$43.77	\$2.67	359	\$11,508.82
2"	\$65.76	\$69.05	\$3.29	464	\$18,307.58
3"	\$164.40	\$164.40	\$0.00	96	\$0.00
4"	\$328.80	\$328.80	\$0.00	34	\$0.00
6"	\$685.00	\$685.00	\$0.00	17	\$0.00
8"	\$685.00	\$685.00	\$0.00	1	\$0.00
Total				26,576	\$191,985.41

While the water monthly minimums are nominal increases, based on the current economic conditions, MWRD staff is not recommending a water or sewer rate increases for FY21. These increases may be held off for one or two years, necessitating larger adjustments in FY23 and FY24.

Chart 5: Monthly Water & Residential Cost Curve, FY19 COSS, FY21 Rate Design, and FY24 PF

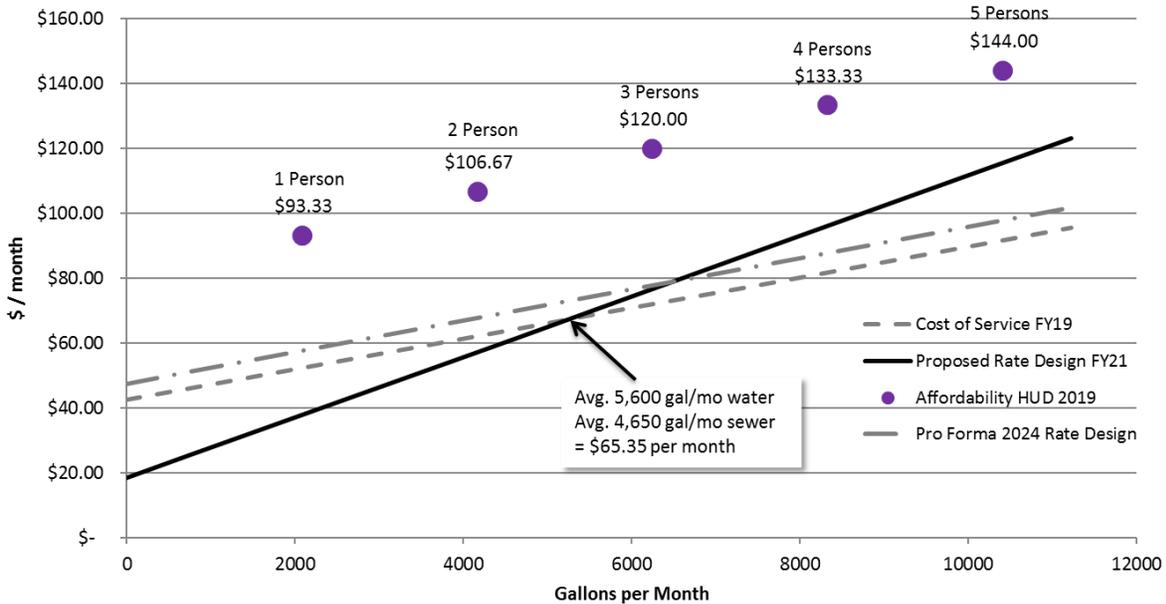


Chart 5 above demonstrates that MWRD’s current rate design meets the affordability index for 1-person through 5-person homes. The good news is that the pro forma for FY24 also meets the current 2019 HUD affordability indexes. Note however that the cost of service for FY19 and pro forma for FY24 do show the need to increase the minimum monthly fees rather substantially and flatten out the commodity charges.

The affordability limits above represent 4% of a very low-income earner (50% of median income) in Murfreesboro. The table below illustrates 2019 HUD housing limits. Median family income of 4 is established at \$80,000 per year, so 50% of median for a family of four is established as \$40,000 per year.

	1 person	2 persons	3 persons	4 persons	5 persons
50% Median Family Income	\$28,000	\$32,000	\$36,000	\$40,000	\$43,200
4% annual	\$1,120	\$1,280	\$1,440	\$1,600	\$1,728
4% monthly	\$93.33	\$106.67	\$120.00	\$133.33	\$144.00

RECOMMENDATION

Staff does not recommend any rate increase for FY21.

FISCAL IMPACT

Rate revenue for water and sewer is anticipated to equal or exceed that which was collected in FY19, or \$43,247,652, and exceed the estimated cost of service expenses for FY21 at \$41,280,142.

ATTACHMENTS

- FY24 Water Pro Forma for Cost of Service
- FY24 Sewer Pro Forma for Cost of Service (Scenario A – No Debt)
- FY24 Sewer Pro Forma for Cost of Service (Scenario B – \$49M Debt Issuance)



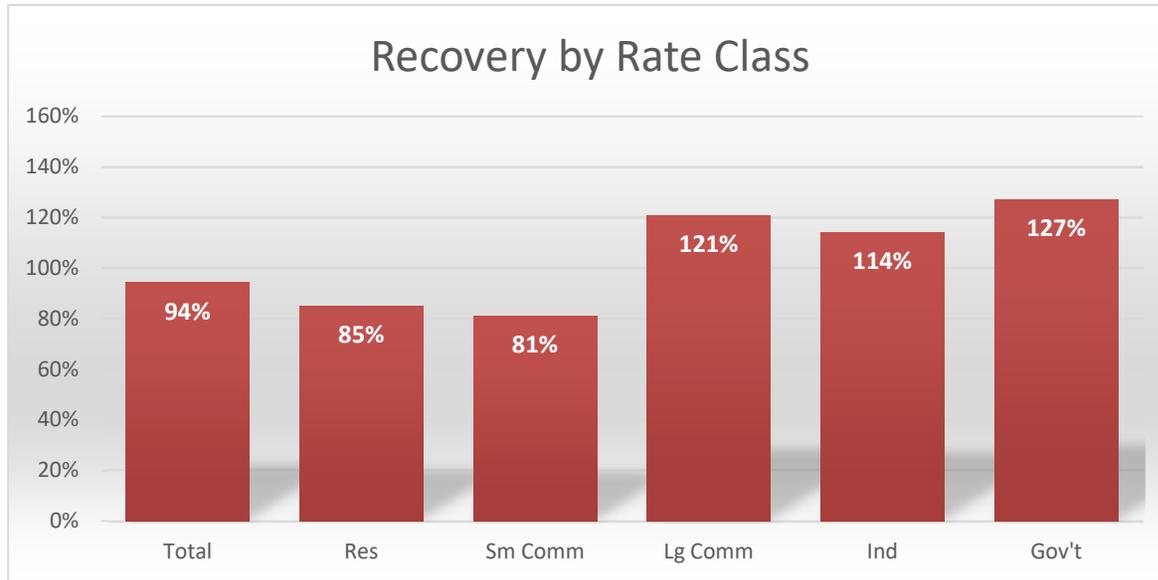
FY24 PRO FORMA WATER

Murfreesboro Water Resources Department

March 19, 2020

**City of Murfreesboro Water Resources Department
Water Pro-Forma Cost of Service-12-Months Ending June 2024
Summary of Results**

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City of Murfreesboro Water Resources Department
Water Pro-Forma Cost of Service-12-Months Ending June 2024
Summary of Cost of Service Allocation

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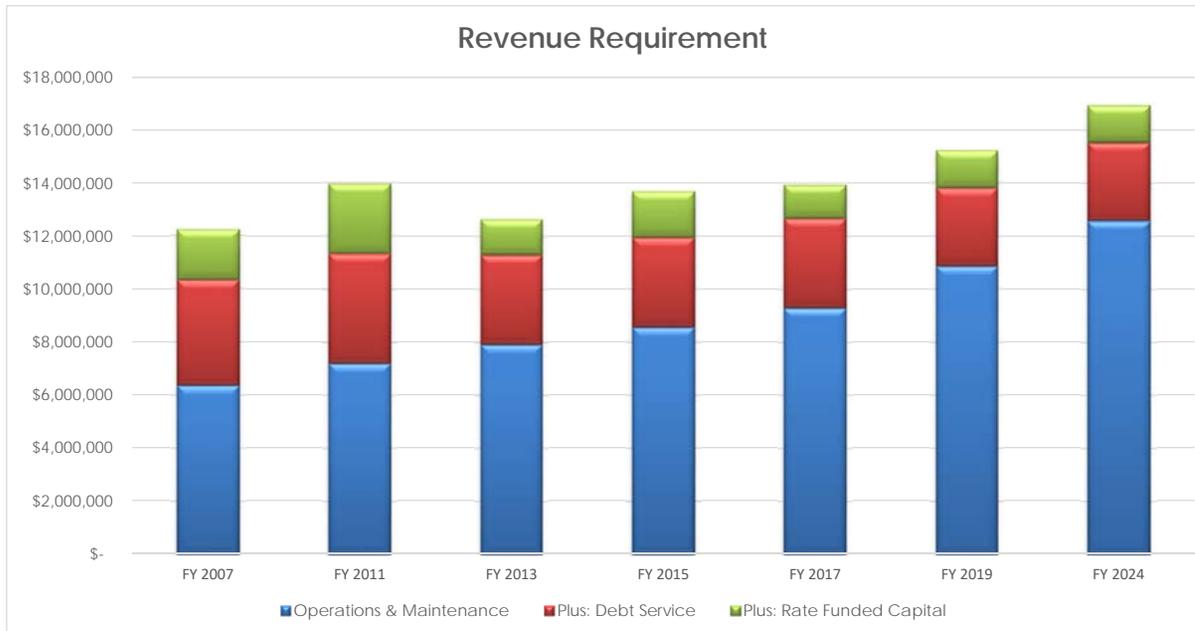
	Total	1 Res	2 Sm Comm	3 Lg Comm	4 Ind	5 Gov't	Total
TOTAL REV. REQ.							
Operations & Maintenance	\$ 12,573,370	\$ 8,546,309	\$ 1,114,750	\$ 1,024,892	\$ 1,001,435	\$ 885,984	\$ 12,573,370
Plus: Debt Service	\$ 2,956,184	\$ 1,529,671	\$ 176,006	\$ 403,007	\$ 465,108	\$ 382,392	\$ 2,956,184
Plus: Rate Funded Capital	\$ 1,404,819	\$ 893,479	\$ 97,387	\$ 138,375	\$ 148,245	\$ 127,333	\$ 1,404,819
Total Revenue Requirement	\$ 16,934,373	\$ 10,969,459	\$ 1,388,143	\$ 1,566,274	\$ 1,614,787	\$ 1,395,709	\$ 16,934,373
Less: Other Revenue	\$ 1,344,016	\$ 1,064,396	\$ 208,201	\$ 50,584	\$ 6,870	\$ 13,964	\$ 1,344,016
Rate Requirement	\$ 15,590,357	\$ 9,905,062	\$ 1,179,942	\$ 1,515,690	\$ 1,607,917	\$ 1,381,745	\$ 15,590,357
Annual Sales (Kgal)	3,029,168	1,571,155	179,126	411,375	482,669	384,842	3,029,168
Rate Rev. Req./Kgal	\$ 5.15	\$ 6.30	\$ 6.59	\$ 3.68	\$ 3.33	\$ 3.59	\$ 5.15
Rate Rev. Req./Customer	\$ 49.19	\$ 35.30	\$ 47.24	\$ 254.78	\$ 1,990.00	\$ 302.95	\$ 49.19
CUSTOMER							
	Total	Res	Sm Comm	Lg Comm	Ind	Gov't	Total
Operations & Maintenance	\$ 6,044,286	\$ 5,061,024	\$ 709,149	\$ 168,911	\$ 22,942	\$ 82,259	\$ 6,044,286
Plus: Debt Service	\$ 2,956,184	\$ 1,529,671	\$ 176,006	\$ 403,007	\$ 465,108	\$ 382,392	\$ 2,956,184
Plus: Rate Funded Capital	\$ 329,909	\$ 292,126	\$ 26,000	\$ 6,193	\$ 841	\$ 4,748	\$ 329,909
Total Revenue Requirement	\$ 9,330,379	\$ 6,882,821	\$ 911,156	\$ 578,111	\$ 488,890	\$ 469,400	\$ 9,330,379
Less: Other Revenue	\$ 1,344,016	\$ 1,064,396	\$ 208,201	\$ 50,584	\$ 6,870	\$ 13,964	\$ 1,344,016
Rate Requirement	\$ 7,986,363	\$ 5,818,425	\$ 702,955	\$ 527,527	\$ 482,020	\$ 455,435	\$ 7,986,363
Annual Billings	316,910	280,616	24,976	5,949	808	4,561	316,910
Calculated Customer Charge	\$ 20.73	\$ 28.15	\$ 88.67	\$ 596.56	\$ 99.85		
CONSUMPTION							
	Total	Res	Sm Comm	Lg Comm	Ind	Gov't	Total
Operations & Maintenance	\$ 6,529,084	\$ 3,485,285	\$ 405,601	\$ 855,981	\$ 978,493	\$ 803,725	\$ 6,529,084
Plus: Debt Service	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Plus: Rate Funded Capital	\$ 1,074,910	\$ 601,352	\$ 71,387	\$ 132,182	\$ 147,404	\$ 122,585	\$ 1,074,910
Total Revenue Requirement	\$ 7,603,994	\$ 4,086,637	\$ 476,987	\$ 988,163	\$ 1,125,897	\$ 926,310	\$ 7,603,994
Less: Other Revenue	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Rate Requirement	\$ 7,603,994	\$ 4,086,637	\$ 476,987	\$ 988,163	\$ 1,125,897	\$ 926,310	\$ 7,603,994
Calculated Water Rate (Kgal)	\$ 2.60	\$ 2.66	\$ 2.40	\$ 2.33	\$ 2.41		
	Total	Res	Sm Comm	Lg Comm	Ind	Gov't	Total
Current Rate Revenue	\$ 14,634,147	\$ 8,275,416	\$ 919,299	\$ 1,841,936	\$ 1,836,514	\$ 1,760,982	\$ 14,634,147
Over/(Under) Recovery	\$ (956,210)	\$ (1,629,646)	\$ (260,643)	\$ 326,246	\$ 228,597	\$ 379,236	\$ (956,210)
Total Revenue	\$ 15,978,163	\$ 9,339,813	\$ 1,127,500	\$ 1,892,520	\$ 1,843,384	\$ 1,774,946	\$ 15,978,163
Over/(Under) Recovery	\$ (956,210)	\$ (1,629,646)	\$ (260,643)	\$ 326,246	\$ 228,597	\$ 379,236	\$ (956,210)

City of Murfreesboro Water Resources Department
Water Pro-Forma Cost of Service-12-Months Ending June 2024
Summary of Cost of Service Allocation

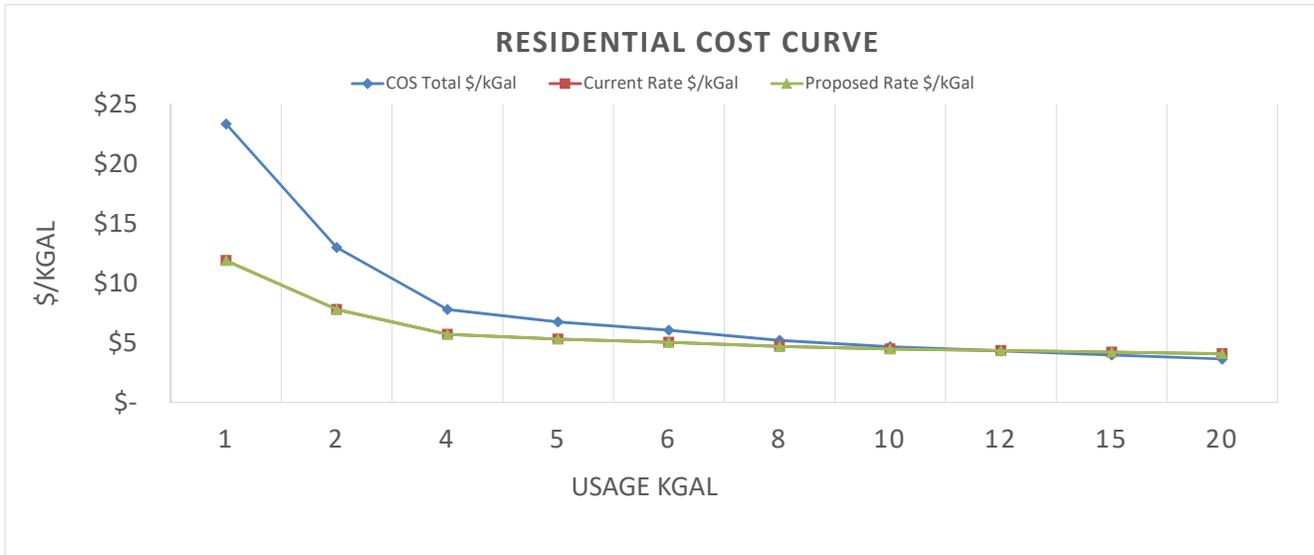
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TOTAL REV. REQ.	FY 2007	FY 2011	FY 2013	FY 2015	FY 2017	FY 2019	FY 2024	Diff. (\$)	Diff. (%)
Operations & Maintenance	\$ 6,345,727	\$ 7,178,916	\$ 7,900,771	\$ 8,539,113	\$ 9,274,214	\$ 10,849,218	\$ 12,573,370	\$ 1,724,152	15.9%
Plus: Debt Service	\$ 3,972,868	\$ 4,149,604	\$ 3,387,470	\$ 3,390,816	\$ 3,392,100	\$ 2,956,184	\$ 2,956,184	\$ -	0.0%
Plus: Rate Funded Capital	\$ 1,900,000	\$ 2,628,255	\$ 1,337,000	\$ 1,735,000	\$ 1,260,223	\$ 1,404,819	\$ 1,404,819	\$ -	0.0%
Total Revenue Requirement	\$ 12,218,595	\$ 13,956,774	\$ 12,625,241	\$ 13,664,929	\$ 13,926,536	\$ 15,210,221	\$ 16,934,373	\$ 1,724,152	11.3%
Less: Other Revenue	\$ 1,266,063	\$ 760,827	\$ 860,586	\$ 715,527	\$ 943,104	\$ 1,344,016	\$ 1,344,016	\$ -	0.0%
Rate Requirement	\$ 10,952,532	\$ 13,195,947	\$ 11,764,655	\$ 12,949,402	\$ 12,983,433	\$ 13,866,205	\$ 15,590,357	\$ 1,724,152	12.4%
Annual Sales (kGal)	2,842,523	2,588,840	2,675,719	2,786,255	3,098,909	3,029,168	3,029,168	(69,741)	-2.3%
Rate Requirement per kGal	\$ 3.85	\$ 5.10	\$ 4.40	\$ 4.65	\$ 4.19	\$ 4.58	\$ 5.15	\$ 0.39	9.3%

TOTAL REV. REQ.	FY 2007	FY 2011	FY 2013	FY 2015	FY 2017	FY 2019	FY 2024	Diff. (\$)	Diff. (%)
Operations & Maintenance	\$ 2.23	\$ 2.77	\$ 2.95	\$ 3.06	\$ 2.99	\$ 3.58	\$ 4.15	\$ 0.57	15.9%
Plus: Debt Service	\$ 1.40	\$ 1.60	\$ 1.27	\$ 1.22	\$ 1.09	\$ 0.98	\$ 0.98	\$ -	0.0%
Plus: Rate Funded Capital	\$ 0.67	\$ 1.02	\$ 0.50	\$ 0.62	\$ 0.41	\$ 0.46	\$ 0.46	\$ -	0.0%
Total Revenue Requirement	\$ 4.30	\$ 5.39	\$ 4.72	\$ 4.90	\$ 4.49	\$ 5.02	\$ 5.59	\$ 0.57	11.3%
Less: Other Revenue	\$ 0.45	\$ 0.29	\$ 0.32	\$ 0.26	\$ 0.30	\$ 0.44	\$ 0.44	\$ 0.14	31.4%
Rate Requirement	\$ 3.85	\$ 5.10	\$ 4.40	\$ 4.65	\$ 4.19	\$ 4.58	\$ 5.15	\$ 0.43	9.4%



	Cost of Service	Current Rate	Proposed Rate	Difference
Customer Charge	\$ 20.73	\$ 8.22	\$ 8.22	\$ -
All Usage per kGal	\$ 2.60	\$ 3.66	\$ 3.66	\$ -



Usage	COS Rates	Current Rates	Proposed Rates	Monthly Change	Daily Change	Current \$/kGal	Proposed \$/kGal
1 \$	23.33	\$ 11.88	\$ 11.88	\$ -	\$ -	\$ 11.88	\$ 11.88
2 \$	25.93	\$ 15.54	\$ 15.54	\$ -	\$ -	\$ 7.77	\$ 7.77
4 \$	31.13	\$ 22.86	\$ 22.86	\$ -	\$ -	\$ 5.72	\$ 5.72
5 \$	33.73	\$ 26.52	\$ 26.52	\$ -	\$ -	\$ 5.30	\$ 5.30
6 \$	36.33	\$ 30.18	\$ 30.18	\$ -	\$ -	\$ 5.03	\$ 5.03
8 \$	41.53	\$ 37.50	\$ 37.50	\$ -	\$ -	\$ 4.69	\$ 4.69
10 \$	46.73	\$ 44.82	\$ 44.82	\$ -	\$ -	\$ 4.48	\$ 4.48
12 \$	51.93	\$ 52.14	\$ 52.14	\$ -	\$ -	\$ 4.35	\$ 4.35
15 \$	59.73	\$ 63.12	\$ 63.12	\$ -	\$ -	\$ 4.21	\$ 4.21
20 \$	72.73	\$ 81.42	\$ 81.42	\$ -	\$ -	\$ 4.07	\$ 4.07
Average Usage		5.599					

Additional Customer Revenue	\$ -
Additional Usage Revenue	\$ -
	<u>\$ -</u>
Current Recovery	\$ (1,629,646)



FY24 PRO FORMA Sewer Scenario A No Debt

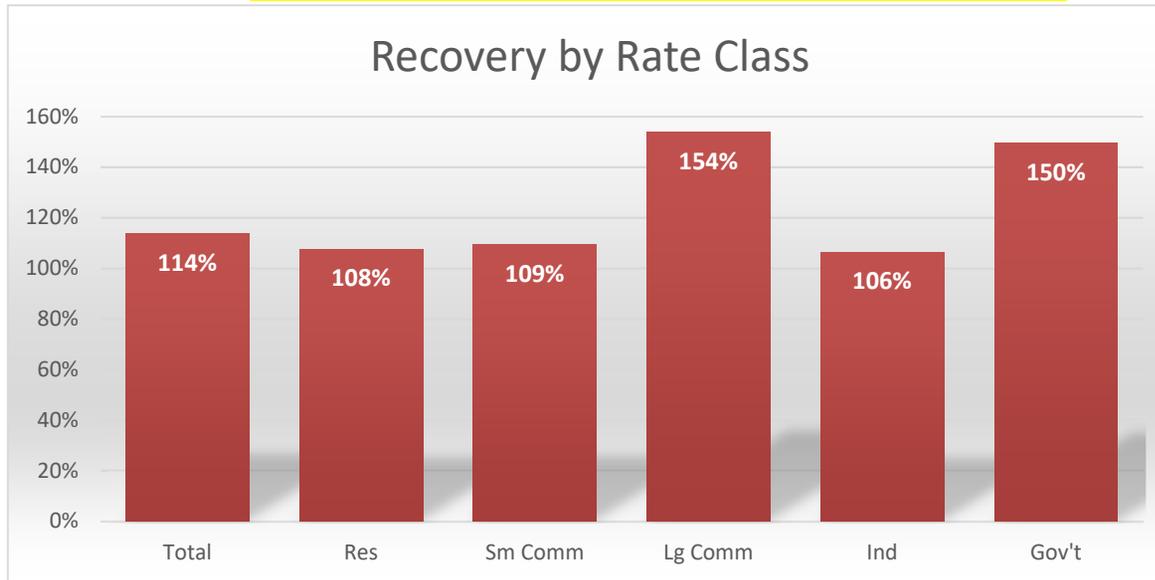
Murfreesboro Water Resources Department

March 19, 2020

City of Murfreesboro Water Resources Department
Sewer Pro-Forma Cost of Service - 12-months Ending June 2024
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SCENARIO A



City of Murfreesboro Water Resources Department
 Sewer Pro-Forma Cost of Service - 12-months Ending June 2024
 Summary of Cost of Service Allocation

SCENARIO A

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	Total	1 Res	2 Sm Comm	3 Lg Comm	4 Ind	5 Gov't	Total
TOTAL REV. REQ.							
Operations & Maintenance Expense	\$ 14,987,933	\$ 11,560,033	\$ 752,952	\$ 1,061,283	\$ 1,002,088	\$ 611,577	\$ 14,987,933
Plus: Debt Service	\$ 10,126,732	\$ 7,095,088	\$ 514,910	\$ 1,085,922	\$ 766,358	\$ 664,453	\$ 10,126,732
Plus: Rate Funded Capital	\$ 3,930,181	\$ 2,884,748	\$ 197,287	\$ 364,895	\$ 257,417	\$ 225,834	\$ 3,930,181
Total Revenue Requirement	\$ 29,044,846	\$ 21,539,869	\$ 1,465,149	\$ 2,512,100	\$ 2,025,863	\$ 1,501,864	\$ 29,044,846
Less: Other Revenue	\$ 1,853,557	\$ 1,734,058	\$ 83,123	\$ 21,803	\$ 3,484	\$ 11,089	\$ 1,853,557
Rate Requirement	\$ 27,191,289	\$ 19,805,811	\$ 1,382,026	\$ 2,490,297	\$ 2,022,379	\$ 1,490,775	\$ 27,191,289

Annual Sales (Kgal)	3,964,055	2,596,116	197,341	492,578	365,377	312,642	3,964,055
Rate Rev. Req./Kgal	\$ 6.86	\$ 7.63	\$ 7.00	\$ 5.06	\$ 5.54	\$ 4.77	\$ 6.86
Rate Rev. Req./Customer	\$ 43.73	\$ 34.29	\$ 44.95	\$ 308.77	\$ 1,569.24	\$ 363.43	\$ 43.73

	Total	Res	Sm Comm	Lg Comm	Ind	Gov't	Total
CUSTOMER							
Operations & Maintenance Expense	\$ 7,743,008	\$ 6,887,359	\$ 366,260	\$ 96,071	\$ 344,456	\$ 48,862	\$ 7,743,008
Plus: Debt Service	\$ 10,126,732	\$ 7,095,088	\$ 514,910	\$ 1,085,922	\$ 766,358	\$ 664,453	\$ 10,126,732
Plus: Rate Funded Capital	\$ 1,154,813	\$ 1,072,724	\$ 57,100	\$ 14,978	\$ 2,393	\$ 7,618	\$ 1,154,813
Total Revenue Requirement	\$ 19,024,553	\$ 15,055,171	\$ 938,271	\$ 1,196,971	\$ 1,113,207	\$ 720,932	\$ 19,024,553
Less: Other Revenue	\$ 1,853,557	\$ 1,734,058	\$ 83,123	\$ 21,803	\$ 3,484	\$ 11,089	\$ 1,853,557
Rate Requirement	\$ 17,170,995	\$ 13,321,113	\$ 855,148	\$ 1,175,168	\$ 1,109,723	\$ 709,843	\$ 17,170,995

Annual Billings	621,850	577,646	30,748	8,065	1,289	4,102	621,850
Calculated Customer Charge	\$ 23.06	\$ 27.81	\$ 145.71	\$ 861.07	\$ 173.05		

	Total	Res	Sm Comm	Lg Comm	Ind	Gov't	Total
CONSUMPTION							
Operations & Maintenance Expense	\$ 7,244,926	\$ 4,672,675	\$ 386,691	\$ 965,212	\$ 657,632	\$ 562,716	\$ 7,244,926
Plus: Debt Service	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Plus: Rate Funded Capital	\$ 2,775,368	\$ 1,812,024	\$ 140,187	\$ 349,917	\$ 255,024	\$ 218,216	\$ 2,775,368
Total Revenue Requirement	\$ 10,020,294	\$ 6,484,699	\$ 526,878	\$ 1,315,129	\$ 912,656	\$ 780,932	\$ 10,020,294
Less: Other Revenue	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Rate Requirement	\$ 10,020,294	\$ 6,484,699	\$ 526,878	\$ 1,315,129	\$ 912,656	\$ 780,932	\$ 10,020,294

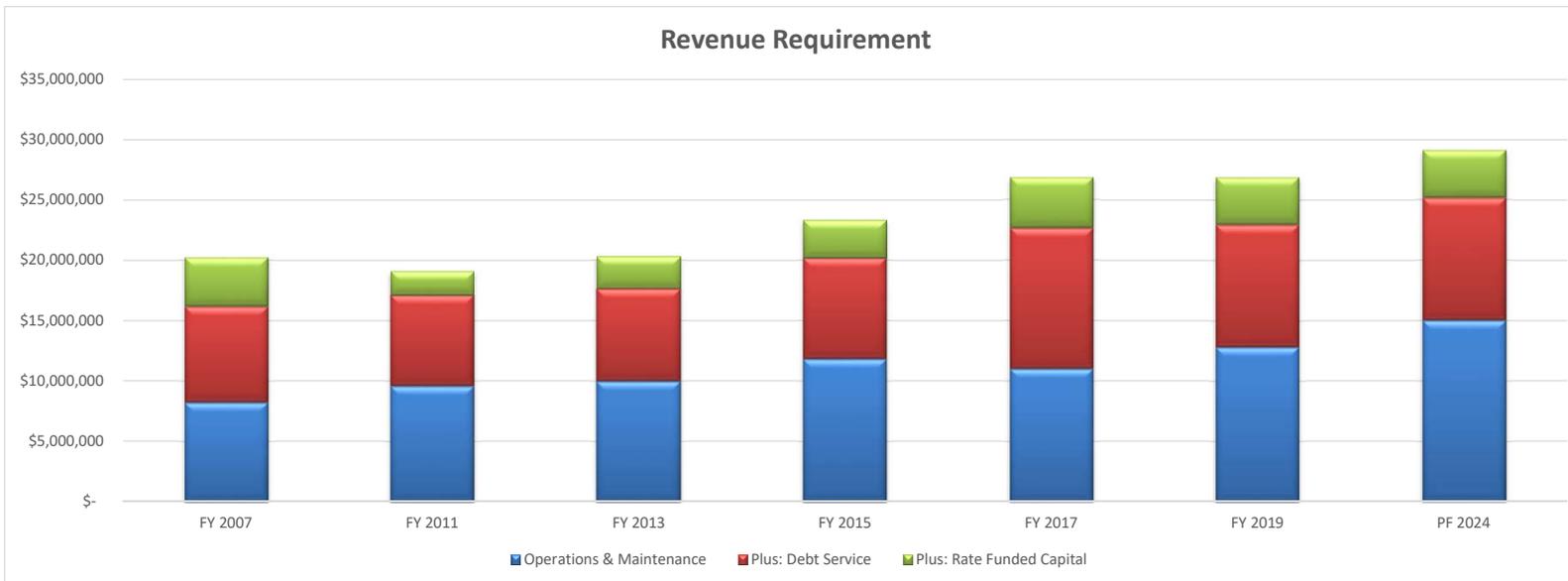
Calculated Water Rate (Kgal)	\$ 2.50	\$ 2.67	\$ 2.67	\$ 2.50	\$ 2.50		
	Total	Res	Sm Comm	Lg Comm	Ind	Gov't	Total
Current Rate Revenue	\$ 31,197,113	\$ 21,447,526	\$ 1,519,948	\$ 3,840,950	\$ 2,153,539	\$ 2,235,150	\$ 31,197,113
Over/(Under) Recovery	\$ 4,005,824	\$ 1,641,714	\$ 137,922	\$ 1,350,653	\$ 131,159	\$ 744,375	\$ 4,005,824
Total Revenue	\$ 33,050,670	\$ 23,181,584	\$ 1,603,071	\$ 3,862,754	\$ 2,157,023	\$ 2,246,239	\$ 33,050,670
Over/(Under) Recovery	\$ 4,005,824	\$ 1,641,714	\$ 137,922	\$ 1,350,653	\$ 131,159	\$ 744,375	\$ 4,005,824

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 Sewer Pro-Forma Cost of Service - 12-months Ending June 2024
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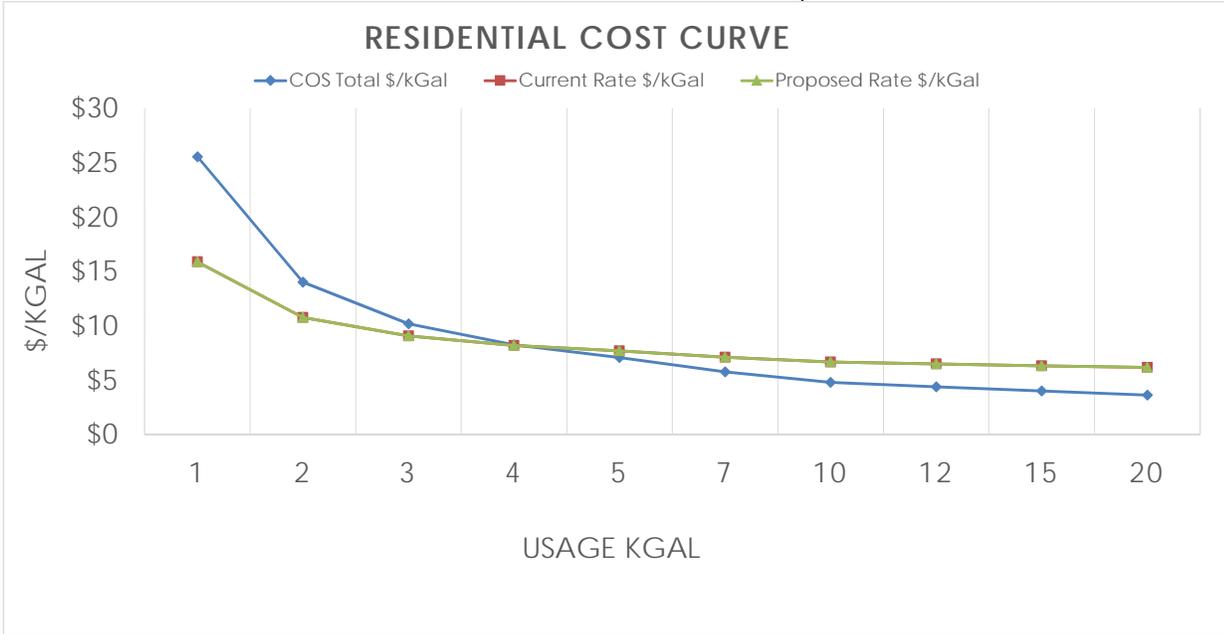
TOTAL REV. REQ.	FY 2007	FY 2011	FY 2013	FY 2015	FY 2017	FY 2019	PF 2024	Diff. (\$)	Diff. (%)
Operations & Maintenance	\$ 8,202,271	\$ 9,576,441	\$ 9,964,561	\$ 11,809,428	\$ 11,001,452	\$ 12,803,382	\$ 14,987,933	\$ 2,184,552	17.1%
Plus: Debt Service	\$ 7,950,954	\$ 7,506,070	\$ 7,647,541	\$ 8,352,272	\$ 11,615,825	\$ 10,126,732	\$ 10,126,732	\$ -	0.0%
Plus: Rate Funded Capital	\$ 4,062,500	\$ 2,000,000	\$ 2,695,000	\$ 3,120,000	\$ 4,187,777	\$ 3,930,181	\$ 3,930,181	\$ -	0.0%
Total Revenue Requirement	\$ 20,215,725	\$ 19,082,512	\$ 20,307,102	\$ 23,281,701	\$ 26,805,053	\$ 26,860,295	\$ 29,044,846	\$ 2,184,552	8.1%
Less: Other Revenue	\$ 1,518,252	\$ 949,923	\$ 827,560	\$ 1,055,581	\$ 972,205	\$ 1,809,740	\$ 1,853,557	\$ 43,817	4.5%
Rate Requirement	\$ 18,697,473	\$ 18,132,588	\$ 19,479,542	\$ 22,226,120	\$ 25,832,849	\$ 25,050,555	\$ 27,191,289	\$ 2,140,734	8.3%
Annual Sales (kGal)	2,913,300	2,818,845	2,999,372	3,284,390	3,506,926	3,637,052	3,964,055	327,003	9.3%
Rate Requirement per kGal	\$ 6.42	\$ 6.43	\$ 6.49	\$ 6.77	\$ 7.37	\$ 6.89	\$ 6.86	\$ (0.03)	-0.4%

TOTAL REV. REQ.	FY 2007	FY 2011	FY 2013	FY 2015	FY 2017	FY 2019	PF 2024	Diff. (\$)	Diff. (%)
Operations & Maintenance	\$ 2.82	\$ 3.40	\$ 3.32	\$ 3.60	\$ 3.14	\$ 3.52	\$ 3.78	\$ 0.38	12.2%
Plus: Debt Service	\$ 2.73	\$ 2.66	\$ 2.55	\$ 2.54	\$ 3.31	\$ 2.78	\$ 2.55	\$ (0.53)	-15.9%
Plus: Rate Funded Capital	\$ 1.39	\$ 0.71	\$ 0.90	\$ 0.95	\$ 1.19	\$ 1.08	\$ 0.99	\$ (0.11)	-9.5%
Total Revenue Requirement	\$ 6.94	\$ 6.77	\$ 6.77	\$ 7.09	\$ 7.64	\$ 7.39	\$ 7.33	\$ (0.26)	-3.4%
Less: Other Revenue	\$ 0.52	\$ 0.34	\$ 0.28	\$ 0.32	\$ 0.28	\$ 0.50	\$ 0.47	\$ 0.22	79.5%
Rate Requirement	\$ 6.42	\$ 6.43	\$ 6.49	\$ 6.77	\$ 7.37	\$ 6.89	\$ 6.86	\$ (0.48)	-6.5%



SCENARIO A

	Cost of Service	Current Rate	Proposed Rate	Difference
Customer Charge	\$ 23.06	\$ 10.22	\$ 10.22	\$ -
All Usage (per kGal)	\$ 2.50	\$ 5.67	\$ 5.67	\$ -



Usage	COS Rates	Current Rates	Proposed Rates	Monthly Change	Daily Change	Current \$/kGal	Proposed \$/kGal
1	\$ 25.56	\$ 15.89	\$ 15.89	\$ -	\$ -	\$ 15.89	\$ 15.89
2	\$ 28.06	\$ 21.56	\$ 21.56	\$ -	\$ -	\$ 10.78	\$ 10.78
3	\$ 30.55	\$ 27.23	\$ 27.23	\$ -	\$ -	\$ 9.08	\$ 9.08
4	\$ 33.05	\$ 32.90	\$ 32.90	\$ -	\$ -	\$ 8.23	\$ 8.23
5	\$ 35.55	\$ 38.57	\$ 38.57	\$ -	\$ -	\$ 7.71	\$ 7.71
7	\$ 40.55	\$ 49.91	\$ 49.91	\$ -	\$ -	\$ 7.13	\$ 7.13
10	\$ 48.04	\$ 66.92	\$ 66.92	\$ -	\$ -	\$ 6.69	\$ 6.69
12	\$ 53.04	\$ 78.26	\$ 78.26	\$ -	\$ -	\$ 6.52	\$ 6.52
15	\$ 60.53	\$ 95.27	\$ 95.27	\$ -	\$ -	\$ 6.35	\$ 6.35
20	\$ 73.02	\$ 123.62	\$ 123.62	\$ -	\$ -	\$ 6.18	\$ 6.18
Average Usage		4,494					

Additional Customer Revenue	\$ -
Additional Usage Revenue	\$ -
	<u>\$ -</u>
Current Recovery	\$ 1,641,714



FY24 PRO FORMA Sewer Scenario B \$49 Debt Issuance

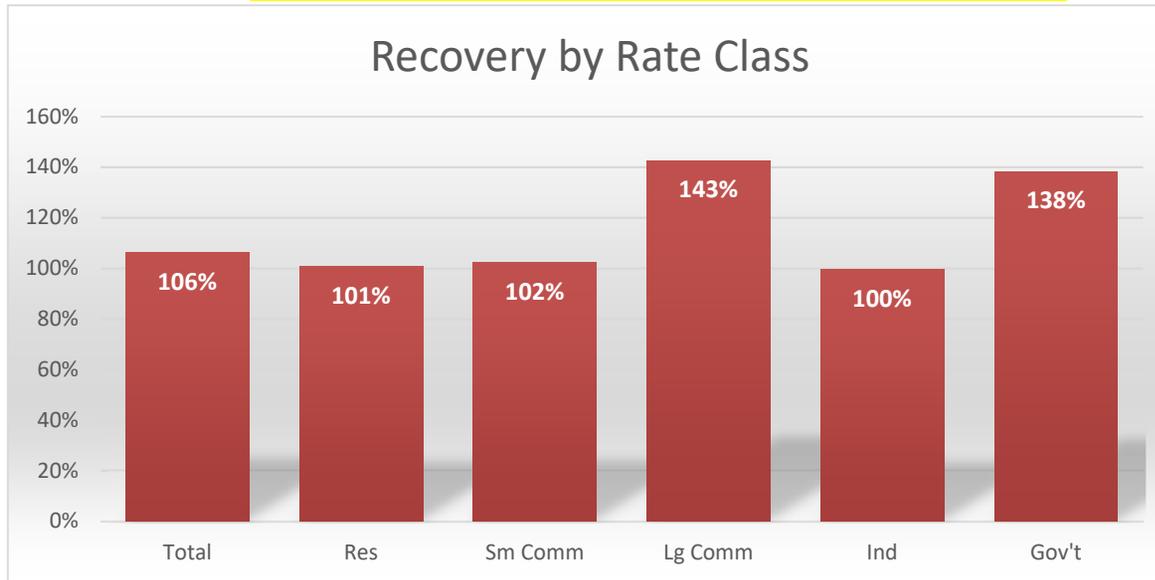
Murfreesboro Water Resources Department

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SCENARIO B



City of Murfreesboro Water Resources Department
 Sewer Pro-Forma Cost of Service - 12-months Ending June 2024
 Summary of Cost of Service Allocation

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	Total	1 Res	2 Sm Comm	3 Lg Comm	4 Ind	5 Gov't	Total
TOTAL REV. REQ.							
Operations & Maintenance Expense	\$ 14,987,933	\$ 11,560,033	\$ 752,952	\$ 1,061,283	\$ 1,002,088	\$ 611,577	\$ 14,987,933
Plus: Debt Service	\$ 13,420,302	\$ 9,457,944	\$ 680,656	\$ 1,414,375	\$ 999,584	\$ 867,741	\$ 13,420,302
Plus: Rate Funded Capital	\$ 2,680,181	\$ 2,006,926	\$ 133,778	\$ 231,744	\$ 163,429	\$ 144,303	\$ 2,680,181
Total Revenue Requirement	<u>\$ 31,088,416</u>	<u>\$ 23,024,904</u>	<u>\$ 1,567,386</u>	<u>\$ 2,707,403</u>	<u>\$ 2,165,102</u>	<u>\$ 1,623,622</u>	<u>\$ 31,088,416</u>
Less: Other Revenue	\$ 1,853,557	\$ 1,734,058	\$ 83,123	\$ 21,803	\$ 3,484	\$ 11,089	\$ 1,853,557
Rate Requirement	<u>\$ 29,234,859</u>	<u>\$ 21,290,846</u>	<u>\$ 1,484,263</u>	<u>\$ 2,685,599</u>	<u>\$ 2,161,618</u>	<u>\$ 1,612,533</u>	<u>\$ 29,234,859</u>

Annual Sales (Kgal)	3,964,055	2,596,116	197,341	492,578	365,377	312,642	3,964,055
Rate Rev. Req./Kgal	\$ 7.37	\$ 8.20	\$ 7.52	\$ 5.45	\$ 5.92	\$ 5.16	\$ 7.37
Rate Rev. Req./Customer	\$ 47.01	\$ 36.86	\$ 48.27	\$ 332.99	\$ 1,677.28	\$ 393.11	\$ 47.01

	Total	Res	Sm Comm	Lg Comm	Ind	Gov't	Total
CUSTOMER							
Operations & Maintenance Expense	\$ 7,743,008	\$ 6,887,359	\$ 366,260	\$ 96,071	\$ 344,456	\$ 48,862	\$ 7,743,008
Plus: Debt Service	\$ 13,420,302	\$ 9,457,944	\$ 680,656	\$ 1,414,375	\$ 999,584	\$ 867,741	\$ 13,420,302
Plus: Rate Funded Capital	\$ 925,093	\$ 859,333	\$ 45,742	\$ 11,998	\$ 1,917	\$ 6,102	\$ 925,093
Total Revenue Requirement	<u>\$ 22,088,402</u>	<u>\$ 17,204,636</u>	<u>\$ 1,092,659</u>	<u>\$ 1,522,445</u>	<u>\$ 1,345,958</u>	<u>\$ 922,705</u>	<u>\$ 22,088,402</u>
Less: Other Revenue	\$ 1,853,557	\$ 1,734,058	\$ 83,123	\$ 21,803	\$ 3,484	\$ 11,089	\$ 1,853,557
Rate Requirement	<u>\$ 20,234,845</u>	<u>\$ 15,470,578</u>	<u>\$ 1,009,536</u>	<u>\$ 1,500,641</u>	<u>\$ 1,342,474</u>	<u>\$ 911,616</u>	<u>\$ 20,234,845</u>

Annual Billings	621,850	577,646	30,748	8,065	1,289	4,102	621,850
Calculated Customer Charge	\$ 26.78	\$ 32.83	\$ 186.06	\$ 1,041.67	\$ 222.24		

	Total	Res	Sm Comm	Lg Comm	Ind	Gov't	Total
CONSUMPTION							
Operations & Maintenance Expense	\$ 7,244,926	\$ 4,672,675	\$ 386,691	\$ 965,212	\$ 657,632	\$ 562,716	\$ 7,244,926
Plus: Debt Service	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Plus: Rate Funded Capital	\$ 1,755,088	\$ 1,147,593	\$ 88,036	\$ 219,746	\$ 161,512	\$ 138,201	\$ 1,755,088
Total Revenue Requirement	<u>\$ 9,000,014</u>	<u>\$ 5,820,268</u>	<u>\$ 474,727</u>	<u>\$ 1,184,958</u>	<u>\$ 819,144</u>	<u>\$ 700,917</u>	<u>\$ 9,000,014</u>
Less: Other Revenue	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Rate Requirement	<u>\$ 9,000,014</u>	<u>\$ 5,820,268</u>	<u>\$ 474,727</u>	<u>\$ 1,184,958</u>	<u>\$ 819,144</u>	<u>\$ 700,917</u>	<u>\$ 9,000,014</u>

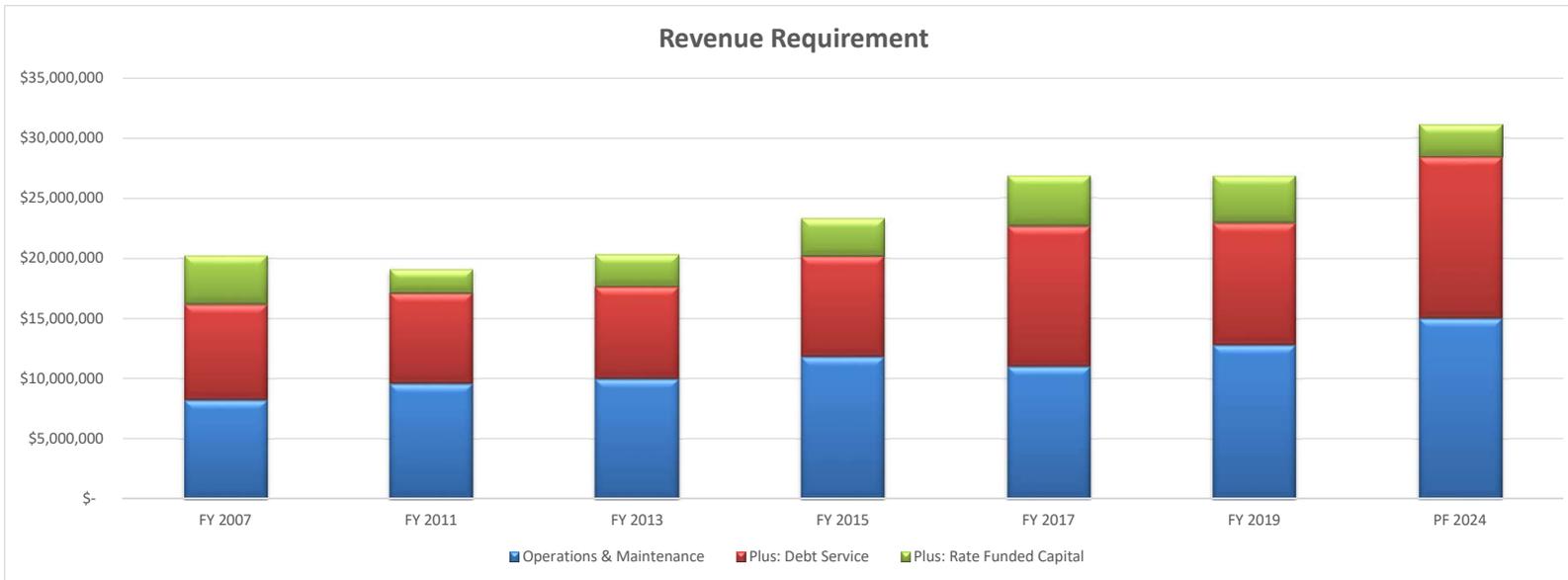
Calculated Water Rate (Kgal)	\$ 2.24	\$ 2.41	\$ 2.41	\$ 2.24	\$ 2.24		
	Total	Res	Sm Comm	Lg Comm	Ind	Gov't	Total
Current Rate Revenue	\$ 31,197,113	\$ 21,447,526	\$ 1,519,948	\$ 3,840,950	\$ 2,153,539	\$ 2,235,150	\$ 31,197,113
Over/(Under) Recovery	\$ 1,962,254	\$ 156,680	\$ 35,685	\$ 1,155,351	\$ (8,079)	\$ 622,618	\$ 1,962,254
Total Revenue	\$ 33,050,670	\$ 23,181,584	\$ 1,603,071	\$ 3,862,754	\$ 2,157,023	\$ 2,246,239	\$ 33,050,670
Over/(Under) Recovery	\$ 1,962,254	\$ 156,680	\$ 35,685	\$ 1,155,351	\$ (8,079)	\$ 622,618	\$ 1,962,254

City of Murfreesboro Water Resources Department
 Sewer Pro-Forma Cost of Service - 12-months Ending June 2024
 Summary of Results
[Main Menu](#)

SCENARIO B

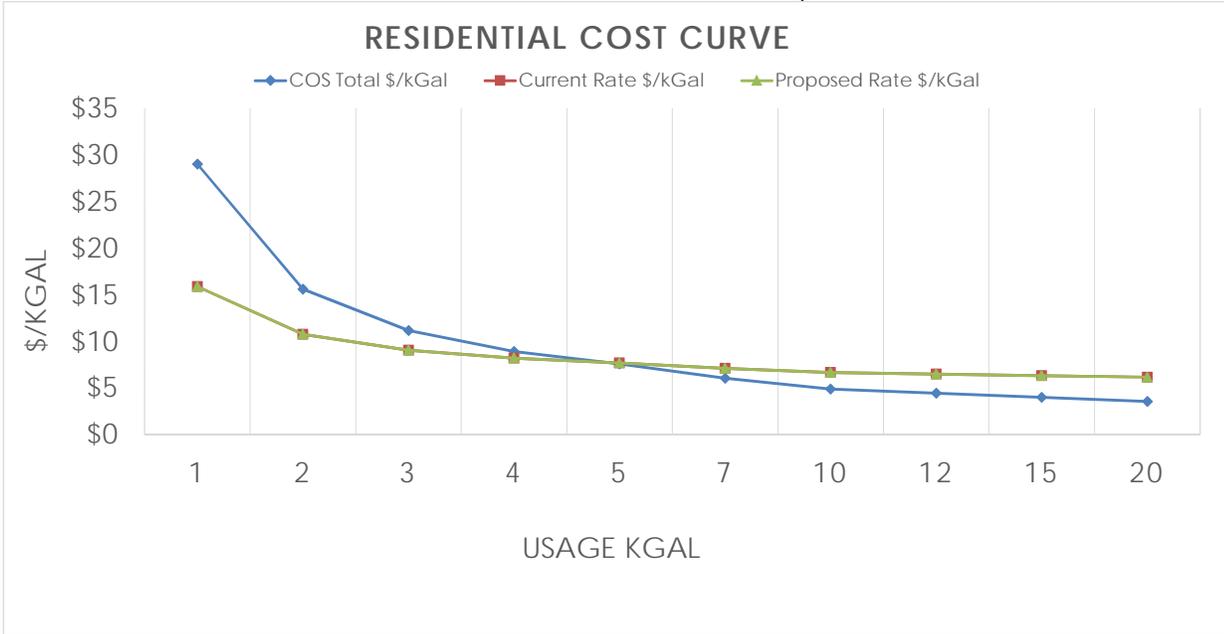
TOTAL REV. REQ.	FY 2007	FY 2011	FY 2013	FY 2015	FY 2017	FY 2019	PF 2024	Diff. (\$)	Diff. (%)
Operations & Maintenance	\$ 8,202,271	\$ 9,576,441	\$ 9,964,561	\$ 11,809,428	\$ 11,001,452	\$ 12,803,382	\$ 14,987,933	\$ 2,184,552	17.1%
Plus: Debt Service	\$ 7,950,954	\$ 7,506,070	\$ 7,647,541	\$ 8,352,272	\$ 11,615,825	\$ 10,126,732	\$ 13,420,302	\$ 3,293,570	32.5%
Plus: Rate Funded Capital	\$ 4,062,500	\$ 2,000,000	\$ 2,695,000	\$ 3,120,000	\$ 4,187,777	\$ 3,930,181	\$ 2,680,181	\$ (1,250,000)	-31.8%
Total Revenue Requirement	\$ 20,215,725	\$ 19,082,512	\$ 20,307,102	\$ 23,281,701	\$ 26,805,053	\$ 26,860,295	\$ 31,088,416	\$ 4,228,121	15.8%
Less: Other Revenue	\$ 1,518,252	\$ 949,923	\$ 827,560	\$ 1,055,581	\$ 972,205	\$ 1,809,740	\$ 1,853,557	\$ 43,817	4.5%
Rate Requirement	\$ 18,697,473	\$ 18,132,588	\$ 19,479,542	\$ 22,226,120	\$ 25,832,849	\$ 25,050,555	\$ 29,234,859	\$ 4,184,304	16.2%
Annual Sales (kGal)	2,913,300	2,818,845	2,999,372	3,284,390	3,506,926	3,637,052	3,964,055	327,003	9.3%
Rate Requirement per kGal	\$ 6.42	\$ 6.43	\$ 6.49	\$ 6.77	\$ 7.37	\$ 6.89	\$ 7.37	\$ 0.49	7.1%

TOTAL REV. REQ.	FY 2007	FY 2011	FY 2013	FY 2015	FY 2017	FY 2019	PF 2024	Diff. (\$)	Diff. (%)
Operations & Maintenance	\$ 2.82	\$ 3.40	\$ 3.32	\$ 3.60	\$ 3.14	\$ 3.52	\$ 3.78	\$ 0.38	12.2%
Plus: Debt Service	\$ 2.73	\$ 2.66	\$ 2.55	\$ 2.54	\$ 3.31	\$ 2.78	\$ 3.39	\$ (0.53)	-15.9%
Plus: Rate Funded Capital	\$ 1.39	\$ 0.71	\$ 0.90	\$ 0.95	\$ 1.19	\$ 1.08	\$ 0.68	\$ (0.11)	-9.5%
Total Revenue Requirement	\$ 6.94	\$ 6.77	\$ 6.77	\$ 7.09	\$ 7.64	\$ 7.39	\$ 7.84	\$ (0.26)	-3.4%
Less: Other Revenue	\$ 0.52	\$ 0.34	\$ 0.28	\$ 0.32	\$ 0.28	\$ 0.50	\$ 0.47	\$ 0.22	79.5%
Rate Requirement	\$ 6.42	\$ 6.43	\$ 6.49	\$ 6.77	\$ 7.37	\$ 6.89	\$ 7.37	\$ (0.48)	-6.5%



SCENARIO B

	Cost of Service	Current Rate	Proposed Rate	Difference
Customer Charge	\$ 26.78	\$ 10.22	\$ 10.22	\$ -
All Usage (per kGal)	\$ 2.24	\$ 5.67	\$ 5.67	\$ -



Usage	COS Rates	Current Rates	Proposed Rates	Monthly Change	Daily Change	Current \$/kGal	Proposed \$/kGal
1	\$ 29.02	\$ 15.89	\$ 15.89	\$ -	\$ -	\$ 15.89	\$ 15.89
2	\$ 31.27	\$ 21.56	\$ 21.56	\$ -	\$ -	\$ 10.78	\$ 10.78
3	\$ 33.51	\$ 27.23	\$ 27.23	\$ -	\$ -	\$ 9.08	\$ 9.08
4	\$ 35.75	\$ 32.90	\$ 32.90	\$ -	\$ -	\$ 8.23	\$ 8.23
5	\$ 37.99	\$ 38.57	\$ 38.57	\$ -	\$ -	\$ 7.71	\$ 7.71
7	\$ 42.48	\$ 49.91	\$ 49.91	\$ -	\$ -	\$ 7.13	\$ 7.13
10	\$ 49.20	\$ 66.92	\$ 66.92	\$ -	\$ -	\$ 6.69	\$ 6.69
12	\$ 53.69	\$ 78.26	\$ 78.26	\$ -	\$ -	\$ 6.52	\$ 6.52
15	\$ 60.41	\$ 95.27	\$ 95.27	\$ -	\$ -	\$ 6.35	\$ 6.35
20	\$ 71.62	\$ 123.62	\$ 123.62	\$ -	\$ -	\$ 6.18	\$ 6.18
Average Usage		4,494					

Additional Customer Revenue	\$ -
Additional Usage Revenue	\$ -
	<u>\$ -</u>
Current Recovery	\$ 156,680



WATER RESOURCES

DASHBOARD PERFORMANCE

February 2020



MWRD FY2020-2024 CIP

NO.	PROJECT	2019-2020 2019	2020-2021 2020 Issue	2021-2022 2021 Issue	2022-2023 2022 Issue	2023-2024 2023 Issue	TOTAL
	Construction- Northeast Regional PS & Force Main						\$0
	Overall Creek PS & Force Main Upgrade						\$0
	Construction- Biosolids Processing Equipment						\$0
	TOTAL Capital Improvements funded from Debt Service	\$0	\$0	\$0	\$0	\$0	\$0

NO.	PROJECT	2019-2020 2020 FY	2020-2021 2021 FY	2021-2022 2022 FY	2022-2023 2023 FY	2023-2024 2024 FY	TOTAL
	Sewer rehab- Account 335	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000	\$5,000,000
	Meters, Water/Sewer Taps, Hydrants - 280, 290, 300, 310	\$435,000	\$435,000	\$435,000	\$435,000	\$435,000	\$2,175,000
	Water lines- Account 320	\$350,000	\$350,000	\$350,000	\$350,000	\$350,000	\$1,750,000
	Sewer Lines - Account 330	\$350,000	\$350,000	\$350,000	\$350,000	\$350,000	\$1,750,000
	Biolsolids Processing Equip & Storage Sinking Fund	\$500,000	\$500,000	\$500,000	\$500,000	\$500,000	\$2,500,000
	Walter Hill Dam Repair/Remediation Sinking Fund	\$125,000	\$125,000	\$125,000	\$125,000	\$125,000	\$625,000
	Lift Station Replacement Sinking Fund	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000	\$1,250,000
	NE Regional PS & FM Sinking Fund	\$500,000	\$500,000	\$500,000	\$500,000	\$500,000	\$2,500,000
	GAC Replacement	\$125,000	\$125,000	\$125,000	\$125,000	\$125,000	\$625,000
	High Service Pumps & Membrane Pump Improv.		\$1,000,000				\$1,000,000
	Vehicle and Equipment Replacement	\$1,500,000	\$1,500,000	\$1,500,000	\$1,500,000	\$1,500,000	\$7,500,000
	TOTAL Capital Improvements funded from Rates	\$5,135,000	\$6,135,000	\$5,135,000	\$5,135,000	\$5,135,000	\$26,675,000

NO.	PROJECT	2019-2020 2020 FY	2020-2021 2021 FY	2021-2022 2022 FY	2022-2023 2023 FY	2023-2024 2024 FY	TOTAL
	W&S CAPITAL IMPROVEMENT PROJECTS						
	Misc FY20 Working Reserve Commitments	\$1,850,000					\$1,850,000
	Biosolids Processing Equipment & Storage Addition	\$1,000,000	\$9,500,000	\$5,500,000			\$16,000,000
	Replace Biosolids Polymer System	\$100,000	\$1,350,000				\$1,450,000
	Overall Creek Pump Station & Force Main Upgrade	\$500,000	\$7,500,000	\$4,300,000			\$12,300,000
	NE Regional Engineering Design	\$500,000	\$1,500,000	\$250,000	\$250,000		\$2,500,000
	NE Regional P.S. & Force Main		\$3,000,000	\$10,000,000	\$7,500,000		\$20,500,000
	Cherry Lane / Sazerac Sanitary Sewer		\$1,000,000	\$1,500,000			\$2,500,000
	SR840 Interchange Area Sanitary Sewer	\$200,000	\$1,100,000	\$1,100,000			\$2,400,000
	Joe B. Jackson Sanitary Sewer	\$50,000	\$750,000				\$800,000
	MWRRF Wet Weather Treatment Train Impr	\$50,000	\$150,000	\$500,000	\$2,500,000	\$2,500,000	\$5,700,000
	Mill Street Painting, Halls Hill and Tiger Hill Tank Repairs	\$1,000,000	\$1,800,000				\$2,800,000
	Replace Pall Membranes					\$650,000	\$650,000
	High Service PS & Membrane Feed Pump Improv.		\$2,500,000				\$2,500,000
	Direct Potable Reuse Demonstration			\$350,000	\$350,000		\$700,000
	Stones River Water Qual Sampling / NPDES Permitting	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000	\$750,000
	Subtotal CAPITAL PROJECTS	\$5,400,000	\$30,300,000	\$23,650,000	\$10,750,000	\$3,300,000	\$73,400,000
	TRANSPORTATION (Water/Sewer Imp.)						
	Bradyville Pike			\$1,500,000	\$1,500,000	\$500,000	\$3,500,000
	Jones Blvd Widening		\$500,000	\$500,000			\$1,000,000
	Cherry Lane Repurified Main Extension (14,600 LF)		\$2,000,000	\$1,000,000			\$3,000,000
	Cherry Lane Sanitary Sewer Construction	\$150,000	\$1,000,000	\$1,500,000			\$2,650,000
	SR 99 Widening- Old Fort to Cason Lane		\$500,000	\$1,000,000			\$1,500,000
	St. Clair St.		\$500,000				\$500,000
	John Rice Blvd & Rucker Lane		\$200,000				\$200,000
	Maney Avenue Reconstruction - Phase 2		\$250,000	\$250,000			\$500,000
	Wilkinson Pike Reconstruction (MCP to TL)		\$650,000	\$650,000			\$1,300,000
	Subtotal TRANSPORTATION PROJECTS	\$150,000	\$5,600,000	\$6,400,000	\$1,500,000	\$500,000	\$14,150,000
	REHABILITATION						
	Sewer Rehabilitation - Maintenance Contract	\$2,770,000	\$1,500,000	\$1,500,000	\$1,500,000	\$1,500,000	\$8,770,000
	INFORMATION TECHNOLOGY PROJECTS						
	IT/Computer Systems Hardware Upgrades	\$350,000	\$100,000	\$100,000	\$100,000	\$100,000	\$750,000
	Electronic Content Management (Scanning/Imaging)		\$250,000	\$250,000			\$500,000
	IT Design Services & Consulting	\$100,000	\$100,000	\$100,000			\$300,000
	Comp Maintenance Management System (CMMS)		\$400,000	\$600,000			\$1,000,000
	Subtotal INFORMATION TECHNOLOGY PROJECTS	\$450,000	\$850,000	\$1,050,000	\$100,000	\$100,000	\$2,550,000
	TOTAL Projects from Working Capital Reserves	\$8,770,000	\$38,250,000	\$32,600,000	\$13,850,000	\$5,400,000	\$98,870,000

PROJECTED RESERVE FUND BALANCE REVENUE (TAPS)	\$8,000,000	\$7,500,000	\$7,500,000	\$7,500,000	\$7,500,000
SINKING FUND DEPOSITS TO RESERVES FROM RATES	\$2,375,000	\$3,375,000	\$2,375,000	\$2,375,000	\$2,375,000
SECURED MIN. BALANCE FOR WORKING CAPITAL RESERVES	\$24,331,276	\$24,817,902	\$25,314,260	\$25,820,545	\$26,336,956
PROJECTED WORKING CAPITAL RESERVE BALANCE	\$83,220,668	\$55,845,668	\$33,120,668	\$29,145,668	\$33,620,668
FUNDS ABOVE SECURED MINIMUM BALANCE	\$58,889,392	\$31,027,766	\$7,806,408	\$3,325,123	\$7,283,712

**Preliminary *Draft* 5-YR CAPITAL IMPROVEMENTS PLAN (CIP)
STORMWATER UTILITY FUND, FY20.-24**

NO.	PROJECT	Originator	2019-2020 2020 FY	2020-2021 2021 FY	2021-2022 2022 FY	2022-2023 2023 FY	2023-2024 2024 FY	TOTAL
			<i>Projected</i>	<i>Budget</i>	<i>Pro Forma</i>	<i>Pro Forma</i>	<i>Pro Forma</i>	
	Neighborhood Projects (NP)							
NP-1	Memorial Blvd / Haynes Dr. Drainage Improvements	City Eng	\$125,000	\$50,000				\$175,000
NP-2	Mitchell-Nielson Drainage Project	City Eng	\$50,000					\$100,000
NP-3	Huntwood/Leaf Ave Neighborhood Drainage Imp.	City Eng	\$100,000	\$100,000				\$200,000
NP-4	Southern Meadows / Kimbro Woods Drainage Imp.	City Eng	\$500,000	\$500,000				\$1,025,000
NP-5	Liberty Dr. / Thatcher Trace Spring Box	City Eng	\$50,000	\$75,000				\$125,000
NP-6	Pennington Drive Drainage Repair/Upgrade (Added)	City Eng						\$0
NP-7	Gateway Pond Repair	Eng/MRSD						\$0
NP-8	Hardwood Drive Drainage Upgrade (Added)	City Eng	\$250,000					\$250,000
NP-9	Pacific Place/Riverrock Blvd Drainage Imp.	City Eng	\$0	\$0				\$0
	Subtotal		\$1,075,000	\$725,000				\$1,875,000
	Water Quality Improvement (Compliance) Projects (WQ)							\$0
WQ-1	Town Creek Bioretention BMP's @ Cannonsburgh	MWRD						\$0
WQ-2	Molloy Lane Water Quality Pond	MWRD	\$25,000	\$125,000	\$75,000			\$225,000
WQ-3	Rosebank Springs Constructed Wetlands	City Eng	\$35,000	\$165,000	\$115,000			\$350,000
WQ-4	Lee's Branch Stream Restoration	City Eng	\$25,000					\$25,000
WQ-5	West Fork Stones River at Cason Trail; bank repair	MWRD	\$140,000					\$180,000
WQ-6	Bear Branch Water Quality Mitigation	City Eng						\$0
WQ-7	Sinking Creek Headwater protection BMP	MWRD/Eng	\$30,000	\$50,000	\$150,000	\$150,000	\$150,000	\$530,000
WQ-8	Todd's Lake Regional Wetlands Improvements	City Eng						\$0
WQ-9	Hooper's Bottom Regional Water Quality Project	City Eng	\$25,000	\$150,000		\$175,000	\$175,000	\$550,000
WQ-10	Lytle Creek/Ridgley Road Bacteriological Reduction (Added)	MWRD	\$15,000	\$75,000	\$25,000			\$125,000
WQ-11	Memorial Blvd/VA Pond Trash Rack (Added)	MWRD						\$0
WQ-12	Spence Creek Restoration	MWRD/Eng	\$25,000	\$25,000	\$25,000			\$100,000
WQ-13	E. Lokey Ave Trash Rack at Sinking Creek	MWRD	\$30,000	\$75,000				\$105,000
WQ-14	Sinking Creek/ Northfield Blvd Commercial Retrofit Study/Project	MWRD	\$25,000	\$50,000	\$100,000			\$185,000
WQ-15	Overall Street retrofit/ bioretention - streetscape	MWRD	\$35,000	\$100,000				\$135,000
WQ-16	Downtown planter box retrofits study/project	MWRD	\$50,000	\$50,000				\$110,000
	Subtotal		\$460,000	\$865,000	\$490,000	\$325,000	\$325,000	\$2,620,000
	Public Drainage/Streets Participation Projects (PD)							\$0
PD-1	Maney Avenue Phase 2	City Eng						\$50,000
PD-2	Town Creek Conveyance (Murfree Springs to Cannonsburgh)	City Eng	\$500,000	\$250,000	\$100,000			\$900,000
PD-3	Maple St. Alley Permeable Paver Project	City Eng						\$0
	Subtotal		\$500,000	\$250,000	\$100,000			\$950,000
	Totals		\$2,035,000	\$ 1,840,000	\$ 590,000	\$ 325,000	\$ 325,000	\$ 5,445,000

EFFECTIVE UTILITY MANAGEMENT
Financial Viability
MWRD WORKING CAPITAL ACCOUNT SUMMARY

ESTIMATED Working Capital at 2/29/20

Board Designated (System Dev, Assessments, etc) as of 6/30/19	\$ 34,445,773	
Undesignated Excess Funds as of 6/30/19	48,028,398	
Estimated Reserve Revenue thru 12/31/19	4,846,624	
Estimated Reserve Expenditures thru 12/31/19	(1,935,518)	
		85,385,277

COMMITTED Reserves at 3/3/20

Tank Painting (Mill, Tiger, Halls Hill)	2,557,130	
ELI - Thompson Lane Utility Relocation TDOT	175,000	
SSR Task Order - High Service & Membrane Pumps	140,130	
JBS Task Order 19-05 - 3 Aerator Install WRRF	70,047	
Sewer Rehab Change Order #1	150,812	
ADS Temporary Flow Monitoring	69,000	
SEC Engineering Task Order - Salem Hwy Ph 3	17,100	
SSR Task Order Overall Creek PS Upgrade	842,628	
Commercial Painting SRWTP C.O. #1	19,913	
CIA - Cherry Lane Ph2 Utility Design	60,000	
SRWTP Trough Construction Joint Repair	54,519	
JBS TO 19-10 - Replace Cast Iron Drains SRWTP	15,264	
ELI - Joe B. Jackson West P.S. and Sewer Design	39,000	
JBS Task Order 19-06 - #5 Raw Water Pump Repair	28,000	
Westwind Reserve Sewer Participation	105,631	
Sanitary Sewer 2019/20 Rehabilitation Contract	3,461,153	
CIS Software Upgrade V4	343,000	
Purchase of Two (2) Aerators at WRRF	217,046	
SSR Task Order - Mill, Tiger, Halls Hill Tank Painting	133,679	
SSR Task Order 201 Facilities Plan	183,493	
Biosolids Thermal Dryer Install (JBS & MR)	107,137	
Overall Creek P.S. Upgrades (VFD's)	351,042	
S&ME - 2019 Sewer Rehab Design	265,904	
WRRF Aerator 2A Gearbox Replacement	130,930	
Biosolids Small-scale Thermal Dryer	216,250	
H-S Blackman Park Sewer Design	180,000	
SEC Jones Blvd Utility Design Proposal	14,225	
Northeast Regional PS & Conv - SSR	1,851,388	
Waste Load Allocation Study	78,200	
Bradyville Pike Utility Design - Neil-Schaffer	22,710	
Wilkinson Pike Utilities Design	10,190	
		11,910,521

APPROVAL Requests at 3/24/20

Rucker Lane Widening Sewer Extensions	74,095	
2018/19 Sewer Rehab Change Order #2	79,645	
S&ME - 2020 Sewer Rehab Design	448,000	
		527,645

BALANCE of Working Capital at 3/24/20 after COMMITMENTS **\$ 72,947,111**

DESIGNATED Projects Pending

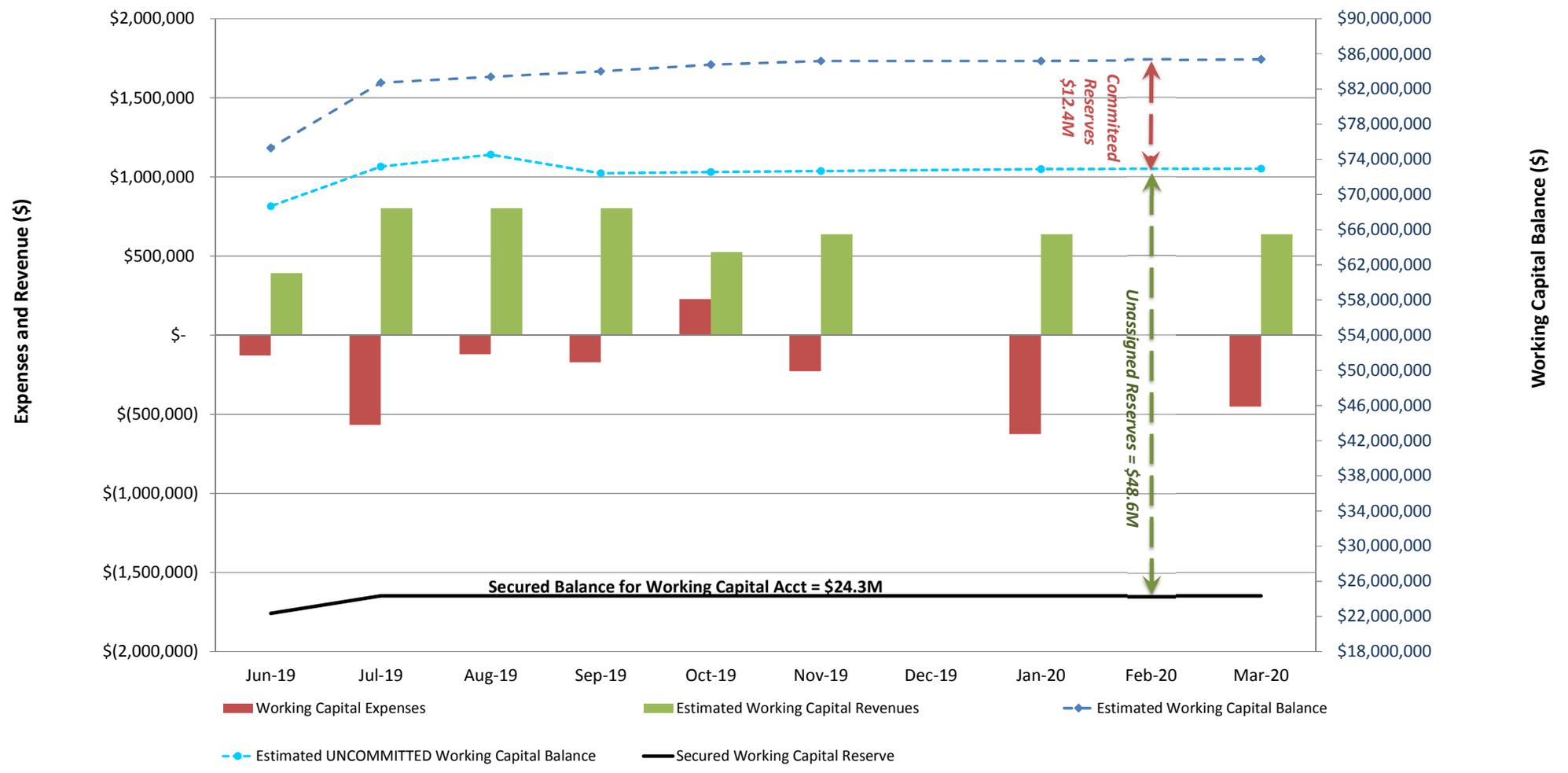
N/A		-

ESTIMATED UNCOMMITTED Working Capital Reserves as of March 24, 2020 **\$ 72,947,111**

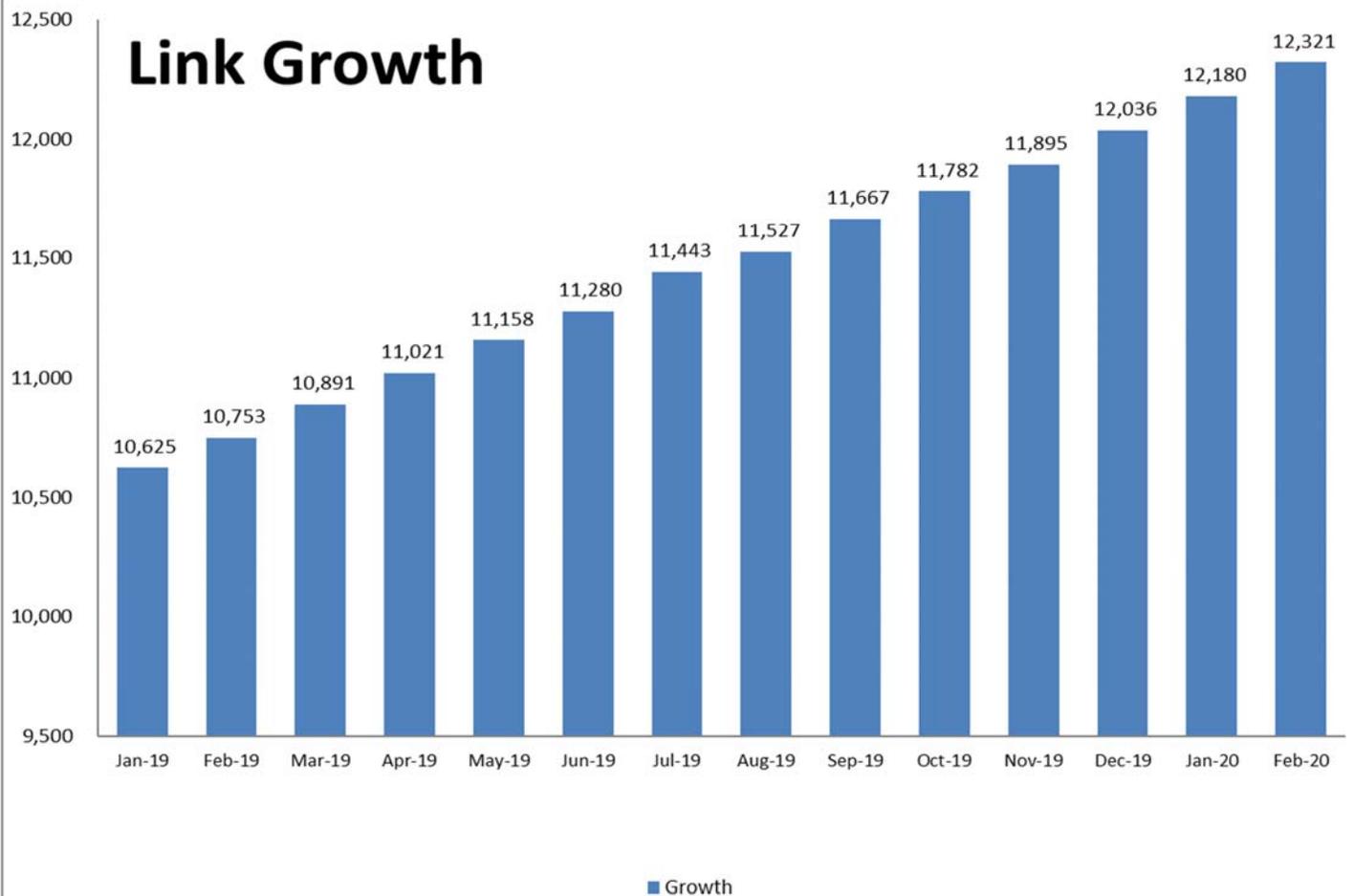
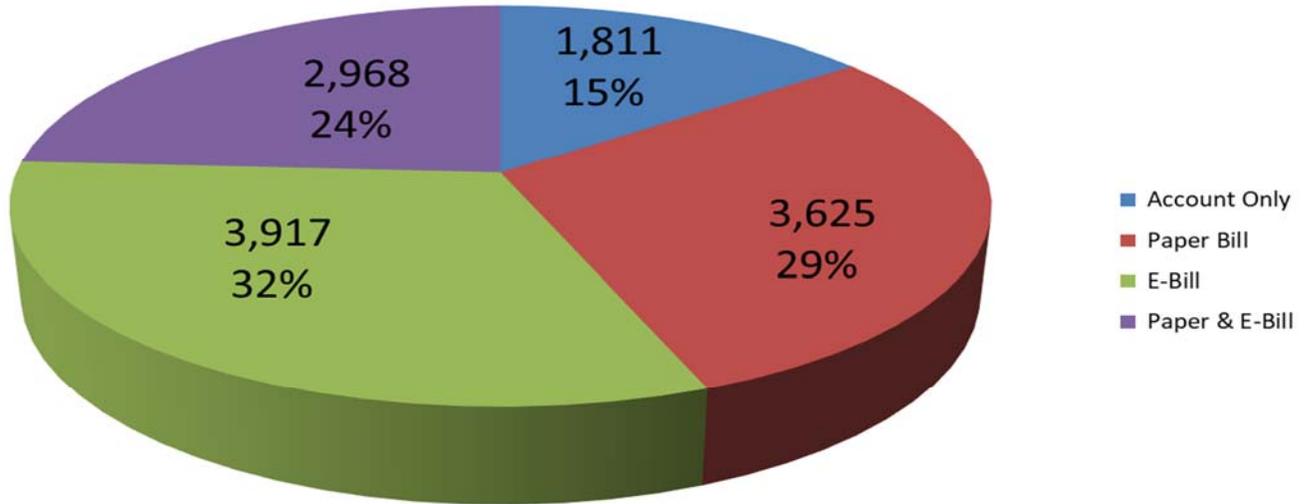
SECURED FY19-20 Operating and Maintenance Expenses **\$ 24,331,276**

UNASSIGNED Working Capital Funds (Est. Uncommitted - Secured) **\$ 48,615,835**

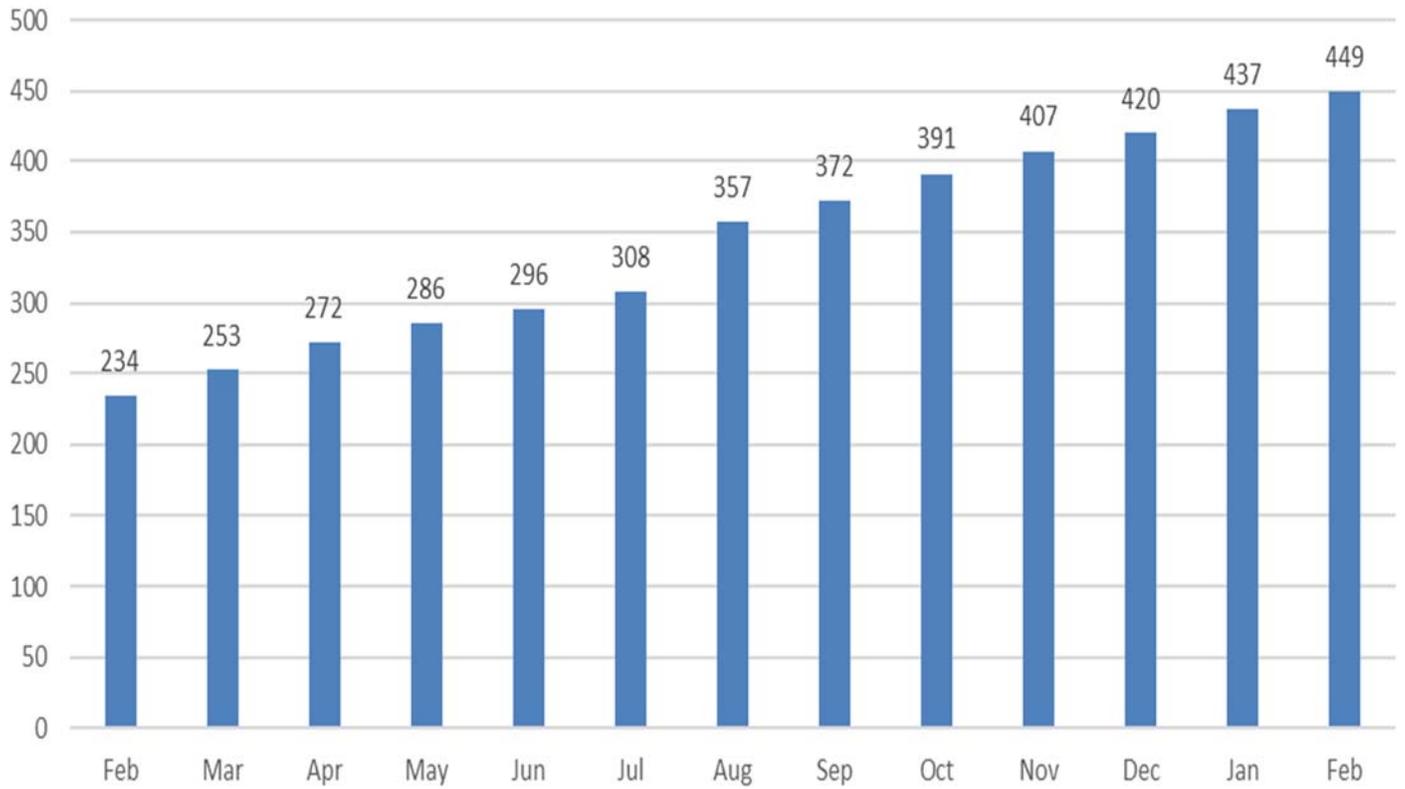
MWRD Working Capital Reserves Dashboard



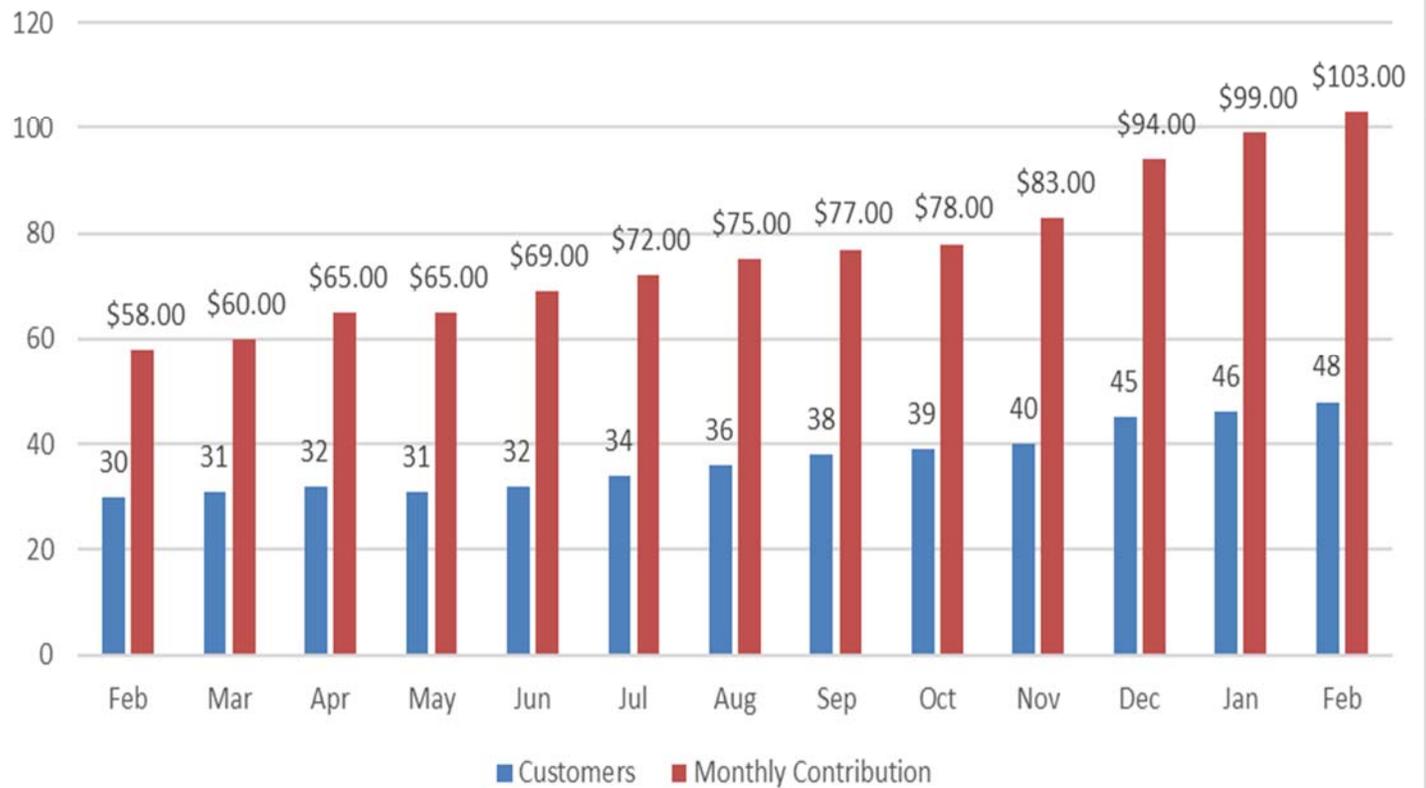
Infinity.Link Customers as of February 2020 = 12,321



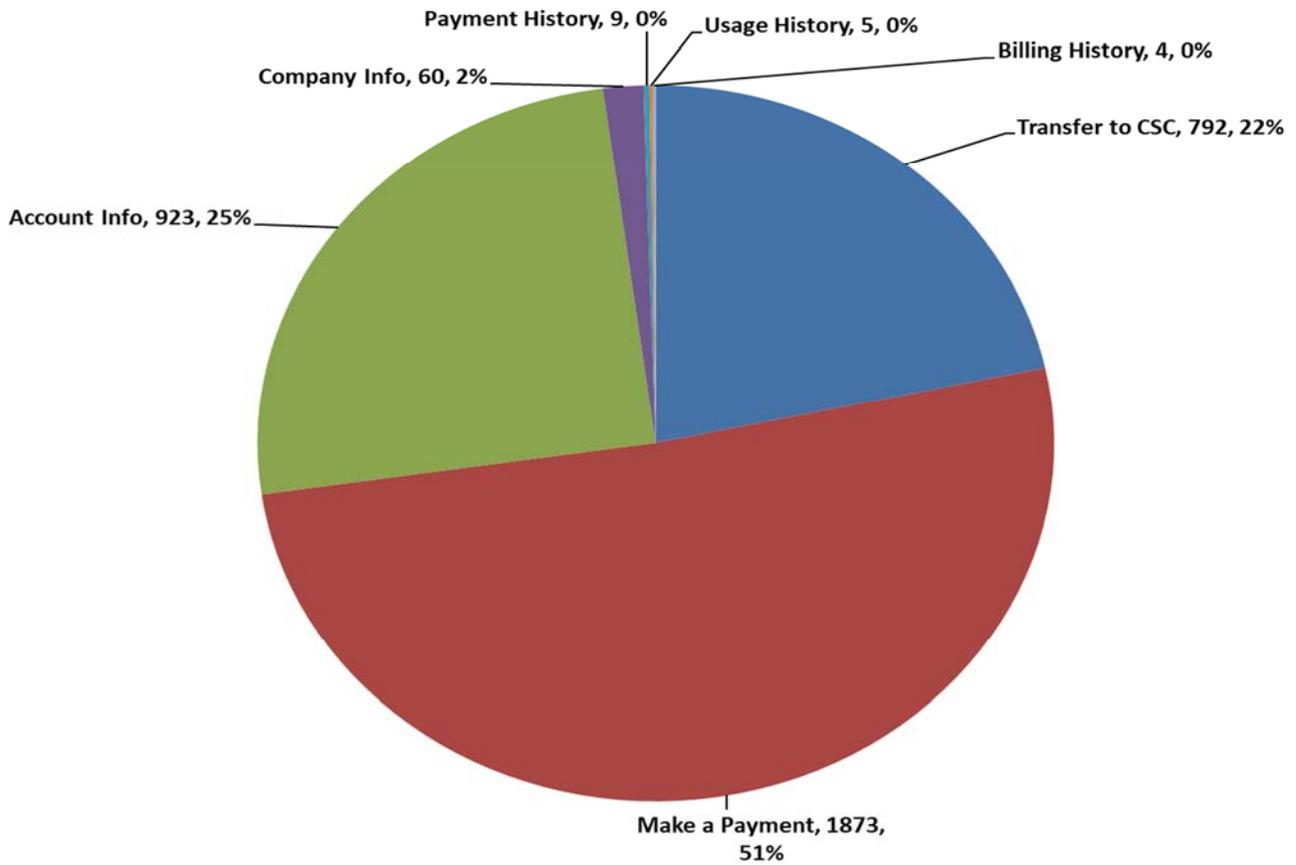
AMI Customer Portal Users



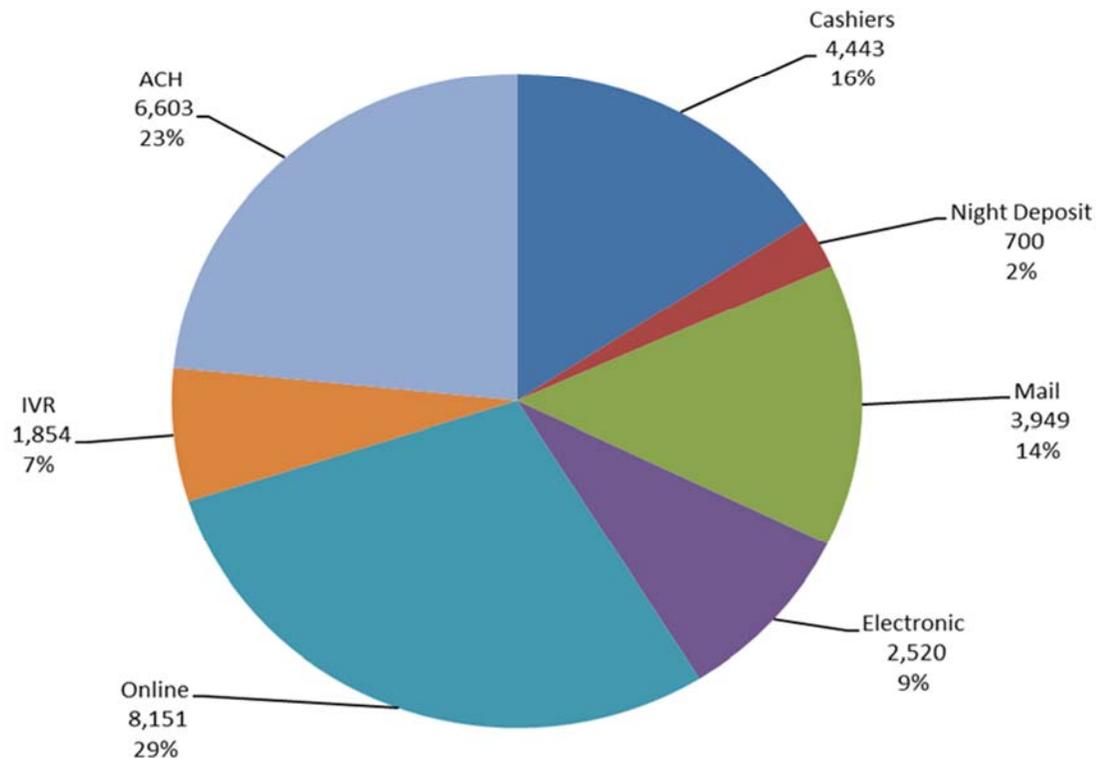
H₂O Users & Monthly Contributions



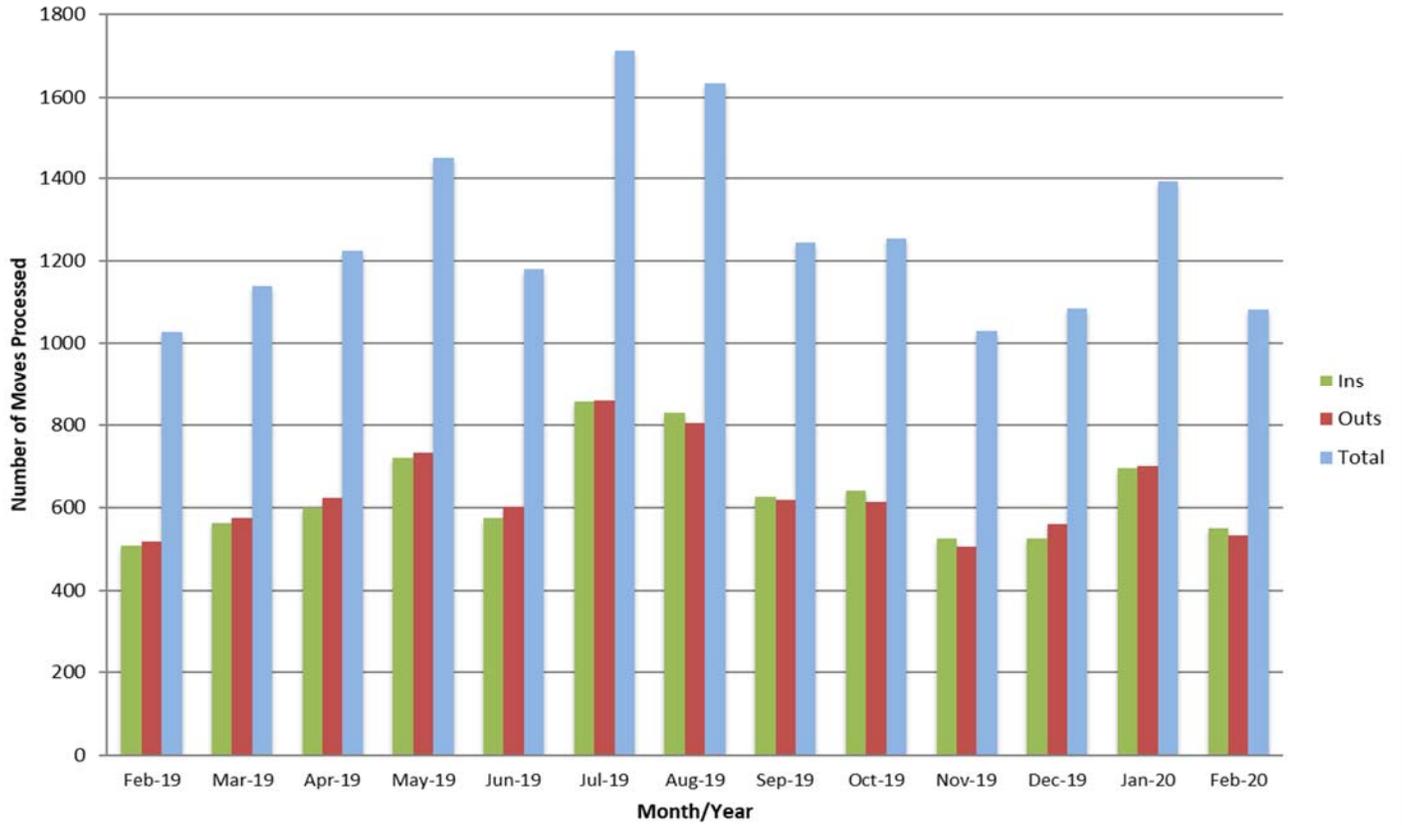
IVR Calls From 02/01-02/29/20 = 3,666



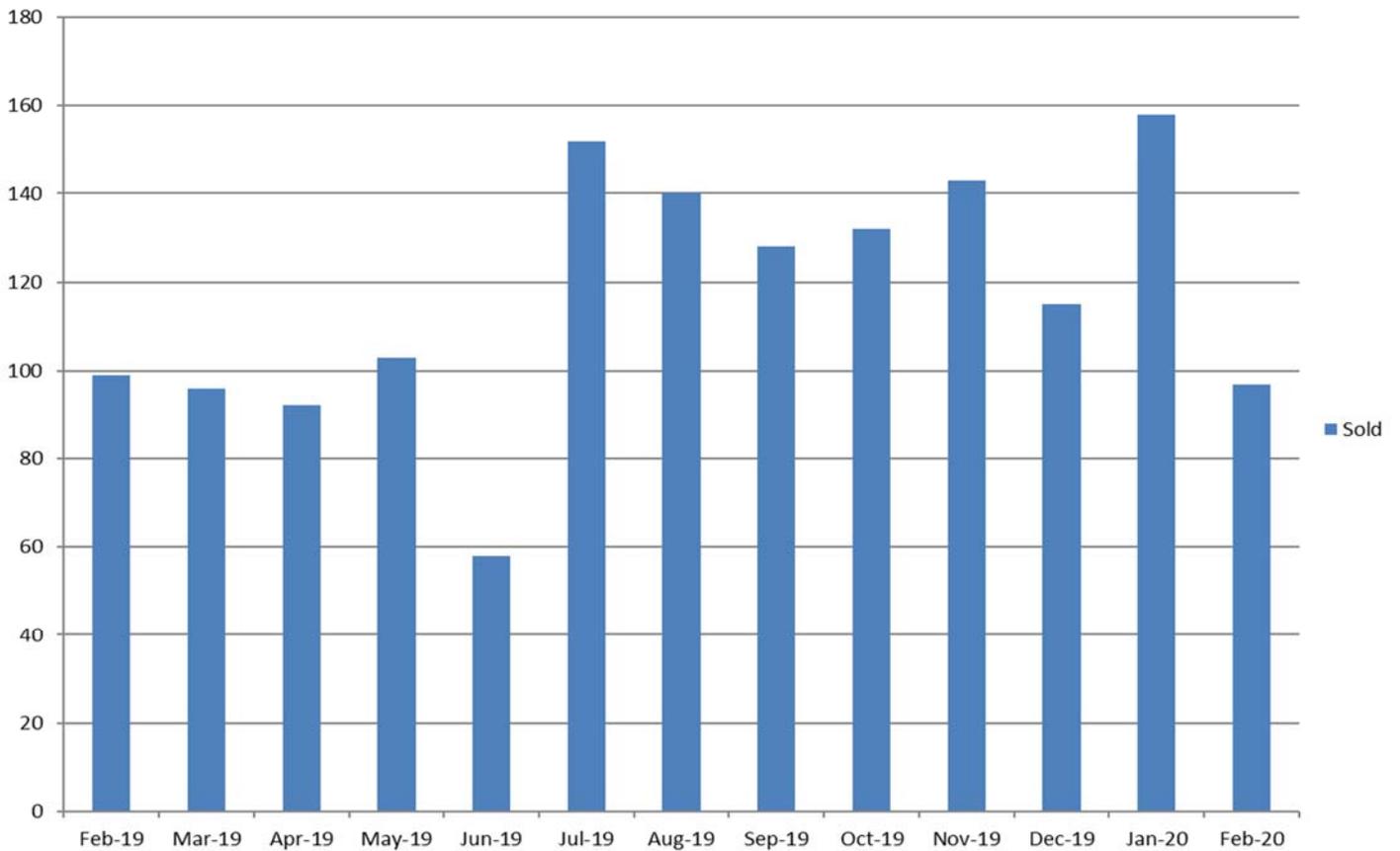
February 2020 Payments by Type



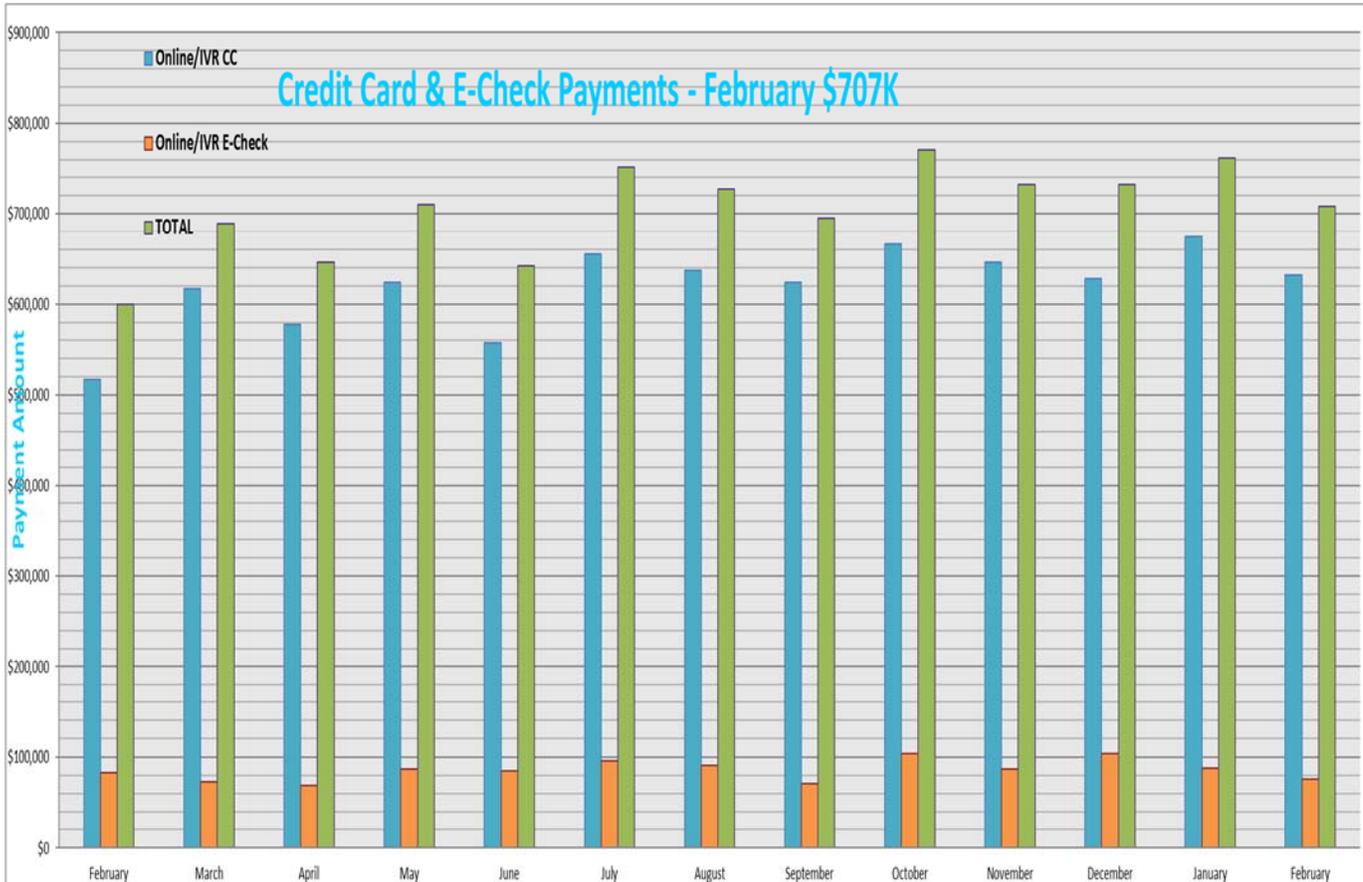
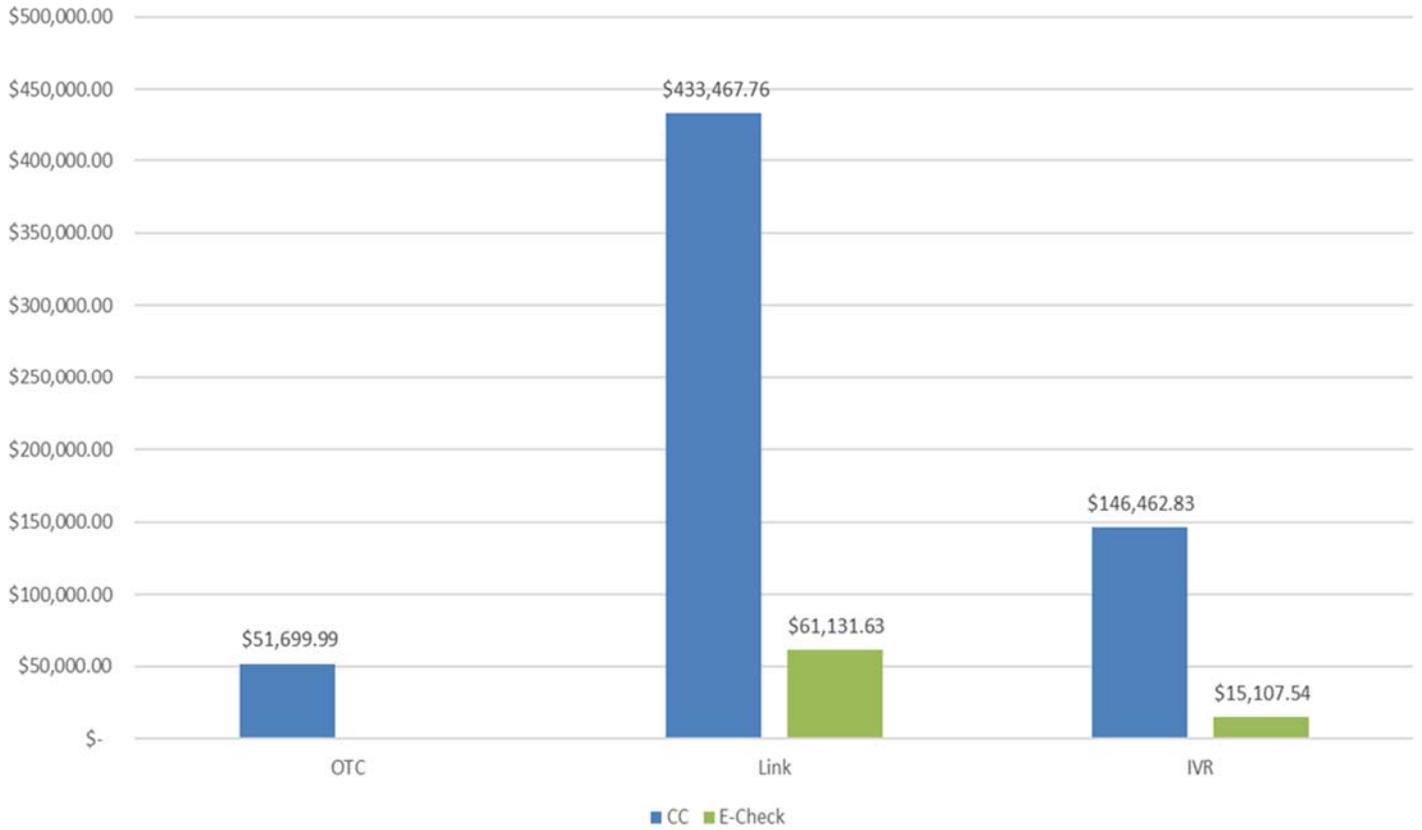
February Moves Processed = 1,083



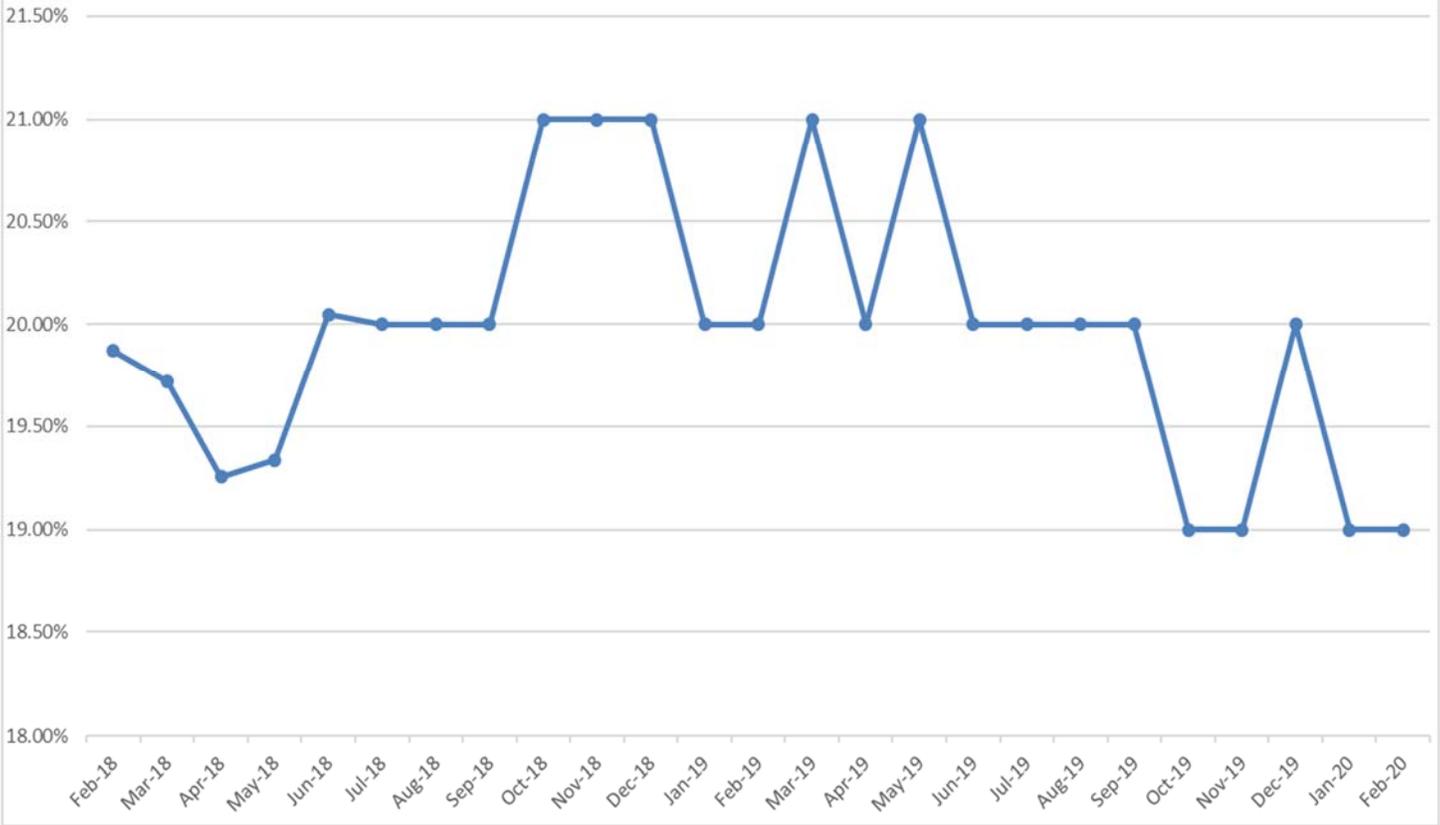
February Taps Sold = 97



Electronic Payment Method February 2020



Water Loss - 12-month rolling average

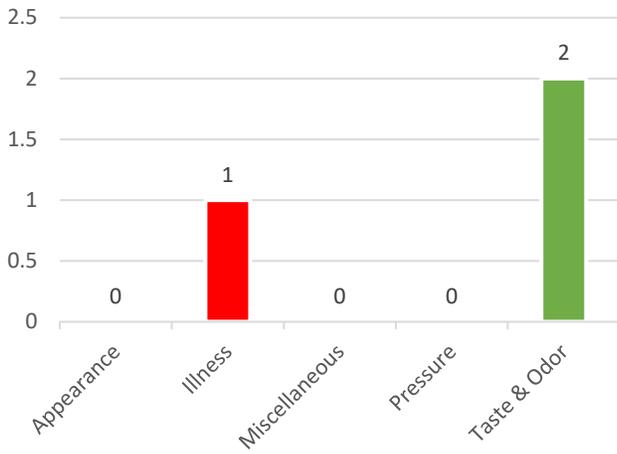


STONES RIVER WATER TREATMENT PLANT

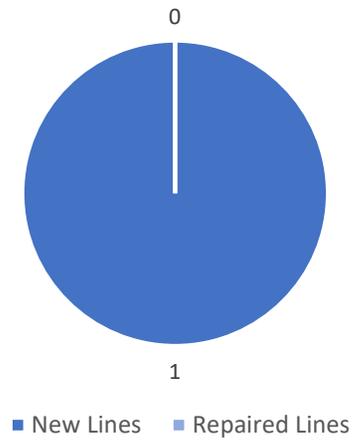
Dashboard Report

February 2020

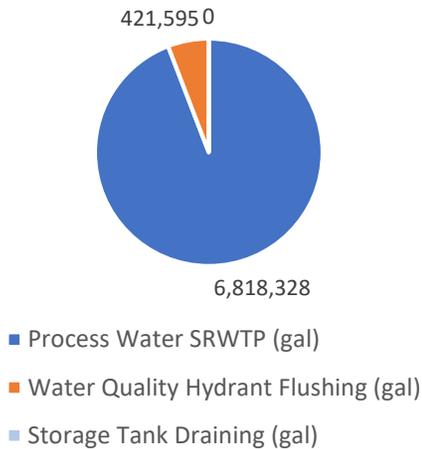
Drinking Water Laboratory Section Water Quality Complaints



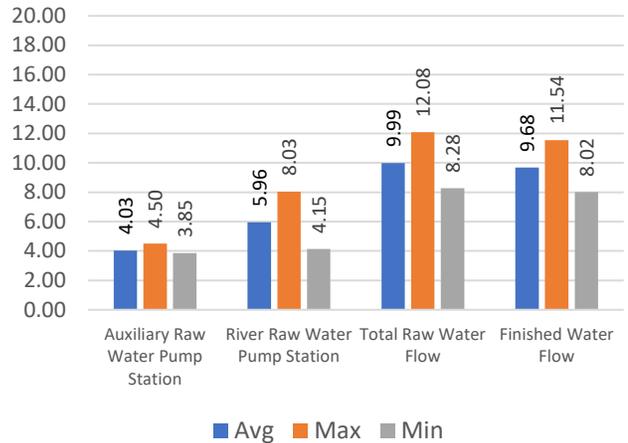
Drinking Water Laboratory Section New & Repaired Lines Tested



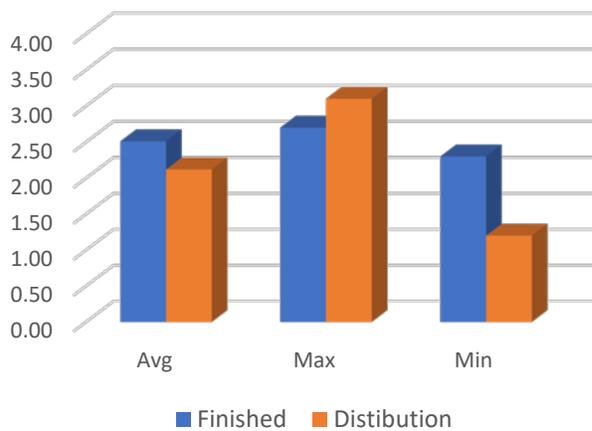
Water Quality Water Used Not Sold



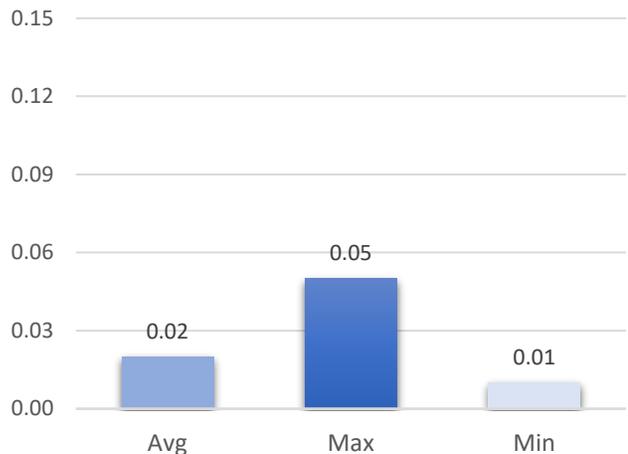
Plant Operations Section Flow (MGD)



Plant Operations Section Chlorine (mg/L)



Plant Operations Section Finished Turbidity (NTU)

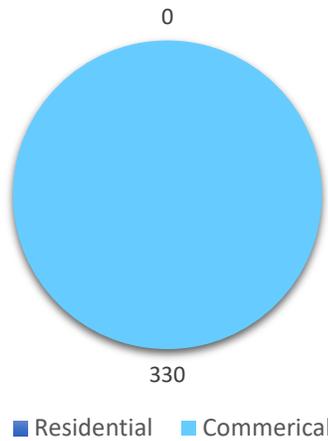


STONES RIVER WATER TREATMENT PLANT

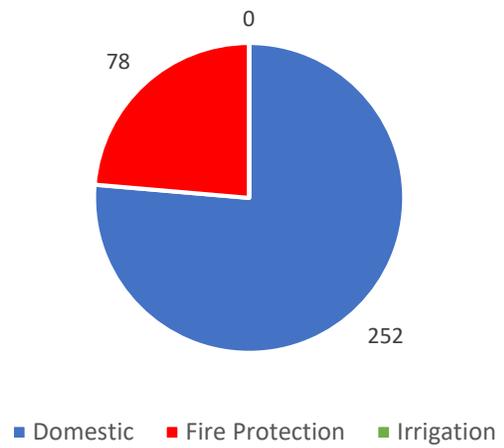
Dashboard Report

February 2020

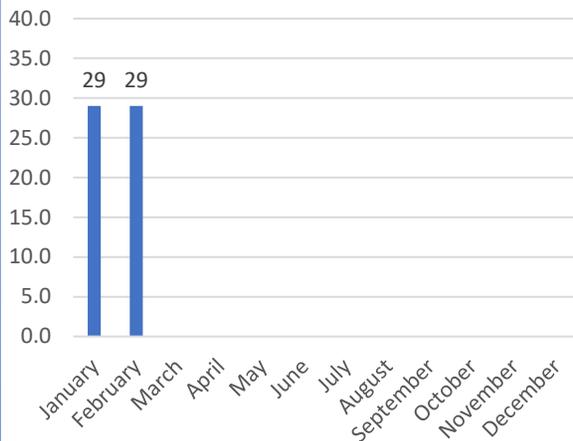
Cross-Connection Control Section Number of Devices Tested By Category



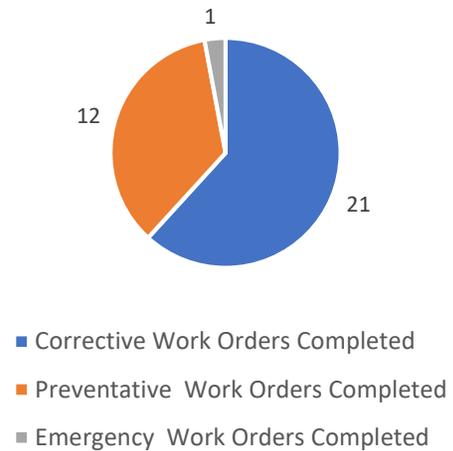
Cross-Connection Control Section Number of Devices Tested



Drinking Water Operations Section Pall Membrane Module Pin Count



Drinking Water Maintenance Section Work Order Status

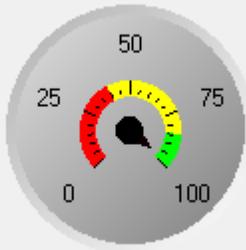


MURFREESBORO WATER RESOURCE RECOVERY FACILITY

DASHBOARD REPORT

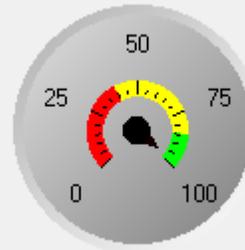
February, 2020

**BOD PERCENT
REMOVAL**



98.3

**AMMONIA PERCENT
REMOVAL**

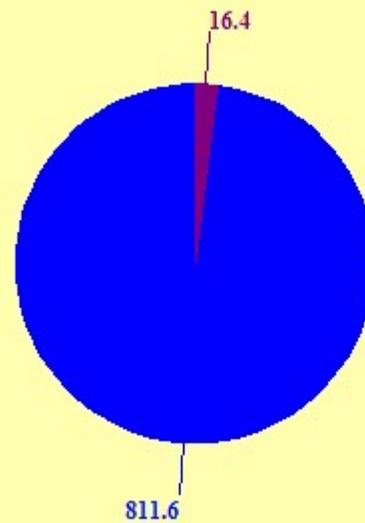


96.8

**855.699
MILLION GALLONS
TREATED**

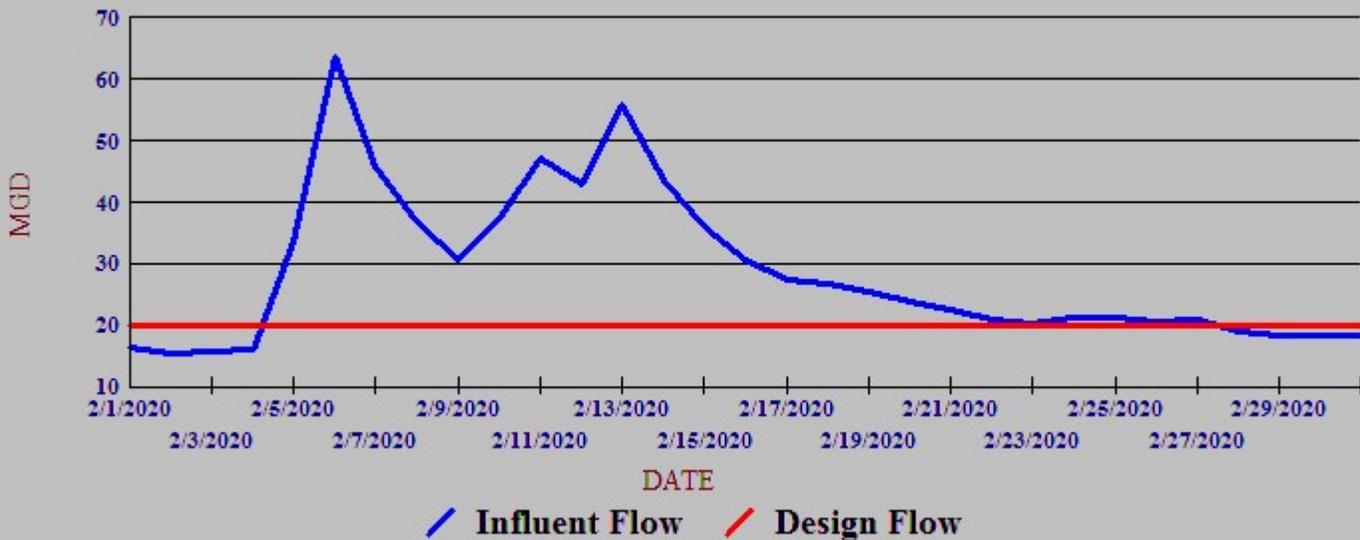
**2,433.38
TONS
BIOSOLIDS
REMOVED**

EFFLUENTS

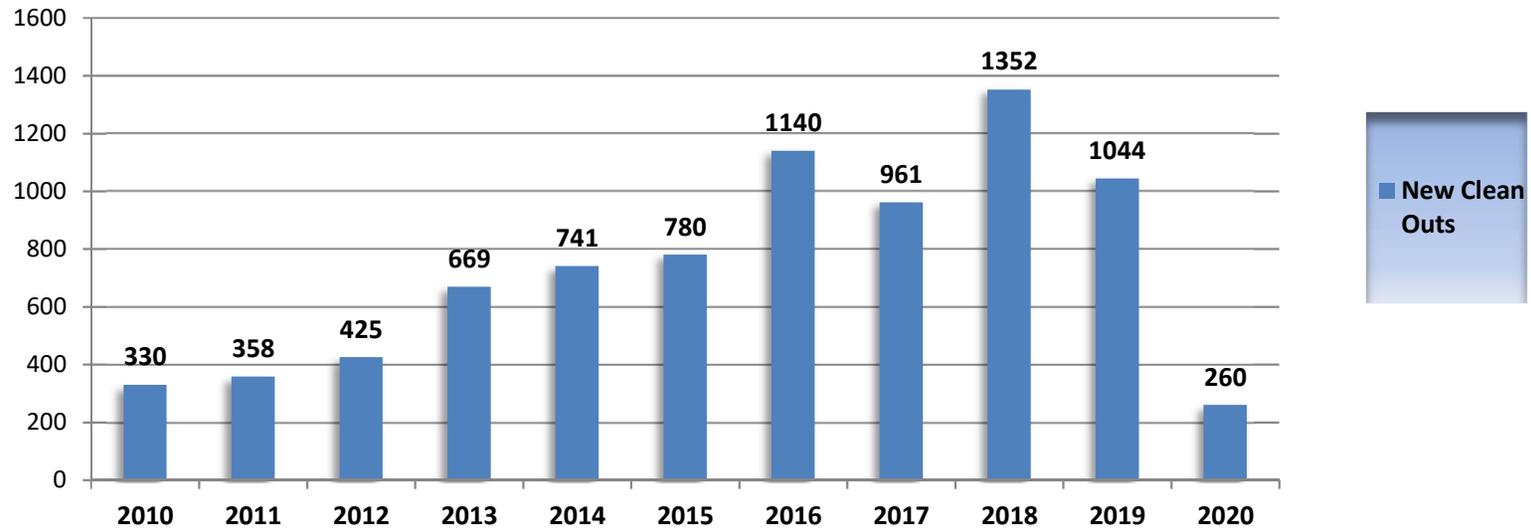


MGD
■ DISCHARGE ■ REUSE

AVERAGE INFLUENT FLOW



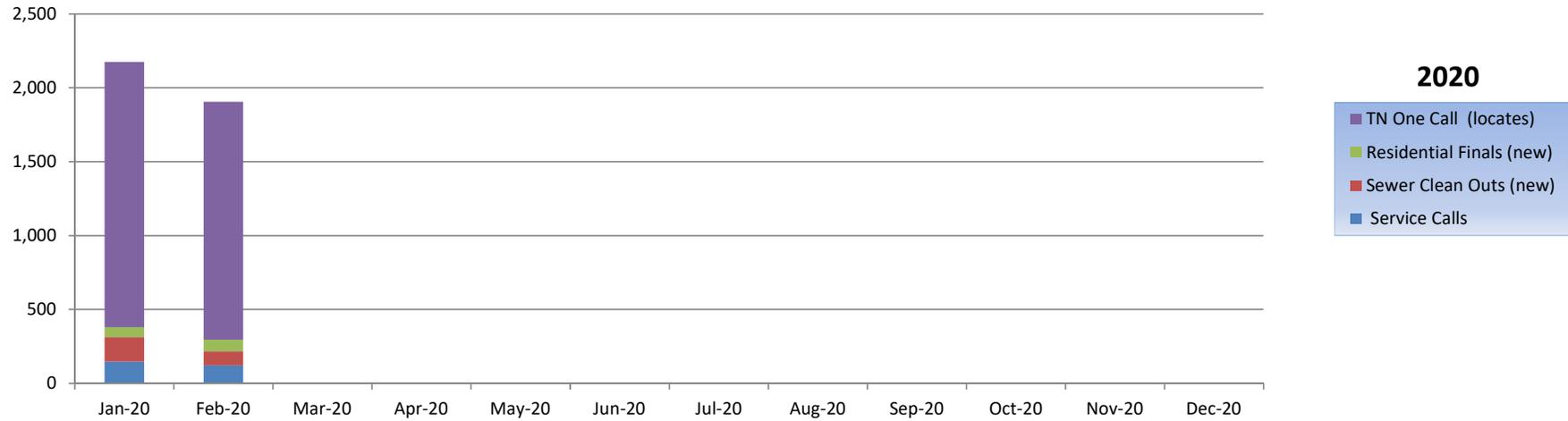
NEW SEWER CLEAN OUTS



	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
New Clean Outs	330	358	425	669	741	780	1140	961	1352	1044	260

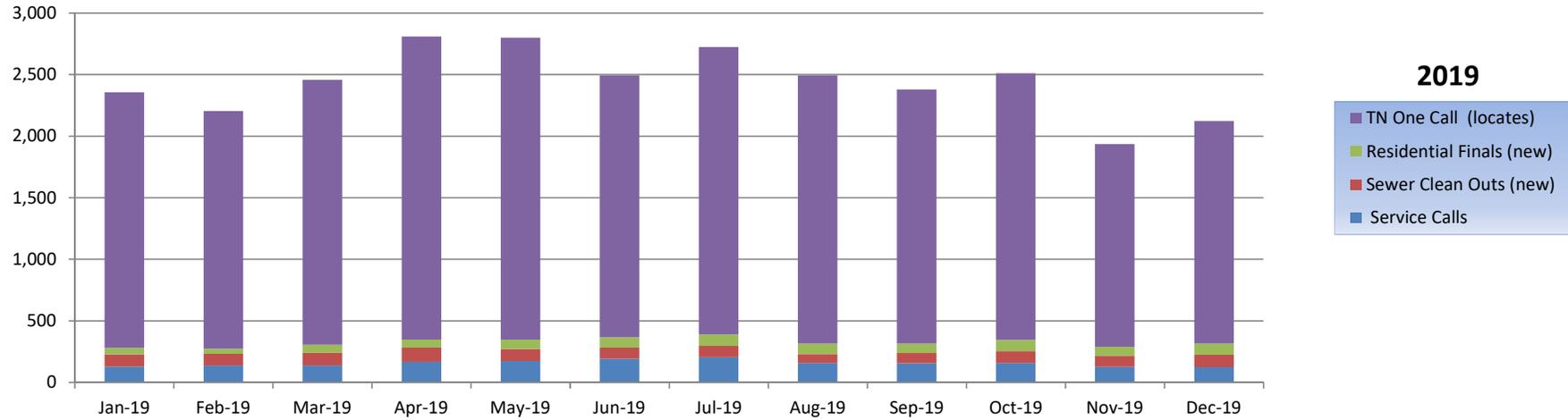
** For the calendar year Jan-Dec*

OPERATIONS & MAINTENANCE MONTHLY TOTALS



	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20	Total
Service Calls	148	123											
Sewer Clean Outs (new)	166	94											
Residential Finals (new)	68	79											
TN One Call (locates)	1,794	1,611											
TOTAL	2,176	1,907											4,083

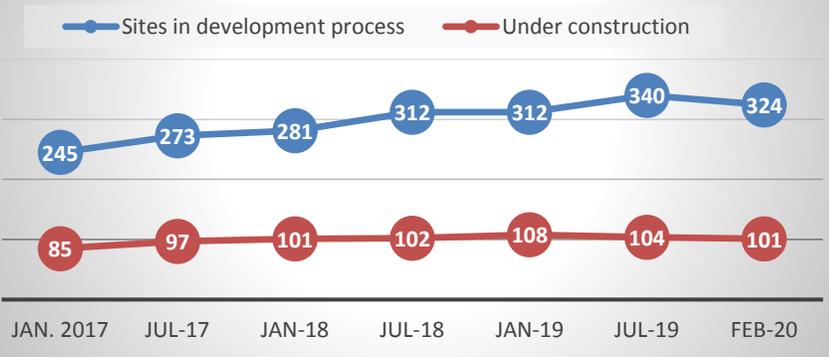
OPERATIONS & MAINTENANCE MONTHLY TOTALS



	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Total
Service Calls	129	138	139	168	176	193	205	159	156	159	128	124	1,874
Sewer Clean Outs (new)	100	95	104	115	97	91	93	72	85	94	89	102	1,137
Residential Finals (new)	52	41	65	65	76	84	93	86	75	94	75	91	897
TN One Call (locates)	2,076	1,931	2,150	2,463	2,452	2,125	2,334	2,177	2,064	2,165	1,645	1,807	25,389
TOTAL	2,357	2,205	2,458	2,811	2,801	2,493	2,725	2,494	2,380	2,512	1,937	2,124	29,297

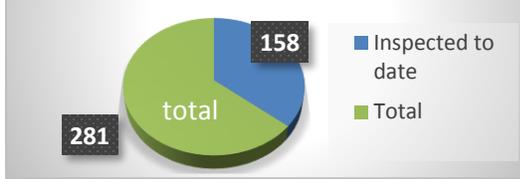
Stormwater Dashboard – February 2020

Construction Phase Inspections of Stormwater Control Measures (SCMs)



Inspection Program

Stormwater Post Construction Inspections



Education and Outreach

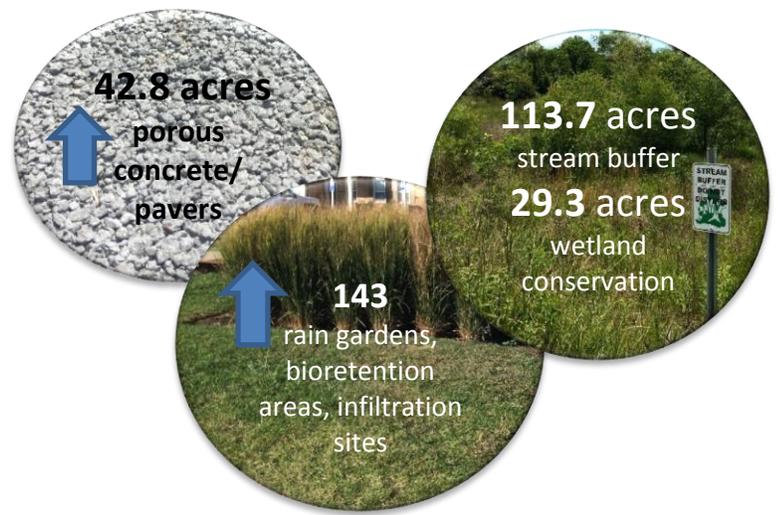


164 students and teachers educated at local schools (MWRD, MTSU, Project WET)



March – 12th Annual Tree Day

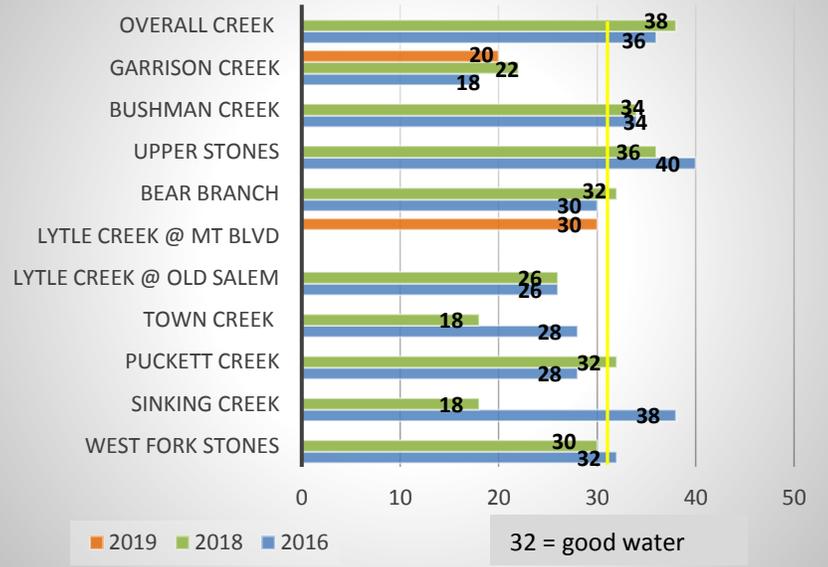
LID/ Green Infrastructure



Stormwater Infrastructure

	Feb	YTD	Total
Junction Boxes	81	130	16,707
Headwalls	12	53	6,933
Ponds	2	7	525
Gravity Mains	8,209 ft	18,098 ft	704.6 miles
Weirs	2	3	307
WQ Units	0	0	112
Underground Storage	0	0	30

Water Quality Scorecard



**MURFREESBORO WATER RESOURCES DEPARTMENT
OPERATING REVENUES AND EXPENDITURES
EIGHT MONTHS ENDED FEBRUARY 29, 2020**

	YTD ACTUAL	ANNUAL BUDGET	% TO BUDGET
Operating Revenues			
Water Revenue	\$ 10,946,324	\$ 16,654,000	66%
Repurified Revenue	\$ 22,062	\$ 26,000	85%
Wastewater Revenue	\$ 19,709,091	\$ 29,804,000	66%
Other Income	\$ 594,548	\$ 596,000	100%
Total Operating Revenues	\$ 31,272,025	\$ 47,080,000	66%
Water Operating Expenses	\$ 6,510,019	\$ 11,526,114	56%
Wastewater Operating Expenses	\$ 7,312,190	\$ 12,829,162	57%
Total Operating Expenses	\$ 13,822,209	\$ 24,355,276	57%
Net Earnings from Operations	\$ 17,449,816	\$ 22,724,724	77%

	YTD ACTUAL	ANNUAL BUDGET	% TO BUDGET
WATER REVENUES			
Metered Water	\$ 9,970,681	\$ 15,200,000	66%
Water Adjustments	\$ (8,951)	\$ (26,000)	34%
Private Fire Protection	\$ 75,858	\$ 112,000	68%
Service Initiation Fees	\$ 161,735	\$ 230,000	70%
Late Fees	\$ 496,637	\$ 700,000	71%
Non-Payment Fees	\$ 109,800	\$ 180,000	61%
Returned Payment Fees	\$ 5,820	\$ 8,000	73%
Cross Connection	\$ 124,775	\$ 225,000	55%
Enernoc	\$ 9,969	\$ 25,000	40%
Miscellaneous	\$ -	\$ -	
TOTAL WATER REVENUES	\$ 10,946,324	\$ 16,654,000	66%

REPURIFIED REVENUES			
Repurified Revenue	\$ 22,062	\$ 26,000	85%
TOTAL REPURIFIED REVENUES	\$ 22,062	\$ 26,000	85%

WASTEWATER REVENUES			
Enernoc	\$ 3,540	\$ 5,000	71%
Sewer Charges	\$ 19,403,640	\$ 29,500,000	66%
Sewer Adjustments	\$ (52,390)	\$ (140,000)	37%
Surveillance	\$ 25,536	\$ 38,000	67%
Sampler	\$ 12,000	\$ 18,000	67%
BOD	\$ 199,672	\$ 275,000	73%
Amonia	\$ 44,279	\$ 60,000	74%
Septage Charges	\$ 66,105	\$ 45,000	147%
STEP Revenue	\$ 6,709	\$ 3,000	224%
TOTAL SEWER REVENUES	\$ 19,709,091	\$ 29,804,000	66%

OTHER INCOME			
Interest Earnings	\$ 432,621	\$ 400,000	108%
Inspections	\$ 118,950	\$ 166,000	72%
Miscellaneous	\$ 42,977	\$ 30,000	143%
TOTAL OTHER INCOME	\$ 594,548	\$ 596,000	100%

**MURFREESBORO WATER RESOURCES DEPARTMENT
 OPERATING REVENUES AND EXPENDITURES
 EIGHT MONTHS ENDED FEBRUARY 29, 2020**

	YTD ACTUAL	ANNUAL BUDGET	% TO BUDGET
Water Operating Expenses			
Water Source	\$ 85,396	\$ 208,000	41%
Water Treatment	\$ 2,537,402	\$ 4,259,169	60%
Water Storage	\$ 14,674	\$ 67,300	22%
Water Distribution	\$ 1,065,866	\$ 1,776,098	60%
Cross Connection	\$ 208,886	\$ 351,959	59%
Water Plant Administration	\$ 465,473	\$ 977,419	48%
AMI Field Services	\$ 499,893	\$ 919,329	54%
O&M Admin Allocation (40%)	\$ 146,117	\$ 229,594	64%
Customer Service Allocation (50%)	\$ 398,228	\$ 690,837	58%
Engineering Allocation (40%)	\$ 221,507	\$ 463,758	48%
Field Inspection Allocation (25%)	\$ 80,797	\$ 112,868	72%
Admin Allocation (40%)	\$ 785,780	\$ 1,469,782	53%
Total Water Operating Expenses	\$ 6,510,019	\$ 11,526,114	56%
Wastewater Operating Expenses			
Wastewater Collections	\$ 1,320,300	\$ 2,213,855	60%
Wastewater Rehab	\$ 93,518	\$ 158,500	59%
Wastewater Pump Stations	\$ 555,283	\$ 779,924	71%
Wastewater Industrial Surveillance	\$ 195,485	\$ 320,878	61%
Wastewater House Services	\$ 9,637	\$ -	
Wastewater Treatment	\$ 1,633,707	\$ 2,953,269	55%
Wastewater Disposal	\$ 410,781	\$ 727,407	56%
WRRF Administration	\$ 563,307	\$ 916,888	61%
STEP System	\$ 1,763	\$ 24,000	7%
Repurified Treatment	\$ 225	\$ 121,000	0%
Repurified Distribution	\$ 2,909	\$ 29,500	10%
Repurified Disposal	\$ 154,547	\$ 309,797	50%
O&M Admin Allocation (60%)	\$ 219,176	\$ 344,391	64%
Customer Service Allocation (50%)	\$ 398,228	\$ 690,837	58%
Engineering Allocation (60%)	\$ 332,261	\$ 695,638	48%
Field Inspection Allocation (75%)	\$ 242,392	\$ 338,605	72%
Admin Allocation (60%)	\$ 1,178,670	\$ 2,204,674	53%
Total Sewer Operating Expenses	\$ 7,312,190	\$ 12,829,162	57%

**MURFREESBORO WATER RESOURCES DEPARTMENT
 OPERATING REVENUES AND EXPENDITURES
 EIGHT MONTHS ENDED FEBRUARY 29, 2020**

SUMMARY OF NET TAP FEES	YTD ACTUAL	ANNUAL BUDGET	% TO BUDGET
Water Taps/Reserves	\$ 310,387	\$ 500,000	62%
Sewer Taps/Reserves	\$ 3,364,157	\$ 5,500,000	61%
Special Assessment Districts	\$ 1,172,081	\$ 2,000,000	59%
	<u>\$ 4,846,625</u>	<u>\$ 8,000,000</u>	<u>61%</u>

DEBT SERVICE	YTD ACTUAL	ANNUAL BUDGET	% TO BUDGET
Principal	\$ 1,760,392	\$ 11,547,588	15%
Interest	\$ 1,082,676	\$ 1,940,732	56%
	<u>\$ 2,843,068</u>	<u>\$ 13,488,320</u>	<u>21%</u>

Debt Coverage Ratio	YTD ACTUAL	ANNUAL BUDGET	% TO BUDGET
Operating Net Earnings	\$ 17,449,816	\$ 22,724,724	77%
Debt Service	\$ 2,843,068	\$ 13,488,320	21%
	6.14	1.68	