

WATER AND SEWER BOARD

Tuesday, May 24, 2016
Operations & Maintenance Facility
1725 South Church Street
3:30 PM

AGENDA

1. Consent Agenda:
 - A. Consider US Department of Interior Joint Funding Agreement for West Fork Stones River Gaging Station..... 2
 - B. Consider renewal of Memorandum of Understanding with MTSU 4
 - C. Consider Final Change Order for Sinking Creek Headworks Construction Phase 4C..... 10
 - D. Consider Final Change Order for Southwest Regional Pumping Station..... 15
 - E. Consider contingency allocations for Sinking Creek WWTP Phase 4D 20
2. Consider minutes from the April 26, 2016 meeting..... 26
3. Consider a proposal for engineering services from Wiser Consultants for Wilkinson Pike Reconstruction 44
4. Consider National Water Supply Alliance Memorandum of Understanding..... 49
5. Notification of Lytle Street Phase II Reconstruction bids 56
6. Dashboard
7. Other business
8. Adjourn



... creating a better quality of life

MEMORANDUM

DATE: May 18, 2016
TO: Water and Sewer Board
FROM: Darren Gore
SUBJECT: Department of Interior
Geological Survey – Joint Funding Agreement
West Fork Stones River – Stream Monitoring

Background

Attached for the Board's consideration is an agreement between the Department of Interior and the Murfreesboro Water and Sewer Department for a program of water resources data collection on the West Fork of the Stones River. This program includes the operation of a stream flow gauge and a water quality monitoring station at the discharge of the Sinking Creek Wastewater Treatment Plant.

This is a standard agreement under which we have participated since 1986 to collect data on the discharge from the wastewater treatment plant.

Recommendations

Staff recommends the Board recommend to the City Council approval of the agreement as presented.

Fiscal Impact

The cost to the Department is \$22,950 per year with USGS matching \$12,050 for a total of \$35,000. This program is included in the proposed 2016-2017 fiscal year budget.

Attachments

US Department of the Interior Joint Funding Request Letter



United States Department of the Interior
U.S. GEOLOGICAL SURVEY
Lower Mississippi-Gulf Water Science Center
Nashville Office
640 Grassmere Park, Suite 100
Nashville, Tennessee 37211



April 25, 2016

Mr. Darren W. Gore, Director
Murfreesboro Water and Sewer Department
P.O. Box 1477
Murfreesboro, Tennessee 37133-1477

Dear Mr. Gore:

The Joint Funding Agreement between the City of Murfreesboro and the U.S. Geological Survey for operation of a continuous discharge and water-quality monitoring station on the West Stones River expires on June 30, 2016. Attached are renewal documents for the period July 1, 2016 through June 30, 2017 for the cost of the existing gage plus the costs for collection of discharge data at the US Army Corp of Engineers stream gage on East Fork Stones River near Lascassas (Station number 03427500). The total cost for operating the stations over this period will be \$35,000.00 with the City of Murfreesboro's share being \$22,950.00 and the USGS' share being \$12,050.00. Upon acceptance, please return one signed copy to this office, to the attention of Vicky Brantley, Administrative Operations Specialist, keeping one copy for your records.

Work performed with funds from the Joint Funding Agreement will be conducted on a fixed-price basis and will be billed annually during the agreement period. The results of work under this agreement will be available for publication by the U.S. Geological Survey.

We appreciate your cooperation in this project and look forward to a continuation of our relationship with City of Murfreesboro. If I can be of any assistance or if you need to discuss our current water resources investigation program, please call me at (615) 837-4701 or Shannon Williams at 615-837-4755. Vicky Brantley, our Administrative Operations Specialist, will be the POC for administrative and billing matters and can be contacted at (615) 837-4711.

Sincerely,

W. Scott Gain
Director, Lower Mississippi Gulf Water Science Center

Enclosures



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Memorandum

Date: May 19, 2016
To: Water and Sewer Board
From: Robert Haley, III
Subject: Memorandum of Understanding with MTSU for stormwater education services
Amendment to renew MOU for 2016-17

BACKGROUND

Public education and participation is a core requirement of the State-issued stormwater discharge permit under which the City of Murfreesboro operates. Each year our annual stormwater report to TDEC includes a record of what outreach and education we have done.

In 2011, the City and MTSU entered into a memorandum of understanding (MOU) for MTSU to do education projects for us related to stormwater and surface water quality. We have continued with that MOU (revised in 2012) by annual renewals since then. The Agreement has a base amount of \$45,000 and allows up to \$60,000. The past three year average cost has been \$46,500.

Each year MTSU and we agree on a list of events and projects. These include education and outreach targeted to certain businesses, areas, and/or activities (TV spots, stream clean-up events, tree-planting, audits of facilities and follow-up education, etc.); indoor and outdoor classroom teaching; setting up and staffing outreach events (Earth Day, school field days, etc.). Projects vary from year to year based on program needs and goals.

RECOMMENDATION

Staff would like to renew the MOU without changes. We recommend that the Water and Sewer Board recommend to City Council renewal of the MOU.

FISCAL IMPACT

\$50,000 has been included in the 2016-17 fiscal year budget for education services and would be paid out of stormwater funds, account no. 20951.001.

ATTACHMENTS

- Copy of MOU renewal amendment and MOU

**Fourth Amendment to Memorandum of Understanding
between
the City of Murfreesboro, Tennessee
and
Middle Tennessee State University**

This Amendment to the Memorandum of Understanding (MOU), MTSU Contract Number C13-0272 between the City of Murfreesboro, Tennessee, and Middle Tennessee State University shall be effective July 1, 2016, through June 30 2017.

This Amendment serves to renew the Memorandum of Understanding for the term stated above; all other terms and conditions of the MOU remain unchanged and are hereby ratified and affirmed.

City of Murfreesboro

Middle Tennessee State University

By: _____
Shane McFarland, Mayor

By: _____
Alan Thomas
Interim Vice President

Date: _____

Date: _____

Approved as to form:

Attest:

Craig Tindall
City Attorney

Memorandum of Understanding

WHEREAS, Middle Tennessee State University ("MTSU") and the City of Murfreesboro, Tennessee ("City") have entered into a Memorandum of Agreement to be co-permittees for the NPDES General Permit for Phase II MS4's; and

WHEREAS, said Memorandum of Agreement provides that MTSU will offer the support of its resources in managing the six minimum measures under the NPDES General Permit, including but not limited to, Public Education and Participation and Pollution Prevention and Good Housekeeping for Municipal Operations; and

WHEREAS, MTSU and the City also entered a Memorandum of Understanding with an effective date of February 1, 2011, and now would like to replace that Memorandum of Understanding with a new Memorandum of Understanding ("MOU") to provide specificity as to said means and forms of support.

NOW THEREFORE MTSU AND THE CITY HEREBY ENTER INTO THIS MOU AND AGREE AS FOLLOWS:

1. MTSU will provide annual assistance with Public Education and Participation Outreach projects during consecutive years of this MOU as described below; all references to "BMP" and a number refer to a "Best Management Practice" and the related number as shown on the City's Notice of Intent for a NPDES Permit filed by letter dated December 29, 2010, and subsequent mailing May 27, 2011. Notice of Coverage was received July 11, 2011.
2. The City will maintain a list of projects based on education-related needs of the City's storm water and surface-water quality program and shall associate a value in dollars for each project. A list will be made available to MTSU Facilities Management at least 90 days prior to start of the fiscal year. The project list will serve as the menu of services and values for which the City will pay MTSU over the course of the year. In general, the types of services are those listed in item 3.
3. Public education, participation and outreach involves activities, such as:
 - o *Cooperating with other community and water-quality advocacy groups*
 - o *Public service announcements*
 - *Community radio campaign*
 - *Local radio airplay*
 - *Local TV/video spots*
 - o *Developing content for print, radio, TV, and internet*

- *Various NPDES permit assistance, such as:*
 - *Pollutant source tracking*
 - *Public Involvement and Education (PIE) plan* also (BMP1G) assist and provide support and resources as directed.
 - *Permit documentation and tracking-* assist City and MTSU campus staff with related documentation and tracking as requested by utilizing CBI software or other procedures determined for best tracking capabilities and use.
 - *Permit Effectiveness-* Share options and guidance for measuring effectiveness of campaigns and education such as change in thinking (perceptions, behaviors) and options for tracking mechanisms for measurable success as available.
 - *Annual Targeted Sub-Watershed projects* – assist as directed for City (ex. Promote community awareness, assist with annual events and publicize to solicit participation, help create a sense of personal pride/ ownership).
- *Hot Spot Outreach and Education* – Work with the City to identify possible development of project targeted materials/resources.
- *Watershed-specific educational events* -(BMP1C) assist and offer support and help document as directed or applicable including but not limited to:
 - *Annual Tree Day and/or other planting events*
 - *Annual Boat Day*
 - *Annual Stones Throw Away*
 - *Annual Earth Day events*
 - *Annual Organization/Business Fairs (Master Gardeners, etc)*
 - *Annual Pharmaceutical/ Drug Take-Back events*

The specific assistance and services to be provided by MTSU may vary from year to year by further agreement between MTSU and the City.

4. MTSU will provide assistance with Pollution Prevention and Good Housekeeping for Municipal Operations by continuing to develop concept of online stormwater education and training classes. Support and assist as directed with potential benefits to the following permit sections BMP2C, 2E, 5A, 5B, 5C as it relates to Good Housekeeping.
5. The term of the MOU shall be one year. The MOU may be renewed for additional annual terms for up to ten years, at which time the parties may agree to continue the MOU. Either party may terminate the MOU upon ninety (90) days prior written notice.
6. MTSU shall invoice the City \$11,250 per quarter for a total fixed payment of \$45,000 in the first year of this MOU. The City may request and pay for services on a supplemental project list provided by the City for each fiscal year, up to a maximum of \$15,000 per year.

Invoices will be emailed to:

Debi Noyce, Accounts Payable Specialist
Murfreesboro Water and Sewer Department
dnoyce@murfreesborotn.gov

Payments will be sent to: MTSU
 Facilities Services Box 32
 1301 East Main St
 Murfreesboro, TN 37132

7. The City warrants that no fee or compensation has been paid directly or indirectly to an employee or official of the State as wages, compensation, or gifts in exchange for acting as an officer, agent, employee, subcontractor, contractor to the City in connection with any work contemplated or performed relative to this agreement. Notwithstanding anything to the contrary in the foregoing, nothing in this paragraph shall be construed to prevent MTSU from paying any of its employees working in conjunction with this MOU from funds received from the City.
8. It is the policy of the City and MTSU not to discriminate on the basis of age, race, sex, color, national origin, disability or veteran status in its hiring and employment practices, or in admission to, access to, or operation of its programs, services, and activities. With regard to all aspects of this MOU, the parties certify that they will comply with this policy.
9. The parties shall comply with the applicable federal and Tennessee laws and regulations in the performance of this MOU.
10. Effective July 1, 2012, this MOU shall replace in its entirety the Memorandum of Understanding with an effective date of February 1, 2011, which shall then be of no further force or effect. This MOU is not intended, and shall not be construed, to modify any of the terms and conditions of the Memorandum of Agreement between the parties or their NPDES General Permit.

City of Murfreesboro

Middle Tennessee State University

By: Tommy Bragg, Mayor

By: [Signature]

Title: MAYOR

Title: John W. Cothran
Senior Vice President

Date: 9-12-12

Date: 9/5/12

Approved as to form:

Attest:

[Signature]
City Attorney
Susan Emery McGannon



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MEMORANDUM

DATE: May 19, 2016
TO: Water and Sewer Board
FROM: Valerie H. Smith
SUBJECT: Approval of Final Change Order
Sinking Creek WWTP – Phase 4C Headworks

Background

Staff received bids for the Sinking Creek Wastewater Treatment Plant (SCWWTP) Headworks facility on August 13, 2013 and the project was awarded to Judy Construction in the amount of \$7,800,000.00. The final balancing change order (attached) establishes the finished contract price as \$7,667,122.00, which is a deduct of \$132,878. However, the contract time was increased by 146 days. Recommendation letters from Smith Seckman Reid (SSR) are attached with regard to the final change order and the contract time.

Recommendation

SSR and staff recommend the Board recommend to City Council approval of the Final Change Order bringing the final project cost to \$7,667,122.00.

Fiscal Impact

\$37M through SRF loans was secured in 2013 to fund the Southwest Force Main, Southwest Pumping Station and Sinking Creek Headworks facility. The final Change Order will be sent to SRF for approval once approved by City Council.

Attachments

SSR Recommendation for Project Closeout
SSR Recommendation for Contract Time Extension
Final Change Order Form



April 12, 2016

Mr. Darren Gore
Director, Murfreesboro Water and Sewer Department
P.O. Box 1477
Murfreesboro, TN 37133-1477

**RE: Sinking Creek WWTP Phase 4C – Headworks
Murfreesboro, TN
Final Change Order No. 3
SRF 2012-306**

Dear Mr. Gore:

Attached are six (6) copies of Final Change Order No. 3 that includes CCF Nos.14 through 27. CCF No. 27 is the final balancing change including the unused allowance money. Also included is a Summary Log of all proposed changes to date.

If approved, Change Order No. 3 results in reduction to the Final Contract Price in the amount of **\$132,878**, giving a Final Contract Price of \$7,667,122.00. There will also be an increase in the contract time in the amount of **146 days**, giving a Substantial Completion date of August 10, 2015.

We have reviewed these proposed changes and recommend they be approved and that the contract time adjusted accordingly. Please review the enclosures and if acceptable to you, execute and forward one (1) signed copy to me. Also, forward four (4) copies of the entire package to Randy Anglin for SRF review. Please retain one copy for your files.

If you have any questions, please contact me.

Sincerely,

SMITH SECKMAN REID, INC.

A handwritten signature in black ink, appearing to read "M Fall", is written over the company name.

Marshall Fall, EI
MDF/mdf
Enclosures

cc: Valerie Smith (w/encl) – MWSD
Randy Anglin, TDEC SRF
RBH – SSR (w/encl)
File (1) (w/encl) – 12-47-001.0



April 7, 2016

Mr. Darren Gore
Director, Murfreesboro Water and Sewer Department
P.O. Box 1477
Murfreesboro, TN 37133-1477

RE: **SCWWTP Phase 4C**
Murfreesboro, TN
Judy Request for Time Extension
CW0 2012-303; SRF 2012-306

Dear Mr. Gore:

SSR has been contacted by Judy Construction requesting a contract time extension in the amount of 146 days. Their request indicates several reasons for the delay in construction time. These reasons are summarized as follows.

In the month of October, the amount of rainfall was more than five times what it was last year and more than double what it typically is for the month. Although the City does not grant time extensions based on weather related delays, the delay due to rainfall in the month of October was unavoidable and consequently hard to make up.

Due to long lead times on some equipment along with some longer than anticipated lead time on some specialty items, receiving equipment on time has been a challenge and has impacted Judy's schedule.

The construction schedule established in the contract documents may have been too aggressive. Due to complicated form work and equipment lead times, the allotted 460 days for completion seems to have been underestimated.

It is our opinion that Judy Construction has made every effort to keep the project on schedule. Judy has worked diligently to improve schedule by working overtime on a weekly basis but has been relatively unsuccessful. The delays are not a result of inadequate manpower or poor planning. Therefore, we recommend that the City extend the March 17, 2015 partial substantial completion date to August 10, 2015.

If you have any questions, please contact me.

Sincerely,

SMITH SECKMAN REID, INC.

A handwritten signature in blue ink, appearing to read "Brentley D. Fowler", is written over the company name.

Brentley D. Fowler, PE
BDF/bdf

cc: Valerie Smith – MWSD
Randy Anglin, TDEC SRF
RBH – SSR
File (1) – 12-47-001.0

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CHANGE ORDER NO. 3

Date Issued for Approval:	04/12/2016	Effective Date:	Date of Execution
Project:	Sinking Creek WWTP Phase 4C	Contract No.:	N/A
Owner:	City of Murfreesboro	Owner Project No.:	N/A
Engineer:	Smith Seckman Reid, Inc.	SSR Project No.:	1247001.0
Contractor:	Judy Construction Company	Government Project No.:	SRF 2012-306

The contractor is hereby authorized and directed to make the changes described below, and agrees to furnish all labor, materials, and equipment to accomplish the changes in accordance with the applicable portions of the Contract Documents for this project.

Description of Change (Including Location and Reasons Therefore):

CCF No. 14 – Atmos gas main crossing. Add additional fittings to sewer lines to provide requested clearance from gas main. \$4,953.
 CCF No. 15 – Panel LE-2-2-B change. \$1,451.
 CCF No. 16 – Provide revised electrical service entrance (underground at Old Nashville Hwy and overhead to electrical building). Install power poles to electrical building, conductors, transformer and transformer pole, meter pole, install 2-4" conduit in road crossing, underground road crossing by MWSD. \$14,940.
 CCF No. 17 – Gas system pressure changes and testing. \$5,073.
 CCF No. 18 – Revisions to the screen channel odor control ductwork. \$5,867.
 CCF No. 19 – Revise electrical service entrance. \$2,850.
 CCF No. 20 – Gas line repairs to existing buildings. \$839.
 CCF No. 21 – Subgrade repair to the roadway and parking lot area. \$15,000.
 CCF No. 22 – Delete all irrigation and landscaping from the project and add casing piping for future irrigation. -\$28,810
 CCF No. 23 – Odor Control site telemetry changes. \$10,667
 CCF No. 24 – Add PRV and strainer to 2-inch effluent water line entering the HW building. \$1,591.
 CCF No. 25 – Replace the previously installed 12X6 reducing bend at the Liquid Phase Odor Control Recirc pump with a new tee. Install 12-inch blind flange, tapped 2-inch with 2" SS nipple, 2" isolation valve and 2" ARV. \$4,109
 CCF No. 26 – Credit for Electric bills May thru July. -\$1,620
 CCF No. 27 – Credit for unused allowance money. -\$132,878

Enclosures and References:

See attached CCF No. 14, thru No. 27 for additional detail.

	AMOUNT		CONTRACT TIME
Original Contract Price	\$7,800,000.00	Substantial Completion Date Prior to Change Order	03/17/2015
Contract Price Prior to Change Order	\$7,800,000.00	Final Payment Date Prior To Change Order	05/16/2015
Net Amount This Change Order	-\$132,878.00	Net Time This Change Order	146 days
Revised Contract Price	\$7,667,122.00	Revised Substantial Completion Date	08/10/2015
		Revised Final Payment Date	04/12/2016

Agreement:

In executing this change order, it is mutually agreed that the amounts provided for herein will be accepted by the contractor as full compensation for all known costs associated in the work, including all direct and indirect costs, and any and all known costs associated with delays or additional time, if any, which may be required as a result of said changes.

Recommended for Approval by Engineer (authorized signature):



Date:

4/12/16

Authorized for Owner by (authorized signature):

Date:

Accepted for Contractor by (authorized signature):



Date:

4/14/16

Approved by Funding Agency (authorized signature, if applicable):

Date:



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MEMORANDUM

DATE: May 19, 2016
TO: Water and Sewer Board
FROM: Valerie H. Smith
SUBJECT: Approval of Final Change Order
Southwest Regional Pump Station

Background

Staff received bids for the Southwest Regional pumping station on Thursday, March 19, 2013 and the project was awarded to Garney Companies, Inc. in the amount of \$7,293,130. The final balancing change order (attached) establishes the finished contract price as \$7,256,545.65, which is a deduct of \$36,584.35. However, the contract time was increased by 261 days. Recommendation letters from Smith Seckman Reid (SSR) are attached with regard to the final change order and the contract time.

Recommendation

SSR and staff recommend the Board recommend to City Council approval of the Final Change Order bringing the final project cost to \$7,256,545.65.

Fiscal Impact

\$37M through SRF loans was secured in 2013 to fund the Southwest Force Main, Southwest Pumping Station and Sinking Creek Headworks facility. The final Change Order will be sent to SRF for approval once approved by City Council.

Attachments

SSR Recommendation for Project Closeout
SSR Recommendation for Contract Time Extension
Final Change Order Form



April 6, 2016

Mr. Darren Gore
Director, Murfreesboro Water and Sewer Department
P.O. Box 1477
Murfreesboro, TN 37133-1477

**RE: Southwest Regional Pumping Station
Murfreesboro, TN
Proposed Final Adjusting Change Order
CW0 2012-303; SRF 2012-306**

Dear Mr. Gore:

Attached are six (6) copies of proposed Final Adjusting Change Order, including a Summary Log of all proposed changes to date. This Final Adjusting Change Order includes CCFs No. 9 through No. 17. CCF No. 9 was requested by the Contractor for changes to the fiberglass doors including changes to door hardware. CCF No. 10 was requested by the Contractor for revisions to the handrail in order to meet City Codes requirements. CCF No. 11 was requested by the Contractor to install a drop ceiling in the pump station superstructure "Lobby" area. CCF No. 12 was requested by the Contractor to delete the eyewash/shower station and heater and relocate the fork truck and charging station to the wastewater plant. CCF No. 13 was requested by the contractor to add additional light fixtures in the stair well. CCF No. 14 was requested by the contractor to provide insulation above the ceiling in the electrical room. CCF No. 15 was requested by the engineer to provide elevator smoke control. CCF No. 16 was requested by the contractor to install control wiring and conduit for additional generator signals. CCF No. 17 was requested by the owner to install a 2" water line for the golf course bathrooms. The sum total of all CCF change items is 103,629.65. The \$3,629.65 overage is rolled into the final adjusting change order. CCF No. 18 is also included to show credit for the unused adjustment price items.

If approved, this change order results in a decrease to the FINAL contract amount in the amount of **\$36,584.35**, making the final Contract Price **\$7,256,545.65**.

We have reviewed this proposed Change Order and recommend that it be approved and that the contract amount be adjusted accordingly. Please review the enclosures and if acceptable to you, execute and forward one (1) signed copy to me. Also, forward four (4) copies of the entire package to Randy Anglin for SRF review. Please retain one copy for your files.

If you have any questions, please contact me.

Sincerely,

SMITH SECKMAN REID, INC.

A handwritten signature in black ink, appearing to read 'M. Fall', is written over a faint, illegible typed name.

Marshall Fall, E.I.
MDF/mdf
Enclosures



April 7, 2016

Mr. Darren Gore
Director, Murfreesboro Water and Sewer Department
P.O. Box 1477
Murfreesboro, TN 37133-1477

**RE: Southwest Regional Pumping Station
Murfreesboro, TN
Garney Request for Time Extension
CW0 2012-303; SRF 2012-306**

Dear Mr. Gore:

SSR has been contacted by Garney Construction requesting a contract time extension in the amount of 261 days. Their request indicates several reasons for the delay in construction time. These reasons are summarized as follows.

Drilling and blasting for the pump station wetwell and drywell was much more time intensive than originally planned. This was due to the high water table and seams in the rock. Also, the excavation of the rock was difficult. Due to the seams in the rock, blasting was ineffective in certain areas requiring the use of a hoe ram for rock removal. This process is very time intensive and was not factored into the original project schedule.

Installation of the rock anchors took much longer than planned. Again, this was due to the water table and seams in the rock. The drill holes would frequently fill in with silt due to the water and seams. This would require additional time to clean the holes.

October is typically one of the driest months of the year and Garney planned some of their work accordingly. This October turned out to be one of the wettest on record creating further delays. This also resulted in the Stones River overflowing its banks and flooding the pump station construction site. Site flooding also occurred in March 2014.

It is our opinion that Garney Construction has made every effort to keep the project on schedule. They have worked diligently to improve schedule but have been relatively unsuccessful due to the reasons above. The delays are not a result of inadequate manpower or poor planning. Therefore, we recommend that the City extend the November 22, 2014 partial substantial completion date to August 10, 2015.

If you have any questions, please contact me.

Sincerely,

SMITH SECKMAN REID, INC.

A handwritten signature in blue ink, appearing to read "Brentley D. Fowler", is written over a white background.

Brentley D. Fowler, PE
BDF/bdf

cc: Valerie Smith – MWSD
Randy Anglin, TDEC SRF
MDF, RBH – SSR
File (1) – 12-47-001.0

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FINAL ADJUSTING CHANGE ORDER

Date Issued for Approval:	4/8/2016	Effective Date:	Date of Execution
Project:	Southwest Regional Pumping Station	Contract No.:	N/A
Owner:	City of Murfreesboro	Owner Project No.:	N/A
Engineer:	Smith Seckman Reid, Inc.	SSR Project No.:	0641057.0
Contractor:	Garney Companies, Inc.	Government Project No.:	TDEC CW0 2012-303; SRF 2012-306

The contractor is hereby authorized and directed to make the changes described below, and agrees to furnish all labor, materials, and equipment to accomplish the changes in accordance with the applicable portions of the Contract Documents for this project.

Description of Change (Including Location and Reasons Therefore):

- See attached CCF documentation.

Enclosures and References:

- CCF No. 7 – 17
- CCF 18 showing Contractor credit for unused adjustment price line items.

	AMOUNT		CONTRACT TIME
Original Contract Price	\$7,293,130.00	Substantial Completion Date Prior to Change Order	11/22/2014
Contract Price Prior to Change Order	\$7,293,130.00	Final Payment Date Prior To Change Order	02/12/2015
Net Amount This Change Order	(\$36,584.35)	Net Time This Change Order	261 days
Revised Contract Price	\$7,256,545.65	Revised Substantial Completion Date	8/10/2015
		Revised Final Payment Date	3/18/2016

Agreement:

In executing this change order, it is mutually agreed that the amounts provided for herein will be accepted by the contractor as full compensation for all known costs associated in the work, including all direct and indirect costs, and any and all known costs associated with delays or additional time, if any, which may be required as a result of said changes.

Recommended for Approval by Engineer (authorized signature):

Date:

4/13/16

Authorized for Owner by (authorized signature):

Date:

Accepted for Contractor by (authorized signature):

Date:

4/21/16

Approved by Funding Agency (authorized signature, if applicable):

Date:

CHANGE CONTROL LOG

Owner: Murfreesboro Water & Sewer Department
Project Name: Southwest Regional Pumping Station
Contract No.: N/A
Engineer: Smith Seckman Reid, Inc.
Contractor: Garney Companies, Inc.

Original Contract Amount: **\$ 7,293,130.00**

Contingency Allowance Amount: **\$ 100,000.00**

Adjusted Contingency Allowance Amount: **\$ 100,000.00**

CCF No.	Change Order No.	Brief Description of Change Item	Status (Approved/Pending/Rejects #)	Date From/To Contractor	Date Submitted to Owner	Date Approved/Rejects # by Owner	Add/Deduct (+/-) Amount	Cumulative Add/Deduct Amount	Adjusted Contingency Amount	Adjusted Contract Amount
1	N/A	FO: Revise elliptical stormwater pipe.	Not required	7/10/2013	N/A	N/A	\$ -	\$ -	\$ 100,000.00	\$ 7,293,130.00
2	N/A	FO: Revise control wiring to MOV-01 through MOV-08 to 24VDC instead of the 120 VAC.	Not required	8/21/2013	N/A	N/A	\$ -	\$ -	\$ 100,000.00	\$ 7,293,130.00
3	1	CCR: Rock Anchor Change.	Approved	10/3/2013	10/4/2013	12/19/2013	\$ (10,000.00)	\$ (10,000.00)	\$ 110,000.00	\$ 7,293,130.00
4	2	FO: Revise elevator shaft walls and roof trusses due to increased elevator cab height.	Approved	10/14/2013	6/13/2014	N/A	\$ 7,257.09	\$ (2,742.91)	\$ 102,742.91	\$ 7,293,130.00
5	N/A	FO: Revise gas monitoring locations. LIT-03 deleted. LIT-02 wiring changes.	Not required	5/23/2014	N/A	N/A	\$ -	\$ (2,742.91)	\$ 102,742.91	\$ 7,293,130.00
6	N/A	CCR: Junction Box relocation	Withdrawn	8/27/2014	Withdrawn	Withdrawn	\$ -	\$ (2,742.91)	\$ 102,742.91	\$ 7,293,130.00
7	Final	CCR: Additional MHs on 12" sewer line	Approved	2/27/2015	3/2/2015	3/24/2015	\$ 34,894.00	\$ 32,151.09	\$ 67,848.91	\$ 7,293,130.00
8	Final	Dampers in elevator machine room duct work	Approved	11/18/2014	3/2/2015	3/24/2015	\$ 1,002.00	\$ 33,153.09	\$ 66,846.91	\$ 7,293,130.00
9	Final	Door changes - fire rated door and hardware revisions	Approved	12/3/2014	1/16/2015	3/24/2015	\$ 11,779.81	\$ 44,932.90	\$ 55,067.10	\$ 7,293,130.00
10	Final	Handrail changes per City Codes	Approved	12/3/2014	1/16/2015	3/24/2015	\$ 1,564.75	\$ 46,497.65	\$ 53,502.35	\$ 7,293,130.00
11	Final	RFP: Drop Ceiling installation	Approved	3/17/2015	3/2/2015	3/24/2015	\$ (726.00)	\$ 45,771.65	\$ 54,228.35	\$ 7,293,130.00
12	Final	RFP: Delete Emergency Shower/eyewash and heater and relocate fork 47,881.00truck and charging station	Approved	2/18/2015	10/16/2015	11/5/2015	\$ (5,224.00)	\$ 40,547.65	\$ 59,452.35	\$ 7,293,130.00
13	Final	RFP: Additional stairwell lighting fixtures	Approved	3/24/2015	Approved	8/25/2015	\$ 5,879.00	\$ 46,426.65	\$ 53,573.35	\$ 7,293,130.00
14	Final	RFP: Insulation above electrical room ceiling	Approved	7/2/2015	7/2/2015	8/25/2015	\$ 2,076.00	\$ 48,502.65	\$ 51,497.35	\$ 7,293,130.00
15	Final	RFP: Add smoke detectors for elevator per TN State Elevator Codes	Approved	8/4/2015	10/16/2015	11/5/2015	\$ 47,881.00	\$ 96,383.65	\$ 3,616.35	\$ 7,293,130.00
16	Final	CCR: Install control wiring and conduit for generator status	Approved	9/4/2015	9/22/2015	10/5/2015	\$ 3,558.00	\$ 99,941.65	\$ 58.35	\$ 7,293,130.00
17	Final	RFP: Install 2" water line at OFGC in lieu of 1-1/4-inch	Approved	2/9/2016	2/12/2016	Pending	\$ 3,688.00	\$ 103,629.65	\$ -	\$ 7,293,130.00
Totals							OVERAGE =	\$ 3,629.65	\$ 100,000.00	\$ 7,296,759.65

- Notes:**
1. CCR - Contractor change request.
 2. CL - Claim.
 3. FO - Field Order.
 4. RFP - Request for proposal.
 5. WCD - Work change directive.

THE OVERAGE WILL BE CARRIED OVER INTO THE FINAL ADJUSTING CHANGE ORDER.



... creating a better quality of life

MEMORANDUM

DATE: May 4, 2016
TO: Water and Sewer Board
FROM: Valerie Smith
SUBJECT: Contingency Allowance Allocations for Sinking Creek WWTP Phase 4D

Background

The Department received bids for the Sinking Creek Plant Expansion – Phase 4D on January 8, 2015. At that meeting the Board approved to award the project to 3D Enterprises the contract in the amount of \$30,472,000. As part of the referenced project, Item #4 within Schedule C of the Construction Contract is a contingency allowance of \$500,000.

The attached change control log which identifies the recent allowance allocation issued through field work change directives. Note that these work change directives do not change the contract price, only adjust the remaining balance of the contingency allowance. The final contract price will be adjusted accordingly in a future change order or a final balancing change order at the end of the project.

The following table is provided to update the Board on the current field work change directives and the remaining contingency allowances.

Project	Contingency Allowance	Prior Contingency Allocations	Current Contingency Allocations	Remaining Contingency Allowance
Phase 4D Expansion	\$500,000	\$144,149.00**	\$ 56,780 *	\$299,071.00

*CCF # – 18 and 22-25 (Current)

**CCF #'s (1 Rev. 2, 2, 5, 6, 7, 8, 9, 11-13, 17, & 19 previously approved)(cumulative)

Recommendation

Staff recommends the referenced contingency allocation for the Phase 4D Expansion be authorized. A final contract amount accounting for all contingency items will be brought to the Board and City Council for approval in a final balancing change order.

Fiscal Impact

There is no fiscal impact at this time to the Department’s State Revolving Fund (SRF) loan, as the contingency allowance has been approved within the contract and the contract amount remains unaffected.

Attachments

SSR Recommendation Letters & CCF Log



May 17, 2016

Mrs. Valerie Smith
Assistant Director, Murfreesboro Water and Sewer Department
P.O. Box 1477
Murfreesboro, TN 37133-1477

**RE: Sinking Creek WWTP Phase 4D – Expansion
Murfreesboro, TN
Proposed Change Item 14, (CCF No. 18).
CG2 2014-338; SRF 2014-339**

Dear Mrs. Smith:

Attached are four (4) copies of proposed Change Item number 14 including a Summary Log of all proposed changes to date. The following summarizes the change item and provides recommendation for its approval.

Change Item No. 18 was requested by SSR to furnish and install one (1) Allen-Bradley Series 5000, bulletin 1426-M5E-A power monitor with Ethernet communications capability in panelboards H8DP and H6A. The cost increase for the change is \$17,080.00.

If approved, Change Item No. 14 result in reduction to the Construction Contingency Allowance from a total of \$336,691.00 to a total of \$319,611.00. There will be no increase in the contract time as a result of these change items.

As stated, SSR has reviewed these proposed changes and recommend they be approved and the contingency allowance be adjusted accordingly. Note that the total contract price will not be adjusted, only the contingency amount. Please review the enclosures and if acceptable to you, execute and forward one (1) signed copy to me.

If you have any questions, please contact me.

Sincerely,

SMITH SECKMAN REID, INC.

A handwritten signature in blue ink, appearing to read "M. Fall", is written over a faint, larger signature.

Marshall Fall, E.I.

cc: Darren Gore (w/encl) – MWSD
BDF (wo/encl) – SSR
RBH (wo/encl) – SSR
File (12) (w/encl) – 12-41-019.0



May 12, 2016

Mrs. Valerie Smith
Assistant Director, Murfreesboro Water and Sewer Department
P.O. Box 1477
Murfreesboro, TN 37133-1477

RE: **Sinking Creek WWTP Phase 4D – Headworks**
Murfreesboro, TN
Proposed CCF Nos. 22, 23, and 24 (COP-16), CCF 25 (COP-17).
CG2 2014-338; SRF 2014-339

Dear Mrs. Smith:

Attached are six (4) copies each of proposed Change Item Nos. 16 and 17, including a Summary Log of all proposed changes to date. The following summarizes the change items and provides recommendation for their approval.

CCF No. 22 was requested by the Contractor to provide counter flashing at the UV control building. The cost increase for the change is \$912.00.

CCF No. 23 was requested by the Engineer to provide steel beams and additional reinforcing steel for pipe supports in the final clarifier pump room. The cost increase for the change is \$28,392.00.

CCF No. 24 was requested by the Engineer to provide an FRP door, frame and hardware at the final clarifier pump room south entrance and upgrade door 8-3 to FRP. The cost increase for the change is \$6,696.00

CCF No. 25 was requested by the Engineer to provide factory applied epoxy coating on coils within six (6) Trane split system HVAC condensing units. The cost increase for the change is \$3,160.00.

If approved, CCFs 22 thru 25 result in reduction to the Construction Contingency Allowance from a total of \$338,771.00 to a total of \$336,691.00 (cost difference includes a \$20,000 credit that has been approved for construction.) There will be no increase in the contract time as a result of these change items.

SSR has reviewed these proposed changes and recommend they be approved and the contingency allowance be adjusted accordingly. Note that the total contract price will not be adjusted, only the contingency amount. Please review the enclosures and if acceptable to you, execute and forward one (1) signed copy to me.

If you have any questions, please contact me.

Sincerely,

SMITH SECKMAN REID, INC.

A handwritten signature in blue ink, appearing to read "M. Fall".

Marshall Fall, EI

cc: Darren Gore (w/encl) – MWSD
BDF (wo/encl) – SSR
File (12) (w/encl) – 12-41-019.0

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CHANGE CONTROL LOG

Owner: Murfreesboro Water & Sewer Department
Project Name: Sinking Creek WWTP Phase 4D Expansion
Contract No.: N/A
Engineer: Smith Seckman Reid, Inc.
Contractor: 3D Enterprises Contracting Corporation

Original Contract Amount: \$ 30,472,000.00

Contingency Allowance Amount: \$ 500,000.00

Adjusted Contingency Allowance Amount: \$ 319,611.00

	Rejected/Withdrawn
	Under Review
	Approved
	Pending

CCF No.	Change Order No.	Change Type	Brief Description of Change Item	Status (Pending/Under Review/Approved/Rejected)	Date From/To Contractor	Date Submitted to Owner	Date Approved/Rejected by Owner	Add/Deduct (+/-) Amount	Cumulative Add/Deduct Amount	Adjusted Contingency Amount	Adjusted Contract Amount
4	N/A	RFP	Add Headworks paving, irrigation piping and landscaping to Phase 4D-scope	Withdrawn	4/15/2015	Withdrawn	Withdrawn	\$ -	\$ -	\$ 500,000.00	\$ 30,472,000.00
1-REV	N/A	RFP	Add Headworks paving partial-landscaping to Phase 4D-scope	Withdrawn	6/11/2015	Withdrawn	Withdrawn	\$ -	\$ -	\$ 500,000.00	\$ 30,472,000.00
1-REV2	TBD	RFP	Delete landscaping and irrigation	Approved	8/5/2015	10/17/2015	Approved	\$ (25,800.00)	\$ (25,800.00)	\$ 525,800.00	\$ 30,472,000.00
2	2	RFP	Delete diffusers from Post Aeration equipment	Approved	9/1/2015	9/2/2015	9/15/2015	\$ (11,200.00)	\$ (37,000.00)	\$ 537,000.00	\$ 30,472,000.00
3	N/A	FP	Change stairs platform from galv to alum.	Approved	4/23/2015	N/A	N/A	\$ -	\$ (37,000.00)	\$ 537,000.00	\$ 30,472,000.00
4	N/A	RFP	Add signal wiring for Main PS pump-discharge valves	Withdrawn	5/29/2015	7/28/2015	8/5/2015	\$ -	\$ (37,000.00)	\$ 537,000.00	\$ 30,472,000.00
5	TBD	RFP	Revise electrical service per MED	Withdrawn	6/18/2015	Withdrawn	Withdrawn	\$ -	\$ (37,000.00)	\$ 537,000.00	\$ 30,472,000.00
5-REV	TBD	RFP	Revise electrical service per MED	Approved	8/10/2015	1/14/2016	2/5/2016	\$ 82,856.00	\$ 45,856.00	\$ 454,144.00	\$ 30,472,000.00
6	TBD	RFP	Algae Cleaning System attachment arm	Approved	7/20/2015	7/28/2015	9/3/2015	\$ 7,600.00	\$ 53,456.00	\$ 446,544.00	\$ 30,472,000.00
7	TBD	RFP	Tertiary Filter embed conduit	Approved	7/24/2015	7/28/2015	9/3/2015	\$ 2,500.00	\$ 55,956.00	\$ 444,044.00	\$ 30,472,000.00
8	TBD	RFP	HVAC upgrade in Post Aeration Control Room	Approved	9/9/2015	1/8/2016	2/5/2016	\$ 52,740.00	\$ 108,696.00	\$ 391,304.00	\$ 30,472,000.00
9	TBD	RFP	Revise Final Clarifier EDI type	Approved	9/24/2015	10/6/2015	11/5/2015	\$ 3,300.00	\$ 111,996.00	\$ 388,004.00	\$ 30,472,000.00
10	TBD	RFP	Provide sleeves under roadway for future irrigation piping.	Pending	9/1/1939	Pending	Pending	\$ -	\$ 111,996.00	\$ 388,004.00	\$ 30,472,000.00
14	TBD	FO	Electrical changes to MCC and-control room layouts	Withdrawn	10/7/2015	Pending	Pending	\$ -	\$ 111,996.00	\$ 388,004.00	\$ 30,472,000.00
11-REV1	TBD	RFP	Various electrical changes	Approved	10/20/2015	2/10/2015	4/7/2016	\$ 7,900.00	\$ 119,896.00	\$ 380,104.00	\$ 30,472,000.00
12	TBD	RFP	Headworks Facility electrical revisions/clarifications	Approved	10/20/2015	2/10/2015	4/7/2016	\$ 2,600.00	\$ 122,496.00	\$ 377,504.00	\$ 30,472,000.00
13	TBD	WCD	Replacement of existing Filter backwash flow meter	Approved	11/9/2015	3/15/2016	4/7/2016	\$ 20,533.00	\$ 143,029.00	\$ 356,971.00	\$ 30,472,000.00
14	TBD	RFP	Knockout wall at gate opening for future Ox Ditch	Withdrawn	12/16/2015			\$ -	\$ 143,029.00	\$ 356,971.00	\$ 30,472,000.00
15	TBD	FO	UV power feed relocation	Approved	1/18/2016	N/A	N/A	\$ -	\$ 143,029.00	\$ 356,971.00	\$ 30,472,000.00
16	TBD	RFP	Additional generator/ATS signals	Pending	1/26/2016			\$ -	\$ 143,029.00	\$ 356,971.00	\$ 30,472,000.00
17	TBD	RFP	Add ultrasonic flow meter at Main PS	Approved	2/4/2016	3/15/2016	4/7/2016	\$ 11,120.00	\$ 154,149.00	\$ 345,851.00	\$ 30,472,000.00
18	TBD	RFP	Installation of the Allen-Bradley Power Monitors into the Eaton switchgear	Under Review	5/4/2016			\$ 17,080.00	\$ 171,229.00	\$ 328,771.00	\$ 30,472,000.00
19	TBD	CCR	60" TRE Junction Box in lieu of tapping sleeve	Approved	2/22/2016	3/24/2016	5/11/2016	\$ (10,000.00)	\$ 161,229.00	\$ 338,771.00	\$ 30,472,000.00

20	TBD	RFP	Addition of area lights and receptacles at clarifiers. Photocell and lighting control.	Waiting on revised pricing				\$ -	\$ 161,229.00	\$ 338,771.00	\$ 30,472,000.00
21	TBD	RFP	Replace building architectural precast fascia panels with brick	Pending	3/18/2016			\$ (20,000.00)	\$ 141,229.00	\$ 358,771.00	\$ 30,472,000.00
22	TBD	RFP	Item 2 on RFI 33 Counter-flashing @ UV basin for building/canopy joint	Pending	4/19/2016	5/12/2016		\$ 912.00	\$ 142,141.00	\$ 357,859.00	\$ 30,472,000.00
23	TBD	RFP	Provide steel beams & additional reinforcing steel for pipe supports per revised drawings S 1.3-05 & S5.4-05	Pending	5/3/2016	5/12/2016		\$ 28,392.00	\$ 170,533.00	\$ 329,467.00	\$ 30,472,000.00
24	TBD	RFP	Provide FRP door, frame and hardware at FCPR south entrance. Modify door 8-3 from hollow metal to FRP with 90 mn fire rating	Pending	5/3/2016	5/12/2016		\$ 6,696.00	\$ 177,229.00	\$ 322,771.00	\$ 30,472,000.00
25	TBD	RFP	Provide factory applied epoxy coating on coils	Pending	5/9/2016	5/12/2016		\$ 3,160.00	\$ 180,389.00	\$ 319,611.00	\$ 30,472,000.00
Totals								\$ 180,389.00	\$ 319,611.00	\$ 319,611.00	\$ 30,472,000.00

Notes:

1. CCR - Contractor change request.
2. CL - Claim.
3. FO - Field Order.
4. RFP - Request for proposal.
5. WCD - Work change directive.

MINUTES
MURFREESBORO WATER AND SEWER BOARD
April 26, 2016

The Murfreesboro Water and Sewer Board met on Tuesday, April 26, 2016 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, Mr. Ron Crabtree, Mr. Ron Washington, Dr. Al Carter, Mr. Clay Beach, Ms. Sandra Trail, and Ms. Kathy Nobles. Also present were Darren Gore, Valerie Smith, Michele Pinkston, Craig Tindall, Doug Swann, Daniel Tribble, Steve Tate, John Strickland, Josh LeMay, Terry Taylor, Alison McGee, Donald Hughes, Jimmy Stacey, Kenny Diehl, Mike Bernard, Lynda Sullivan, and Travis Wilson, along with other members of the public.

The Consent Agenda was presented for the following considerations:

A. *Consider contingency allocations for Sinking Creek WWTP Phase 4D –*

The Department received bids for the Sinking Creek Plant Expansion – Phase 4D on January 8, 2015. At that meeting the Board awarded the project to 3D Enterprises in the amount of \$30,472,000. As part of the referenced project, Item #4 within Schedule C of the Construction Contract is a contingency allowance of \$500,000.

The change control log identifies the recent allowance allocation issued through field work change directives. These work change directives do not change the contract price, only adjust the remaining balance of the contingency allowance. The final contract price will be adjusted accordingly in a future change order or a final balancing change order at the end of the project.

The following table is provided to update the Board on the current field work change directives and the remaining contingency allowances.

Project	Contingency Allowance	Prior Contingency Allocations	Current Contingency Allocations	Remaining Contingency Allowance
Phase 4D Expansion	\$500,000	\$(154,149.00)**	\$ (10,000) *	\$355,851.00

*CCF # – 19 (Current)

**CCF #'s (1 Rev. 2, 2, 5, 6, 7, 8, 9, 11-13 & 17 previously approved)(cumulative)

Staff recommended the referenced contingency allocation for the Phase 4D Expansion be authorized. A final contract amount accounting for all contingency items will be brought to the Board and City Council for approval in a final balancing change order.

There is no fiscal impact at this time to the Department’s State Revolving Fund (SRF) loan, as the contingency allowance has been approved within the contract and the contract amount remains unaffected.

B. Consider grounds work at the Stones River WTP –

Staff has identified two areas at the Stones River Water Treatment Plant that are in need of repair outside the scope of staff's equipment and ability. The first location is the overflow for the raingarden. The overflow has experienced severe erosion and needs repaired. Staff has tried to repair the overflow; however these repairs did not correct the problem. The second location is the driveway to access the pretreatment and post treatment chemical delivery points. The driveway needs a concrete addition to allow trucks to stay on the driveway instead of driving through the grass and causing deep ruts. Staff has determined that Rollins Excavating Company can perform all identified work in accordance with the contract they have with the City. Rollins provided an estimate for repair of the raingarden overflow in the amount of \$8,450 and the addition to the drive for access to the pretreatment and post treatment chemical delivery driveway in the amount of \$5,108.

Staff recommended that the Board recommend to the City Council to approve work requested from Rollins Excavating Company in accordance with their estimate from an approved City contract.

Funding for repair of the raingarden overflow and the addition to the driveway for access to the pretreatment and post treatment chemical buildings in the total amount of \$13,558 is from rate funded capital reserves.

C. Consider chemical and media contract extensions –

Section 1.3.4 of the bid documents states that the successful bidder shall have the option of renewing the contract for up to three additional one year terms. The following companies opted to renew their contracts through June 30, 2017:

PRODUCT	LOW BIDDER	UNIT PRICE	EST. ANNUAL EXPENSE
SulphSorb XL	PurAir	\$2.045/lb.	\$40,000
CPS Blend	PurAir	\$1.865/lb.	\$24,000
Bleach	Brenntag	80¢/gal.	\$80,000
Caustic Soda	Univar	\$1.1682/gal.	\$10,000

All of the products are used to control odor throughout the wastewater system. Additionally, bleach is used in the final treatment of repurified water.

Staff recommended that the Board recommend to City Council approval of the renewal of the chemical contracts as referenced.

The prices of the products will be reflected in the FY17 Operating budget. The contract prices will be good through June 30, 2017.

D. Consider single source purchase of Rotork Actuators –

Throughout the wastewater treatment plant there is an extensive system of piping and valves to direct the flow of water and sludge. Many of these valves are computer controlled via Rotork actuators which physically open or close the valves. The actuators within the system have a limited life expectancy

and require periodic replacement. All of the actuators at the plant have surpassed their life expectancies and are obsolete (component parts are no longer available for repairs). This purchase will continue the replacement process that began in 2014. As actuators fail, they will be replaced with new. Usable components will be salvaged so that future failures may be repaired instead of replacing with new.

New OEM parts are only available from a single source. The manufacturer’s distributor for this area is Eco-Tech, Inc.

Staff recommended the Board recommend to City Council approving the purchase of the referenced parts in the amount of \$51,500.

The cost to replace the Rotork actuators will be funded from the equipment replacement capital account for the wastewater plant. This purchase is budgeted for \$57,000.

E. Consider purchase of traveling sprinkler irrigation units for Coleman Farm –

The Department owned Coleman Farm was purchased to play a significant role in the land disposal of treated effluent from the Sinking Creek Wastewater Treatment Plant. Traveling sprinkler irrigation units are necessary in order to accomplish this and adequately utilize the 24” repurified water pipeline at the Coleman farm. The Water and Sewer Board approved staff’s request to budget funds for the purchase.

As more units are put into operation, it may be necessary to construct a booster pump station to maintain adequate pressure.

An Invitation to Bid was issued and bids were opened on April 19, 2016. The results are tabulated below:

Hughes Farm Services Inc.	\$37,000.00
Kentucky Irrigation Company	No Bid
Smith Turf and Irrigation	No Bid

Staff recommended the Board recommend to City Council approving the purchase of two Medium Traveling Sprinkler Irrigation Units from Hughes Farm Services Inc. in the total amount of \$37,000 from rate funded capital.

The purchase of the units was budgeted in the Department’s rate funded capital account in the amount of \$45,000.

F. Consider a request to abandon/relocate a water easement at Stones River Manor –

This easement abandonment request is from Enoch Jarrell, the project Engineer with Huddleston Steele Engineering, Inc. on behalf of the Developer. Stones River Manor has plans to add to their facility. To do so, they are requesting the abandonment of an existing water main and easement that will be in conflict. The developer will relocate this water main in conjunction with the project and new easement will be dedicated for the newly relocated water main.

Staff recommended that the Board recommend to the Planning Commission and City Council approval of abandoning this portion of the existing water easement. The existing easement was dedicated to the Department by plat.

G. Consider John Bouchard and Sons Task Order 16-02 for Pump Station #32 Replacement –

Staff is requesting approval for Task Order 16-02 under the annual Water/Wastewater System Mechanical/Electrical Services Contract with John Bouchard and Sons to remove and replace the pre-existing Smith & Loveless factory built pumping station with a new Smith & Loveless factory built pumping station complete in fiberglass housing with structural steel floor.

Pump Station 32 (English Hill) was installed in 1993 with the development of Huntington Place Subdivision Section 4. With the deterioration of the station and constant maintenance of these pumps and motors, staff is concerned a failure may occur in the near future and feel it should be replaced as soon as possible. The noise level is also an important factor since the station is located in between two residential homes on English Hill Drive. The pre-existing Smith & Loveless pump station has caused no complaints from the surrounding neighbors and has demonstrated the lowest noise level (@ 59 dB) of all other stations built for these applications.

Staff recommended the Board approve John Bouchard and Sons Task Order 16-02 to furnish all labor and materials to remove the existing pump station and replace the existing pump station with a new factory built Smith & Loveless pumping station with fiberglass housing and steel base.

The total fiscal impact is estimated, with the maximum cost not to exceed \$55,443. The pump station package includes all labor, handling and delivery and will be supplied by John Bouchard & Sons. The funding for this replacement is budgeted in the FY15-16 Capital Budget at \$46,000.

H. Consider John Bouchard and Sons Task Order 16-03 for Replace Wiring to Clarifier Collector Rings –

On December 18, 2014, MWSD accepted and opened bids for the MWSD Water/Wastewater System Mechanical/Electrical Services contract. John Bouchard & Sons Co. was awarded the bid after approval by the Water and Sewer Board and City Council. This contract has been renewed and is currently in effect.

Based upon inspection by the Department's staff of the existing wiring to two clarifier collector rings at the Sinking Creek Plant's Final Clarifiers, it was determined that repairs are beyond the Department's ability to perform. As a result, staff has requested John Bouchard & Sons Co. provide an estimate that would include JB&S staff's determination as to the extent of repairs necessary to get the clarifiers into full operation. The clarifiers were installed in 2000 and have not received any major repairs outside of maintenance performed by MWSD personnel.

Staff recommended that the Board recommend the City Council approve Task Order 16-03 by John Bouchard & Sons Co.

Funding used to replace the clarifier collector rings in the amount of \$7,324 is from working capital reserves.

I. Consider single source purchase of vacuum compressor for vacuum truck –

The Operation & Maintenance Department operates four vacuum trucks. They are used daily for routine line cleaning, stopped sewer mains, cleaning pump station wet wells, and hydro-excavation in sensitive areas around other utilities, etc.

Currently one of the trucks is out of service. The vacuum compressor and pump which controls the unit’s vacuum system is not functioning and must be replaced. The replacement will be purchased through Vac-Con, the original manufacturer, as a single source purchase. O&M staff will install the compressor and pump.

Staff recommended the Board approve purchase of the vacuum compressor with pump as a single source purchase for approximately \$15,741. Funding for this purchase will come from FY2015-2016 working capital reserves.

J. Consider purchase of reuse pump motor –

The Tennessee Department of Environment and Conservation issued National Pollution Discharge Elimination System permit for the Sinking Creek Wastewater Treatment Plant is very stringent. Part of the Department’s strategy to meet the permit requirements is to shed as much of the effluent load as possible to the Reuse water system for beneficial use within Murfreesboro.

Water for the system is delivered alternately by two 400 HP pumps at the Sinking Creek plant. Recently, one of the motors was taken out of service for regularly scheduled maintenance. After inspection, it was discovered that the motor’s bars and rotor had substantial damage. Additionally, it was determined that it would need to be rewound. The cost of the repairs totaled \$35,380.

Since the cost to repair the motor is greater than the cost to replace the motor, staff obtained several quotes for replacement. They are tabulated below:

Company	Quote
Industrial Maintenance & Engineering	\$24,375.00
Industrial Services of Nashville Inc.	\$25,871.00
Fox Brothers Electric	\$27,058.82

Staff recommended the Board recommend to City Council approving the purchase of one 400 HP motor from Industrial Maintenance & Engineering in the amount of \$24,375 from working capital reserves.

K. Consider Department participation for sewer main extension at Lancaster Christian Daycare–

The Lancaster Christian Daycare is proposing to build along Manson Pike next to the Overall Creek Interceptor Sewer. Anytime a development is first in line to connect to the interceptor sewer, you can

almost plan that there will be some participation involved in order to be sure that the remaining sewer service area can be reached. The same is with this proposed development.

Per a Sub-basin Area Master Plan (SAMP) for sewer service in this area, this extension would be a partial second route consistent with the SAMP. Staff requested that the Department participate in a larger and deeper sewer main than necessary for the Lancaster Daycare, in order to afford ourselves another alternative for the SAMP. The existing alignment extends through several developed properties that may make easement acquisition and construction difficult so this second alternative may be important for a future extension.

A few points per the Department's participation policy, within our approved Policies, Procedures & General Design Requirements adopted in 2009 by the Board & Council are:

1. Prior to dedication and acceptance of the improvements by the City, the Developer requesting reimbursement must present to the City Council a detailed statement of the actual eligible costs and the City Council in its discretion may amend the agreement, and the reimbursement amount, to reflect the actual project costs.
2. Should a project be eligible for participation by the City due to upsizing of a water or sewer line, the Department reserves the right to publicly bid the project or the portion of the project eligible for participation.
3. Participation in the cost to upsize water and/or sewer lines shall be in accordance with established policies in effect. The Department or Developer can prepare a schedule of upsize participation, based on recent bid results or agreed upon unit pricing, which the Department and the Developer may accept in lieu of publicly bidding, subject to approval of the Water and Sewer Board and City Council.
4. The Department will only participate on that portion of sewer deeper than twelve (12) feet deep, if the sewer is upsized and if the material changes.
5. Sewer must extend to the limits of construction at strategic locations for future extension.

To determine the Department participation amount, Jim Cason, with Huddleston Steele Engineering, Inc., has prepared an estimate for the cost associated with the extra depth of sewer "over" 12 feet to include the material invoice cost associated with upsizing and the change in pipe material from 8 inch to 12 inch and heavier wall PVC respectively.

The estimated amount of the extra depth and increase in size is \$21,871 and is also the Department's participation amount to the Developer. The proposed funding is from the Department's working capital reserves in the amount of \$21,871.

Staff recommended the Board recommend to City Council approval of participating financially in this sanitary sewer extension requiring extra depth and size to serve future MWSD customers, as established through a the Sub-basin Area Master Plan for this area. This approval is consistent with the Department's adopted Policies and Procedures.

L. Consider a proposal from Jobe, Hastings & Associates for the Water and Sewer Department Audit and the Stormwater Fund Audit for the year ending June 30, 2016 –

Jobe, Hastings & Associates submitted a proposal to audit the balance sheet of the Murfreesboro Water and Sewer Department and the Murfreesboro Stormwater Fund as of June 30, 2016 and the related statements of earnings and retained earnings and cash flows for the year then ended. The Water & Sewer Department is now on the same financial software as the City. City Finance believes it would be more efficient to use the same firm for both audits. Staff is in agreement with this suggestion.

Staff recommended accepting the proposal as presented. The proposed fee is \$28,500 with funding coming from the Professional Services expense account in the FY17 budget year. This represents an \$8,000 increase from last year's combined audit fees.

M. Consider Change Order 3 for NW Broad Street Pump Station Replacements –

At the May 2013 Board meeting, the Board approved the design contract with Civil Infrastructure Associates (CIA) to abandon three existing pump stations along NW Broad Street. They are PS #2, #19, & #20. The Department received bids for the Pump Station Replacements and the project was awarded to J. Cumby Construction, Inc. in the amount of \$976,089. There have been two change orders previously approved by the Board for a total contract amount of \$1,057,989. This was to add time to the contract, explain a few miscellaneous changes and to add the alternate of replacing the existing 6 inch forcemain.

The contractor has completed the installation of the forcemain, except for the portion under CSX right of way, which is a spur track leading to International Paper at Van Cleeve Lane. The CSX portion is to be completed on Sunday, April 24th with a CSX Flagman present. As explained in the recommendation letter from CIA, Cumby experienced some delays while staff coordinated with CSX for permission to explore and find the existing steel casing and is requesting additional time be added to the contract to account for lost time.

Two other changes to the contract, which are a result of unforeseen field conditions, are additional undercutting for unsuitable material along a portion of the gravity sewer trench and the addition of an air release valve. An air release valve is required at high points along a forcemain. A high point was created along the forcemain due to crossing existing underground utilities in which the elevations were unknown.

Staff recommended the Board recommend to City Council approval of Change Order #3 in the amount of \$9,400.

There is \$1.5M committed in the Working Capital Reserves account for FY 2015-2016 for pump station upgrades. The additional costs of \$9,400 is covered by this budgeted amount.

N. Update on Department participation for Ascend Federal Credit Union –

At the February 18, 2015 Board meeting, the Board approved to participate in a water main extension across the proposed Ascend FCU property from Dill Lane to Rutherford Boulevard. The property is located in the southwest quadrant of E. Main Street and Rutherford Boulevard and there are four lots that

will be combined for the project. During construction plans review process, staff realized that this southwest quadrant did not have a “looped” water system and if something were to happen to this connection, there would be a couple of residences and several businesses without water until a repair could be made.

At that time there was one unknown for the project that would prohibit the waterline extension, which was the purchase of the existing right of way of Nesbitt Drive. It is staff’s understanding that Ascend could not negotiate the offer with the existing property owners for the purchase of the existing right of way; therefore, the waterline will not be extended. It was approved for the Department to pay for the extension estimated in the amount of \$35,160, but this is no longer needed.

A motion was made by Ron Crabtree to accept the Consent Agenda as presented and it was seconded by Sandra Trail. The Board voted unanimously to approve.

The March 22, 2016 Board Minutes were unanimously accepted as presented.

The Board considered purchase of Penn Valley Pumps for Fournier Rotary Biosolids Presses using State Revolving Fund (SRF) Loans.

At the August 2015 meeting, the Board approved for Smith Seckman and Reid (SSR) to provide engineering consulting services to replace two Fournier biosolids rotary presses at the Sinking Creek Wastewater Treatment Plant and purchase the rotary presses using State Revolving Fund (SRF) loans. Afterward, SRF stated that there were remaining funds in the subsidized loan available to MWSD and recommended a purchase of a third press. Based on the business case developed in August and the need to replace older presses, staff recommended at the October 2015 meeting and the Board approved purchasing a third Fournier press using SRF Loan CW0 2012-303 which allows for 24.7% principal forgiveness.

The new Fournier presses are the major components of this dewatering system project. However, installation requires significant coordination with various manufacturers. It is now time to purchase the double disc pumps which will transfer the sludge from the holding facility to the Fournier presses. The existing pumps are near the end of their useful lives. Additionally, since they are incompatible with the new Fournier presses, they are obsolete for our dewatering system.

The requested additional loan amount would be for purchase of the equipment only. The engineering work order requested from SSR and the installation of the new presses through the Department’s standing contract with John+Bouchard will be funded through the Department’s working capital reserves. The cost associated with installation is unknown at this time and will be determined after the development of the plans by SSR. A subsequent task order will be developed through our contract with John+Bouchard and brought back to the Board for approval.

Staff recommended approval to procure three double disc pumps from Penn Valley Pump Company to replace three pre-existing pumps that are obsolete and at the end of their useful lives.

The costs associated with procuring the pumps are quoted as \$91,550; funding coming from SRF loan CW0 2012-303, a 20-yr fixed loan at 1.01% interest, affording \$22,613 in principal forgiveness.

Clay Beach made a motion to approve. Dr. Carter seconded. The motion unanimously passed.

The Board considered sewer service for the Jones property on Manchester Highway. John Sant Amour advised the Board he had a conflict and abstained from discussion and voting.

At the July 2010 Board meeting, staff presented information regarding the Sanitary Sewer Extension Policy per the Departments Policies, Procedures and General Design Requirements as well as a Request for Sewer Service for the Jones property along Manchester Highway. The Board did not make a decision for sewer service at that time. A public hearing was scheduled for September 1, 2010 and the property was rezoned from RS15 to RM16 by the Planning Commission.

After the discussion with the Board and the Planning Commission's approval of the rezoning, the property sat idle. Mrs. Jones has approached staff recently, as have developers in the area, with regard to sewer service to the property. Going back and looking at the alternatives presented to the Board in 2010, it is staff's opinion that we should stay consistent with what has been approved for sewer service within the "Area"; the "Area" being defined as properties within close proximity to the Buchanan/Elam Assessment District, but being located within Service Areas 62, 63 & 114. Within this "Area", the Sommersby Subdivision/Panatoni Development and Buchanan Middle School have been approved for sewer service with the use of a single sewer pump station and forcemain that is operated and maintained by the Department. These pump stations have been installed at a location that can easily be abandoned once the Lytle Creek sewer is extended in the future; however, the sewer is pumped into the Buchanan/Elam Sewer Sanitary Assessment District and the associated fees for this District have been paid.

This recommendation doesn't necessarily conform to the sewer extension policy that states pump stations will only be considered if gravity sewer is proven to be unable to be provided in existing or future extensions of the 201 Facilities Plan or a Sub-basin Area Master Plan (SAMP). However, when staff considers the fact that the Lytle Creek sewer extension is still not foreseeable in the immediate or distant future, as well as considering the approvals of the previously cited pumping stations, staff believes that a temporary pumping station offers a solution that allows development to proceed but one that can be eliminated as a long-term liability when the Lytle Creek sewer extension is ultimately constructed.

This alternative has been discussed with Mrs. Jones and the interested developers, and all are satisfied with a single pump station and forcemain and paying the Buchanan/Elam Assessment District in the amount of \$1,000 per single family unit in addition to the current standard connection fees. The development of this property is contingent upon Mrs. Jones and/or the developers obtaining and dedicating the necessary off-site sewer easements to the City for the sewer forcemain.

Staff recommended that the Board recommend to the City Council to approve the alternative to use a single pump station and forcemain for sewer service to the Jones Property.

The pump station and forcemain will be installed by the developer at the time of construction, but dedicated to the Department to operate and maintain.

Sandra Trail made a motion to approve. Dr. Carter seconded. The motion unanimously passed.

The Board considered a Professional Services Contract with ADS, LLC for engineering analysis of permanent and temporary flow monitoring data.

Currently, the Department is contracted with ADS, LLC to operate and maintain the Department's 19 permanent flow monitors and 7 rain gauges, to analyze data recorded from these monitors and to report on this data bi-annually. These bi-annual reports, report wet and dry weather capacities and rain dependent inflow and infiltration (RDII) for 18 flow monitor areas. They also are contracted to perform temporary flow monitoring, analyze the temporary data recorded and report findings as well as perform field investigations. The current Professional Services Contract is in its third year and is set to expire June 30, 2016.

ADS has the professional expertise, equipment and personnel (both office and field) to continue to provide excellent service to the Department. Staff wishes to continue to contract their professional service as we have in various forms over the last 24 years. Staff has evaluated the contract and the first year is actually a decrease from our current third year pricing. This upcoming contract is written similarly to the existing contract that there is an option to extend for two additional one year periods; however, it is different in the fact that pricing is not set for Years 2 & 3. Years 2 & 3 pricing will be negotiated based on the CPI for the Southern Region. The contract documents have been reviewed and approved by both parties.

Staff recommended that the Board recommend to the City Council to accept entering into a one year professional services contract with ADS with the option to renew for two additional one year periods if we remain satisfied with the quality and performance of their work and deliverables.

The amount of the contract is within the estimated budget amount for 2016-2017 of \$400,000.

Sandra Trail made a motion to approve. Ron Washington seconded. The motion unanimously passed.

The Board considered Littlejohn Engineering Task Order request for additional services associated with the 2015 Sewer Rehabilitation project.

Littlejohn Engineering Associates (LEA) has been advising the Department regarding the information in our sewer databases, the structure/organization of our databases among other things under our Master Services Agreement approved February 2012. At the December 2014 Board meeting it was approved for LEA to create sewer rehabilitation specifications, with the intent of bringing a proposal back for approval to design and bid a future sewer rehabilitation project. At the June 2015 Board meeting the Board approved the design work under Task Order 20150318.

At that time, staff issued an original list of items that needed repair and rehabilitation. The design fee in the original Task Order was estimated and based off a construction cost of approximately \$1.2

million. During the actual review of inspection data and design process, staff added additional mainline segments, manholes, service lateral connections, and a pump station rehabilitation to the project list which were subsequently reviewed and a rehabilitation design completed. The bid price and current contract amount for the construction contract is \$2,737,276.90 which is an increase of approximately 120% over the original estimate. Littlejohn recognizes the design is not directly linear to the construction cost; however, there was much additional effort expended to incorporate the additional rehabilitation items added prior to the bids.

In addition to the Design, there have been and will be scope changes with regard to Construction Administration, Additional Services and Resident Project Representation. These scope changes are in relation to several factors that were not accounted for after the original scope. One factor is increased construction contract time. The original estimated contract time was based on a 120-day construction time; however, with the inclusion of additional sewer mainline, manhole, and service lateral connection repairs, the contract period was increased from 120 days to 135 days. This additional time was not accounted for when estimating the cost of Construction Administration.

In relation to Supplemental Services during the project, staff requested conventional surveying and boundary research to be certain the work was being completed on City property and not a neighboring property.

In relation to Resident Project Representation it was anticipated that Littlejohn would provide some onsite training to an MWSD inspector relating to specialized trenchless repair methods such that MWSD might assume some of the project representation workload. The original agreement was budgeted for Littlejohn to provide Resident Project Representation (RPR) services for 75% of the time. However, the contractor has scheduled the necessary crews to complete the work which required a number of subcontractors, up to four or five crews, to be working simultaneously. Therefore, Littlejohn has been required to provide RPR services at 100% of the time along with an MWSD inspector 100% of the time to ensure proper coverage throughout the project area. Also, with the request of additional time via change order to perform work not in the original scope, additional time will be required to ensure coverage on the project site.

Staff is requesting a task order amendment to increase the fee ceiling to accommodate for scope modifications after the execution of the original task order.

Staff recommended the Board recommend to City Council approving the fee ceiling increase in the amount not to exceed of \$69,450 to Littlejohn Engineering associated with the change in scope for design, construction administration, project representation and supplemental services for the 2015 Sewer Rehabilitation project.

The funding for these additional fees are broken down in the table below and are recommended to come from the Department's working capital reserves.

Task	Description	Original Fee	Requested Amended Fee	Total Amended
Task 1	Design	\$45,000.00	\$16,500.00	\$61,500.00
Task 2	Construction Administration	\$36,000.00	\$12,500.00	\$48,500.00
Task 3	RPR Services	\$82,800.00	\$38,500.00	\$121,300.00
Task 4	Supplemental Services	NA	\$1,950.00	\$1,950.00
	Total	\$163,800.00	\$69,450.00	\$233,250.00

Kathy Nobles made a motion to approve. Ron Crabtree seconded. The motion unanimously passed.

The Board considered Change Order 1 for the 2015 Sewer Rehabilitation project.

At the June 2015 Board meeting the Engineering Task Order with Littlejohn was approved to design, bid, and provide construction administration and inspection for the 2015 Sewer Rehabilitation project. Also, staff brought a funding request to the Board in August and October 2015 to request approval to fund this project by reallocating a portion of the funds that were not spent from last year's 2014/2015 Budget and Working Capital Reserves (WCR) and to add that amount to this year's 2015/2016 Budget for this project. This additional funding was approved.

Bids were received for the 2015 Sewer Rehabilitation project on October 13, 2015 and the Board approved to award the project to SBW Constructors, LLC in the amount of \$2,737,276.90. Construction is on schedule and staff is happy with the work. Since the award of the contract, staff has found a couple of repairs that we would like to add to this contract. One is the pipe bursting of two sections of gravity sewer that extend between houses along Taylor Place and Greenhill Street. Pipe bursting these sections, pushing a new pipe within the existing pipe, would fix the defects along these sections of sewer without having to remove several large trees and digging between the homes. One of these sections would require the demolition of a garage that a homeowner has built without knowing he has done so on top of the easement and sewer main.

The other repair is to sand-blast, clean and coat the inside of the VA Pump Station dry-pit (PS#28) with an epoxy coating to prevent further corrosion of the metal floor and to also prevent slips and falls while inside. The second coat of epoxy will have sand added to it to create a rough surface.

The total cost of these additions to the contract are in the amount of \$57,786.60, which would increase the original contract to \$2,795,063.50.

Staff recommended the Board recommend approval from the City Council for Change Order #1 in the amount of \$57,786.60.

Funding is coming from the 2014/2015 & 2015/2016 Rate Funded Rehabilitation Budgets and 2014/2015 Working Capital Reserves.

Clay Beach made a motion to approve. Sandra Trail seconded. The motion unanimously passed.

The Board considered SSR Task Order re-budgeting request for professional services associated with the SW Regional Pumping Station, Phase 4C Headworks, Phase 4D Sinking Creek Plant Expansion, and Phase 4E Biosolids Press Replacements.

Since 2003 Water and Sewer Department staff has been working with Smith Seckman and Reid (SSR) in conjunction with the planning, design and construction of serving the southwest region of Murfreesboro with sanitary sewer. Phase 1 of the southwest interceptor was started in 2005 and Phase 4 was completed in 2014. The Southwest Regional Pumping Station and Forcemain started design in 2009, started construction in 2013 and were completed in 2015. SSR has been actively planning for the Phase 4 expansion of the Sinking Creek Treatment Plant since 2002. The following projects have been completed or are currently active as part of this 14 year initiative:

- 1) Phase 4 – Preliminary Engineering report initiated in 2002 to support upgrading the plant to 24 or 32 million gallons per day (MGD).
- 2) Phase 4B – Biosolids press additions in 2007. Four newer model presses were added to the older models installed in 1999.
- 3) Phase 4C – A new headworks started design in 2009 and was completed in 2015.
- 4) Phase 4D – Treatment infrastructure expansions including oxidation ditch, secondary clarifiers and tertiary filters were designed in 2012 and started construction in 2015; expected completion in 2018.
- 5) Phase 4E – Design of replacement of three of the four older model biosolids presses that have met their intended duty life of over 15 years in operation was started in 2015.

This endeavor has been long and expensive, but afforded the City great growth opportunities along the Joe B Jackson corridor as well as relieved several bottlenecks that caused overflows in the older gravity system.

The southwest regional pumping station offset the costs associated with having to upgrade the Stones River sanitary sewer interceptor, and should be considered a value-engineered approach to support the City's growing sewer needs.

The Department also worked very diligently with SSR to secure some very low interest loans at fixed rates between 1.1 and 1.4 percent; some having principal forgiveness associated with them. A portion of the additional services requested by SSR are in conjunction with meeting the State and Federal requirements to secure those loans.

The overall magnitude of costs involved with re-budgeting SSR's fees is nominal, but staff wanted to take this opportunity to give the Board a better understanding and appreciation of the breadth and depth associated with completing these type of regional endeavors, as well as underscore the partnership the City has with SSR. Staff believes SSR has provided great value in getting these projects completed and their fees are more than fair.

Staff gave one example involving the additional fee of \$70,723 associated with Phase 4D design to delete the mudwell, clearwell and pumps and blowers associated with the plant's filter modifications. While

the design fee increased, it was a value engineered approach to afford cost savings to the project of \$750,000 in equipment savings and \$1,250,000 in reduced concrete and excavation costs.

Staff recommended the Board recommend to City Council approving the additional services to Smith Seckman and Reid associated with the change in scope within the projects identified.

The re-budgeting request associated with the various changes in scope and additional design services equate to an overall addition of \$37,373 to the approved contract amounts with Smith Seckman and Reid. The construction amounts associated with these fees are approximately \$55M. The funding for these additional professional service fees are broken down in the table below and recommended to come from the Department's working capital reserves.

Firm	Scope	Original Fee	Rebudget Request	Revised Total
	Phase 4D Design and Project Management	\$2,661,620	\$194,536	\$2,856,156
	Phase 4C Resident Project Representative	\$255,000	-\$ (122,990)	\$132,010
	SWRPS Resident Project Representative	\$255,000	-\$ (49,428)	\$205,572
	Phase 4C Integration Design and Installation	\$149,000	\$3,600	\$152,600
	SWRPS Integration Design and Installation	\$244,000	\$1,300	\$245,300
	Phase 4E Design and Project Management	\$119,900	\$10,355	\$130,255
	TOTAL	\$3,684,520	\$37,373	\$3,721,893

Sandra Trail made a motion to approve. Dr. Carter seconded. The motion unanimously passed.

The Board considered Water and Sewer and Stormwater Funds FY17 Draft Budgets.

The water and sewer FY17 draft budget is balanced and is not expected to deviate significantly from the overall revenue and expense total of \$50,089,500. This amount is \$6.9M over the FY16 budget and \$540,000 under FY16 projected revenues.

The \$6.9M increase in budget can be attributed to the following:

- 1) An adjustment based on FY16 rate revenue to accommodate an approximate \$3.5M exceedance in projected revenue received through water and sewer rates. The FY16 rate design and growth projections were estimated to yield \$1.15M in increased revenue; the fact that this estimate tripled can only be attributed to more growth than expected. General Mills is using approximately 200,000-300,000 gallons per day more in calendar year 2016 versus calendar year 2015. The tap revenue that was collected over budget in FY16 supports the fact that residential and commercial growth is occurring above expectations.
- 2) The rate adjustments anticipated for FY17 yield approximately \$1.3M in increased revenue.
- 3) Staff has increased tap revenue associated with new growth by \$1.5M. Tap revenue is simply being adjusted above what was budgeted for FY16. Tap revenue is a direct corollary to the level of development that occurs within MWSD's service area. All tap revenue is expensed to the Department's working capital reserves to fund future capacity projects or major repair and replacement projects.

There are \$1,486,438 of sinking funds being earmarked to assign the excess revenue for future construction or repair and replacement. The sinking funds identified below have been assigned rate revenue since FY15. The total FY17 earmarked amounts and FY15-16 "banked" amounts are as tabulated below:

	<u>FY17 Budget</u>	<u>FY15-16 Budget</u>
1. Water Plant Membrane Replace (5-yrs for \$2.0M)	\$400,000	\$800,000
2. Lift Station Replacement (5-yrs for \$2.5M)	\$286,438	\$625,000
3. New Sludge Holding Building (5-yrs for \$2.5M)	\$300,000	\$600,000
4. NE Regional P.S. & FM (10-yrs for \$10.0M)	\$500,000	\$1,000,000

The sinking funds will be sustained until such time that the entire anticipated debt service hits in the first quarter of 2018 and potentially eliminates the opportunity to continue supporting sinking funds for cash funded projects. The use of sinking funds reduces the need to incur debt thereby alleviating the need for future rate increases.

Table 1 itemizes the projects that will ultimately equal an approximate annual debt service of \$3.0 million dollars. Approximately \$1.2M of that annual debt service payment is built into the Department’s FY17 budget; based on the completion of the Southwest regional pumping station, force main, and Sinking Creek Headworks projects.

Table 1: Water and Sewer Department Debt Funded CIP (FY14-18)

Project	Funding Source	Total Estimated Project Cost	Principal Forgiveness	Total Estimated Loan
Southwest Regional Pump Station	SRF	\$7.3 M	\$2.47 M	\$4.83 M
Southwest Regional Force Main	SRF	\$8.3 M	\$400k	\$7.9M
SCWWTP Headworks	SRF	\$7.8 M	\$0	\$7.8 M
SCWWTP Plant Expansion	SRF	\$30.5M	\$0	\$30.5M
Engineering & Inspection	SRF	\$1.3M	\$0	\$1.3M
TOTAL		\$55.2M	\$2.87M	\$52.33M

A rate structure change is recommended for FY17. Since July 2008, a rate strategy has been implemented to reduce the consumption allowance for a minimum bill over multiple years. In FY14, the minimum monthly allowance for 5/8 inch meters was reduced to a zero minimum allowance per month. In FY16, customers with a 5/8 inch meter (primarily residential) were increased by \$0.50 on the sanitary sewer minimum monthly bill. Approximately 96% of MWSD’s customers have 5/8” meters. In FY17, staff is recommending no rate increase for customers with 5/8 inch meters. With no rate increase, the Department maintains AWWA’s affordability index, or 4% of a very low income earner as defined by the Department of Housing and Urban Development.

The proposed FY17 rate design also reduces the minimum monthly allowance for all meter sizes one inch and greater by 50%. The minimum monthly monetary charges for all meter sizes remain the same. Table 2 provides the average monthly dollar increase for each size meter one inch and greater.

TABLE 2: Estimated FY16-20 Revenue Generated based on Average Monthly Bills by Meter Size

Fiscal Year	Estimated ↑ Revenue	Monthly Rate Increase for 5/8" Residential	Avg Monthly Increase for 1" & 1 1/2" Meters	Avg Monthly Increase for 2" & 3" Meters	Avg Monthly Increase for 4" & 6" Meters
July 1, 2015 (FY16)	\$1,153,676	\$0.50	\$6.39	\$29.07	\$184.78
July 1, 2016 (FY17)	\$1,304,951	\$0.00	\$6.39	\$29.07	\$184.78
July 1, 2017 (FY18)	\$1,498,227	\$0.00	\$6.39	\$29.07	\$184.78
July 1, 2018 (FY19)	\$159,368	\$0.00	\$0.00	\$0.00	\$0.00
July 1, 2019 (FY20)	\$159,368	\$0.00	\$0.00	\$0.00	\$0.00
5-yr Total	\$4,275,589	5-yr Pro Forma Requirement		\$3,180,495	

The water rate is recommended to remain at \$2.74 per 100 cubic feet. The Sewer Service Fee is recommended to remain at \$3.34 per 100 cubic feet and the Sewer Operation and Maintenance Fee is recommended to remain at 90 cents per 100 cubic feet. The average monthly bill for an MWSD customer that uses 5,200 gallons per month for water and 4,800 gallons per month of sewer will remain the same, or \$66.70 per month.

There are no increases recommended to the water and sewer connection fees. Based on findings in the Cost of Service Study by Jackson Thornton Utilities in 2007, water and sewer connection fees were scheduled to increase annually until the water connection fee reached \$1,700 and the sewer connection fee \$3,300. The Study identifies connection fees that can be justified based on utility assets. However, when setting these fees the regional market and economy are taken into account. These increases are recommended to be suspended and considered again next year.

The FY17 total operating expenses, including benefits and payroll, decreased \$(468,102), or -2.3% over the FY16 budgeted amount.

The FY16 budget for All Labor and Related Expenses was \$11,796,577, which included Payroll, Benefits and workers' compensation insurance expenses. With the following personnel requests, the FY17 budget is expected to increase by 0.87% or \$102,895. There are a total of 164 full time and three part time positions budgeted for FY17. Included in the full time positions are 7 positions in the Stormwater Department. There are three new positions requested for the FY16 personnel budget:

1. Administration/Finance – One (1) new position; an Accounting Specialist for succession planning purposes.
2. Engineering – One (1) part time Administrative Support Specialist position proposed as a full time. This position was full time prior to the recession occurring in 2009. When the recession occurred, this position was vacated and not filled. It was filled as part-time last year, and warrants a full time employee based on increased work volume.
3. Customer Service – One (1) full time Cashier reduced to a part-time position. With the decreased in office payments, the Department believes replacing a full time position will still provide for coverage during “peak” customer traffic and “fill in” for vacation and sick leave absences of the other two (2) full time Cashiers.

4. Wastewater Plant – A new Plant Operator position is being requested due to increased need as part of the 50% plant expansion, as well as moving towards two (2) operators per shift for safety purposes.

The rate funded capital budget is \$6,653,565, which is an increase of \$2,068,831 from the FY16 budget. MWSD's goal is a minimum of \$5 million per year in rate-funded capital purchases. With increased projected revenues from FY16 factored into the FY17 budget, staff is investing more into the Department's sanitary sewer rehabilitation improvements as well as invest in some water plant improvements to cover the settling basins. Debt service expense has basically stayed flat as compared to FY16 budget.

The Stormwater Fund budget is independent of the Department budget. It is funded from revenue based on a user fee of \$3.25 per single family equivalent. The fund will be in its eighth year in FY17. No change is recommended to the fee. The net revenue generated by the stormwater fee is budgeted at \$2.85M with operation expenses budgeted at \$1,721,536 and rate funded capital expenditures at \$539,899. The rate funded stormwater capital expenditures include a street sweeper, dump truck and one ton truck for the City's Street division. The anticipated excess funds above operating expenses and rate funded capital expenditures are \$338,565. The stormwater fund has developed an extensive five (5) year Capital Improvements Plan, currently totaling \$5,750,000 from FY17 through FY21. A five (5) year pro forma has been developed to demonstrate the banking of excess revenues to pay for these proposed capital improvements without incurring any debt. Financial policies for the stormwater enterprise fund were adopted by the Water and Sewer Board and City Council on May 21, 2013 and July 11, 2013, respectively.

Staff recommended the Board recommend approval of the FY17 Water and Sewer DRAFT Budget to City Council.

Ron Washington made a motion to approve. Clay Beach seconded. The motion unanimously passed.

Staff recommended the Board recommend approval of the FY17 Stormwater DRAFT Budget to City Council.

Ron Washington made a motion to approve. Sandra Trail seconded. The motion unanimously passed.

Staff presented the Board the 2015 Annual Water Quality Report.

The purpose of the annual water quality report is to inform the Department's customers of their water quality and to meet federal and state regulatory requirements. In accordance with the Environmental Protection Agency rules and TDEC regulation, staff must deliver a consumer confidence report (annual water quality report) to all customers no later than July 1st with the water quality results of the previous calendar year.

In addition to mailing the annual water quality report, the report will be placed on the City’s website and copies located at the Linebaugh Library, the Administration building and other locations throughout the City.

Under Other Business, staff updated the Board on the 2016 Water Treatment Plant Chemical Bid for Coagulant.

The Council and Water and Sewer Board approved staff recommendations for chemical bids in April and March respectively. This is to update the Board on staff’s selection.

The raw bid tabulation for polyaluminum hydroxychloride bid prices including freight.

	Chemical
Company Name	Poyaluminum Hydroxychloride
Chemtrade	\$0.2465/lb
Dycho	\$0.203/lb
Kemira	\$0.33/lb
Summit Chemical Specialty Products	\$0.206/lb

Not Approved
Approved

Staff has reviewed the bid submissions and determined the lowest responsible and responsive bidder for the polyaluminum hydroxychloride as Summit Chemical Specialty Products. Laboratory analyses need to be performed for polyaluminum hydroxychloride products during a cold water plant trial to determine if the product is acceptable. Dycho was not selected because the product was not submitted in a sufficient amount of time to perform the proper cold water plant trial. Staff has performed a cold water plant trial with the bid product submitted by Summit; therefore, recommended selecting Summit for full-scale application.

The price of the chemicals will be reflected in the FY 2016-17 Operating Budget with a contract price through June 30, 2017. The estimated annual expense for FY 2016-17 Operating Budget is \$31,000.

Sandra Trail made a motion to approve. Clay Beach seconded. The motion unanimously passed.

Staff presented and discussed the Water and Sewer Dashboard Performance for March 2016.

Staff presented and discussed the Financial Reports for the year ending March 31, 2016.

There being no further business, the meeting was adjourned.



... creating a better quality of life

MEMORANDUM

DATE: May 16, 2016

TO: Water and Sewer Board

FROM: Valerie H. Smith

RE: Wilkinson Pike Reconstruction
Thompson Lane to Chamber of Commerce
Proposal for Engineering Services

Background

The City is moving forward with the design to reconstruct and widen the above portion of Wilkinson Pike. Typically the Department's policy is to replace and upgrade the existing water and sewer mains with new roadway reconstruction projects to avoid having old lines within a new road. However, the water service provider for this area is Consolidation Utility District and the sewer infrastructure in this area is very young, so replacement is not necessary. What is necessary is to extend a combination of gravity sewer and sewer forcemain to those properties that do not have public sewer available as well as repurified water.

The City is under contract with Wisser Consultants, LLC to design the roadway improvements and as matter of standard practice, staff has requested a proposal from Wisser Consultants to design the sewer improvements.

Wisser Consultants, LLC has provided their proposal in the lump sum not to exceed amount of \$24,850. They have also estimated the construction costs for the repurified water and sewer improvements at a total of \$655,059 which includes a ten (10%) percent contingency amount.

Recommendation

Staff would like to recommend the Board to recommend approval from the City Council the proposal for engineering design services in the amount not to exceed \$24,850.

Fiscal Impact

This project was a planned project listed in the 5-year capital improvement plan for years FY16 and FY17 with the construction costs to be funded from working capital reserves in the amount

of \$200,000. However, this amount did not include costs associated with extending repurified water. The 5-yr working capital reserve CIP has been updated to reflect the new estimate; adequate funds exist for the increased costs associated with running a repurified main along the length of the improvements.

Attachments

Proposal Wiser Consultants, LLC
Exhibit of Project Area



Wiser Consultants, LLC
1427 Kensington Square Court
Murfreesboro, Tennessee 37130

www.wiserconsultants.com

p. 615-278-1500

f. 615-217-8130

May 17, 2016

Valerie Smith, PE
Murfreesboro Water and Sewer Department
300 NW Broad Street
Murfreesboro, Tennessee 37130

**RE: Sanitary Sewer and Repurified Waterline Design Services for Wilkinson Pike Improvements
Murfreesboro, Tennessee**

Dear Mrs. Smith,

Wiser Consultants is pleased to submit to you our scope of work for professional services to develop construction plan sets and specifications for the above referenced project. Scope of Services shall include the development of preliminary and final construction plans, cost estimate and specifications for approximately 930 linear feet of 8" sanitary sewer line, approximately 2,000 linear feet of sanitary sewer force main, and approximately 7,700 linear feet of 8" C-900 PVC re-purified waterline.

We propose to accomplish this scope of work on a Lump Sum Not to Exceed basis in the amount of **\$24,850.00**.

Preliminary Design	\$8,700.00
Final Design	\$9,950.00
Bidding or Negotiating	\$1,250.00
<u>Construction</u>	<u>\$4,950.00</u>
Total	\$24,850.00

We are available to begin work upon notice to proceed from the City of Murfreesboro.

As always, Wiser Consultants looks forward to working with you and your staff on this project.

Sincerely,

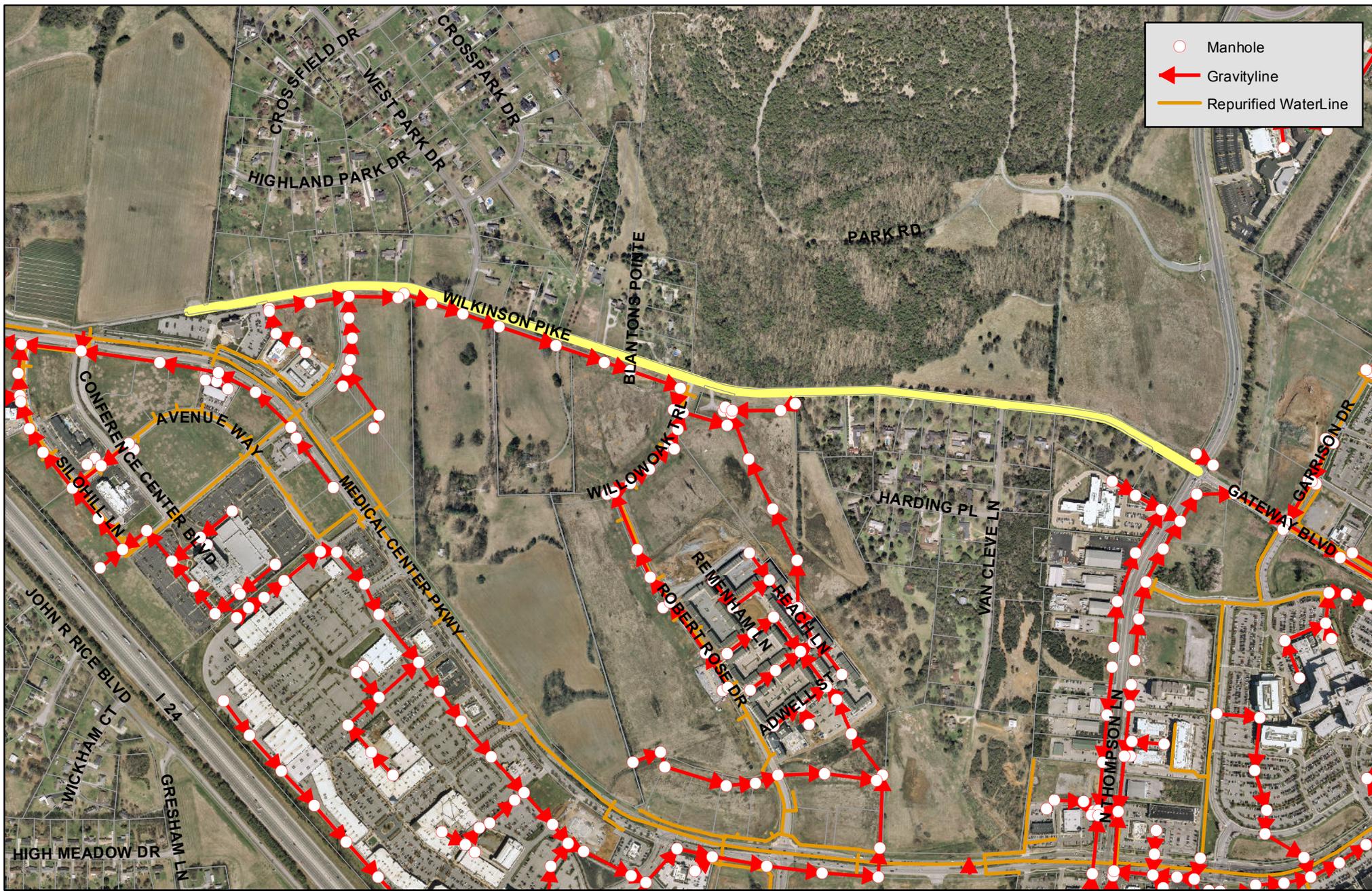
WISER CONSULTANTS, LLC

Kyle M. Peters, PE

Attachments: Opinion of Probable Construction Cost

Opinion of Probable Cost
Wilkinson Pike Force Main and Re-Purified Water Line
Murfreesboro Water & Sewer Department

Item	Unit	Estimated Quantity	Estimated Unit Price	Estimated Cost
Sanitary Sewer - Force Main				
Mobilization	LS	1	\$25,000.00	\$25,000.00
Construction Stakes, Lines and Grades	LS	1	\$10,000.00	\$10,000.00
8" PVC SDR26 Gravity Sanitary Sewer	LF	930.5	\$90.00	\$83,745.00
4' Diam. Manholes	EACH	10	\$4,000.00	\$40,000.00
Connect to Existing Sewer	EACH	9	\$1,500.00	\$13,500.00
TV Inspection 8" PVC Sewer	LF	930.5	\$5.50	\$5,117.75
2.5" SDR21 PVC Class 200 (Force Main)	LF	2000	\$35.00	\$70,000.00
2.5" Tee	EACH	11	\$45.00	\$495.00
2.5" Ball Valve	EACH	13	\$400.00	\$5,200.00
2.5" Check Valve	EACH	13	\$400.00	\$5,200.00
2.5" Combo Air Release Valve Assembly	EACH	2	\$2,000.00	\$4,000.00
2.5" Terminal Flushing Connection	EACH	1	\$1,750.00	\$1,750.00
Re-Purified Water				
8"C-900 PVC Waterline	LF	7700	\$40.00	\$308,000.00
Connect to Existing Waterline	EACH	2	\$5,000.00	\$10,000.00
8" Water Valves	EACH	7	\$1,000.00	\$7,000.00
8" Tee	EACH	1	\$500.00	\$500.00
Blow-Off Hydrant Assembly	EACH	2	\$3,000.00	\$6,000.00
Subtotal - Opinion of Probable Cost				
				\$595,507.75
10% Contingency				
				\$ 59,550.78
Total - Opinion of Probable Cost				
				\$655,058.53



MURFREESBORO WATER AND SEWER DEPARTMENT

Wilkinson Pike Reconstruction





... creating a better quality of life

MEMORANDUM

DATE: May 16, 2016
TO: Water and Sewer Board
FROM: Darren Gore, Director
SUBJECT: Water Supply in J. Percy Priest Reservoir – National Water Supply Alliance Memorandum of Understanding (MOU)

Background

I believe you all have been aware that since December of 2015, I have been involved with a group of water supply providers that withdraw from Corps reservoirs. The group has been meeting to discuss common principles, goals and objectives that they could coalesce around to abate some of the inconsistencies in Corps' administered policy and advocate for water supply at a stronger level with Congress, primarily through affecting legislation, specifically the Water Resource Development Act (WRDA) that is scheduled to be put forward every other year.

The group met for a 3rd time on May 4th, 2016 in Kansas City and is developing a Memorandum of Understanding (MOU) to form an unincorporated coalition that intends to articulate those common principles and tactics. The term being used to label the group in the MOU is the National Water Supply Alliance (NWSA). The immediate expectation is for the group to use that MOU to demonstrate to their Congressional delegation that the inconsistent or bad policy and lack of water supply as a preeminent use in Corps reservoirs is causing a National hardship, not just a local difficulty.

I have been placed on the steering committee and charged with determining whether this organization should become a newly formed incorporated nonprofit or affiliate the group's members under a pre-existing organization that can accomplish the goal of making water supply a priority with the Corps and Congress.

A draft mission statement for the group would be something along the lines of:

To advocate for the preservation and enhancement of the nation's water supply, protection of traditional State authorities, and to ensure that water supply interests share equitably in the benefits provided by U.S. Army Corps of Engineers' water projects.

So in the long-term, we are expecting to formulate a dues structure that would be capable of funding some type of management structure that has the ability to lobby Congress on common-ground issues; becoming either a newly formed organization or come in under the umbrella of a pre-existing organization that can fulfill the mission and goals outlined. I will keep the Board abreast of "next steps", but I believe the water supply use in Corps' projects is "growing up" with the understanding that in order to have a voice in Corps policy and National legislation there has to be a strong advocacy group created.

Water and Sewer Department

300 NW Broad Street * P.O. Box 1477 * Murfreesboro, TN 37133-1477 * Office: 615 890 0862 * Fax: 615 896 4259
TTY 615 848 3214 * www.murfreesborotn.gov

Recommendations

Staff recommends the Board approve the Director entering the Murfreesboro Water and Sewer Department into the final draft NWSA Memorandum of Understanding.

Attachments

National Water Supply Alliance DRAFT Memorandum of Understanding (MOU)
National Water Supply Alliance DRAFT Mission, Principles, Goals and Tactics

NATIONAL WATER SUPPLY ALLIANCE

MEMORANDUM OF UNDERSTANDING

This agreement entered into as of this ____ day of _____, 2016, describes the principles that will guide the National Water Supply Alliance (NWSA), an unincorporated voluntary membership organization.

RECITALS

Whereas, a national organization is needed to advance the interests of water supply providers before the United States Army Corps of Engineers and the United States Congress;

Whereas, a network is needed to share information amongst water supply interests and to provide a point of contact for members of Congress and the Corps; and,

Whereas, the National Water Supply Alliance has formed to meet these needs...

AGREEMENT

Now therefore, the undersigned members of NWSA agree as follows:

Mission

The mission of NWSA is to preserve and enhance the nation's water supply, protect traditional State authorities, and ensure that water supply interests share equitably in the benefits provided by U.S. Army Corps of Engineers' water projects.

Activities

NWSA will develop position papers, comment letters, and such other work product as its members deem appropriate. The primary purpose of this agreement is to specify the procedures for developing such materials, and the circumstances under which such materials may be cited as the work of NWSA.

Membership

Membership in NWSA is open to local, regional, state, and interstate entities that identify with and seek to promote the interests of water supply providers in relation to the United States Army Corps of Engineers. Other individuals and entities (including professional service firms) who work for or represent such entities may participate but will not be considered members in their own right.

Dues

No dues will be collected unless and until this agreement is revised to create a more formal governing structure. Until then, individual members may choose to participate and to contribute to specific initiatives as they see fit.

Governance

Voting

NWSA will strive to achieve consensus on all work product. When votes are taken, each member entity will get one vote.

Steering committee

A steering committee will develop materials and make recommendations to the group for approval. The steering committee will be open to all members, who may volunteer to serve for selected projects as they choose.

Work Product and Approvals

Materials developed by the steering committee will be presented to the membership for approval. Any work product approved by at least two-thirds of the membership may be cited as the work product or position of NWSA, but only if a list of the member entities that approved or did not object to it is also prominently displayed.

SIGNATURES

>>>

DRAFT National Water Supply Alliance (NWSA) MOU Attachment

Mission

To advocate for the preservation and enhancement of the nation's water supply, protection of traditional State authorities, and to ensure that water supply interests share equitably in the benefits provided by U.S. Army Corps of Engineers' water projects.

Principles

1. Army Corps of Engineers' Mission
 - a. Greater priority should be given to water supply as a purpose of federal water projects.
 - b. Corps policies should be designed to support State and regional preferences, policies, and priorities relating to water resources to the extent that they are not inconsistent with Federal law and regulation.
 - c. Corps policies should encourage and incentivize State and local practices that increase the benefits provided by federal water projects.
 - d. The Corps must continue to seek the necessary appropriations and staff resources to be responsive to stakeholders and to collaborate with state and local partners.
 - e. The Corp's decision-making process should be improved and include an overall Corps policy framework to provide greater transparency, predictability, and timeliness.
 - f. Corps permitting policies and processes should be designed to encourage timely development of new water resources
2. State Primacy
 - a. States have exclusive authority over the allocation and administration of rights to the use of surface water located within their borders and are primarily responsible for protecting, managing and otherwise controlling the resource.
 - b. States are in the best position to allocate and administer water resources through state laws and regulations that are specific to their individual circumstances.
 - c. The Corps has authority to provide a beneficial service by storing water. The Corps should defer to States to allocate the water rights needed to utilize storage in Corps projects.
3. Contracts and Pricing
 - a. As dictated by the Water Supply Act of 1958, fees charged to water supply users should be designed to ensure that users share equitably in the benefits provided by multiple purpose construction.
 - b. Pricing policies should be transparent, predictable, and consistent across districts. Prices should also be consistent with the principle that the charge is for providing a service (storing water) and not for the water itself.

Goals

- Influence WRDA 2016 and subsequent WRDA bills
- Influence the upcoming Corps' "water supply rules"
- Make comments to the GAO study on water supply pricing policies
- Advocate for additional GAO studies on topics such as Corps' implementation of the 3x3x3 rule and the 404 permitting process.

(Draft Goals not yet discussed or vetted)

- Determine the correct strategic position regarding whether or not to advocate for adding water supply as a USACE mission, equivalent to flood control and navigation.
- Change Corps policies that infringe on state primacy or local priorities:
 - a. Return Flows –
 - b. Surplus Storage – ensure that the upcoming ‘water supply rule’ includes the following principles:
 - i. Contract lengths should be long enough to incentivize investment in water supply infrastructure.
 - ii. Pricing should reflect the true market value of the water
 - iii. Priority should be given to existing contract holders and future use of the surplus water should recognize the investments made by existing contract holders.
 - c. Water Rights – change the following policies that conflict with states’ control and administration of water rights:
 - i.
- Change Corps policies so that contracts and pricing reflect the principles stated above. Specific policies include: (GAO study will help with this...)
 - a.
 - b.
 - c.
- Work towards passage of a biannual WRDA bill.
- Decrease the time required for issuance of 404 permits from the Corps and EPA to a maximum of 5 years by advocating for the following policies:
 - a.
 - b.
 - c.
- Goals regarding storage reallocations?

Tactics

Convene

1. Convene the alliance on a schedule befitting its advocacy targets and lobbying agenda; paralleling legislative or Corp policy activity.
2. Document and report on alliance capacity, advocacy efforts and policy outcomes. The ultimate purpose of reporting is to allow NWSA to adapt strategies and improve future outcomes. It is, however, also a way to demonstrate impact and attract more resources to the alliance, to use in increasing membership and fundraising.

Engage

1. Engage Congress, Congressional staff, stakeholders and media as appropriate and at a level commensurate with legislative and national policy activity. Become known as the subject matter expert and primary point of contact in all matters related to water supply in Corps projects.
2. Network and share advocacy opportunities with other Corps project water supply users through Informal learning groups, webinars, workshops, updates and resources. Advocacy opportunities include sign-on letters, meetings with policymakers and advocacy trainings.
3. Maintain an active web presence to share updates, advocacy agenda, events, partnerships, etc. The website should connect the alliance with other Corps water supply users working on similar issues.

4. Connect with users in the alliance by managing a listserv; ask questions of peers, suggest learning groups ideas and share information on the listserv.
5. Create a clearinghouse containing existing water supply agreements, enabling project legislation and water allocation modeling of Corps projects.

Lead

1. Spearhead lobbying efforts to promote water supply as highest public benefit in proposed legislation (e.g., Water Resource Development Act).
2. Strategically position alliance members regarding state's primacy in allocating water rights. Influence Corps policies to the benefit of stakeholders responsible for public water supply.
3. Participate in virtual discussions, online polls, work groups and in-person leadership meetings to help set priorities and shape the direction of the alliance.
4. Suggest topics for, participate in and consider facilitating informal learning groups, webinars and workshops. Share knowledge and expertise with alliance members.



... creating a better quality of life

MEMORANDUM

DATE: May 16, 2016

TO: Water and Sewer Board

FROM: Valerie H. Smith

RE: Lytle Street Phase II Reconstruction
Between Barker Street and Church Street
Recommendation of Award

Background

At the September 2015 Board Meeting an engineering proposal was approved for Wiser Company to design the replacement and relocation of the existing water and sewer mains within the project area listed above. This phase of the reconstruction will extend from Barker Street to Church Street to include portions of Front, Walnut and Maple Streets.

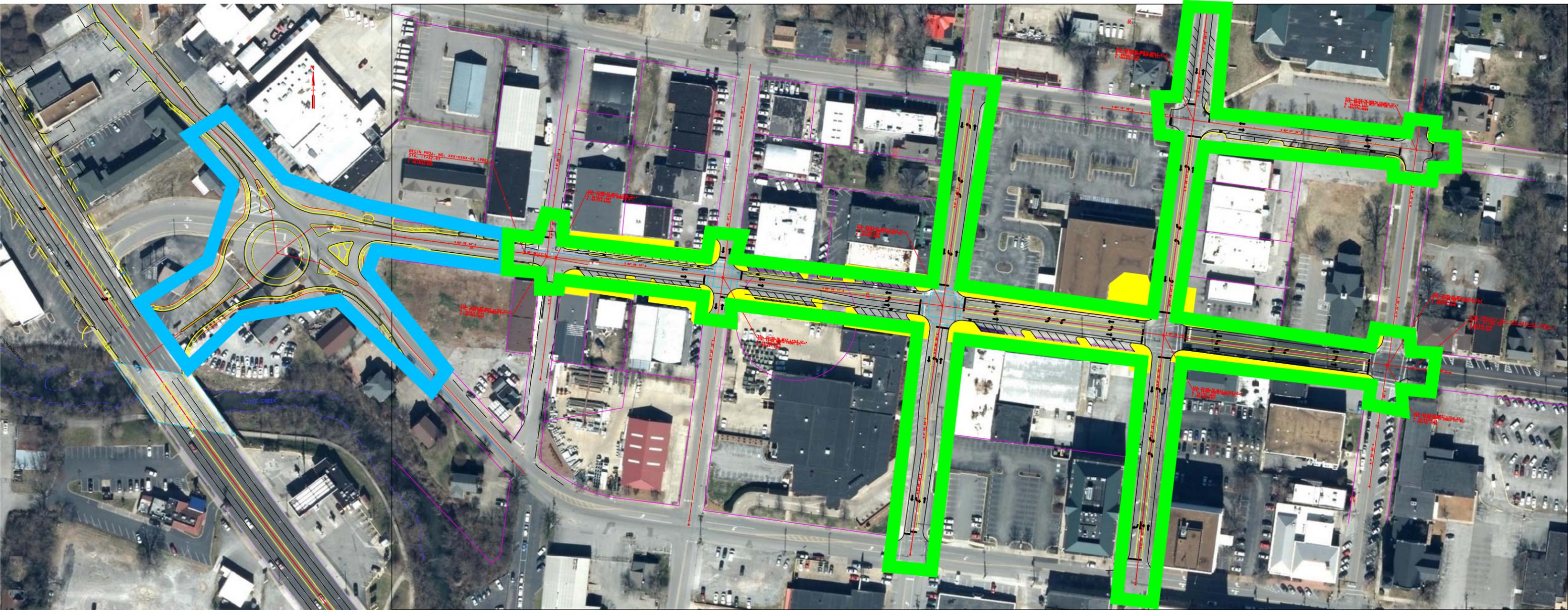
The last Engineers estimate for construction of the replacement/relocation of the existing water and sewer mains was in the amount of \$1.17M. Bids were received for the project on April 14, 2016; however, the City decided to re-bid the project. The bid opening is May 24th at 2:00 p.m. and will likely be taken to City Council for approval prior to the June Water & Sewer Board meeting. Results of the bids will be sent to you via email for your information.

Fiscal Impact

This project was a planned project listed in the 5-year capital improvement plan for years FY16 and FY17 with the construction costs to be funded from working capital reserves in the amount of \$1.17M. Adequate reserve funds exist to fund this project. Staff previously requested the engineering and construction costs of the project to be funded from working capital reserves.

Attachments

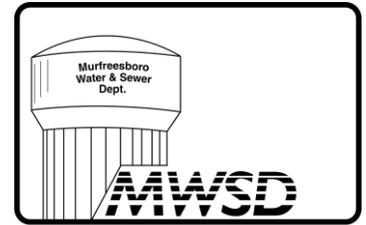
Lytle St. Phase 1 and Phase 2 Exhibit



Lytle Street - Phase 1 and 2
Proposed Limits
09/18/2015

Legend

Phase 1:	
Phase 2:	



WATER AND SEWER ***DASHBOARD PERFORMANCE***

April 2016



PRELIMINARY MWSD FY2016-2020 CIP

NO.	PROJECT	2015-2016 2015 Issue	2016-2017 2016 Issue	2017-2018 2017 Issue	2018-2019 2018 Issue	2019-2020 2019 Issue	TOTAL
	Wastewater Treatment Plant Expansion						
	Engineering (4C, 4D, SW FM & PS)	\$200,000	\$200,000	\$50,000			\$450,000
	Construction- Northeast Regional force main						\$0
	Construction- Northeast Regional pumping station						\$0
	Process expansion to 24 mgd, Phase 4D	\$14,500,000	\$13,000,000	\$2,000,000			\$29,500,000
	TOTAL Capital Improvements funded from Debt Service	\$14,700,000	\$13,200,000	\$2,050,000	\$0	\$0	\$29,950,000

NO.	PROJECT	2015-2016 2016 FY	2016-2017 2017 FY	2017-2018 2018 FY	2018-2019 2019 FY	2019-2020 2020 FY	TOTAL
	Sewer rehab- Account 335	\$1,250,000	\$1,250,000	\$1,250,000	\$1,250,000	\$1,250,000	\$6,250,000
	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
	Water Plant Membrane Replacement Sinking Fund	\$400,000	\$400,000	\$400,000	\$400,000	\$0	\$1,600,000
	Biolsolids Storage Sinking Fund	\$300,000	\$300,000	\$300,000	\$300,000	\$0	\$1,200,000
	Lift Station Replacement Sinking Fund	\$125,000	\$286,000	\$125,000	\$125,000	\$125,000	\$786,000
	NE Regional PS & FM Sinking Fund	\$0	\$500,000	\$500,000	\$500,000	\$500,000	\$2,000,000
	GAC Replacement	\$110,000	\$110,000	\$110,000	\$110,000	\$110,000	\$550,000
	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	\$4,820,000	\$5,481,000	\$5,320,000	\$5,320,000	\$4,620,000	\$25,561,000

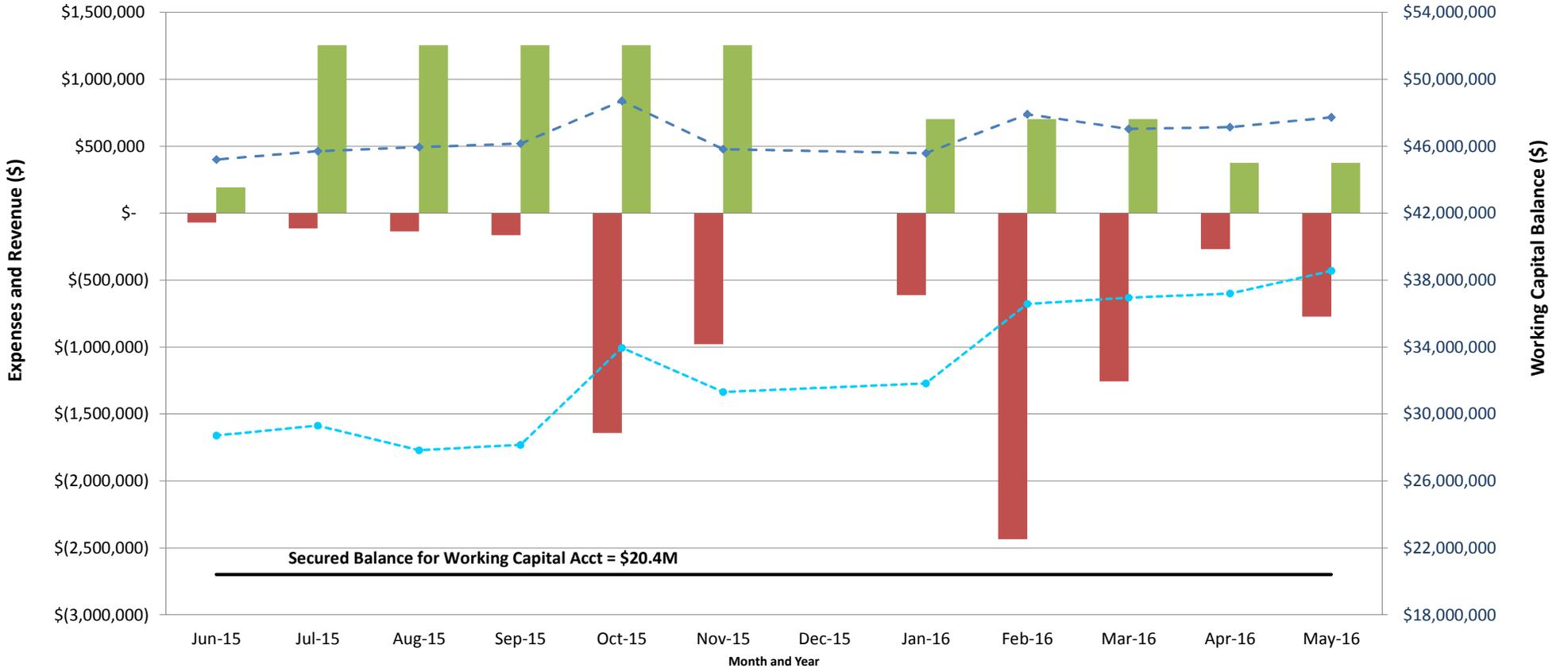
NO.	PROJECT	2015-2016 2016 FY	2016-2017 2017 FY	2017-2018 2018 FY	2018-2019 2019 FY	2019-2020 2020 FY	TOTAL
	W&S CAPITAL IMPROVEMENT PROJECTS						
	Misc FY15 Working Reserve Commitments	\$2,100,000					\$2,100,000
	Customer Service Area Security Renovations	\$450,000					\$450,000
	Contingency Items (Generators, Gear Box, HVAC)	\$775,000					\$775,000
	NE Regional Engineering Design	\$500,000	\$500,000	\$500,000	\$200,000	\$200,000	\$1,900,000
	NE Regional P.S.				\$2,500,000	\$5,000,000	\$7,500,000
	NE Regional Force Main				\$2,500,000	\$5,000,000	\$7,500,000
	SCWWTP Phase 4D Engineering & Inspection	\$300,000	\$250,000				\$550,000
	Lift Station Rehab/Replacement (#2, #13, #19 & #20)	\$1,500,000	\$500,000	\$500,000	\$500,000		\$3,000,000
	S. Church St. Sewer @ Joe B. Jackson Pkwy	\$250,000					\$250,000
	Water Resource Integration Plan (WRIP)	\$400,000					\$400,000
	WTP Membrane Replacement				\$2,000,000		\$2,000,000
	Biolsolids Storage Addition			\$1,500,000			\$1,500,000
	Water Quality Studies		\$50,000	\$50,000	\$50,000	\$50,000	\$200,000
	Subtotal CAPITAL PROJECTS	\$6,275,000	\$1,300,000	\$2,550,000	\$7,750,000	\$10,250,000	\$28,125,000
	TRANSPORTATION (Water/Sewer Imp.)						
	Bradyville Pike		\$500,000	\$500,000			\$1,000,000
	MT Blvd Widening- Greenland to Main	\$750,000	\$750,000	\$140,000			\$1,640,000
	Lytle St. Relocation (Ph1 & Ph2)	\$390,000	\$1,170,000				\$1,560,000
	SR 99 Widening- Old Fort to Cason Lane		\$500,000	\$500,000			\$1,000,000
	Cherry Lane Repurified Main Extension (14,600 LF)		\$825,000	\$1,000,000			\$1,825,000
	Maney Avenue Reconstruction - Phase 2		\$250,000	\$250,000			\$500,000
	Wilkinson Pike Reconstruction (MCP to TL)		\$650,000				\$650,000
	Subtotal TRANSPORTATION PROJECTS	\$1,140,000	\$4,645,000	\$2,390,000	\$0	\$0	\$8,175,000
	REHABILITATION						
	Sewer Rehabilitation - Maintenance Contract	\$1,500,000	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000	\$5,500,000
	INFORMATION TECHNOLOGY PROJECTS						
	CIS, IVR, MWM	\$50,000					\$50,000
	Advanced Metering Infrastructure (AMI)	\$4,150,000	\$2,850,000				\$7,000,000
	IT/Computer Systems Hardware Upgrades	\$200,000	\$50,000	\$50,000	\$50,000	\$50,000	\$400,000
	Financial Information Systems (FIS), HRIS						\$0
	Electronic Content Management (Scanning/Imaging)		\$150,000	\$150,000	\$150,000		\$450,000
	IT Design Services & Consulting	\$100,000	\$100,000	\$100,000	\$100,000		\$400,000
	Computerized Maintenance Management System (CMMS)			\$200,000	\$200,000		\$400,000
	Subtotal INFORMATION TECHNOLOGY PROJECTS	\$4,500,000	\$3,150,000	\$500,000	\$500,000	\$50,000	\$8,700,000
	TOTAL Projects from Working Capital Reserves	\$13,415,000	\$10,095,000	\$6,440,000	\$9,250,000	\$11,300,000	\$50,500,000

PROJECTED RESERVE FUND BALANCE REVENUE (TAPS)	\$8,500,000	\$6,000,000	\$4,500,000	\$4,500,000	\$4,500,000
PROJECTED ENHANCED REVENUE FOR RESERVES	\$200,000	\$500,000	\$750,000	\$2,000,000	\$2,000,000
SINKING FUND DEPOSITS TO RESERVES FROM RATES	\$825,000	\$1,486,000	\$1,325,000	\$1,325,000	\$625,000
SECURED MIN. BALANCE FOR WORKING CAPITAL RESERVES	\$20,404,791	\$20,812,887	\$21,229,145	\$21,653,727	\$22,086,802
PROJECTED WORKING CAPITAL RESERVE BALANCE	\$41,024,556	\$38,915,556	\$39,050,556	\$37,625,556	\$33,450,556
FUNDS ABOVE SECURED MINIMUM BALANCE	\$20,619,765	\$18,102,669	\$17,821,411	\$15,971,829	\$11,363,754

**Preliminary Draft 5-YR CAPITAL IMPROVEMENTS PLAN (CIP)
STORMWATER UTILITY FUND, FY16-20**

NO.	PROJECT	Originator	2015-2016 2016 FY	2016-2017 2017 FY	2017-2018 2018 FY	2018-2019 2019 FY	2019-2020 2020 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	\$50,000	\$150,000	\$125,000			\$325,000
NP-2	Mitchell-Nielson Drainage Project	City Eng	\$50,000	\$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	\$300,000	\$200,000				\$500,000
NP-5	Liberty Dr. / Thatcher Trace Spring Box	City Eng			\$25,000	\$50,000	\$50,000	\$125,000
NP-6	Pennington Drive Drainage Repair/Upgrade (Added)	City Eng						\$0
NP-7	Gateway Pond Repair (Added)	Eng/MWSD						\$0
NP-8	Hardwood Drive Drainage Upgrade (Added)	City Eng	\$100,000	\$250,000				\$350,000
NP-9	Pacific Place/Riverrock Blvd Drainage Imp.	City Eng		\$150,000	\$200,000			\$350,000
	Subtotal		\$500,000	\$900,000	\$450,000	\$50,000	\$50,000	\$1,950,000
	Water Quality Improvement (Compliance) Projects (WQ)							
WQ-1	Town Creek Bioretention BMP's @ Cannonsburgh	MWSD		\$75,000				\$75,000
WQ-2	Molloy Lane Water Quality Pond	MWSD		\$100,000	\$100,000			\$200,000
WQ-3	Rosebank Springs Constructed Wetlands	City Eng	\$500,000	\$300,000				\$800,000
WQ-4	Lee's Branch Stream Restoration	City Eng		\$50,000	\$50,000	\$50,000	\$50,000	\$200,000
WQ-5	West Fork Stones River at Cason Trail; bank repair	MWSD	\$100,000					\$100,000
WQ-6	Bear Branch Water Quality Mitigation	City Eng		\$50,000	\$50,000	\$50,000	\$50,000	\$200,000
WQ-7	Sinking Creek Headwater protection BMP	City Eng		\$100,000	\$100,000	\$150,000	\$150,000	\$500,000
WQ-8	Todd's Lake Regional Wetlands Improvements	City Eng						\$0
WQ-9	Hooper's Bottom Regional Water Quality Project	City Eng	\$75,000	\$150,000	\$150,000	\$150,000		\$525,000
WQ-10	Lytle Creek/Ridgley Road Bacteriological Reduction (Added)	MWSD				\$50,000		\$50,000
WQ-11	Memorial Blvd/VA Pond Trash Rack (Added)	MWSD				\$50,000		\$50,000
WQ-12	Spence Creek Restoration	Eng/MWSD	\$100,000	\$25,000	\$25,000	\$25,000	\$25,000	\$200,000
	Subtotal		\$775,000	\$850,000	\$475,000	\$525,000	\$275,000	\$2,900,000
	Public Drainage/Streets Participation Projects (PD)							
PD-1	Maney Avenue Phase 2	City Eng						\$0
PD-2	Town Creek Conveyance (Murfree Springs to Cannonsburgh)	City Eng	\$250,000	\$175,000	\$175,000	\$175,000		\$775,000
PD-3	Maple St. Alley Permeable Paver Project	City Eng	\$100,000					\$100,000
	Subtotal		\$350,000	\$175,000	\$175,000	\$175,000	\$0	\$875,000
	Parks & Rec and School Participation Projects (PP)							
PP-1	Hobgood School Porous Pavers	City Eng						\$0
PP-2	McFadden LID Project	MWSD						\$0
PP-3	Parks and Rec Office/Ag Center Pervious Parking Lot	MWSD						\$0
PP-4	West Elementary School Porous Pavers/Outdoor Classroom	City Eng						\$0
PP-5	Hobgood School Pervious Pavers Phase 2	City Eng						\$0
PP-6	Black Fox School Pervious Pavers	City Eng						\$0
PP-7	Police HQ Sinking Creek Water Quality Project	City Eng						\$0
	Subtotal		\$0	\$0	\$0	\$0	\$0	\$0
	Watershed Planning Projects / Development Participation (DP)							
DP-1	Warrior Dr. Regional Stormwater BMP	MWSD						\$0
DP-2	Mercury Plaza Shopping Center Pervious Parking Conversion	City Eng						\$0
	Subtotal		\$0	\$0	\$0	\$0	\$0	\$0
	Totals		\$ 1,625,000	\$ 1,925,000	\$ 1,100,000	\$ 750,000	\$ 325,000	\$ 5,725,000

MWSD Working Capital Reserves Dashboard



■ Working Capital Expenses
 ■ Estimated Working Capital Revenues
 —◆— Estimated Working Capital Balance
 - - -◆- - - Estimated UNCOMMITTED Working Capital Balance
 — Secured Working Capital Reserve

EFFECTIVE UTILITY MANAGEMENT
Financial Viability
MWSD WORKING CAPITAL ACCOUNT SUMMARY

ESTIMATED Working Capital at 4/30/16

Board Designated (System Dev, Assessments, etc) as of 6/30/15	\$	28,659,579
Undesignated Excess Funds as of 6/30/15		18,310,430
Estimated Reserve Revenue thru 4/30/16		9,134,785
Estimated Reserve Expenditures thru 4/30/16		(8,379,388)
		47,725,406

COMMITTED Reserves at 4/26/16

Lancaster Christian Participation	21,871	
Compressor purchase for Vac Truck	15,471	
Reuse Pump Motor	24,375	
SRWTP Groundworks Repairs	13,558	
JBS 15-09 Pump Vibration Analysis	7,854	
Rewiring of Final Clarifier Collector Ring	10,999	
Inspection of RW Traveling Screen	3,273	
Eng Design for Raw Water Aux Pumps Generator	32,056	
Sewer Rehab Projects (Littlejohn)	1,487,278	
Lytle St Ph2 Utility Design Services	18,851	
Lytle St Ph1 Construction Inspection Services	26,615	
Engineering Services - Fournier Biosolids Press Repl	61,708	
Middle TN Blvd Utility Construction	1,626,281	
Lytle St. Utility Construction	87,734	
Westin Task Order #11 - AMI Implementation Support	78,440	
Pump Stations #3, #19, & #20 Replacement	227,110	
Water Resource Integration Plan (WRIP)	362,157	
Johnson Bailey Architect Fee (O&M, C/S)	22,172	
AMI Implementation	3,165,277	
E. & W. Fork Stones River Water Quality Sampling	105,441	
Pump Station #13 Replacement Design	28,820	
Hydrogen Peroxide Feed System at SRWTP	24,985	
Additional Services Ph4D - SSR Amendment	37,373	
Engineering Services - SCWWTP Ph 4D	78,854	7,568,553
		7,568,553

APPROVAL Requests at 5/24/16

Wilkinson Pike Utilities Design	24,850	24,850
		24,850

BALANCE of Working Capital at 5/24/16 after COMMITMENTS **\$ 40,132,003**

DESIGNATED Projects Pending

Aux Raw Water Pump Generator	600,000	
Pump Station #13 Replacement	1,000,000	1,600,000
		1,600,000

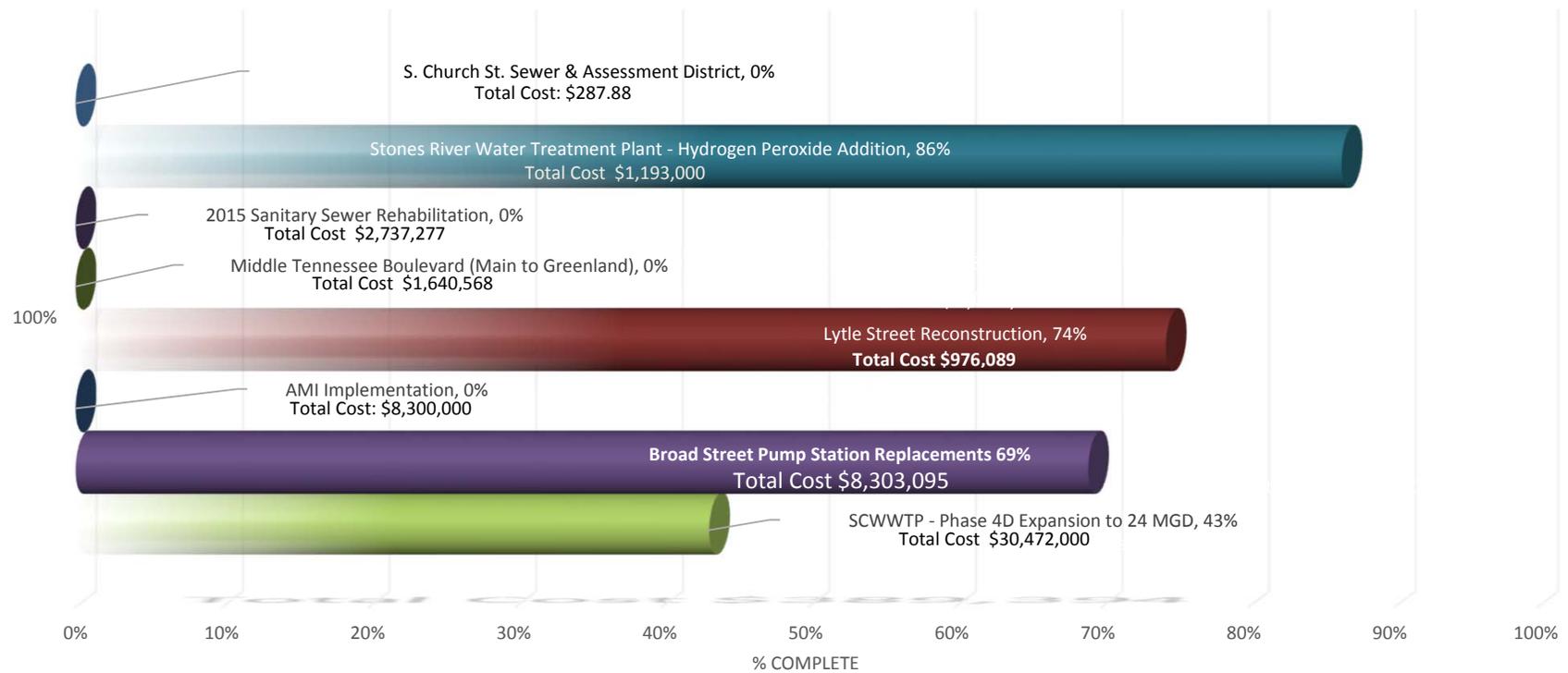
ESTIMATED UNCOMMITTED Working Capital Reserves as of May 24, 2016 **\$ 38,532,003**

SECURED FY15-16 Operating and Maintenance Expenses **\$ 20,404,791**

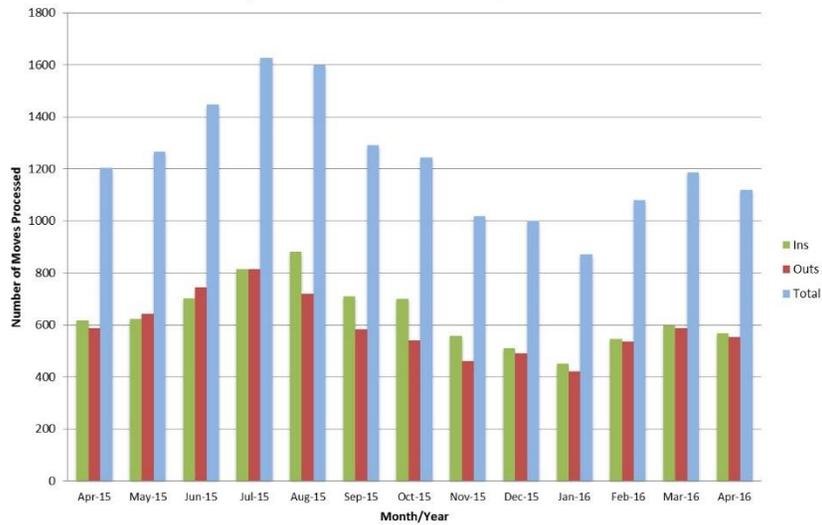
UNASSIGNED Working Capital Funds (Est. Uncommitted - Secured) **\$ 18,127,212**

DASHBOARD PERFORMANCE - APRIL 2016

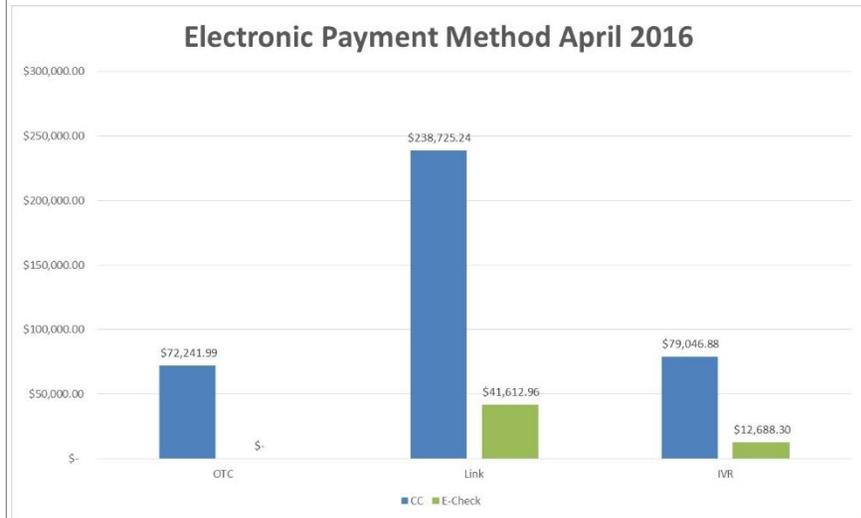
CAPITAL PROJECTS



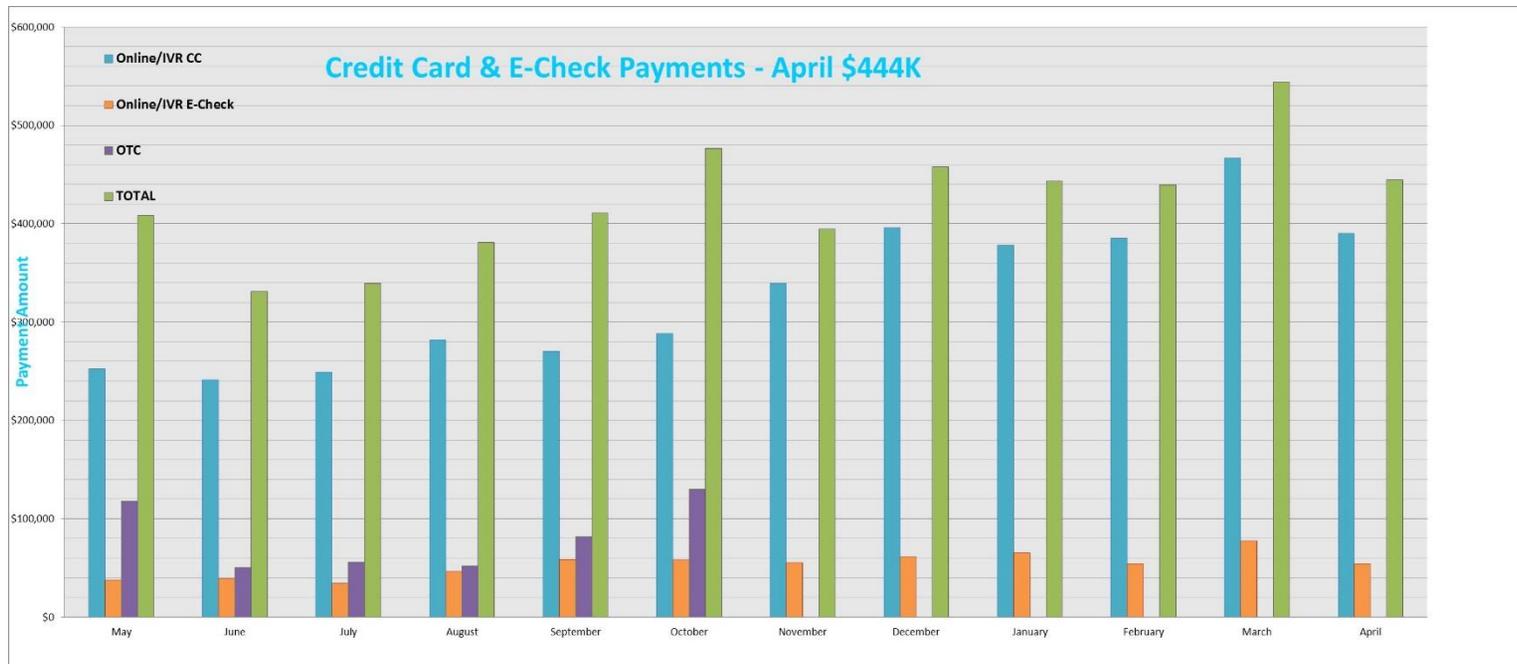
April Moves Processed = 1,119

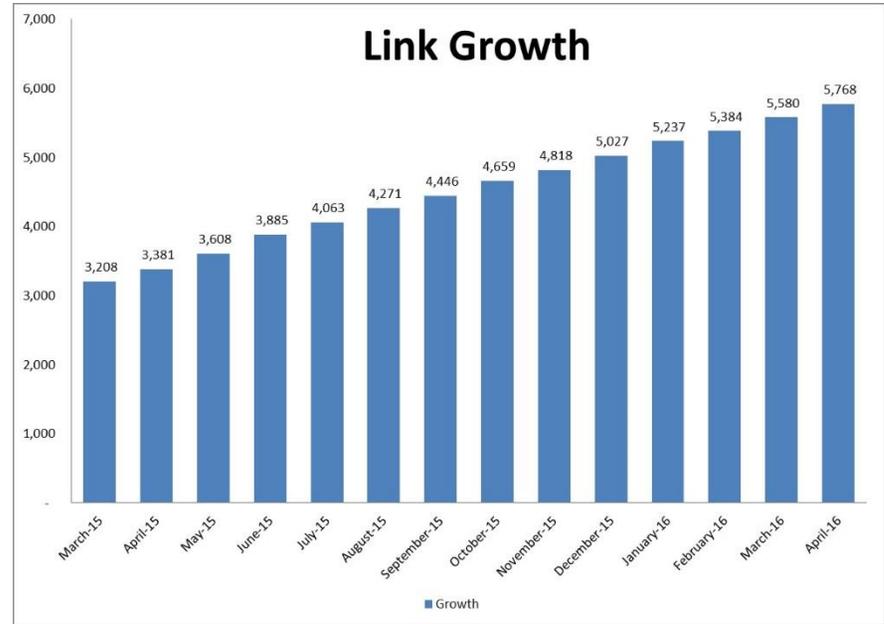
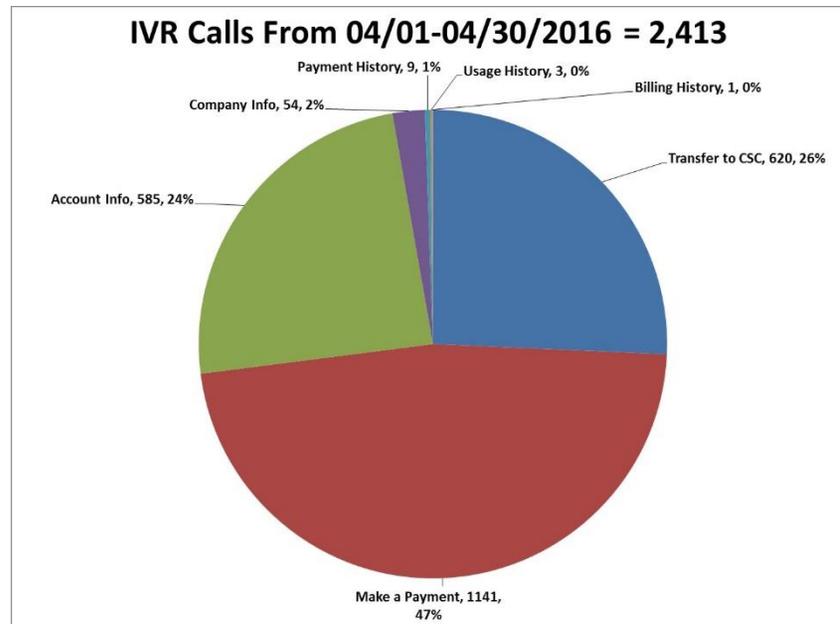
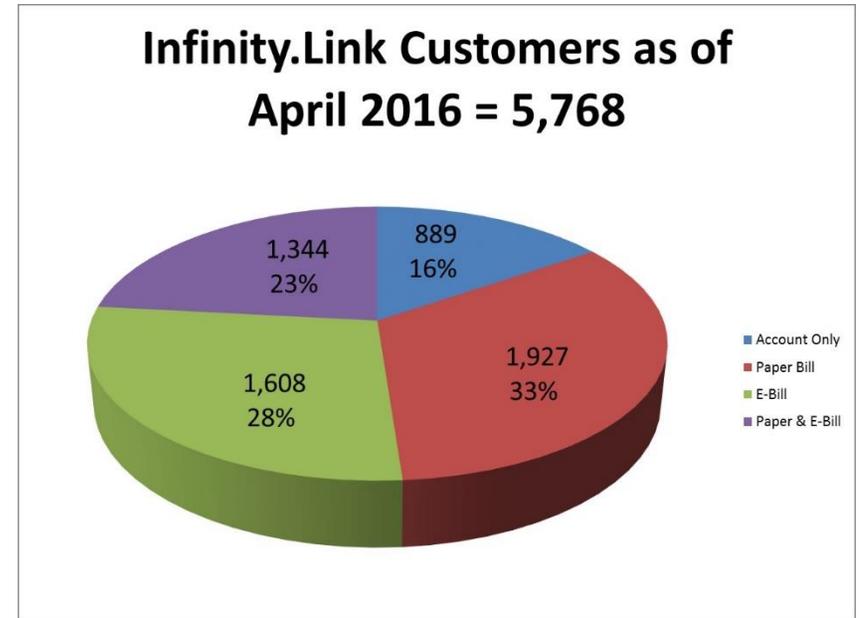
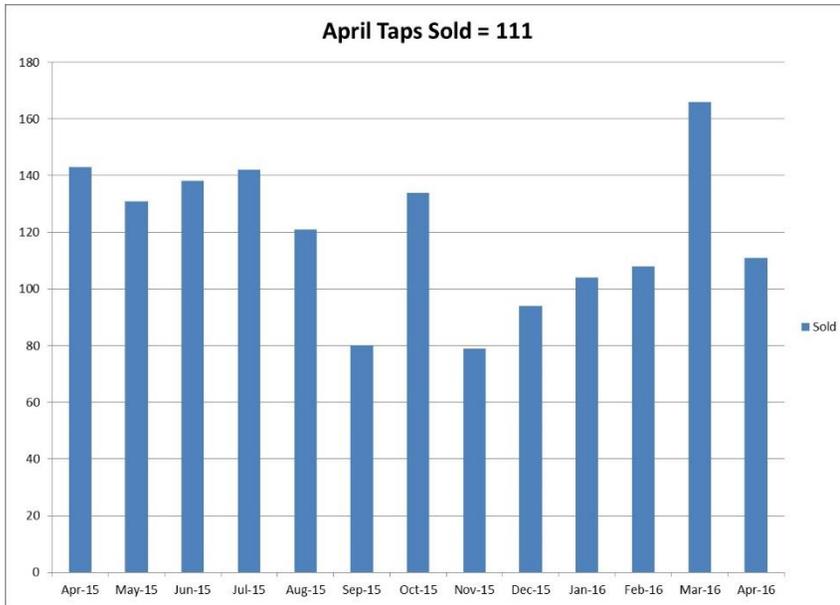


Electronic Payment Method April 2016

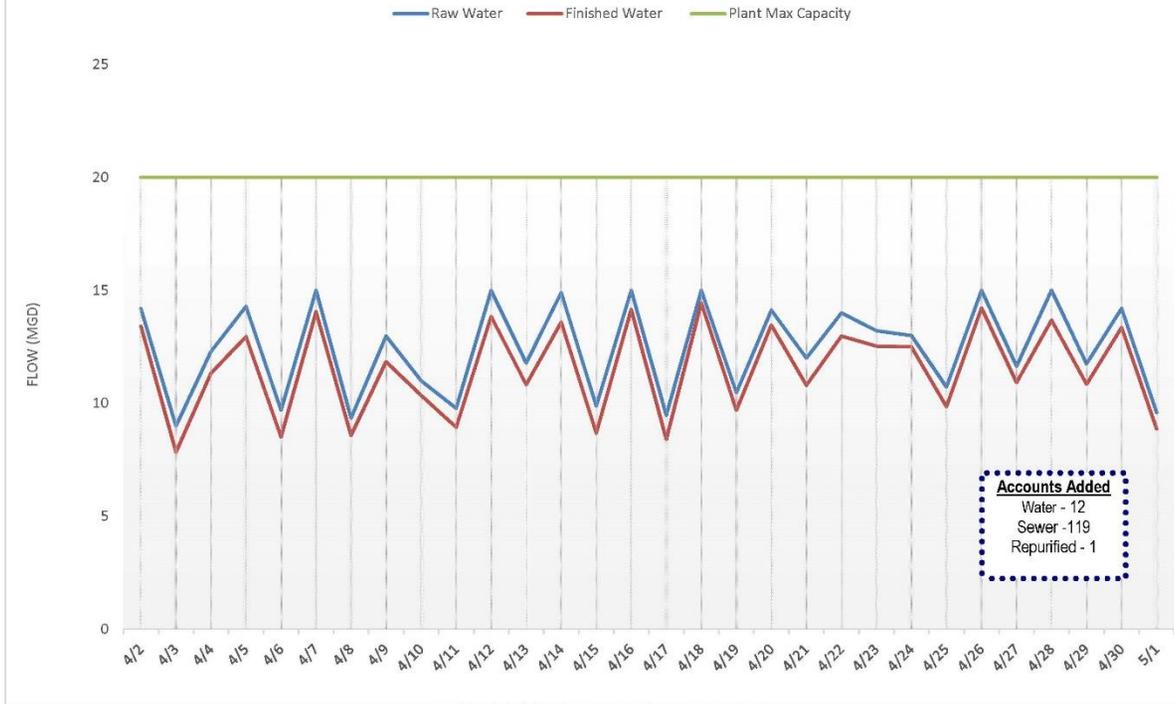


Credit Card & E-Check Payments - April \$444K

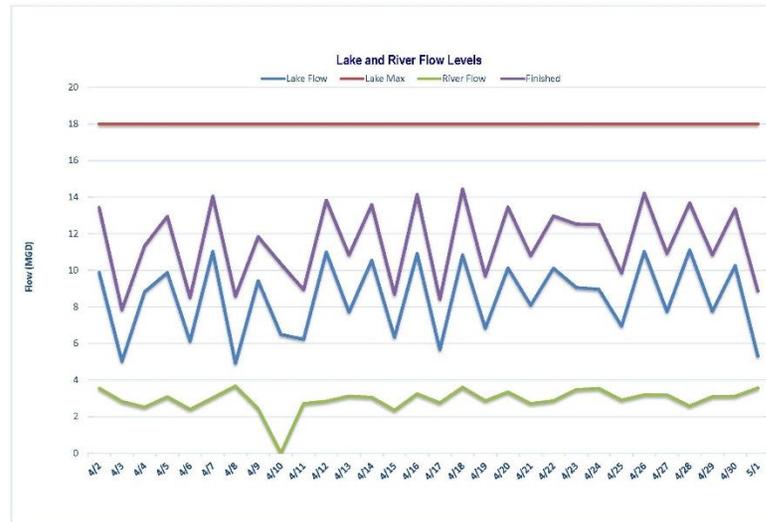
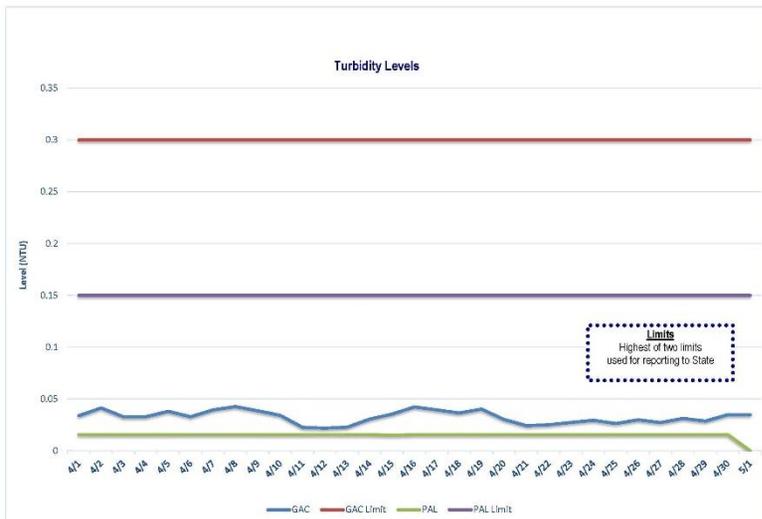




Dashboard Performance for April 2016 Stones River Water Treatment Plant



Totalized Finished Water Volume: 345.4 MG
 Totalized Billed Water Volume: 240.8 MG
 % Unaccounted for Water: 30.3%



State Report Coversheet

Month/Year Reported

April 2016

Name of Water Utility Murfreesboro Water & Sewer Department
 Name of WTP Stones River Water Treatment Plant
 County Rutherford
 PWSID 0000491
 Laboratory ID 00450

Bacteria	Total Number of Bacteria Samples for Month	104
Disinfection	Number of Samples	104
	Number of days plant operated	30
	Lowest Residual in Distribution System	1.40
	Lowest Residual Entering Distribution System	3.20
	Average Plant Effluent	3.4
Turbidity	Total Hours Planted Operated	720
	Number of Samples	180
	Maximum Turbidity	0.10
Flow	Average Raw Water Flow	12443
	Maximum Raw Water Flow	15000
Pumpage Data	Total Water Pumped (Lake)	254,089.002
	Average Water Pumped (Lake)	8,469.633
	Maximum Day (Lake)	11,112.000
	Minimum Day (Lake)	4,911.000
	Total Water Pumped (River)	119,210.046
	Average Water Pumped (River)	3,973.668
	Maximum Day (River)	4,516.150
Water Statistics	Minimum Day (River)	3,469.604
	Water Treated (Raw)	373,299.048
	Water Pumped (Finished)	345,430.884
	Water Transfer - to Murfreesboro (Smyrna, CUD)	0.000
	Water Metered (Sales, OM/Hydrant)	226,134.452
	Water Metered (Vacant Accounts, Fire Protection)	122.264
	Accounted For Water - (Flushing O&M/Eng, Fire, Street)	4,419.647
	Accounted For Water - (Flushing WTP)	716.097
	Process Water (Distribution,Tank,Water Plant)	9,010.082
	Water Transfer - to CUD	405.000
	Water Transfer - to Smyrna	0.000
	Total Accounted For Water	240,807.542
	Non Revenue Water	104,623.343
	Water Loss - Percentage	30.3%
	Water Cost Per 1,000 gallons	

0	0	
226,075.772	58.680	
0.000	122.264	
2762.337	1485.31	172
716097		
568.8	0	8441.282

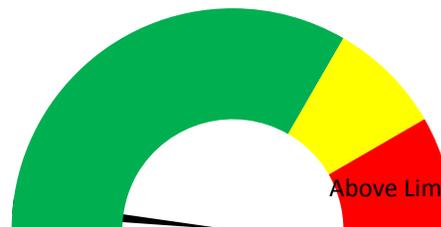
Reports Needed:

- MOR - Page 1 & 2 **DECEMBER Check YEAR!**
- Distribution
- Monthly Disinfectants Monitoring Report - Page 1 & 2
- Filter Performance Report
- Filter Turbidity Exceedance Report (Only if the filter turbidity exceeds standards)
- Monthly Microbiological Monitoring Report/Disinfectant Monitoring
- TOC & Enhanced Coagulation Report (Quarterly ADDED Data in March, June, September, December)
- Pumpage Data Report
- Bacteria Detail Report (**Check for POSITIVE Bacteria**)
- Flow to/from Smyrna to Smyrna, Dashboard Data to Pamela, Raw Flow to Debbie, PALL Turb to SS Indirect IT Folder, Dist Sheet to Randy
- Copy of Chemicals sheet to Debbie Crocker, Data to WaterLossMonthlyTotals (\\172.19.195.31\ShareA\Admin\Water Loss and Unaccounted for Water)
- Close out and lock Operator Log, convert to PDF, Add to SS Operator Log Folder
- High Service Dist. Monitor Logs to SS Folder
- PALL Data Logs to S3 and HS1 archives to S3
- BE-BH Correction on RAW Sheet/ **AUTOMATIC FLUSHING to KIM**

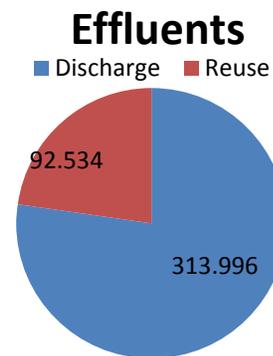
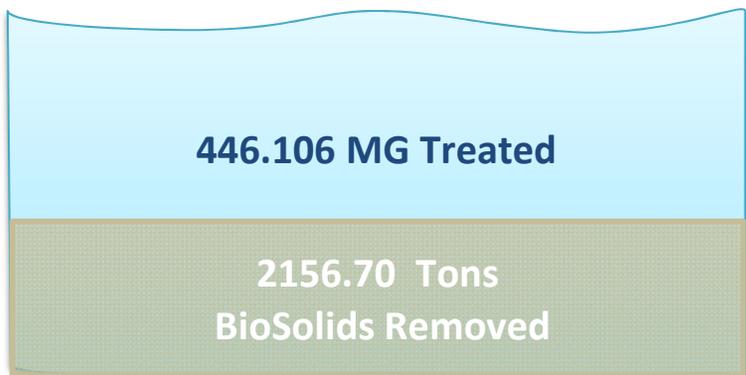
Dashboard Report April 2016
Sinking Creek Wastewater Treatment Plant



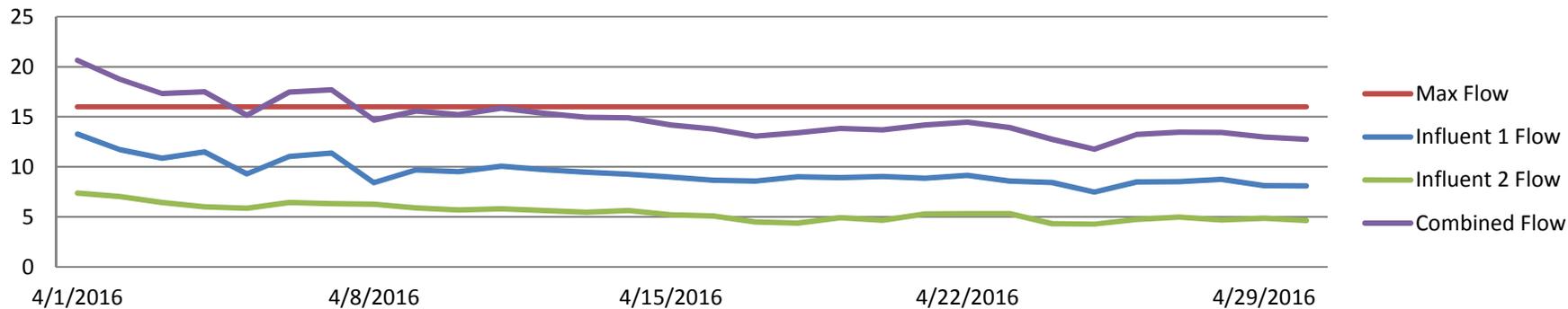
98.79%
Removal
BOD



99.03%
Removal
NH3

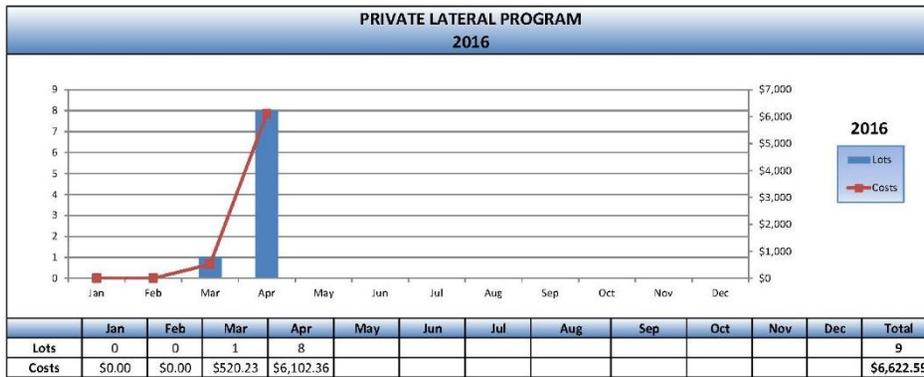
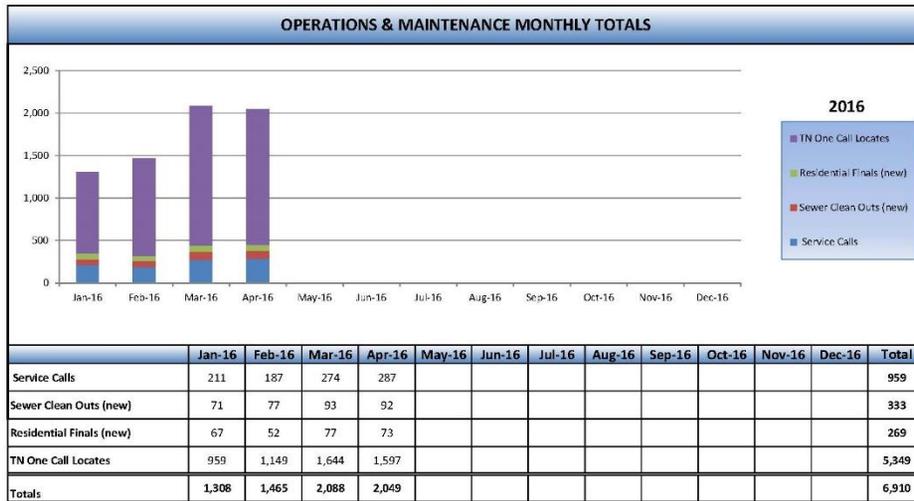


Average Influent Flow



Operations and Maintenance Dashboard

April 2016



ASPHALT PURCHASES 2016

DATE	PRODUCT	VENDOR	QUANTITY (TONS)	UNIT COST	TOTAL	ACCEPT BID	WINNING BID	SINGLE SOURCE	APPROVAL	NOTES
4/14/2016	Cold Mix	Lojac	40.22	\$73.00	\$2,936	Y		Y	TT	
4/27/2016	Fine BM	Hawkins	43.89	\$52.04	\$2,284	Y		Y		
5/3/2016	Fine BM	Hawkins	125.00	\$50.93	\$6,366	Y	Hawkins	N	TT	
		Hoover				N/A				Product not available
		Lojac	125.00	\$52.25	\$6,531	N				
5/4/2016	BM	Lojac	86.12	\$52.25	\$4,500	Y	Lojac			
		Hawkins				N/A				Hawkins closed
5/11/2016	Binder	Lojac	75.00	\$46.25	\$3,469	Y	Lojac	N	TT	
		Hawkins	75.00	\$50.62	\$3,797	N				
		Hoover				N/A				Not running state mix
5/11/2016	Topping	Lojac	25.00	\$53.00	\$1,325	Y	Lojac	N	TT	
		Hawkins	25.00	\$54.18	\$1,355	N				
		Hoover				N/A				Not running state mix
5/13/2016	BM Binder	Hoover	20.00	\$50.79	\$1,016			Y		
		Lojac								Product not available
		Hawkins								Product not available



MWSD Operations & Maintenance Dashboard Report July 2015 - June 2016

	<i>Jul</i>	<i>Aug</i>	<i>Sep</i>	<i>Oct</i>	<i>Nov</i>	<i>Dec</i>	<i>Jan</i>	<i>Feb</i>	<i>Mar</i>	<i>Apr</i>	<i>May</i>	<i>Jun</i>	<i>Total</i>
Water Pipe (ft) - New Construction													
6" C-900	0	0	0	480	0	0	0	0	0	0			480
8" C-900	581	0	838	0	0	0	0	827	1,880	180			4,306
6" Ductile Iron	9	0	33	8	0	0	0	17	23	0			90
8" Ductile Iron	0	0	0	0	0	0	0	0	11	15			26
1" Copper	567	0	19	0	290	0	43	0	0	450			1,369
2" Copper	0	0	0	0	0	0	0	0	0	0			0
Total	1,157	0	890	488	290	0	43	844	1,914	645			6,271

Sewer Pipe (ft) - New Construction													
6" SDR-35	0	522	0	0	22	0	0	0	0	0			544
8" SDR-35	0	726	0	0	0	0	20	0	0	0			746
6" Ductile Iron	0	0	0	0	0	0	0	0	0	0			0
8" Ductile Iron	0	0	0	0	0	0	0	0	0	0			0
Total	0	1,248	0	0	22	0	20	0	0	0			1,290

Paving (tons)													
Asphalt	400.00	262.66	70.55	292.69	53.77	141.70	50.15	0.00	0.00	84.11			1,355.63
Stone	1,065.58	2,714.41	1,496.48	923.12	799.86	695.50	1,279.30	1,169.48	2,298.18	683.30			13,125.21

New Stubs Water Pipe (ft)													
1" Copper	488	780	657	700	0	600	0	0	0	0			3,225
2" Copper	0	0	0	0	0	0	0	0	0	0			0

Stormwater Televised Lines & Line Cleaning (ft)													
Line Cleaning	3,000	5,078	4,914	13,000	0	0	5,000	2,000	3,000	0			35,992
Televised Lines	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00

Sewer Televised Lines & Line Cleaning (ft)													
Line Cleaning	71,618	47,702	33,982	109,094	43,160	48,671	53,022	84,492	20,181	65,060			576,982
Televised Lines	29,991.30	20,586.00	34,949.00	40,363.40	2,382.00	15,090.90	14,251.00	19,773.00	20,564.40	34,548.50			232,499.50
Televised Laterals	1,254.00	2,395.00	538.00	191.00	1,816.00	855.00	2,000.00	1,508.00	5,243.00	997.00			16,797.00
Televised Lines (Warranty)	0.00	0.00	486.00	1,186.00	15,908.90	16,186.60	5,841.50	3,784.00	10,856.00	0.00			54,249.00



MWSD Operations & Maintenance Dashboard Report July 2015 - June 2016

	<i>Jul</i>	<i>Aug</i>	<i>Sep</i>	<i>Oct</i>	<i>Nov</i>	<i>Dec</i>	<i>Jan</i>	<i>Feb</i>	<i>Mar</i>	<i>Apr</i>	<i>May</i>	<i>Jun</i>	<i>Total</i>
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Sewer Rehab													
Maintenance Projects	16	12	3	10	14	28	8	12	9	29			141
Lateral Replacement Pipe (ft)	67	20	35	40	49	104	29	107	84	194			729
Restoration	22	30	36	61	19	1	2	14	31	17			233

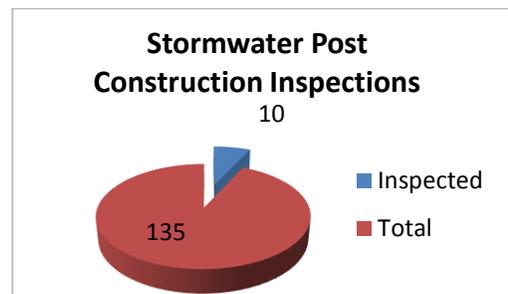
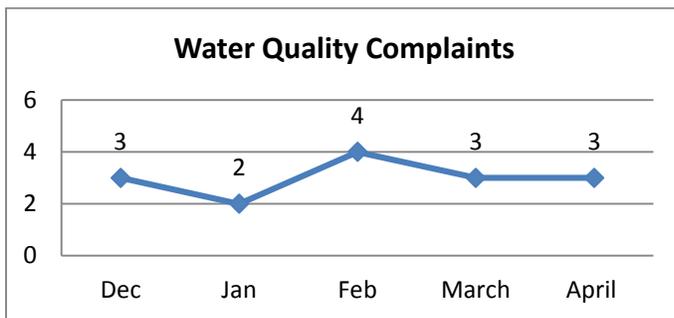
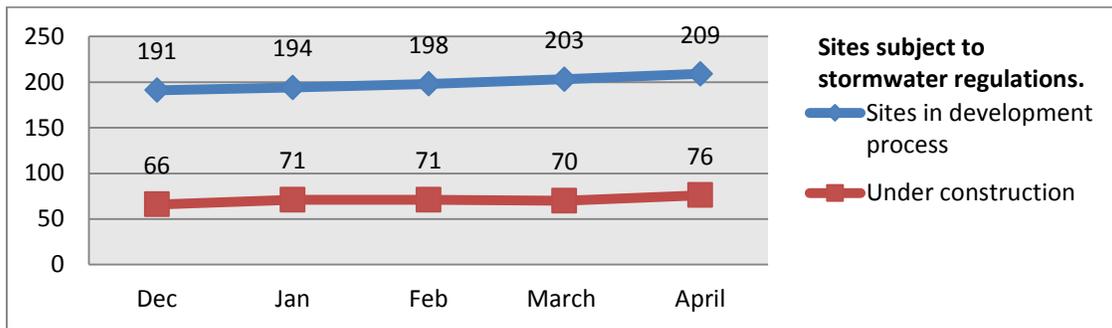
Private Lateral													
Services	4	2	3	3	0	0	0	0	1	8			21
4" C-900 (ft)	460	110	70	93	0	0	0	0	46	535			1,314
6" C-900 (ft)	46	54	27	25	0	0	0	0	5	30			187

Collection Maintenance													
New Sewer Cleanouts	54	77	81	91	45	59	71	77	93	92			740
GIS Located cleanouts	9	8	13	6	10	2	6	8	1	9			72

Distribution Maintenance													
Fire Hydrants - New	4	4	0	2	3	1	0	7	5	2			28
Fire Hydrants - Blow off	0	0	0	1	0	0	0	0	0	0			1
Main Water Line Damage	1	0	0	0	0	1	1	0	0	0			3
Main Water Line Leak	6	3	9	5	8	6	14	1	7	3			62
New Taps	27	1	5	0	4	2	0	0	4	4			47
New Stubs	21	15	21	17	0	15	0	0	0	0			89
Tap Replacements	3	0	16	1	0	1	16	9	2	1			49
Tap Replacements (New Const)										25			25
Meter Connections	18	11	3	3	19	8	6	5	11	13			97

Distribution & Collection													
Service Calls	239	271	271	214	217	219	211	187	274	278			2,381
TN One Call Locates	1,235	1,258	1,252	1,189	1,073	1,037	959	1,149	1,644	1,597			12,393
Water & Sewer Inspections	110	80	84	103	49	71	76	88	92	93			846
Water & Sewer Final Insp	71	57	77	69	80	68	67	52	77	73			691
Total	1,655	1,666	1,684	1,575	1,419	1,395	1,313	1,476	2,087	2,041			16,311

Stormwater April 2016



Monitoring and Sampling

Stream Miles Assessed (VSA May 2016)
 March - 0 miles
 April - 0 miles
 Year to Date - 0 miles

Samples Taken
 March - 9
 April - 1
 Year to Date - 11

Outfall Screenings
 March - 0
 April - 1
 Year to Date - 2

Stormwater Infrastructure

Gravity Mains (ft)
 April - 6,867
 Year to Date - 18,577

Junction Boxes
 April - 63
 Year to Date - 164

Weirs/Headwalls/Basins
 April - 3/10/2
 Year to Date - 9/47/7
Pavers/ P. Concrete
 Total to date: 27.8 acres

Outfalls
 March - 0
 April - 3
 Year to Date - 5

Stormwater Activities

Outreach Events
 March - 2
 April - 2
 Year to Date - 4

Ongoing Projects

- West Fork Stones River bank stabilization
- Spence Creek watershed study
- Invasive aquatic plant treatment at Murfree Spring Wetlands
- Biological sampling to gage effectiveness of programs

