

**BOARD OF THE METROPOLITAN SEWERAGE DISTRICT
MARCH 19, 2014**

1. Call to Order and Roll Call:

The regular monthly meeting of the Metropolitan Sewerage District Board was held in the Boardroom of MSD's Administration Building at 2:00 p.m., Wednesday, March 19, 2014. Chairman VeHaun presided with the following members present: Ashley, Belcher, Bryson, Frost, Kelly, Pelly, Root, Russell, Stanley and Watts. Ms. Manheimer was absent.

Others present were: Thomas E. Hartye, General Manager, William Clarke, General Counsel, Gary McGill with McGill Associates, P.E., Mary Knosby with HDR Engineering, Joseph Martin with Woodfin Sanitary Water & Sewer District, and MSD staff, Ed Bradford, Scott Powell, Peter Weed, Mike Stamey, Ken Stines, Matthew Walter, Jim Hemphill, Hunter Carson, and Sondra Honeycutt.

2. Inquiry as to Conflict of Interest:

Mr. VeHaun asked if there were any conflicts of interest with the agenda items. No conflicts were reported.

3. Approval of Minutes of the February 19, 2014 Board Meeting:

Mr. VeHaun asked if there were any changes to the Minutes of the February 19, 2014 Board Meeting. With no changes, Mr. Stanley moved for approval of the minutes as presented. Mr. Watts seconded the motion. Voice vote was unanimous in favor of the motion.

4. Discussion and Adjustment of Agenda:

None

5. Informal Discussion and Public Comment:

Mr. Vahaun welcomed Ms. Knosby and Mr. Martin. There was no public comment.

6. Report of the General Manager:

Mr. Hartye reported one of the main items on the agenda is the Treatment Plant Facilities Plan for engineering services last done in 2007. The study will consist of performing a condition assessment of the existing plant and will provide recommendations for future improvements necessary to sustain the plant and to meet new future regulations. He stated that many of the short term and mid-term recommendations from the previous study have been completed. The MSD Treatment Plant was first built in 1967 at a capacity of (25MGD) and was later expanded to (40MGD) in 1987. He further stated that Mr. Hunter Carson, Project Engineer, will give a presentation on the Facilities Plan later in the meeting.

Mr. Hartye reported an e-mail was received from John Newton of Dew Waite Road. He stated, "As a retired municipal engineer, I have seen a lot of public works and your crew on this project is excellent; their work is very well planned, coordinated and executed to produce the very minimum of disruption to us residents. Thank you for a job well done." A call was received from Mike Warren of Prairie Path in Haw Creek expressing appreciation for Grady Brooks for being incredibly helpful and polite and returning a number of times to assist. Also, a Kudo goes out to Kathy Meeks who headed up the Wellness Team effort for Healthy Heart month by setting up and coordinating an employee scavenger hunt which was most successful in giving some 28 participants "the run around" up and down 4 flights of stairs.

Mr. Hartye reported the next regular Board Meeting will be April 16th at 2 p.m. The March Right of Way Committee meeting is cancelled and the next meeting will be held at 9 a.m. on April 23rd.

7. Report of Committees:

Right of Way Committee

Mr. Kelly reported the Right of Way Committee met on February 26, 2014 to consider Condemnation on the Broadview Avenue GSR Project which is part of the Consolidated Motion Agenda.

8. Consolidated Motion Agenda:

a. Consideration of Condemnation – Broadview Avenue GSR Project:

Mr. Hartye reported the Right of Way Committee recommends authority to obtain appraisal and proceed with condemnation.

b. Consideration of Bids – Indiana Avenue Sanitary Sewer Rehabilitation Project:

Mr. Hartye reported this project is for the replacement of an aged clay sewer line located in West Asheville, near State Street and is comprised of 2,135 linear feet of 8-inch DIP. The contract was advertised and the following bids were received on March 4, 2014: Huntley Construction Co. with a total bid of \$899,799.78; Buckeye Construction Co., with a total bid of \$473,072.40; Dillard Excavating Co., with a total bid of \$444,115.00, and Don Moorhead Construction Co., with a total bid of \$413,313.20. The apparent low bidder, Don Moorhead Construction Co., has not had previous experience with MSD rehabilitation projects, however all references were positive, with no problems cited with the company's performance. The FY13-14 construction budget for this project is \$403,000.00. There are sufficient funds within the CIP Budget for the overage. Staff recommends award of this contract to Don Moorhead Construction Co. in the amount of \$413,313.20, subject to review and approval by District Counsel.

c. Consideration of Developer Constructed Sewer Systems: Berrington Village Apartments; 2005 City of Asheville Annexation Sewer (Airport Road); 2010 City of Asheville Annexation Sewer (Rockhill Road), and ALDI- Weaverville:

Mr. Hartye reported on the following developer constructed sewer systems:

The Berrington Village Apartments are located inside the District Boundary along Charlotte Highway (US-74A) in Buncombe County. The project included the rehabilitation of 121 linear feet of 8-inch public gravity sewer and installation of approximately 4,400 linear feet of 8-inch public gravity sewer to serve the 308 unit apartment complex.

The 2005 City of Asheville Annexation Sewer is located inside the District Boundary at the intersection of Airport Road and Hendersonville Road in the City of Asheville. The project included the installation of approximately 600 linear feet of 8-inch public gravity sewer to serve four (4) annexed commercial properties.

The 2010 City of Asheville Annexation Sewer is located outside the District Boundary near the intersection of Rockwood Road and Airport Road in the City of Asheville. The project included the installation of approximately 400 linear feet of 8-inch public gravity to serve annexed commercial properties.

The ALDI-Weaverville sewer rehabilitation project is located inside the District boundary on Weaver Boulevard in the Town of Weaverville. The project included relocating approximately 307 linear feet of 8-inch public gravity and abandoning approximately 170 linear feet of 8-inch public gravity sewer to accommodate the commercial development.

Staff recommends acceptance of the aforementioned developer constructed sewer systems. All MSD requirements have been met.

d. Cash Commitment/Investment Report – Month Ended January 31, 2014:

Mr. Powell reported that Page 29 presents the makeup of the District's Investment Portfolio. There has been no change in the makeup of the portfolio from the prior month. Additionally, the makeup of the Portfolio is in accordance to the District's Investment Policy. Page 30 is the MSD Investment Manager report as of the month of January. The weighted average maturity of the Investment portfolio is 216 days. The yield to maturity is 0.59% and exceeds MSD bench marks of the 6 month T-Bill and NCCMT cash portfolio. Page 31 is the MSD Analysis of Cash Receipts for the month of January. Monthly and YTD domestic and industrial revenue is considered reasonable based on timing of cash receipts in their respective fiscal periods. YTD Facility and Tap fees are higher than budgeted expectations due to unanticipated receipts from five (5) developments as well as staff's conservative budgeting of impact fees. Page 32 is the MSD Analysis of Expenditures. Monthly O&M expenditures are considered reasonable based on historical trends and timing of expenditures in the current year. Debt service expenditures are below budgeted expectations due to lower than expected interest rates on the District's variable rate debt. Due to the nature and timing of capital projects, YTD expenditures can vary from year to year. Based on the current outstanding capital projects, YTD expenditures are considered reasonable and all budgeted funds are expected to be spent at year end. Page 33 is the MSD Variable Debt Service report. The 2008A Series Bonds are performing better than budgeted expectations, and as of the end of February, this issue has saved District ratepayers approximately \$3.2 million dollars in debt service since April of 2008.

Mr. Watts moved the Board approve the Consolidated Motion Agenda as presented. Mr. Stanley seconded the motion. With no discussion, Mr. VeHaun called for the question. Roll call vote was as follows: 11 Ayes; 0 Nays.

9. Facilities Plan Update – Engineering Services Contract:

Mr. Carson reported the Facilities Plan Update is a continuation of the Plan prepared by CDM Smith which was completed in April, 2007. The Plan was a facility-wide assessment that included equipment operation, performance and infrastructure condition plant-wide. From that assessment, CDM formulated phased recommendations; short-term, medium-term, and long-term, spanning over 7+ years for repairs/replacement and/or upgrades. He stated that several of CDM's recommendations were made into CIP projects. One of the short-term recommendations was to replace air piping and diffusers in the grit basin as well as increasing the grit classifier capacity. He presented slides showing the location and process of the grit and grease removal basin, which was completed in 2008. This project was to provide better separation and dewatering of concentrated grit. Another short-term project completed in 2011 was a recommendation to replace hydraulic-driven intermediate pumps with electric motor-driven units. He presented slides showing the location of the hydraulic pumps, lines and drives. He stated the new electric motors are more efficient; saving the District about \$72 thousand a year. Mr. Carson further reported that a third CIP project was from one of the medium-term recommendations. This was to abandon the secondary microscreen system and replace

with a cloth filtration. This project was completed in 2013 and reduced total suspended solids (TSS) in the WRF effluent.

Mr. Carson reported the Facilities Plan Update will expand the 2007 Plan and will focus on several topics, specifically, the grit and grease removal system. The current system does not effectively remove small grit particles. As a result, grit accumulates in downstream basins and reduces process capacity and damages equipment. He further reported the Plan will evaluate possible modifications to the existing Schreiber system and evaluate new grit removal technologies such as the HeadCell and PISTA Grit removal systems, both of which would remove 95% of grit at all different classifications. The second main topic of the Facilities Plan Update will be the installation of primary clarifiers, which was a long-term recommendation in the 2007 Plan. He explained that the clarifiers remove solids early in the treatment process which reduces loading on intermediate clarifiers and disk filters. Also, clarifiers remove organics (biological oxygen demand) which increases the efficiency of Rotating Biological Contactors (RBC's). The Plan will evaluate size and spacing necessary for primary clarifier units at the plant; recommend gravity vs. high-rate clarification and assess impacts on downstream processes; RBCs, Clarifiers and Filters. The third Facilities Plan Update will be biological treatment, both now and in the future. The RBC's were constructed in 1988 with a manufacturer's projected life of 25 years. Shaft breakage is a problem with 36 of the 152 units out of commission. Because these units are extremely difficult to move, MSD must contract with a crane company to remove them. Also, because they are old, there are some obsolete components. The Plan will assess age, condition, and life cycle of RBC's; evaluate the RBC's ability to provide biological treatment (with and without primary clarifiers); include a phased approach to repairing, replacing, or eliminating RBC's, and evaluate the RBC's ability to comply with future ammonia and/or nutrient limits. The fourth Facilities Plan Update is an ammonia reduction evaluation which is a requirement of MSD's NPDES discharge permit. The permit states "Permittee shall evaluate the feasibility and cost for ammonia reduction." The current effluent ammonia levels equal approximately 15 mg/L. The permit wants MSD to evaluate actions necessary to achieve approximately 7 mg/L in the summer and 17 mg/L in the winter, which must be submitted within 4.5 years of the permit effective date (Oct. 1, 2015). The Plan will include the Ammonia Reduction Evaluation as a stand-alone section and evaluate impacts to current and future treatment processes if nutrient limits are imposed.

Mr. Carson reported that an RFQ was issued in October, 2013 with those topics previously addressed. A tour of the Water Reclamation Facility was conducted November 6 and 7, 2013. MSD received Statements of Qualifications on December 6, 2013 from six (6) firms: HDR Engineering, Black & Veatch, CDM Smith, Arcadis, GHD and Hazen and Sawyer. The Selection Committee decided to short-list and interview three (3) of the aforementioned firms. HDR was selected based on qualifications and experience. He stated that HDR is a global consulting engineering firm with extensive experience in facility planning nationwide with many clients in North Carolina. They have performed facility planning and design for over 10 WWTPs that use RBC's as their main biological treatment and have extensive regulatory experience and permitting expertise. HDR provided a Scope of Services which included a Facility Assessment; Regulatory Assessment; Treatment alternatives (primary and biological); developed conceptual site layouts, hydraulic profiles, and prepare a phased WRF Improvements Plan (15-yr, 10-yr, and 20+yr) and a cost estimate for each improvement. In addition, Mr. Carson stated that this will be a hands-on Facilities Plan Update with approximately 14 workshops/meetings planned throughout the next year. The total CIP Budget for this project for the current fiscal year (FY13/14 & FY14/15) is \$450,000. The proposed fee from HDR is \$450,943. In addition, there is an Optional Task fee of \$21,711 which is for a site specific ammonia criteria evaluation to be initiated only if deemed necessary after a regulatory assessment. Staff recommends award of the Engineering Services Contract to HDR. Mr. Watts asked if there are still plans to improve the incinerator. Mr. Hartye stated the incinerator is a separate project that is underway because of new regulations and is currently in the

design phase with pilot testing planned for new technology, but is not part of this Facility Plan. Mr. Watts asked how ammonia is removed. Ms. Knosby stated there are a number of biological processes that can remove ammonia and this will be part of our evaluation of the RBC's. Mr. Carson stated that BOD has to be removed before ammonia removal so that is why the primary clarifiers will help remove some of the BOD and allow the RBC's to perform better. With no further discussion, Mr. VeHaun called for a motion to approve staff's recommendation and award the Engineering Services Contract to HDR. Mr. Belcher moved and Mr. Stanley seconded the motion. Roll call vote was as follows: 11 Ayes, 0 Nays

10. Old Business:

None

11. New Business:

At 2:32 p.m., Mr. Clarke asked for a motion to go into closed session to discuss a pending legal matter of MSD vs. Fort. Mr. Stanley moved. Ms. Frost seconded the motion. Voice vote in favor of the motion was unanimous. During the closed session, Mr. Clarke reported to the Board on the jury verdict in MSD vs. Fort and distributed some photographs depicting the Fort property. The Board took no action.

At 2:49 p.m., the Board went back into open session.

12. Adjournment:

With no further business, Mr. VeHaun called for adjournment at 2:50 p.m.

Jackie W. Bryson, Secretary/Treasurer

<h1 style="margin: 0;">MSD</h1> <h2 style="margin: 0;">Regular Board Meeting</h2>

Metropolitan Sewerage District
of Buncombe County, NC

AGENDA FOR 3/19/14

✓	Agenda Item	Presenter	Time	
	Call to Order and Roll Call	VeHaun	2:00	
	01. Inquiry as to Conflict of Interest	VeHaun	2:05	
	02. Approval of Minutes of the February 19, 2014 Board Meeting.	VeHaun	2:10	
	03. Discussion and Adjustment of Agenda	VeHaun	2:15	
	04. Informal Discussion and Public Comment.	VeHaun	2:20	
	05. Report of General Manager	Hartye	2:30	
	06. Report of Committees Right of Way Committee – February 26, 2014 – Kelly	Kelly	2:45	
	07. Consolidated Motion Agenda		2:55	
	a. Consideration of Condemnation – Broadview Avenue GSR.	Hartye		
	b. Consideration of Bids: Indiana Avenue Sewer Rehabilitation Project.	Hartye		
	c. Consideration of Developer Constructed Sewer Systems: Berrington Village; 2005 City of Asheville Annexation Sewer (Airport Road); 2010 City of Asheville Annexation Sewer (Rockhill Road), and Aldi-Weaverville.	Hartye		
	d. Cash Commitment/Investment Report – Month Ended January 31, 2014.	Powell		
	08. Facilities Plan Update: Engineering Services Contract.	Hartye	3:15	
	09. Old Business:	VeHaun	3:30	
	10. New Business	VeHaun	3:35	
	11. Adjournment (Next Meeting (4/16/14))	VeHaun	3:40	
	STATUS REPORTS			

**BOARD OF THE METROPOLITAN SEWERAGE DISTRICT
FEBRUARY 19, 2014**

1. Call to Order and Roll Call:

The regular monthly meeting of the Metropolitan Sewerage District Board was held in the Boardroom of MSD's Administration Building at 2:00 p.m., Wednesday, January 19, 2014. Chairman VeHaun presided with the following members present: Ashley, Belcher, Bryson, Frost, Kelly, Manheimer, Pelly, Root, Stanley and Watts. Mr. Russell was absent.

Others present were: Thomas E. Hartye, General Manager, William Clarke, General Counsel, Gary McGill with McGill Associates, P.E., Joseph Martin with Woodfin Sanitary Water & Sewer District, Jesse Farthing, Haley Benton and MSD staff, Ed Bradford, Scott Powell, Peter Weed, Mike Stamey, Ken Stines, Matthew Walter, Jim Hemphill, Angel Banks, Julie Willingham and Sondra Honeycutt.

2. Inquiry as to Conflict of Interest:

Mr. VeHaun asked if there were any conflicts of interest with the agenda items. No conflicts were reported.

3. Approval of Minutes of the January 15, 2014 Board Meeting:

Mr. VeHaun asked if there were any changes to the Minutes of the January 15, 2014 Board Meeting. With no changes, Mr. Watts moved for approval of the minutes as presented. Mr. Stanley seconded the motion. Voice vote was unanimous in favor of the motion.

4. Discussion and Adjustment of Agenda:

None

5. Informal Discussion and Public Comment:

Mr. VeHaun welcomed Mr. Martin, Mr. Farthing and Ms. Benton. There was no public comment. Mr. VeHaun reported the North Carolina Super Lawyers 2014 edition recently named Mr. Clarke a "Super Lawyer". He expressed his congratulations to Mr. Clarke for this recognition.

6. Report of the General Manager:

Mr. Hartye reported that MSD intends to issue Bonds this spring to finance approximately \$30 million of the District's Capital Improvement Program (CIP). The CIP currently consists of \$160 million of improvements to the collection system and the treatment plant over the next 10 years. An update to the Facilities Plan for the treatment plant will identify additional improvements to keep pace with new regulations and aging of the RBC's. He further reported the Finance Committee met on February 5th to pick a Co-manager for underwriting services and the Board agenda includes a resolution to authorize the filing of an application to the LGC to issue the bonds. A calendar for the issuance can be found on page 78 of the Board document.

Mr. Hartye reported that MSD conducted an Operators Certification school for the State Association (NCAWWA/WEA) at MSD January 28 through the 31st. Staff took extra time over and above their usual duties to put together this education opportunity to increase the knowledge and skills of its personnel as well as supporting the viability of the State Association and the water/wastewater industry as a whole. He expressed thanks to Lisa Tolley, Mark Schuman, Ken Stines, Mike Stamey, Jason Capizzi, Michael Ball, Lloyd Anders, Darin Prosser, Eric Dawson, Tim Coates, Roger Edwards, Wayne Tipton, Jon Van Hoff, Sandra Moore, Dan Waugh and Shaun Armistead.

Mr. Hartye reported that an alert operator smelled a natural gas leak at the plant and PSNC personnel responded and assisted MSD in tracking down the leak and rerouting an internal gas line. He stated PSNC went above and beyond with their help; signifying their gratitude for the help MSD recently gave them.

Mr. Hartye reported that once again, MSD received the Distinguished Budget Presentation Award from the Government Finance Officers Association (GFOA). He expressed thanks to the great effort put forth by Teresa Gilbert and Scott Powell.

Mr. Hartye reported the next regular Board Meeting will be March 19th at 2 p.m. The next Right of Way Committee meeting will be held at 9 a.m. on February 26th.

7. Committee Reports:

Finance Committee

Mr. Kelly reported the Finance Committee met February 5, 2014 to consider several staff recommendations. He called on Mr. Powell for a report. Mr. Powell reported that a review of the Second Quarter Budget to Actual was given. As of the end of December MSD is in line with the budget, both on an expenditure and revenue perspective. Other items discussed at the Finance Committee involve recommendations to the full Board as part of the Consolidated Motion Agenda.

8. Consolidated Motion Agenda:

a. Consideration of Developer Constructed Sewer Systems: Lutheridge Phase 1 Sewer Extension Project, Pisgah Manor Skilled Nursing Sewer Extension Project, and Thunderland Circle Sewer Extension Project:

Mr. Hartye reported the Lutheridge Phase 1 Sewer Extension Project is located inside the District boundary off Airport Road in Buncombe County. The project included replacing approximately 325 linear feet of 6-inch private sewer with 8-inch public gravity sewer serving an existing residential/commercial development.

Mr. Hartye reported the Pisgah Manor Skilled Nursing Sewer Extension Project is located outside the District boundary off Holcombe Cove Road in Buncombe County. The project included the installation of approximately 128 linear feet of 8-inch gravity sewer to serve a retirement home.

Mr. Hartye reported the Thunderland Circle Sewer Extension Project is located outside the District boundary at the intersection of Clayton Road and Long Shoals Road in Buncombe County. The project included the installation of approximately 460 linear feet of 8-inch gravity sewer to serve a commercial development.

Staff recommends acceptance of the developer constructed sewer systems. All MSD requirements have been met.

b. Consideration of Bids for Sanitary Sewer Rehabilitation Project – Forest Ridge Road:

Mr. Hartye reported this project is for the replacement of an aged clay and PVC sewer line, located in South Asheville near Sweeten Creek Road & Rock Hill Road. The project is comprised of 2,842 linear feet of 8-inch DIP. The contract was advertised and the following bids were received on January 30, 2014: Moorehead Construction Co., with a total bid of \$737,733.00; Buckeye Bridge, LLC with a total bid of \$736,136.50; Terry Brothers Construction Co., with a total bid of \$624,240.00; Huntley Construction Co., with a total bid of \$597,407.70 and Dillard Excavating Co. with a total bid of \$588,115.00. The apparent low bidder is Dillard Excavating Co.

with a bid amount of \$588,115.00. Dillard has completed a previous MSD project, and their work quality was satisfactory. The FY 13-14 construction budget for this project is \$570,000.00 and sufficient funds are available within the CIP Budget for the overage. Staff recommends award of this contract to Dillard Excavating Co. in the amount of \$588,115.00, subject to review and approval by District Counsel.

c. Consideration of Bids for Sanitary Sewer Rehabilitation Project – Macon Avenue @ Sunset Parkway:

Mr. Hartye reported this project is for the replacement of aged clay sewer lines located in the Grove Park area of North Asheville. The lines, constructed in the 1920's and 1930's are in poor structural conditions. Pipe bursting will be utilized in the Charlotte and Macon Street sections to reduce costs associated with traffic control, paving, and restoration of median islands and associated landscaping. The project is comprised of 2,807 linear feet of 8-inch and 10-inch DIP and HDPE main line. The following bids were received on February 4, 2014: Buchanan and Sons with a total bid of \$1,038,681.00; Huntley Construction Co. with a total bid of \$1,010,316.87; Buckeye Bridge LLC with a total bid of \$893,728.40; Dillard Excavating Co. with a total bid of \$828,315.00 and Terry Brothers Const. Co. with a total bid of \$757,688.00. The apparent low bidder is Terry Brothers Construction Co. with a bid amount of \$757,688.00. Terry Brothers has completed numerous MSD rehabilitation projects, and their work quality has been excellent to date. The FY 13-14 construction budget for this project is \$795,000.00. Staff recommends award of this contract to Terry Brothers Construction Co. in the amount of \$757,688.00, subject to review and approval by District Counsel.

d. Consideration of Bids – New Backhoe – Fleet Replacement:

Mr. Hartye reported that annually the District evaluates the condition of fleet vehicles and purchase replacements when the estimated cost of repair and maintenance exceeds the cost of a new one. At the March 12, 2013 Fleet Replacement Committee meeting, the members recommended the purchase of one (1) new backhoe replacement. The following bids were received and opened on February 3, 2014: Contractor's Machinery/Case Construction with a total bid of \$98,897.00 and James River Equipment/John Deere with a total bid of \$99,450.00. Staff recommends award of the bid from Contractor's Machinery/Case Construction in the amount of \$98,897.00.

e. Consideration of Auditing Services Contract FY2014:

Mr. Powell reported in March of 2013, the District's current audit provider, Cherry Bekaert, LLP proposed a three-year commitment to provide audit services for \$46,500; a 4.5% reduction in fees from \$48,670 in FY12. They also provided an engagement letter as well as an audit contract for fiscal year FY14. He stated that Cherry Bekaert continues to provide excellent service with the focus of reducing fees to the District as well as a commitment to work hard to control expenses and pass on any additional savings to the District. The Finance Committee and staff recommend approval of the FY 2014 audit contract with Cherry, Bekaert, LLP.

f. Consideration of Amendment to the Standby Bond Purchase Agreement:

Mr. Powell reported that because the District's 2008A Series Revenue Refunding Bonds are variable rate debt, the District is required to have a Standby Bond Purchase Agreement (SBPA). He explained that an SBPA is an agreement with a third party, typically a bank, in which the bank agrees to purchase variable rate debt tendered for purchase in the event the bonds cannot be remarketed. Staff informally investigated the SBPA market and looked at rate and terms. This information was used to

negotiate a reduction in the current fee from .53% basis points to .43% and extend its agreement from June, 2015 through February 2017 with its current provider Wells Fargo NA. The District will incur approximately \$2,500 in legal fees and will save approximately \$96,000 over the life of the Agreement. The Finance Committee endorsed staff's recommendation to approve the proposed amendment to its current SBPA with Wells Fargo, NA.

g. Consideration of RFQ for Bond Co-Manager Underwriting Services:

Mr. Powell reported an RFQ for Investment Banking Services (Co-Managing Underwriter) was issued in response to staff's concerns of personnel movement and performance of its current Co-managing Underwriter BB&T Capital Markets. As a result, staff sent out an RFQ to the following institutions: BB&T Capital Markets; Bank of America Merrill Lynch; Edward Jones; PNC Capital Markets; Raymond James; RW Baird & Company; Stephens; TD Securities and US Bancorp Investment Inc. The aforementioned institutions represent entities that have expressed interest in participating in the upcoming \$28 million new money revenue bond issue. Due to the complexities of the current economic environment and timing of the District's debt issuances, staff engaged its financial advisor Davenport & Company LLC to assist in the evaluation of the RFQs. The RFQs were evaluated based on their relevant experience; a working knowledge of the District and the firm's resources as it relates to municipal bond distribution and underwriting commitments. The Finance Committee endorses staff's recommendation that RW Baird & Company be selected to serve as Co-Managing Underwriter due to their knowledge of the District as well as their municipal bond distribution resources.

h. Resolution Authorizing Filing Application to LGC to Issue Revenue Bonds:

Mr. Powell reported that all debt issued by local government entities in the state of North Carolina must be authorized by the Local Government Commission (LGC). The LGC requires an application by the Board to initiate the formal process. Approval of the enclosed resolution is a necessary step to issue debt required to augment pay-as-go financing for the District's Capital Improvement Plan. In addition to the Resolution he included the financing schedule which outlines the overall process, along with a list of projects to be funded and/or reimbursed based on previous Board approved Reimbursement Resolutions authorizing the use of bond proceeds. He noted that the cost of issuing the bonds is about thirty cents lower per bond than the 2009 bond issue. Staff recommends to the Board approval of the Resolution.

i. Cash Commitment/Investment Report – Month Ended December 31, 2013:

Mr. Powell reported that Page 85 presents the makeup of the District's Investment Portfolio. There has been no change in the makeup of the portfolio from the prior month. Page 86 is the MSD Investment Manager report as of the month of December. The weighted average maturity of the Investment portfolio is 236 days. The yield to maturity is .76% and exceeds MSD benchmarks of the 6 month T-Bill and NCCMT cash portfolio. Page 87 is the MSD Analysis of Cash Receipts. Both the YTD and Monthly Domestic and Industrial revenues are considered reasonable based on timing of cash receipts in their respective fiscal periods. The YTD Facility and Tap Fees are considered reasonable based on timing of four (4) development contributions in the current year in addition to the conservative budgeting approach of these fees. Page 88 is the MSD Analysis of Expenditures. O&M expenditures are considered reasonable based on historical trends and current year budgeted needs. Debt service expenditures are below budgeted expectations due to lower than expected interest rates on the District's Series 2008A Revenue Refunding Bonds. Due to the nature and timing of capital projects, YTD expenditures can vary from year to year. Based on the current outstanding capital projects, YTD capital project expenditures are considered reasonable. Page 89 is the MSD Variable Debt Service report for the month of

January. The 2008A Series Bonds are performing better than budgeted expectations. As of the end of January, this issue has saved District ratepayers approximately \$3.2 million dollars in debt service since April of 2008.

With regard to the Resolution authorizing filing of application to the LGC, Mr. Kelly asked about the \$12,500 application fee; to whom the fee is paid, and how the fee was arrived at. Mr. Powell stated the fee is paid to the LGC and is a standard application fee for new money revenue or refunding bonds.

Ms. Frost moved the Board approve the Consolidated Motion Agenda as presented. Mr. Watts seconded the motion. With no discussion, Mr. VeHaun called for the question. Roll call vote was as follows: 11 Ayes; 0 Nays.

9. Old Business:

None

10. New Business:

None

11. Adjournment:

With no further business, Mr. VeHaun called for adjournment at 2:27p.m.

Jackie W. Bryson, Secretary/Treasurer



MEMORANDUM

TO: MSD Board
FROM: Thomas E. Hartye, P.E., General Manager
DATE: March 14, 2014
SUBJECT: Report from the General Manager

- Treatment Plant Facilities Plan

On the current agenda is the consideration of engineering services to update the Facilities Plan for the Treatment Plant. This study will consist of performing a condition assessment of the existing plant and will provide recommendations for future improvements necessary to sustain the plant and to meet new future regulations. This study was last done in 2007. Many of the short term and mid term recommendations from that study have been completed and new regulations are on the horizon. The MSD Treatment Plant was first built in 1967 (25 MGD) and was later expanded (40 MGD) in 1987. Staff will give a presentation at the meeting.

- Kudos

- Email from John Newton of Dew Waite Rd. "As a retired municipal engineer, I have seen a lot of public works and your crew on this project is excellent; their work is very well planned, coordinated and executed to produce the very minimum of disruption to us residents. Thank you for a job so well done."
- Call from Mike Warren of Prairie Path in Haw Creek expressing appreciation for Grady Brooks for being incredibly helpful and polite and returning a number of times to assist.
- To Kathy Meeks who headed up the Wellness Team effort for Healthy Heart month by setting up and coordinating an employee scavenger hunt which was most successful in giving some 28 participants "the run around" up and down 4 flights of stairs.

- Board/Committee Meetings/Events

The next Regular Board Meeting will be April 16th at 2 pm. The next Right of Way Committee meeting will be held at 9 am on March 26th.

**RIGHT OF WAY
COMMITTEE RECOMMENDATIONS
AND MINUTES
February 26, 2014**

I. Call To Order

The regular monthly meeting of the Right of Way Committee was held in the Boardroom of the William H. Mull Building and called to order at 9:00 a.m. on Wednesday, February 26, 2014. The following Right of Way Committee members were present: Glenn Kelly, Matt Ashley Jr., Jackie Bryson, Ellen Frost, Esther Manheimer, Chris Pelly and Robert Watts.

Others present were: Jerry VeHaun, Chairman of the Board; Bill Stanley, Board member; Ellen McKinnon, Martin-McGill; Tom Hartye, Ed Bradford, Angel Banks, Hunter Carson, Wesley Banner and Pam Nolan, M.S.D.

II. Inquiry as to Conflict of Interest

Mr. Kelly inquired if anyone had a conflict of interest with Agenda items. There were none.

III. Consideration of Condemnation – Broadview Avenue GSR, Project No. 2009127

PIN Number 9657-67-5093 - Property is improved with a single-family residence. Existing 8 inch VCP sewer runs diagonally across the lot and the circa 1962 house was constructed five feet away from line. The proposed 8-inch DIP rehab alignment parallels the existing sewer on opposite side from the house.

Owner rejected that alignment asking that the line be placed in road. Due to grade/elevation conflicts that is not feasible for the gravity line. MSD engineer re-designed to place new line along the rear property line then turn 90 degrees along the side property line. This still utilizes a 20-foot corridor, but it is just inside the rear/side property lines vs a diagonal swath through the heart of the property.

Building setbacks already reduce buildable area. In this RS-8 zoning, the rear setback is 15 feet, creating a net loss in buildable area along a 5-foot strip. The side setback is 6 feet, creating a net loss in buildable area along a 14-foot strip. Owner has refused this re-design as well.

Owner refused the standard compensation of \$2,409 and requires payment of \$10,000 for an easement to replace the existing sewer. We have countered with payment of \$3,000 and the rear/side alignment. Owner has rejected this counter.

Total Contacts: 6

STAFF RECOMMENDATION: Authority to obtain appraisal and proceed with condemnation.

Ms. Banks explained the above situation. There was no discussion. Mr. Watts made the motion to accept Staff's recommendation. Mr. Kelly seconded the motion. Voice vote was unanimous.

COMMITTEE RECOMMENDATION: Authority to obtain appraisal and proceed with condemnation.

IV. Birth of a Committee

In a recent house-cleaning of old files, we discovered these 1966 articles establishing a “right-of-way board” by the “Metropolitan Sewerage District commission”. These articles are copied here for your reading enjoyment.

Ms. Banks gave some background about the persons and projects mentioned in this article.

STAFF RECOMMENDATION: For Information Only

V. Other business:

The 2014 meeting schedule was passed out.

Ms. Banks reminded Committee to call to confirm their attendance for upcoming meetings upon receipt of packages in the mail due to quorum requirements. Ms. Manheimer asked if these could be e-mailed. Ms. Banks stated that Staff could mail and e-mail the packages. Mr. Hartye stated that would be fine. Right of Way Committee packages will be mailed and e-mailed in the future.

Ms. Banks noted that in the case of inclement weather, Committee members will be contacted by Mrs. Nolan with any cancellation or delay information. Ms. Banks will contact MSD staff and consultants.

Ms. Banks noted that there is an upcoming Condemnation trial beginning the week of March 10 if any members are interested in attending. Ms. Banks asked that if they are interested in attending to let her know so that she may call and let them know when jury selection is complete and the trial is ready to begin.

There being no further business the meeting adjourned at 9:14 am.

Metropolitan Sewerage District of Buncombe County

Board Action Item - Right-of-Way Committee

COMMITTEE MEETING DATE: 2/26/2014

BOARD MEETING DATE: 3/19/2014

SUBMITTED BY: Tom Hartye, PE, General Manager
 PREPARED BY: Angel Banks, Right of Way Manager
 REVIEWED BY: Ed Bradford, PE, Director of CIP

**SUBJECT: Consideration of Condemnation – Broadview Avenue GSR
 Project No. 2009127**

PIN Number 9657-67-5093 - Property is improved with a single-family residence. Existing 8-inch VCP sewer runs diagonally across the lot and the circa 1962 house was constructed five feet away from line. The proposed 8-inch DIP rehab alignment parallels the existing sewer on opposite side from the house.

Owner rejected that alignment asking that the line be placed in road. Due to grade/elevation conflicts that is not feasible for the gravity line. MSD engineer re-designed to place new line along the rear property line then turn 90 degrees along the side property line. This still utilizes a 20-foot corridor, but it is just inside the rear/side property lines vs a diagonal swath through the heart of the property.

Building setbacks already reduce buildable area. In this RS-8 zoning, the rear setback is 15 feet, creating a net loss in buildable area along a 5-foot strip. The side setback is 6 feet, creating a net loss in buildable area along a 14-foot strip. Owner has refused this re-design as well.

Owner refused the standard compensation of \$2,409 and requires payment of \$10,000 for an easement to replace the existing sewer. We have countered with payment of \$3,000 and the rear/side alignment. Owner has rejected this counter.

Total Contacts: 6

STAFF RECOMMENDATION: Authority to obtain appraisal and proceed with condemnation.

Ms. Banks explained the above situation. There was no discussion. Mr. Watts made the motion to accept Staff's recommendation. Mr. Kelly seconded the motion. Voice vote was unanimous.

COMMITTEE RECOMMENDATION: Authority to obtain appraisal and proceed with condemnation.

COMMITTEE ACTION TAKEN	
Motion by: Robert C. Watts	To: <input checked="" type="checkbox"/> Approve <input type="checkbox"/> Disapprove
Second by: Glenn Kelly	<input type="checkbox"/> Table <input type="checkbox"/> Send back to Staff
	<input type="checkbox"/> Other
BOARD ACTION TAKEN	
Motion by:	To: <input type="checkbox"/> Approve <input type="checkbox"/> Disapprove
Second by:	<input type="checkbox"/> Table <input type="checkbox"/> Send back to Staff

**Metropolitan Sewerage District of Buncombe County
BOARD ACTION ITEM**

BOARD MEETING DATE: March 19, 2014

SUBMITTED BY: Tom Hartye, P.E. - General Manager

PREPARED BY: Ed Bradford, P.E. - Director of Engineering
Roger Watson, P.E. - Project Manager

SUBJECT: Sanitary Sewer Rehabilitation Project: Indiana Avenue, MSD Project No. 2007017

BACKGROUND: This project is for the replacement of an aged clay sewer line located in West Asheville, near State Street. The line is in poor structural condition, which has caused frequent maintenance issues and also allows groundwater infiltration.

The project is comprised of 2,135 linear feet of 8-inch DIP.

The contract was advertised and four bids were received on Tuesday March 4, 2014 at 2:00 PM as follows:

<u>Contractor</u>	<u>Bid Amount</u>
1) Huntley Construction Co.	\$899,799.76
2) Buckeye Construction Co.	\$473,072.40
3) Dillard Excavating Co.	\$444,115.00
4) Don Moorhead Construction Co.	\$413,313.20

The apparent low bidder is Don Moorhead Construction Co. with a bid amount of \$413,313.20. Don Moorhead has not had previous experience with MSD rehabilitation projects; therefore, staff checked multiple references.

All references were positive, with no problems cited with the company's performance. Staff is therefore comfortable that the Board award this contract to Don Moorhead Construction Co..

Please refer to the attached documentation for further details.

FISCAL IMPACT: The FY13-14 construction budget for this project is \$403,000.00. There are sufficient funds within the CIP Budget for the overage.

STAFF RECOMMENDATION: Staff recommends award of this contract to Don Moorhead Construction Co. in the amount of \$413,313.20, subject to review and approval by District Counsel.


**METROPOLITAN SEWERAGE DISTRICT OF
BUNCOMBE COUNTY, NORTH CAROLINA**

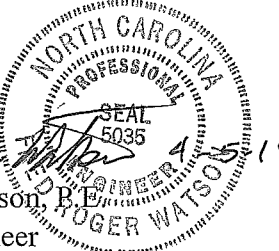
**INDIANA AVENUE SEWER REPLACEMENT
PROJECT NO. 2007017**

**BID TABULATION
March 4, 2014**

BIDDER	Bid Bond	MBE Form	Bid Forms (Proposal)	TOTAL BID AMOUNT
Huntley Construction Company Asheville, NC	N/A	1	Yes	\$899,799.76
Buckeye Bridge, LLC Canton, NC	N/A	1	Yes	\$473,072.40
Dillard Excavating Co., Inc. Sylva, NC	N/A	1	Yes	\$444,115.00
Don Moorhead Construction, Inc. Belton, SC	N/A	1	Yes	\$413,313.20

APPARENT LOW BIDDER


F. Roger Watson, P.E.
Project Engineer
Metropolitan Sewerage District of
Buncombe County, North Carolina



This is to certify that the bids tabulated herein were publicly opened and read aloud at 2:00 p.m. on the 4th day of March, 2014, in the W.H. Mull Building at the Metropolitan Sewerage District of Buncombe County, Asheville, North Carolina. This was an informal bid and no bid bond was required.

Interoffice Memorandum

TO: Tom Hartye, General Manager
Ed Bradford, CIP Manager

FROM: F. Roger Watson, Project Engineer

DATE: March 5, 2014

**RE: Indiana Avenue Sanitary Sewerage Rehabilitation Project,
MSD Project No. 2007017**

This project is for the replacement of an existing 8-inch vitrified clay sewer main which serves properties in an area of West Asheville bounded by State Street, Michigan Ave, Montana Ave, and Hanover Drive.

The line begins in State Street and extends northward along a small creek to Montana Avenue. The line is in very poor condition and is a high source of I&I. At several points along the length of the sewer main; the existing line crosses under or is in close proximity to a storm drainage system. This system is not in good condition either, and adds to the I&I problems with the sewer. The new alignment will provide separation between the sewer and storm drain systems as well as a more durable ductile iron pipe system.

This project includes 2,135 LF 8-inch of ductile iron sewer pipe plus manholes and service connections.

Bids for this project were received at 2:00 PM on Tuesday, March 4, 2014 from four bidders as shown below:

<u>Bidder</u>	<u>Bid</u>
1) Huntley Construction Company of Asheville, NC	\$899,799.76
2) Buckeye Construction Company of Canton, NC	\$473,072.40
3) Dillard Excavating Company of Sylvia, NC	\$444,115.00
4) Don Moorhead Construction Company of Belton, SC	\$413,313.20

Don Moorhead Construction Company of Belton, SC is the apparent low bidder with a bid amount of \$413,313.20.

Since this company has not worked for MSD on previous projects, they were asked to provide references and a list of similar projects completed for other public agencies. The list of projects submitted revealed that they have successfully completed projects ranging from \$189,000 to \$12,000,000 in Greenville, Greenwood, Anderson, Rock Hill and Mt. Pleasant, SC.

In addition, staff checked several references to verify their work quality. All references were positive, and did not indicate any problems with this company's performance.

Staff therefore recommends that this project be awarded to Don Moorhead Construction Company of Belton, SC in the amount of \$413,313.20, subject to MSD Counsel's review and approval.

Reference Verification

**Don Moorhead Construction , Inc.
Belton SC.**

March 6, 2014

Don Moorhead Construction Inc. was the apparent low bidder on MSD's Indiana Avenue Sanitary Sewer Rehabilitation Project No. 2007017. They were asked to provide a list of sewer construction project which they have completed during the past several years. That list of projects contained the names of several people with whom they have worked. The following references were selected at random, contacted, and provided the following comments:

Aaron Fraizer; Engineer and owner of Fraizer Engineering PA of Stanley, SC

Mr. Fraizer was the Engineer of Record on several projects constructed by Don Moorhead Construction. He stated that he had been satisfied with their work on all of those jobs. The work of DMC, Inc. was well planned and scheduled, and their construction practices were excellent. He had no problem recommending them for work. He stated that they are "pre-qualified" as a bidder/contractor for Mt. Pleasant, SC and have done numerous jobs for that community.

Jeff Caldwell ; Wastewater Superintendent , City of Anderson, SC

Mr. Caldwell stated that Don Moorhead Construction had done work for the City of Anderson and they had done a great job and were very professional in their work.

Tommy Kennedy – Engineering Director , Georgetown County Water & Sewer District

Mr. Kennedy indicated that Don Moorhead Construction had done great work on jobs performed for the District. Work was completed on time and within budget. There were no change orders for additional payment generated by DMC, Inc. He stated that he would not hesitate to award them another contract if they were the successful bidder. He stated that there was a minor problem on one project that occurred after the warranty period of the contract and that when notified, DMC, Inc. came back and made appropriate corrections with no fuss or additional expense to the District.

In summary

All those interviewed had no negative comments about this contractor and all comments were very positive. All parties were in agreement that DMC, Inc. did excellent work and that they would re-hire DMC Inc. if the opportunity presented.

CONTRACTS COMPLETED

Location	Name and Description of Project	Owner	Design Engineer	Date Completed	Contract Price
Mt Pleasant, SC	CMOM FY13 / FY14 8" to 12" Sewers with the Old Village Area from manhole to manhole; performing other sewer replacements and pi repairs; bypass pumping flows	Mt Pleasant Waterworks 1619 Rifle Range Rd Mt Pleasant, SC 29464	Frazier Engineering 6592 Bob White Trail Stanley, NC 28164 704-822-8444 Aaron Frazier	Oct-13	Bid Amount \$ 1,797,677.50
				335 days	Completed Contract \$ 1,661,600.09
Georgetown, SC	Plantersville Community Sewer Improvements Approx. 12,544 lf of 8" gravity sewer; 59 sewer MH 16,647 lf of 2" force main; 3,159 lf of 3" force main; 5,700 lf of 4" force main; 26,315 lf of 8" force main; 758 lf of various sized pipe with encasement bored under roads, 1,520 lf of directional bores under wetlands; 10 air release; 50 simplex residential grinder PS; 6 duplex submersible PS; 49 single sewer services; 41 double sewer services	Georgetown Cty Water & Sewer District PO Box 2748 4145 Highmarket St Georgetown, SC 29442 843-237-9727	Davis & Floyd, Inc BTC-105, Suite 23 181 E Evans St Florence, SC 29506 843-519-1050 John Reynolds	9/20/2012	Bid Amount \$ 2,628,298.15
				390 days	Completed Contract \$ 2,622,504.49
Mount Pleasant, SC	FY11 / FY12 CMOM Project Replace 2,326 lf of 8" sewer; performing one point repair and replacing 5 defective service laterals; performing other sewer replacements and point repairs as identified	Mount Pleasant Waterworks 1619 Rifle Range Rd Mt Pleasant, SC	Frazier Engineering PA 6592 Bob White Trail Stanley, NC 28164 704-822-8444 Aaron Frazier	8/22/2012	Bid Amount \$ 1,426,255.13
				365 days	Completed Contract \$ 1,512,165.58
Anderson, SC	SC Hwy 28 / Airline Rd Water & Sewer Relocation Water & sewer line relocation to locate new facilities out of conflict with the re-alignment of SCDOT construction of Hwy 28/Airline Rd- 1,041 lf of 8" Gravity Sewer; 11 MH- 2,023 lf of 3"-8" waterline; 467 lf of 10" Sewer Forcemair 431 lf of 6"-20" Steel Encasement; remove & abandon existing.	Homeland Park Water & Sewer District 3231 D.L. Dr Anderson, SC 29624 864-296-9766	Dunn & Associates Engineering PO Box 1120 Anderson, SC 29622 864-222-0339 Keith Dunn	Sep-10	Bid Amount \$ 189,583.00
				60 days	Completed Contract \$ 198,869.25
Greenwood SC	Seaboard Replacement Sewer 3,300 lf of 16" sewer to replace existing 10" sewer Replace 6" & 8" existing sewer with 8" connector sewer; 30 precast MH; cured-in-place lining sewer;	Greenwood Metropolitan District 110 Metro Dr Greenwood, SC 864-942-3900 Marion Boone	Frazier Engineering PA 6592 Bob White Tr Stanley, NC 28164 704-822-8444 Aaron Frazier	Aug-10 240 days	\$ 1,770,018.50

CONTRACTS COMPLETED

Location	Name and Description of Project	Owner	Design Engineer	Date Completed	Contract Price
Greenwood SC	Turner Branch Replacement Sewer 13,000 lf of 24" gravity sewer; 4,300 lf of 8" to 12" gravity sewer; 65 precast MH; 1,200 lf of 4" to 6" service laterals etc.	Greenwood Metropolitan District 110 Metro Dr Greenwood, SC 864-942-3900 Marion Boone	Frazier Engineering PA 6592 Bob White Tr Stanley, NC 28164 704-822-8444 Aaron Frazier	Aug-10 480 days	Bid Amount \$ 3,857,700.00
					Completed Contracts \$ 3,599,655.56
Greenville SC	Woodfern-Pitts Replacement Sewer 3,976 lf of 24" trunk sewer; 4,445 lf of 18" trunk sewer; 42 - 5' dia manholes; 80 lf of 48" jack & bore	Western Carolina Regional Sewer Authority 561 Mauldin Rd Greenville, SC 29607 864-299-4020	Frazier Engineering 6592 Bob White Tr Stanley, NC 28164 704-822-8444	Jul-09 470 days	Bid Amount \$ 3,188,902.00
					Completed Contracts \$ 2,460,699.71
North Augusta SC	Mims Branch / Little Horse Creek Sanitary Sewer 12,00lf of 30" Gravity Sewer; 3,100 lf of 27" Gravity Sewer; 80 lf of 24" Gravity Sewer; 21,800 lf of 16" Force Main; 2 Metering Stations	City of N. Augusta PO Box 6400 North Augusta SC 29861 803-441-4202 Tom Zeaser	B P Barber & Associates Inc PO Box 1116 Columbia, SC 803-254-4400 Bob Vannerson	Mar-09 553 days	Bid Amount \$ 4,894,293.50
					Completed Contracts \$ 5,000,205.56
Rock Hill SC	Dutchman Creek Sewer System 23,585 lf of 48" Gravity Sewer New & Replacement; 1,320 lf of 48" DI Gravity Sewers on Pile/Piers; 1 - Diversion Structure 10 Connect to Existing Sewer; 100 lf of 72" Tunnel under Norfolk Southern Railroad 100 lf of 72" Tunnel under US Highway 21 100 lf of 72" Tunnel under Interstate I-77	City of Rock Hill PO Box 11706 Rock Hill, SC 29731 803-325-2500	Wiedeman & Singleton of SC, Inc 131 Main St, Ste 300 Rock Hill, SC 29731 803-329-2944 Troy Began	2007 365 days	\$12,366,784.00
Greenwood SC	Cokesbury Street Replacement Sewer 1,800 lf of 24" gravity sewer; 1,900 lf of 18" gravity sewer; 230 lf of 16' gravity sewer; 3,500 lf of 8" gravity sewer; 950 lf of 4" & 6" service laterals several creek crossings; 328 lf of 48" road bore; 275 lf of 30" road bore	Greenwood Metro District 110 Metro Dr Greenwood, SC 864-943-8000 Marion Boone	Frazier Engineering PA 6592 Bob White Tr Stanley, NC 28164 704-822-8444 Aaron Frazier	Oct-07 300 days	\$1,715,235.00
Anderson SC	Beaverdam Creek Interceptor Phase II Division I 17,500 lf 36" gravity sewer - 80 manholes	County of Anderson 731 Michelin Blvd Anderson, SC 29626 864-260-4729 Dewey Pearson	BP Barber & Associates Inc 9601 Warren H. Abernathy Hwy Spartanburg, SC 29301 864-949-1111 Jim Longshore	Oct-07 300 days	\$3,704,650.00
Anderson SC	Rocky River Relief Sewer approx 2575 lf 54" DIP gravity sewer; 10500 lf 48" DIP gravity sewer; 4602 lf 42" DIP gravity sewer; 3263 lf 36" DIP gravity sewer; 1144 lf 24" DIP gravity sewer and appurt.	City of Anderson 1100 Southwood St Anderson, SC 29624 864-231-2246 Jeff Caldwell	Design South Professionals Inc. One Linwa Blvd Anderson, SC 29621 864-226-6111 Frank Morgan	June-07 480 days	\$6,953,035.92
Woodruff SC	Peters Creek Trunk Sewer 11,600 lf 30" gravity sewer along Peters Creek	Western Carolina 561 Mauldin Rd Greenville, SC 29607 864-299-4020 Julie Dacus	Frazier Engineering 6592 Bob White Tr Stanley, NC 28164 704-822-8444 Aaron Frazier	Dec-06 240 days	\$3,777,005.00

CONTRACTS COMPLETED

Location	Name and Description of Project	Owner	Design Engineer	Date Completed	Contract Price
Greenwood SC	Lakeshores Sewer System - Phase 2 approx 4400 lf 16" DIP sewer; 3870 lf 10" DIP sewer; 841 lf 8" DIP sewer; (1) .40 gpm pump station w/ 5400 ft 8" FM; (1) .07 mgd pump	Greenwood Metropolitan District 110 Metro Dr Greenwood, SC 864-943-8000 Marion Boone	Frazier Engineering 6592 Bob White Tr Stanley, NC 28164 704-822-8444 Aaron Frazier	Dec-05 425 days	Bid Amount \$2,184,795.00 Completed Contract \$2,178,918.00
Pickens SC	Wolf Creek Interceptor 4,333 lf of 15" PVC sewer; 912 lf of 8" PVC sewer 90 lf of 24" Bore; 90 lf of 42" Bore	City of Pickens 219 Pendleton St Pickens, SC 29671 864-878-641	B P Barber & Associates Inc 9601 Warren H Abernathy Hwy Spartanburg, SC 29301 864-949-1111 Lonnie Mathis	May-05 150 days	Bid Price \$ 447,798.50 Completed Contract \$ 481,677.50
Calhoun Falls, SC	Water and Sewer Relocation 400 lf of gravity sewer 8"-14", 8 manholes, 2,800 lf of 6"-16" waterline	Town of Calhoun Falls 401 N. Washington St Calhoun Falls, SC 29628 864-418-8512	Dunn & Associates PO Box 1120 Anderson, SC 29622 864-222-0339 Keith Dunn	Jan-06 210 days	\$ 572,940.00
Starr Iva SC	Area Sewer Improvements Division I 13,868 lf of 10" PVC Gravity Sewer; 4,386 lf of 15" PVC Gravity Sewer; 11,885 lf of 8" PVC FM	County of Anderson Wastewater Management 731 Michelin Blvd Anderson, SC 29626 864-260-4729	B P Barber & Associates Inc 9601 Warren H Abernathy Hwy Spartanburg, SC 29301 864-949-1111 Lonnie Mathis	Dec-04 360 days	Bid Price \$ 1,050,760.22 Completed Contract \$ 991,497.00
Starr Iva SC	Area Sewer Improvements Division IV 52,000 lf of 16" PVC FM; 805 lf of 30" Bore	County of Anderson Wastewater Management 731 Michelin Blvd Anderson, SC 29626 864-260-4729	B P Barber & Associates Inc 9601 Warren H Abernathy Hwy Spartanburg, SC 29301 864-949-1111 Lonnie Mathis	Dec-04 360 days	Bid Price \$ 750,742.95 Completed Contract \$ 1,292,610.00

**Metropolitan Sewerage District of Buncombe County, North Carolina
CAPITAL IMPROVEMENT PROGRAM**

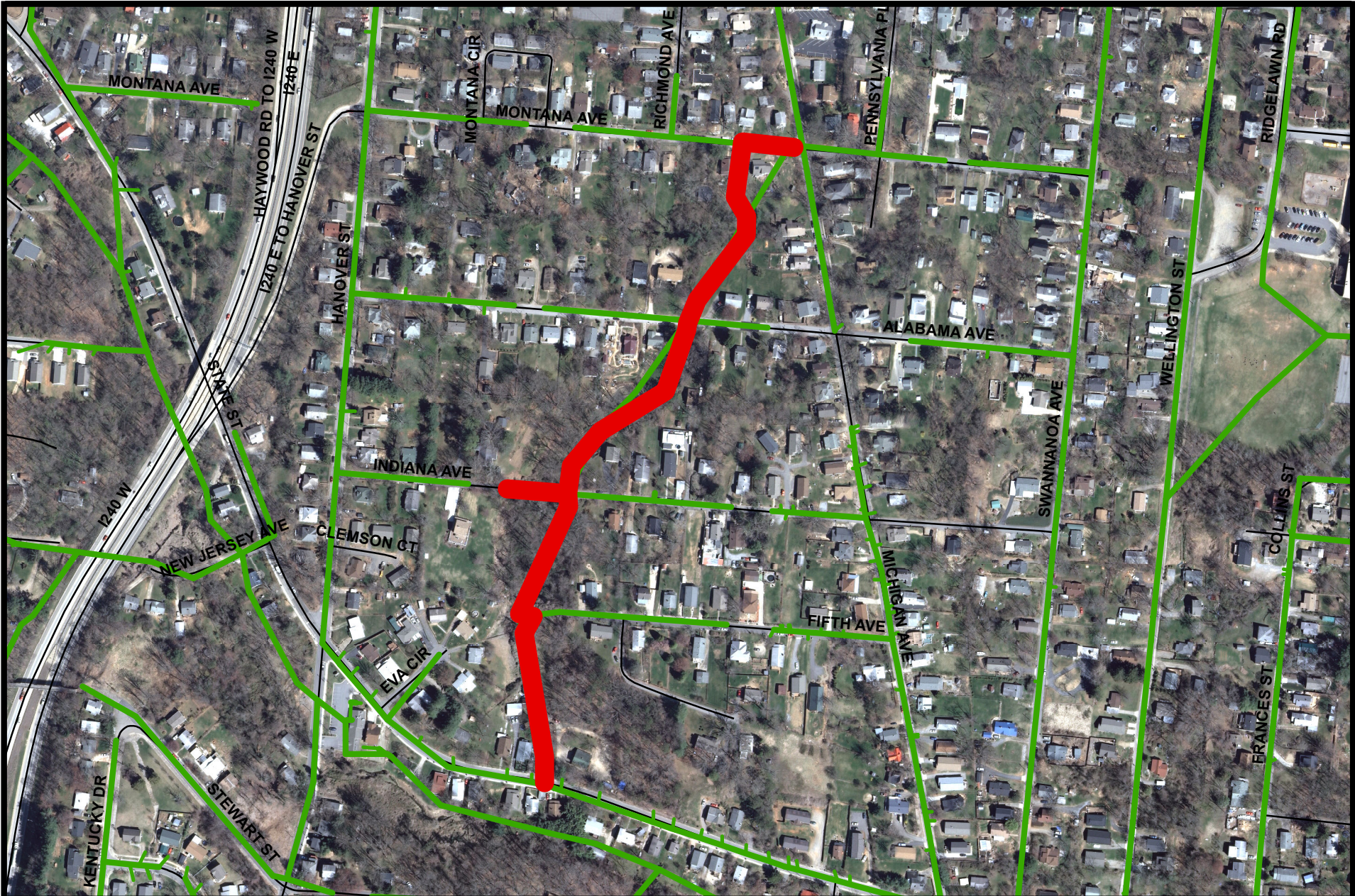
BUDGET DATA SHEET - FY 2013 - 2014

PROJECT:	Indiana Avenue	LOCATION:	Asheville
TYPE:	General Sewer Rehab.	DATE OF REPORT:	January 2013
PROJECT NO.	2007017	TOTAL L.F.:	2,153
PROJECT BUDGET:	\$489,400.00	PROJECT ORIGIN:	SSO's, Work Orders, Line Condition

DESCRIPTION	ESTIMATED PROJECT COST	TOTAL EXPENDS THRU 12/31/12	EST. COST JAN - JUNE 2013	EST. BUDGET FY 13-14
55310 - PRELIM. ENGINEERING				
55320 - SURVEY - DESIGN	\$8,900.00	\$8,830.00	\$70.00	
55330 - DESIGN				
55340 - PERMITS	\$1,000.00		\$1,000.00	
55350 - SPECIAL STUDIES				
55360 - EASEMENT PLATS	\$12,000.00	\$8,400.00	\$3,600.00	
55370 - LEGAL FEES	\$12,000.00	\$1,890.00	\$6,110.00	\$4,000.00
55380 - ACQUISITION SERVICES				
55390 - COMPENSATION	\$40,000.00		\$40,000.00	
55400 - APPRAISAL	\$2,000.00			\$2,000.00
55410 - CONDEMNATION	\$5,000.00			\$1,000.00
55420 - CONSTRUCTION	\$403,000.00			\$403,000.00
55430 - CONST. CONTRACT ADM.				
55440 - TESTING	\$1,000.00			\$1,000.00
55450 - SURVEY - ASBUILT	\$4,500.00			\$4,500.00
TOTAL AMOUNT	\$489,400.00	\$19,120.00	\$50,780.00	\$415,500.00

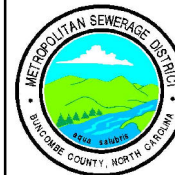
ENGINEER:	MSD	ESTIMATED BUDGETS - FY '14 -'23	
R.O.W. ACQUISITION:	MSD	# PLATS: [16]	FY 14-15 \$4,000.00
CONTRACTOR:			FY 15-16 \$0.00
CONSTRUCTION ADM:	MSD		FY 16-17 \$0.00
INSPECTION:	MSD		FY 17-18 \$0.00
			FY 18-19 \$0.00
PROJECT DESCRIPTION:	This project begins at an existing manhole in State Street and extends up a small creek, eventually ending near the intersection of Michigan Ave. and Montana Ave. The existing lines are vitrified clay pipe and have broken and cracked pipes, poor joints and root problems. Outbuildings and storage sheds have been built over the lines in some locations.		FY 19-20 \$0.00
			FY 20-21 \$0.00
			FY 21-22 \$0.00
			FY 22-23 \$0.00

SPECIAL PROJECT NOTES:



**Indiana Avenue
Project No. 2007017**

NOT TO SCALE



METROPOLITAN SEWERAGE DISTRICT
of
BUNCOMBE COUNTY, NORTH CAROLINA

Budget Map

Metropolitan Sewerage District of Buncombe County

Board Action Item

BOARD MEETING DATE: March 19, 2014

SUBMITTED BY: Thomas Hartye, P.E., General Manager

PREPARED BY: Kevin Johnson

REVIEWED BY: Ed Bradford, P.E., Engineering Director

SUBJECT: Acceptance of Developer Constructed Sewer System for the Berrington Village Apartments Sewer Extension Project.

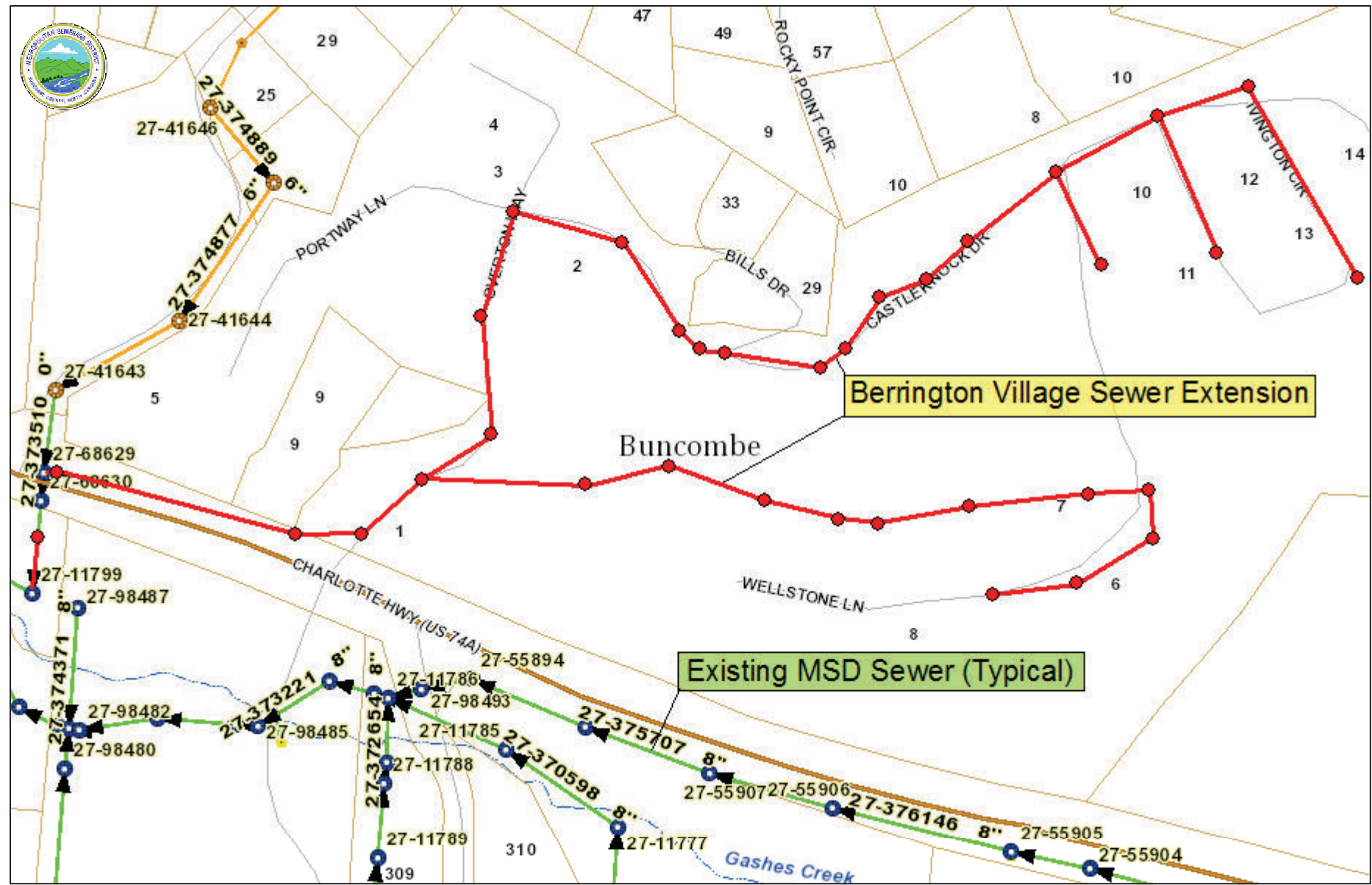
BACKGROUND: This project is located inside the District boundary along Charlotte Highway (US-74A) in Buncombe County. The developer of the project is Roy Carroll of Berrington Village Apartments, LLC.

The project included rehabilitation of 121 linear feet of 8-inch public gravity sewer and installation of approximately 4,440 linear feet of 8-inch public gravity sewer to serve the 308 unit apartment complex.

A wastewater allocation was issued in the amount of 61,600 GPD for the project. The estimated cost of the sewer construction is \$296,000.00.

All MSD requirements have been met.

STAFF RECOMMENDATION: Staff recommends acceptance of this developer constructed sewer system.



Berrington Village Sewer Extension

Buncombe

Existing MSD Sewer (Typical)

Gashes Creek

Berrington Village MSD Project #2008164

Author: KJ

1 in = 200 ft

Date: 3/12/2014

The Metropolitan Sewerage District of Buncombe County, NC has prepared these maps based on best available information for use in assisting District maintenance work, service area analysis, and planning. The District does not warrant the accuracy of any of the information shown. Field verification is advised for all information shown on the maps or included with manhole data. No guarantee is given as to the accuracy or currency of any of the data. Therefore, in no event shall the District be liable for any special, indirect, or consequential damages or any damages whatsoever resulting from loss of use, data, or profits, whether in an action of contract, negligence, or other action, arising out of or in connection with the use of the information herein provided. Grid shown is North Carolina State Plane Coordinate System NAD 1983 (North American Datum 1983).

Metropolitan Sewerage District of Buncombe County

Board Action Item

BOARD MEETING DATE: March 19, 2014

SUBMITTED BY: Thomas Hartye, P.E., General Manager

PREPARED BY: Kevin Johnson

REVIEWED BY: Ed Bradford, P.E., Engineering Director

SUBJECT: Acceptance of Developer Constructed Sewer System for the City of Asheville 2005 Annexation (Airport Road) Sewer Extension Project.

BACKGROUND: This project is located inside the District boundary at the intersection of Airport Road and Hendersonville Road in the City of Asheville.

The developer of the project is the City of Asheville. The project included installing approximately 600 linear feet of 8-inch public gravity sewer to serve four (4) annexed commercial properties.

A wastewater allocation was issued in the amount of 1,500 GPD for the project. The estimated cost of the sewer extension is \$55,215.83.

All MSD requirements have been met.

STAFF RECOMMENDATION: Staff recommends acceptance of this developer constructed sewer system.



COA 2005 Annexation Sewer (Airport Rd.) MSD Project #2010092

1 in = 100 ft
Date: 3/12/2014

Author: KJ

The Metropolitan Sewerage District of Buncombe County, NC has prepared these maps based on best available information for use in assisting District maintenance work, service area analysis, and planning. The District does not warrant the accuracy of any of the information shown. Field verification is advised for all information shown on the maps or included with manhole data. No guarantee is given as to the accuracy or currency of any of the data. Therefore, in no event shall the District be liable for any special, indirect, or consequential damages or any damages whatsoever resulting from loss of use, data, or profits, whether in an action of contract, negligence, or other action, arising out of or in connection with the use of the information herein provided. Grid shown is North Carolina State Plane Coordinate System NAD 1983 (North American Datum 1983).

Metropolitan Sewerage District of Buncombe County

Board Action Item

BOARD MEETING DATE: March 19, 2014

SUBMITTED BY: Thomas Hartye, P.E., General Manager

PREPARED BY: Kevin Johnson

REVIEWED BY: Ed Bradford, P.E., Engineering Director

SUBJECT: Acceptance of Developer Constructed Sewer System for the City of Asheville 2010 Annexation (Rockwood Road) Sewer Extension Project.

BACKGROUND: This project is located outside the District boundary near the intersection of Rockwood Road and Airport Road in the City of Asheville.

The developer of the project is the City of Asheville. The project included installing approximately 400 linear feet of 8-inch public gravity sewer to serve annexed commercial properties.

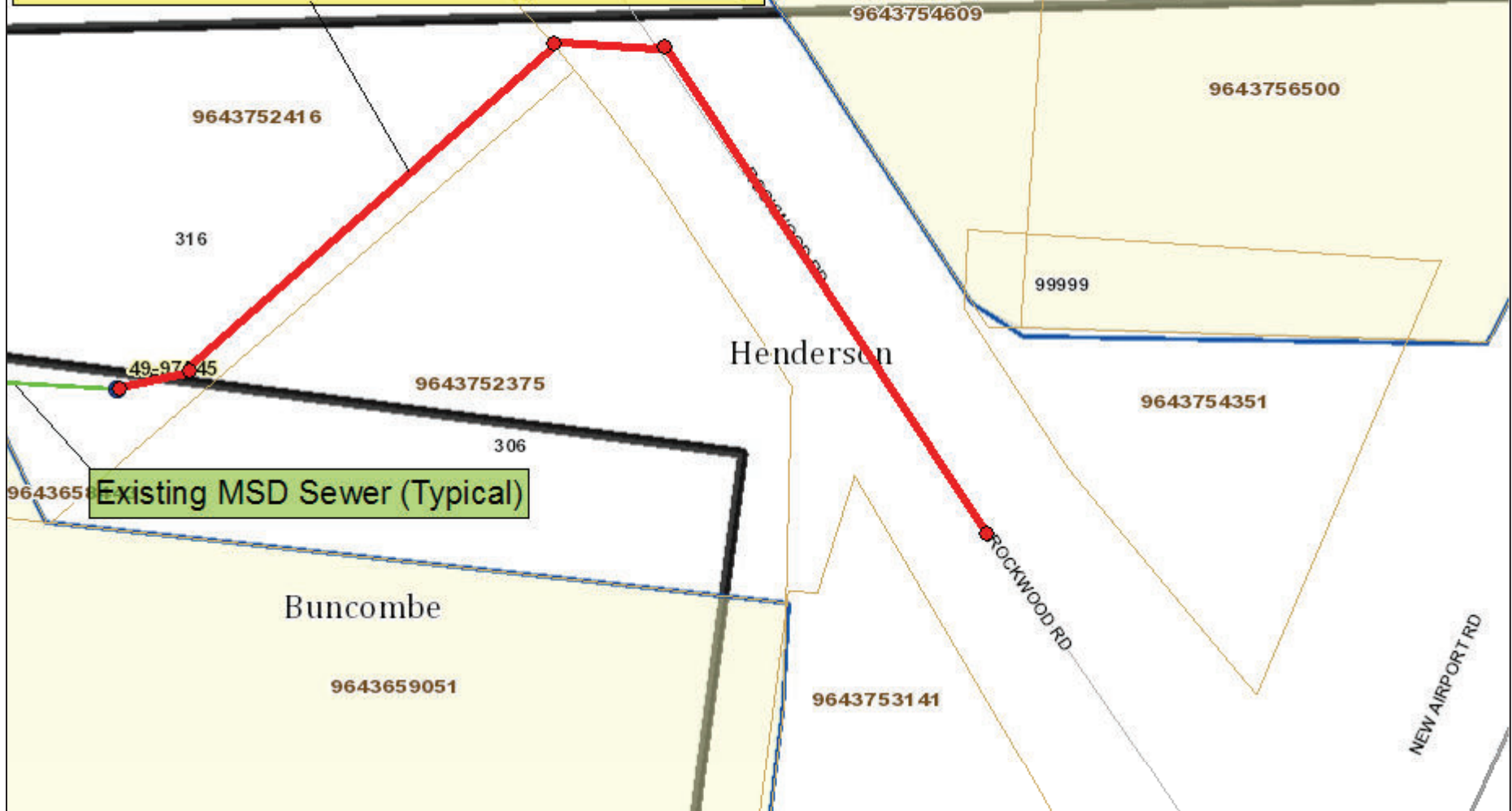
A wastewater allocation was issued in the amount of 5,000 GPD for the project. The estimated cost of the sewer extension is \$62,133.66.

All MSD requirements have been met.

STAFF RECOMMENDATION: Staff recommends acceptance of this developer constructed sewer system.



COA Annexation Sewer Extension (Rockwood Rd.)



COA 2010 Annexation Sewer (Rockwood Rd) MSD Project #2011027

Author: KJ

1 in = 50 ft

Date: 3/12/2014

The Metropolitan Sewerage District of Buncombe County, NC has prepared these maps based on best available information for use in assisting District maintenance work, service area analysis, and planning. The District does not warrant the accuracy of any of the information shown. Field verification is advised for all information shown on the maps or included with manhole data. No guarantee is given as to the accuracy or currency of any of the data. Therefore, in no event shall the District be liable for any special, indirect, or consequential damages or any damages whatsoever resulting from loss of use, data, or profits, whether in an action of contract, negligence, or other action, arising out of or in connection with the use of the information herein provided. Grid shown is North Carolina State Plane Coordinate System NAD 1983 (North American Datum 1983).

Metropolitan Sewerage District of Buncombe County

Board Action Item

BOARD MEETING DATE: March 19, 2014

SUBMITTED BY: Thomas Hartye, P.E., General Manager

PREPARED BY: Kevin Johnson

REVIEWED BY: Ed Bradford, P.E., Engineering Director

SUBJECT: Acceptance of Developer Constructed Sewer System for the ALDI - Weaverville Sewer Relocation Project.

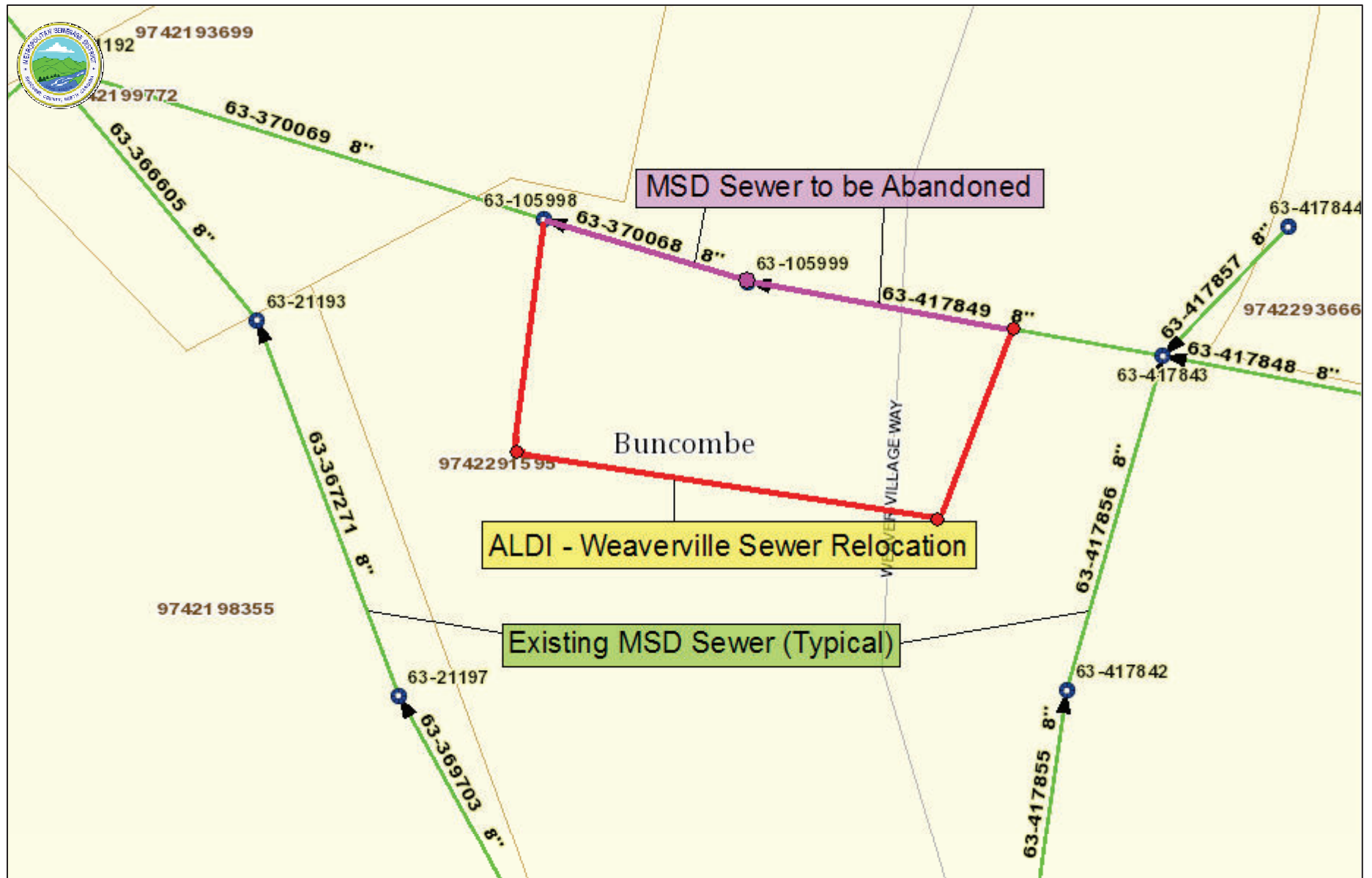
BACKGROUND: This project is located inside the District boundary on Weaver Boulevard in the Town of Weaverville. The developer of the project is Greg Phillips of Weaverville Partners, LLC.

The project included relocating approximately 307 linear feet of 8-inch public gravity and abandoning approximately 170 linear feet of 8-inch public gravity sewer to accommodate the commercial development.

A wastewater allocation was issued in the amount of 250 GPD for the project. The estimated cost of the sewer construction is \$38,000.00.

All MSD requirements have been met.

STAFF RECOMMENDATION: Staff recommends acceptance of this developer constructed sewer system.



ALDI - Weaverville Sewer Relocation MSD Project #2013048

Author: KJ

1 in = 50 ft

Date: 3/12/2014

The Metropolitan Sewerage District of Buncombe County, NC has prepared these maps based on best available information for use in assisting District maintenance work, service area analysis, and planning. The District does not warrant the accuracy of any of the information shown. Field verification is advised for all information shown on the maps or included with manhole data. No guarantee is given as to the accuracy or currency of any of the data. Therefore, in no event shall the District be liable for any special, indirect, or consequential damages or any damages whatsoever resulting from loss of use, data, or profits, whether in an action of contract, negligence, or other action, arising out of or in connection with the use of the information herein provided. Grid shown is North Carolina State Plane Coordinate System NAD 1983 (North American Datum 1983).

Metropolitan Sewerage District of Buncombe County

BOARD INFORMATIONAL ITEM

Meeting Date: March 19, 2014

Submitted By: Thomas E. Hartye, PE., General Manager

Prepared By: W. Scott Powell, CLGFO, Director of Finance
Cheryl Rice, Accounting Manager

Subject: Cash Commitment/Investment Report-Month Ended January 31, 2014

Background

Each month, staff presents to the Board an investment report for all monies in bank accounts and specific investment instruments. The total investments as of January 31, 2014 were \$26,347,264. The detailed listing of accounts is available upon request. The average rate of return for all investments is 0.591. These investments comply with North Carolina General Statutes, Board written investment policies, and the District's Bond Order.

The attached investment report represents cash and cash equivalents as of January 31, 2014 do not reflect contractual commitments or encumbrances against said funds. Shown below are the total investments as of January 31, 2014 reduced by contractual commitments, bond funds, and District reserve funds. The balance available for future capital outlay is \$(3,714,674).

Total Cash & Investments as of 01/31/2014		26,347,264
Less:		
Budgeted Commitments (Required to pay remaining FY14 budgeted expenditures from unrestricted cash)		
Construction Funds	(10,999,654)	
Operations & Maintenance Fund	(6,833,943)	
		(17,833,597)
Bond Restricted Funds		
Bond Service (Funds held by trustee):		
Funds in Principal & Interest Accounts	(5,191)	
Remaining Principal & Interest Due	(6,822,344)	
		(6,827,535)
District Reserve Funds		
Fleet Replacement	(677,761)	
WWTP Replacement	(505,062)	
Maintenance Reserve	(913,130)	
		(2,095,953)
District Insurance Funds		
General Liability	(277,695)	
Worker's Compensation	(310,198)	
Post-Retirement Benefit	(1,182,664)	
Self-Funded Employee Medical	(1,534,296)	
		(3,304,853)
Designated for Capital Outlay		(3,714,674)

Staff Recommendation

None. Information Only.

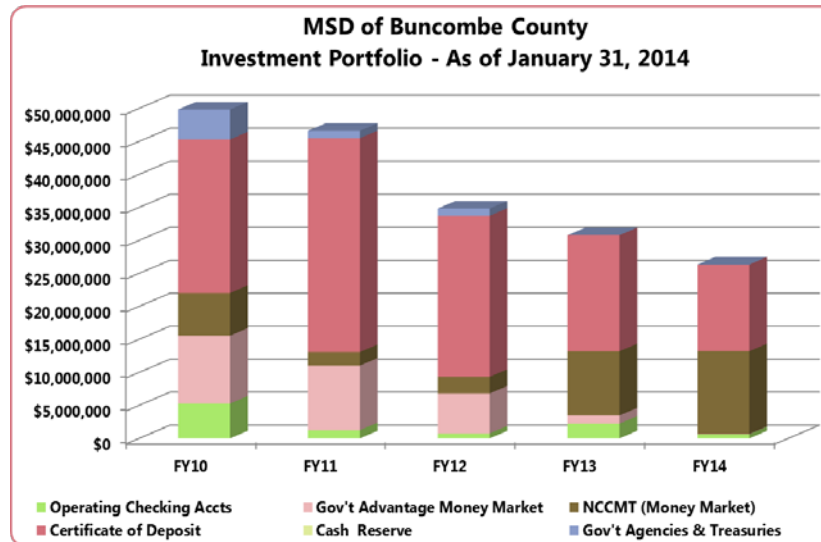
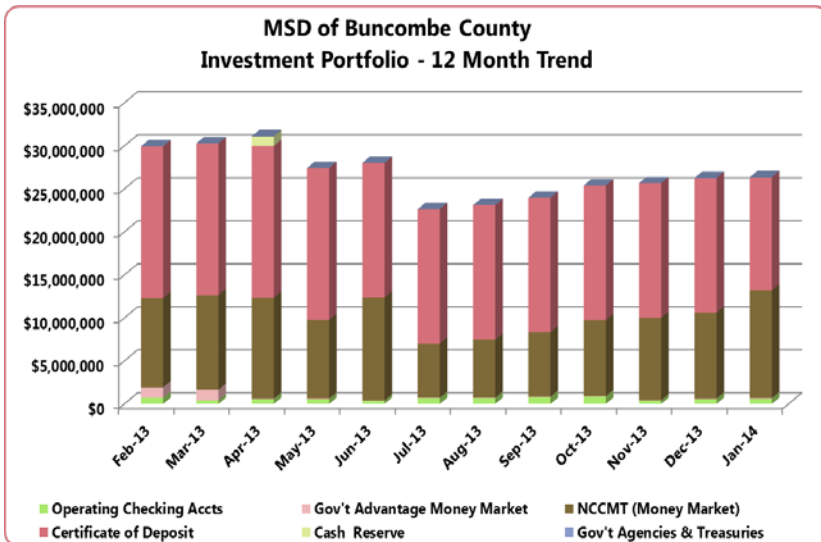
Action Taken

Motion by:	to	Approve	Disapprove
Second by:		Table	Send to Committee
Other:			
Follow-up required:			
Person responsible:			Deadline:

Metropolitan Sewerage District of Buncombe County Investment Portfolio

	Operating Checking Accounts	Gov't Advantage Money Market	NCCMT (Money Market)	Certificate of Deposit	Cash Reserve	Gov't Agencies & Treasuries	Total
Held with Bond Trustee	\$ -	\$ -	\$ 5,191	\$ -	\$ -	\$ -	\$ 5,191
Held by MSD	623,014	46,657	12,521,818	13,150,584	-	-	26,342,073
	<u>\$ 623,014</u>	<u>\$ 46,657</u>	<u>\$ 12,527,009</u>	<u>\$ 13,150,584</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ 26,347,264</u>

<u>Investment Policy Asset Allocation</u>	<u>Maximum Percent</u>	<u>Actual Percent</u>	
U.S. Government Treasuries, Agencies and Instrumentalities	100%	0.00%	No significant changes in the investment portfolio as to makeup or total amount.
Bankers' Acceptances	20%	0.00%	
Certificates of Deposit	100%	49.91%	The District's YTM of .59% is exceeding the YTM benchmarks of the 6 month T-Bill and NCCMT Cash Portfolio.
North Carolina Capital Management Trust	100%	47.55%	
Checking Accounts:	100%		All funds invested in CD's, operating checking accounts, Gov't Advantage money market are fully collateralized with the State Treasurer.
Operating Checking Accounts		2.36%	
Gov't Advantage Money Market		0.18%	



**METROPOLITAN SEWERAGE DISTRICT
INVESTMENT MANAGERS' REPORT
At January 31, 2014**

Summary of Asset Transactions

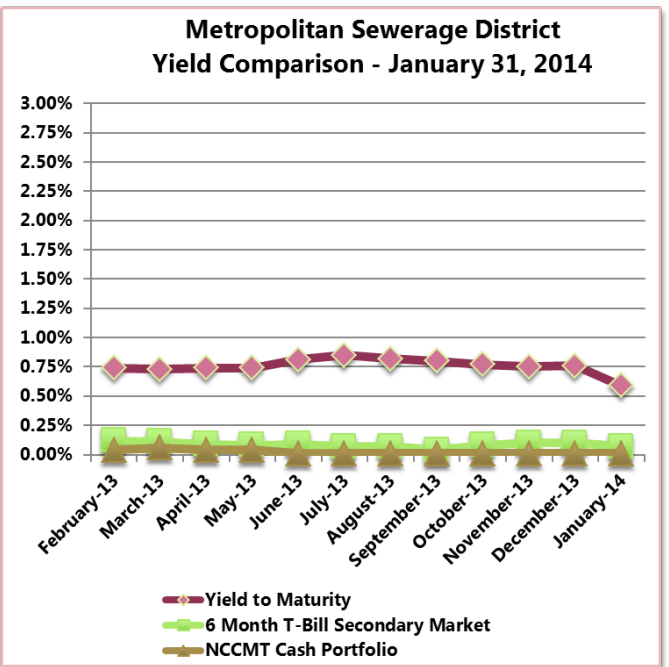
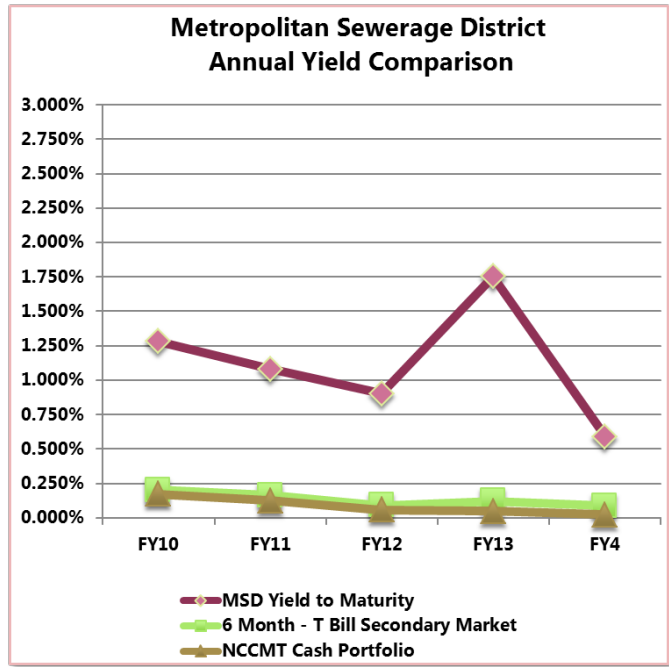
	Original Cost	Market	Interest Receivable
Beginning Balance	\$ 23,040,494	\$ 23,040,494	\$ 478,995
Capital Contributed (Withdrawn)	864,249	864,249	
Realized Income	122,681	122,681	(121,980)
Unrealized/Accrued Income		-	12,068
Ending Balance	<u>\$ 24,027,424</u>	<u>\$ 24,027,424</u>	<u>\$ 369,083</u>

Value and Income by Maturity

	Original Cost	Income
Cash Equivalents <91 Days	\$ 10,876,839	\$ 5,780
Securities/CD's 91 to 365 Days	13,150,584	\$ 6,989
Securities/CD's > 1 Year	-	-
	<u>\$ 24,027,424</u>	<u>\$ 12,769</u>

Month End Portfolio Information

Weighted Average Maturity	216
Yield to Maturity	0.59%
6 Month T-Bill Secondary Market	0.07%
NCCMT Cash Portfolio	0.01%



Board Meeting:

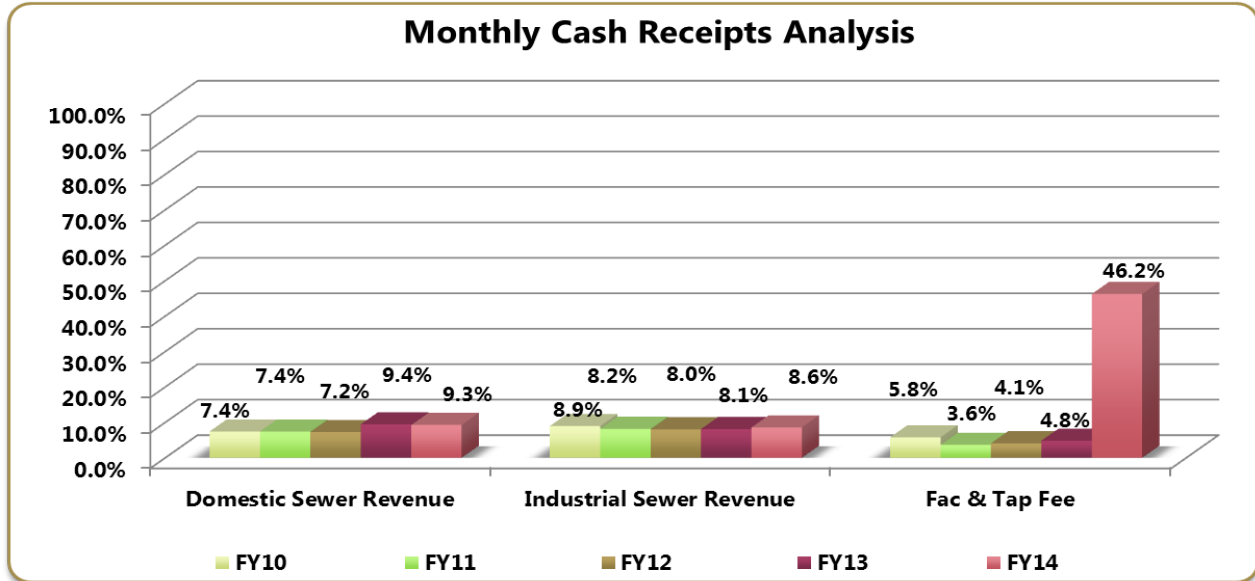
March 19, 2014

Subject:

Cash Commitment/Investment Report-Month Ended January 31, 2014

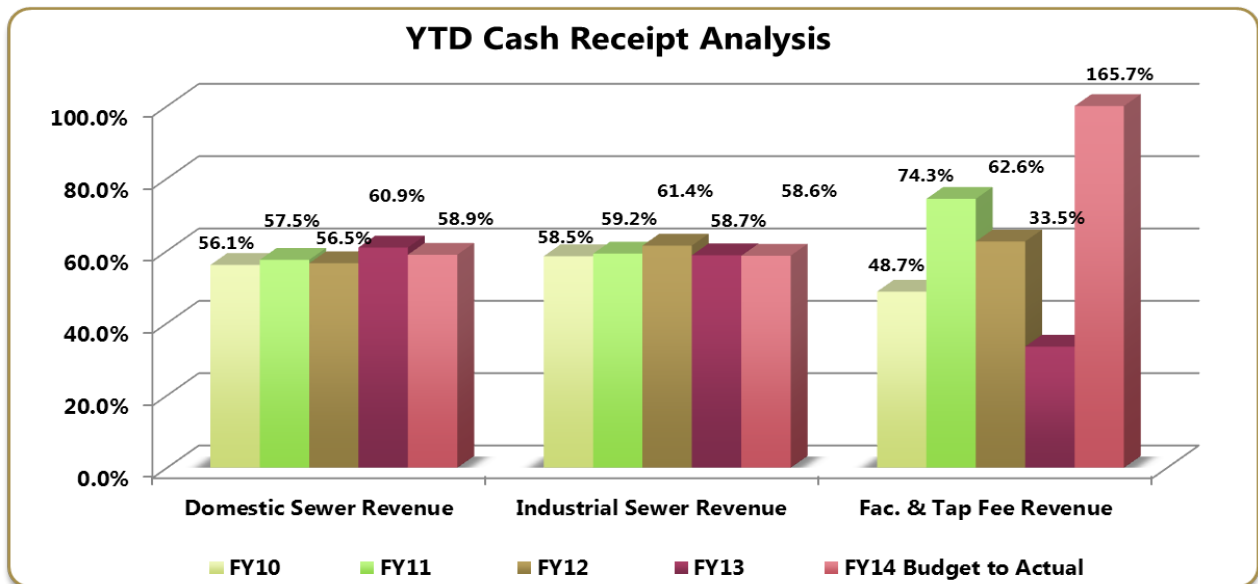
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**METROPOLITAN SEWERAGE DISTRICT
ANALYSIS OF CASH RECEIPTS
As of January 31, 2014**



Monthly Cash Receipts Analysis:

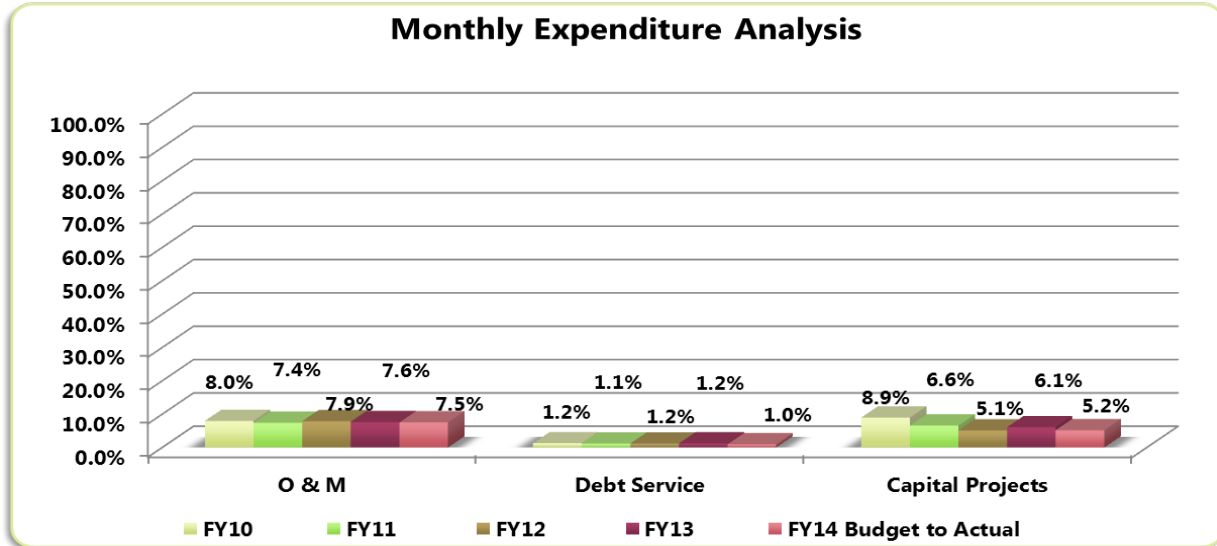
- ◆ Monthly domestic sewer revenue is considered reasonable based on timing of cash receipts in their respective fiscal periods.
- ◆ Monthly industrial sewer revenue is trending below budgeted expectations.
- ◆ Due to the unpredictable nature of facility and tap fee revenue, staff considers facility and tap fee revenue reasonable.



YTD Actual Revenue Analysis:

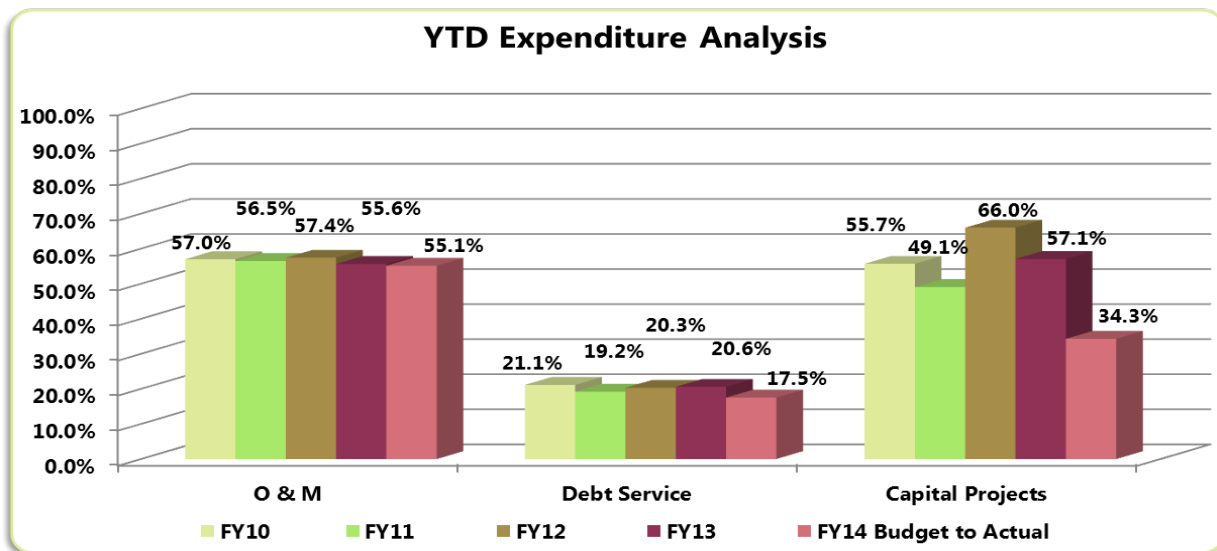
- ◆ YTD domestic sewer revenue is considered reasonable based on historical trends.
- ◆ YTD industrial sewer revenue is trending below budgeted expectations.
- ◆ Due to the unpredictable nature of facility and tap fee revenue, staff considers facility and tap fee revenue reasonable.

**METROPOLITAN SEWERAGE DISTRICT
ANALYSIS OF EXPENDITURES
As of January 31, 2014**



Monthly Expenditure Analysis:

- Monthly O&M expenditures are considered reasonable based on historical trends and timing of expenditures in the current year.
- Due to the nature of the variable rate bond market, monthly expenditures can vary year to year. Based on current variable interest rates, monthly debt service expenditures are considered reasonable.
- Due to nature and timing of capital projects, monthly expenditures can vary from year to year. Based on the current outstanding capital projects, monthly capital project expenditures are considered reasonable.



YTD Expenditure Analysis:

- YTD O&M expenditures are considered reasonable based on historical trends.
- Due to the nature of the variable rate bond market, YTD expenditures can vary year to year. Based on current variable interest rates, YTD debt service expenditures are considered reasonable.
- Due to nature and timing of capital projects, YTD expenditures can vary from year to year. Based on the current outstanding capital projects, YTD capital project expenditures are considered reasonable.

Board Meeting:

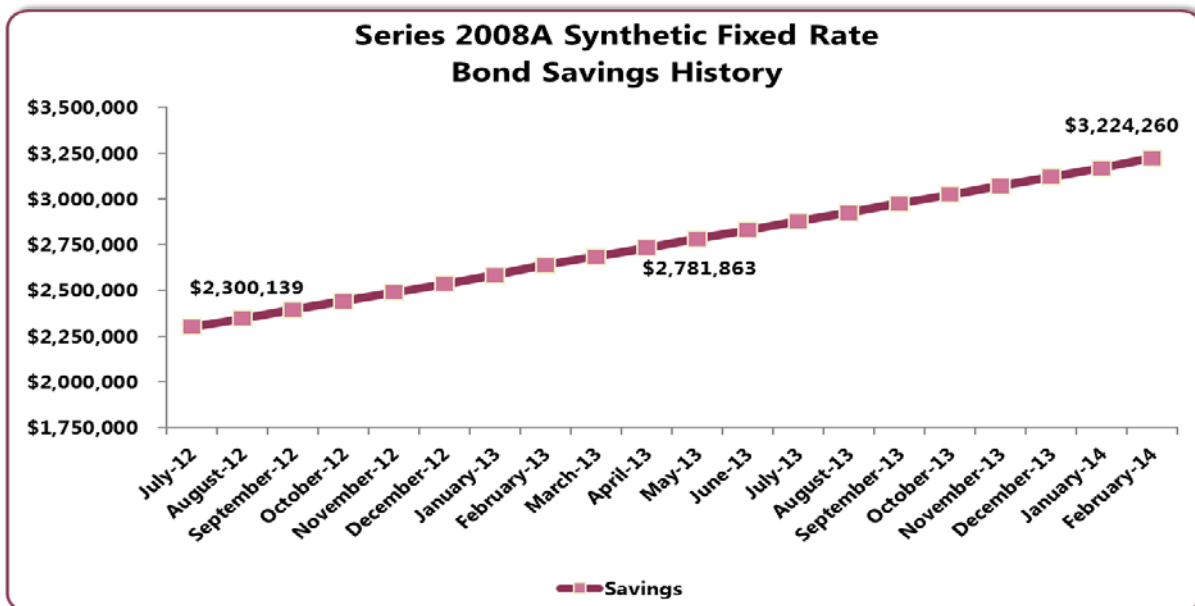
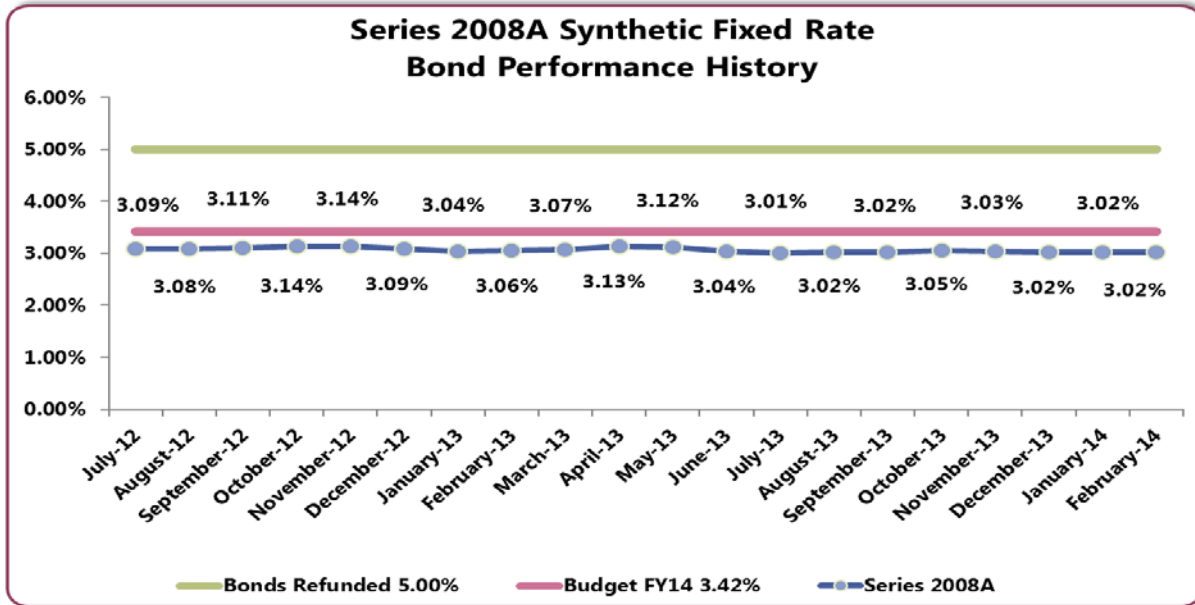
March 19, 2014

Subject:

Cash Commitment/Investment Report-Month Ended January 31, 2014

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**METROPOLITAN SEWERAGE DISTRICT
VARIABLE DEBT SERVICE REPORT
As of February 28, 2014**



Series 2008A:

- Savings to date on the Series 2008A Synthetic Fixed Rate Bonds is \$3,224,260 as compared to 4/1 fixed rate of 4.85%.
- Assuming that the rate on the Series 2008A Bonds continues at the current all-in rate of 4.0475%, MSD will achieve cash savings of \$4,730,000 over the life of the bonds.
- MSD would pay \$4,121,000 to terminate the existing Bank of America Swap Agreement.

Metropolitan Sewerage District of Buncombe County

BOARD ACTION ITEM

BOARD MEETING DATE: March 19, 2014

SUBMITTED BY: Tom Hartye, P.E. - General Manager

REVIEWED BY: Billy Clarke - District Counsel
Gary McGill, P.E. - Engineer of Record
Peter Weed - Director of WRF

PREPARED BY: Ed Bradford, P.E. - Director of Engineering
Hunter Carson, P.E. - Project Manager

SUBJECT: Facilities Plan Update - Engineering Services Contract, MSD Project Number 2013010

BACKGROUND: Summary of Project

In 2007, CDM Smith prepared a comprehensive facilities plan that evaluated the operation and performance of each treatment process at the French Broad River Water Reclamation Facility (WRF). This plan provided short, medium, and long-term recommendations for future service to each specific process and facility, many of which have been completed since that time.

This update of the Facility Plan will primarily expand on several of its longer term recommendations. It will focus specifically on improvements to the WRF headworks (i.e. bar screens, influent pumping station, grit & grease removal system); it will investigate installation of primary clarification units; and will evaluate alternatives for the biological treatment process.

Inadequate grit removal has been an ongoing problem at the WRF. Grit accumulates in downstream basins and damages equipment. The Facility Plan Update will evaluate various grit removal technologies and will recommend the most appropriate system for MSD.

The addition of primary clarification will be evaluated as part of the study. Primary clarification is a common wastewater treatment process that reduces solids and organic loading at the head of the WRF, thereby reducing loads to downstream basins. Adding primary clarifiers may extend the useful life of the RBCs and will help to produce a better quality effluent.

The biological treatment improvements alternatives evaluation will account for a majority of the Facility Plan Update document. The rotating biological contactors (RBCs) were installed in 1988. They have performed well and continue to meet permitted effluent limits. The RBCs are approaching the end of their useful life; however, staff is taking steps to help ensure their longevity. The Facilities Plan Update will evaluate the various alternatives for biological treatment at the WRF; and will provide a method/timeline for phasing in a viable long-term technology.

MSD's NPDES permit requires that an ammonia reduction evaluation be submitted in 2015. This document will be produced as part of the Facility Plan Update and will assess the feasibility and costs associated with complying with future ammonia limits. Significant improvements and capital expenditures may be necessary if future ammonia or nutrient limits (i.e. nitrogen and phosphorus) are imposed. The Facility Plan Update will address future effluent limits and will include an assessment of current and proposed regulations based on correspondence with key NCDENR staff.

The Facility Plan Update document will consider modifications and process upgrades over a twenty year planning horizon. The Plan will include a facility assessment, estimate of future influent flows and loads (to serve as a basis for planning), phased biological treatment alternatives evaluation, and conceptual design. The document will also include a Treatment Facility Improvements Plan that will assist MSD in creating its ten-year CIP Budget for the plant, with a planning horizon of twenty years.

Selection of Design Firm

Staff advertised a Request for Qualifications in October 2013, and received responses from six major consulting firms - Arcadis, Black & Veatch, CDM Smith, GHD, Hazen & Sawyer, and HDR. All six firms have significant experience with wastewater treatment design and planning.

The staff selection committee interviewed three of the six firms, and carefully considered the various strengths that each offered. Ultimately, HDR was chosen as the most qualified firm for this project.

HDR is an established and well-respected global consulting engineering firm. To date, HDR has not performed work for the District, but has extensive experience completing facility planning documents for other similar-sized facilities.

Engineering Fee

HDR's initial fee was reduced to \$450,943.00. HDR's Scope of Services includes an optional task in the amount of \$21,711.00 for evaluating the applicability of site specific ammonia criteria.

The inclusion of this optional task is recommended by staff, but will be initiated only if deemed necessary after regulatory assessment.

Please refer to the attached documents for more detailed information.

FISCAL IMPACT: The FY14 and FY15 budgets for this project total \$450,000.00.

STAFF RECOMMENDATION: Staff recommends award of the engineering services contract to HDR, in the amount of \$472,654.00 subject to review and approval by District Counsel

**Metropolitan Sewerage District of Buncombe County
French Broad River Water Reclamation Facility
Facility Plan Update
Scope of Services**

Part A: Background

This Scope of Services is for development of a Facility Plan Update for the Metropolitan Sewerage District (MSD) of Buncombe County's French Broad River Water Reclamation Facility (WRF). The existing WRF was placed into service in 1967 as a 25 million gallon per day (mgd) capacity facility. Originally an activated sludge facility, the WRF's biological treatment process was converted to Rotating Biological Contactors (RBCs) in 1988 as part of a federal government initiative to promote "innovative technology". The RBCs were retrofitted into existing primary and secondary clarifier basins, and activated sludge aeration tanks. In the same footprint, the 25 mgd activated sludge plant was expanded to 40 mgd using RBC technology.

Major processes at the WRF include Screening, Grit and Grease Removal, Biological Treatment via seven-stage RBCs, Intermediate Clarification, Cloth Media Filtration, Chlorine Disinfection, Dechlorination, Gravity Thickening, Belt Filter Press Dewatering, and Fluidized Bed Sludge Incineration. The WRF treated effluent is discharged to the French Broad River. In April 2007, CDM-Smith finalized the MSD WRF Facility Plan, a comprehensive facilities study that evaluated operation and performance of each treatment process at the WRF. Recommendations for repairs, replacements and/or upgrades were made for short term (2-5 years), medium term (5-7 years), and long term (7+ years) ranges.

This Facility Plan Update will utilize the 2007 study as a basis, and will include a facility assessment; future effluent requirements and regulatory assessments; influent flows and loads development that will serve as the basis of planning future facilities; preliminary, primary, biological treatment improvements alternatives evaluation; conceptual design and selection of facility alternatives; plant expansion possibilities; current site limitations; development of a phased Treatment Facility Improvements Plan including specific projects recommended to accommodate future demands, meet future regulatory requirements, and to improve reliability and operational efficiency. The Facility Plan Update will be a collaborative process between HDR and MSD staff and management, with strong emphasis on a series of information and decision-making workshops.

The current NPDES permit was issued on February 25, 2011, and requires MSD to submit an Ammonia Reduction Evaluation within 4.5 years of the permit effective date. This evaluation will be included as a standalone section in the Facility Plan Update that can be submitted to NC DENR to meet the permit requirement. The evaluation shall consider the feasibility and cost for optimizing ammonia removal at the current plant via operational improvements, and upgrading the plant to meet summer ammonia limits of 6.9 mg/L (monthly average) and 20.7 mg/L (weekly average), and winter limits of 17 mg/L (monthly average) and 35 mg/L (weekly average).

Part B: Scope of Services

1.01 French Broad River Water Reclamation Facility Plan Update – Tasks 100 – 1100

The Scope of Work below provides the objectives, major tasks, assumptions and deliverables. The scope includes a collaborative process between HDR and MSD staff and management, with strong emphasis on a series of information and decision-making workshops. The purpose of the workshops is to present preliminary analyses and findings from individual tasks of the Facility Plan Update. Comments and input received from MSD during the workshops will be used to further develop and finalize the analyses. A series of Technical Memoranda will then be developed to document the approach, analysis, and findings for each task. Subsequent tasks and workshops built upon the analyses and findings from previous tasks.

The table below lists major tasks for the Facility Plan Update.

MAJOR TASKS	
100	Project Initiation Workshop
200	Background Data Collection
300	Facility Assessment
400	Future Effluent Requirements and Regulatory Assessment
500	Establish Planning Criteria
600	Preliminary / Primary Treatment Alternatives Evaluation
700	Biological Treatment Process Alternatives Evaluation
800	Conceptual Evaluation and Selection of Facility Alternatives
900	Treatment Facility Improvements Plan Development
1000	MSD WRF Facility Plan Update
1100	Project Management
Optional Tasks	
400-1	Evaluation of Applicability of Site Specific Ammonia Criteria

A. HDR shall perform the following:

1. Task 100 – Project Initiation Workshop

- a. Prepare for and attend a one-day workshop to provide an opportunity for all the key team members to meet and review the overall Project goals and objectives, establish lines of communication, identify critical data needed to initiate the facility planning analysis, review the overall Project schedule, and provide a general exchange of ideas and establish team building concepts.
- b. Prepare agenda and meeting minutes for workshop.

2. Task 200 – Background Data Collection

- a. HDR will develop a data and information request and submit it to MSD. Once the data are received, HDR will compile and review the data and documents in order to:
 - i. Determine critical data gaps/needs
 - ii. Recommend additional wastewater characterization/sampling to be conducted by MSD

3. Task 300 – Facility Assessment

- a. Using the April 2007 MSD WRF Facility Plan as a basis, conduct a facility assessment of current processes and systems including the following activities:
 - i. Meet with MSD staff to identify assets previously identified for repair/replacement.
 - ii. Conduct a condition assessment, in the presence of MSD staff, of all major facilities associated with the Facility Plan Update including the following:
 1. Structures - in particular, the suitability of structures to be utilized in future treatment alternatives, including out of service structures such as primary microscreens and anaerobic digesters
 2. Process Equipment, including solids handling as necessary for future process alternatives
 3. RBCs
 4. Pumps, Motors, Valves and Piping
 5. Process Tankage
 6. HVAC System
 7. Electrical Systems
 8. Instrumentation, Controls and SCADA Systems
 - iii. Integrate the services of Lew Andowski, RBC Services, as a subconsultant to assist with evaluation and maintenance recommendations for the RBCs. Lew will attend two (2) meetings/workshops total as part of Task 300 and 700.
 - iv. Based on the results of the facility assessment and interviews with MSD staff, perform useful remaining life analysis and identify plant processes and systems slated for repair/replacement in the following time frames: 0 to 5 years, 5 to 10 years and 10 to 20 years. This analysis will include a criticality assessment to identify key systems that could significantly impact regulatory compliance and level of service if rendered inoperable.
 - v. Quality Assurance and Quality Control (QA/QC)
 - vi. Prepare a draft technical memorandum in electronic format (Technical Memorandum No. 1) summarizing the results of the Facility Assessment.

- vii. The draft Technical Memorandum No. 1 will be submitted electronically to MSD for a 10 working day review period.
- viii. Approximately mid-way through the MSD review period, conduct a workshop with MSD to present the findings from the Facility Assessment, review the technical memorandum, and facilitate the development of a prioritization ranking system.
- ix. Based on comments received from MSD staff, update and prepare a final Facility Assessment technical memorandum in electronic format.

4. Task 400 – Future Effluent Requirements and Regulatory Assessment

Under this Task, HDR will review current and future regulatory issues. The objective is to understand and reflect in the Facility Plan Update how these issues may affect design criteria and alternatives development.

- a. Review existing raw wastewater influent and effluent data and prepare a brief summary of MSD's current regulatory compliance status relative to MSD's current NPDES effluent permit requirements, current NC DENR ammonia policy, EPA's 1999 Ammonia Criteria for Freshwaters, and EPA's 2013 Revised Ammonia Criteria.
- b. Evaluate impacts of US EPA's 2013 Revised Federal Ammonia Criteria on future NC DENR ammonia water quality standards and future ammonia reduction requirements for MSD. Contact NC DENR Division of Water Resources (DWR) to assess plans for adoption of 2013 Revised Federal Ammonia Criteria and timing. Ammonia reduction evaluation is based on 6.9 mg/L summer limits (monthly average).
- c. Evaluate the current status of national (EPA) and state (NC DENR) drivers for numerical nutrient criteria or potential nutrient limits for MSD.
- d. Estimate the likely range of future effluent ammonia limits to meet expected ammonia water quality standards over the planning period.
- e. Contact NC DENR Division of Water Resources (DWR) to assess the likelihood of future development of site specific nutrient targets for the French Broad River Basin watershed under the Nutrient Criteria Development Plan and timing.
- f. Quality Assurance and Quality Control (QA/QC)
- g. Finalize ammonia reduction scenarios for the process alternatives evaluation (Task 700) and document the basis of these scenarios. Prepare a draft technical memorandum in electronic format (Technical Memorandum No. 2) summarizing the results of the Future Effluent Requirements and Regulatory Assessment.
- h. The draft Technical Memorandum No. 2 will be submitted electronically to MSD for a 10 working day review period.
- i. Based on comments received from MSD staff, update and prepare a final Future Effluent Requirements and Regulatory Assessment technical memorandum in electronic format.
- j. MSD desires to postpone inclusion of an ammonia limit in their NPDES permit

until it's necessary to upgrade the treatment process. Schedule a meeting with NC DENR DWR once the Facility Plan alternatives have been evaluated in Task 700 to discuss the various treatment options for ammonia reduction. The discussion with NC DENR DWR staff will also include evaluation of plant performance data and water quality data to compare receiving stream effluent quality compared to current NC DENR ammonia policy, and EPA's 1999 Ammonia Criteria for Freshwaters to support postponing ammonia limit in next NPDES permit cycle.

- k. After completion of Task 700, prepare an Ammonia Reduction Evaluation as a standalone section in the Facility Plan Update that can be submitted to NC DENR to meet the permit requirement.
- l. **400-1 - Optional Regulatory Task** - Evaluation of Applicability of Site Specific Ammonia Criteria:
 - i. Complete search of available databases to determine presence of mussel species / mussel species habitat in the discharge area.
 - ii. Contact NC DENR staff to discuss State's plans for adopting EPA's 2013 guidance documentation for site specific ammonia criteria and interpretation of guidance documentation
 - iii. Determine applicability of site specific ammonia criteria option for MSD and discuss findings with MSD staff.
 - iv. Develop brief TM summarizing findings and outlining steps that would be required for MSD to develop site specific criteria, if applicable and recommended option.

5. Task 500 – Establish Planning Criteria

- a. Review the previous flow projections provided by MSD staff.
- b. Review historical influent plant data to establish historical influent flows, loads and peaking factors. Based on historical trends, establish future influent flows and loads that will serve as the basis of planning future facilities.
- c. Develop design basis and treatment/storage/conveyance capacity of existing and new facilities on the plant site. The design basis will be established from original design documents, NPDES requirements, operating history, and industry standards. The design basis and system capacity will be identified for the following processes and systems:
 - i. Influent Screens and Existing Influent Pumping Station
 - ii. Grit Removal
 - iii. Flow Equalization Surge Tanks System
 - iv. Primary Clarifiers / High Rate Primary Clarification
 - v. RBCs
 - vi. Process Conversion from RBCs
 - vii. Final Clarifiers / Solids Capture Process
 - viii. Blower Facilities
 - ix. RAS (where applicable) and Waste Solids Pumping Facilities
 - x. New Headworks and Influent Pumping Facility

- xi. Odor control facility for New Headworks
 - xii. Chlorine Contact Basins and Dechlorination
 - xiii. Alkalinity Feed System
 - xiv. Options for expansion to 50 mgd
- d. Compare the current design capacity of the MSD WRF and each of its processes to the planning level influent flow projections and identify deficiencies to meet future demands.
 - e. Quality Assurance and Quality Control (QA/QC)
 - f. Document influent flows and loads, summary of design criteria, capacity estimate of existing facilities, and when capacities will be reached. Prepare a draft technical memorandum in electronic format (Technical Memorandum No. 3) summarizing the results of the Planning Criteria Assessment.
 - g. The draft Technical Memorandum No. 3 will be submitted electronically to MSD for a 10 working day review period.
 - h. Approximately mid-way through the MSD review period, conduct a workshop with MSD to summarize the results of the Planning Criteria Assessment and review the technical memorandum.
 - i. Based on comments received from MSD staff, update and prepare a final Planning Criteria Assessment technical memorandum in electronic format.

6. Task 600 – Preliminary / Primary Treatment Alternatives Evaluation

- a. Conduct a workshop to review recommended modifications / new technology options including:
 - i. Existing Influent Pumping Station Modifications
 - ii. New Screening Facility
 - iii. New Grit Removal System
 - iv. Flow Equalization Surge Tanks System
 - v. Primary Clarifiers / High Rate Clarification
 - vi. Future Headworks / Influent Pumping Station / Odor Control
- b. Quality Assurance and Quality Control (QA/QC)
- c. Prepare a draft technical memorandum in electronic format (Technical Memorandum No. 4) summarizing the results of the Preliminary / Primary Treatment Improvements Alternatives Evaluation, which will include budgetary capital and operating costs and preliminary design layout drawings (including updated hydraulic profile).
- d. The draft Technical Memorandum No. 4 will be submitted electronically to MSD for a 10 working day review period.
- e. Approximately mid-way through the MSD review period, conduct a workshop with MSD to summarize the recommendations and review the technical memorandum.
- f. Based on comments received from MSD staff, update and prepare a final Preliminary / Primary Treatment Improvements Alternatives Evaluation technical memorandum in electronic format.

7. Task 700 – Biological Treatment Process Alternatives Evaluation

- a. Identify the universe of biological treatment alternatives and conduct a preliminary screening to select up to four viable alternatives for further evaluation.
- b. Review hydraulic profile and develop conceptual sizing for biological process alternatives for the WRF to allow for analysis of four future plant operational scenarios such as:
 - i. Optimize Existing RBCs
 - ii. Conventional Activated Sludge Nitrification
 - iii. Moving Bed Biofilm Reactor (MBBR)
 - iv. Integrated Fixed Film Activated Sludge (IFAS)
- c. Integrate the services of Lew Andowski, RBC Services, as a subconsultant to assist with planning recommendations for the RBCs. Lew will attend two (2) meetings/workshops total as part of Task 300 and 700.
- d. Each operational scenario above will include peak flow attenuation options.
- e. The evaluation of options will consider the facility condition assessment, optimization requirements, ability to reconfigure to Biological Nutrient Removal (BNR), and current and anticipated regulatory requirements. Some options may be more pertinent for the short-term time frame (i.e., the next 5-10 years), while others may be more pertinent for the long-term horizon (20 years or beyond). This array of options will likely be combined into logical high-level alternatives, or hybrid alternatives, and some options may be subject to a more confined or narrow decision evaluation.
- f. A process alternatives evaluation workshop will be conducted serve to define those "packages" and individual decisions that will be further developed and evaluated in subsequent Tasks.
- g. The Ammonia Reduction Evaluation requires MSD to “evaluate the feasibility and cost for optimizing ammonia removal at the current plant via operational improvements as well as upgrading the plant to meet summer ammonia limits of 6.9 mg/L (monthly average) and 20.7 mg/L (weekly average), and winter limits of 17 mg/L (monthly average) and 35 mg/L (weekly average)”. Evaluate the various treatment options for ammonia reduction.
- h. Quality Assurance and Quality Control (QA/QC)
- i. Prepare a draft technical memorandum in electronic format (Technical Memorandum No. 5) summarizing the results of the Biological Treatment Process Alternatives Evaluation, presenting the technologies considered, potential configurations, and the advantages and disadvantages.
- j. The draft Technical Memorandum No. 5 will be submitted electronically to MSD for a 10 working day review period.

- k. Approximately mid-way through the MSD review period, conduct a workshop with MSD to summarize the recommendations and review the technical memorandum.
- l. Based on comments received from MSD staff, update and prepare a final Biological Treatment Process Alternatives Evaluation technical memorandum in electronic format.

8. Task 800 – Conceptual Evaluation and Selection of Facility Alternatives

- a. Work with MSD in a workshop setting to develop relevant plant-wide facility plan concepts considering existing facility condition assessment, influent wastewater characteristics, future effluent quality goals, regulatory requirements, and prioritizing and phasing the improvements with the ultimate goal of narrowing these concepts down to no more than three (3) facility plan concepts for detailed evaluation.
- b. Assist in coordinating up to three (3) site visits to review wastewater treatment technologies that may be considered by MSD during the facility planning process.
- c. Develop design criteria for each of the unit processes associated with each of the three (3) facility plan concepts.
- d. Develop site layouts for each of the facility plan concepts.
- e. Develop hydraulic profiles for each of the facility plan concepts.
- f. Conduct a work space needs assessment.
- g. Develop operating and construction cost opinions for each of the facility plan options.
- h. Conduct a cost-effective decision analysis including working with MSD in a workshop setting to develop evaluation criteria, assign criteria ratings and establish weighting factors for the purpose of completing a cost-effective analysis and selecting the most viable option.
- i. Quality Assurance and Quality Control (QA/QC)
- j. Prepare a draft technical memorandum in electronic format (Technical Memorandum No. 6) summarizing the results of the Conceptual Evaluation and Selection of Facility Alternatives Evaluation.
- k. The draft Technical Memorandum No. 6 will be submitted electronically to MSD for a 10 working day review period.
- l. Approximately mid-way through the MSD review period, conduct a workshop with MSD to summarize and review the technical memorandum.
- m. Based on comments received from MSD staff, update and prepare a final Conceptual Evaluation and Selection of Facility Alternatives Evaluation technical memorandum in electronic format.
- n. As discussed in Task 400, schedule a meeting with NC DENR DWR to discuss the various treatment options for ammonia reduction as well as future permit requirements and timeframe.
- o. As discussed in Task 400, prepare an Ammonia Reduction Evaluation as a standalone section in the Facility Plan Update that can be submitted to NC DENR to meet the permit requirement.

9. Task 900 – Treatment Facility Improvements Plan Development

- a. Based on the results of the facility planning analysis, HDR will develop a comprehensive Treatment Facility Improvements Plan. The Plan will outline the recommended improvements over the next 20 years and will include the proposed prioritized 5-, 10-, and 20-year and beyond improvements. Included in the Plan will be construction cost opinions for each of the recommended improvements and an implementation schedule. Project descriptions will be developed along with project justifications.
- b. HDR will also develop a list of rehab/replacement projects based on the facility assessment. These projects may be funded out of the existing CIP or operations budget. A cost opinion, project description and implementation schedule will be developed for each rehab/replacement project.
- c. Quality Assurance and Quality Control (QA/QC)
- d. Prepare a draft technical memorandum in electronic format (Technical Memorandum No. 7) summarizing the results of the Treatment Facility Improvements Plan.

10. Task 1000 – MSD WRF Facility Plan Update Document

- a. HDR will compile all of the Technical Memoranda into an overall Facility Plan Update including Executive Summary. The Facility Plan Update will also include an overall project schedule, permit approval requirements, an opinion of construction and operating cost for the recommended improvements, proposed construction phasing, and procurement requirements and recommendations. HDR will coordinate with NC DENR to obtain buy-in of the recommendations included in the Facility Plan Update.
- b. Submit six (6) hard copies and one digital copy of the draft Facility Plan Update to MSD for review and comment.
- c. Incorporate MSD's comments into Facility Plan Update and submit six (6) hard copies and one digital copy of the final document to MSD.
- d. Prepare and present a final presentation of the Facility Plan Update findings to MSD.

11. Task 1100 - Project Management

- a. The Project Management efforts include administering the project, filing and document control, project reviews, resource assignment, and monthly invoicing.
- B. Engineer's services under the Wastewater Treatment Facility Plan Update will be considered complete on the date when the revised Facility Plan documents and any other deliverables have been delivered to MSD. It is anticipated that this scope of services will be completed by April 1, 2015 assuming a Notice to Proceed on or about March 20, 2014.

Professional Services Not Included

1. Design, value engineering, permitting, bidding and construction phase services.
2. Full scale testing, jar testing, pilot testing, and laboratory analytical services will be conducted by MSD staff.
3. Survey and geotechnical services.
4. Preparing cash flow and economic evaluations, rate schedules and appraisals.
5. Environmental assessments or impact statements or biological surveys.
6. Historical, archeological and hazardous waste investigations.
7. Preparing to serve or serving as a consultant or witness for MSD in any litigation, arbitration, or other legal or administrative proceeding involving the Project. If MSD and HDR are parties to such proceedings, HDR's activities associated with such proceedings shall not entitle HDR to any payment under this Agreement.

Key Understandings and Assumptions

1. Calendar days to completion have been prepared based on the assumption that MSD will have information requested readily available.
2. Technical Memorandums will be submitted electronically to MSD for a 10 working day review period.
3. Site visits to tour recommended technologies will be coordinated by HDR. MSD will fund travel and expenses for MSD staff separately from this project.
4. Engineer's opinions of probable cost are for planning purposes. Appropriate contingency will be included in the development of costs.
5. All activities defined in Task Series 100 through 1100 are based on a Notice to Proceed issued on or before March 20, 2014.
6. Engineer will not supervise, direct or control MSD staff.
7. Hours and fee are based on project's totals and not specific tasks. Total hours associated with each professional classification may vary.

Part C: Additional Services / Optional Tasks

Additional services and optional tasks may be performed under this scope of services with the written authorization of MSD. Detailed scope of services, schedules and engineering fees for the additional services will be provided at the request of MSD. No additional services will be initiated without the authorization of MSD.

Part D: Schedule

The attached schedule has been prepared based on written authorization to proceed by March 20, 2014. Should the authorization extend beyond this date, HDR reserves the right to request an extension in the schedule.

Anticipated Workshops/Meetings

1. Project Initiation
2. Facility Assessment – 2 (assessment and results)
3. Regulatory
4. Site Specific Criteria (optional task)
5. Planning Criteria Assessment – 2 (evaluation and summary)
6. Headworks
7. High Rate Primary clarification and Surge Tanks
8. Preliminary / Primary Treatment Alternatives Evaluation Summary
9. Biological Process Alternatives – 2 (evaluation and summary)
10. New Pumping Station, Headworks, Long-Term Alternatives
11. Site Visits (up to 3)
12. Construction Phasing and Sequencing/MOPO/Recommended Alternatives
13. DENR Raleigh
14. Facility Plan Update

Anticipated Technical Memorandum / Other deliverables

1. Project Initiation (meeting minutes only)
2. Data Request
3. Facility Assessment (TM 1)
4. Regulatory (TM 2)
5. Planning Criteria Assessment (TM 3)
6. Headworks, High Rate Primary clarification, and surge tanks (TM 4)
7. CFD Model – optional task
8. Biological Process Alternatives (TM 5)
9. New Pumping Station and Headworks
10. Construction Phasing and Sequencing/MOPO/Recommended Alternatives (TM 6)
11. DENR – Ammonia Reduction Evaluation
12. Facility Plan Update – draft and final

Part E: Engineering Fee

Compensation for professional engineering services associated with the Scope of Work detailed above will be based on a lump sum engineering fee of \$450,943. The compensation for Optional Task 400-1 detailed above will be based on a lump engineering sum of \$21,711.

HDR will invoice MSD on a monthly basis for all activities related to this scope of services based on percent complete of the lump sum fee. The fees listed above will not be exceeded without written authorization from the MSD.

Payment of each invoice will be due upon receipt and considered past due if not paid within forty-five (45) days from the date of the invoice.

**MSD - French Broad River WRF
Scope of Work - Facility Plan Update**

Task	Task Description	Manhour Forecast (Hrs)															Total Hours	Task Fee	Total Expenses	Total Fee
		TA/QC 230	PM 190	SPE 180	Pro/Reg 185	PE 180	SPro 240	EIT 95	SE 210	EE 140	ME 167	I&C 265	COST 185	CAD 100	ADM 75	ACCT 75				
100	Project Initiation Workshop	0	16	24	12	12	2	4	0	0	0	8	0	0	0	0	78	\$14,719	\$1,789	\$16,509
200	Background Data Collection	0	12	32	16	8	2	24	0	0	0	0	0	0	8	0	102	\$15,799	\$1,578	\$17,378
300	Facility Assessment	8	12	32	2	4	2	8	40	40	40	24	0	0	8	0	220	\$39,842	\$11,316	\$51,159
400	Future Effluent Requirements and Reg. Assessment	4	24	8	80	8	2	16	0	0	0	0	0	0	8	0	150	\$25,756	\$1,757	\$27,513
500	Establish Planning Criteria	4	24	32	32	16	8	40	0	0	0	0	0	0	8	0	164	\$26,358	\$2,308	\$28,667
600	Preliminary / Primary Treatment Improvements Alternatives Evaluation	20	24	160	12	32	8	40	0	0	0	0	0	12	8	0	316	\$53,459	\$2,872	\$56,332
700	Biological Treatment Process Alternatives Evaluation	20	30	40	50	60	12	40	0	0	0	0	0	12	8	0	272	\$46,028	\$8,709	\$54,737
800	Conceptual Evaluation and Selection of Facility Alternatives	24	24	100	24	40	12	40	40	40	24	24	24	140	8	0	564	\$89,803	\$4,292	\$94,095
900	Treatment Facility Improvements Plan Development	8	24	60	8	24	4	40	0	0	0	8	80	0	8	0	264	\$45,280	\$1,179	\$46,459
1000	MSD WRF Facility Plan Update	8	40	60	40	24	4	40	0	0	0	8	0	40	40	0	304	\$45,838	\$3,128	\$48,966
1100	Project Management	0	40	0	0	0	0	0	0	0	0	0	0	0	0	15	55	\$8,725	\$404	\$9,129
	FACILITY PLAN SUBTOTAL	96	270	548	276	228	56	292	80	80	64	72	104	204	104	15	2,489	\$411,609	\$39,334	\$450,943

Optional Task

Opt 400-1	Evaluate Applicability of Site Specific Ammonia Criteria	2	4	0	90	0	0	20	0	0	0	0	0	0	4	0	120	20,066	\$1,645	\$21,711
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TA / QC Technical Advisor / QC

PM Mary Knosby

SPE Brian Thorsvold

Pro/Reg Erika Bailey

PE / Process Gary Grey

TA / S Process Dave Kinnear

EIT David Christopher

I&C Terry Draper

SE Structural - Henry Antshel

EE Electrical - Jim Dinkler

ME Mechanical - Joel Johnson

COST Cost Estimating

ADM Administrative

Acct Accounting

SUB

Lew Andowski

\$125/hour + travel

2 trips

80 hours + \$2,500 expenses = \$12,500

(\$6,500 included in Task 300 and \$6,000 in Task 700)

Optional tasks not included

Site Specific Criteria (mussels)

Site Visits to see Equipment/Process

**Metropolitan Sewerage District of Buncombe County, North Carolina
CAPITAL IMPROVEMENT PROGRAM**

BUDGET DATA SHEET - FY 2013 - 2014

PROJECT:	Facilities Plan Update	LOCATION:	MSD-Treatment Plant
TYPE:	Treatment Plant	DATE OF REPORT:	January 2013
PROJECT NO.	2013010	TOTAL L.F.:	0
PROJECT BUDGET:	\$450,000.00	PROJECT ORIGIN:	Aging Equipment

DESCRIPTION	ESTIMATED PROJECT COST	TOTAL EXPENDS THRU 12/31/12	EST. COST JAN - JUNE 2013	EST. BUDGET FY 13-14
55310 - PRELIM. ENGINEERING				
55320 - SURVEY - DESIGN				
55330 - DESIGN				
55340 - PERMITS				
55350 - SPECIAL STUDIES	\$450,000.00			\$225,000.00
55360 - EASEMENT PLATS				
55370 - LEGAL FEES				
55380 - ACQUISITION SERVICES				
55390 - COMPENSATION				
55400 - APPRAISAL				
55410 - CONDEMNATION				
55420 - CONSTRUCTION				
55430 - CONST. CONTRACT ADM.				
55440 - TESTING				
55450 - SURVEY - ASBUILT				
TOTAL AMOUNT	\$450,000.00	\$0.00	\$0.00	\$225,000.00

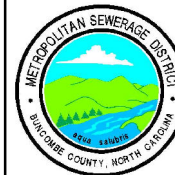
ENGINEER:		ESTIMATED BUDGETS - FY '14 -'23	
R.O.W. ACQUISITION:	# PLATS: [0]	FY 14-15	\$225,000.00
CONTRACTOR:		FY 15-16	\$0.00
CONSTRUCTION ADM.:		FY 16-17	\$0.00
INSPECTION:		FY 17-18	\$0.00
		FY 18-19	\$0.00
PROJECT DESCRIPTION:	This project will be an update to the 2007 Water Reclamation Facility Plan. The study will evaluate future treatment regulation requirements at the Treatment Plant and will focus specifically on primary treatment and rotating biological contactors. This study will also include an ammonia removal evaluation per 2011 NPDES permit requirements.	FY 19-20	\$0.00
		FY 20-21	\$0.00
		FY 21-22	\$0.00
		FY 22-23	\$0.00

SPECIAL PROJECT NOTES:



**Facilities Plan Update
Project No. 2013010**

NOT TO SCALE



METROPOLITAN SEWERAGE DISTRICT
of
BUNCOMBE COUNTY, NORTH CAROLINA

Budget Map

STATUS REPORTS

**MSD System Services In-House Construction
Fy 13-14 PROJECTS**

PROJECT NAME	ESTIMATED FOOTAGE	ESTIMATED PROJECT DATES	WO#	CREW	COMPLETION DATE	ACTUAL FOOTAGE	Notes
Craven Street Improvements (P/N 2013071)	300	7/1/13-8/30/13	434914	667	8/14/2013	306	complete
90 Asheland Ave - Pipe Ream/Burst	118	8/29/2013	456371	631	8/29/2013	118	complete
Melody Lane	220	8/15/13 - 9/13/13	433549	667	8/30/2013	560	complete
Melody Lane Addition	25	9/10/2013	450458	667	9/10/2013	28	complete
41 Walnut Lane (Woodfin)	1260	5/27/13 - 8/30/13	441589	631	9/27/2013	1189	complete
View Street at Montreat Road (P/N 2013051)	461	10/8/13-10/31/13	400926	667	10/7/2013	463	complete
Elk Mtn Scenic Hwy @ Edgedale*(P/N 2010101)	785	10/7/13-11/7/13	456298/450460	667	10/23/2013	638	complete
Roberts Street at Haywood Rd* (P/N 20100980)	200	10/16/13 - 11/16/13	470501	631	10/22/2013	210	complete
Gay Street (P/N 2013077)	327	10/7/13 - 11/4/13	433544	631	11/6/2013	335	complete
Memorial Park Drive	963	10/24/13 - 12/1/13	433530	667	11/22/2013	1004	complete
Daniel Road Phase II (14)	568	11/4/13 - 12/1/13	456760	631	12/3/2013	574	complete
Memorial Park Drive Phase 2	480	11/25/13 - 12/5/13	456768	667	12/20/2013	453	complete
Central Avenue SanitarySewer Replacement*	675	12/3/13 - 1/1/14	448995	631	1/2/2014	692	complete
Sweeten Creek Industrial Park Replacement	45	1/14/14 - 1/15/14	470611/457019	632	1/15/2014	50	complete
Buckner Road	600	12/23/13 - 2/3/14	400919	667	1/31/2013	990	complete
Livinston - AB Tech	529	1/2/14 - 2/3/14	456309	631	1/28/2014	561	complete
Dew Waite Dr	500	2/4/14 - 2/28/14	470610	667	2/28/2014	620	complete
Rash Road* (P/N 2010095)	550	2/4/14 - 2/28/14	456302	631			contruction 90% complete
Ridgeway Dr. (MSD P/N 2012136)	595	3/10/14 - 4/10/14	456296	667			Construction in Progress
101 E. Skyview Circle	260	3/10/2014 - 3/14/14	456310	631			Construction in Progress
Broadview Drive	265	3/17/14 - 3/25/14	456312	631			ready for construction
Shiloh Road	350	4/11/14 - 4/30/14	456294	667			ready for construction
18 Crestland Road	270	3/10/14-3/14/14	448974	631			ready for construction
995 West Chapel Rd	100	TBA	211782	667			ready for construction
382 Lakeshore Drive	240	TBA	456311	631			ready for construction
Springside Drive	522	TBA	205995	TBA			ready for construction
N. Anne St.	550	TBA	400920	TBA			ready for construction
165 Old County Home Road	1,100	TBA	433522	TBA			ready for construction
Sareva Place	932	TBA	410095	TBA			ready for construction
Carjen Avenue	825	TBA	410096	TBA			ready for construction
Hunt Hill Place	786	TBA	400922	TBA			ready for construction
Emory Road* (P/N 2009137)	300	TBA	456301	TBA			ready for construction
350 Old Haw Creek Road	1333	TBA	400923	TBA			ready for construction
Grovestone Quarry	TBA	TBA	456316	TBA			Design
Tabernacle Road	TBA	TBA	TBA	TBA			Design
S. Oak Forest	TBA	TBA	TBA	TBA			Design



CONSTRUCTION TOTALS BY DATE COMPLETED - Monthly

From 7/1/2013 to 1/31/2014

	Dig Ups	Emergency Dig Ups	Dig Up ML Ftg	Dig Up SL Ftg	Manhole Repairs	Taps Installed	ROW Ftg	IRS Rehab Ftg *	Const Rehab Ftg *	D-R Rehab Ftg *	Manhole Installs	Bursting Rehab Ftg *	Total Rehab Ftg *
July 2013	36	16	108	628	40	23	2,264	0	0	0	0	0	0
August 2013	49	7	207	659	38	24	0	0	259	882	10	118	1259
September 2013	32	16	356	468	22	8	7,426	197	116	1217	11	0	1530
October 2013	28	22	406	921	42	35	17,950	288	375	1053	10	258	1974
November 2013	32	7	84	569	26	4	0	0	0	1192	12	147	1339
December 2013	40	5	131	676	32	17	500	0	0	1035	8	0	1035
January 2014	33	6	81	512	19	15	750	0	150	1801	18	492	2443
Grand Totals	250	79	1,373	4,432	219	126	28,890	485	900	7180	69	1,015	9580

* Used to calculate Total Rehab Footage



PIPELINE MAINTENANCE TOTALS BY DATE COMPLETED - Monthly

July 01, 2013 to January 31, 2014

	Main Line Wash Footage	Service Line Wash Footage	Rod Line Footage	Cleaned Footage	CCTV Footage	Smoke Footage	SL-RAT Footage
2013							
July	81,515	2,058	5,143	86,658	33,272	2,080	12,186
August	60,003	1,509	5,763	65,741	37,017	35,663	12,680
September	56,833	1,230	6,596	63,354	32,358	18,324	20,686
October	58,691	3,187	4,418	63,104	33,888	22,886	26,287
November	28,280	1,891	6,184	34,464	26,252	500	6,992
December	45,483	3,133	4,389	49,837	30,203	4,286	10,919
2014							
January	53,575	2,602	4,387	57,892	23,412	250	2,885
Grand Total:	384,380	15,610	36,880	421,050	216,401	83,989	92,635
Avg Per Month:	54,911	2,230	5,269	60,150	30,914	11,998	13,234



CUSTOMER SERVICE REQUESTS

Monthly - All Crews

CREW	MONTH	JOBS	AVERAGE RESPONSE TIME	AVERAGE TIME SPENT
DAY 1ST RESPONDER				
	July, 2013	153	39	40
	August, 2013	109	30	36
	September, 2013	79	28	37
	October, 2013	111	29	40
	November, 2013	70	27	39
	December, 2013	84	29	49
	January, 2014	108	30	38
		714	31	40
NIGHT 1ST RESPONDER				
	July, 2013	45	39	33
	August, 2013	34	35	31
	September, 2013	18	26	24
	October, 2013	33	26	33
	November, 2013	31	27	34
	December, 2013	20	31	30
	January, 2014	36	26	20
		217	31	30
ON-CALL CREW *				
	July, 2013	79	52	35
	August, 2013	40	65	46
	September, 2013	30	49	43
	October, 2013	35	46	14
	November, 2013	35	36	47
	December, 2013	66	43	46
	January, 2014	62	59	42
		347	51	39
Grand Totals:		1,278	36	38

* On-Call Crew Hours: 10:30pm-7:30am Monday-Friday, Weekends, and Holidays

CAPITAL IMPROVEMENT PROGRAM

STATUS REPORT SUMMARY

March 10, 2014

PROJECT	CONTRACTOR	AWARD DATE	NOTICE TO PROCEED	ESTIMATED COMPLETION DATE	*CONTRACT AMOUNT	*COMPLETION STATUS (WORK)	COMMENTS
BRADLEY BRANCH ROAD PHASE II	Terry Brothers	8/21/2013	10/28/2013	4/1/2014	\$314,860.00	95%	All pipe work complete and awaiting Final. Paving on hold until Spring.
BROOKCLIFF DRIVE (PRP 59001)	Buckeye Construction	10/16/2013	11/4/2013	4/30/2014	\$360,132.50	80%	Mainline in roadway is complete. Contractor working in the ROW.
FOREST RIDGE ROAD	Dillard Excavating Company	2/19/2014	3/10/2014	6/8/2014	\$588,115.00	0%	A preconstruction meeting was held on March 11th. Project expected to begin soon.
INDIANA AVENUE	TBA	TBA	TBA	TBA	TBA	0%	Bids were opened on March 4th. Moorhead Construction Company is the apparent low bidder. Project will be presented at the March Board meeting.
MACON AVENUE @ SUNSET PARKWAY	Terry Brothers	1/15/2014	3/1/2014	6/29/2014	\$757,688.00	0%	Preconstruction meeting has been held and submittals are under review. Work is imminent.
MERRIMON AVENUE @ COLONIAL PLACE	Terry Brothers	8/21/2013	9/3/2013	2/24/2014	\$205,878.00	100%	Project is complete and in close out.
MERRIMON AVENUE @ STRATFORD ROAD	Terry Brothers	9/18/2013	12/16/2013	4/15/2014	\$885,849.00	20%	Contractor is working on 12-inch line near Beaver Lake and very near completion on that segment. Rock bore at Elkwood is progressing slowly because of extremely hard rock formations.
MOUNT VERNON PLACE PHASE I	Terry Brothers	8/21/2013	9/3/2013	1/15/2014	\$96,347.00	100%	Project is complete and in close out.
OLD US 70 @ GROVEMONT AVENUE	Buckeye Construction	10/16/2013	11/18/2013	5/17/2014	\$729,740.90	32%	The 8 inch portion of work at the upper end of project is nearly complete. The 12 inch portion has progressed slowly due to rock and proximity of existing utilities.
SOUTH FRENCH BROAD INTERCEPTOR - BILTMORE ACCESS STRUCTURES	James E. Harris Construction	1/28/2014	2/3/2014	4/1/2014	\$228,880.00	40%	Four structures will be complete by mid-March. Delays by weather and existing Biltmore waterline will delay project by approximately 2 weeks.
SYCAMORE TERRACE (PRP 34012)	Terry Brothers	1/15/2014	2/20/2014	6/20/2014	\$638,350.00	10%	Pipe installation has begun at MH #6 and is heading toward Sweeten Creek.
WRF - CRAGGY HYDRO FACILITY REPAIRS - CONTROL COMPONENTS UPGRADE	Innovative Solutions of NC	7/12/2012	N/A	3/28/2014	\$100,717.72	98%	This is to upgrade the old control panel at the Hydro Facility. In addition to this, Turbine No. 2 has been repaired and reinstalled. New controls are complete. Equipment being run-in and tested.
WRF - ELECTRICAL IMPROVEMENTS	Haynes Electric	8/15/2012	9/10/2012	3/28/2014	\$1,061,900.00	99%	Final commissioning underway. Completion expected by end of March.
WRF - SLIDE GATE REPLACEMENT	NHM Constructors	9/18/2013	10/7/2013	6/4/2014	\$288,924.00	15%	Contractor has begun work.

***Updated to reflect approved Change Orders and Time Extensions**

Planning & Development Project Status Report

March 19, 2014

Project Name	Project Number	Work Location	Units	LF	Pre-Construction Conference Date	Comments
N. Bear Creek Road Subdivision	2005137	Asheville	20	127	7/11/2006	Complete - Waiting on final documents
Willowcreek Village Ph.3	2003110	Asheville	26	597	4/21/2006	Complete - Waiting on final documents
Rock Hill Road Subdivision	2005153	Asheville	2	277	8/7/2006	Complete - Waiting on final documents
Black Mtn Annex: Avena Rd.	1999026	Black Mtn.	24	4,300	8/19/2010	Complete - Waiting on final documents
Black Mtn Annex: McCoy Cove	1992174	Black Mtn.	24	2,067	8/19/2010	Complete - Waiting on final documents
Black Mtn Annex: Blue Ridge Rd.	1992171	Black Mtn.	24	2,560	8/19/2010	Complete-Waiting on final documents
Haywood Village	2007172	Asheville	55	749	7/15/2008	New owner developer - will resume soon
Camp Dorothy Walls - Ph. 1	2007294	Black Mtn.	Comm.	593	6/16/2009	Complete - Waiting on final documents
Momentum Health Adventure	2008097	Asheville	Comm.	184	8/19/2009	New ownership - project currently inactive
North Point Baptist Church	2008105	Weaverville	Comm.	723	5/20/2009	Complete - Waiting on final documents
AVL Technologies	2010018	Woodfin	Comm.	133	5/21/2010	Complete-Waiting on final documents
UNC-A New Residence Hall	2011047	Asheville	304	404	8/29/2011	Complete-Waiting on final documents
Cottonwood Townhomes	2009110	Black Mtn.	8	580	10/20/2009	Complete-Waiting on final documents
Goldmont St	2012087	Black Mtn.	6	91	1/11/2013	Complete-Waiting on final documents
Bradley Street - Phase II	2013031	Asheville	12	194	2/14/2013	Waiting on revised as-built drawings
Onteora Oaks Subdivison	2012026	Asheville	28	1,222	1/4/2013	Complete-Waiting on final documents
Ramble at Parkway	2013100	Biltmore Forest	TBD	335	7/26/2013	Complete-Waiting on final documents
Eargle Sewer Extension	2011077	Asheville	2	45	9/4/2013	Complete-Waiting on final documents
Carolina Truck and Body (Cooper)	2012075	Asheville	Comm.	298	10/30/2012	Awaiting COA approval for work in ROW
Biltmore Lake Block "J"	2013013	Enka	32	3,918	4/16/2013	Complete-Waiting on final documents
Sardis Road (COA) Annexation	2009037	Asheville	N/A	6,981	4/2/2012	Complete-Waiting on revised ROW items
Ardmion Park	2011107	Asheville	5	208	4/16/2013	Complete-Waiting on final documents
Central Ave	2012065	Asheville	6	305	9/26/2013	Complete - Waiting on final documents
Waynesville Ave (Pittman)	2013046	Asheville	15	332	5/23/2013	Complete-Waiting on final documents
Ridgefield Business Park	2004188	Asheville	18	758	2/16/2005	Complete-Waiting on final documents

Planning & Development Project Status Report

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Project Name	Project Number	Work Location	Units	LF	Pre-Construction Conference Date	Comments
The Settings (6 Acre Outparcel)	2004192	Black Mountain	21	623	3/15/2006	Ready for final inspection
Waightstill Mountain PH-8	2006277	Arden	66	3,387	7/26/2007	testing / in foreclosure
Brookside Road Relocation	2008189	Black Mtn	N/A	346	1/14/2009	Project will not be built per consultant
Scenic View	2006194	Asheville	48	534	11/15/2006	Ready for final inspection
Ingles	2007214	Black Mtn.	Comm.	594	3/4/2008	Ready for final inspection
Bartram's Walk	2007065	Asheville	100	10,077	7/28/2008	Punchlist pending - in bankruptcy
Morgan Property	2008007	Candler	10	1,721	8/11/2008	Pre-con held, ready for construction
Village at Bradley Branch - Ph. III	2008076	Asheville	44	783	8/8/2008	New developer, ready for testing
Canoe Landing	2007137	Woodfin	4	303	5/12/2008	Ready for construction
Central Valley	2006166	Black Mtn	12	472	8/8/2007	Punchlist pending
CVS-Acton Circle	2005163	Asheville	4	557	5/3/2006	Ready for final inspection
Hamburg Mountain Phase 3	2004086	Weaverville	13	844	11/10/2005	Ready for final inspection
Bostic Place Sewer Relocation	2005102	Asheville	3	88	8/25/2005	Ready for final inspection
Kyfields	2003100	Weaverville	35	1,118	5/10/2004	Ready for final inspection
Reems Creek Cottages	2013066	Weaverville	17	483	11/15/2013	Under Construction
Camp Dorothy Walls - Ph. 2	2007294	Black Mtn.	Comm.	593	6/16/2009	Pre-con held, ready for construction
Burk Street Cottages	2012115	Asheville	27	631	10/24/2013	Under Construction
Thoms Estate 3B & 4	2013052	Asheville	35	4,690	7/26/2013	Installing/Testing (75% Complete)
Carmel Ridge Apartments	2013018	Leicester	80	1,162	10/11/2013	Under Construction
Palisades Apartments	2013024	Asheville	224	1,423	9/4/2013	Ready for testing
Crest Mountain Phase 3B	2013041	Woodfin	69	1,329	10/15/2013	Under Construction
Asheville Market (Relocation)	2012139	Asheville	Comm.	280	9/18/2013	Ready for testing
The Aventine	2011015	Biltmore Forest	300	3,238	10/14/2013	Under constr./some air testing complete
Westover Relocation	2013132	Asheville	1	87	11/20/2013	Under Construction
Eagle's Landing	2010015	Asheville	25	472	10/22/2013	Under Construction
Hunt Hill Apartments	2013111	Asheville	180	1,729	3/5/2014	Pre-con held, ready for construction
Hyde Park	2013058	Arden	65	3,062	12/3/2013	Pre-con held, ready for construction
Ramble Block "D"	2013074	Biltmore Forest	36	4,783	12/11/2013	Under Construction
Pinebrook Farms Relocation	2013148	Weaverville	N/A	178	12/19/2013	Under Construction
Upper Kentucky Improvements	2013085	Montreat	N/A	284	12/3/2013	Under Construction
Isaac Dickson School Relocation	2013033	Asheville	School	504	1/13/2014	Pre-con held, ready for construction
Biltmore Lake Block "J2"	2013128	Biltmore Forest	14	1,541	2/4/2014	Pre-con held, ready for construction
Gorilla Carwash - Weaverville	2013109	Weaverville	Comm.	236	11/15/2013	Ready for final inspection
TOTAL			2,044	76,133		