

**METROPOLITAN GOVERNMENT OF NASHVILLE
AND DAVIDSON COUNTY - METRO WATER SERVICES
PERFORMANCE AUDIT OF CLEAN WATER
NASHVILLE OVERFLOW ABATEMENT PROGRAM**

INTERIM REPORT - JULY 1, 2014 - APRIL 30, 2015

DATE ISSUED: SEPTEMBER 29, 2015

METROPOLITAN GOVERNMENT OF NASHVILLE
AND DAVIDSON COUNTY - METRO WATER SERVICES
PERFORMANCE AUDIT OF CLEAN WATER
NASHVILLE OVERFLOW ABATEMENT PROGRAM

Table of Contents

	<u>Page</u>
INTRODUCTION	
Performance Audit Initiation	1
Background.....	1 - 2
 EXECUTIVE SUMMARY	
Scope of Performance Audit.....	3
 PERFORMANCE AUDIT OBSERVATIONS, RECOMMENDATIONS AND MANAGEMENT RESPONSES	
Conflicts of Interest	4
Program and Related Project Budget Costs vs. Actual Results and Financial Data Tracking within the PMIS Database and Metro Finance	4
Process for Changing Project Budget Costs	5
Program Management Internal Controls for Payment Processing	5 - 6
Project Cost Reconciliation between PMIS Database and Metro Finance.....	6
Compliance with Metro Procurement Regulations.....	7
Program Management Processes for Quality Controls and Risk Assessment.....	7 - 9
Program and Related Projects Timeline Performance.....	9
Project Performance in Accordance with Design	10
EPA and TDEC Reporting Requirements Compliance	10
Project Site Visits	11
Process for Reassignment of Unused Budgeted Funds	11 - 12
 APPENDIX A - CAP/ER and LTCP Implementation Plans and Schedules	 13 - 14

METROPOLITAN GOVERNMENT OF NASHVILLE
AND DAVIDSON COUNTY - METRO WATER SERVICES
PERFORMANCE AUDIT OF CLEAN WATER
NASHVILLE OVERFLOW ABATEMENT PROGRAM

INTRODUCTION

Performance Audit Initiation

Metro Water Services (“MWS”) engaged Crosslin & Associates (“C&A”) in May 2015 to design and implement a performance audit for the Clean Water Nashville Overflow Abatement Program (the “Program”). The design phase of the engagement included three tasks as follows:

1. Identify specific objectives and strategies for achieving the performance engagement goals through discussion with Program personnel, review of available documentation, and review of both legal and internal control requirements.
2. Identify relevant operational and financial performance measures to attain Program goals and objectives.
3. Assist MWS by developing a program to report performance measurement information which will allow MWS to monitor progress toward achieving Program goals and objectives.

The implementation phase of the engagement included testing these determined performance measurement objectives and goals and issuing the results of the engagement procedures in an annual report that includes both observations and any related recommendations. An annual report will be issued throughout the duration of the Program. This is the third annual performance audit report for the Program.

Background

MWS began an aggressive improvement and rehabilitation program in 1990 through 2006 to reduce the number of combined sewer overflows (“CSOs”) and sanitary sewer overflows (“SSOs”), making tremendous progress toward improving water quality in the Cumberland River and its major tributaries. However, despite these improvements, a significant number of overflows still remained, prompting state and federal regulatory agencies to approach MWS in 2006 about the need for additional work within the sewer system.

METROPOLITAN GOVERNMENT OF NASHVILLE
AND DAVIDSON COUNTY - METRO WATER SERVICES
PERFORMANCE AUDIT OF CLEAN WATER
NASHVILLE OVERFLOW ABATEMENT PROGRAM

INTRODUCTION - Continued

Background - Continued

In March 2009, a Consent Decree between the United States of America, the State of Tennessee, and the Metropolitan Government of Nashville and Davidson County was approved and entered with the United States District Court for the Middle District of Tennessee. The Consent Decree was filed on behalf of the United States Environmental Protection Agency (“EPA”) and the Tennessee Department of Environment and Conservation (“TDEC”), requiring MWS to use its best efforts to achieve the following goals:

1. Full compliance with National Pollutant Discharge Elimination System (“NPDES”) permits, the Clean Water Act (“CWA”), the Tennessee Water Quality Control Act, and related regulations.
2. Elimination of SSOs, due to a later submitted design storm.
3. Compliance with EPA’s CSO Control Policy.

Under the Consent Decree, MWS is required to fully develop, in two years, a Corrective Action Plan/Engineering Report (“CAP/ER”) for its sanitary sewer system, a Long-term Control Plan (“LTCP”) for its combined sewer system to achieve the goals of the CWA, and meet water quality requirements in the Cumberland River. Due to the impacts of the May 2010 flood, MWS received a six month extension for the CAP/ER and the LTCP to be fully developed, and further a two year extension for final compliance. As such, these reports were developed and filed with the EPA, effective September 12, 2011. At a total estimated cost of \$1.0-\$1.5 billion, the Program represents a major investment in overflow abatement for the Nashville community. As of September 29, 2015, the EPA has not yet given final approval for either of the CAP/ER or LTCP plans.

See Appendix A for both the CAP/ER and LTCP Implementation Plans and Schedules submitted to the EPA.

METROPOLITAN GOVERNMENT OF NASHVILLE
AND DAVIDSON COUNTY - METRO WATER SERVICES
PERFORMANCE AUDIT OF CLEAN WATER
NASHVILLE OVERFLOW ABATEMENT PROGRAM

EXECUTIVE SUMMARY

Scope of Performance Audit

MWS engaged C&A to perform the third annual performance audit of the Clean Water Nashville Overflow Abatement Program (the “Program”) for interim period of July 1, 2014 through April 30, 2015. The performance audit was conducted over a three-month period from May 2015 through July 2015. As of April 30, 2015, the Program had 33 active projects (each in various phases of the project) that are covered under the Consent Decree (see Appendix A for complete list of Consent Decree projects). As of April 30, 2015, a total of approximately \$149.6 million out of a budgeted \$1.5 billion had been incurred for projects (See detail of these expenditures by project at Appendix A).

C&A selected 13 active projects for testing performance measurement objectives. As of April 30, 2015, the following projects were active and selected for testing:

<u>Project Name</u>	<u>Escalated Budget</u>	<u>Project Phase</u>
Gibson Creek Equalization Facility	\$21.1 million	Real Estate
Central WWTP Capacity Improvements and CSO Reduction	\$ 7.8 million	Planning
Brick Church Pike Pipe Improvements	\$17.5 million	Design
Cowan Riverside Rehabilitation - Area 1	\$ 8.6 million	Construction
Cowan Riverside Rehabilitation - Area 2	\$ 8.7 million	Construction
Dodson Chapel Pipe Improvements	\$14.2 million	Construction
Mill Creek Opryland Equalization Facility - Phase II	\$19.3 million	Construction
Shelby Park Rehabilitation - Area 1	\$ 9.9 million	Construction
Shelby Park Rehabilitation - Area 2	\$10.0 million	Construction
Shelby Park Rehabilitation - Area 3	\$10.3 million	Construction
Apex Sewer Corrections	\$ 3.3 million	Closeout
Dodson Chapel Equalization Facility	\$25.1 million	Closeout
Neely’s Bend Rehabilitation	\$ 2.4 million	Closeout

See the Performance Audit Observations, Recommendations and Management Responses section of the report for detailed observations, recommendations and management responses for each performance measurement tested.

METROPOLITAN GOVERNMENT OF NASHVILLE
AND DAVIDSON COUNTY - METRO WATER SERVICES
PERFORMANCE AUDIT OF CLEAN WATER
NASHVILLE OVERFLOW ABATEMENT PROGRAM

**PERFORMANCE AUDIT OBSERVATIONS, RECOMMENDATIONS
AND MANAGEMENT RESPONSES**

CONFLICTS OF INTEREST

Observation

During fieldwork, C&A noted that conflict of interest disclosures had been disseminated to all key individuals and the signed copies were properly filed in the Program Management Information System (“PMIS”). Signed conflict of interest disclosures are required to be obtained annually for all key individuals. Any disclosures are reviewed for potential conflicts and controls have been put into place for any potential ethics violations. Signed conflict of interest disclosures and related controls are being monitored regularly for compliance.

Recommendation

None.

Management’s Response

No response necessary.

**PROGRAM AND RELATED PROJECT BUDGET COSTS VS. ACTUAL RESULTS
AND FINANCIAL DATA TRACKING WITHIN THE PMIS DATABASE AND
METRO FINANCE**

Observations

During fieldwork, C&A noted actual costs for all projects tested were closely monitored to respective budget costs within the PMIS database. For each of the projects tested, we observed that the project’s budget is properly supported by cost estimates. Actual costs to date through April 30, 2015, are either below or in line with budgeted costs to date.

Recommendations

None.

Management’s Response

No response necessary.

METROPOLITAN GOVERNMENT OF NASHVILLE
AND DAVIDSON COUNTY - METRO WATER SERVICES
PERFORMANCE AUDIT OF CLEAN WATER
NASHVILLE OVERFLOW ABATEMENT PROGRAM

**PERFORMANCE AUDIT OBSERVATIONS, RECOMMENDATIONS
AND MANAGEMENT RESPONSES - Continued**

PROCESS FOR CHANGING PROJECT BUDGET COSTS

Observation

C&A reviewed certain project budget cost changes to verify that the changes were made with proper approvals, had a justification document properly completed, and appeared reasonable in nature. During our testing, we observed that only one project tested had two significant budget changes.

We noted that the significant changes to the project budget were supported by source documents, approved by appropriate Program management, and noted in meeting minutes.

Recommendation

None.

Management's Response

No response necessary.

**PROGRAM MANAGEMENT INTERNAL CONTROLS FOR
PAYMENT PROCESSING**

Observations

During fieldwork, payments were tested for evidence of proper review of documentation, accuracy and timeliness. It was noted that in two of our projects tested, a selected invoice for each project was not transmitted by the Program Management Team to Metro Finance for payment within the two-day requirement as outlined in the Program Management Plan ("PMP") - vol II - Procedures - Invoice Review.

Invoice review procedures states that the Program Controls Group has two business days to assemble and send to Metro Finance the approved invoice/construction pay application package.

One invoice was transmitted by the Program Controls Group to Metro Finance 18 business days after approval and the second invoice was transmitted 3 business days after approval.

METROPOLITAN GOVERNMENT OF NASHVILLE
AND DAVIDSON COUNTY - METRO WATER SERVICES
PERFORMANCE AUDIT OF CLEAN WATER
NASHVILLE OVERFLOW ABATEMENT PROGRAM

**PERFORMANCE AUDIT OBSERVATIONS, RECOMMENDATIONS
AND MANAGEMENT RESPONSES - Continued**

**PROGRAM MANAGEMENT INTERNAL CONTROLS FOR
PAYMENT PROCESSING - Continued**

Recommendation

C&A recommends that the Program Controls Group assemble and send the approved invoice/construction pay application packages for all projects within two business days, as outlined in the PMP-vol. 11- Procedures-Invoice Review.

Management's Response

The Program Management Team concurs with this recommendation.

**PROJECT COST RECONCILIATION BETWEEN PMIS DATABASE
AND METRO FINANCE**

Observation

While performing our procedures during the prior period, C&A noted that the PMT matched the invoices submitted to MWS to the access database report, provided by MWS Finance each week. The access database is a project management program used by MWS Finance for internal projects. MWS Finance reconciled each payment request received to EBS (both on the vendor payment side and the encumbrance side) verifying the accuracy of their access database to the general ledger. However, the Program Management Team did not perform reconciliation between the PMIS database and EBS, which is the primary source for payments. Without the full reconciliation process to EBS, duplicate payments, inappropriate paid amounts or other errors could potentially be missed. In addition, total Program cost overruns may not be detected on a timely basis.

During the current period procedures, C&A noted that the Programs Control Group reconciles actual invoice costs processed in PMIS to EBS on a monthly basis. C&A selected 9 of the 13 tested projects to verify the propriety of the reconciliation process by the Programs Control Group. For each of the selected 9 projects, C&A verified all invoice amounts from inception of the project through April 30, 2015 processed in PMIS were properly posted as payments in EBS, with no exceptions noted.

Recommendation

None.

Management's Response

No response necessary.

METROPOLITAN GOVERNMENT OF NASHVILLE
AND DAVIDSON COUNTY - METRO WATER SERVICES
PERFORMANCE AUDIT OF CLEAN WATER
NASHVILLE OVERFLOW ABATEMENT PROGRAM

**PERFORMANCE AUDIT OBSERVATIONS, RECOMMENDATIONS
AND MANAGEMENT RESPONSES - Continued**

COMPLIANCE WITH METRO PROCUREMENT REGULATIONS

Observation

C&A reviewed selected projects to ensure proper procurement procedures were followed and to confirm whether relevant data was entered correctly in the project cost sheets within PMIS, consistent with each individual contract. We also reviewed change orders to confirm that proper signatures were obtained. We compared the contracted amounts with the budgets to see if there were any unsupported variations. No unexplained deviations were noted. We noted that, in certain circumstances, only limited procurement documentation existed. We inquired about the limited documentation as it related to the procurement process. It was noted that the procurement process is handled by the Metro Procurement Department and communicated to the PMT through a liaison and that management did not think that it is prudent to place sensitive documents within the file that is viewed by various contractors and subcontractors. Due to the sensitive nature of the information, C&A contacted both the MWS Finance Department and Procurement Department to request the items noted that was not included within PMIS in order to ensure that the proper procurement procedures were followed. C&A reviewed all documents noting no exceptions.

Recommendation

None.

Management's Response

No response necessary.

**PROGRAM MANAGEMENT PROCESSES FOR QUALITY CONTROLS
AND RISK ASSESSMENT**

Observation

C&A conducted an assessment of quality control documents that are required to be prepared, reviewed and signed by designated responsible parties at various phases of the projects. While most documentation was properly filed, there were several instances of missing documents. There were also instances where the documentation was found, but not in the files.

Recommendation

We recommend that quality control documents consistently be prepared, reviewed, and signed in the future, and a system be put in place to ensure that the documents are properly and timely maintained within PMIS.

METROPOLITAN GOVERNMENT OF NASHVILLE
AND DAVIDSON COUNTY - METRO WATER SERVICES
PERFORMANCE AUDIT OF CLEAN WATER
NASHVILLE OVERFLOW ABATEMENT PROGRAM

**PERFORMANCE AUDIT OBSERVATIONS, RECOMMENDATIONS
AND MANAGEMENT RESPONSES - Continued**

**PROGRAM MANAGEMENT PROCESSES FOR QUALITY CONTROLS
AND RISK ASSESSMENT - Continued**

Management's Response

The Program Management Team concurs with this recommendation.

Observation

The Program Management Plan ("PMP") - vol. I, section 6, states that risk assessment should be performed at the project level with a defined set of documentation (risk assessment matrix including consequence ratings and likelihood of occurrence rating). We noted that formal project specific risk assessments were prepared and placed into PMIS in order to comply with the PMP.

Recommendation

None.

Management's Response

No response necessary.

Observation

The PMIS database is designed in such a way that it can be utilized by all members of the Project Management Team, and all contractors and subcontractors at a level appropriate for their needs. We noted in the PMP that training for individuals at various levels should be provided to allow for full utilization of the resources provided and for consistency in documentation placed in the file. While performing our procedures during the prior period, C&A noted there was missing documentation in the system to support that training had been provided. As a result, in the prior period, C&A recommended a training log be developed and maintained for not only the primary project team members, but also for contractors, subcontractors, and others who utilize the system.

During the current year procedures, C&A noted this training log was developed and implemented. C&A selected and tested 10 program management consultant staff members and 5 each of design and construction management consultants on current active projects. We verified that each consultant's training dates were included in the training log without exception.

METROPOLITAN GOVERNMENT OF NASHVILLE
AND DAVIDSON COUNTY - METRO WATER SERVICES
PERFORMANCE AUDIT OF CLEAN WATER
NASHVILLE OVERFLOW ABATEMENT PROGRAM

**PERFORMANCE AUDIT OBSERVATIONS, RECOMMENDATIONS
AND MANAGEMENT RESPONSES - Continued**

**PROGRAM MANAGEMENT PROCESSES FOR QUALITY CONTROLS
AND RISK ASSESSMENT - Continued**

Recommendation

None.

Management's Response

No response necessary.

Observation

The PMP states that periodic audits are to be performed internally. C&A noted that the annual internal audit was conducted by the PMC Quality Manager as described in the Quality Management Plan during the period covered by our procedures.

Recommendation

None.

Management's Response

No response necessary.

PROGRAM AND RELATED PROJECTS TIMELINE PERFORMANCE

Observation

C&A reviewed the timeline for tested projects to determine if any significant changes had been made, and if so, we obtained support for the justification and approval of these timeline changes. For any significant delays, we found that there was documentation to support that the proper members of management (both Program Management and MWS) had been informed.

Recommendation

None.

Management's Response

No response necessary.

METROPOLITAN GOVERNMENT OF NASHVILLE
AND DAVIDSON COUNTY - METRO WATER SERVICES
PERFORMANCE AUDIT OF CLEAN WATER
NASHVILLE OVERFLOW ABATEMENT PROGRAM

**PERFORMANCE AUDIT OBSERVATIONS, RECOMMENDATIONS
AND MANAGEMENT RESPONSES - Continued**

PROJECT PERFORMANCE IN ACCORDANCE WITH DESIGN

Observation

C&A noted that there were several projects in the construction phase that had been processed through the PMP. Of the projects reviewed, the designs submitted appeared to represent the RFPs. Reviews of the designs at various milestones were being performed by management and the engineers of record were monitoring changes that may impact the intent of the design for maximizing resources to resolve problems. We also noted field visits are being performed by the Construction Managers with cross-references to the expectations.

Recommendation

None.

Management's Response

No response necessary.

EPA AND TDEC REPORTING REQUIREMENTS COMPLIANCE

Observation

C&A reviewed MWS's compliance with the various reporting requirements as it relates to the Consent Decree with particular attention to the Project Management Team's maintenance of documentation, content, and deadlines. C&A did not note any non-compliance.

Recommendation

None.

Management's Response

No response necessary.

METROPOLITAN GOVERNMENT OF NASHVILLE
AND DAVIDSON COUNTY - METRO WATER SERVICES
PERFORMANCE AUDIT OF CLEAN WATER
NASHVILLE OVERFLOW ABATEMENT PROGRAM

**PERFORMANCE AUDIT OBSERVATIONS, RECOMMENDATIONS
AND MANAGEMENT RESPONSES - Continued**

PROJECT SITE VISITS

Observation

C&A conducted on-site visits for each of the 10 projects currently in either the construction or closeout phase. For each of these 10 projects, C&A met with the Site Construction Manager and performed a walkthrough of the site location, noting the current status of the project, including description/design of the project. Each project's timeline of completion in its current phase and percentage of completion costs were in line with that reported on the respective project summary reports reviewed and tested with no exception.

Recommendation

None.

Management's Response

No response necessary.

PROCESS FOR REASSIGNMENT OF UNUSED BUDGETED FUNDS

Observation

During the prior year engagement, C&A inquired of the Program Management Team as to the process for the reallocation of unused budgeted funds for a project once an OAP project has been closed out. At that time, none of the projects had reached the close out phase and as such, no transfers of unused budgeted funds needed to be transferred. However, during the current year engagement, several projects were moved into the close out phase and the Program Management Team documented procedures to address the process for the reassignment of unused budgeted funds. Based on discussions with the Program Management Team and per review of PMIS, C&A observed that any unused budgeted funds from projects that have been closed out are to be transferred from the individual project's detail cost sheet as Contingency - Forecasted Adjustments to the OAP Program detail cost sheet as Cross Phase-Contingency-Budgeted Changes (Approved). As of April 30, 2105, a total of \$32.2 million of unused budgeted funds from the various OAP projects that have closed out from inception of the

METROPOLITAN GOVERNMENT OF NASHVILLE
AND DAVIDSON COUNTY - METRO WATER SERVICES
PERFORMANCE AUDIT OF CLEAN WATER
NASHVILLE OVERFLOW ABATEMENT PROGRAM

**PERFORMANCE AUDIT OBSERVATIONS, RECOMMENDATIONS
AND MANAGEMENT RESPONSES - Continued**

PROCESS FOR REASSIGNMENT OF UNUSED BUDGETED FUNDS - Continued

Program through April 2015 have been captured in this contingency reserve fund for the overall CWN Program. C&A reviewed the forecasted adjustments along with the budget changes and verify that these processes are the same noting no exceptions. Therefore, it appears that the Program Management Team has implemented its process for tracking unused budgeted funds from projects closed out and is transferring these unused budgeted funds back into the overall Program reserve.

Recommendation

None.

Management's Response

No response necessary.

Clean Water Nashville Overflow Abatement Program

CAP/ER & LTCP Implementation Plans & Schedules

CD Name	Sub-Program	Expended Amount	Start	End
Early Action Projects (EAP)				
Barker Road Omohundro Equalization Storage Phase I	CAP-ER	\$12,310,818	5/15/2006	5/14/2008
Broadway Improvements	LTCP	\$646,794	7/1/2010	11/1/2011
Dodson Chapel Equalization Facility	CAP-ER	\$15,709,669	12/6/2010	11/25/2013
Driftwood Equalization Facility	LTCP	\$2,577,921	1/4/2011	11/27/2013
Dry Creek Waste Water Treatment Plant Optimization	CAP-ER	\$0	7/1/2003	12/31/2007
Holiday Travel Park Gravity Conversion	CAP-ER	\$114,638	6/2/2007	9/1/2012
Lakewood Rehabilitation (EAP)	CAP-ER	\$5,206,533	1/10/2011	11/26/2015
Mill Creek 36 in Trunk Sewer System Rehabilitation	CAP-ER	\$1,682,251	1/2/2008	9/30/2011
Rockwood Conveyance Improvement	CAP-ER	\$1,215,193	12/1/2011	5/1/2012
Smith Springs Equalization Storage	CAP-ER	\$0	7/11/2005	4/7/2006
Van Buren Improvements	LTCP	\$646,794	7/1/2010	11/1/2011
Washington CSO Facility Improvements	LTCP	\$19,613,899	7/1/2010	4/27/2012
West Park Equalization Storage Phase I	CAP-ER	\$9,366,031	1/2/2006	6/29/2011
Whites Creek Pump Station Improvements	CAP-ER	\$21,832,738	7/1/2009	11/14/2013
Whites Creek WWTP Disinfection & Optimization	CAP-ER	\$6,498,937	7/1/2008	12/21/2012
Subtotal:		\$97,422,216		
Overflow Abatement Program (OAP)				
28th Avenue Rehabilitation	CAP-ER	\$280,809	3/1/2012	11/5/2021
Apex Sewer Corrections	LTCP	\$1,192,195	7/5/2012	7/1/2014
Bandywood - Green Hills Rehabilitation (SU03A)	CAP-ER	\$0	1/2/2016	10/7/2018
Benedict & Crutcher Equalization Facility	LTCP	\$198	3/31/2015	5/29/2021
Berwick Trail Pipe Improvements	CAP-ER	\$0	4/1/2015	11/25/2018
Berwick Trail Pump Station Upgrades	CAP-ER	\$111,288	5/7/2012	12/18/2018
Boscobel Equalization Facility	LTCP	\$0	3/31/2015	4/25/2021
Brick Church Pike Pipe Improvements	CAP-ER	\$1,378,209	4/12/2012	11/2/2017
Central Wastewater Treatment Plant Equalization - Phase I	LTCP	\$0	1/28/2014	8/7/2019
Central Wastewater Treatment Plant Equalization - Phase II	LTCP	\$0	4/8/2015	11/4/2020
Central Wastewater Treatment Plant Equalization - Phase III	LTCP	\$0	6/4/2018	3/7/2023
Central Wastewater Treatment Plant Grit and Pump Station Upgrades	LTCP	\$0	1/28/2014	5/7/2020
Central Wastewater Treatment Plant Capacity Improvements and CSO Reduction	LTCP	\$205,333	6/11/2014	1/11/2021
Cleece Ferry Rehabilitation	CAP-ER	\$0	1/1/2017	12/26/2021
Combined Sewer System and First Avenue Tunnel Rehabilitation	LTCP	\$0	9/2/2019	11/24/2022
Cowan Riverside Rehabilitation	CAP-ER	\$6,567,686	12/30/2011	8/22/2017
Cowan Street Pipe Improvements	CAP-ER	\$0	8/3/2017	5/5/2022
Cowan Street Pump Station Upgrades	CAP-ER	\$0	9/23/2017	1/3/2021
Davidson and Brook Hollow Sewer Improvements	CAP-ER	\$313,264	12/28/2012	1/31/2016
Davidson Branch Pump Station and Equalization Facility	CAP-ER	\$335,917	5/7/2012	6/18/2018
Dodson Chapel Pipe Improvements	CAP-ER	\$913,960	11/30/2011	8/18/2015
Dry Creek Pipe Improvements	CAP-ER	\$69,985	8/31/2012	10/20/2019
Ewing Creek - Brick Church Equalization Facility	CAP-ER	\$367,865	5/7/2012	1/21/2018
First Avenue Tunnel Access	LTCP	\$0	3/29/2017	8/19/2020
Foster Avenue Rehabilitation GL01	CAP-ER	\$0	2/1/2019	10/27/2021
Gibson Creek Equalization Facility	CAP-ER	\$1,044	2/3/2013	2/13/2019

Clean Water Nashville Overflow Abatement Program

CAP/ER & LTCP Implementation Plans & Schedules

CD Name	Sub-Program	Expended Amount	Start	End
Gibson Creek Rehabilitation	CAP-ER	\$18,027	12/3/2012	7/8/2017
Green Improvements	LTCP	\$213,019	7/31/2012	7/30/2023
Henry Ford Drive Pipe Improvements	CAP-ER	\$0	12/3/2017	4/25/2022
Hidden Acres Pump Station Upgrades	CAP-ER	\$0	6/3/2015	4/7/2019
Highway 100 Tyne Boulevard Pipe Improvements	CAP-ER	\$1,159,085	12/1/2011	7/14/2022
Hurricane Creek Pipe Improvements	CAP-ER	\$13,226	11/1/2014	9/24/2019
Joelton Rehabilitation	CAP-ER	\$899,251	3/6/2012	6/16/2014
Kerrigan Trash Trap Replacement	LTCP	\$0	11/20/2019	4/12/2023
Kerrigan Weir Dynamic Addition	LTCP	\$0	6/1/2016	9/8/2019
Lakewood Rehabilitation	CAP-ER	\$130,841	1/10/2011	12/5/2017
Langford Farms Rehabilitation	CAP-ER	\$630	3/31/2015	12/8/2016
Loves Branch Pump Station Upgrades	CAP-ER	\$235,353	5/7/2012	5/17/2019
Madison Heights Rainbow Terrace Rehabilitation	CAP-ER	\$1,155	3/31/2015	4/28/2017
Mill Creek Opryland Equalization Facility - Phase II	CAP-ER	\$11,164,014	2/2/2012	4/3/2015
Mill Creek Opryland Equalization Facility - Phase III	CAP-ER	\$0	12/11/2013	4/28/2023
Mill Creek Trunk Improvements	CAP-ER	\$3,229	3/1/2016	8/1/2022
Neely's Bend Pump Station Upgrades	CAP-ER	\$274,632	5/7/2012	9/24/2019
Neely's Bend Rehabilitation	CAP-ER	\$2,773,183	12/30/2011	12/8/2014
Norman Drive Pipe Improvements GC14	CAP-ER	\$12,176	3/31/2015	3/25/2021
Parthenon Area Improvements	LTCP	\$275,359	3/26/2012	2/10/2019
Program Cross-Phase	N/A	\$11,000,143	4/30/2015	4/30/2015
River Drive Rehabilitation	CAP-ER	\$0	1/31/2018	11/25/2020
Riverside Drive Pump Station Upgrades	CAP-ER	\$0	9/23/2017	7/26/2021
Schrader Equalization Facility	LTCP	\$0	2/12/2018	7/5/2021
Shelby Park Rehabilitation	CAP-ER	\$10,131,246	2/1/2012	1/25/2022
Smith Springs Rehabilitation	CAP-ER	\$229,141	4/3/2012	11/25/2020
Vandiver Pump Station Upgrades	CAP-ER	\$134,922	5/7/2012	1/28/2019
West Park Equalization Facility Phase II	CAP-ER	\$1,725,416	1/3/2012	2/14/2017
West Park Equalization Facility Phase III	CAP-ER	\$0	1/3/2012	11/8/2016

Subtotal: \$52,131,801

Total: \$149,554,017

Count: 70

Total for LTCP:	\$25,371,512
Total for CAP-ER:	\$113,182,362
Total for Program Cross-Phase:	<u>\$11,000,143</u>
Total:	<u><u>\$149,554,017</u></u>