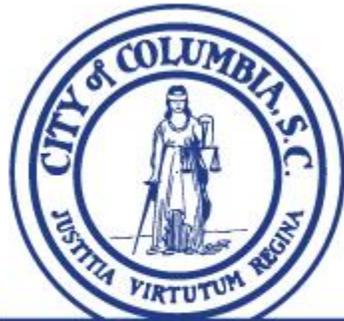


# Clean Water 2020 Program

## FINANCIAL ANALYSIS PROGRAM

December 2015



We Are Columbia



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# Program Summary and Intent

## Introduction and Objectives

The City of Columbia (City) has developed a Financial Analysis Program which establishes and tracks the sufficiency of funds for operations and maintenance, capital projects financing, and debt service coverage associated with its wastewater collection and transmission system (WCTS).

This Financial Analysis Program (FAP) has been prepared in accordance with the requirements of Paragraph 12 of the Consent Decree (CD) entered by order dated May 21, 2014 in *The United States of America and State of South Carolina by and through the Department of Health and Environmental Control vs. the City of Columbia*, Civil Action No. 3:13-2429-TWL, DOJ Case Number 90-5-1-1-00954.

The CD requirements for the Financial Analysis Program (FAP) and the sections of this document that address each requirement are outlined in **Table 1** below.

*Table 1 CD Requirements for the Financial Analysis Program*

CD Section	CD Requirements	FAP Section
12.j Main Paragraph	" <u>Financial Analysis Program</u> . Within eighteen (18) months after the Date of Entry of this Consent Decree, Columbia shall submit to the EPA and DHEC for review, comment, and approval a Financial Analysis Program which establishes and tracks the sufficiency of funds for operations and maintenance, capital projects financing, and debt service coverage associated with the WCTS. At minimum, the Financial Analysis Program shall include, and Columbia shall implement, the requirements set forth in Paragraph 12.j.(i) through (v)."	Section 1. FAP Overview
12.j.(i)	" <u>Cost Analysis</u> . Protocols to regularly analyze and project future utility management, operations, and maintenance costs integral to proper management, operation, and maintenance of the WCTS and WWTP. The cost analyses should include, at a minimum: capital infrastructure improvements; staffing levels; replacement of equipment and materials integral to the proper management, operation and maintenance of the WCTS and WWTP; outsourced activities; and services provided by organizational departments or agencies outside Columbia's Department of Utilities and Engineering."	Section 2. Cost Analysis
12.j.(ii)	" <u>Capital Improvement Financing Program</u> . Protocols to analyze, project, plan, and finance capital improvement needs established through engineering studies; WCTS condition assessments; historical WCTS management, operations, and maintenance cost data; and sound sewer infrastructure asset management programs. Capital improvement financing should be planned using a five (5) year planning horizon with annual updates."	Section 3. Capital Improvement Financing Program
12.j.(iii)	" <u>Budget and Customer Rate Setting Analysis</u> . The Financial Analysis Program shall project the annual utility budget and customer rates periodically. The program should predict the budget and funding provided by customer rates that will meet the cost and financing needs for the management, operation, and maintenance of the WCTS as identified pursuant to the procedures set forth in Subparagraph j.(i) through (ii) above."	Section 4. Budget and Customer Rate Setting Analysis
12.j.(iv)	"The ability to directly track and report operation and maintenance costs by the type of activity (corrective, preventative, and emergency) and capital improvement costs."	Section 5. Operation and Maintenance Costs Tracking

CD Section	CD Requirements	FAP Section
12.j.(v)	"An implementation schedule specifying dates and actions."	Section 6. Implementation Schedule

## Acronyms & Abbreviations

**CD** – Consent Decree

**City** – City of Columbia

**CIP** – Capital Improvements Program

**CSAP** – Continuing Sewer Assessment Program for the WCTS

**DHEC** – South Carolina Department of Health and Environmental Control

**DOJ** – United States Department of Justice

**DUE** – Department of Utilities and Engineering

**EPA** – United States Environmental Protection Agency

**FAP** – Financial Analysis Program

**GSOMP** – Gravity Sewer System Operations and Maintenance Program

**HMR** – Sewer System Hydraulic Model Report

**IMS** – Information Management System Program

**IRP** – Infrastructure Rehabilitation Program for the WCTS

**IRR** – Infrastructure Rehabilitation Report for the WCTS

**MMS** – Maintenance Management System

**MOM** – Management, Operations, and Maintenance

**O&M** – Operations and Maintenance

**SIRR** – Supplemental Infrastructure Rehabilitation Report for the WCTS

**SMP** – Sewer Mapping Program

**TSOMP** – Transmission System Operations and Maintenance Program

**U&E** – Utilities and Engineering

**WCTS** – Wastewater Collection and Transmission System

**WMD** – Wastewater Maintenance Division

**WWTP** – Wastewater Treatment Plant

## Section 1 FAP Overview

The FAP Overview addresses the following specific requirements of the CD:

- Subparagraph 12.j – Financial Analysis Program. Within eighteen (18) months after the Date of Entry of this Consent Decree, Columbia shall submit to the EPA and DHEC for review, comment, and approval a Financial Analysis Program which establishes and tracks the sufficiency of funds for operations and maintenance, capital projects financing, and debt service coverage associated with the WCTS. At minimum, the Financial Analysis Program shall include, and Columbia shall implement, the requirements set forth in Paragraph 12. j. (i) through (v).

The FAP was developed to establish sufficient funds for operations and maintenance, financing of capital projects and debt service coverage associated with the System, which includes the WCTS.

Unless otherwise stated, all plans referenced herein are subject to periodic review and modification as deemed necessary by the City.

## Section 2 Cost Analysis

The Cost Analysis addresses the following specific requirements of the CD:

- Subparagraph 12.j.(i) – Cost Analysis. Protocols to regularly analyze and project future utility management, operations, and maintenance costs integral to proper management, operation, and maintenance of the WCTS and WWTP. The cost analyses should include, at a minimum: capital infrastructure improvements; staffing levels; replacement of equipment and materials integral to the proper management, operation and maintenance of the WCTS and WWTP; outsourced activities; and services provided by organizational departments or agencies outside Columbia’s Department of Utilities and Engineering.

### 2.1 Budgeting Process

The City has established an annual budgeting process that includes analyzing costs from past years and projecting future needs. This section generally describes that process and the manner in which future projections are developed.

The City’s budget planning and adoption is an annual process for a 12 month fiscal year (July 1 – June 30) that typically begins in December with the annual action plan instruction issuance and a subsequent budget kickoff with department and division managers. Draft department budgets are due to the Assistant City Manager in mid-January.

After review by the Assistant City Manager, the final budgets, action plans and Capital Improvements Program (CIP) are due from all departments at the end of January for review by the City Manager in February.

The Department Managers perform the initial review of the budget requests for all divisions within their departments. This review provides an overview of each division’s proposed activities and emphasis for the next fiscal year, which permits the Department Manager to assess the reasonableness and accuracy of each request.

The Department Manager, after reviewing each division’s budget requests, submits the budget requests for the entire department to the City Manager. The Department Manager is responsible for the timely submission of the department’s budget.

Final adoption of the budgets by City Council generally occur by the second City Council meeting in June.

All protocols contained above and referenced herein are subject to periodic review and modification as deemed necessary by the City.

### 2.2 Capital Infrastructure Improvements

Please see **Section 3** Capital Improvement Financing, for information on the process for developing future capital infrastructure improvement costs.

In the course of the budgeting process, the Department of Utilities (U&E) and Engineering provides the Finance Department with capital projects to be financed during the next fiscal year and includes a comparison of the previous year, present year estimates, and the requested expenditure levels.

## 2.3 Staffing Levels

The City utilizes multiple forms which are to be submitted by the Department of Utilities and Engineering as part of the annual budgeting process. These forms include detail significant information related to staffing, and efforts targeted at capturing:

- Summary of expenditures requested for staffing and a comparison of these to present and previous year expenditures (including items such as fringe benefit categories, overtime, etc.)
- Projected retirements
- Personnel Survey, which reflects all authorized positions and personnel costs charged to a department for the budget year (includes overtime, vacant positions, part-time positions, etc.)
- Organizational chart showing general chain of command in the organization for authorized positions

The City will be assessing staffing impacts that will be evaluated and determined in connection with CD programs. While considering past staffing levels is helpful, the City will also review the effort to implement the required CD Programs many of which may not have been covered in past efforts. Many of the staffing impacts are likely to be addressed through the Management, Operations and Maintenance (MOM) programs detailed in the CD (Gravity Sewer Operations Maintenance Program [GSOMP], Transmission System Operations and Maintenance Program [TSOMP], Wastewater Treatment Plant Operations Program [WWTP Ops], Maintenance Management System [MMS], etc.). For example, the TSOMP requires inspections of the pump stations and is expected to have a significant impact on staffing.

The capital improvement related programs will also be considered (Infrastructure Rehabilitation Program [IRP], Supplemental Infrastructure Rehabilitation Report [SIRR]). While the vast majority of costs associated with these programs are capital funding needs, these Programs will also require staffing to support these projects (project management, engineering, inspection, procurement, etc.).

Additional staffing needs will be managed through the normal staffing process at the City.

## 2.4 Equipment and Materials

The annual budgeting process includes planning for the costs of equipment and materials needed to operate and maintain the WWTP and WCTS. This planning is partly based on evaluation of past needs and budgeting levels in recent years.

Additionally, as each CD Program is implemented, the City will have compiled additional information on equipment and material needed to implement those Programs, including equipment and material to be maintained in the City's inventory. For example, increased inspections as part of the Continuing Sewer Assessment Program (CSAP) of the WCTS may lead to the City acquiring additional closed-circuit television inspection equipment. Additionally, the Maintenance Management System (MMS) for the WWTP includes an inventory management system which identifies critical equipment and critical spare parts to be stored at the WWTP or obtained within a reasonable amount of time. Similarly, the GSOMP and TSOMP include inventory management systems with comparable requirements for the WCTS. These inventory management systems will govern the required levels of inventory for operation and maintenance of the WWTP and WCTS and facilitate the budgeting process for this equipment and materials.

## 2.5 Outsourced Activities

The City currently utilizes outside service providers (contractors, consultants, etc.) for many activities related to management, operations, and maintenance of the wastewater system. Planning for the utilization of these outsourced activities is done in conjunction with the annual budgeting cycle.

Much like the assessment and planning for staffing, past budgets will be reviewed as part of the process to project future year needs for outsourcing. However, as noted above, the budgeting process will include an evaluation of the specific requirements for implementing the various CD Programs and the use of third-party vendors to meet those requirements.

Annually, the City will evaluate the workload and determine which activities the City will perform, and which activities the City will outsource. Once that evaluation is completed, estimates will be developed to determine the budgetary needs.

This evaluation will also be conducted for work required under the CD Programs. For example, the City will establish assessment needs based on the requirements in the CSAP. The City will then need to determine whether to perform the work with City personnel or to outsource to a third party. Committing internal resources could potentially impact staffing as well as equipment that must be budgeted. Similarly, the TSOMP and GSOMP require the City to maintain pipeline easements. This activity has been accomplished in the past by outsourcing to a third party, but the City may periodically reassess whether to continue to outsource this work or to perform some or all of this work with City staff.

## 2.6 Services Provided by Other City Departments

The Finance Department allocates the costs of purchasing services provided to the Department of Utilities and Engineering. Costs directly charged to U&E include support provided to the Department for payroll and accounting functions. These allocations and charges are performed on a monthly basis.

## Section 3 Capital Improvement Financing Program

The Capital Improvement Financing Program addresses the following specific requirements of the CD:

- Subparagraph 12.j.(ii) – Capital Improvement Financing Program. Protocols to analyze, project, plan, and finance capital improvement needs established through engineering studies; WCTS condition assessments; historical WCTS management, operations, and maintenance cost data; and sound sewer infrastructure asset management programs. Capital improvement financing should be planned using a five (5) year planning horizon with annual updates.

In addition to the budgeting and cost analysis protocols established in **Section 2**, the Capital Improvements Program includes additional guidelines for budgeting and financing capital improvement.

Currently the City's five year Capital Improvement Plan is based on available estimates of future capital needs. Under the terms of the CD, comprehensive system assessment and prioritization will be conducted before the near-term and long-term costs for improvements are known in detail.

### 3.1 Current Estimates

In recent years the City has had limited asset condition assessment information, and no comprehensive hydraulic model existed on which to base current capital needs or project future capital needs. Initial estimates of the capital needs as required by the terms of the CD were based on anticipated percentages for a system that was in need of improvements for items such as manhole and pipeline repair, pump station improvements, capacity expansion of major pipelines, and other common project types. This initial conceptual estimate projects the costs for a 10-Year Consent Decree implementation at approximately \$750 million.

However, it is critical to note that the estimate was based on very limited available information and anticipated percentages for common infrastructure needs. As the City continues the implementation of the CD requirements for planning, and most importantly, condition assessment, the capital infrastructure needs will be better defined and improved estimates can be developed. The current financial planning is generally based on the original \$750 million estimate, but this estimate will be periodically reassessed as the condition assessment of the system progresses.

### 3.2 Condition Assessment & Modeling

The City has submitted (and EPA has approved) the Sewer Mapping Program which is now in the implementation phase. In addition, the City has already initiated some condition assessment work on pipelines, manholes, and pump stations. This assessment work is detailed in the Continuing Sewer Assessment Program and Transmission System Operations and Management Program which has been submitted to EPA/DHEC for review and approval. The detailed condition assessment strategy in these programs will allow the City to better understand the current condition of the assets.

In addition to condition assessment of the assets, the City has begun preliminary work on a hydraulic model. Information on potentially undersized lines, which did not previously exist, will be vital in determining major future capital projects. This information will be detailed in the Hydraulic Model Report (HMR). The projects identified through the modeling effort will likely have significant cost implications.

### 3.3 Capital Project Selection & Prioritization

The City is currently working on developing the Infrastructure Rehabilitation Program. This program establishes the strategy and protocols for identifying projects from the knowledge gained during the ongoing CSAP efforts. The IRP establishes the protocol for selecting and prioritizing projects based on the criticality and condition of infrastructure.

The deliverables resulting from the IRP and CSAP efforts are the Infrastructure Rehabilitation Report (IRR) and the SIRR. These documents will identify specific projects for which specific estimates of costs can be determined for the implementation of these projects.

### 3.4 Refined Financial Needs

As a result of the infrastructure needs identified through implementation of the CD programs and the additional information regarding the condition of the assets in the City, along with detailed infrastructure rehabilitation planning, the City will be able to evaluate the initial estimates on which the current CIP is based. Adjustments will be made as the City moves forward and becomes more knowledgeable about the infrastructure improvement needs.

### 3.5 Budgeting

The purpose of capital improvements programming is to develop an orderly schedule for the expenditure of City funds for major public improvements and to ensure that the budgeting for building of infrastructure and acquiring of assets is not done in a vacuum, but is done through a thoughtful and comprehensive planning approach.

The capital projects budget is developed separately from the City's Annual Operating Budget. Actual appropriations for capital projects are made when the City Council approves the total (operating & capital) budget for the City.

The CIP document is different from the annual budget as it sets forth a five-year program. The first year's (typically referred to as Year 1) program contains projects that are included in the proposed Annual Operating Budget for the upcoming fiscal year. The remaining four years reflects City staff's recommended priorities for the future. The priorities are reviewed and revised annually by staff, executive management and City Council.

The development of the City's CIP occurs during the annual budget process. The City's Budget Office initiates the CIP process by providing a preparation guide and schedules to the relevant departments. U&E is responsible for developing, preparing and submitting a CIP Project request form for each project to the Budget Office. Also, a Business Case, which should be completed by the Project Manager and include at a minimum, details the description, costs, and justification for each proposed project.

The City Manager and staff review requests and establish priorities. The City Manager will incorporate the proposed CIP with the Annual Proposed Budget, along with recommendations to the City Council for its consideration and approval.

The cost of the scheduled major capital improvements is expected to be financed from existing cash balances, annual operating revenues available for cash financing of capital improvements, capital payments from the City of West Columbia, and projected revenue bond proceeds. The funding required

to meet the capital needs, combined with the financing strategy, will be incorporated into and evaluated in the periodic rate analysis to assist in establishing appropriate rates.

All protocols described herein are subject to periodic review and modification as deemed necessary by the City of Columbia.

## Section 4 Budget and Customer Rate Setting Analysis

The Budget and Customer Rate Setting Analysis addresses the following specific requirements of the CD:

- Subparagraph 12.j.(iii) - Budget and Customer Rate Setting Analysis. The Financial Analysis Program shall project the annual utility budget and customer rates periodically. The program should predict the budget and funding provided by customer rates that will meet the cost and financing needs for the management, operation, and maintenance of the WCTS as identified pursuant to the procedures set forth in Subparagraph j.(i) through (ii) above.

The most recent water and sewer rate study for the City was concluded by Black & Veatch in September 2015. The City will analyze actual costs in conjunction with the annual rate study update in order to make any adjustment in the rate to meet budget obligations.

## Section 5 Operation and Maintenance Costs Tracking

The Operation and Maintenance Costs Tracking addresses the following specific requirements of the CD:

- Subparagraph 12.j.(iv) – The ability to directly track and report operation and maintenance costs by the type of activity (corrective, preventative, and emergency) and capital improvement costs.

### 5.1 Track and Report O&M Costs by Type of Activity (Corrective, Preventative, and Emergency)

Cityworks® provides the ability to capture costs related to any given work activity including:

- Labor costs
- Material costs
- Equipment costs

The hourly rate used in Cityworks® for any given employee is not necessarily that employee's exact rate. The rates used in Cityworks® are derived from a base rate assigned to each labor category multiplied by a factor to account for employee benefits.

The hourly rates for labor and equipment and the costs for materials are updated periodically in Cityworks®.

By March 31, 2018, the Wastewater Maintenance Division and the WWTP staff will have completed the implementation of Cityworks® Storeroom for warehouse management and cost tracking and will, therefore, be able to include complete cost information on wastewater work orders no later than June 30, 2018.

In addition, every work order will be categorized and entered in a way to enable the City to track and report operation and maintenance costs as either corrective, preventative, or emergency (routine and catastrophic emergency as defined in the Contingency and Emergency Response Plan). This categorization will likely be accomplished by utilizing a required field called "Maintenance Type" and a work order may not be closed until this field is completed.

There will be two reports created to track the costs spent on each of the maintenance types: a detailed report and a summary report. Both reports will allow the user to specify a date range of work orders. The detailed report will list all individual wastewater work orders within that date range grouped by maintenance type and will include the labor cost, material cost, equipment cost, and total cost for each. In contrast, the summary report will simply provide the labor cost, material cost, equipment cost, and total cost for each maintenance type (corrective, preventative, emergency) and will not include the individual work orders.

Currently, Integrated Financial and Administrative Solution (IFAS) will be used for third-party contracts to track and report operation and maintenance costs by the type of activity (corrective, preventative, and emergency). In the future, the City may choose to capture these costs for third-party contracts in Cityworks® with the same activity detail as City-performed work.

## 5.2 Capital Improvement Costs

IFAS will be used to track and report capital improvement costs.

The aforementioned reports generated from Cityworks® and IFAS will be combined to build a comprehensive report that shows O&M costs by the maintenance type (corrective, preventative, or emergency) and capital improvement costs for the preceding fiscal year.

## Section 6 Implementation Schedule

The Implementation Schedule addresses the following specific requirements of the CD:

- Subparagraph 12.j.(v) – An implementation schedule specifying dates and actions.

**Table 2** below presents the implementation schedule for the necessary components to complete the obligations as described within the Financial Analysis Program.

*Table 2 – Financial Analysis Program Implementation Schedule*

Completion Date	Task	Description
Ongoing / Starting in Fiscal Year 2017-2018 Budget Cycle	Budgeting Process	In addition to the Budgeting Process currently in use by the City, the impacts of CD Programs on Staffing Needs and Levels, Equipment and Materials, and Outsourced Activities will be used to supplement the Budgeting Process and ensure the needs of all CD Programs are properly recognized and budgeted. These changes will first be fully implemented in December 2016 for the planning of the Fiscal Year 2017-2018 budget.
Ongoing as Information is Available	Capital Improvement Financing Program	The City currently has in place a Capital Improvement Financing Program which is based on the initial \$750 million estimate. As CD Programs and Condition Assessments and Modeling are completed, this will allow the City to identify Capital Project Selection and Prioritization needs and also to refine financial needs as the City becomes more knowledgeable about the infrastructure improvement needs.
Starting in Fiscal Year 2017-2018 Budget Cycle	Budget and Customer Rate Setting Analysis	The City will analyze actual costs in conjunction with the annual rate study update in order to make any adjustment in the rate to meet budget obligations. The first rate study update is anticipated in June 2016 with implications for the planning of the Fiscal Year 2017-2018 budget.
June 30, 2018	O&M Costs Tracking by Type of Activity	IFAS is currently in use and has the ability to track and report third-party contracts by needed O&M categories. By June 30, 2018, the Cityworks® Storeroom implementation will be complete and will enable the City to track and report work orders and operation and maintenance costs by the needed categories. Leading up to June 30, 2018, many tasks will be underway in advancing Cityworks® to enable the tracking and reporting of this information. The MMS and IMS reference multiple steps in their implementation plans that are required to be completed before this functionality can be completed.
Ongoing	Capital Improvement Costs	IFAS is currently in use and has the ability to track and report capital improvement costs.