



miamidade.gov

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**VIA ELECTRONIC CORRESPONDENCE**

December 5, 2014

CCN: 58933  
File No: 8.DC.20.19 & 82

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**RE: Consent Decree (Case: No. 1:12-cv-24400-FAM)  
Reference DOJ Case No. 90-5-1-1-4022/1  
Section VI – Financial Analysis Program Submittal, Paragraph 19(j)**

Dear Sirs/Madam:

In accordance with the provisions of Paragraph 19(j) of the above referenced Consent Decree, on behalf of Miami-Dade County, the Miami-Dade Water and Sewer Department (MDWASD) submits to both the United States Environmental Protection Agency (EPA) and the State of Florida Department of Environmental Protection (FDEP) the Financial Analysis Program.

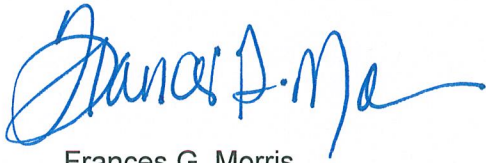
Should you have any questions regarding this matter, please call me at (786) 552-8104.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering such information, the information submitted is, to the best of my knowledge and belief, true, accurate



and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Sincerely,



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Attachment: Financial Analysis Program

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FINAL

# FINANCIAL ANALYSIS PROGRAM

In Accordance with the Requirements  
of the Consent Decree  
Case 1:12-cv-24400-FAM

BLACK & VEATCH PROJECT NO. 178415

PREPARED FOR

Miami-Dade Water & Sewer Department

1 DECEMBER 2014



**BLACK & VEATCH**  
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PLANNING AND  
ECONOMICS GROUP

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## Acronyms

AD	Assistant Directors
ASE	Active Strategy Enterprise
A&E	Architectural and Engineering
BCC	Board of County Commissioners
CAFR	Comprehensive Annual Financial Report
CMOM	Capacity, Management, Operations, and Maintenance
CPCS	Capital Planning and Coordination Section
DC	Division Chiefs
ER	Expenditure Request
EPA	U.S. Environmental Protection Agency
FDEP	Florida Department of Environmental Protection
FYTD	Fiscal Year to Date
ISD	Internal Service Department
MYCIP	Multi-Year Capital Improvement Program
OMB	Office of Management and Budget
O&M	Operations and Maintenance
PCTS	Project Control and Tracking System
PIR	Project Initiation Request (PIR)
R&R	Renewal and Replacement
WASD	Water and Sewer Department

## 1 Introduction

The Consent Decree, Case 1:12-cv-24400-FAM, includes a requirement that the County prepare and submit for review and approval to the U.S. Environmental Protection Agency (EPA) and the Florida Department of Environmental Protection (FDEP) a Capacity, Management, Operations, and Maintenance (CMOM) Program that reflects accepted industry practices to properly manage, operate, and maintain sanitary wastewater collection, transmission, and treatment systems, investigate capacity-constrained areas of these systems, and respond to sanitary sewer overflow events. Paragraph 19 of the Consent Decree identifies new CMOM programs that must be developed and implemented in accordance with EPA Region IV guidance, which is described in Appendix C of the Consent Decree.

Paragraph 19(j) of the Consent Decree states that the County must submit to the EPA and FDEP for review and approval a Financial Analysis Program to ensure that the County “can effectively establish and track the sufficiency of funds for operations and maintenance, capital projects financing, and debt service coverage associated with the Sewer System, including, without limitation, the continued implementation of the Work pursuant to this Consent Decree.” The Financial Analysis Program presented herein is designed to meet the requirements of the Consent Decree, including the EPA guidance described in Appendix C of the Consent Decree.

The Consent Decree uses the term “sewer system” to refer to the Miami-Dade Water and Sewer Department’s (WASD) wastewater system, which encompasses more than sewer facilities. The system includes operation, maintenance, and development of facilities for wastewater collection, wastewater transmission, wastewater treatment, and management and disposal of treated effluent. To reflect the breadth of the Department’s wastewater facilities and operations, this report uses the term “wastewater” rather than “sewer” to refer to the overall system.

The guidelines in Appendix C for financial administration of a wastewater utility address the following specific items, under the general headings of rates and budgeting:

### 1.1 RATES

- Presentation of the utility’s current rates
- A description of how the rates are calculated
- The frequency of adjusting the rates
- Whether the utility is fully funded by its revenue
- Whether or not the utility’s revenues are used for other government activities

### 1.2 BUDGETING

- Provide details for funding all functions
- Whether the utility budgets for annual operation costs
- Whether the budget adequately itemizes the budget items
- Whether the utility maintains a fund for future equipment and infrastructure replacement, and a description of how the fund is financed
- Whether the budget provides for sufficient funding

Paragraph 19(j) lists additional specific requirements of the Financial Analysis Program that the County must meet. These specific requirements are the following:

- Paragraph 19(j)(i) – The program must regularly analyze and project future utility costs needed to effectively manage, operate, and maintain the wastewater system, including the implementation of the CMOM programs listed in the Consent Decree. The cost analyses must address capital requirements, labor, including staffing, and equipment and materials.
- Paragraph 19(j)(ii) – The program must analyze, project, plan for, and finance capital improvement needs through engineering studies, assess wastewater system condition, analyze historical wastewater system management, operations, and maintenance costs, and effectively manage wastewater infrastructure assets, including the improvements required by the Consent Decree. The capital planning program must use a 5-year planning horizon and be updated annually.
- Paragraph 19(j)(iii) – The program must periodically establish an annual budget and customer service rates, and assure that the funding provided through customer rates will be sufficient to meet the costs, including financing, for the management, operation, and maintenance of the wastewater system and to support the activities identified in paragraphs (i) and (ii).
- Paragraph 19(j)(iv) – The program must track and report operation and maintenance costs by type of activity, including corrective, preventive, and emergency, and capital improvement costs against the capital improvement plan.
- Paragraph 19(j)(v) – The program must track and report any transfer or use of funds obtained by Miami-Dade County from the collection of wastewater rates for any purpose not related to the management, operation, or maintenance of the wastewater system or to capital improvements needed by the wastewater system. Any such transfer must be reported in the Water and Sewer Department’s semi-annual report to the EPA and FDEP as required under Section 33 of the Consent Decree, and the County must provide a 30-day advance notice in writing to the EPA of the County’s intent to transfer or use any such funds.

The Department’s current financial management procedures, including its development of the Comprehensive Annual Financial Report (CAFR), review of the adequacy of rates and charges, and annual process for budgeting and setting rates, are extensive and consistent with or exceed the practices of large utilities across the country. The Department’s procedures go well beyond the guidelines provided in Appendix C and comply with each of the specific requirements of Section 19(j) of the Consent Decree. The procedures are described in the following sections, along with current examples of the information regularly developed and analyzed for preparing budgets and rates, and ensuring that the budgeted expenses, including debt service and asset renewal and replacement, will be adequately funded through the Department’s rates



## 2 Comprehensive Annual Financial Report (CAFR)

The CAFR presents audited financial statement for the previous fiscal year, beginning October 1 and running through the following September 30. The audit is conducted by an independent auditor. The CAFR shows results separately for the water and wastewater systems, presents detailed information on the use of funds for operation and maintenance, asset renewal and replacement, capital projects, and non-operating functions. The CAFR provides detailed information on the Department's financial condition, including assets and liabilities. It also includes a wide range of information on factors that affect the Department's operations and finances, insurance and contingent liabilities, statistical information on water and wastewater sales, and information on rates and charges required to maintain debt service coverage. Much of the statistical information in the CAFR is presented for the 10-year period including the year of the CAFR. Because its results are audited and thoroughly documented, the CAFR serves as the starting point for the Department's development of its annual budget.

A copy of the 2013 CAFR can be obtained from the Department's web portal

<http://www.miamidade.gov/water/publications-reports.asp#2>

### 3 Annual Budget Development

While the Department's financial program encompasses numerous procedures relating to accounting, debt management, budgeting, and rate setting, the thrust of the financial program that supports the Consent Decree requirements of paragraph 19(j)(i) cited above is the annual budgeting process. The Department's annual budget and its administration are based on the premise that the Department must be fully self-funding, provide quality water and wastewater service to all of its customers, and meet all applicable regulatory and legal requirements. The budgeting process includes, among other activities, the following specific functions:

- Continued development and assessment of the Department's Multi-Year Capital Improvement Program (MYCIP) to validate that it adequately addresses the system's future capacity needs, requirements of the Consent Decree, including the implementation of the CMOM programs, elimination of ocean outfalls, the Department's water use permit, and other regulatory requirements
- Estimation of future requirements for additional debt needed to fund capital improvements, and associated debt service
- Analysis of revenues and expenses from the most recently audited fiscal year
- Tracking of revenues and expenses during the current fiscal year
- Estimation of the funding requirements for water and wastewater system operation and maintenance, based on budget estimates prepared by system operations managers, projected labor costs based on every staff position on current and projected Department's staffing plans, materials costs, and any changes expected due to new facilities coming on line or any other significant changes in O&M requirements
- Estimation of asset renewal and replacement costs based on each major asset's condition, age, expected useful life, and any plans for significant modification
- Development of the Budget shows, estimated operating revenues based on any proposed rate increases, estimated operating expenses including any additional expenses associated with new projects coming on line, non-operating revenues and expenses including debt service, estimated fund balances for rate stabilization, general reserve, and the Department's required 60-day operating reserve, and estimated debt service coverage for both senior debt on outstanding bonds or planned revenue bonds and other secondary debt; the Proposed Budget also includes the assumptions applied in its development.
- Preparation of financial projections for each of the four years following the budgeted year.
- Tracking transfers from the Department to the County. The Board of County Commissioners (BCC), on March 18, 2014, adopted Resolution No. R-282-14 which sets forth the County's commitment to not make transfers from the Department to the County during the duration of the Consent Decree. <http://www.miamidade.gov/cob/library/Registry/Resolutions/Board-of-County-Commissioners/2014/R-282-14.pdf>
- The Adopted Budget and 4-year projections show the specific rate increases to water and wastewater customers needed to generate the revenue required to fund all of the Department's expenses and meet debt service coverage requirements. The Department has a water conservation rate structure that is annually assessed to ensure that it will generate sufficient revenue and continues to encourage water conservation, a requirement of the Department's water use permit as

well as a sound practice for any water utility in South Florida. The rates are annually approved by the Board of County Commissioners.

The budget is developed through a detailed analysis of historical values, operation and maintenance requirements, analysis of the effects of inflation and labor agreements, requirements for asset renewal and replacement, and requirements for the development of new capital projects. Most of the costs for new capital projects are met through the issuance of debt, and the budget includes expenses for existing debt as well as estimates of the costs associated with issuing new bond issues. A large percentage of the new debt will be associated with projects required under the Consent Decree. However, the projected debt service also includes significant amounts for other projects needed to allow the Department to continue to provide a high level of water service and to develop wastewater projects beyond those required by the Consent Decree.

The Department's Adopted Budget is the result of extensive analyses conducted by all of the Department's divisions, including those groups responsible for planning and executing the capital improvement program, in which funding requirements for the coming fiscal year are estimated. The results are summarized in a set of tables that set forth the results by fiscal year, beginning with the most recent audited fiscal year, currently Fiscal Year 2013, and extending to five years including the Adopted Budget, currently out to Fiscal Year 2019.

Table 1 shows the results rolled up to the Department as a whole. Table 2 shows the results only for the water system. Table 3 shows the results for the wastewater system. These are the basic data applied in the Department's Adopted Budget for Fiscal Year 2015.

Table 1 Consolidated Water and Wastewater Systems Proposed Budget  
**Consolidated Financial Projection - Water and Wastewater Systems (\$000)**  
 (On an accrual basis for Budget Purposes)  
 (Proposed Debt Service calculated with Capitalized Interest)

DESCRIPTION				REVENUES @98%, 95%		REVENUES @ 100%		REVENUES @98%, 95%		REVENUES @98%, 95%		REVENUES @98%, 95%		REVENUES @98%, 95%	
				RETAIL RATE INCREASE											
				6%		6%		6%		5%		5%		15%	
	FY 12-13 Actual	FY 13-14 Pre-Audit Actual	Incr Decr	FY 14-15 Adopted Budget	Incr Decr	FY 14-15 Projected	Incr Decr	FY 15-16 Future	Incr Decr	FY 16-17 Future	Incr Decr	FY 17-18 Future	Incr Decr	FY 18-19 Future	Incr Decr
Operating Revenues															
Retail Water	207,118	\$219,890		\$229,957		\$234,650		\$243,755		\$255,942		\$268,739		\$309,050	
Wholesale Water	29,210	\$28,815		\$38,954		\$41,004		\$39,733		\$40,527		\$41,338		\$42,164	
Retail Wastewater	230,661	\$245,167		\$255,004		\$260,208		\$270,304		\$283,820		\$298,011		\$342,712	
Wholesale Wastewater	59,544	\$56,956		\$58,601		\$61,949		\$64,874		\$66,171		\$67,495		\$68,845	
Other Operating Revenue	21,875	\$28,022		\$26,088		\$26,088		\$26,350		\$26,610		\$26,872		\$27,137	
<b>Sub-total Operating Revenues</b>	<b>548,408</b>	<b>578,850</b>	<b>6%</b>	<b>\$608,604</b>	<b>7%</b>	<b>\$623,899</b>	<b>8%</b>	<b>\$645,015</b>	<b>6%</b>	<b>\$673,070</b>	<b>4%</b>	<b>\$702,455</b>	<b>4%</b>	<b>\$789,909</b>	<b>12%</b>
Water System O&M	(\$140,798)	(\$142,309)		(\$162,567)		(\$162,567)		(\$168,224)		(\$174,078)		(\$180,136)		(\$186,405)	
Water System O&M (Hialeah RO Plant)	\$0	\$0		(\$5,000)		(\$5,000)		(\$6,550)		(\$6,878)		(\$7,221)		(\$7,582)	
Wastewater System O&M	(\$179,007)	(\$190,355)		(\$194,441)		(\$194,441)		(\$201,208)		(\$208,210)		(\$215,456)		(\$222,954)	
Administrative Reimbursement *	(\$20,359)	(\$18,809)		(\$20,997)		(\$20,997)		(\$21,092)		(\$22,009)		(\$22,970)		(\$25,830)	
<b>Sub-total O&amp;M Expenses</b>	<b>(\$340,164)</b>	<b>(\$351,473)</b>	<b>3%</b>	<b>(\$383,005)</b>	<b>7%</b>	<b>(\$383,005)</b>	<b>9%</b>	<b>(\$397,074)</b>	<b>4%</b>	<b>(\$411,175)</b>	<b>4%</b>	<b>(\$425,784)</b>	<b>4%</b>	<b>(\$442,771)</b>	<b>4%</b>
Interest Income (CARF-Actual includes GASB 53 and Fair Market Value)	\$1,655	\$1,593		\$2,027		\$2,027		\$2,326		\$2,689		\$2,972		\$3,437	
Non-Operating Revenues- Rock Mining Mitigation Fees	\$0	\$0		\$0		\$0		\$0		\$0		\$0		\$0	
Debt Service -Existing	(\$156,307)	(\$161,687)		(\$176,352)		(\$176,352)		(\$181,560)		(\$179,151)		(\$178,955)		(\$177,778)	
Debt Service - Future	\$0	\$0		\$0		\$0		\$0		(\$7,403)		(\$36,098)		(\$97,337)	
<b>Debt Service -Bank of New York SWAP Receipts</b>	<b>\$9,273</b>	<b>\$11,551</b>		<b>\$8,500</b>		<b>\$8,500</b>		<b>\$8,500</b>		<b>\$8,500</b>		<b>\$8,500</b>		<b>\$8,500</b>	
R&R Contribution from Operating Revenues	(\$55,000)	(\$70,000)		(\$80,000)		(\$80,000)		(\$80,000)		(\$80,000)		(\$80,000)		(\$80,000)	
Fire Hydrant Fund	(\$2,117)	(\$2,171)		(\$2,160)		(\$2,160)		(\$2,182)		(\$2,203)		(\$2,225)		(\$2,248)	
Other Charges/Adjustments	\$1,773	(\$5,976)		\$0		\$0		\$0		\$0		\$0		\$0	
Change in Reserve Requirement	(\$1,719)	(\$2,047)		(\$4,404)		(\$4,404)		(\$2,345)		(\$2,350)		(\$2,435)		(\$2,831)	
Non-Operating WASD Loan (Due From Cty's General Reserve)	\$0	\$5,000		\$5,000		\$5,000		\$5,000		\$5,000		\$5,000		\$0	
Non-Operating - Emergency Contingency Fund Res.	\$0	\$0		\$0		\$0		\$0		\$0		\$0		\$0	
Transfers to County General Fund	\$0	(\$2,394)		\$0		\$0		\$0		\$0		\$0		\$0	
Transfer from/(to) W&S Reserve Fund	(\$5,802)	(\$1,246)		\$21,790		\$6,495		\$2,319		(\$6,977)		\$6,570		\$1,120	
Transfer from/(to) Rate Stabilization	\$0	\$0		\$0		\$0		\$0		\$0		\$0		\$0	
<b>Sub-total Non-Operating &amp; Transfers</b>	<b>(\$208,244)</b>	<b>(\$227,377)</b>	<b>9%</b>	<b>(\$225,599)</b>	<b>15%</b>	<b>(\$240,894)</b>	<b>6%</b>	<b>(\$247,941)</b>	<b>10%</b>	<b>(\$261,896)</b>	<b>15%</b>	<b>(\$276,671)</b>	<b>15%</b>	<b>(\$347,137)</b>	<b>15%</b>
<b>Net Overage/(Deficit) in Revenues</b>	<b>\$0</b>	<b>\$0</b>		<b>(\$0)</b>		<b>\$0</b>		<b>(\$0)</b>		<b>(\$0)</b>		<b>(\$0)</b>		<b>\$0</b>	
<b>% Increase for Net Deficit</b>								<b>0.00%</b>		<b>0.00%</b>		<b>0.00%</b>		<b>0.00%</b>	
<b>Rate Stabilization Fund Balance</b>	<b>\$30,534</b>	<b>\$30,534</b>	<b>0%</b>	<b>\$30,534</b>	<b>0%</b>	<b>\$30,534</b>	<b>0%</b>	<b>\$30,534</b>	<b>0%</b>	<b>\$30,534</b>	<b>0%</b>	<b>\$30,534</b>	<b>0%</b>	<b>\$30,534</b>	<b>0%</b>
<b>Water and Sewer Reserve Fund Balance</b>	<b>\$34,080</b>	<b>\$35,326</b>	<b>4%</b>	<b>\$17,653</b>	<b>-55%</b>	<b>\$28,831</b>	<b>-18%</b>	<b>\$26,512</b>	<b>50%</b>	<b>\$33,489</b>	<b>26%</b>	<b>\$26,919</b>	<b>-20%</b>	<b>\$25,799</b>	<b>-4%</b>
<b>Balance Due from County's General Reserve on FY 2012 WASD Loan</b>	<b>\$25,000</b>	<b>\$20,000</b>		<b>\$15,000</b>		<b>\$15,000</b>		<b>\$10,000</b>		<b>\$5,000</b>		<b>\$0</b>		<b>\$0</b>	
<b>Reserve Required By Bond Ordinance</b>	<b>\$57,383</b>	<b>\$59,430</b>	<b>4%</b>	<b>\$63,834</b>	<b>7%</b>	<b>\$63,834</b>	<b>7%</b>	<b>\$66,179</b>	<b>4%</b>	<b>\$68,529</b>	<b>4%</b>	<b>\$70,964</b>	<b>4%</b>	<b>\$73,795</b>	<b>4%</b>

Table 2 Water Systems Proposed Budget

**Miami-Dade Water and Sewer Department - Financial Projection**

Consolidated Financial Projection - Water System (\$000)

(On an accrual basis for Budget Purposes)

(Proposed Debt Service calculated with Capitalized Interest)

DESCRIPTION				REVENUES	REVENUES		REVENUES	REVENUES	REVENUES	REVENUES				
				@98%, 95%	@ 100%		@98%, 95%	@98%, 95%	@98%, 95%	@98%, 95%	@98%, 95%	@98%, 95%	@98%, 95%	@98%, 95%
				RETAIL RATE INCREASE										
				6%	6%		6%	5%	5%	5%	5%	5%	15%	
	FY 12-13	FY 13-14	Incr	FY 14-15	FY 14-15	Incr	FY 15-16	Incr	FY 16-17	Incr	FY 17-18	Incr	FY 18-19	Incr
	Actual	Pre-Audit Actual	Decr	Adopted Budget	Projected	Decr	Future	Decr	Future	Decr	Future	Decr	Future	Decr
Operating Revenues														
Retail Water	207,117	\$219,890		\$229,957	\$234,650		\$243,755		\$255,942		\$268,739		\$309,050	
Wholesale Water	29,210	\$28,815		\$38,953	\$41,004		\$39,733		\$40,527		\$41,338		\$42,164	
Other Operating Revenue	11,985	\$14,908		\$13,815	\$13,815		\$13,954		\$14,090		\$14,228		\$14,366	
<b>Sub-total Operating Revenues</b>	<b>248,312</b>	<b>263,613</b>	<b>6%</b>	<b>\$282,726</b>	<b>\$289,469</b>	<b>10%</b>	<b>\$297,442</b>	<b>5%</b>	<b>\$310,560</b>	<b>4%</b>	<b>\$324,305</b>	<b>4%</b>	<b>\$365,581</b>	<b>13%</b>
Water System O&M	(\$149,960)	(\$150,773)		(\$172,016)	(\$172,016)		(\$177,715)		(\$183,982)		(\$190,473)		(\$198,029)	
Water System O&M (Hialeah RO Plant)	\$0	\$0		(\$5,000)	(\$5,000)		(\$6,550)		(\$6,878)		(\$7,221)		(\$7,582)	
<b>Sub-total O&amp;M Expenses</b>	<b>(\$149,960)</b>	<b>(\$150,773)</b>	<b>1%</b>	<b>(\$177,016)</b>	<b>(\$177,016)</b>	<b>17%</b>	<b>(\$184,265)</b>	<b>4%</b>	<b>(\$190,860)</b>	<b>4%</b>	<b>(\$197,694)</b>	<b>4%</b>	<b>(\$205,611)</b>	<b>4%</b>
Interest Income (CARF-Actual includes GASB 53 and Fair Market Value)	\$931	\$730		\$1,020	\$1,020		\$1,093		\$1,190		\$1,354		\$1,549	
Debt Service -Existing	(\$44,622)	(\$32,205)		(\$37,225)	(\$37,225)		(\$39,601)		(\$39,617)		(\$39,646)		(\$39,666)	
Debt Service - Future	\$0	\$0		\$0	\$0		\$0		(\$2,089)		(\$9,717)		(\$30,184)	
<b>Debt Service -Bank of New York SWAP Receipts</b>	<b>\$3,019</b>	<b>\$3,911</b>		<b>\$2,868</b>	<b>\$2,868</b>		<b>\$2,868</b>		<b>\$2,868</b>		<b>\$2,868</b>		<b>\$2,868</b>	
R&R Contribution from Operating Revenues	(\$52,535)	(\$45,000)		(\$52,000)	(\$52,000)		(\$40,000)		(\$40,000)		(\$40,000)		(\$40,000)	
Fire Hydrant Fund	(\$2,117)	(\$2,171)		(\$2,160)	(\$2,160)		(\$2,182)		(\$2,203)		(\$2,225)		(\$2,248)	
Other Charges/Adjustments	(\$2,111)	(\$5,976)		\$0	\$0		\$0		\$0		\$0		\$0	
Change in Reserve Requirement	(\$917)	(\$205)		(\$2,316)	(\$2,316)		(\$1,208)		(\$1,099)		(\$1,139)		(\$1,320)	
Non-Operating Transfer from/(to) County General Fund	\$0	(\$2,394)		\$0	\$0		\$0		\$0		\$0		\$0	
Non-Operating WASD Loan (Due From Cty's General Reserve)	\$0	\$5,000		\$5,000	\$5,000		\$5,000		\$5,000		\$5,000		\$0	
Transfer from/(to) W&S Reserve Fund	\$0	(\$34,530)		(\$20,897)	(\$27,640)		(\$39,146)		(\$43,750)		(\$43,106)		(\$50,971)	
Transfer from/(to) Rate Stabilization	\$0	\$0		\$0	\$0		\$0		\$0		\$0		\$0	
<b>Sub-total Non-Operating &amp; Transfers</b>	<b>(\$98,352)</b>	<b>(\$112,840)</b>	<b>15%</b>	<b>(\$105,710)</b>	<b>(\$112,453)</b>	<b>0%</b>	<b>(\$113,176)</b>	<b>7%</b>	<b>(\$119,700)</b>	<b>6%</b>	<b>(\$126,611)</b>	<b>6%</b>	<b>(\$159,971)</b>	<b>26%</b>
Net Overage/(Deficit) in Revenues	\$0	\$0		\$0	(\$0)		\$0		(\$0)		(\$0)		(\$0)	
% Increase for Net Deficit		0%		0.00%			0.00%		0.00%		0.00%		0.00%	
<b>Reserve Required By Bond Ordinance</b>	<b>\$26,981</b>	<b>\$27,186</b>	<b>1%</b>	<b>\$29,503</b>	<b>\$29,503</b>	<b>9%</b>	<b>\$30,711</b>	<b>4%</b>	<b>\$31,810</b>	<b>4%</b>	<b>\$32,949</b>	<b>4%</b>	<b>\$34,268</b>	<b>4%</b>
<b>Water and Wastewater Reserve Balances</b>														
<b>Water and Wastewater Rate Stabilization Fund Balance</b>	<b>\$30,534</b>	<b>\$30,534</b>	<b>0%</b>	<b>\$30,534</b>	<b>\$30,534</b>	<b>0%</b>	<b>\$30,534</b>	<b>0%</b>	<b>\$30,534</b>	<b>0%</b>	<b>\$30,534</b>	<b>0%</b>	<b>\$30,534</b>	<b>0%</b>
<b>Water and Sewer Reserve Fund Balance</b>	\$28,255	\$34,060		\$39,443	\$35,306		\$28,811		\$26,490		\$33,467		\$26,897	
Water System Transfer to/(from) General Reserve	\$0	\$29,533		\$15,897	\$22,640		\$34,146		\$38,750		\$38,106		\$50,971	
Loan to Cty General Reserve from WASD General Reserve	\$0	\$5,000		\$5,000	\$5,000		\$5,000		\$5,000		\$5,000		\$0	
Wastewater System Transfer to/(from) General Reserve	\$5,805	(\$33,287)		(\$42,687)	(\$34,135)		(\$41,467)		(\$36,773)		(\$49,676)		(\$52,090)	
<b>Water and Sewer Reserve Fund Ending Balance</b>	<b>\$34,060</b>	<b>\$35,306</b>	<b>4%</b>	<b>\$17,653</b>	<b>\$28,811</b>	<b>-18%</b>	<b>\$26,490</b>	<b>50%</b>	<b>\$33,467</b>	<b>26%</b>	<b>\$26,897</b>	<b>-20%</b>	<b>\$25,778</b>	<b>-4%</b>
Balance Due from County's General Reserve on FY 2012 WASD Loan	\$25,000	\$20,000		\$15,000	\$15,000		\$10,000		\$5,000		\$0		\$0	

Table 3 Wastewater Systems Proposed Budget

**Miami-Dade Water and Sewer Department - Financial Projection**

Consolidated Financial Projection - Wastewater Systems (\$000)

(On an accrual basis for Budget Purposes)

(Proposed Debt Service calculated with Capitalized Interest)

DESCRIPTION				REVENUES	REVENUES		REVENUES		REVENUES		REVENUES		REVENUES		
				@98%, 95%	@ 100%		@98%, 95%		@98%, 95%		@98%, 95%		@98%, 95%		
				RETAIL RATE INCREASE											
				6%	6%		6%		5%		5%		15%		
	FY 12-13	FY 13-14	Incr	FY 14-15	FY 14-15	Incr	FY 15-16	Incr	FY 16-17	Incr	FY 17-18	Incr	FY 18-19	Incr	
	Actual	Pre-Audit Actual	Decr	Adopted Budget	Projected	Decr	Future	Decr	Future	Decr	Future	Decr	Future	Decr	
Operating Revenues															
Retail Wastewater	230,661	\$245,167		\$255,004	\$260,208		\$270,304		\$283,820		\$298,011		\$342,712		
Wholesale Wastewater	59,544	\$56,956		\$58,601	\$61,949		\$64,874		\$66,171		\$67,495		\$68,845		
Other Operating Revenue	9,891	\$13,114		\$12,273	\$12,273		\$12,395		\$12,519		\$12,644		\$12,771		
<b>Sub-total Operating Revenues</b>	<b>300,096</b>	<b>315,237</b>	<b>5%</b>	<b>\$325,878</b>	<b>\$334,430</b>	<b>6%</b>	<b>\$347,573</b>	<b>7%</b>	<b>\$362,510</b>	<b>4%</b>	<b>\$378,150</b>	<b>4%</b>	<b>\$424,328</b>	<b>12%</b>	
Wastewater System O&M	(\$190,204)	(\$200,700)		(\$205,989)	(\$205,989)		(\$212,809)		(\$220,315)		(\$228,090)		(\$237,161)		
<b>Sub-total O&amp;M Expenses</b>	<b>(\$190,204)</b>	<b>(\$200,700)</b>	<b>6%</b>	<b>(\$205,989)</b>	<b>(\$205,989)</b>	<b>3%</b>	<b>(\$212,809)</b>	<b>3%</b>	<b>(\$220,315)</b>	<b>4%</b>	<b>(\$228,090)</b>	<b>4%</b>	<b>(\$237,161)</b>	<b>4%</b>	
Interest Income (CARF-Actual includes GASB 53 and Fair Market Value)	\$724	\$863		\$1,007	\$1,007		\$1,233		\$1,499		\$1,619		\$1,888		
Debt Service -Existing	(\$111,685)	(\$129,483)		(\$139,127)	(\$139,127)		(\$141,959)		(\$139,533)		(\$139,309)		(\$138,112)		
Debt Service - Future	\$0	\$0		\$0	\$0		\$0		(\$5,314)		(\$26,381)		(\$67,153)		
<b>Debt Service -Bank of New York SWAP Receipts</b>	<b>\$6,254</b>	<b>\$7,640</b>		<b>\$5,632</b>	<b>\$5,632</b>		<b>\$5,632</b>		<b>\$5,632</b>		<b>\$5,632</b>		<b>\$5,632</b>		
R&R Contribution from Operating Revenues	(\$2,465)	(\$25,000)		(\$28,000)	(\$28,000)		(\$40,000)		(\$40,000)		(\$40,000)		(\$40,000)		
Other Charges/Adjustments	\$3,884	\$0		\$0	\$0		\$0		\$0		\$0		\$0		
Change in Reserve Requirement	(\$802)	(\$1,842)		(\$2,088)	(\$2,088)		(\$1,137)		(\$1,251)		(\$1,296)		(\$1,512)		
Transfer from/(to) W&S Reserve Fund	(\$5,802)	\$33,287		\$42,687	\$34,135		\$41,466		\$36,772		\$49,675		\$52,090		
Transfer from/(to) Rate Stabilization	\$0	\$0		\$0	\$0		\$0		\$0		\$0		\$0		
<b>Sub-total Non-Operating &amp; Transfers</b>	<b>(\$109,892)</b>	<b>(\$114,535)</b>	<b>4%</b>	<b>(\$119,889)</b>	<b>(\$128,441)</b>	<b>12%</b>	<b>(\$134,765)</b>	<b>12%</b>	<b>(\$142,195)</b>	<b>6%</b>	<b>(\$150,060)</b>	<b>6%</b>	<b>(\$187,167)</b>	<b>25%</b>	
Net Overage/(Deficit) in Revenues	\$0	\$0		(\$0)	\$0		\$0		\$0		\$0		\$0		
<i>% Increase for Net Deficit</i>		<i>0.00%</i>		<i>0.00%</i>	<i>0.00%</i>		<i>0.00%</i>		<i>0.00%</i>		<i>0.00%</i>		<i>0.00%</i>		
<b>Wastewater operating Reserve Required By Bond Ordinance</b>	<b>\$30,402</b>	<b>\$32,244</b>	<b>6%</b>	<b>\$34,332</b>	<b>\$34,332</b>	<b>6%</b>	<b>\$35,468</b>	<b>3%</b>	<b>\$36,719</b>	<b>4%</b>	<b>\$38,015</b>	<b>4%</b>	<b>\$39,527</b>	<b>4%</b>	
Water and Wastewater Reserve Balances															
<b>Water and Wastewater Rate Stabilization Fund Balance</b>	<b>\$30,534</b>	<b>\$30,534</b>	<b>0%</b>	<b>\$30,534</b>	<b>\$30,534</b>	<b>0%</b>	<b>\$30,534</b>	<b>0%</b>	<b>\$30,534</b>	<b>0%</b>	<b>\$30,534</b>	<b>0%</b>	<b>\$30,534</b>	<b>0%</b>	
<b>Water and Sewer Reserve Fund Balance</b>	<b>\$28,255</b>	<b>\$34,060</b>		<b>\$39,443</b>	<b>\$35,306</b>		<b>\$28,811</b>		<b>\$26,491</b>		<b>\$33,468</b>		<b>\$26,899</b>		
Water System Transfer to/(from) General Reserve	\$0	\$34,530		\$20,897	\$27,640		\$39,146		\$43,750		\$43,106		\$50,971		
Wastewater System Transfer to/(from) General Reserve	\$5,805	(\$33,284)		(\$42,687)	(\$34,135)		(\$41,466)		(\$36,773)		(\$49,675)		(\$52,090)		
<b>Water and Sewer Reserve Fund Ending Balance</b>	<b>\$34,060</b>	<b>\$35,306</b>	<b>4%</b>	<b>\$17,653</b>	<b>\$28,811</b>	<b>-18%</b>	<b>\$26,491</b>	<b>50%</b>	<b>\$33,468</b>	<b>26%</b>	<b>\$26,899</b>	<b>-20%</b>	<b>\$25,780</b>	<b>-4%</b>	

The budget items are presented under their major headings: operating revenues, operating expenses, and non-operating revenues and expenses and transfers. Adopted and projected revenues include, for both the water and wastewater systems, revenue increases necessary to ensure that the Department's revenues will equal total expenses. They also reflect any rate increases needed to generate the necessary additional revenues, which are received from both retail and wholesale customers.

In the Department's budget, the operating revenues and expenses, non-operating items, revenue requirements, and rate requirements are shown separately for the water and wastewater systems. Through Fiscal Year 2015, the Department has shown a single percent rate increase applicable to both water and wastewater customers. Collectively, the uniform rate increase is estimated to be sufficient to meet the Department's revenue requirements for the combined water and wastewater systems. In the future, the Department intends to separately calculate the rate increases needed to fund expenses in the water and wastewater systems.

The Department's proposed budget is sent to the County Mayor. The Office of the Mayor may accept the proposed budget or make revisions. Following approval by the Mayor, the Department's budget is combined with the budgets of the other County departments, and sent to the BCC for review and approval. The BCC acts on the Mayor's budget in September of each year, and the budget goes into effect on October 1. The budget, which can be amended after October 1, remains in effect through September 30 of the next calendar year.

After the budget is approved by the BCC, the retail customer rates, which are multi-tiered, are revised and published. They are available on-line on the Department's web portal.

<http://www.miamidade.gov/water/rates.asp>

The Department monthly tracks budgeted revenues and expenses against budgeted levels, and, as noted above, prepares an annual CAFR that presents actual revenues and expenses for the previous fiscal year. Separately, the Department tracks the status of the capital improvement program against the MYCIP. This is discussed in more detail in Section 4 of this report.

### **3.1 ADEQUACY OF RATES AND CHARGES**

A key part of the Department's budgeting process is an annual review of the adequacy of proposed expenses for asset renewal and replacement and the adequacy of projected revenues to meet the Department's debt service coverage requirements. In accordance with the Department's bond ordinance, Miami-Dade County Ordinance 93-134, the Department's outside bond consultant annually analyzes these two key aspects of the Department's proposed budget, and provides a report to the County by September 1 of each year. The report specifically addresses the adequacy of the budgeted operation and maintenance expenses, the adequacy of projected operating revenues, and the adequacy of proposed rates and fees that allow the Department to cover operating and maintenance costs and meet the debt service coverage requirements for Senior Lien Debt, Subordinate Lien Debt, and State Revolving Fund loan. Another analysis conducted by the outside bond consultant addresses the condition of the Department's assets and its compliance with its debt service coverage requirements in the prior fiscal year.

### **3.2 PERFORMANCE MEASURES**

The Department utilizes the Active Strategy Enterprise (ASE) performance management system application to monitor metrics and measure performance. ASE has been in use since 2005 when it was adopted by Miami-Dade County to be used by all of its Departments.

The Department currently maintains over forty (40) different scorecards used to monitor performance across all of its Divisions and Sections, including a new scorecard developed for monitoring the Consent Decree. Also, during the annual Miami-Dade County Business Planning process, (the Plan covers a two-year time period), the Department makes revisions and modifications to the scorecards to ensure that they are aligned with the County's Strategic Plan and the Department's budget.



## 4 Multiyear Capital Improvement Program (MYCIP)

The Department's Multi-Year Capital Improvement Program (MYCIP) is a rolling six-year plan for the Department's major capital projects and expenditures. The Department prepares and submits annually its MYCIP to the County Office of Management and Budget (OMB). The MYCIP is adopted by the BCC. The preparation of the MYCIP also includes a financial plan to identify the need for future bond issues and ensure the availability of funds for both the short and long term capital requirements.

The development of the MYCIP incorporates an extensive planning process that assesses alternatives for meeting the Department's requirements, scheduling requirements, financing requirements, impacts on operation and maintenance, and contracting. The MYCIP lists each proposed capital project, the year it is expected to be started, the amount expected to be expended in each year of the program, and the proposed method of funding these projects. The first year of the Department's Capital Plan is the current fiscal year's capital budget.

The MYCIP is prepared from the bottom up. Assistant Directors (ADs) and Division Chiefs (DCs) submit project requests to the Capital Planning and Coordination Section (CPCS). Project requests include project description, cost estimates, implementation schedule by project phase and annual expenditure schedules, indication of project location and service area. CPCS compiles reviews and analyzes this information and questions or information gaps are sent back to the ADs and DCs for completion, then it is an iterative process to clarify, obtain additional information, priorities from the AD and DCs for completion.

Figure 4-1 depicts the high-level process timeline for the preparation of the MYCIP.

High Level Overview of Capital Planning and Coordination Section's MYCIP Preparation

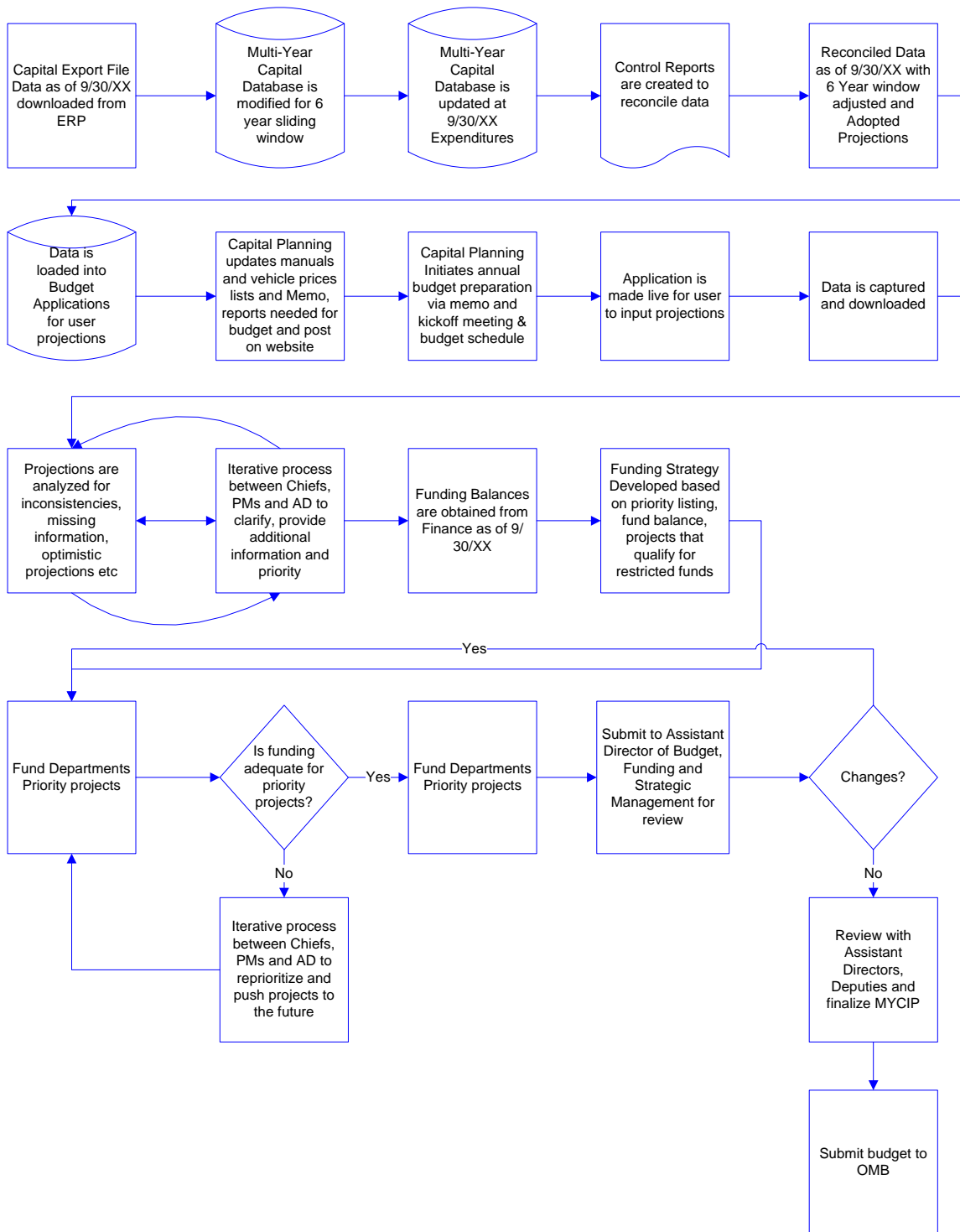


Figure 4-1 MYCIP High Level Preparation Process

Source: MDWASD

## 4.1 MYCIP DEVELOPMENT, PLANNING AND DELIVERY PROCESS

### 4.1.1 Overview

The overall process for planning and implementing capital projects was established in 2007 and is shown in Figure 4-2. The figure shows the shared role of project identification and formulation for both capital and renewal and replacement (R&R) programs.

The process begins with the identification of the need for capital projects. Capital projects generally support capacity expansion or regulatory compliance requirements. Department planning staff determine the best way to meet these needs through a master planning process that appears to be somewhat static – that is, it takes a snapshot of the current water and wastewater systems and the perceived need for improvements at a point in time and develops a series of capital projects considered to be the best group possible to meet the needs. The projects are scheduled and moved forward for budgeting, financing, and implementation.

The results of the capital planning process include a detailed description of each required project, the need for the project, its function, the year in which the project is to be operational, construction duration, estimated cost, estimated useful life, and any additional operation and maintenance expense expected to be incurred upon its implementation.

It is important to note that capital projects are defined as improvements whose useful lives are close to or exceed the duration of any bonds issued for their financing. Improvements with shorter useful lives are funded through the Department’s renewal and replacement fund, which is funded through operating revenues.

While the capital planning process is conducted on a continual basis, the process annually produces results for inclusion in the annual proposed budget.

The Department in 2007 implemented Meridian Systems’ Proliance as their overall program management system that would allow the Department to have:

- Centralized information and process management system for the development, implementation and monitoring of the MYCIP and all projects undertaken by the Department by all stakeholders
- Sound program management best practices
- Strong schedule and cost control to support compliance

The Department in conjunction with Meridian Systems developed the business processes for each phase of a project. The detailed system processes are documented in the Department’s Proliance Functional Specification Document. Business processes were developed and documented for the following phases:

- Initiation
- Planning
- Design and permitting
- Procurement
- Construction
- Closeout

Following are described the process the Department has instituted for the various phases of a project.

### 4.1.2 Planning

The process commences with the identification and request of capital projects which fall under the following categories:

- Regulatory requirements.
- System expansion to provide adequate level of service.
- Renewal and or replacement of existing assets.
- System improvements.

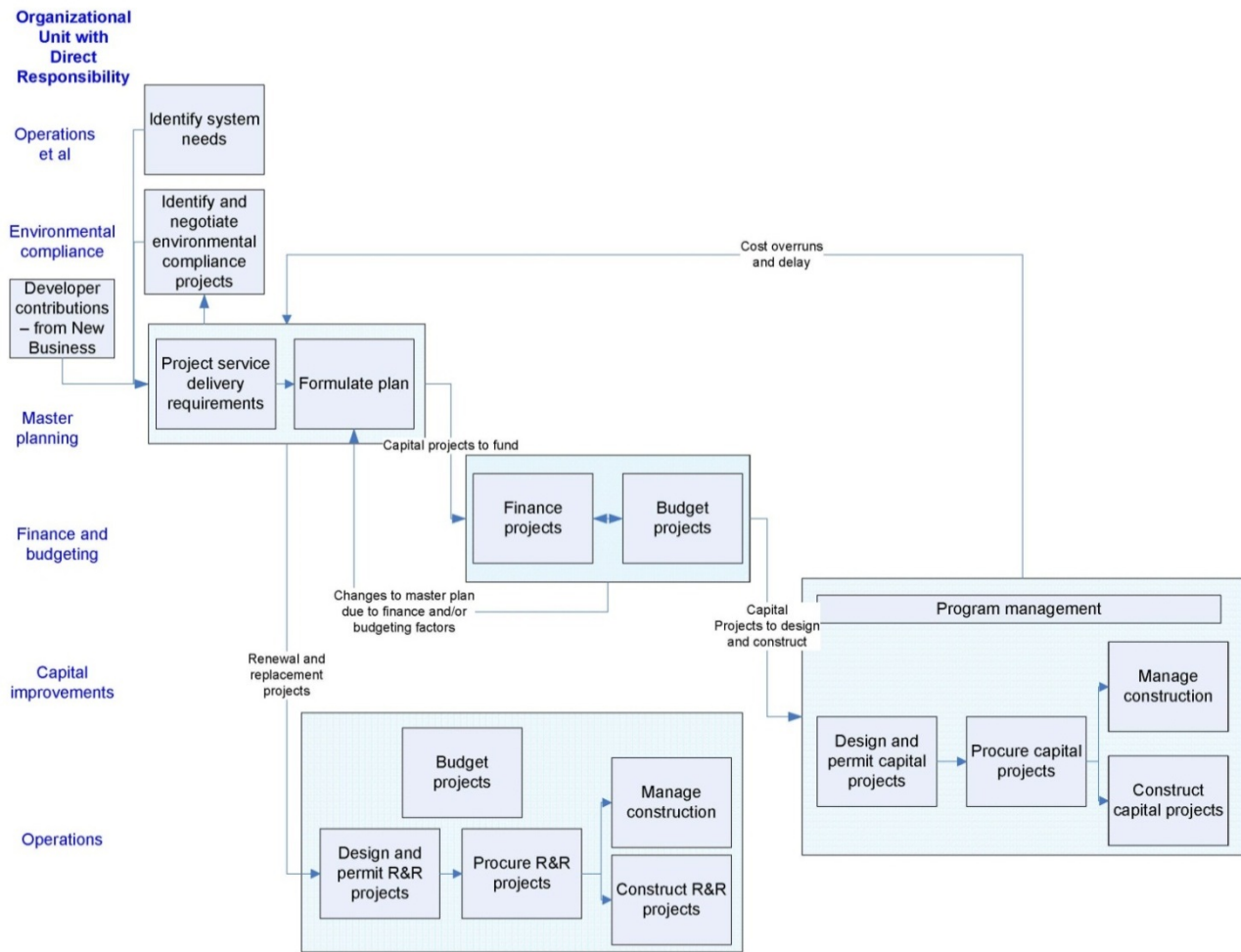


Figure 4-2 MYCIP Development and Implementation Process

Source: MDWASD

The process as designed is intended so that all proposed projects are compiled into the MYCIP and are coordinated by the Planning Division with input and corroboration from the Engineering and Operations Divisions and in coordination with the office of Capital Planning and Coordination.

Projects are identified and developed either in-house or using outside consultants and based on the four categories identified above. The Planning Division compiles the MYCIP and maintains a master schedule for the entire MYCIP. The master schedule lists all projects, subprojects, and proposed schedule.

#### **4.1.3 Budgeting**

The capital budget is prepared annually and is developed well in advance of the budget year. Budgets are prepared at the project level. The budget cycle commences in October with a preliminary budget developed by December. This is reviewed and challenged by the Divisions and the budget is updated accordingly. A final version of the budget is presented to the Mayor's office in June, with the budget being 'adopted' in September.

#### **4.1.4 Design**

Designs are either undertaken in-house by the Engineering and Design Division, or contracted out to professional architecture and engineering firms. There are processes in place for developing designs. On receipt of a Project Initiation Request (PIR) (either from the Planning or Operations divisions), the Engineering and Design Division develops a budget estimate for the project and submits an Expenditure Request (ER) for approval.

Designs undertaken in-house are primarily for pipelines (water distribution and transmission, sewage collection and forcemains) and pumping stations. Depending on the volume of work, the Department may choose to hire outside architecture and engineering firms to supplement the engineering staff to perform these designs. For treatment facilities or very large and complex pumping stations or pipelines the Department generally contracts with outside engineering consultants.

#### **4.1.5 Procurement**

All procurement of architectural and engineering (A&E) professional services and construction contracts are contracted and implemented by the County through the Internal Service Department (ISD).

### **4.2 MYCIP 2015-2020**

Table 4 below shows the capital projects currently included in the Department's multiyear capital improvement plan for its wastewater system, the cost of which has been included in the adopted budget for FY 2015 and the corresponding 5-year projections. The adopted budget includes the capital projects listed in Exhibit D-1 of the consent decree. These projects are listed in the adopted budget presented in Table 4 under project numbers 1044, 1045 and 1046.

Table 4 Wastewater System MYCIP 2015-2020

PROJECT NUMBER	PROJECT DESCRIPTION	SUBPROJECT NUMBER	SUBPROJECT DESCRIPTION	2015	2016	2017	2018	2019	2020	FUTURE	TOTAL
1002	North District Upgrades - Wastewater Treatment Plant	102097	Chemically Enhanced Primary Treatment At NDWWTP	\$0	\$500,000	\$2,000,000	\$8,000,000	\$7,500,000	\$0	\$0	\$18,000,000
1002	North District Upgrades - Wastewater Treatment Plant	101638	NDWWTP - Injection Wells PS Upgrade	0	0	142,354	518,419	1,072,000	2,958,277	3,121,601	7,812,651
1002	North District Upgrades - Wastewater Treatment Plant	101947	NDWWTP Fa Monitoring Wells to Meet FDEP Req.	0	0	454,428	486,313	307,500	1,992,731	2,250,000	5,490,972
1002	North District Upgrades - Wastewater Treatment Plant	102081	NDWWTP Interim Wet Weather Improvements	0	0	0	747,271	2,598,926	2,313,141	105,984,294	111,643,632
1002	North District Upgrades - Wastewater Treatment Plant	102080	NDWWTP - Peak Flow Treatment	0	0	0	0	152,797	827,565	42,799,447	43,779,809
1002	North District Upgrades - Wastewater Treatment Plant	102101	Rotary Drum Press at North District	0	0	0	0	7,000,000	0	0	7,000,000
1003	Central District Upgrades - Wastewater Treatment Plant	101656	CDWWTP - Sludge Handling Facility	750,000	1,000,000	1,390,000	2,410,000	2,500,000	0	0	8,050,000
1003	Central District Upgrades - Wastewater Treatment Plant	102038	CDWWTP - Centrate Injection Well	7,500,000	15,798,322	13,949,494	5,000,000	0	0	0	42,247,816
1003	Central District Upgrades - Wastewater Treatment Plant	102095	Actiflo/Bioactiflo 20 MGD Unit at the CDWWTP	0	500,000	3,000,000	6,000,000	0	0	0	9,500,000
1003	Central District Upgrades - Wastewater Treatment Plant	102096	CDWWTP Pump Station For Centrate Well	1,000,000	15,000,000	14,810,682	16,657,915	6,000,000	0	0	53,468,597
1003	Central District Upgrades - Wastewater Treatment Plant	102098	Concentrator Improvements to Accommodate the North District Transfer Sludge at Central District	250,000	2,000,000	2,000,000	2,000,000	0	0	0	6,250,000
1003	Central District Upgrades - Wastewater Treatment Plant	102100	Recuperative Thickening of Digesting Sludge at CDWWTP	0	500,000	2,000,000	5,000,000	5,000,000	0	0	12,500,000
1003	Central District Upgrades - Wastewater Treatment Plant	102073	CDWWTP - Peak Flow Treatment	0	0	3,552	941,675	4,160,288	1,266,554	60,307,948	66,680,017
1003	Central District Upgrades - Wastewater Treatment Plant	101838	CDWWTP - 2 Emergency Generators	0	0	0	2,300,000	4,700,000	0	0	7,000,000
1003	Central District Upgrades - Wastewater Treatment Plant	101988	CDWWTP - Biosolids Processing Facilities	0	0	0	20,145	1,775,164	8,439,119	124,685,072	134,919,500
1003	Central District Upgrades - Wastewater Treatment Plant	101716	CDWWTP - Engineering Services for Upgrades, and Rehabilitation of the Plant Including Pump Stations 1 and 2	0	0	0	0	0	0	0	0
1003	Central District Upgrades - Wastewater Treatment Plant	101910	CDWWTP - Plant Process Controls	625,000	0	0	0	0	0	0	625,000
1003	Central District Upgrades - Wastewater Treatment Plant	101914	CDWWTP - O2 Plant Process Controls Phase 2	0	0	0	0	0	0	0	0
1003	Central District Upgrades - Wastewater Treatment Plant	101918	CDWWTP - Replace Digester Systems	0	0	0	0	0	0	0	0
1003	Central District Upgrades - Wastewater Treatment Plant	101990	CDWWTP Sustainability Carbon Dioxide Sequestering and Sustainability with Effluent Reuse	0	0	0	0	0	0	105,000,000	105,000,000

PROJECT NUMBER	PROJECT DESCRIPTION	SUBPROJECT NUMBER	SUBPROJECT DESCRIPTION	2015	2016	2017	2018	2019	2020	FUTURE	TOTAL
1003	Central District Upgrades - Wastewater Treatment Plant	101991	CDWWTP Struvite Control Process Implementation	0	0	0	0	0	0	8,500,000	8,500,000
1006	South District Wastewater Treatment Plant Expansion - Phase 3	101768	South Miami-Dade Sewer Improvements - Redlands Edge	0	422,720	726,925	1,897,786	12,889,171	7,016,735	4,000,000	26,953,337
1006	South District Wastewater Treatment Plant Expansion - Phase 3	101769	South Miami-Dade Sewer Improvements - Homestead East	0	129,275	469,026	970,890	2,390,582	3,000,000	110,023	7,069,796
1006	South District Wastewater Treatment Plant Expansion - Phase 3	102055	SDWWTP-Plant Expansion to 131 MGD	0	733,823	1,875,857	2,336,392	10,467,063	46,266,965	12,174,538	73,854,638
1006	South District Wastewater Treatment Plant Expansion - Phase 3	102102	SDWWTP Fa Monitoring Well Replacement	0	384,828	1,081,878	3,554,715	3,000,000	0	0	8,021,421
1006	South District Wastewater Treatment Plant Expansion - Phase 3	102056	SDWWTP-HLD Expansion (48 MGD)	0	0	434,714	1,776,548	1,602,132	19,107,174	4,805,436	27,726,004
1006	South District Wastewater Treatment Plant Expansion - Phase 3	102057	SDWWTP-Bz Effluent Disposal Pump Station Expansion	0	0	0	23,448	209,524	324,434	5,651,414	6,208,820
1006	South District Wastewater Treatment Plant Expansion - Phase 3	102058	SDWWTP-Bz Deep Injection Wells	0	0	0	0	545,289	1,122,912	16,902,044	18,570,245
1006	South District Wastewater Treatment Plant Expansion - Phase 3	101717	SDWWTP - Engineering Services / or Upgrades, And Rehabilitation of the Plant and its Appurtenant Facilities	0	0	0	0	0	0	0	0
1007	South District Upgrades - Wastewater Treatment Plant	101932	Replacement of SDWWTP Cogeneration Units 1, 2, And 3	2,268,000	756,000	0	0	0	0	0	3,024,000
1007	South District Upgrades - Wastewater Treatment Plant	101940	SDWWTP - Plant Process Upgrade to High Efficiency - Transformers Motors and Electrical Equipment	500,000	1,000,000	500,000	0	0	0	0	2,000,000
1007	South District Upgrades - Wastewater Treatment Plant	101941	SDWWTP - Replace Effluent Pumps 7-12 Level Control System	0	450,000	0	0	0	0	0	450,000
1007	South District Upgrades - Wastewater Treatment Plant	102099	Recuperative Thickening of Digesting Sludge at SDWWTP	500,000	1,500,000	5,500,000	3,500,000	1,500,000	0	0	12,500,000
1007	South District Upgrades - Wastewater Treatment Plant	102083	SDWWTP - Class AA Biosolids Processing Plant	0	0	848,131	3,295,329	12,019,017	117,883,585	59,540,515	193,586,577
1007	South District Upgrades - Wastewater Treatment Plant	101650	SDWWTP - Installation of Co-Gen Units 4 & 5	500,000	0	0	0	0	0	0	500,000
1007	South District Upgrades - Wastewater Treatment Plant	101937	SDWWTP - Centrifuge Controls Upgrade	280,000	0	0	0	0	0	0	280,000
1007	South District Upgrades - Wastewater Treatment Plant	101993	SDWWTP Centrate Treatment Process	0	0	0	0	0	0	105,000,000	105,000,000
1007	South District Upgrades - Wastewater Treatment Plant	101994	SDWWTP Struvite Control Process Implementation - 8870	0	0	0	0	0	0	7,500,000	7,500,000
1007	South District Upgrades - Wastewater Treatment Plant	101995	SDWWTP Sustainability Carbon Dioxide Sequestering with Effluent Reuse - 7880	0	0	0	0	0	0	70,000,000	70,000,000
1008	North Miami-Dade Wastewater Treatment Mains and Pump Station Improvements	102086	Upgrade PS 416	0	609,256	336,176	811,373	2,129,034	4,114,161	2,000,000	10,000,000

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1008	North Miami-Dade Wastewater Treatment Mains and Pump Station Improvements	102041	Doral Basin Upgrade - 20 Inch Force Main FDEP 74Th St	260,730	242,730	2,941,060	17,780	0	0	0	3,462,300
1008	North Miami-Dade Wastewater Treatment Mains and Pump Station Improvements	102072	72-Inch Force Main From PS 300 to NDWWTP	0	0	36,798	520,478	2,858,557	2,440,829	144,373,338	150,230,000
1008	North Miami-Dade Wastewater Treatment Mains and Pump Station Improvements	102082	North Dade Booster Station at FDEP 183 St / FDEP 57 Ave (NP-1)	0	0	188,547	473,740	685,896	1,777,459	11,874,358	15,000,000
1008	North Miami-Dade Wastewater Treatment Mains and Pump Station Improvements	102042	Doral Basin Upgrade - Local Pump Station Upgrades	295,305	1,096,043	2,254,448	12,597,213	256,991	0	0	16,500,000
1008	North Miami-Dade Wastewater Treatment Mains and Pump Station Improvements	102064	24-Inch FM From Ps 416 To 30-Inch FM At FDEP 171 St / 67 Ave	0	0	0	0	110,411	407,946	6,061,643	6,580,000
1008	North Miami-Dade Wastewater Treatment Mains and Pump Station Improvements	102065	24-Inch Force Main Extension in FDEP 167 St from FDEP 58 Ave to FDEP 49 Ave then South To FDEP 156 St	0	0	0	0	103,026	379,362	5,637,612	6,120,000
1008	North Miami-Dade Wastewater Treatment Mains and Pump Station Improvements	102069	48-Inch Force Main Connection from FDEP 62 Ave At W 77 St to Discharge Force Main of PS 307	0	0	0	0	230,894	1,010,871	14,898,235	16,140,000
1008	North Miami-Dade Wastewater Treatment Mains and Pump Station Improvements	101924	Installation of a Redundant Sewer FM From West Side of Intercoastal Waterway at Ne 163 St to NDWWTP	0	0	0	0	0	15,000,000	0	15,000,000
1008	North Miami-Dade Wastewater Treatment Mains and Pump Station Improvements	102066	30-Inch Force Main in W 12 Ave (FDEP 67 Ave) from W 79 St to W 84 St (FDEP 138 St)	0	0	0	0	0	20,801	2,739,199	2,760,000
1008	North Miami-Dade Wastewater Treatment Mains and Pump Station Improvements	102043	Doral Basin Upgrade - P.S. 14 Upgrade - County Share	385,584	0	0	0	0	0	0	385,584
1008	North Miami-Dade Wastewater Treatment Mains and Pump Station Improvements	102036	6" FM from PS 316 To MH 126 on Collins Ave	0	0	0	0	0	0	0	0
1008	North Miami-Dade Wastewater Treatment Mains and Pump Station Improvements	101985	Wastewater Force Mains Upgrades	0	0	0	0	0	0	30,000,000	30,000,000
1008	North Miami-Dade Wastewater Treatment Mains and Pump Station Improvements	101986	18 Inch D.I. FM from Island Drive	0	0	0	0	0	0	960,000	960,000
1009	Central Miami-Dade Wastewater Transmission Mains and Pump Station Improvements	101757	42-Inch FM from Interceptor to PS 2 Discharge - Biscayne Basin Improvements	424,006	2,070,256	4,733,547	3,889,208	3,700,000	0	0	14,817,017
1009	Central Miami-Dade Wastewater Transmission Mains and Pump Station Improvements	102074	Coconut Grove Reroute	728,032	373,167	1,851,755	4,725,629	4,306,973	0	0	11,985,556
1009	Central Miami-Dade Wastewater Transmission Mains and Pump Station Improvements	102045	P.S. 2 Basin Upgrade - Local Pump Station Upgrades	0	190,893	768,333	2,640,000	7,550,623	850,151	0	12,000,000
1009	Central Miami-Dade Wastewater Transmission Mains and Pump Station Improvements	102046	P.S. 2 Basin Upgrade - P.S. 2 Upgrade	0	609,016	1,235,617	14,502,148	5,183,219	1,000,000	0	22,530,000
1009	Central Miami-Dade Wastewater Transmission Mains and Pump Station Improvements	101840	Replacement of Anvic Drives and Switchgear at PS #536	0	0	0	0	0	0	0	0



PROJECT NUMBER	PROJECT DESCRIPTION	SUBPROJECT NUMBER	SUBPROJECT DESCRIPTION	2015	2016	2017	2018	2019	2020	FUTURE	TOTAL
1009	Central Miami-Dade Wastewater Transmission Mains and Pump Station Improvements	101996	12 Inch D.I. FM At SW 87 Ave - 6850	0	0	0	0	0	0	828,000	828,000
1010	South District Wastewater Transmission Mains and Pump Station Improvements	102051	Upgrade 6" FM At SW 160 St and 92 Ave	700,000	500,000	0	0	0	0	0	1,200,000
1010	South District Wastewater Transmission Mains and Pump Station Improvements	102078	Force Main Connection In SW 137 Ave from SW 136 St to SP-1	16,474	445,246	1,320,541	2,475,296	15,429,246	41,310,000	4,123,197	65,120,000
1010	South District Wastewater Transmission Mains and Pump Station Improvements	102079	Force Main Connection SW 137 Ave from SP-1 to SW 232 St/SW 127 Ave	19,077	733,548	1,584,214	8,366,995	37,908,651	9,480,000	1,347,515	59,440,000
1010	South District Wastewater Transmission Mains and Pump Station Improvements	102067	42-Inch FM Connection from PS 691 to PS 692	0	0	617,400	836,557	1,236,782	1,291,531	38,117,730	42,100,000
1010	South District Wastewater Transmission Mains and Pump Station Improvements	102077	Force Main Connection from PS 692 to SW 232 St/SW 127 Ave	0	0	128,122	1,622,050	2,883,029	1,916,137	40,510,662	47,060,000
1010	South District Wastewater Transmission Mains and Pump Station Improvements	102087	Upgrade PS 692	0	0	533,377	1,675,837	3,578,135	20,400,286	23,812,365	50,000,000
1010	South District Wastewater Transmission Mains and Pump Station Improvements	102088	Upgrade PS 1073	0	0	503,466	1,272,110	2,094,275	10,958,571	5,171,578	20,000,000
1010	South District Wastewater Transmission Mains and Pump Station Improvements	102063	24-Inch FM Connection from Ps 1073 to PS 691	0	0	0	0	0	21,084	6,428,916	6,450,000
1010	South District Wastewater Transmission Mains and Pump Station Improvements	102035	6" FM from PS 1071 to MH 7 South of SW 186 St on 108 Ave	250,000	0	0	0	0	0	0	250,000
1010	South District Wastewater Transmission Mains and Pump Station Improvements	102037	Furnish and Install of 8-Inch D.I. FM along SW 216 St. from SW 98 Ct. to SW 99 Ave.	176,000	0	0	0	0	0	0	176,000
1010	South District Wastewater Transmission Mains and Pump Station Improvements	102050	Upgrade 4" FM from PS 733 on Us1	150,000	0	0	0	0	0	0	150,000
1011	Gravity Sewer Renovations	100889	Rehabilitation Of Sewer Mains Due to I/I - Dig and Replace	614,722	1,402,948	2,000,000	2,458,452	3,000,000	0	0	9,476,122
1011	Gravity Sewer Renovations	101807	Rehab of all Junction Chambers and Associated Lines	500,000	500,000	0	0	0	0	0	1,000,000
1012	Sanitary Sewer System Improvements	101688	Installation Of 3,504 LF of Sanitary Sewer - Orion Plaza	0	0	0	0	0	0	0	0
1012	Sanitary Sewer System Improvements	100055	Special Construction - Sanitary Sewer Improvements	300,000	400,000	500,000	500,000	500,000	500,000	0	2,700,000
1013	Wastewater General Maintenance and Office Facilities	101108	Miami Service Facility - Phase 2	500,000	2,300,000	3,200,000	4,700,000	4,000,000	4,022,484	2,000,000	20,722,484
1013	Wastewater General Maintenance and Office Facilities	101461	North Maintenance Center	0	500,000	2,174,912	5,000,000	4,500,000	0	0	12,174,912
1013	Wastewater General Maintenance and Office Facilities	101506	South Maintenance Center	2,235,000	8,515,000	8,000,000	6,740,000	0	0	0	25,490,000
1013	Wastewater General Maintenance and Office Facilities	101653	11Th Street Distribution Facility Renovation	388,510	1,211,490	1,000,000	1,000,000	0	0	0	3,600,000
1013	Wastewater General Maintenance and Office Facilities	101654	Westwood Lakes Facility Elevator Renovation	100,000	600,000	800,000	0	0	0	0	1,500,000
1013	Wastewater General Maintenance and Office Facilities	101886	Miami Gardens (Carol City Yard) - Modular / Steel Building	500,000	700,000	100,000	0	0	0	0	1,300,000

PROJECT NUMBER	PROJECT DESCRIPTION	SUBPROJECT NUMBER	SUBPROJECT DESCRIPTION	2015	2016	2017	2018	2019	2020	FUTURE	TOTAL
1013	Wastewater General Maintenance and Office Facilities	101887	Medley Yard Building	200,000	400,000	100,000	0	0	0	0	700,000
1013	Wastewater General Maintenance and Office Facilities	102052	Maintenance & Storage Building For The Pump Station Division	600,000	1,000,000	400,000	0	0	0	0	2,000,000
1013	Wastewater General Maintenance and Office Facilities	101999	West Maintenance Center	0	0	0	0	0	0	41,000,000	41,000,000
1013	Wastewater General Maintenance and Office Facilities	102000	General Maintenance Land Acquisition - Sewer	0	0	0	0	0	0	3,500,000	3,500,000
1013	Wastewater General Maintenance and Office Facilities	102001	Lejeune Road Office Expansion - Phase 2	0	0	0	0	0	0	5,000,000	5,000,000
1013	Wastewater General Maintenance and Office Facilities	102030	Emergency Preparedness/Recovery Projects	0	0	0	0	0	0	25,000,000	25,000,000
1014	Corrosion Control Facilities Improvements	100984	Refurbish Structures In Pump Stations	500,000	1,500,000	3,000,000	1,699,919	500,000	0	0	7,199,919
1014	Corrosion Control Facilities Improvements	101015	Corrosion Control at Wastewater Treatment Plants	0	0	0	0	0	0	0	0
1015	Pump Station Improvement Program	101454	Pump Station Improvement Program	15,000,000	65,000,000	60,600,000	35,000,000	0	0	0	175,600,000
1015	Pump Station Improvement Program	101975	Pump Station Improvement Program (MH)	0	0	0	0	0	0	0	0
1018	Peak Flow Management Studies	100618	36-Inch FM Interconnect PS 1 and PS 2	34,806	179,129	986,939	1,169,247	0	0	0	2,370,121
1018	Peak Flow Management Studies	101710	Master Pump Station No. 3 (Formerly P.S. 8)	15,000,000	13,000,000	10,000,000	5,000,000	0	0	0	43,000,000
1018	Peak Flow Management Studies	101759	48-Inch - Allows P.S. 300 to Pump North to P.S. 1310 Discharge	234,611	1,739,801	925,588	0	0	0	0	2,900,000
1018	Peak Flow Management Studies	101774	Force Main In Doral N.W. 107Th Ave.	0	288,151	1,001,021	489,251	2,641,959	10,869,656	1,752,557	17,042,595
1018	Peak Flow Management Studies	101846	PS 559 Flow Meter	0	500,000	0	0	0	0	0	500,000
1018	Peak Flow Management Studies	101862	NP-187 Upgrade And Expansion to PS 187	350,887	6,036,392	50,378,029	21,171,169	22,063,523	0	0	100,000,000
1018	Peak Flow Management Studies	101865	Peak Flow Management - Pump Station Optimization Plan (PSOP)	0	639,545	1,245,093	1,763,150	10,438,635	39,746,429	10,469,562	64,302,414
1018	Peak Flow Management Studies	101459	Peak Flow Management Facilities - Miscellaneous Peak Flow Projects	1,510,633	448,599	1,000,000	0	0	0	0	2,959,232
1018	Peak Flow Management Studies	101864	Peak Flow - Pump Station Upgrades - Capacity	0	0	868,230	3,893,631	5,055,147	4,024,900	235,371,371	249,213,279
1018	Peak Flow Management Studies	101861	Coral Gables Reroute	0	0	0	484,551	1,940,985	1,763,669	26,460,795	30,650,000
1018	Peak Flow Management Studies	102124	Upgrade to PS 552	0	0	0	26,747	712,157	208,930	9,052,166	10,000,000
1019	Sanitary Sewer system Extension	100877	Sanitary Sewer System Extension	460,000	2,113,135	2,113,135	2,113,135	4,113,135	2,038,444	0	12,950,984
1019	Sanitary Sewer system Extension	101733	Sanitary Sewer System Extension for JPAs	0	0	0	0	0	0	0	0
1019	Sanitary Sewer system Extension	101722	Design And Engineering Services For Sanitary Sewer Force Mains And Sanitary Sewer Gravity Mains	721,630	0	0	0	0	0	0	721,630
1019	Sanitary Sewer system Extension	102128	6" FM from PS 746 to SW 156 St & Us1	1,200,000	0	0	0	0	0	0	1,200,000
1019	Sanitary Sewer system Extension	102129	6" PVC FM from PS 1070 South to MH 19	434,000	0	0	0	0	0	0	434,000
1019	Sanitary Sewer system Extension	102130	Replace 8" FM from PS 149 South to FDEP 112 Ave & W. Flagler St	263,650	0	0	0	0	0	0	263,650

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1019	Sanitary Sewer system Extension	101983	Wastewater Needs Assessment For New Gravity Sewer	0	0	0	0	0	0	390,000,000	390,000,000
1021	Pump Station Generators and Miscellaneous Upgrades	101816	Installation of Odor Control Units at Pump Stations	850,000	850,000	775,000	700,000	0	0	0	3,175,000
1021	Pump Station Generators and Miscellaneous Upgrades	101823	Installation of Security Systems at Pump Stations	425,000	650,000	1,100,000	0	0	0	0	2,175,000
1021	Pump Station Generators and Miscellaneous Upgrades	101837	Replacement of Motor Control Centers And Switchgear at Regional Pump Stations	974,808	1,220,320	5,462,968	7,575,731	6,459,517	0	0	21,693,344
1021	Pump Station Generators and Miscellaneous Upgrades	101930	Replacement of Mechanical Equipment In Regional Pump Stations	225,000	500,000	1,225,000	1,225,000	1,075,000	700,000	0	4,950,000
1021	Pump Station Generators and Miscellaneous Upgrades	101933	Replacement of Submersible Pumping Equipment	240,000	240,000	265,000	65,000	0	0	0	810,000
1021	Pump Station Generators and Miscellaneous Upgrades	101934	Replacement of Variable Frequency Drives (VFD)	500,000	750,000	1,000,000	600,000	500,000	250,000	0	3,600,000
1023	Wastewater Telemetry System	100621	Telemetry System - Wastewater	700,000	700,000	578,707	0	0	0	0	1,978,707
1024	Wastewater System Maintenance and Upgrades	100622	Wastewater System Upgrades	15,717,000	16,188,510	16,674,165	17,174,390	17,689,622	18,220,311	0	101,663,998
1024	Wastewater System Maintenance and Upgrades	102028	Renewal and Replacement Needs	0	0	0	0	0	0	162,500,000	162,500,000
1025	Lift Station Upgrades and Structural Maintenance Improvements	102044	Main Software Applications Enhancements & Hardware (EAMS)	1,500,000	1,000,000	2,500,000	2,050,000	0	0	0	7,050,000
1025	Lift Station Upgrades and Structural Maintenance Improvements	102126	Relocation Of 20 Pump Stations	400,000	2,000,000	3,000,000	3,000,000	3,000,000	5,000,000	4,000,000	20,400,000
1025	Lift Station Upgrades and Structural Maintenance Improvements	100623	Lift Station Structural Maintenance & Upgrades	3,240,000	5,000,000	2,000,000	2,000,000	2,000,000	2,000,000	0	16,240,000
1025	Lift Station Upgrades and Structural Maintenance Improvements	101718	Design of Upgrades For Sanitary Sewer Pump Stations	804,335	0	0	0	0	0	0	804,335
1027	Wastewater Equipment and Vehicles	100625	Miscellaneous Tools and Equipment	1,707,637	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	0	6,707,637
1027	Wastewater Equipment and Vehicles	101729	Vehicles/Transportation Equipment	13,611,911	4,540,628	3,500,000	3,500,000	3,500,000	3,500,000	0	32,152,539
1027	Wastewater Equipment and Vehicles	101730	Heavy Construction Equipment	7,754,950	3,500,000	3,500,000	3,500,000	3,500,000	3,500,000	0	25,254,950
1029	Wastewater Treatment Plants Replacement and Renovation	101732	Security Projects	3,423,200	2,008,333	2,008,333	2,008,333	4,926,484	1,400,000	0	15,774,683
1029	Wastewater Treatment Plants Replacement and Renovation	100627	Wastewater Treatment Plants Rehabilitation	8,822,000	5,600,000	5,600,000	5,600,000	5,600,000	5,600,000	0	36,822,000
1029	Wastewater Treatment Plants Replacement and Renovation	102018	Upgrade Wholesale Wastewater Flow Meters	0	0	0	0	0	0	5,165,000	5,165,000
1030	Wastewater Treatment Plant Automation Enhancements	101124	Automation Of Emergency Generators Engine Controls	1,500,000	0	0	0	0	0	0	1,500,000
1032	Wastewater Treatment Plant Miscellaneous Upgrades	101808	Emergency Generator Housing Replacement At WWTP	500,000	750,000	550,000	0	0	0	0	1,800,000
1032	Wastewater Treatment Plant Miscellaneous Upgrades	101812	Oxygen Plant Controls Upgrade at the WWTP	454,362	386,644	908,994	0	0	0	0	1,750,000

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1032	Wastewater Treatment Plant Miscellaneous Upgrades	101885	WWTP - Video Surveillance System	750,000	2,000,000	1,750,000	0	0	0	0	4,500,000
1032	Wastewater Treatment Plant Miscellaneous Upgrades	101944	WWTP - Replacement Of WWTP Electrical Instrumentation Equipment	500,000	0	0	0	0	0	0	500,000
1032	Wastewater Treatment Plant Miscellaneous Upgrades	102004	Wastewater Treatment Plants Miscellaneous Upgrades	0	0	0	0	0	0	7,500,000	7,500,000
1036	Wastewater Treatment Plants Effluent Reuse	101851	SR-D 72-Inch Reclaimed Water Pipeline - SDWWTP To FPL (Turkey Point)	0	0	0	0	0	0	95,000,000	95,000,000
1037	South District Wastewater Treatment Plant - High Level Disinfection	101695	SDWWTP - Fog Improvements	0	0	0	0	0	0	0	0
1037	South District Wastewater Treatment Plant - High Level Disinfection	101901	Solids Control Improvements	400,000	0	0	0	0	0	0	400,000
1037	South District Wastewater Treatment Plant - High Level Disinfection	101624	SDWWTP - Low Lift Transfer Pump Station	607,548	0	0	0	0	0	0	607,548
1037	South District Wastewater Treatment Plant - High Level Disinfection	101696	SDWWTP - Chlorine Contact Tanks	0	0	0	0	0	0	0	0
1039	MIASP	101791	Contract Specifications	100,000	200,000	43,635	0	0	0	0	343,635
1040	Outfall Legislation Summary Description	102012	Southwest Dade Booster Station	696,428	2,938,511	1,416,198	10,620,081	50,881,500	8,447,282	0	75,000,000
1040	Outfall Legislation Summary Description	102034	West District Wastewater Treatment Plant	19,500,000	12,337,624	41,810,146	26,255,478	18,154,279	9,099,475	1,176,256,182	1,303,413,184
1040	Outfall Legislation Summary Description	102068	48-Inch FM Connection In FDEP 58 St From FDEP 107 Ave To FDEP 79 Ave - Doral	0	18,101	555,542	1,138,216	3,170,382	32,845,126	3,642,633	41,370,000
1040	Outfall Legislation Summary Description	102075	Doral Booster Station (Wp-1)	0	626,551	545,566	2,220,478	3,237,732	40,383,896	2,985,777	50,000,000
1040	Outfall Legislation Summary Description	102113	48 Inch FM In FDEP 54 St From 79 Ave To FDEP 72 Ave	0	95,993	933,262	628,602	7,235,873	4,206,270	0	13,100,000
1040	Outfall Legislation Summary Description	102121	54-Inch FM Connection In SW 232 St From SW 127 Ave To SDWWTP	490,883	893,909	7,278,268	30,874,903	47,392,037	0	0	86,930,000
1040	Outfall Legislation Summary Description	102010	CDWWTP- Bz Deep Injection Wells	0	0	1,572,701	7,237,201	3,240,596	5,321,241	149,769,483	167,141,222
1040	Outfall Legislation Summary Description	102009	CDWWTP- Bz Disposal Effluent Pump Station	0	0	0	824,244	4,977,449	1,442,742	68,583,652	75,828,087
1040	Outfall Legislation Summary Description	101867	CDWWTP HLD Filters (141 MGD)	0	0	0	0	95,432	5,410,612	167,815,394	173,321,438
1040	Outfall Legislation Summary Description	102006	NDWWTP - HLD Treatment 57 MGD	0	0	0	0	6,978	918,731	63,015,228	63,940,937
1040	Outfall Legislation Summary Description	102007	NDWWTP- Bz Deep Injection Wells	0	0	0	0	53,076	2,898,730	89,899,148	92,850,954
1040	Outfall Legislation Summary Description	102008	NDWWTP - Bz Disposal Effluent Pump Station	0	0	0	0	5,353	1,191,355	36,514,574	37,711,282
1040	Outfall Legislation Summary Description	102070	54-Inch FM From Wp-1 (Doral) To WDWTP	0	0	0	0	1,842,605	5,804,942	91,932,453	99,580,000
1040	Outfall Legislation Summary Description	102071	72-Inch FM Connection In SW 137 Ave To CI-4 FM In FDEP 6 St	0	0	0	0	4,467	971,552	29,753,981	30,730,000
1040	Outfall Legislation Summary Description	102076	East/West 72/84-Inch FM Connection From PS 187 To WDWTP	0	0	0	0	1,989,750	1,904,592	153,485,658	157,380,000
1040	Outfall Legislation Summary Description	102089	WDWWTP - Biosolids Processing Plant	0	0	0	0	83,542	4,705,467	145,942,524	150,731,533
1040	Outfall Legislation Summary Description	102092	WDWWTP - Injection Well Pump Station	0	0	0	0	1,404,221	2,398,434	114,509,857	118,312,512
1040	Outfall Legislation Summary Description	102093	WDWWTP - Injection Wells	0	0	0	0	3,755,146	14,267,907	241,960,372	259,983,425

PROJECT NUMBER	PROJECT DESCRIPTION	SUBPROJECT NUMBER	SUBPROJECT DESCRIPTION	2015	2016	2017	2018	2019	2020	FUTURE	TOTAL
1040	Outfall Legislation Summary Description	102094	WDWWTP - Peak Flow Treatment	0	0	0	0	3,755,146	14,267,907	148,679,851	166,702,904
1040	Outfall Legislation Summary Description	102125	WWTP - Storm Surge Protection	0	0	0	0	38,108	1,979,809	163,795,085	165,813,002
1040	Outfall Legislation Summary Description	101858	Flow Control Pipeline Interconnection	0	0	0	0	0	140,052	4,859,948	5,000,000
1040	Outfall Legislation Summary Description	102013	CDWWTP - Fa Reuse Pump Station	0	0	0	0	0	675,124	18,024,876	18,700,000
1040	Outfall Legislation Summary Description	102014	CDWWTP - Fa Reuse Injection Wells	0	0	0	0	0	251,912	6,648,088	6,900,000
1040	Outfall Legislation Summary Description	102084	SDWWTP - Fa Reuse Injection Wells	0	0	0	0	0	251,912	6,648,088	6,900,000
1040	Outfall Legislation Summary Description	102085	SDWWTP - Fa Reuse Pump Station	0	0	0	0	0	675,124	18,024,876	18,700,000
1040	Outfall Legislation Summary Description	102090	WDWWTP - Fa Reuse Injection Wells	0	0	0	0	0	251,912	6,648,088	6,900,000
1040	Outfall Legislation Summary Description	102091	WDWWTP - Fa Reuse Pump Station	0	0	0	0	0	675,124	18,024,876	18,700,000
1041	General Obligation Bond (GOB)	101950	Perrine - Cutler Ridge Wastewater Mains Improvements	1,305,901	654,098	0	0	0	0	0	1,959,999
1041	General Obligation Bond (GOB)	101611	Sanitary Sewer System Enhancements	622,500	959,971	1,284,264	17,508,619	16,652,386	4,756,929	0	41,784,669
1041	General Obligation Bond (GOB)	101612	Sanitary Sewer Needs Assessment	812,825	1,271,789	1,612,559	558,000	100,000	776,400	0	5,131,573
1041	General Obligation Bond (GOB)	101613	Sanitary Sewer System Municipal Projects	0	0	0	800,000	4,300,000	14,795,000	0	19,895,000
1041	General Obligation Bond (GOB)	101796	Upgrade of Miami Springs Pump Station and Contract Specifications	200,000	70,965	0	0	0	0	0	270,965
1041	General Obligation Bond (GOB)	101949	Sanitary Sewer System Extension	200,000	400,000	1,800,231	366,500	2,946,500	4,958,242	0	10,671,473
1041	General Obligation Bond (GOB)	101957	FDEP 37Th Avenue - Sewer Mains Improvements	500,000	1,370,000	2,030,501	847,871	0	0	0	4,748,372
1042	Wastewater - Pipes and Infrastructure	101967	Wastewater - Pipes And Infrastructure Projects	3,000,000	6,811,490	6,325,835	5,825,610	5,310,378	4,779,689	0	32,053,002
1044	Wastewater Treatment Plants Consent Decree Projects	102500	SDWWTP - Headworks	0	41,875	6,546	155,168	372,446	153,812	0	729,847
1044	Wastewater Treatment Plants Consent Decree Projects	102501	SDWWTP - Oxygen Production	105,283	350,283	3,384,660	3,331,715	0	0	0	7,171,941
1044	Wastewater Treatment Plants Consent Decree Projects	102504	SDWWTP - Effluent Pump Station	950,000	125,210	1,310,374	323,899	1,964,830	5,604,385	14,306,543	24,585,241
1044	Wastewater Treatment Plants Consent Decree Projects	102505	SDWWTP - Gravity Sludge Thickeners	72,139	269,257	2,306,074	2,341,755	0	0	0	4,989,225
1044	Wastewater Treatment Plants Consent Decree Projects	102506	SDWWTP - Digesters And Control Buildings	390,825	1,445,736	8,131,560	8,395,381	9,867,760	10,507,448	9,971,082	48,709,792
1044	Wastewater Treatment Plants Consent Decree Projects	102507	SDWWTP - Dewatering Facility	300,000	138,543	2,654,786	5,850,499	6,426,163	1,276,379	0	16,646,370
1044	Wastewater Treatment Plants Consent Decree Projects	102508	SDWWTP - Fog Removal Facility	8,607	219,221	543,500	104,539	0	0	0	875,867
1044	Wastewater Treatment Plants Consent Decree Projects	102511	SDWWTP - Chlorine Contact Chamber Structural	0	82,897	317,234	56,779	1,367,926	2,953,739	2,174,693	6,953,268
1044	Wastewater Treatment Plants Consent Decree Projects	102601	CDWWTP - Building Improvements	116,288	4,548	5,301,533	0	0	0	0	5,422,369
1044	Wastewater Treatment Plants Consent Decree Projects	102602	Headworks Plant 1	124,075	2,477,439	10,823,783	7,272,399	0	0	0	20,697,696

PROJECT NUMBER	PROJECT DESCRIPTION	SUBPROJECT NUMBER	SUBPROJECT DESCRIPTION	2015	2016	2017	2018	2019	2020	FUTURE	TOTAL
1044	Wastewater Treatment Plants Consent Decree Projects	102603	CDWWTP - Headworks Plant 2	728,269	140,984	9,128,599	10,402,809	0	0	0	20,400,661
1044	Wastewater Treatment Plants Consent Decree Projects	102605	CDWWTP - Oxygenation Trains Plant 2	0	795,368	222,336	492,401	3,068,419	3,692,842	7,729,021	16,000,387
1044	Wastewater Treatment Plants Consent Decree Projects	102607	CDWWTP - Secondary Clarifiers Plant 2	213,462	20,031	1,092,835	1,381,121	1,422,034	1,468,170	1,441,050	7,038,703
1044	Wastewater Treatment Plants Consent Decree Projects	102609	CDWWTP - RS Pump Stations Plant 2	421,791	39,582	2,159,380	2,729,013	2,809,854	2,901,017	2,847,433	13,908,070
1044	Wastewater Treatment Plants Consent Decree Projects	102612	CDWWTP - Sludge Thickeners Plant 2	77,781	2,744,055	5,809,413	377,948	0	0	0	9,009,197
1044	Wastewater Treatment Plants Consent Decree Projects	102614	CDWWTP - Digesters Plant 2	353,485	8,491,889	18,271,561	20,454,393	19,386,102	19,538,044	36,590,122	123,085,596
1044	Wastewater Treatment Plants Consent Decree Projects	102615	CDWWTP - Dewatering Building	0	1,394,874	3,848,893	1,304,559	7,304,709	46,004,393	40,359,438	100,216,866
1044	Wastewater Treatment Plants Consent Decree Projects	102616	CDWWTP - Chlorination Facilities	647,117	937,591	14,681,494	0	0	0	0	16,266,202
1044	Wastewater Treatment Plants Consent Decree Projects	102617	CDWWTP - Odor Control Systems	228,849	4,996,754	13,904,379	0	0	0	0	19,129,982
1044	Wastewater Treatment Plants Consent Decree Projects	102618	CDWWTP - Co-Gen Facility	693,068	817,376	2,073,323	17,362,566	4,553,121	0	0	25,499,454
1044	Wastewater Treatment Plants Consent Decree Projects	102621	CDWWTP - Pump Station 2	30,499	4,575,520	436,669	0	0	0	0	5,042,688
1044	Wastewater Treatment Plants Consent Decree Projects	102622	CDWWTP - O2 Plant Process Controls Phase 2	2,651	267,462	183,329	0	0	0	0	453,442
1044	Wastewater Treatment Plants Consent Decree Projects	102623	CDWWTP - Gas Monitoring	20,580	2,308	312,438	0	0	0	0	335,326
1044	Wastewater Treatment Plants Consent Decree Projects	102625	CDWWTP - Rehabilitation Of Walkways And Stairways	160,101	165,748	170,658	176,195	181,911	188,329	1,495,497	2,538,439
1044	Wastewater Treatment Plants Consent Decree Projects	102626	CDWWTP - Oxygen Production	185,773	649,425	105,077	9,091,833	13,304,326	3,218,661	0	26,555,095
1044	Wastewater Treatment Plants Consent Decree Projects	102700	NDWWTP - Headworks And Sludge Degritting Transfer	1,000,000	17,062,357	9,103,299	3,513,971	0	0	0	30,679,627
1044	Wastewater Treatment Plants Consent Decree Projects	102701	NDWWTP - Primary Clarifiers And Odor Control	0	2,615,010	494,859	4,837,820	15,192,451	15,728,329	8,873,561	47,742,030
1044	Wastewater Treatment Plants Consent Decree Projects	102705	NDWWTP - Disinfection	153,624	5,812,458	8,754,950	0	0	0	0	14,721,032
1044	Wastewater Treatment Plants Consent Decree Projects	102706	NDWWTP - Effluent Disposal	500,000	1,020,000	4,923,073	7,714,152	7,387,621	6,025,812	0	27,570,658
1044	Wastewater Treatment Plants Consent Decree Projects	102707	NDWWTP - Plant Wide Electrical	275,335	285,047	286,858	89,947	3,258,687	4,867,094	9,603,958	18,666,926

PROJECT NUMBER	PROJECT DESCRIPTION	SUBPROJECT NUMBER	SUBPROJECT DESCRIPTION	2015	2016	2017	2018	2019	2020	FUTURE	TOTAL
1044	Wastewater Treatment Plants Consent Decree Projects	102708	NDWWTP - Flood Mitigation	90,611	10,989	4,043,325	0	0	0	0	4,144,925
1044	Wastewater Treatment Plants Consent Decree Projects	102709	NDWWTP - Yard Piping Replacement	0	235,015	79,422	1,903	1,370,281	1,454,480	1,772,907	4,914,008
1044	Wastewater Treatment Plants Consent Decree Projects	102502	SDWWTP - Oxygenation Trains	0	0	911,323	211,246	1,324,917	2,261,600	13,476,196	18,185,282
1044	Wastewater Treatment Plants Consent Decree Projects	102510	SDWWTP - General Electrical	0	0	681,479	125,860	2,058,558	6,223,015	3,107,130	12,196,042
1044	Wastewater Treatment Plants Consent Decree Projects	102600	CDWWTP - Electrical Improvements	0	0	1,585,105	326,394	10,213,423	16,334,085	0	28,459,007
1044	Wastewater Treatment Plants Consent Decree Projects	102604	CDWWTP - Oxygenation Trains Plant 1	98,621	0	3,160,985	3,280,190	0	0	0	6,539,796
1044	Wastewater Treatment Plants Consent Decree Projects	102610	CDWWTP - Effluent Pump Station	0	0	552,904	113,850	2,858,850	6,424,076	0	9,949,680
1044	Wastewater Treatment Plants Consent Decree Projects	102611	CDWWTP - Sludge Thickeners Plant 1	0	0	547,003	187,101	2,461	6,587,250	3,862,044	11,185,859
1044	Wastewater Treatment Plants Consent Decree Projects	102620	CDWWTP - Pump Station 1	0	0	723,538	65,777	9,826,342	984,550	0	11,600,207
1044	Wastewater Treatment Plants Consent Decree Projects	102503	SDWWTP - Chlorine Building	0	0	0	0	148,551	21,189	2,359,031	2,528,771
1044	Wastewater Treatment Plants Consent Decree Projects	102509	SDWWTP - Odor Control	0	0	0	0	444,467	94,461	7,619,095	8,158,023
1044	Wastewater Treatment Plants Consent Decree Projects	102619	CDWWTP - Septage Unloading	0	0	0	0	1,552,414	395,430	27,209,582	29,157,426
1044	Wastewater Treatment Plants Consent Decree Projects	102702	NDWWTP - Oxygenation Trains	0	0	0	0	1,273,207	467,224	25,181,924	26,922,355
1044	Wastewater Treatment Plants Consent Decree Projects	102704	NDWWTP - Secondary Clarifiers	0	0	0	0	2,699,773	1,956,162	77,354,780	82,010,715
1044	Wastewater Treatment Plants Consent Decree Projects	102613	CDWWTP - Digesters Plant 1	0	0	0	0	0	1,210,905	59,736,581	60,947,486
1044	Wastewater Treatment Plants Consent Decree Projects	102624	CDWWTP - Ventilation Improvements	0	0	0	0	0	148,689	2,596,630	2,745,319
1044	Wastewater Treatment Plants Consent Decree Projects	102703	NDWWTP - Oxygen Production	0	0	0	0	0	253,061	6,914,496	7,167,557
1044	Wastewater Treatment Plants Consent Decree Projects	102627	CDWWTP - SCADA RTU Upgrades	0	0	0	0	0	0	0	0
1044	Wastewater Treatment Plants Consent Decree Projects	102710	NDWWTP - SCADA RTU Upgrades	397,490	0	0	0	0	0	0	397,490
1044	Wastewater Treatment Plants Consent Decree Projects	102606	CDWWTP - Secondary Clarifiers Plant 1	0	0	0	0	0	0	4,942,022	4,942,022

PROJECT NUMBER	PROJECT DESCRIPTION	SUBPROJECT NUMBER	SUBPROJECT DESCRIPTION	2015	2016	2017	2018	2019	2020	FUTURE	TOTAL
1044	Wastewater Treatment Plants Consent Decree Projects	102608	CDWWTP - RS Pump Stations Plant 1	0	0	0	0	0	0	9,485,169	9,485,169
1045	Wastewater Collection and Transmissions Lines Consent Decree	102800	Collection System I/I Repairs	2,259,553	8,550,888	8,804,192	9,089,835	9,384,746	9,715,771	75,073,936	122,878,921
1045	Wastewater Collection and Transmissions Lines Consent Decree	102802	Government Cut FM - Phase 3	14,912,668	56,713,964	37,396,880	0	0	0	0	109,023,512
1045	Wastewater Collection and Transmissions Lines Consent Decree	102803	North Dade 72 Inch PCCP FM Rehabilitation	561,353	6,172,440	11,129,353	4,314,430	0	0	0	22,177,576
1045	Wastewater Collection and Transmissions Lines Consent Decree	102804	South Dade 54 Inch PCCP FM Rehabilitation	151,556	5,008,625	10,603,713	1,739,641	0	0	0	17,503,535
1045	Wastewater Collection and Transmissions Lines Consent Decree	102806	Replacement of 18 Inch Dip FM In Miami Lakes	15,885	1,118,680	1,050,477	0	0	0	0	2,185,042
1045	Wastewater Collection and Transmissions Lines Consent Decree	102807	Rehabilitation of 54 Inch PCCP FM In The City Of Miami	74,131	5,220,504	4,902,222	0	0	0	0	10,196,857
1045	Wastewater Collection and Transmissions Lines Consent Decree	102808	Replace Approximately 25 Miles of AC Force Mains	1,555,545	209,664	15,579,138	16,445,027	16,401,682	384,206	0	50,575,262
1045	Wastewater Collection and Transmissions Lines Consent Decree	102809	Opa-Locka Airport 48" PCCP Force Main Replacement	306,508	2,524,534	14,636,167	4,968,008	0	0	0	22,435,217
1045	Wastewater Collection and Transmissions Lines Consent Decree	102805	Replacement Of Tamiami Canal Aerial Crossing FMs At FDEP 37Th Ave	325,751	0	0	0	0	0	0	325,751
1046	Sewer Pump Station Systems Consent Decree Projects	102900	Doral Basin - Upgrade Sewage PS No. 418	553,556	2,770,830	8,924,491	9,214,037	427,485	0	0	21,890,399
1046	Sewer Pup Station Systems Consent Decree Projects	102901	Upgrade of PS #0691	179,683	313,790	2,231,121	2,303,508	775,372	0	0	5,803,474
1046	Sewer Pup Station Systems Consent Decree Projects	102902	Upgrade of PS #0692	179,683	313,790	2,231,121	2,303,508	775,372	0	0	5,803,474
1046	Sewer Pup Station Systems Consent Decree Projects	102903	Replacement of Switchgear PS #0414	15,909	220,613	716,693	448,021	0	0	0	1,401,236
1046	Sewer Pup Station Systems Consent Decree Projects	102904	Replacement of Switchgear And Rehabilitation of Wet Well PS#0415	113,745	251,032	1,784,899	1,842,808	620,298	0	0	4,612,782
1046	Sewer Pup Station Systems Consent Decree Projects	102905	Replacement of Switchgear PS #0416	45,910	220,613	716,693	448,021	0	0	0	1,431,237
1046	Sewer Pup Station Systems Consent Decree Projects	102906	Replacement of Switchgear And Rehabilitation of Wet Well PS #0417	92,495	167,354	1,189,934	1,228,539	413,532	0	0	3,091,854
1046	Sewer Pup Station Systems Consent Decree Projects	102907	Replacement of Electrical And Mechanical Equipment In PS #0107	153,120	209,193	1,487,414	1,535,671	516,914	0	0	3,902,312
1046	Sewer Pup Station Systems Consent Decree Projects	102908	Replacement of Plumbing And Electrical Equipment At PS 0301	48,793	676,547	2,197,858	1,373,932	0	0	0	4,297,130
1046	Sewer Pup Station Systems Consent Decree Projects	102909	Upgrade of PS#0488	31,822	441,227	1,433,387	896,044	0	0	0	2,802,480



PROJECT NUMBER	PROJECT DESCRIPTION	SUBPROJECT NUMBER	SUBPROJECT DESCRIPTION	2015	2016	2017	2018	2019	2020	FUTURE	TOTAL
1046	Sewer Pup Station Systems Consent Decree Projects	102910	Installation of 60 Inch FM From Kendall Dr To PS #0536	163,645	882,453	2,866,769	1,792,086	0	0	0	5,704,953
1046	Sewer Pup Station Systems Consent Decree Projects	102911	Replacement of Switchgear At PS #0187	88,187	529,471	1,720,061	1,075,251	0	0	0	3,412,970
1046	Sewer Pup Station Systems Consent Decree Projects	102912	Refurbish Emergency Generators And Controls At Regional Pump Stations	62,763	2,848,193	0	0	0	0	0	2,910,956
1046	Sewer Pup Station Systems Consent Decree Projects	102914	Upgrade of PS #0065, 0201, 0334, 0374, 0607	620,567	4,890,128	0	0	0	0	0	5,510,695
1046	Sewer Pup Station Systems Consent Decree Projects	102915	Upgrade of PS #00198, 0437, 0466, 0680	272,549	2,391,081	1,247,894	0	0	0	0	3,911,524
1046	Sewer Pup Station Systems Consent Decree Projects	102916	Upgrade of PS #0037, 0351, 0370, 0403	0	390,320	3,414,298	1,782,444	0	0	0	5,587,062
1046	Sewer Pup Station Systems Consent Decree Projects	102918	SCADA RTU Upgrades	3,085,386	3,964,516	0	0	0	0	0	7,049,902
1046	Sewer Pup Station Systems Consent Decree Projects	102917	Upgrade of PS #0441, 0491, 0710, 0827, 0852, 1236	0	0	553,618	4,832,514	2,528,176	0	0	7,914,308
1046	Sewer Pup Station Systems Consent Decree Projects	102913	Upgrade of PS #0086, 0492	0	0	0	0	0	0	0	0
1047	Wastewater Commercial Corridor Economic Development	103000	Wastewater Commercial Corridors Economic Development - Gravity And Force Mains	0	11,801,562	12,125,292	34,442,572	55,874,653	51,591,048	58,377,630	224,212,757
1047	Wastewater Commercial Corridor Economic Development	103001	Wastewater Commercial Corridors Economic Development - Pump Stations	0	2,599,591	2,670,901	7,586,840	12,307,794	11,364,223	12,859,137	49,388,486
				\$186,480,032	\$413,689,205	\$635,863,407	\$594,512,689	\$698,651,923	\$862,696,573	\$5,555,729,511	\$8,947,623,340

Source: MDWASD

#### 4.2.1 Program Monitoring and Reporting

The Department uses the Project Control and Tracking System (PCTS) to monitor and report on project progress. The PCTS solution is comprised of software from Primavera, Proliance and SharePoint and it is managed by the Projects and PCTS office of the Engineering and Design Division. Implementation of PCTS commenced in 2008 with Proliance. All project needs are identified as projects in Proliance through the creation of Project Information Request (PIR).

In 2011, the Department's CPCS commenced a quarterly variance analysis to better monitor progress and performance of the development and execution of the MYCIP. CPCS prepares variance reports for each project. The variance reports include information on actual expenditures on ERs (in the budget year and to-date), the ER authorized amount, an explanation for the variance from the ER authorized amount, and a project status category selected from a list of categories developed by the budget group. This report focuses on variances at ER level, not the variances at project and sub-project level from the adopted budget. Through the implementation of quarterly variance reports, the CPCS monitors and reports on the execution of the department's capital projects included in the MYCIP.

CPCS employs various methods to complete variance analysis including but not limited to graphical depictions of project execution based on financials, obtaining feedback from project managers on individual project statuses, project impacts, and reporting findings to the operating divisions of the department as well as to senior management at regularly scheduled capital progress review meetings. In conducting the analysis and preparing the reports CPCS:

- Sets the adopted budget as the baseline for comparing execution versus fiscal year to date execution on a quarterly basis. During the variance analysis process, CPCS requests project status information from project managers for all of their projects at the ER level. This analysis is conducted for all open ERs in the system.
- Uses data derived from construction fund balance reports and CWIP (Construction Work in Process) provided by the Department's Controller division, to generate graphs that show fiscal year to date execution of the MYCIP at the operating group (Water/Sewer) level. Graphs are published on the Department's web site on a monthly basis. Graphs included are: Total Monthly Construction Expenditures, FYTD Actuals vs. Budget (WASD Total), Cumulative FYTD Construction Expenditures (Water, Sewer, and WASD Total)



Figure 4-3 Program Monitoring and Reporting

Source: MDWASD

- Uses financial data to identify ERs that have been executed beyond their authorization and conversely, ERs that have not expended funds throughout the fiscal year.
- Prepares quarterly variance reports. These reports consist of spreadsheets containing all the data compiled throughout the variance analysis process including all financial and project status information by project / sub-project / ER.