

FY 2016 Sewage Disposal System Capital Improvement Program

Fiscal Years 2016 Through 2020

Mike Duggan, Mayor
City of Detroit

Administration

Sue F. McCormick, Director
Darryl A. Latimer, Deputy Director
William Wolfson, General Counsel/
Chief Administrative/Compliance Officer
Nicolette Bateson, Chief Financial Officer
Cheryl Porter, Chief Operating Officer
Syed Ali, P.E., Head Engineer
Capital Management Group

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**Sewage Disposal System
Capital Improvement Program
Fiscal Years 2015-16 Through 2019-20**

**BOWC Approved
3-11-2015**

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Executive Management Team

Sue F. McCormick, Director
Darryl A. Latimer, Deputy Director
Nicolette Bateson, Chief Financial Officer
William Wolfson, General Counsel/Chief Administrative/Compliance Officer
Cheryl Porter, Chief Operating Officer
Dan Rainey, Information Technology Director
W. Barnett Jones, Chief Security Officer
Terri Conerway, Organizational Development Director

Capital Management Group

Syed Ali, P.E., Head Engineer
Corey Thomas

**Sewage Disposal System
Detroit Water and Sewerage Department
Capital Improvement Programs**

BOWC Approved
3-11-2015

OVERVIEW

The attached report summarizes the capital planning agenda for the DWSD Sewage Disposal System. This should be considered a planning document – the CIP is a dynamic and evolving plan that requires continual review and modification during the course of each year. The estimates indicated in the early years of the attached report are likely more precise than those in the later years. The project descriptions represent brief synopses of the entire project scope; these descriptions are generally more precise for ongoing active projects than for planned new projects, where specific project activities may have yet to be determined.

DEFINITIONS

Funded Portion of the Programs

The Water System and Sewerage System capital improvement programs cover a five fiscal year planning horizon. However, only the first year or two of the programs are actually funded. The Department uses the pay as you go method of capital project funding rather than financing projects 100% in advance. The Department's capital financing strategy is designed to align capital project financing sources with program requirements in a framework that balances multiple goals, including: (a) recover the costs of capital investment over the useful lives of the capital assets; (b) minimize the impact of the capital programs on water and sewerage rates; and (c) protect and enhance the Department's financial position.

Projected Expenditures Spread by Fiscal Year

In the Water System and Sewerage System capital improvement programs, when project funding requirements are displayed spread by fiscal year, the dollar amount shown for the projects is the estimated expenditures for each fiscal year throughout the life of the projects. This type of presentation identifies what the financial requirements would be, using the pay as you go method of financing, which is the method currently in use by DWSD.

Project Types

The typical capital project consists of three distinct phases: study, design and construction. In some cases, phases are combined, such as study/design or design/construction. For capital program purposes, each phase is considered a separate project. Financing is committed only for the current project phase, and not for any subsequent phase until that phase has been authorized to start. Project identified as ongoing have been authorized to start by the director and the work is underway. Project identified as new have not yet started.

Project Detail Sections

Active Project: is a project that has an assigned DRMS number, been issued the Notice to Start Work, had expenditures in the last fiscal year and has projected expenditures of more than \$100,000 in the current fiscal year.

Project On Hold: is a project that may or may not have an assigned DRMS number, experienced expenditures or no expenditures in previous fiscal year(s), and/or has no projected expenditures in the current fiscal year or future fiscal years.

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 Detroit Water and Sewerage Department
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Projects Under Procurement: is a project that has an assigned DRMS number and has not been issued Notice to Start Work.

Projects Pending Close-out: is a project that has an assigned DRMS number, been issued the Notice to Start Work, has projected expenditures for the current fiscal year equal to \$100,000 or less – with no further projected expenditures, and has been substantially completed.

New Project: is a project that does not have an assigned DRMS number, has a proposal, and has never had expenditures charged to it.

Primary Project Purpose

- 1 – Directly mandated projects (Specific projects mandated by regulatory agencies or court ordered)
- 2 – Projects mandated by regulatory requirements to maintain compliance
- 3 – Projects required to maintain or improve system reliability and/or capacity
- 4 – Projects that utilize technological advances to improve operational efficiency, worker productivity and/or managerial effectiveness
- 5 – Projects required for new service

Allocation Status

- D – Detroit Only
- S – Suburban Only
- M – Macomb Only
- C/O – Clinton/Oakland Only
- C/O & M – Clinton/Oakland and Macomb
- 83/17 – New Wet Weather Facility
- CTA - Common To All
- OMID – Oakland Macomb Interceptor District

Project Types

- S – Study; S/D – Study and Design; S/D/C – Study, Design and Construction;
- S/D/CA – Study, Design and Construction Assistance
- D – Design; DB – Design Build; DBA – Design Build Assistance;
- D/C – Design and Construction; D/CA – Design and Construction Assistance
- C – Construction; CA – Construction Assistance;
- CM – Construction Management
- C/CA – Construction and Construction Assistance
- IT – Information Technology Systems
- LS – Legal Services
- PO – Purchase Order

Legend

(1) Costs shown represent the Sewage Disposal System’s portion (generally 50%) of the project. Refer to the Water CIP for project costs financed by the Water Supply System.

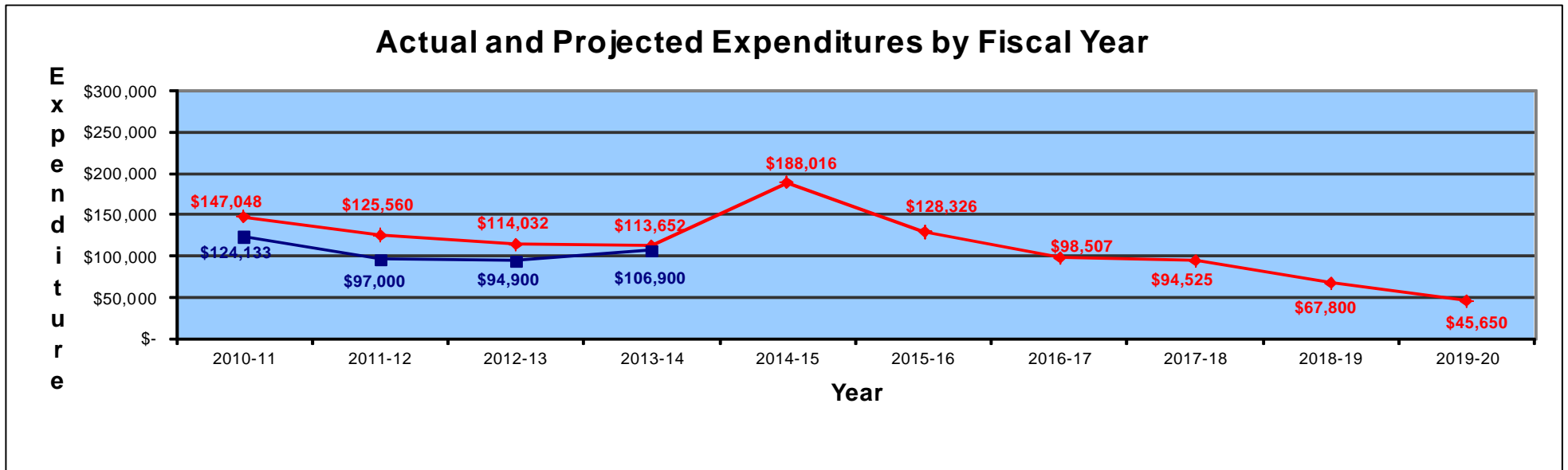
**Sewage Disposal System
Capital Improvement Program
CIP Executive Summary**

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3-11-2015

(000)

* For information purposes only. Not
counted in Total.

Ongoing	Update* 2014-15	2015 - 16	# of Projects	2016 - 17	2017 - 18	2018 - 19	2019 - 20	5 Year Sub Total	Remaining	Total
Active	136,877	63,378	17	9,357	3,825	0	0	76,560	5,661	82,221
Under Procurement	5,850	28,500	8	28,750	22,150	1,350	150	80,900	0	80,900
Pending Close-out	30,189	148	17	0	0	0	0	148	0	148
Ongoing Total	<u>172,916</u>	<u>92,026</u>	42	<u>38,107</u>	<u>25,975</u>	<u>1,350</u>	<u>150</u>	<u>157,608</u>	<u>5,661</u>	<u>163,269</u>
New Projects Total	15,100	36,300	12	60,400	68,550	66,450	45,500	277,200	22,782	299,982
Total CIP	<u>\$188,016</u>	<u>\$ 128,326</u>	<u>54</u>	<u>\$ 98,507</u>	<u>\$ 94,525</u>	<u>\$ 67,800</u>	<u>\$ 45,650</u>	<u>\$ 434,808</u>	<u>\$ 28,443</u>	<u>\$ 463,251</u>



■ Projected Expenditures
 ■ Actual (unaudited) Expenditures

Notations: 2010-11 thru 2013-14 totals are projected and actual (unaudited) expenditures
 2014-15 thru 2019-20 are projected expenditures

Summary of Projected Expenditures Spread by Fiscal Year

**Sewage Disposal System
Capital Improvement Program**

**BOWC Approved
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**Summary of Projected Expenditures Spread by Fiscal Year for Ongoing and New Projects
(000)**

	<u>2015 - 16</u>	<u>2016 - 17</u>	<u>2017 - 18</u>	<u>2018 - 19</u>	<u>2019 - 20</u>	<u>Remaining</u>	<u>Total</u>
Plant							
Primary Treatment	22,955	22,768	19,446	3,100	6,000	2,000	76,269
Secondary Treatment	6,519	8,612	5,640				20,771
Solids Handling	48,315	5,109	1,829	2,250	650	14,282	72,435
Disinfection	1,605	8,750	11,900	10,000		5,661	37,916
General Purpose	21,464	21,168	23,460	17,200	10,000		93,292
	<u>\$100,858</u>	<u>\$66,407</u>	<u>\$62,275</u>	<u>\$32,550</u>	<u>\$16,650</u>	<u>\$21,943</u>	<u>\$300,683</u>
Facilities							
Sewer Interceptor System	5,000	5,000	5,000	5,000	5,000		25,000
Combined Sewer System	6,015	5,100					11,115
Urban System Improvements	10,465	21,000	25,000	30,000	24,000	1,500	111,965
Information Technology	5,988	1,000	2,250	250		5,000	14,488
	<u>\$27,468</u>	<u>\$32,100</u>	<u>\$32,250</u>	<u>\$35,250</u>	<u>\$29,000</u>	<u>\$6,500</u>	<u>\$162,568</u>
Ongoing Projects	92,026	38,107	25,975	1,350	150	5,661	163,269
New Projects	36,300	60,400	68,550	66,450	45,500	22,782	299,982
TOTAL CAPITAL COSTS	<u>\$128,326</u>	<u>\$98,507</u>	<u>\$94,525</u>	<u>\$67,800</u>	<u>\$45,650</u>	<u>\$28,443</u>	<u>\$463,251</u>

Projected Expenditures Spread by Fiscal Year

**Sewage Disposal System
Capital Improvement Program
Projected Expenditures Spread by Fiscal Year
(000)**

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3-11-2015**

	<u>2015 - 16</u>	<u>2016 - 17</u>	<u>2017 - 18</u>	<u>2018 - 19</u>	<u>2019 - 20</u>	<u>Remaining</u>	<u>Total</u>
Combined Sewer System							
Ongoing	15						15
New	6,000	5,100					11,100
	<u>\$6,015</u>	<u>\$5,100</u>					<u>\$11,115</u>
Urban System Improvements							
Ongoing	6,265						6,265
New	4,200	21,000	25,000	30,000	24,000	1,500	105,700
	<u>\$10,465</u>	<u>\$21,000</u>	<u>\$25,000</u>	<u>\$30,000</u>	<u>\$24,000</u>	<u>\$1,500</u>	<u>\$111,965</u>
Information Technology							
Ongoing	1,988						1,988
New	4,000	1,000	2,250	250		5,000	12,500
	<u>\$5,988</u>	<u>\$1,000</u>	<u>\$2,250</u>	<u>\$250</u>		<u>\$5,000</u>	<u>\$14,488</u>
<u>Facilities Total</u>							
Ongoing Projects	8,268						8,268
New Projects	19,200	32,100	32,250	35,250	29,000	6,500	154,300
	<u>\$27,468</u>	<u>\$32,100</u>	<u>\$32,250</u>	<u>\$35,250</u>	<u>\$29,000</u>	<u>\$6,500</u>	<u>\$162,568</u>
Summary - Total Costs							
Ongoing Projects	92,026	38,107	25,975	1,350	150	5,661	163,269
New Projects	36,300	60,400	68,550	66,450	45,500	22,782	299,982
TOTAL CAPITAL COSTS	<u><u>\$128,326</u></u>	<u><u>\$98,507</u></u>	<u><u>\$94,525</u></u>	<u><u>\$67,800</u></u>	<u><u>\$45,650</u></u>	<u><u>\$28,443</u></u>	<u><u>\$463,251</u></u>

Summary of Mandate and Allocation Status by Fiscal Year

**Sewage Disposal System
Capital Improvement Program
Summary of Primary Project Purpose & Allocation Status
Projected Expenditures Spread by Fiscal Year**

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SUMMARY BY PRIMARY PROJECT PURPOSE AND ALLOCATION	<u>2015 - 16</u>	<u>2016 - 17</u>	<u>Funded</u>	<u>2017 - 18</u>	<u>2018 - 19</u>	<u>2019 - 20</u>	<u>Remaining</u>	<u>Total</u>
Directly Mandated Projects								
Common to All	1,055	6,000	7,055	10,800	10,000	0	5,661	33,516
Projects Mandated by Regulatory Requirements to Maintain Compliance								
Detroit Only	10	0	10	0	0	0	0	10
New Wet Weather Facility	5	0	5	0	0	0	0	5
Common to All	84,407	44,589	128,996	32,815	7,150	6,650	2,000	177,611
Projects Required to Maintain or Improve System Reliability and/or Capacity								
Detroit Only	10,470	21,000	31,470	25,000	30,000	24,000	1,500	111,970
Common to All	27,689	25,918	53,607	23,660	20,400	15,000	14,282	126,949
Projects that Utilize Technological Advances to Improve Operational Efficiency, Worker Productivity and/or Management Effectiveness								
Common to All	4,690	1,000	5,690	2,250	250	0	5,000	13,190
TOTAL	<u>\$128,326</u>	<u>\$98,507</u>	<u>\$226,833</u>	<u>\$94,525</u>	<u>\$67,800</u>	<u>\$45,650</u>	<u>\$28,443</u>	<u>\$463,251</u>

**Sewage Disposal System
Capital Improvement Program
Summary of Primary Project Purpose & Allocation Status
Projected Expenditures Spread by Fiscal Year
(000)**

SUMMARY BY ALLOCATION STATUS	<u>2015 - 16</u>	<u>2016 - 17</u>	<u>Funded</u>	<u>2017 - 18</u>	<u>2018 - 19</u>	<u>2019 - 20</u>	<u>Remaining</u>	<u>Total</u>
Detroit Only	10,480	21,000	31,480	25,000	30,000	24,000	1,500	111,980
New Wet Weather Facility	5	0	5	0	0	0	0	5
Common to All	117,841	77,507	195,348	69,525	37,800	21,650	26,943	351,266
TOTAL	<u><u>\$128,326</u></u>	<u><u>\$98,507</u></u>	<u><u>\$226,833</u></u>	<u><u>\$94,525</u></u>	<u><u>\$67,800</u></u>	<u><u>\$45,650</u></u>	<u><u>\$28,443</u></u>	<u><u>\$463,251</u></u>
Detroit Only	8%	21%	14%	26%	44%	53%	5%	24%
New Wet Weather Facility	<1%	0%	<1%	0%	0%	0%	0%	<1%
Common to All	92%	79%	86%	74%	56%	47%	95%	76%

**Sewage Disposal System
Capital Improvement Program
Summary of Primary Project Purpose & Allocation Status
Projected Expenditures Spread by Fiscal Year**

**BOWC Approved
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(000)

SUMMARY BY PRIMARY PROJECT PURPOSE	<u>2015 - 16</u>	<u>2016 - 17</u>	<u>Funded</u>	<u>2017 - 18</u>	<u>2018 - 19</u>	<u>2019 - 20</u>	<u>Remaining</u>	<u>Total</u>
Directly Mandated Projects	1,055	6,000	7,055	10,800	10,000	0	5,661	33,516
Projects Mandated by Regulatory Requirements to Maintain Compliance	84,422	44,589	129,011	32,815	7,150	6,650	2,000	177,626
Projects Required to Maintain or Improve System Reliability and/or Capacity	38,159	46,918	85,077	48,660	50,400	39,000	15,782	238,919
Projects that Utilize Technological Advances to Improve Operational Efficiency, Worker Productivity and/or Management Effectiveness	4,690	1,000	5,690	2,250	250	0	5,000	13,190
TOTAL	<u>\$128,326</u>	<u>\$98,507</u>	<u>226,833</u>	<u>\$94,525</u>	<u>\$67,800</u>	<u>\$45,650</u>	<u>\$28,443</u>	<u>\$463,251</u>
RELATIVE PERCENTAGE								
Directly Mandated Projects	<1%	6%	3%	11%	15%	0%	20%	7%
Projects Mandated by Regulatory Requirements to Maintain Compliance	66%	45%	57%	35%	11%	15%	7%	38%
Projects Required to Maintain or Improve System Reliability and/or Capacity	30%	48%	38%	51%	74%	85%	55%	52%
Projects that Utilize Technological Advances to Improve Operational Efficiency, Worker Productivity and/or Management Effectiveness	4%	1%	3%	2%	<1%	0%	18%	3%

A - Active Projects

An Active Project is a project that has:

1. an assigned DRMS number
2. been issued the Notice to Start Work
3. had expenditures in the last fiscal year
4. expenditures of more than \$100,000 in the current fiscal year

**Sewage Disposal System
Capital Improvement Program
Projected Expenditures Spread by Fiscal Year
Active Projects
(000)**

* For information purposes only. Not counted in Total.

Project Title	DRMS No.	CIP No.	Contract No./Contract Amount	Type	Update* 2014-15	2015 - 16	2016 - 17	2017 - 18	2018 - 19	2019 - 20	Remaining	Total	Primary Project Purpose	Allocation Status
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Primary Treatment

1	Rehabilitation of Primary Clarifiers, Drain Lines, Hot Water, and Scum Lines	004290	1141	CS-1484 \$ 915,650	S/D/CA	55	50	68	49			167	2	CTA
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Start Date: 08/11/2010 **Completion Date:** 02/09/2014

This project includes rehabilitation of scum collectors, replacement of hot water pipes on scum lines and conveyors for clarifiers # 1 through 12, replacement of sludge conveyance equipment, and sludge cross collectors for clarifiers #5 through 8, and rehabilitation of 12 drain lines from rectangular clarifiers Nos. 3-12. The scope of work shall also include concrete crack repair on floor, wall, and ceiling and clarifiers, etc., installation of large manhole with sum pumps to collect drainage and discharge to clarifier and interceptor to avoid plugging issue.

2	Pump Station 1 Rack & Grit and MPI Sampling Station 1 Improvements	004420	1189	PC-789 \$ 20,335,000	C	7,920	6,600	3,300	2,597			12,497	2	CTA
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Start Date: 11/18/2013 **Completion Date:** 07/30/2017

The scope of work includes modifications and improvements of the existing grit and screening handling system at pump stations 1 and MPI Sampling Station 1.

**Sewage Disposal System
Capital Improvement Program
Projected Expenditures Spread by Fiscal Year
Active Projects
(000)**

* For information purposes only. Not counted in Total.

Project Title	DRMS No.	CIP No.	Contract No./Contract Amount	Type	Update* 2014-15	2015 - 16	2016 - 17	2017 - 18	2018 - 19	2019 - 20	Remaining	Total	Primary Project Purpose	Allocation Status
Secondary Treatment														
3 Secondary Clarifiers, RAS Pumps and MCCs Improvements	004211	1100	PC-776 \$ 26,562,000	C	5,500	950						950	2	CTA
Start Date: 08/23/2010 Completion Date: 05/09/2016														
<i>This project provides new power supply cable to/from the secondary clarifiers and substation MCCs, provide new MCCs at each secondary clarifier, provide short-circuit analysis and fault rating, provide 25 RAS pumps at the secondary clarifiers and complete all miscellaneous electrical work such as replacement of cables, conduit, pull boxes, panels and junction boxes, etc.</i>														
4 Aeration System Improvements	004336	1194	CS-1498 \$ 1,731,573	S/D/CA	330	119	112	40				271	2	CTA
Start Date: 02/21/2012 Completion Date: 02/21/2017														
<i>The scope of work includes study, design, and construction assistance for the oxygen baffle on Bay 10 of A1 & A2 decks, replacement of influent, RAS piping, isolation gate and valves for decks nos. 3 & 4, replace RAS & influent magmeters for ILP nos. 3,4, & 7. The work will also include replacement of influent gates and operators on aeration deck no. 1 & 2.</i>														

**Sewage Disposal System
Capital Improvement Program
Projected Expenditures Spread by Fiscal Year
Active Projects
(000)**

* For information purposes only. Not counted in Total.

Project Title	DRMS No.	CIP No.	Contract No./Contract Amount	Type	Update* 2014-15	2015 - 16	2016 - 17	2017 - 18	2018 - 19	2019 - 20	Remaining	Total	Primary Project Purpose	Allocation Status
Solids Handling														
5 Replacement of Upper Level Belt Filter Presses for Complex I & II Dewatering	004284	1144	CS-1483 \$ 2,401,776	S/D/CA	236	300	139					439	2	CTA
<p>Start Date: 01/11/2010 Completion Date: 12/31/2016</p> <p><i>The work will consist of replacement of 10 Belt Filter Presses for Complex I and 12 Upper Level Belt Filter Presses for Complex II Dewatering, SFE booster pumps, sludge belt conveyors, sludge grinders, and all related supportive equipment including control panels and associated wiring.</i></p>														
6 Replacement of Belt Filter Presses for Complex I and Upper Level Complex II	004397	1144	PC-787 \$ 30,216,000	C	6,120	6,000	388					6,388	2	CTA
<p>Start Date: 05/21/2012 Completion Date: 08/03/2016</p> <p><i>The work will consist of replacement of 10 Belt Filter Presses for Complex I and 12 Upper Level Belt Filter Presses for Complex II Dewatering, SFE booster pumps, sludge belt conveyors, sludge grinders, and all related supportive equipment including control panels and associated wiring.</i></p>														

**Sewage Disposal System
Capital Improvement Program
Projected Expenditures Spread by Fiscal Year
Active Projects
(000)**

* For information purposes only. Not counted in Total.

Project Title	DRMS No.	CIP No.	Contract No./Contract Amount	Type	Update* 2014-15	2015 - 16	2016 - 17	2017 - 18	2018 - 19	2019 - 20	Remaining	Total	Primary Project Purpose	Allocation Status
7 Sewage Sludge Incinerator Air Quality Improvements at WWTP	004426	1253	PC-791 \$ 37,989,471	DB	15,000	13,500	3,000	479				16,979	2	CTA
<p>Start Date: 12/17/2012 Completion Date: 06/30/2017</p> <p><i>This project involves the design and construction for sludge incinerator air quality improvements at Complex I and Complex II Incinerator Facility at WWTP. The scope of work includes installation of new scrubber, ID fan, noise reduction modification, burner train upgrade, installation of conveyance system from Complex I to Complex II as necessary, and air quality control and monitoring equipment.</i></p>														
8 Biosolids Dryer Facility at WWTP	004439	1254	PC-792 \$ 143,000,000	DB	88,000	28,000	532					28,532	2	CTA

Start Date: 05/23/2013 **Completion Date:** 10/13/2016

This project provides for study, design and construction of a thermal dryer facility to treat 250 dtpd. The scope of work also includes a conveyance system from Complex I to Complex II and installation of quality control equipment.

**Sewage Disposal System
Capital Improvement Program
Projected Expenditures Spread by Fiscal Year
Active Projects
(000)**

* For information purposes only. Not counted in Total.

Project Title	DRMS No.	CIP No.	Contract No./Contract Amount	Type	Update* 2014-15	2015 - 16	2016 - 17	2017 - 18	2018 - 19	2019 - 20	Remaining	Total	Primary Project Purpose	Allocation Status
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Disinfection

9	Study, Design, & Construction Management Services for Modified Detroit River Outfall No. 2 - WWTP	004178	1117	CS-1448 \$ 13,097,673	S/D/CA	114					5,661	5,661	1	CTA
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Start Date: 10/31/2006 **Completion Date:** 10/31/2015

This project will involved limited study, detailed design, preparation of construction plans, and construction management services necessary to implement the modified Detroit River Outfall No. 2 in accordance with NPDES Permit requirements.

This contract is being used to provide study, design and construction assistance services for RRO-2 Segment 1.

General Purpose

10	Underground Electrical Duct Bank Repair and EB-1, EB-2, and EB-10 Primary Power Service Improvements - WWTP	004181	366	PC-783 \$ 27,620,000	C	5,107	3,000					3,000	2	CTA
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Start Date: 05/21/2012 **Completion Date:** 05/21/2016

This project will include replacement of 15kv Primary Switch Gears A & B, unit substation EB-1, EB-2, and EB-10, unit 5kv substation and switchgear DE-1, and two outdoor 3-phase primary transformers; and repair of building structure and associated components. The work will also include site preparation, installation of new ducts, placement of new electrical cable, coordination of system shut-down, and coordination of system reconnection with new cables.

**Sewage Disposal System
Capital Improvement Program
Projected Expenditures Spread by Fiscal Year
Active Projects
(000)**

* For information purposes only. Not counted in Total.

Project Title	DRMS No.	CIP No.	Contract No./Contract Amount	Type	Update* 2014-15	2015 - 16	2016 - 17	2017 - 18	2018 - 19	2019 - 20	Remaining	Total	Primary Project Purpose	Allocation Status
11 General Engineering Services (1)	004207	1031	CS-1432A \$ 6,625,000	D	495	220	18					238	3	CTA
Start Date: 01/23/2008 Completion Date: 01/23/2017														
<i>This project involves the study, design and construction assistance services for a variety of disciplines including, but not limited to, civil, architectural, structural, geotechnical, hydraulics, mechanical, piping, electrical, and instrumentation in a variety of tasks on an as-needed basis. Further tasks involve one or more DWSD facilities including, but not limited to water treatment plants, water distribution system including booster stations, wastewater treatment plant, wastewater collection systems including pumping stations, combined sewer overflow facilities, and administrative and logistical support facilities.</i>														
12 As-needed CIP Implementation Assistance and Related Services (1)	004218	956	CS-1433 \$ 9,913,172	S/D/CM	1,300	851	700	50				1,601	3	CTA
Start Date: 03/24/2006 Completion Date: 07/24/2017														
<i>This project provides for multi-discipline Engineering services on an "as-needed basis" to support DWSD's Water & Sewer Systems.</i>														
13 General Engineering Services (1)	004293	1182	CS-1481 \$ 6,600,000	D	1,000	1,000	500	323				1,823	3	CTA
Start Date: 03/27/2008 Completion Date: 03/27/2015														
<i>This project provides for rapid design turn-around for a variety of small scale projects on an as needed basis providing multi disciplinary professional services.</i>														

**Sewage Disposal System
Capital Improvement Program
Projected Expenditures Spread by Fiscal Year
Active Projects
(000)**

* For information purposes only. Not counted in Total.

Project Title	DRMS No.	CIP No.	Contract No./Contract Amount	Type	Update* 2014-15	2015 - 16	2016 - 17	2017 - 18	2018 - 19	2019 - 20	Remaining	Total	Primary Project Purpose	Allocation Status
14 As-needed Engineering Services for Concrete Testing, Geotechnical Soil Borings, other Testing Services, and Related Services (1)	004295	1147	CS-1488 \$ 4,097,850	D/C	600	600	600	287				1,487	3	CTA
Start Date: 04/08/2009 Completion Date: 04/08/2018														
<i>The scope of work provides for as-needed engineering services for concrete testing, geotechnical soil borings, and other testing and related services.</i>														
15 Geotechnical and Related Services on an As-Needed Basis (1)	004307	1164	CS-1490 \$ 2,500,000	D	200	200						200	3	CTA
Start Date: 01/14/2010 Completion Date: 01/14/2015														
<i>The work includes consultant services for geotechnical work on as needed basis. The work also provides for additional engineering/technical services as requested by DWSD.</i>														

**Sewage Disposal System
Capital Improvement Program
Projected Expenditures Spread by Fiscal Year
Active Projects
(000)**

* For information purposes only. Not counted in Total.

Project Title	DRMS No.	CIP No.	Contract No./Contract Amount	Type	Update* 2014-15	2015 - 16	2016 - 17	2017 - 18	2018 - 19	2019 - 20	Remaining	Total	Primary Project Purpose	Allocation Status
Information Technology														
16 Data Center Reliability/Availability Improvements (1)	004367	1206	DWS-881 \$ 2,862,425	DB	1,500	685						685	4	CTA
Start Date: 01/29/2013 Completion Date: 02/27/2016														
<i>The scope of work consists of designing and building data centers, which will provide system improvements for both power and UPS systems, environmental service, fire protection, structural wiring, and monitoring. This includes the SCC, WBB, Switch Room Central Services Facility, Switch Room WWTP-NAB-B1, Data Center Central Service Facility - IS-226, and Data Center WWTP-K303.</i>														
17 SCADA Radio Network Upgrade (1)	004369	1207	DWS-882 \$ 3,997,545	DB	1,900	383						383	3	CTA

Start Date: 03/26/2013 **Completion Date:** 03/26/2016

The scope of work consists of installing and upgrading the Department's new SCADA Radio network including low voltage wiring, radio wiring and cable, data connections, antenna mounting and connections, instrument wiring, network wiring, and fiber networks. It also includes system improvements and planning, system and material procurement in support of the activities required for completing each task.

**Sewage Disposal System
Capital Improvement Program
Projected Expenditures Spread by Fiscal Year
Active Projects
(000)**

* For information purposes only. Not counted in Total.

Project Title	DRMS No.	CIP No.	Contract No./Contract Amount	Type	Update* 2014-15	2015 - 16	2016 - 17	2017 - 18	2018 - 19	2019 - 20	Remaining	Total	Primary Project Purpose	Allocation Status
18 Consolidated Process Control System Upgrades (1)	004393	1153	PC-773D \$ 3,280,158	DB1	1,500	920						920	3	CTA

Start Date: 05/23/2013 **Completion Date:** 05/22/2016

This project involves integrating the control and monitoring network throughout all of the DWSD facilities with the new SCADA system installed under PC-713. The work includes control system hardware, software, and firmware upgrade or replacement, also troubleshooting, installation, start-up, testing, and repair services.

<u>\$136,877</u>	<u>\$63,378</u>	<u>\$9,357</u>	<u>\$3,825</u>	<u>\$0</u>	<u>\$0</u>	<u>\$5,661</u>	<u>\$82,221</u>
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UP - Projects Under Procurement

A Project Under Procurement has:

1. an assigned DRMS number
2. not been issued the Notice to Start Work

**Sewage Disposal System
Capital Improvement Program
Projected Expenditures Spread by Fiscal Year
Projects Under Procurement
(000)**

* For information purposes only. Not
counted in Total.

Project Title	DRMS No.	CIP No.	Contract No.	Type	Update* 2014-15	2015 - 16	2016 - 17	2017 - 18	2018 - 19	2019 - 20	Remaining	Total	Primary Project Purpose	Allocation Status
Primary Treatment														
1 Pump Station No. 2 Pumping Improvements	004215	961	PC-795	C	500	1,300	1,200	200				2,700	2	CTA
<i>The scope of work involves modification/refurbishment of existing constant speed Pump Nos. 11 and 14. The modifications consist of replacing the complete pump less casing and hand hole covers, worn out parts, suction head and stuffing box head to improve pump hydraulic conditions and replace the existing suction pipe with newly designed suction pipe with vanes based on the computerized flow dynamics (CFD) analysis.</i>														
2 Rehabilitation of Primary Clarifiers Rectangular Tanks, Drain Lines, Electrical/Mechanical Building and Pipe Gallery	004818	291	PC-757	C	1,500	15,000	18,000	16,000	1,100			50,100	2	CTA
<i>The work to be completed under this project will include installing ventilation and atmospheric control for the rectangular primary pipe gallery; providing new lights and emergency lights, etc. This work also includes rehabilitation of 12 drain lines from rectangular clarifiers 3 thru 12, installation of large manhole with sump pumps to collect drainage and discharge to clarifier, and concrete crack repairs, and rehabilitation work in Electrical/Mechanical Building.</i>														

**Sewage Disposal System
Capital Improvement Program
Projected Expenditures Spread by Fiscal Year
Projects Under Procurement
(000)**

* For information purposes only. Not
counted in Total.

Project Title	DRMS No.	CIP No.	Contract No.	Type	Update* 2014-15	2015 - 16	2016 - 17	2017 - 18	2018 - 19	2019 - 20	Remaining	Total	Primary Project Purpose	Allocation Status
Secondary Treatment														
3 Aeration System Improvements	004336	1194	PC-796	C	50	5,450	8,500	5,600				19,550	2	CTA
<i>The scope of work includes the installation of oxygen baffle on Bay 10 of A1 & A2 decks, replacement of influent, RAS piping, isolation gate and valves for decks nos. 3 & 4, replace RAS & influent magmeters for ILP nos. 3,4, & 7. The work will also include replacement of influent gates and operators on aeration deck no. 1 & 2.</i>														
Solids Handling														
4 Rehabilitation of Central Offload Facility	004820	1221	CS-1701	S/D/CA	200	500	1,050	350	250	150		2,300	2	CTA
<i>The scope of work consists of study, design, and construction assistance services for the rehabilitation of the central offload facility, which includes bin activators, rotary feeder valves, knife gate valves, bottom hoppers, conveyors, and other associated items. The work also includes rehabilitation of HVAC system of the entire facility, lime offloading system, drainage system, elevator, and doors.</i>														
Urban System Improvements														
5 Inspection and In-Place Rehabilitation of Existing Sewers - East Side	004821	448	DWS-889	C1	900	1,550						1,550	3	D
<i>Inspection and In-place rehabilitation/repair of existing sewers located in DWSD's east maintenance yard using the trenchless pipeline lining/rehabilitation techniques.</i>														

**Sewage Disposal System
Capital Improvement Program
Projected Expenditures Spread by Fiscal Year
Projects Under Procurement
(000)**

* For information purposes only. Not counted in Total.

Project Title	DRMS No.	CIP No.	Contract No.	Type	Update* 2014-15	2015 - 16	2016 - 17	2017 - 18	2018 - 19	2019 - 20	Remaining	Total	Primary Project Purpose	Allocation Status
6 Inspection and In-place Rehabilitation of Existing Sewers - North Side	004822	448	DWS-900	C 4	900	1,575						1,575	3	D
<i>Inspection and In-place rehabilitation/repair of existing sewers located in DWSD's north maintenance yard using the trenchless pipeline lining/rehabilitation techniques.</i>														
7 Inspection and In-place Rehabilitation of Existing Sewers - Central Side	004823	448	DWS-890	C 3	900	1,550						1,550	3	D
<i>Inspection and In-place rehabilitation/repair of existing sewers located in DWSD's central maintenance yard using the trenchless pipeline lining/rehabilitation techniques.</i>														
8 Inspection and In-place Rehabilitation of Existing Sewers - West Side	004824	448	DWS-901	C 5	900	1,575						1,575	3	D
<i>Inspection and In-place rehabilitation/repair of existing sewers located in DWSD's west maintenance yard using the trenchless pipeline lining/rehabilitation techniques.</i>														
					<u>\$5,850</u>	<u>\$28,500</u>	<u>\$28,750</u>	<u>\$22,150</u>	<u>\$1,350</u>	<u>\$150</u>	<u>\$0</u>	<u>\$80,900</u>		

PC - Projects Pending Close-Out

A Project Pending Close-Out is a project that has:

1. an assigned DRMS number
2. been issued the Notice to Start Work
3. been substantially completed
4. project expenditures for the current fiscal year equal to \$100,000 or less - with no projected expenditures

**Sewage Disposal System
Capital Improvement Program
Projected Expenditures Spread by Fiscal Year
Projects Pending Close-out
(000)**

* For information purposes only. Not counted in Total.

Project Title	DRMS No.	CIP No.	Contract No./Contract Amount	Type	Update* 2014-15	2015 - 16	2016 - 17	2017 - 18	2018 - 19	2019 - 20	Remaining	Total	Primary Project Purpose	Allocation Status
Primary Treatment														
1 Pump Station No. 2 Pumping Improvements	004215	961	CS-1444 \$ 414,246	S/D/CA	7	5						5	2	CTA
Start Date: 08/11/2010		Completion Date: 08/11/2015												
<i>This project involves evaluating and recommending alternatives for providing more reliable pumping capacity at Pump Station No. 2.</i>														
Solids Handling														
2 Complex I and Complex II Incinerator Improvements	004169	965	PC-774 \$ 38,150,000	DB	7,976	5						5	2	CTA
Start Date: 11/01/2010		Completion Date: 03/31/2015												
<i>This project provides for the designbuild replacement of the Opacity monitors, improvements for Yellow plume reduction and rehabilitation of refractory, brick work and internal components of complex I and II incinerators at the Waste Water Treatment Plant.</i>														
3 Rehabilitate Sludge Pump Stations 1 and 2	004225	607	CS-1467 \$ 950,000	D/CA	5	5						5	2	CTA
Start Date: 09/09/2008		Completion Date: 07/09/2014												
<i>This project will provide for general rehabilitation of the Sludge Pump Station Nos. 1 and 2, including sludge pump improvements to meet future sludge loads, heating and ventilation improvements and other miscellaneous building and utility improvements.</i>														

**Sewage Disposal System
Capital Improvement Program
Projected Expenditures Spread by Fiscal Year
Projects Pending Close-out
(000)**

* For information purposes only. Not counted in Total.

Project Title	DRMS No.	CIP No.	Contract No./Contract Amount	Type	Update*						Remaining	Total	Primary Project Purpose	Allocation Status
					2014 - 15	2015 - 16	2016 - 17	2017 - 18	2018 - 19	2019 - 20				
4 Rehabilitate Sludge Pump Stations 1 and 2	004225	607	PC-780 \$ 6,199,525	C	61	5						5	2	CTA

Start Date: 08/15/2011 **Completion Date:** 10/12/2014

This project will provide for general rehabilitation of the Sludge Pump Station Nos. 1 and 2, including sludge pump improvements to meet future sludge loads, heating and ventilation improvements and other miscellaneous building and utility improvements.

Disinfection

5 Rouge River Outfall No. 2 (RRO-2) Segment 1 - WWTP Modifications	004395	1235	PC-786 \$ 13,117,000	C	2,220	55						55	1	CTA
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Start Date: 05/21/2012 **Completion Date:** 12/21/2015

The scope of work includes installation of new SL-8 Gates, modification of Movable DAM MD-1, and installation of new power pack building. This project will also provide for a hydraulic actuation system for gates MD-3 A/B, MD-4 A/B and SG 41-44, modification of stop logs SL-1 A/B, and replace Chlorination/dechlorination tank car emergency shutoff valves. The project will further include modification of PLC based control system with an Ovation based or Rockwell control system, capping abandon PC-709 entrance shaft, and removal of PC-709 precast tunnel lining segments.

**Sewage Disposal System
Capital Improvement Program
Projected Expenditures Spread by Fiscal Year
Projects Pending Close-out
(000)**

* For information purposes only. Not counted in Total.

Project Title	DRMS No.	CIP No.	Contract No./Contract Amount	Type	Update* 2014-15	2015 - 16	2016 - 17	2017 - 18	2018 - 19	2019 - 20	Remaining	Total	Primary Project Purpose	Allocation Status
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General Purpose

6	As-needed Engineering Services (1)	003451	54	CS-1345 \$ 4,165,092	D	168	5					5	3	CTA
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Start Date: 07/09/2001 **Completion Date:** 01/19/2015

This project provides rapid design turn-around for a variety of small scale projects which have not been initiated due to lack of in-house engineering staff.

7	Plant-wide Fire Alarm Systems Upgrade/ Integration and Fire Protection Improvements	004180	1028	CS-1443 \$ 710,668	S/D/CA	94	5					5	3	CTA
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Start Date: 06/12/2008 **Completion Date:** 12/31/2015

This project involves the necessary study, design, and construction assistance for the installation of an Integrated Plant Wide Fire Alarm System in the approximately 100 buildings (of which 50 + have a standalone fire alarm system) at the WWTP in order to facilitate centralized monitoring and assure faster corrective action. The new system will be interfaced with the existing WWTP Control System so that signals associated with this system can be transmitted over the existing fiber optic cables as a physical media for interconnection of the standalone systems.

**Sewage Disposal System
Capital Improvement Program
Projected Expenditures Spread by Fiscal Year
Projects Pending Close-out
(000)**

* For information purposes only. Not counted in Total.

Project Title	DRMS No.	CIP No.	Contract No./Contract Amount	Type	Update*						Remaining	Total	Primary Project Purpose	Allocation Status
					2014 - 15	2015 - 16	2016 - 17	2017 - 18	2018 - 19	2019 - 20				
8 Plant-wide Fire Alarm Systems Upgrade/ Integration and Fire Protection Improvements	004180	1028	PC-782 \$ 5,749,000	C	3,108	5						5	3	CTA

Start Date: 04/15/2013 **Completion Date:** 09/05/2015

This project involves the installation of an Integrated Plant Wide Fire Alarm System in the approximately 100 buildings (of which 50 + have a stand-alone fire alarm system) at the WWTP in order to facilitate centralized monitoring and assure faster corrective action. The new system will be interfaced with the existing WWTP Control System so that signals associated with this system can be transmitted over the existing fiber optic cables as a physical media for interconnection of the standalone systems.

9 Underground Electrical Duct Bank Repair and EB-1, EB-2, and EB-10 Primary Power Service Improvements - WWTP	004181	366	CS-1449 \$ 1,910,150	S/D/CA	165	18						18	2	CTA
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Start Date: 06/12/2008 **Completion Date:** 06/11/2016

This project involves the necessary study, design, and construction assistance work for repairing the 15kv Primary Switch Gears A & B, unit substation EB-1, EB-2, and EB-10, unit 5kv substation and switchgear DE-1, and two outdoor 3-phase primary transformers; and repair of building structure and associated components. The work will also include site preparation, installation of new ducts, placement of new electrical cable, coordination of system shut-down, and coordination of system reconnection with new cables.

**Sewage Disposal System
Capital Improvement Program
Projected Expenditures Spread by Fiscal Year
Projects Pending Close-out
(000)**

* For information purposes only. Not counted in Total.

Project Title	DRMS No.	CIP No.	Contract No./Contract Amount	Type	Update* 2014 - 15	2015 - 16	2016 - 17	2017 - 18	2018 - 19	2019 - 20	Remaining	Total	Primary Project Purpose	Allocation Status
10 Department-wide General Engineering Services on an As-needed Basis (1)	004338	1026	CS-1499 \$ 5,000,000	D	889	5						5	3	D
<p>Start Date: 05/12/2010 Completion Date: 05/12/2015</p> <p><i>This project involves designing water main and lateral sewer replacement projects for aging and dysfunctional water mains and sewers throughout Detroit under different tasks on an as-needed basis. The work also includes civil, structural, architectural, hydraulics, mechanical, electrical, surveying, instrumentation and piping design services.</i></p>														
11 Central Services Facility (CSF) Improvements (1)	004399	1188	DWS-884A \$ 1,853,981	C	1,466	5						5	4	CTA
<p>Start Date: 11/04/2013 Completion Date: 11/30/2014</p> <p><i>The scope of work includes HVAC system improvements, overhead doors replacement and other structural, mechanical and electrical rehabilitative work at the Central Services Facility (CSF).</i></p>														

**Sewage Disposal System
Capital Improvement Program
Projected Expenditures Spread by Fiscal Year
Projects Pending Close-out
(000)**

* For information purposes only. Not counted in Total.

Project Title	DRMS No.	CIP No.	Contract No./Contract Amount	Type	Update* 2014-15	2015 - 16	2016 - 17	2017 - 18	2018 - 19	2019 - 20	Remaining	Total	Primary Project Purpose	Allocation Status
Combined Sewer System														
12 Bluehill Pumping Station Rehabilitation	004067	637	PC-685 \$ 18,524,855	C	0	5						5	2	D
Start Date: 08/31/2005		Completion Date: 01/31/2014												
<i>The work to be completed under this project includes: a new 120 MGD stormwater pump with VFD; replacement of three existing stormwater pumps of 250 MGD capacity each; replacement of stormwater dewatering pump; replacement of two 75 HP sanitary pumps; and replacement of switchgear. This project also includes structural, architectural, mechanical, electrical, and I/C modifications.</i>														
13 Fischer Pumping Station Improvements	004174	1093	CS-1421 \$ 2,923,014	S/D/CA 2	149	5						5	2	D
Start Date: 06/11/2007		Completion Date: 12/31/2015												
<i>This project involves study, design, and construction assistance services for the rehabilitation of the Fischer Pumping Station.</i>														
14 Hubbell-Southfield CSO Control Facility & In-System Storage Gate Improvements	004424	1190	PC-788 \$ 17,669,550	C	7,523	5						5	2	83/17
Start Date: 02/27/2013		Completion Date: 04/28/2015												
<i>The scope of work includes selective repair and rehabilitation of Hubbell-Southfield CSO facility. The work also includes in-system storage gate improvements, upgrades of select process and control equipment installed at Puritan/Fenkell, 7 mile, and Conner Creek RTBs.</i>														

**Sewage Disposal System
Capital Improvement Program
Projected Expenditures Spread by Fiscal Year
Projects Pending Close-out
(000)**

* For information purposes only. Not
counted in Total.

Project Title	DRMS No.	CIP No.	Contract No./Contract Amount	Type	Update* 2014-15	2015 - 16	2016 - 17	2017 - 18	2018 - 19	2019 - 20	Remaining	Total	Primary Project Purpose	Allocation Status
Urban System Improvements														
15 East Side City of Detroit Sewer Repair Contract for Inspection and In-place Rehabilitation of Existing Circular and Non-Circular Sewers	004341	1201	DWS-876 \$ 43,759,001	DB	1,547	5						5	3	D
Start Date: 04/22/2010		Completion Date: 09/28/2014												
<i>This project will provide for inspection and in-place rehabilitation of existing sewers using the construction process, procedures, methods and equipment of trenchless pipeline rehabilitation techniques on an as-needed basis.</i>														
16 West Side City of Detroit Sewer Repair Contract for Inspection and In-place Rehabilitation of Existing Circular and Non-Circular Sewers	004342	1200	DWS-877 \$ 43,471,188	DB	1,621	5						5	3	D
Start Date: 04/22/2010		Completion Date: 09/28/2014												
<i>This project will provide for inspection and in-place rehabilitation of existing sewers using the construction process, procedures, methods and equipment of trenchless pipeline rehabilitation techniques on an as-needed basis.</i>														

**Sewage Disposal System
Capital Improvement Program
Projected Expenditures Spread by Fiscal Year
Projects Pending Close-out
(000)**

* For information purposes only. Not counted in Total.

Project Title	DRMS No.	CIP No.	Contract No./Contract Amount	Type	Update*						Remaining	Total	Primary Project Purpose	Allocation Status
					2014 - 15	2015 - 16	2016 - 17	2017 - 18	2018 - 19	2019 - 20				
17 Emergency Sewer Repair and Rehabilitation	004487	448	DWS-899 \$ 2,900,000	DB	3,190	5						5	3	D

Start Date: 07/14/2014 **Completion Date:** 03/14/2015

Emergency sewer repair/rehabilitation work throughout the City of Detroit.

<u>\$30,189</u>	<u>\$148</u>	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>	<u>\$148</u>
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N - New Projects

A New Project is a project that:

1. does not have an assigned DRMS number
2. has a proposal
3. has never had expenditures charged against it

**Sewage Disposal System
Capital Improvement Program
Projected Expenditures Spread by Fiscal Year**

**BOWC Approved
3-11-2015**

**New Projects
(000)**

* For information purposes only. Not counted in Total.

Project Title	Contract No.	Year Added	CIP No.	Type	Update* 2014-15	2015 - 16	2016 - 17	2017 - 18	2018 - 19	2019 - 20	Remaining	Total	Primary Project Purpose	Allocation Status
Primary Treatment														
1 Pump Station No. 2 Improvements Phase II at Wastewater Treatment Plant (WWTP)		2014	1287	S/D/C	0		200	600	2,000	6,000	2,000	10,800	2	CTA
<i>The work includes study, design, and construction for the rehabilitation/rebuilding of 5 pumps namely 9, 12, 13, 15, and 16 at PS 2 facility, its control and any associated equipment, replacement of HVAC System, I&C improvements, structural, architectural and electrical improvements at the facility.</i>														
Solids Handling														
2 Rehabilitation of Central Offload Facility		2010	1221	C	0			1,000	2,000	500		3,500	2	CTA
<i>The scope of work for the rehabilitation of the central offload facility includes bin activators, rotary feeder valves, knife gate valves, bottom hoppers, conveyors, and other associated items. The work also includes rehabilitation of HVAC system of the entire facility, lime offloading system, drainage system, elevator, and doors.</i>														
3 Complex I Incinerators Demolition and Reusability at Wastewater Treatment Plant (WWTP)		2014	1284	S/D/C	0						14,282	14,282	3	CTA
<i>The work includes demolition of the existing complex I incineration facility requiring study, plan, removal and relocation of the existing equipment. The work also includes future reusability plan recommendation for complex I incineration facility. This project is necessitated because of the anticipated non use of the facility due to the new biosolids dryer facility coming into operation in near future.</i>														

**Sewage Disposal System
Capital Improvement Program
Projected Expenditures Spread by Fiscal Year**

**BOWC Approved
3-11-2015**

**New Projects
(000)**

* For information purposes only. Not counted in Total.

Project Title	Contract No.	Year Added	CIP No.	Type	Update* 2014-15	2015 - 16	2016 - 17	2017 - 18	2018 - 19	2019 - 20	Remaining	Total	Primary Project Purpose	Allocation Status
Disinfection														
4 Replacement of Chlorination and Dechlorination Equipment at the WWTP		2010	1222	C	0	550	2,750	1,100				4,400	2	CTA
<i>The work will consist of installation of sixteen (16) chlorinators, fourteen (14) sulfonators, and thirty (30) evaporators and related equipment mandated by regulatory requirements.</i>														
5 Rouge River Outfall (RRO) Disinfection (Alternative)		2014	1302	S/D/C	200	1,000	6,000	10,800	10,000			27,800	1	CTA
<i>This is an alternative to RRO-2 Segment 2 Conduit, which will provide disinfection of excess wet weather flow at Detroit WWTP.</i>														
General Purpose														
6 Study/ Repair Potable Water, Screened Final Effluent, Natural Gas and Compressed Air Pipe Lines at the WWTP		2006	1140	S/D/C	0	50	350	2,800	1,800			5,000	2	CTA
<i>This project will include the repair or replacement of the aging and corroded pipes, valves, and fittings for the potable water supply system, natural gas system, SFE system, and compressed air system. It also includes installation of a compressed air system to supply air to the pneumatic tools in the PS 2 facility.</i>														

**Sewage Disposal System
Capital Improvement Program
Projected Expenditures Spread by Fiscal Year**

**BOWC Approved
3-11-2015**

**New Projects
(000)**

* For information purposes only. Not counted in Total.

Project Title	Contract No.	Year Added	CIP No.	Type	Update* 2014-15	2015 - 16	2016 - 17	2017 - 18	2018 - 19	2019 - 20	Remaining	Total	Primary Project Purpose	Allocation Status
7 Rehabilitation of Grit and Screening System at PS # 2 and Rehabilitation of Sampling Sites at WWTP		2010	1223	C	1,000	3,000	5,000	2,000				10,000	2	CTA
<i>The work consists of modifications and improvements of the existing grit and screening handling system at pump station #2. The work also includes removal, and installation of new samplers, pumps, piping, housing, and related equipment. Sampling sites include Jefferson, Oakwood, MPI 2, NEIA, PE, River Rouge Outfall, PEAS 1, 3 and 4, ML 1 thru 4, RAS 1 thru 4, and C2E 3 and 4. These improvements will enable WWTP to be in compliance with NPDES.</i>														
8 Rehabilitation of the Main Plant Maintenance Building, Replacement of Various Plant Maintenance Areas and Work Environment Improvement		2011	1237	S/D/C	0	500	1,000	6,000	5,400			12,900	3	CTA
<i>The scope of work consists of studying existing maintenance facilities and evaluation of suitable modifications to consolidate the maintenance areas and provide sufficient storage. The work also will provide for new maintenance areas, rehabilitate Primary Treatment maintenance areas: i.e., Main Plant Maintenance building, shops, work and storage areas for Pump Station no. 1, replace loading dock on the Rack and Grit building and Complex 1, rehabilitate basement of the Rack and Grit building for equipment storage, and provide work environment improvements at the Waste Water Treatment Plant.</i>														
9 Wastewater Treatment Plant Allowance		2012	1257	D/C	10,000	10,000	10,000	10,000	10,000	10,000		50,000	3	CTA
<i>This is an Allowance for unplanned critical projects, equipment replacement/rehabilitation, critical asset replacement, energy saving project, etc. at the Wastewater Treatment Plant and other Wastewater Operation Facilities.</i>														

**Sewage Disposal System
Capital Improvement Program
Projected Expenditures Spread by Fiscal Year**

**BOWC Approved
3-11-2015**

**New Projects
(000)**

* For information purposes only. Not counted in Total.

Project Title	Contract No.	Year Added	CIP No.	Type	Update* 2014-15	2015 - 16	2016 - 17	2017 - 18	2018 - 19	2019 - 20	Remaining	Total	Primary Project Purpose	Allocation Status
10 Relocation of Industrial Waste Division and Analytical Laboratory Operations		2014	1285	C	0	2,000	3,000	2,000				7,000	3	CTA
<i>The work includes relocation of the industrial waste control division and analytical laboratory operations to Conner Creek CSO facility and WWTP 3rd floor respectively.</i>														

Sewer Interceptor System

11 Interceptor Allowance		2013	1263	D/C	1,000	5,000	5,000	5,000	5,000	5,000		25,000	3	CTA
<i>Yearly allowance for evaluation and rehabilitation of the interceptors and other large diameter sewers.</i>														

Combined Sewer System

12 Fairview Pumping Station - Replace Four Sanitary Pumps		2011	1241	C	0	6,000	5,100					11,100	3	CTA
<i>The scope of work consists of the study and design for four new pumping systems including inlet and discharge valves and wet well hydraulics. This will also include enlarging doorways, revamping roadways, and upgrade of electrical and control systems.</i>														

Urban System Improvements

13 Sewer Replacement Allowance			448	D/C	1,400	4,000	20,000	20,000	20,000	20,000		84,000	3	D
<i>Yearly allowance to replace aging sewer lines in the City.</i>														
14 Oakwood District Relief Sewer Modification at Oakwood District		2014	1286	S/D/C	0	200	1,000	5,000	10,000	4,000	1,500	21,700	3	D
<i>The work includes basis of design (study) report on alternative solution to proposed Oakwood District Relief Sewer, design for replacement of sewer lines, catch basins, diversion of stormwater flow, and construction assistance during construction phase of emerging projects etc.</i>														

**Sewage Disposal System
Capital Improvement Program
Projected Expenditures Spread by Fiscal Year**

**BOWC Approved
3-11-2015**

**New Projects
(000)**

* For information purposes only. Not counted in Total.

Project Title	Contract No.	Year Added	CIP No.	Type	Update* 2014-15	2015 - 16	2016 - 17	2017 - 18	2018 - 19	2019 - 20	Remaining	Total	Primary Project Purpose	Allocation Status
Information Technology														
15 Replacement of LIMS / PIMS Software System		2010	1224	S/D/C	0						5,000	5,000	4	CTA
<i>The scope of work consists of the study, design, purchase, and installation of the LIMS / PIMS software system. This will include identifying major tasks to be performed and customizing software requirements, testing, and training.</i>														
16 IT Systems Allowance (1)		2013	1262	DB	1,500	4,000	1,000	2,250	250			7,500	4	CTA
<i>This is an allowance for the procurement of IT equipment or services for the replacement or upgrade of the department's computer systems, software licensing, and related IT items.</i>														
					<u>\$15,100</u>	<u>\$36,300</u>	<u>\$60,400</u>	<u>\$68,550</u>	<u>\$66,450</u>	<u>\$45,500</u>	<u>\$22,782</u>	<u>\$299,982</u>		