



# Sewage Disposal System Capital Improvement Program

Fiscal Years 2012 Through 2016  
July, 2011

**Dave Bing, Mayor**  
City of Detroit

**Administration**

Sue F. McCormick, Director

Darryl A. Latimer, Deputy Director

James George, Assistant Director  
Financial Services Group

Syed Ali, P.E., Manager  
Capital Management Group

**Board of Water Commissioners**

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Janice M. Winfrey, City Clerk

**Sewage Disposal System  
Capital Improvement Program  
Fiscal Years 2011-12 Through 2015-16  
July, 2011**

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**Detroit Water and Sewerage Department  
Capital Improvement Program  
Fiscal Years 2011-12 through 2015-16  
July, 2011**

**Executive Management Team**

Sue F. McCormick - Director  
Darryl A. Latimer, Deputy Director  
Pa Dada, Assistant Director, Information Technology, Systems Integration & Operations  
Assistant Director, Asset Maintenance Group - Vacant  
James George, Assistant Director, Financial Services Group  
Rodney Johnson, Assistant Director, Commercial Operations and Public Affairs Group  
Stephen Kuplicki, P.E., Assistant Director, Industrial Waste Control  
Cheryl Porter, Assistant Director, Water Supply Operations Group  
Samuel A. Smalley, P.E., Assistant Director, Wastewater Operations Group  
Miriam Dixon, General Manager, Contracts and Grants  
Terri Conerway, Manager, Process and Quality Control

**Capital Management Group**

Syed Ali, P.E., Manager  
Joan A. Wills  
Corey Thomas

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

## 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 uses maximum debt financing to pay for the capital programs. This means that the programs are paid for primarily through the sale of revenue bonds, with only a small amount of capital financing provided directly from annual revenues. These fiscal policies allow the department to minimize the impact of the capital programs on water and sewage rates.

### 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.

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

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

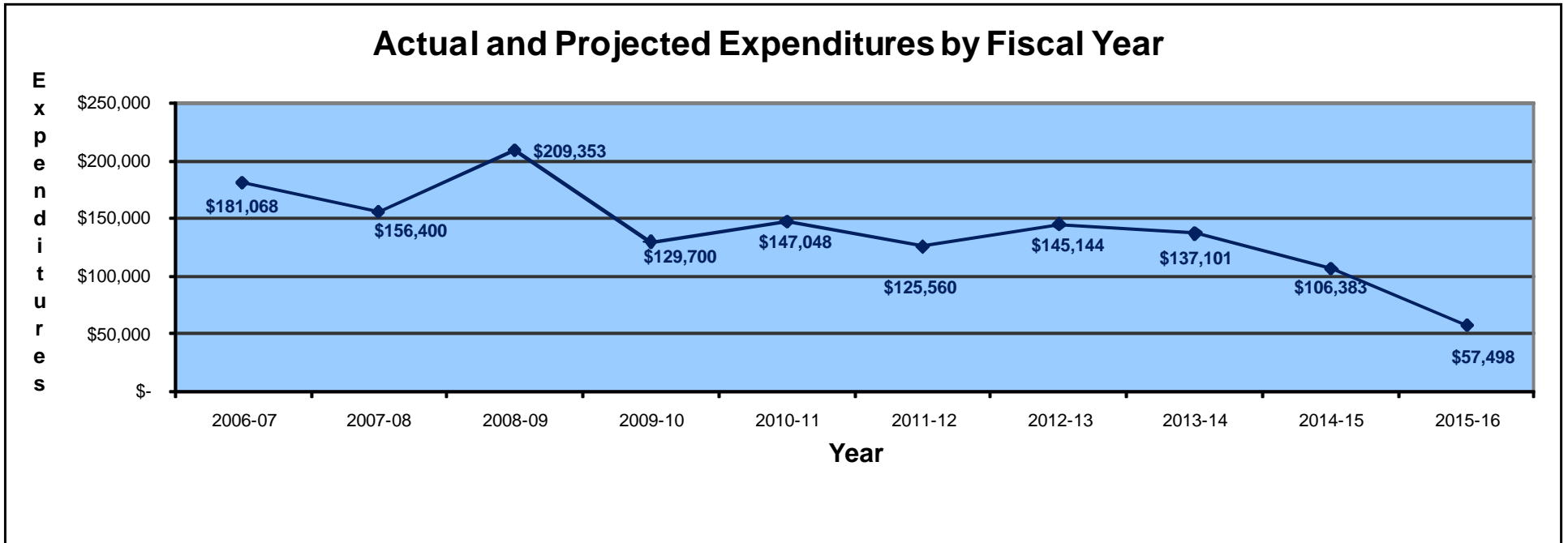
- S – Study; S/D – Study and Design; S/D/C – Study, Design and Construction;
- S/D/CA – Study, Design and Construction Assistance
- D – Design; DB – Design Build; DBA – Design Build Assistance;
- D/C – Design and Construction; D/CA – Design and Construction Assistance
- C – Construction; CA – Construction 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 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  
(000)**

	<u>2011 - 12</u>	# of Projects	<u>2012 - 13</u>	<u>2013 - 14</u>	<u>2014 - 15</u>	<u>2015 - 16</u>	<u>Remaining</u>	<u>Total</u>
<b>Ongoing</b>								
Active	100,761	37	54,286	22,773	9,472	3,003	1,130	191,425
Under Procurement	14,700	9	34,263	29,009	13,208	7,650	0	98,830
Pending Close-out	199	12	0	0	0	0	0	199
<b>Ongoing Total</b>	<u>115,660</u>	58	<u>88,549</u>	<u>51,782</u>	<u>22,680</u>	<u>10,653</u>	<u>1,130</u>	<u>290,454</u>
<b>New Projects Total</b>	9,900	10	56,595	85,319	83,703	46,845	35,551	317,913
<b>Total CIP</b>	<u>\$ 125,560</u>	<u>68</u>	<u>\$ 145,144</u>	<u>\$ 137,101</u>	<u>\$ 106,383</u>	<u>\$ 57,498</u>	<u>\$ 36,681</u>	<u>\$ 608,367</u>



**Notations:** 2006-07 thru 2009-10 totals are actual (unaudited) expenditures  
2010-11 thru 2015-16 are projected expenditures

# Summary of Projected Expenditures Spread by Fiscal Year

**Sewage Disposal System  
Capital Improvement Program**

**Summary of Projected Expenditures Spread by Fiscal Year for Ongoing and New Projects**

(000)

	<u>2011 - 12</u>	<u>2012 - 13</u>	<u>2013 - 14</u>	<u>2014 - 15</u>	<u>2015 - 16</u>	<u>Remaining</u>	<u>Total</u>
<b>Plant</b>							
<b>Primary Treatment</b>	5,342	18,895	24,487	9,646	1,800		60,170
<b>Secondary Treatment</b>	6,811	7,897	12,994	17,847	6,950		52,499
<b>Solids Handling</b>	17,770	29,227	24,184	11,990	4,950	25,001	113,122
<b>Disinfection</b>	2,656	9,506	10,130	7,092	4,253	150	33,787
<b>General Purpose</b>	18,536	27,291	26,056	14,808	8,843	10,840	106,374
	<u>\$51,115</u>	<u>\$92,816</u>	<u>\$97,851</u>	<u>\$61,383</u>	<u>\$26,796</u>	<u>\$35,991</u>	<u>\$365,952</u>
<b>Facilities</b>							
<b>Sewer Interceptor System</b>	823	1,300	150				2,273
<b>Combined Sewer System</b>	35,793	4,828	15,150	21,550	4,252	690	82,263
<b>Lateral Sewer Replacement</b>	35,947	44,200	20,000	20,000	20,000		140,147
<b>Information Technology</b>	1,882	2,000	3,950	3,450	6,450		17,732
	<u>\$74,445</u>	<u>\$52,328</u>	<u>\$39,250</u>	<u>\$45,000</u>	<u>\$30,702</u>	<u>\$690</u>	<u>\$242,415</u>
<b>Ongoing Projects</b>	115,660	88,549	51,782	22,680	10,653	1,130	290,454
<b>New Projects</b>	9,900	56,595	85,319	83,703	46,845	35,551	317,913
<b>TOTAL CAPITAL COSTS</b>	<u>\$125,560</u>	<u>\$145,144</u>	<u>\$137,101</u>	<u>\$106,383</u>	<u>\$57,498</u>	<u>\$36,681</u>	<u>\$608,367</u>

# Projected Expenditures Spread by Fiscal Year

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

	<u>2011 - 12</u>	<u>2012 - 13</u>	<u>2013 - 14</u>	<u>2014 - 15</u>	<u>2015 - 16</u>	<u>Remaining</u>	<u>Total</u>
<b>Plant</b>							
<b>Primary Treatment</b>							
Ongoing	4,842	4,895	3,187	60			12,984
New	500	14,000	21,300	9,586	1,800		47,186
	<u>\$5,342</u>	<u>\$18,895</u>	<u>\$24,487</u>	<u>\$9,646</u>	<u>\$1,800</u>		<u>\$60,170</u>
<b>Secondary Treatment</b>							
Ongoing	6,811	7,897	6,994	5,762	50		27,514
New			6,000	12,085	6,900		24,985
	<u>\$6,811</u>	<u>\$7,897</u>	<u>\$12,994</u>	<u>\$17,847</u>	<u>\$6,950</u>		<u>\$52,499</u>
<b>Solids Handling</b>							
Ongoing	15,720	17,027	11,434	740			44,921
New	2,050	12,200	12,750	11,250	4,950	25,001	68,201
	<u>\$17,770</u>	<u>\$29,227</u>	<u>\$24,184</u>	<u>\$11,990</u>	<u>\$4,950</u>	<u>\$25,001</u>	<u>\$113,122</u>
<b>Disinfection</b>							
Ongoing	2,556	9,086	9,900	4,510	3,608		29,660
New	100	420	230	2,582	645	150	4,127
	<u>\$2,656</u>	<u>\$9,506</u>	<u>\$10,130</u>	<u>\$7,092</u>	<u>\$4,253</u>	<u>\$150</u>	<u>\$33,787</u>
<b>General Purpose</b>							
Ongoing	13,436	20,116	17,717	10,608	5,995	440	68,312
New	5,100	7,175	8,339	4,200	2,848	10,400	38,062
	<u>\$18,536</u>	<u>\$27,291</u>	<u>\$26,056</u>	<u>\$14,808</u>	<u>\$8,843</u>	<u>\$10,840</u>	<u>\$106,374</u>
<b>Plant Total</b>							
Ongoing Projects	43,365	59,021	49,232	21,680	9,653	440	183,391
New Projects	7,750	33,795	48,619	39,703	17,143	35,551	182,561
	<u>\$51,115</u>	<u>\$92,816</u>	<u>\$97,851</u>	<u>\$61,383</u>	<u>\$26,796</u>	<u>\$35,991</u>	<u>\$365,952</u>
<b>Facilities</b>							
<b>Sewer Interceptor System</b>							
Ongoing	823	1,300	150				2,273
	<u>\$823</u>	<u>\$1,300</u>	<u>\$150</u>				<u>\$2,273</u>

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

	<u>2011 - 12</u>	<u>2012 - 13</u>	<u>2013 - 14</u>	<u>2014 - 15</u>	<u>2015 - 16</u>	<u>Remaining</u>	<u>Total</u>
<b>Combined Sewer System</b>							
Ongoing	35,693	2,628				690	39,011
New	100	2,200	15,150	21,550	4,252		43,252
	<u>\$35,793</u>	<u>\$4,828</u>	<u>\$15,150</u>	<u>\$21,550</u>	<u>\$4,252</u>	<u>\$690</u>	<u>\$82,263</u>
<b>Lateral Sewer Replacement</b>							
Ongoing	33,947	24,200					58,147
New	2,000	20,000	20,000	20,000	20,000		82,000
	<u>\$35,947</u>	<u>\$44,200</u>	<u>\$20,000</u>	<u>\$20,000</u>	<u>\$20,000</u>		<u>\$140,147</u>
<b>Information Technology</b>							
Ongoing	1,832	1,400	2,400	1,000	1,000		7,632
New	50	600	1,550	2,450	5,450		10,100
	<u>\$1,882</u>	<u>\$2,000</u>	<u>\$3,950</u>	<u>\$3,450</u>	<u>\$6,450</u>		<u>\$17,732</u>
<b><u>Facilities Total</u></b>							
Ongoing Projects	72,295	29,528	2,550	1,000	1,000	690	107,063
New Projects	2,150	22,800	36,700	44,000	29,702		135,352
	<u>\$74,445</u>	<u>\$52,328</u>	<u>\$39,250</u>	<u>\$45,000</u>	<u>\$30,702</u>	<u>\$690</u>	<u>\$242,415</u>
<b>Summary - Total Costs</b>							
Ongoing Projects	115,660	88,549	51,782	22,680	10,653	1,130	290,454
New Projects	9,900	56,595	85,319	83,703	46,845	35,551	317,913
<b>TOTAL CAPITAL COSTS</b>	<u>\$125,560</u>	<u>\$145,144</u>	<u>\$137,101</u>	<u>\$106,383</u>	<u>\$57,498</u>	<u>\$36,681</u>	<u>\$608,367</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  
(000)**

<b>SUMMARY BY PRIMARY PROJECT PURPOSE AND ALLOCATION</b>	<u>2011 - 12</u>	<u>2012 - 13</u>	<u>Funded</u>	<u>2013 - 14</u>	<u>2014 - 15</u>	<u>2015 - 16</u>	<u>Remaining</u>	<u>Total</u>
<b>Directly Mandated Projects</b>								
New Wet Weather Facility	30,517	28	30,545	9,900	13,200	2,622	690	56,957
Common to All	2,556	9,086	11,642	9,900	4,510	3,608	0	29,660
<b>Projects Mandated by Regulatory Requirements to Maintain Compliance</b>								
Detroit Only	9,377	2,600	11,977	0	0	0	0	11,977
New Wet Weather Facility	629	2,000	2,629	3,000	0	0	0	5,629
Common to All	34,748	68,674	103,422	72,045	51,483	21,248	25,151	273,349
<b>Projects Required to Maintain or Improve System Reliability and/or Capacity</b>								
Oakland Macomb Interceptor District	0	0	0	250	350	200	0	800
Detroit Only	32,317	45,400	77,717	21,000	20,800	20,000	0	139,517
Suburban Only	73	0	73	0	0	0	0	73
Common to All	12,806	13,456	26,262	17,206	13,990	5,820	10,840	74,118
<b>Projects that Utilize Technological Advances to Improve Operational Efficiency, Worker Productivity and/or Management Effectiveness</b>								
Detroit Only	5	0	5	0	0	0	0	5
Common to All	2,532	3,900	6,432	3,800	2,050	4,000	0	16,282
<b>TOTAL</b>	<u>\$125,560</u>	<u>\$145,144</u>	<u>\$270,704</u>	<u>\$137,101</u>	<u>\$106,383</u>	<u>\$57,498</u>	<u>\$36,681</u>	<u>\$608,367</u>

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

<b>SUMMARY BY ALLOCATION STATUS</b>	<u>2011 - 12</u>	<u>2012 - 13</u>	<u>Funded</u>	<u>2013 - 14</u>	<u>2014 - 15</u>	<u>2015 - 16</u>	<u>Remaining</u>	<u>Total</u>
Oakland Macomb Interceptor District	0	0	0	250	350	200	0	800
Detroit Only	41,699	48,000	89,699	21,000	20,800	20,000	0	151,499
Suburban Only	73	0	73	0	0	0	0	73
New Wet Weather Facility	31,146	2,028	33,174	12,900	13,200	2,622	690	62,586
Common to All	52,642	95,116	147,758	102,951	72,033	34,676	35,991	393,409
<b>TOTAL</b>	<u>\$125,560</u>	<u>\$145,144</u>	<u>\$270,704</u>	<u>\$137,101</u>	<u>\$106,383</u>	<u>\$57,498</u>	<u>\$36,681</u>	<u>\$608,367</u>
Oakland Macomb Interceptor District	0%	0%	0%	<1%	<1%	<1%	0%	<1%
Detroit Only	33%	33%	33%	15%	20%	35%	0%	25%
Suburban Only	<1%	0%	<1%	0%	0%	0%	0%	<1%
New Wet Weather Facility	25%	1%	12%	9%	12%	5%	2%	10%
Common to All	42%	66%	55%	75%	68%	60%	98%	65%

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

<b>SUMMARY BY PRIMARY PROJECT PURPOSE</b>	<u>2011 - 12</u>	<u>2012 - 13</u>	<u>Funded</u>	<u>2013 - 14</u>	<u>2014 - 15</u>	<u>2015 - 16</u>	<u>Remaining</u>	<u>Total</u>
Directly Mandated Projects	33,073	9,114	42,187	19,800	17,710	6,230	690	86,617
Projects Mandated by Regulatory Requirements to Maintain Compliance	44,754	73,274	118,028	75,045	51,483	21,248	25,151	290,955
Projects Required to Maintain or Improve System Reliability and/or Capacity	45,196	58,856	104,052	38,456	35,140	26,020	10,840	214,508
Projects that Utilize Technological Advances to Improve Operational Efficiency, Worker Productivity and/or Management Effectiveness	2,537	3,900	6,437	3,800	2,050	4,000	0	16,287
<b>TOTAL</b>	<u>\$125,560</u>	<u>\$145,144</u>	<u>270,704</u>	<u>\$137,101</u>	<u>\$106,383</u>	<u>\$57,498</u>	<u>\$36,681</u>	<u>\$608,367</u>
<b>RELATIVE PERCENTAGE</b>								
Directly Mandated Projects	26%	6%	16%	14%	17%	11%	2%	14%
Projects Mandated by Regulatory Requirements to Maintain Compliance	36%	50%	44%	55%	48%	37%	69%	48%
Projects Required to Maintain or Improve System Reliability and/or Capacity	36%	41%	38%	28%	33%	45%	30%	35%
Projects that Utilize Technological Advances to Improve Operational Efficiency, Worker Productivity and/or Management Effectiveness	2%	3%	2%	3%	2%	7%	0%	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)**

Project Title	DRMS No.	CIP No.	Contract No.	Type	2011 - 12	2012 - 13	2013 - 14	2014 - 15	2015 - 16	Remaining	Total	Primary Project Purpose	Allocation Status
<b>Primary Treatment</b>													
1 <b>Pump Station No. 2 Pumping Improvements</b>	004215	961	CS-1444	S/D/CA	142	95	87				324	2	CTA
<i>This project involves evaluating and recommending alternatives for providing more reliable pumping capacity at Pump Station No. 2.</i>													
2 <b>Rehabilitation of Primary Clarifiers, Drain Lines, Hot Water, and Scum Lines</b>	004290	1141	CS-1484	S/D/CA	200	300	100	60			660	2	CTA
<i>The work will include rehabilitation of 12" drain lines from rectangular clarifiers Nos. 3-12, and replacement of hot water and scum pipe lines between the primary scum buildings and scum incinerator building. The scope of work will also include concrete repair work and replacement of main collectors in the primary rectangular clarifiers #5 thru 8, and other related work.</i>													
<b>Secondary Treatment</b>													
3 <b>Secondary Clarifiers, RAS Pumps and MCCs Improvements</b>	004211	1100	CS-1451	S/D/CA	114	200	100	64			478	2	CTA
<i>This project involves providing the necessary study, design, and construction assistance services for a 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 detailed hydraulic analysis and sizing of the pumps related to secondary clarifiers RAS pumping, 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>													

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

Project Title	DRMS No.	CIP No.	Contract No.	Type	2011 - 12	2012 - 13	2013 - 14	2014 - 15	2015 - 16	Remaining	Total	Primary Project Purpose	Allocation Status
<b>4 Secondary Clarifiers, RAS Pumps and MCCs Improvements</b>	<b>004211</b>	<b>1100</b>	<b>PC-776</b>	C	6,597	6,597	6,594	5,498			25,286	2	CTA
<i>This project will provide 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 detailed hydraulic analysis and sizing of the pumps related to secondary clarifiers RAS pumping, 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>													
<b>Solids Handling</b>													
<b>5 Complex I and Complex II Incinerator Improvements</b>	<b>004169</b>	<b>965</b>	<b>PC-774</b>	DB	13,500	13,500	10,050				37,050	2	CTA
<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 Plants.</i>													
<b>6 Rehabilitate Sludge Pump Stations 1 and 2</b>	<b>004225</b>	<b>607</b>	<b>CS-1467</b>	D/CA	110	99	45	10			264	2	CTA
<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  
Active Projects  
(000)**

Project Title	DRMS No.	CIP No.	Contract No.	Type	2011 - 12	2012 - 13	2013 - 14	2014 - 15	2015 - 16	Remaining	Total	Primary Project Purpose	Allocation Status
<b>7 Rehabilitation of Upper Level Belt Filter Presses for Complex I &amp; II Dewatering</b>	<b>004284</b>	<b>1144</b>	<b>CS-1483</b>	S/D/CA	110	550	460	250			1,370	2	CTA
<i>The work will consist of rehabilitation 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>													

**Disinfection**

<b>8 Study, Design, &amp; Construction Management Services for Modified Detroit River Outfall No. 2 - WWTP</b>	<b>004178</b>	<b>1117</b>	<b>CS-1448</b>	S/D/CA	356	286	1,100	1,650	2,508		5,900	1	CTA
<i>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.</i>													
<i>This contract is being used to provide study, design and construction assistance services for RRO-2 Segment 1.</i>													

**General Purpose**

<b>9 As-needed Engineering Services (1)</b>	<b>003446</b>	<b>52</b>	<b>CS-1340</b>	D	850						850	3	CTA
<i>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.</i>													

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

Project Title	DRMS No.	CIP No.	Contract No.	Type	2011 - 12	2012 - 13	2013 - 14	2014 - 15	2015 - 16	Remaining	Total	Primary Project Purpose	Allocation Status
<b>10 As-needed Engineering Services (1)</b> <i>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.</i>	<b>003453</b>	<b>55</b>	<b>CS-1346</b>	D	550						550	3	CTA
<b>11 As-needed Aerial Photography, Related Aerial Survey, Ground Survey and Related Services (1)</b> <i>This project is being performed to procure professional services, on an as-needed basis, for aerial photography, strip and area topographic mapping using Global Positioning System or on an equivalent system.</i>	<b>003780</b>	<b>409</b>	<b>CS-1343</b>	C	115						115	3	CTA
<b>12 Consultant Contract for Instrumentation &amp; Control System Repair and Engineering Services at WWTP</b> <i>Procurement, acquisition and installation of new instrumentation for control system and training in the new system.</i>	<b>003928</b>	<b>610</b>	<b>CS-1392</b>	S/D/C	1,400						1,400	2	CTA
<b>13 Facilities As-built Documentation Development and Maintenance Services (1)</b> <i>This project involves compiling &amp; updating existing "as-built" drawings for DWSD facilities, creating "as-built" drawings where none exist, procuring &amp; installing equipment to implement a network database system for storage, and retrieving the "as-built drawings and subjected facility manuals.</i>	<b>003951</b>	<b>380</b>	<b>CS-1333</b>	D	1,100						1,100	4	CTA

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

Project Title	DRMS No.	CIP No.	Contract No.	Type	2011 - 12	2012 - 13	2013 - 14	2014 - 15	2015 - 16	Remaining	Total	Primary Project Purpose	Allocation Status
<b>14 Plant-wide Fire Alarm Systems Upgrade/ Integration and Fire Protection Improvements</b>	<b>004180</b>	<b>1028</b>	<b>CS-1443</b>	S/D/CA	41	66	66				173	3	CTA
<p><i>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.</i></p>													
<b>15 Underground Electrical Duct Bank Repair and EB-1, EB-2, and EB-10 Primary Power Service Improvements - WWTP</b>	<b>004181</b>	<b>366</b>	<b>CS-1449</b>	S/D/CA	150	275	231	100	55		811	2	CTA
<p><i>This project involves the necessary study, design, and construction assistance work for repairing the 15kv Primary Switch Gears A &amp; 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.</i></p>													

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

Project Title		DRMS No.	CIP No.	Contract No.	Type	2011 - 12	2012 - 13	2013 - 14	2014 - 15	2015 - 16	Remaining	Total	Primary Project Purpose	Allocation Status
16	<b>General Engineering Services (1)</b>	<b>004207</b>	<b>1031</b>	<b>CS-1432A</b>	D	440	440	440	440	440	440	2,640	3	CTA
	<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>													
17	<b>As-needed CIP Implementation Assistance and Related Services (1)</b>	<b>004218</b>	<b>956</b>	<b>CS-1433</b>	S/D/CM	900	800	800				2,500	3	CTA
	<i>This project provides for multi-discipline Engineering services on an "as-needed basis" to support DWSD's Water &amp; Sewer Systems.</i>													
18	<b>General Engineering Services (1)</b>	<b>004293</b>	<b>1182</b>	<b>CS-1481</b>	D	1,500	1,500	1,500	600			5,100	3	CTA
	<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>													
19	<b>As-needed Engineering Services for Concrete Testing, Geotechnical Soil Borings, other Testing Services, and Related Services (1)</b>	<b>004295</b>	<b>1147</b>	<b>CS-1488</b>	D/C	300	300	200				800	3	CTA
	<i>The scope of work provides for as-needed engineering services for concrete testing, geotechnical soil borings, and other testing and related services.</i>													

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

Project Title	DRMS No.	CIP No.	Contract No.	Type	2011 - 12	2012 - 13	2013 - 14	2014 - 15	2015 - 16	Remaining	Total	Primary Project Purpose	Allocation Status
<b>20 Geotechnical and Related Services on an As-Needed Basis (1)</b>	<b>004307</b>	<b>1164</b>	<b>CS-1490</b>	D	1,500	1,250					2,750	3	CTA
<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>													
<b>21 Department-wide General Engineering Services on an As-needed Basis (1)</b>	<b>004338</b>	<b>1026</b>	<b>CS-1499</b>	D	1,200	1,200	1,000	800			4,200	3	D
<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>													

**Combined Sewer System**

<b>22 Baby Creek CSO Pilot Control Facility</b>	<b>003250</b>	<b>101</b>	<b>PC-748</b>	C	1,700						1,700	1	83/17
<i>Construction of a screening/ disinfecting/ regulating facility at the Baby Creek enclosure discharge point. Major elements of the work include deep excavation and temporary earth retention systems, new influent and effluent/ dewatering hydraulic structures, modification/ rehabilitation to existing interconnected hydraulic structures and erection of a Control and Screening Building and related site work.</i>													

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

Project Title	DRMS No.	CIP No.	Contract No.	Type	2011 - 12	2012 - 13	2013 - 14	2014 - 15	2015 - 16	Remaining	Total	Primary Project Purpose	Allocation Status
<b>23 Oakwood CSO Control Facility and Pump Station</b>	<b>004063</b>	<b>420</b>	<b>CS-1364</b>	S/D/CA	1,552						1,552	1	83/17
<i>This project includes study, design, and construction assistance services for the Oakwood CSO control facility and the pump station to meet the MDEQ/NPDES permit requirement to provide adequate treatment, including disinfection, of combined sewage discharges to protect public health.</i>													
<b>24 Oakwood CSO Control Facility and Pump Station</b>	<b>004063</b>	<b>420</b>	<b>PC-755</b>	C	23,000						23,000	1	83/17
<i>This project includes construction of the Oakwood CSO control facility and the pump station to meet the MDEQ/NPDES permit requirement to provide adequate treatment, including disinfection, of combined sewage discharges to protect public health.</i>													
<b>25 Bluehill Pumping Station Rehabilitation</b>	<b>004067</b>	<b>637</b>	<b>PC-685</b>	C	132						132	2	D
<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>													
<b>26 Woodmere Pumping Station Rehabilitation</b>	<b>004093</b>	<b>958</b>	<b>PC-752A</b>	C	1,815						1,815	2	D
<i>This project includes civil, architectural, mechanical, electrical rehabilitation work including but not limited to the rehabilitation of 3 storm water pumps of 165 mgd capacity each, 2 sanitary pumps of 7 mgd capacity each, replacement of switchgear, and related electrical and mechanical work.</i>													

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

	Project Title	DRMS No.	CIP No.	Contract No.	Type	2011 - 12	2012 - 13	2013 - 14	2014 - 15	2015 - 16	Remaining	Total	Primary Project Purpose	Allocation Status
27	<b>Consultant Services for Land Acquisition for Long Term CSO Control Program</b>	<b>004110</b>	<b>1078</b>	<b>CS-1407</b>	S	550					690	1,240	1	83/17
	<i>The consultant will initiate acquisition rights in private property and for rights in several properties under the administrative control of several Departments of the City of Detroit. They will also provide environmental site assessments, property appraisals, cost estimates, property surveys, property legal descriptions, and property acquisition negotiation assistance as needed.</i>													
28	<b>Land Acquisition for Long Term CSO Control Program</b>	<b>004110</b>	<b>1078</b>		C	3,000						3,000	1	83/17
	<i>Long term CSO control program land acquisition allowance.</i>													
29	<b>Fischer Pumping Station Improvements</b>	<b>004174</b>	<b>1093</b>	<b>CS-1421</b>	S/D/CA 2	300	300					600	2	D
	<i>This project involves study, design, and construction assistance services for the rehabilitation of the Fischer Pumping Station.</i>													
30	<b>Replacement of CSO Basins Control Systems</b>	<b>004275</b>	<b>1036</b>	<b>PC-761</b>	C	600						600	2	83/17
	<i>This project includes replacement of the existing INFI 90 Bailey Controls with improved and dependable controls at Fenkell/Puritan and Hubbell/Southfield CSO Basins.</i>													
31	<b>Fischer Pumping Station Improvements</b>	<b>004318</b>	<b>1093</b>	<b>PC-772</b>	C 2	2,300	2,300					4,600	2	D
	<i>This project will involve the construction for the Fischer Pumping Station Improvements.</i>													

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

Project Title	DRMS No.	CIP No.	Contract No.	Type	2011 - 12	2012 - 13	2013 - 14	2014 - 15	2015 - 16	Remaining	Total	Primary Project Purpose	Allocation Status
<b>32 Replacement of Screening Equipment at Baby Creek CSO Facility</b>	<b>004394</b>	<b>1225</b>	<b>IH-108</b>	S/D	700	28					728	1	83/17
<i>The work consists of the study and design activities of demolishing the existing sixteen (16) screens and installing sixteen (16) new screens. Civil, mechanical, and electrical systems will be evaluated including reinforced concrete, wiring systems, and motor controls with wiring. This project will also evaluate SCADA and control systems.</i>													

**Lateral Sewer Replacement**

<b>33 Department-wide Engineering Services II (1)</b>	<b>001772</b>	<b>107</b>	<b>CS-1240</b>	D	107						107	3	D
<i>This project provides general engineering services for project-specific tasks for smaller scale projects, on an as-needed basis.</i>													
<b>34 Sewer System Improvement: Oakwood District Sewers Phase I</b>	<b>004238</b>	<b>449</b>	<b>PCS-79</b>	C	3,700						3,700	2	D
<i>This project involves improving the sewer system of Oakwood District by replacing and constructing approximately 31,230 L. Ft of 12" to 24" Diameter Sewer.</i>													
<b>35 Sewer System Improvement: Oakwood District Sewers - Phase II</b>	<b>004239</b>	<b>449</b>	<b>PCS-80</b>	C 2	1,130						1,130	2	D
<i>Improving the sewer of Oakwood District by replacing and approximately 38,790 L Ft of 12" to 24" Diameter Sewer.</i>													

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

	Project Title	DRMS No.	CIP No.	Contract No.	Type	2011 - 12	2012 - 13	2013 - 14	2014 - 15	2015 - 16	Remaining	Total	Primary Project Purpose	Allocation Status
36	<b>East Side City of Detroit Sewer Repair Contract for Inspection and In-place Rehabilitation of Existing Circular and Non-Circular Sewers</b>	<b>004341</b>	<b>1201</b>	<b>DWS-876</b>	DB	15,500	13,000					28,500	3	D
	<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>													
37	<b>West Side City of Detroit Sewer Repair Contract for Inspection and In-place Rehabilitation of Existing Circular and Non-Circular Sewers</b>	<b>004342</b>	<b>1200</b>	<b>DWS-877</b>	DB	13,500	11,200					24,700	3	D
	<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>													
						<u>\$100,761</u>	<u>\$54,286</u>	<u>\$22,773</u>	<u>\$9,472</u>	<u>\$3,003</u>	<u>\$1,130</u>	<u>\$191,425</u>		

# 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)**

Project Title	DRMS No.	CIP No.	Contract No.	Type	2011 - 12	2012 - 13	2013 - 14	2014 - 15	2015 - 16	Remaining	Total	Primary Project Purpose	Allocation Status
<b>Primary Treatment</b>													
1 <b>New Troughs and Weirs for Primary Clarifiers 13-16</b>	004173	962	PC-756	C	4,500	4,500	3,000				12,000	2	CTA
<i>This project will involve rehabilitating or replacing troughs and weirs for Circular Primary Clarifiers (PCs) 13-16. If new troughs are determined to be required, the material used on PCs 17 and 18 (stainless steel) will be used on PCs 13-16.</i>													
<b>Secondary Treatment</b>													
2 <b>Aeration System Improvements</b>	004336	1194	CS-1498	S/D/CA	100	1,100	300	200	50		1,750	2	CTA
<i>The scope of work includes study, design, and construction assistance for the oxygen baffle on Bay 10 of A1 &amp; A2 decks, replacement of influent, RAS piping, isolation gate and valves for decks nos. 3 &amp; 4, replace RAS &amp; influent magmeters for ILP nos. 3,4, &amp; 7. The work will also include replacement of influent gates and operators on aeration deck no. 1 &amp; 2.</i>													
<b>Solids Handling</b>													
3 <b>Rehabilitate Sludge Pump Stations 1 and 2</b>	004225	607	PC-780	C	2,000	2,878	879	480			6,237	2	CTA
<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 Under Procurement  
(000)**

Project Title	DRMS No.	CIP No.	Contract No.	Type	2011 - 12	2012 - 13	2013 - 14	2014 - 15	2015 - 16	Remaining	Total	Primary Project Purpose	Allocation Status
<b>Disinfection</b>													
4 <b>Rouge River Outfall No. 2 (RRO-2) Segment 1 - WWTP Modifications</b>	004395	1235	PC-786	C	2,200	8,800	8,800	2,860	1,100		23,760	1	CTA
<p><i>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.</i></p>													
<b>General Purpose</b>													
5 <b>Plant-wide Fire Alarm Systems Upgrade/ Integration and Fire Protection Improvements</b>	004180	1028	PC-782	C	250	2,500	3,800	1,050			7,600	3	CTA
<p><i>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.</i></p>													

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

Project Title	DRMS No.	CIP No.	Contract No.	Type	2011 - 12	2012 - 13	2013 - 14	2014 - 15	2015 - 16	Remaining	Total	Primary Project Purpose	Allocation Status
<b>6 Underground Electrical Duct Bank Repair and EB-1, EB-2, and EB-10 Primary Power Service Improvements - WWTP</b>	<b>004181</b>	<b>366</b>	<b>PC-783</b>	C	3,100	11,785	9,680	7,618	5,500		37,683	2	CTA

*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.*

**Sewer Interceptor System**

<b>7 Sewer Meter Replacement</b>	<b>004291</b>	<b>1167</b>	<b>PC-784</b>	C	750	1,300	150				2,200	4	CTA
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*This project will provide for the implementation of the best sewer metering technology at several sewer metering locations. It will develop a control system configuration diagrams which will define the system components, communication structure, and operational interface, electrical interface, process flow diagrams, and process and instrumentation diagrams.*

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

Project Title	DRMS No.	CIP No.	Contract No.	Type	2011 - 12	2012 - 13	2013 - 14	2014 - 15	2015 - 16	Remaining	Total	Primary Project Purpose	Allocation Status
<b>Information Technology</b>													
8 <b>Consolidated Process Control System and Standardization for Construction Contracts (1)</b>	003423	1153	PC-773B	DB	1,200	800	800				2,800	3	CTA
<i>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. The scope of work also includes preparation of a DWSD Ovation Standards Manual to establish guidelines for incorporating processes into Ovation System through future design and construction contracts.</i>													
9 <b>Data Center Reliability/Availability Improvements (1)</b>	004367	1206	DWS-881	DB	600	600	600				1,800	4	CTA
<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 Switch Room Central Services Facility, Switch Room WWTP-NAB-B1, Data Center Central Service Facility - IS-226, and Data Center WWTP-K303.</i>													
10 <b>SCADA Radio Network Upgrade (1)</b>	004369	1207	DWS-882	DB			1,000	1,000	1,000		3,000	3	CTA
<i>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.</i>													
					<u>\$14,700</u>	<u>\$34,263</u>	<u>\$29,009</u>	<u>\$13,208</u>	<u>\$7,650</u>	<u>\$0</u>	<u>\$98,830</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)**

Project Title	DRMS No.	CIP No.	Contract No.	Type	2011 - 12	2012 - 13	2013 - 14	2014 - 15	2015 - 16	Remaining	Total	Primary Project Purpose	Allocation Status
<b>General Purpose</b>													
1 <b>Water Meter Replacement and Automatic Meter Reading Equipment Installation (1)</b>	002003	131	CM-2007	DB	5						5	4	D
<i>This project involves replacing existing 5/8-inch through 12-inch residential and commercial water meters, within the City of Detroit, with new water meters and an automatic reading system.</i>													
2 <b>As-needed Engineering Services (1)</b>	003451	54	CS-1345	D	5						5	3	CTA
<i>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.</i>													
3 <b>Power Enhancement - Primary Service Conversion and PCB Disposal (1)</b>	004144	1082	DWS-837C	DB	25						25	2	CTA
<i>This project involves the replacement of existing PLD primary power feed system with DTE at Fairview Sewage Pumping Station, Springwells WTP, Central Services Facility and the Water Board Building, and enhancements to existing electrical system at various DWSD facilities.</i>													
4 <b>Department-wide Roof Replacement and Repair III (1)</b>	004166	1027	DWS-857	D/C	5						5	3	CTA
<i>This project involves repairing, removing or replacing existing built-up and shingle type roofs on an as-needed basis.</i>													

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

Project Title	DRMS No.	CIP No.	Contract No.	Type	2011 - 12	2012 - 13	2013 - 14	2014 - 15	2015 - 16	Remaining	Total	Primary Project Purpose	Allocation Status
<b>Sewer Interceptor System</b>													
5 Sewage Metering - Primary Measuring Device Improvements	001770	61	CS-1225	D	73						73	3	S
<i>This project involves design modifications for various Suburban Sewage Meter Pits and construction assistance during construction phases.</i>													
<b>Combined Sewer System</b>													
6 Long Term CSO Control Plan - Phase III	001796	85	CS-1281	S/D	29						29	2	83/17
<i>The objective of this project is the development and implementation of DWSD's Long Term CSO program. The scope of services includes, but may not be limited to, the following tasks: evaluate the performance and effectiveness of the Phase II CSO control facilities; perform pilot projects for source controls, rapid disinfection and screening, a retention/treatment facility at Conner Creek; design and construct improvements at Baby Creek; assist with land acquisition for future CSO facilities; modify and incorporate demonstration facilities performance and evaluations of the CSO pilot projects into Detroit's Long Term CSO Control Plan; coordinate with MDEQ on CSO issues; partner with suburban tier 1 customers; provide technical assistance and monitoring work currently being performed by other consultants on various CSO related projects.</i>													

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

Project Title	DRMS No.	CIP No.	Contract No.	Type	2011 - 12	2012 - 13	2013 - 14	2014 - 15	2015 - 16	Remaining	Total	Primary Project Purpose	Allocation Status
<b>7 Baby Creek CSO Pilot Control Facility</b>	<b>003250</b>	<b>101</b>	<b>CS-1286</b>	S/D/CA	5						5	1	83/17
<i>This project involves study, design, and construction phase assistance services by the consultant to support construction of a combined sewer overflow rapid mix disinfection, screening and flow regulation facility near the Rouge River discharge for the Baby Creek Enclosure (Outfall Number 057).</i>													
<b>8 Detailed Design, Bidding, Construction Management, and Related Services for Upper Rouge Tunnel</b>	<b>004112</b>	<b>434</b>	<b>CS-1431</b>	D/CM	5						5	1	83/17
<i>This project involves the design and construction management necessary to prepare a basis of design report and geotechnical baseline report for the intended, NPDES Permit mandated, Upper Rouge CSO Tunnel.</i>													
<b>9 Upper Rouge CSO Control Project - South Tunnel</b>	<b>004299</b>	<b>434</b>	<b>PC-764</b>	C 1	5						5	1	83/17
<i>This contract has been terminated. An alternative scope, cost, and schedule are under review and discussion.</i>													

**Lateral Sewer Replacement**

<b>10 East-side Existing Sewer Repair in the City of Detroit for In-place Rehabilitation of Existing Circular and Non-circular Sewers</b>	<b>004182</b>	<b>1129</b>	<b>DWS-865</b>	DB	5						5	3	D
<i>In-place rehabilitation of existing sewers using the construction process, procedures, methods and equipment of the trenchless pipeline rehabilitation techniques for circular and non circular sewers on the East-side of Detroit.</i>													

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

Project Title	DRMS No.	CIP No.	Contract No.	Type	2011 - 12	2012 - 13	2013 - 14	2014 - 15	2015 - 16	Remaining	Total	Primary Project Purpose	Allocation Status
<b>11 West-side Existing Sewer Repair in the City of Detroit for In-place Rehabilitation of Existing Circular and Non-circular Sewers</b>	<b>004183</b>	<b>1128</b>	<b>DWS-864</b>	DB	5						5	3	D
<i>In-place rehabilitation of existing sewers using the construction process, procedures, methods and equipment of the trenchless pipeline rehabilitation techniques for circular and non circular sewers on the West-side of Detroit.</i>													

**Information Technology**

<b>12 Customer Billing and Management System (CBMS) Upgrade (1)</b>	<b>004220</b>	<b>1139</b>	<b>CS-1465</b>	IT	32						32	4	CTA
<i>This project involves upgrading of the CBMS operating software to enQuesta 2006 (Version 3.5). The consultant will install and configure the software. This project will also involve ensuring that the existing interfaces are updated to perform with this new version and training end-users and support staff.</i>													

<u>\$199</u>	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>	<u>\$199</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  
New Projects  
(000)**

Project Title	Contract No.	Year Added	CIP No.	Type	2011 - 12	2012 - 13	2013 - 14	2014 - 15	2015 - 16	Remaining	Total	Primary Project Purpose	Allocation Status
<b>Primary Treatment</b>													
1 <b>Improvements to Rectangular Primary Clarifier Pipe Gallery</b>		1999	291	C		1,000	5,100	4,000			10,100	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.</i>													
2 <b>Pump Station No. 2 Pumping Improvements</b>		2003	961	C	500	3,000	2,200				5,700	2	CTA
<i>This project will add VFDs to the three constant speed pumps to allow for restoring the pumping capacity during wet weather events; repair existing VFD on existing pump; install new, larger VFDs on existing pumps; or install larger VFDs and larger pumps for three or more pumps.</i>													
3 <b>Rehabilitation of Primary Clarifiers, Drain Lines, Hot Water, and Scum Lines</b>		2006	1141	C		5,000	8,000	2,586			15,586	2	CTA
<i>This project will include rehabilitation of 12" drain lines from rectangular clarifiers Nos. 3-12, and replacement of how water and scum pipe lines between the primary scum buildings and scum incinerator building. The scope of work will also include concrete repair work in the primary rectangular clarifiers, disconnecting a drain line from the manhole to the interceptor, installing a large manhole with sump pumps to collect drainage and discharge to clarifiers or the interceptor.</i>													
4 <b>Grit and Screening System Improvements for Pump Station # 1 and # 2</b>		2008	1189	C		5,000	6,000	3,000	1,800		15,800	2	CTA
<i>The scope of work includes modifications and improvements of the existing grit and screening handling system at pump stations 1 and 2.</i>													

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

Project Title	Contract No.	Year Added	CIP No.	Type	2011 - 12	2012 - 13	2013 - 14	2014 - 15	2015 - 16	Remaining	Total	Primary Project Purpose	Allocation Status
<b>Secondary Treatment</b>													
<b>5 Aeration System Improvements</b>		<b>2008</b>	<b>1194</b>	C			5,000	11,800	6,900		23,700	2	CTA
<i>The scope of work includes the installation of oxygen baffle on Bay 10 of A1 &amp; A2 decks, replacement of influent, RAS piping, isolation gate and valves for decks nos. 3 &amp; 4, replace RAS &amp; influent magmeters for ILP nos. 3,4, &amp; 7. The work will also include replacement of influent gates and operators on aeration deck no. 1 &amp; 2.</i>													
<b>6 Process Improvements for the Secondary Treatment at WWTP</b>		<b>2008</b>	<b>1195</b>	C			1,000	285			1,285	2	CTA
<i>The scope of work involves the installation of chlorination distribution system at Complex B, procure on-line instrumentation with the ability to determine Phosphorus and Ammonia levels and Biochemical Oxygen demand in real time, and a ferric chloride addition to the secondary system.</i>													
<b>Solids Handling</b>													
<b>7 Rehabilitation of Upper Level Belt Filter Presses for Complex I &amp; II Dewatering</b>		<b>2006</b>	<b>1144</b>	C	2,000	12,000	12,000	8,000	3,200		37,200	2	CTA
<i>The work will consist of rehabilitation 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>													

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

Project Title	Contract No.	Year Added	CIP No.	Type	2011 - 12	2012 - 13	2013 - 14	2014 - 15	2015 - 16	Remaining	Total	Primary Project Purpose	Allocation Status
<b>8 Replacement of Lower Level Complex II Dewatering Centrifuges</b>		<b>2010</b>	<b>1220</b>	S/D/C						25,000	25,000	2	CTA
<i>The scope of work consists of the study and evaluation of the existing Complex II Dewatering System for Centrifuges and making recommendations for changing to belt filter presses (BFP's), design and installation of twelve (12) BFP's units, including isolation valves, grinders, control valves, meters, polymer system and electrical devices, and all existing supporting equipment and necessary items related to the centrifuges. The twelve (12) centrifuge units to be replaced include four (4) Alpha Laval Centrifuges and eight (8) Westfalia Centrifuges.</i>													
<b>9 Rehabilitation of Central Offload Facility</b>		<b>2010</b>	<b>1221</b>	S/D/C	50	200	750	3,250	1,750		6,000	2	CTA
<i>The scope of work consists of the study, design, and rehabilitation / replacement of the following equipment: three (3) live Bottom Hoppers, three (3) Lime Silos, three (3) Lime mixers, all screw conveyors and related conveyors, electrical equipment, Scrubber system, HVAC, and other related equipment.</i>													
<b>10 Long Term Biosolid Disposal Alternatives</b>		<b>2010</b>	<b>1231</b>	S/D/C						1	1	2	CTA
<i>This project's scope includes study, design, and construction work for a primary disposal alternative to dispose the solids produced at the WWTP.</i>													
<i>This project is under review/evaluation, may not be a capital project.</i>													

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

Project Title	Contract No.	Year Added	CIP No.	Type	2011 - 12	2012 - 13	2013 - 14	2014 - 15	2015 - 16	Remaining	Total	Primary Project Purpose	Allocation Status
<b>Disinfection</b>													
11 <b>Replacement of Chlorination and Dechlorination Equipment at the WWTP</b>		2010	1222	S/D/C	100	420	230	2,582	645	150	4,127	2	CTA
<i>The work will consist of the study, design, removal and installation of sixteen (16) chlorinators, fourteen (14) sulfonators, and thirty (30) evaporators and related equipment mandated by regulatory requirements.</i>													
<b>General Purpose</b>													
12 <b>Study/ Repair Potable Water, Screened Final Effluent, Natural Gas and Compressed Air Pipe Lines at the WWTP</b>		2006	1140	S/D/C		50	114	1,000	1,123		2,287	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>													
13 <b>Central Services Facility (CSF) Improvements (1)</b>		2008	1188	C	50	2,000	3,000	1,100			6,150	4	CTA
<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>													

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

Project Title	Contract No.	Year Added	CIP No.	Type	2011 - 12	2012 - 13	2013 - 14	2014 - 15	2015 - 16	Remaining	Total	Primary Project Purpose	Allocation Status
<b>14 Rehabilitation of Sampling Sites at WWTP</b>		<b>2010</b>	<b>1223</b>	S/D/C	50	125	125	700	225		1,225	2	CTA
<i>The work consists of study, design, removal, and installation of new samplers, pumps, piping, housing, and related equipment. Sampling sites include Jefferson, Oakwood, MP11, MP12, NEIA, PE, River Rouge Outfall, PEAS1, 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>													
<b>15 Rehabilitation of the Main Plant Maintenance Building, Replacement of Various Plant Maintenance Areas and Work Environment Improvement</b>		<b>2011</b>	<b>1237</b>	S/D/C			100	1,400	1,500	10,400	13,400	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, rehabilitate Chain Storage building and provide work environment improvements at the Waste Water Treatment Plant.</i>													
<b>16 Allowance for Job Order/As Needed Services Contract</b>		<b>2011</b>	<b>1244</b>	D/C	5,000	5,000	5,000				15,000	3	CTA
<i>This project is an allowance for Job Order/As Needed Contract.</i>													

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

Project Title	Contract No.	Year Added	CIP No.	Type	2011 - 12	2012 - 13	2013 - 14	2014 - 15	2015 - 16	Remaining	Total	Primary Project Purpose	Allocation Status
<b>Combined Sewer System</b>													
17 <b>CSO Control Facilities - Mechanical, Electrical, and Structural Improvements</b>		2008	1190	C		2,000	3,000				5,000	2	83/17
<i>The scope of work includes mechanical, electrical, instrumentation, structural, and other rehabilitative or new work at the six CSO facilities namely Hubbell/Southfield, Leib, St. Aubin, Puritan, Seven Mile, and Conner Creek.</i>													
18 <b>Replacement of Corroded Sanitary Headers at North East Sewage Pumping Station</b>		2010	1214	S/D/C			250	350	200		800	3	OMID
<i>The work consists of the assessment, design and installation of six (6) Discharge Headers and replacement of corroded pipes.</i>													
19 <b>Replacement of Screening Equipment at Baby Creek CSO Facility</b>		2010	1225	C			9,900	13,200	2,622		25,722	1	83/17
<i>The work consists of the installation of sixteen (16) new screens, demolishing the existing screens, replacing or modifying existing SCADA and control equipment. This will also include the purchase of a new crane.</i>													
20 <b>Fairview Pumping Station - Replace Four Sanitary Pumps</b>		2011	1241	S/D/C	100	200	2,000	8,000	1,430		11,730	3	CTA
<i>The scope of work consists of the study, design, and construction for four new pumping systems including inlet and discharge valves plus review wet well hydraulics. This will also include enlarging doors to handle equipment, add roadways, and upgrade electrical and control systems.</i>													

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

Project Title	Contract No.	Year Added	CIP No.	Type	2011 - 12	2012 - 13	2013 - 14	2014 - 15	2015 - 16	Remaining	Total	Primary Project Purpose	Allocation Status
<b>Lateral Sewer Replacement</b>													
21 Lateral Sewer Replacement Allowance			448	D/C	2,000	20,000	20,000	20,000	20,000		82,000	3	D
<i>Yearly allowance to replace aging lateral sewer lines in the City.</i>													
<b>Information Technology</b>													
22 As Needed Instrumentation and Control System Services		2010	1219	IT	50	600	1,500	1,500	1,450		5,100	3	CTA
<i>The scope of work consists of the design, construction and integration of services for new and existing control systems at WWTP and CSO Basins.</i>													
23 Replacement of LIMS / PIMS Software System		2010	1224	S/D/C			50	950	4,000		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>													
					<u>\$9,900</u>	<u>\$56,595</u>	<u>\$85,319</u>	<u>\$83,703</u>	<u>\$46,845</u>	<u>\$35,551</u>	<u>\$317,913</u>		