



# Sewage Disposal System Capital Improvement Program

Fiscal Years 2011 Through 2015  
July, 2010

**Dave Bing, Mayor**  
City of Detroit

Administration

Director - Vacant

Darryl A. Latimer, Deputy Director

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

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**Sewage Disposal System  
Capital Improvement Program  
Fiscal Years 2010-11 Through 2014-15  
July, 2010**

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Detroit Water and Sewerage Department  
Capital Improvement Program  
Fiscal Years 2010-11 through 2014-15  
July, 2010

## **Executive Management Team**

**Director - Vacant**  
**Darryl A. Latimer, Deputy Director**  
**Pa Dada, Assistant Director, Information Technology, Systems Integration & Operations**  
**Assistant Director, Public Affairs - Vacant**  
**Samuel Smalley, P.E., Assistant Director, Asset Maintenance**  
**Stephen Kuplicki, P.E., Assistant Director, Wastewater Operations**  
**Raphael Chirolla, Acting Assistant Director, Financial Services**  
**Cheryl Porter, Assistant Director, Water Supply Operations**  
**Ramesh Shukla, P.E., Assistant Director, Engineering Services**  
**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 has an assigned DRMS number, experienced expenditures prior to the last fiscal year, and experienced no expenditures in the last fiscal year, and/or no projected expenditures in the current fiscal year.

# 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

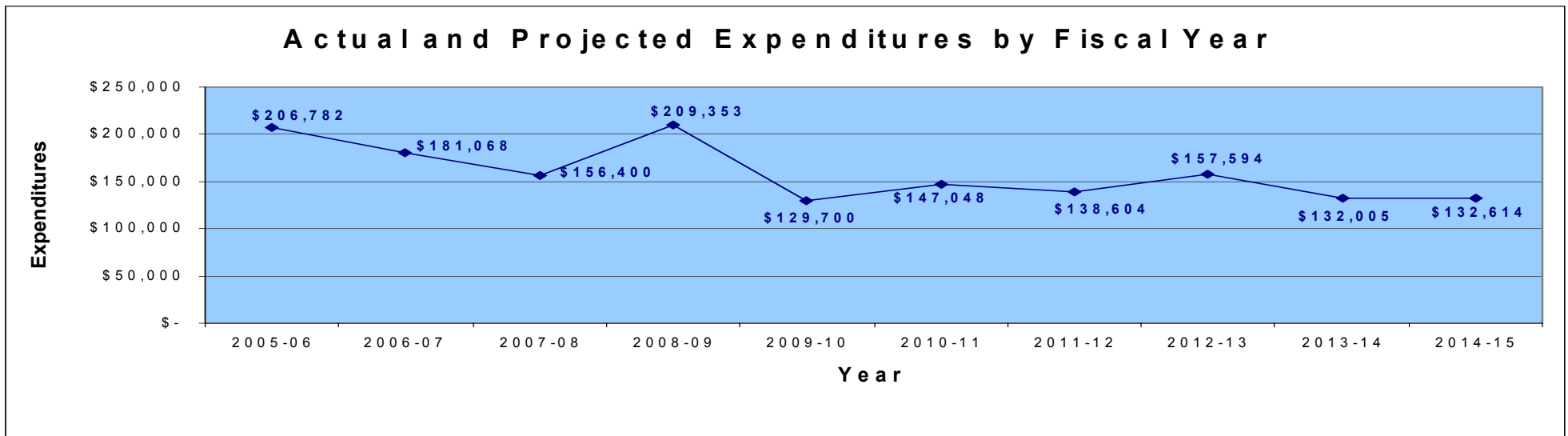
- S – Study; S/D – Study and Design; S/D/C – Study, Design and Construction;
- S/D/CA – Study, Design and Construction Assistance
- D – Design; DB – Design Build; DBA – Design Build Assistance;
- D/C – Design and Construction; D/CA – Design and Construction Assistance
- C – Construction; CA – Construction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

<b>Ongoing</b>	<u>2010 - 11</u>	<u># of Projects</u>	<u>2011 - 12</u>	<u>2012 - 13</u>	<u>2013 - 14</u>	<u>2014 - 15</u>	<u>Remaining</u>	<u>Total</u>
Active	127,286	48	65,033	31,308	3,927	2,740	22,815	253,109
Under Procurement	15,145	10	36,445	31,745	11,835	3,440	4,276	102,886
Pending Close-out	10	2	0	0	0	0	0	10
<b>Ongoing Total</b>	<u>142,441</u>	60	<u>101,478</u>	<u>63,053</u>	<u>15,762</u>	<u>6,180</u>	<u>27,091</u>	<u>356,005</u>
<b>New Projects Total</b>	4,607	15	37,126	94,541	116,243	126,434	380,442	759,393
<b>Total CIP</b>	<u>\$ 147,048</u>	<u>75</u>	<u>\$ 138,604</u>	<u>\$ 157,594</u>	<u>\$ 132,005</u>	<u>\$ 132,614</u>	<u>\$ 407,533</u>	<u>\$ 1,115,398</u>



**Notations:** 2005-06 thru 2009-10 totals are actual (unaudited) expenditures  
2010-11 thru 2014-15 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>2010 - 11</u>	<u>2011 - 12</u>	<u>2012 - 13</u>	<u>2013 - 14</u>	<u>2014 - 15</u>	<u>Remaining</u>	<u>Total</u>
<b>Plant</b>							
Primary Treatment	2,028	10,439	21,885	25,096	9,506		68,954
Secondary Treatment	3,580	9,240	14,505	18,900	9,740		55,965
Solids Handling	8,750	23,685	29,906	22,892	56,250	357,112	498,595
Disinfection	1,300	1,020	380	4,083	2,345	1,576	10,704
General Purpose	17,683	22,869	32,714	20,890	9,968	1,018	105,142
	<u>\$33,341</u>	<u>\$67,253</u>	<u>\$99,390</u>	<u>\$91,861</u>	<u>\$87,809</u>	<u>\$359,706</u>	<u>\$739,360</u>
<b>Facilities</b>							
Sewer Interceptor System	178	3,530	2,920				6,628
Combined Sewer System	59,453	27,088	6,319	19,954	24,605	46,927	184,346
Lateral Sewer Replacement	47,376	38,318	47,100	20,000	20,000		172,794
Planning and Administration	6,700	2,415	1,865	190	200	900	12,270
	<u>\$113,707</u>	<u>\$71,351</u>	<u>\$58,204</u>	<u>\$40,144</u>	<u>\$44,805</u>	<u>\$47,827</u>	<u>\$376,038</u>
<b>Ongoing Projects</b>	142,441	101,478	63,053	15,762	6,180	27,091	356,005
<b>New Projects</b>	4,607	37,126	94,541	116,243	126,434	380,442	759,393
<b>TOTAL CAPITAL COSTS</b>	<u>\$147,048</u>	<u>\$138,604</u>	<u>\$157,594</u>	<u>\$132,005</u>	<u>\$132,614</u>	<u>\$407,533</u>	<u>\$1,115,398</u>

# Projected Expenditures Spread by Fiscal Year



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

	<u>2010 - 11</u>	<u>2011 - 12</u>	<u>2012 - 13</u>	<u>2013 - 14</u>	<u>2014 - 15</u>	<u>Remaining</u>	<u>Total</u>
<b>Combined Sewer System</b>							
Ongoing	59,203	25,912	1,719	304		23,947	111,085
New	250	1,176	4,600	19,650	24,605	22,980	73,261
	<u>\$59,453</u>	<u>\$27,088</u>	<u>\$6,319</u>	<u>\$19,954</u>	<u>\$24,605</u>	<u>\$46,927</u>	<u>\$184,346</u>
<b>Lateral Sewer Replacement</b>							
Ongoing	46,376	33,318	27,100				106,794
New	1,000	5,000	20,000	20,000	20,000		66,000
	<u>\$47,376</u>	<u>\$38,318</u>	<u>\$47,100</u>	<u>\$20,000</u>	<u>\$20,000</u>		<u>\$172,794</u>
<b>Planning and Administration</b>							
Ongoing	6,700	2,415	1,865	190	200	900	12,270
	<u>\$6,700</u>	<u>\$2,415</u>	<u>\$1,865</u>	<u>\$190</u>	<u>\$200</u>	<u>\$900</u>	<u>\$12,270</u>
<b><u>Facilities Total</u></b>							
Ongoing Projects	112,357	63,175	31,704	494	200	24,847	232,777
New Projects	1,350	8,176	26,500	39,650	44,605	22,980	143,261
	<u>\$113,707</u>	<u>\$71,351</u>	<u>\$58,204</u>	<u>\$40,144</u>	<u>\$44,805</u>	<u>\$47,827</u>	<u>\$376,038</u>
<b>Summary - Total Costs</b>							
Ongoing Projects	142,441	101,478	63,053	15,762	6,180	27,091	356,005
New Projects	4,607	37,126	94,541	116,243	126,434	380,442	759,393
<b>TOTAL CAPITAL COSTS</b>	<u>\$147,048</u>	<u>\$138,604</u>	<u>\$157,594</u>	<u>\$132,005</u>	<u>\$132,614</u>	<u>\$407,533</u>	<u>\$1,115,398</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>	<b>2010 - 11</b>	<b>2011 - 12</b>	<b>Funded</b>	<b>2012 - 13</b>	<b>2013 - 14</b>	<b>2014 - 15</b>	<b>Remaining</b>	<b>Total</b>
<b>Directly Mandated Projects</b>								
New Wet Weather Facility	53,150	21,360	74,510	600	9,000	12,000	23,230	119,340
Common to All	1,900	600	2,500	150	1,501	1,700	1,426	7,277
<b>Projects Mandated by Regulatory Requirements to Maintain Compliance</b>								
Oakland Macomb Interceptor District	221	0	221	0	0	0	441	662
Detroit Only	22,558	10,897	33,455	1,719	304	0	0	35,478
New Wet Weather Facility	686	417	1,103	0	6,000	6,255	19,356	32,714
Common to All	18,713	52,435	71,148	78,866	77,270	80,319	356,550	664,153
<b>Projects Required to Maintain or Improve System Reliability and/or Capacity</b>								
Oakland Macomb Interceptor District	0	0	0	0	250	350	200	800
Detroit Only	30,178	33,136	63,314	47,700	20,580	20,640	0	152,234
Suburban Only	78	1,530	1,608	1,020	0	0	0	2,628
Common to All	11,239	10,343	21,582	15,769	13,810	9,950	5,430	66,541
<b>Projects that Utilize Technological Advances to Improve Operational Efficiency, Worker Productivity and/or Management Effectiveness</b>								
Detroit Only	5,200	0	5,200	0	0	0	0	5,200
Common to All	3,125	7,886	11,011	11,770	3,290	1,400	900	28,371
<b>TOTAL</b>	<b>\$147,048</b>	<b>\$138,604</b>	<b>\$285,652</b>	<b>\$157,594</b>	<b>\$132,005</b>	<b>\$132,614</b>	<b>\$407,533</b>	<b>\$1,115,398</b>

## 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>	2010 - 11	2011 - 12	Funded	2012 - 13	2013 - 14	2014 - 15	Remaining	Total
Oakland Macomb Interceptor District	221	0	221	0	250	350	641	1,462
Detroit Only	57,936	44,033	101,969	49,419	20,884	20,640	0	192,912
Suburban Only	78	1,530	1,608	1,020	0	0	0	2,628
New Wet Weather Facility	53,836	21,777	75,613	600	15,000	18,255	42,586	152,054
Common to All	34,977	71,264	106,241	106,555	95,871	93,369	364,306	766,342
<b>TOTAL</b>	<b>\$147,048</b>	<b>\$138,604</b>	<b>\$285,652</b>	<b>\$157,594</b>	<b>\$132,005</b>	<b>\$132,614</b>	<b>\$407,533</b>	<b>\$1,115,398</b>
Oakland Macomb Interceptor District	<1%	0%	<1%	0%	<1%	<1%	<1%	<1%
Detroit Only	39%	32%	36%	31%	16%	16%	0%	17%
Suburban Only	<1%	1%	<1%	<1%	0%	0%	0%	<1%
New Wet Weather Facility	37%	16%	26%	<1%	11%	14%	10%	14%
Common to All	24%	51%	37%	68%	73%	70%	89%	69%

**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>	2010 - 11	2011 - 12	Funded	2012 - 13	2013 - 14	2014 - 15	Remaining	Total
Directly Mandated Projects	55,050	21,960	77,010	750	10,501	13,700	24,656	126,617
Projects Mandated by Regulatory Requirements to Maintain Compliance	42,178	63,749	105,927	80,585	83,574	86,574	376,347	733,007
Projects Required to Maintain or Improve System Reliability and/or Capacity	41,495	45,009	86,504	64,489	34,640	30,940	5,630	222,203
Projects that Utilize Technological Advances to Improve Operational Efficiency, Worker Productivity and/or Management Effectiveness	8,325	7,886	16,211	11,770	3,290	1,400	900	33,571
<b>TOTAL</b>	<b>\$147,048</b>	<b>\$138,604</b>	<b>285,652</b>	<b>\$157,594</b>	<b>\$132,005</b>	<b>\$132,614</b>	<b>\$407,533</b>	<b>\$1,115,398</b>
<b>RELATIVE PERCENTAGE</b>								
Directly Mandated Projects	37%	16%	27%	<1%	8%	10%	6%	11%
Projects Mandated by Regulatory Requirements to Maintain Compliance	29%	46%	37%	51%	63%	65%	92%	66%
Projects Required to Maintain or Improve System Reliability and/or Capacity	28%	32%	30%	41%	26%	23%	1%	20%
Projects that Utilize Technological Advances to Improve Operational Efficiency, Worker Productivity and/or Management Effectiveness	6%	6%	6%	7%	2%	1%	<1%	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	2010 - 11	2011 - 12	2012 - 13	2013 - 14	2014 - 15	Remaining	Total	Primary Project Purpose	Allocation Status
<b>Primary Treatment</b>													
1 <b>Pump Station No. 2 Pumping Improvements</b>	<b>004215</b>	<b>961</b>	<b>CS-1444</b>	S/D/CA	184	134	85	75			478	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>	<b>004290</b>	<b>1141</b>	<b>CS-1484</b>	S/D/CA	544	650	300	150	120		1,764	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>	<b>004211</b>	<b>1100</b>	<b>CS-1451</b>	S/D/CA	110	100	100	100	40		450	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	2010 - 11	2011 - 12	2012 - 13	2013 - 14	2014 - 15	Remaining	Total	Primary Project Purpose	Allocation Status
<b>Solids Handling</b>													
4 <b>Rehabilitate Sludge Pump Stations 1 and 2</b>	004225	607	CS-1467	D/CA	100	110	31	20			261	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>													
5 <b>Rehabilitation of Upper Level Belt Filter Presses for Complex II Dewatering</b>	004284	1144	CS-1483	S/D/CA	650	550	300	367	100		1,967	2	CTA
<i>The work will consist of rehabilitation of 12 Upper Level Belt Filter Presses for Complex II Dewatering, SFE booster pumps, and all related supportive equipment including control panels and associated wiring.</i>													
<b>Disinfection</b>													
6 <b>Study, Design, &amp; Construction Management Services for Modified Detroit River Outfall No. 2 - WWTP</b>	004178	1117	CS-1448	S/D/CA	1,200	600	150	1,501	1,700	1,426	6,577	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>													

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

Project Title	DRMS No.	CIP No.	Contract No.	Type	2010 - 11	2011 - 12	2012 - 13	2013 - 14	2014 - 15	Remaining	Total	Primary Project Purpose	Allocation Status
<b>General Purpose</b>													
7 <b>Department-wide Instrumentation, Control and Computer System Program Phase II (1)</b>	<b>003423</b>	<b>49</b>	<b>PC-713</b>	DB	700						700	1	CTA
<i>This project provides for department-wide instrumentation and computers to be used for data acquisition and control of DWSD systems. PC-713 will be designed, built and maintained by the contractor.</i>													
8 <b>As-needed Engineering Services (1)</b>	<b>003446</b>	<b>52</b>	<b>CS-1340</b>	D	700	532					1,232	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>													
9 <b>As-needed Engineering Services (1)</b>	<b>003453</b>	<b>55</b>	<b>CS-1346</b>	D	790	461					1,251	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>													
10 <b>Geotechnical Engineering Services on an As-needed Basis (1)</b>	<b>003778</b>	<b>571</b>	<b>CS-1372</b>	S/D	650						650	3	CTA
<i>This project provides geotechnical and related consulting services on an as-needed basis as requested by DWSD. This work consists of reviewing designs impacting DWSD facilities and responding to geotechnical emergencies. This project will also provide necessary services for field investigations to determine the geotechnical parameters affecting project feasibility, design, construction phasing, and the potential impact of construction on adjacent DWSD structures and DWSD operations.</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	2010 - 11	2011 - 12	2012 - 13	2013 - 14	2014 - 15	Remaining	Total	Primary Project Purpose	Allocation Status
<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	490						490	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	2,100						2,100	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	575	471	105				1,151	4	CTA
<b>14 Power Enhancement - Primary Service Conversion and PCB Disposal (1)</b>  <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>	<b>004144</b>	<b>1082</b>	<b>DWS-837C</b>	DB	312						312	2	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	2010 - 11	2011 - 12	2012 - 13	2013 - 14	2014 - 15	Remaining	Total	Primary Project Purpose	Allocation Status
<b>15 Department-wide Roof Replacement and Repair III (1)</b>	<b>004166</b>	<b>1027</b>	<b>DWS-857</b>	D/C	643						643	3	CTA
<i>This project involves repairing, removing or replacing existing built-up and shingle type roofs on an as-needed basis.</i>													
<b>16 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	131	100	71	20			322	3	CTA
<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>													
<b>17 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	600	100	101	100	30		931	2	CTA
<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>													

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

	Project Title	DRMS No.	CIP No.	Contract No.	Type	2010 - 11	2011 - 12	2012 - 13	2013 - 14	2014 - 15	Remaining	Total	Primary Project Purpose	Allocation Status
18	<b>General Engineering Services (1)</b> <i>This project will involve 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 may 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>	<b>004207</b>	<b>1031</b>	<b>CS-1432A</b>	D	618	550	550	550	550	818	3,636	3	CTA
19	<b>Low Voltage Wiring Contract (1)</b> <i>This project involves a vendor providing assistance with installing and maintaining the Department's low voltage wiring, telephone wiring and cable, data connections, antenna mounting and connections, instrument wiring, fiber networks, speaker, paging systems and code call system. It also includes system improvements and planning, system configuration and material procurement in support of the activities required completing each task.</i>	<b>004210</b>	<b>1058</b>	<b>DWS-866</b>	IT	600	750					1,350	4	CTA
20	<b>As-needed CIP Implementation Assistance and Related Services (1)</b> <i>This project provides for multi-discipline Engineering services on an "as-needed basis" to support DWSD's Water &amp; Sewer Systems.</i>	<b>004218</b>	<b>956</b>	<b>CS-1433</b>	S/D/CM	1,500	550	550	550			3,150	3	CTA
21	<b>General Engineering Services (1)</b> <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>	<b>004293</b>	<b>1182</b>	<b>CS-1481</b>	D	1,700	700	261				2,661	3	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	2010 - 11	2011 - 12	2012 - 13	2013 - 14	2014 - 15	Remaining	Total	Primary Project Purpose	Allocation Status
<b>22 As-needed Engineering Services for Concrete Testing, Geotechnical Soil Borings, other Testing Services, and Related Services (1)</b>  <i>The scope of work will include as-needed engineering services for concrete testing, geotechnical soil borings, and other testing and related services.</i>	<b>004295</b>	<b>1147</b>	<b>CS-1488</b>	D/C	1,112						1,112	3	CTA
<b>23 Geotechnical and Related Services on an As-Needed Basis (1)</b>  <i>The work includes consultant services for geotechnical work on as needed basis. The work may also include providing additional engineering/ technical services as requested by DWSD.</i>	<b>004307</b>	<b>1164</b>	<b>CS-1490</b>	D	1,150	1,150	600				2,900	3	CTA

**Sewer Interceptor System**

<b>24 Sewage Metering - Primary Measuring Device Improvements</b>  <i>This project involves design modifications for various Suburban Sewage Meter Pits and construction assistance during construction phases.</i>	<b>001770</b>	<b>61</b>	<b>CS-1225</b>	D	78	30	20				128	3	S
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**Sewage Disposal System  
Capital Improvement Program  
Projected Expenditures Spread by Fiscal Year  
Active Projects  
(000)**

Project Title	DRMS No.	CIP No.	Contract No.	Type	2010 - 11	2011 - 12	2012 - 13	2013 - 14	2014 - 15	Remaining	Total	Primary Project Purpose	Allocation Status
<b>Combined Sewer System</b>													
25 <b>Long Term CSO Control Plan - Phase III</b>	<b>001796</b>	<b>85</b>	<b>CS-1281</b>	S/D	186	217					403	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>													
26 <b>Baby Creek CSO Pilot Control Facility</b>	<b>003250</b>	<b>101</b>	<b>PC-748</b>	C	1,600	1,100					2,700	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>													
27 <b>Inspection &amp; In-Place Rehabilitation of Outfalls</b>	<b>003883</b>	<b>945</b>	<b>DWS-849</b>	DB	286						286	2	CTA
<i>This project involves furnishing all labor, materials, and equipment to perform television inspection, cleaning, and rehabilitation/ lining of outfall sewers.</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	2010 - 11	2011 - 12	2012 - 13	2013 - 14	2014 - 15	Remaining	Total	Primary Project Purpose	Allocation Status
28	<b>Oakwood CSO Control Facility and Pump Station</b>  <i>This project involves the necessary study, design and construction assistance for retrofitting the Oakwood Pump Station with screening devices to remove "floatables" and construct a disinfection system to demonstrate that the CSO discharges comply with MDNR requirements of adequate treatment.</i>	<b>004063</b>	<b>420</b>	<b>CS-1364</b>	S/D/CA	2,395	1,650					4,045	1	83/17
29	<b>CSO Control for Oakwood Pumping Station</b>  <i>Retrofit Oakwood Pump Station with screening devices to remove "floatables" and construct a disinfection system to demonstrate that the CSO discharges comply with MDNR requirements of adequate treatment.</i>	<b>004063</b>	<b>420</b>	<b>PC-755</b>	C	28,600	17,810					46,410	1	83/17
30	<b>Bluehill Pumping Station Rehabilitation</b>  <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>004067</b>	<b>637</b>	<b>PC-685</b>	C	450						450	2	D
31	<b>Woodmere Pumping Station Rehabilitation</b>  <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>	<b>004093</b>	<b>958</b>	<b>PC-752A</b>	C	3,400	2,600	600	304			6,904	2	D

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

Project Title	DRMS No.	CIP No.	Contract No.	Type	2010 - 11	2011 - 12	2012 - 13	2013 - 14	2014 - 15	Remaining	Total	Primary Project Purpose	Allocation Status
<b>32 Consultant Services for Land Acquisition for Long Term CSO Control Program</b>	<b>004110</b>	<b>1078</b>	<b>CS-1407</b>	S	250					1,230	1,480	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>													
<b>33 Land Acquisition for Long Term CSO Control Program</b>	<b>004110</b>	<b>1078</b>		C	1,000					18,000	19,000	1	83/17
<i>Long term CSO control program land acquisition allowance.</i>													
<b>34 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	1,200						1,200	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>35 Clintondale and Fischer Pumping Station Improvements</b>	<b>004174</b>	<b>1093</b>	<b>CS-1421</b>	S/D/CA	221					441	662	2	OMID
<i>This project involves study, design, and construction assistance services for the rehabilitation of the Clintondale Pumping Station.</i>													
<b>36 Clintondale and Fischer Pumping Station Improvements</b>	<b>004174</b>	<b>1093</b>	<b>CS-1421</b>	S/D/CA 2	135	135	119				389	2	D
<i>This project involves study, design, and construction assistance services for the rehabilitation of the Fischer Pumping Station.</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	2010 - 11	2011 - 12	2012 - 13	2013 - 14	2014 - 15	Remaining	Total	Primary Project Purpose	Allocation Status
<b>37 Upper Rouge CSO Control Project - South Tunnel</b>	<b>004299</b>	<b>434</b>	<b>PC-764</b>	C 1	18,000						18,000	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>38 Department-wide Engineering Services II (1)</b>	<b>001772</b>	<b>107</b>	<b>CS-1240</b>	D	548	136					684	3	D
<i>This project provides general engineering services for project-specific tasks for smaller scale projects, on an as-needed basis.</i>													
<b>39 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	810						810	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>													
<b>40 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	200						200	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>													

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

	Project Title	DRMS No.	CIP No.	Contract No.	Type	2010 - 11	2011 - 12	2012 - 13	2013 - 14	2014 - 15	Remaining	Total	Primary Project Purpose	Allocation Status
41	<b>Sewer System Improvement: Oakwood District Sewers Phase I</b>  <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>004238</b>	<b>449</b>	<b>PCS-79</b>	C	11,518	4,482					16,000	2	D
42	<b>Sewer System Improvement: Oakwood District Sewers - Phase II</b>  <i>Improving the sewer of Oakwood District by replacing and approximately 38,790 L Ft of 12" to 24" Diameter Sewer.</i>	<b>004239</b>	<b>449</b>	<b>PCS-80</b>	C 2	6,080	1,480					7,560	2	D
43	<b>East Side City of Detroit Sewer Repair Contract for Inspection and In-place Rehabilitation of Existing Circular and Non-Circular Sewers</b>  <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>	<b>004341</b>	<b>1201</b>	<b>DWS-876</b>	DB	13,610	13,610	13,550				40,770	3	D
44	<b>West Side City of Detroit Sewer Repair Contract for Inspection and In-place Rehabilitation of Existing Circular and Non-Circular Sewers</b>  <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>	<b>004342</b>	<b>1200</b>	<b>DWS-877</b>	DB	13,610	13,610	13,550				40,770	3	D

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

Project Title	DRMS No.	CIP No.	Contract No.	Type	2010 - 11	2011 - 12	2012 - 13	2013 - 14	2014 - 15	Remaining	Total	Primary Project Purpose	Allocation Status
<b>Planning and Administration</b>													
45 <b>Water Meter Replacement and Automatic Meter Reading Equipment Installation (1)</b>	002003	131	CM-2007	DB	5,200						5,200	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>													
46 <b>Department-wide Furniture Acquisition/Purchase (1)</b>	003348	136		PO	200	400					600	4	CTA
<i>This project is intended as a mechanism by which to purchase all furniture needs of the department.</i>													
47 <b>Document Control Improvement Program (DCIP) (1)</b>	003878	948		S/D	200	265	265	190	200	900	2,020	4	CTA
<i>Implement computer-based facilities into a single database system including system design, installation and data entry; make existing documents to plant standard; include existing information in CAD or paper format.</i>													
48 <b>Customer Billing and Management System (CBMS) Upgrade (1)</b>	004220	1139	CS-1465	IT	350						350	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>\$127,286</u>	<u>\$65,033</u>	<u>\$31,308</u>	<u>\$3,927</u>	<u>\$2,740</u>	<u>\$22,815</u>	<u>\$253,109</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	2010 - 11	2011 - 12	2012 - 13	2013 - 14	2014 - 15	Remaining	Total	Primary Project Purpose	Allocation Status
<b>Secondary Treatment</b>													
1 <b>Secondary Clarifiers, RAS Pumps and MCCs Improvements</b>	<b>004211</b>	<b>1100</b>	<b>PC-776</b>	C	3,280	6,900	9,000	6,900	2,700		28,780	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>													
2 <b>Aeration System Improvements</b>	<b>004336</b>	<b>1194</b>	<b>CS-1498</b>	S/D/CA	190	1,240	120	100	100		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>Complex I and Complex II Incinerator Improvements</b>	<b>004169</b>	<b>965</b>	<b>PC-774</b>	DB	7,100	16,175	14,175	3,300			40,750	2	CTA
<i>This project involves study, design and construction for the short term (immediate needs) improvements of the complex I and complex II incinerators and conveyance system 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	2010 - 11	2011 - 12	2012 - 13	2013 - 14	2014 - 15	Remaining	Total	Primary Project Purpose	Allocation Status
<b>4 Rehabilitate Sludge Pump Stations 1 and 2</b>	<b>004225</b>	<b>607</b>	<b>PC-780</b>	C	850	3,500	2,050	555			6,955	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>													
<b>General Purpose</b>													
<b>5 Consolidated Process Control System and Standardization for Construction Contracts (1)</b>	<b>003423</b>	<b>1153</b>	<b>PC-773B</b>	C	700	1,200	1,200	400			3,500	3	CTA
<i>This project will involve integrating the control and monitoring network throughout all of the DWSD facilities with the new SCADA system installed under PC-713. The work will include control system hardware, software, and firmware upgrade or replacement, also troubleshooting, installation, start-up, testing, and repair services. The scope of work will also include preparation of a DWSD Ovation Standards Manual to establish guidelines for incorporating processes into Ovation System through future design and construction contracts.</i>													
<b>6 Department-wide General Engineering Services on an As-needed Basis (1)</b>	<b>004338</b>	<b>1026</b>	<b>CS-1499</b>	D	400	780	600	580	640		3,000	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 tasks to be performed may involve civil, structural, architectural, hydraulics, mechanical, electrical, surveying, instrumentation and piping design services.</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	2010 - 11	2011 - 12	2012 - 13	2013 - 14	2014 - 15	Remaining	Total	Primary Project Purpose	Allocation Status
<b>7 Data Center Reliability/Availability Improvements (1)</b>	<b>004367</b>	<b>1206</b>	<b>DWS-881</b>	IT	400	1,000	1,000				2,400	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>													
<b>Sewer Interceptor System</b>													
<b>8 Primary Measuring Device Improvements</b>	<b>001715</b>	<b>60</b>	<b>PC-721</b>	C		1,500	1,000				2,500	3	S
<i>Modifications to sewage metering facility No. OC-S-2 (Oakland County), which include changes to primary devices and appurtenances, cleaning and water-proofing the facilities, ventilating permanent light, and installing flushing water vaults.</i>													
<b>Combined Sewer System</b>													
<b>9 Replacement of CSO Basins Control Systems</b>	<b>004275</b>	<b>1036</b>	<b>PC-761</b>	C	500	200					700	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>													
<b>10 Fischer Pumping Station Improvements</b>	<b>004318</b>	<b>1093</b>	<b>PC-772</b>	C 2	975	2,200	1,000				4,175	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  
Projects Under Procurement  
(000)**

Project Title	DRMS No.	CIP No.	Contract No.	Type	2010 - 11	2011 - 12	2012 - 13	2013 - 14	2014 - 15	Remaining	Total	Primary Project Purpose	Allocation Status
<b>11 Disposable Nets with Disinfection Pilot Facilities at Adair, Joseph Campau and Helen Outfalls and Diversion of Meldrum Sewer to Existing Leib Screening and Disinfection Facility</b>  <i>The scope of the work includes the study, design, construction management, and performance assessment for the Pilot Disinfection Facilities (Netting Facilities) at Adair, Joseph Campau, and Helen Outfalls. This also includes the collection and evaluating of data collection from DWSD facilities' sites, equipment inspection, existing design information and built drawings, and conducting geotechnical analysis to determine surface and subsurface soil conditions for proposed construction. The performance assessment phase will develop work plans for implementing schedules describing the sampling and analysis to evaluate the performance of these pilot facilities.</i>	<b>004362</b>	<b>1204</b>	<b>CS-1504</b>	S/D/CM						4,276	4,276	2	83/17
<b>Planning and Administration</b>													
<b>12 SCADA Radio Network Upgrade (1)</b>  <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 will also include system improvements and planned, system and material procurement in support of the activities required for completing each task.</i>	<b>004369</b>	<b>1207</b>	<b>DWS-882</b>	IT	750	1,750	1,600				4,100	3	CTA
					<u>\$15,145</u>	<u>\$36,445</u>	<u>\$31,745</u>	<u>\$11,835</u>	<u>\$3,440</u>	<u>\$4,276</u>	<u>\$102,886</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	2010 - 11	2011 - 12	2012 - 13	2013 - 14	2014 - 15	Remaining	Total	Primary Project Purpose	Allocation Status
<b>General Purpose</b>													
1 <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>													
<b>Combined Sewer System</b>													
2 <b>Baby Creek CSO Pilot Control Facility</b>	003250	101	CS-1286	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>													
					\$10	\$0	\$0	\$0	\$0	\$0	\$0	\$10	

# 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	CIP No.	Type	2010 - 11	2011 - 12	2012 - 13	2013 - 14	2014 - 15	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		2,000	3,000	700			5,700	2	CTA
<i>This project will either 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, if feasible; install new, larger VFDs on existing pumps; or install larger VFDs and larger pumps for three or more pumps.</i>													
3 <b>New Troughs and Weirs for Primary Clarifiers 13-16</b>	PC-756	2003	962	C	1,300	7,655	7,500	3,071			19,526	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>													
4 <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>													

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(000)**

Project Title	Contract No.	Year	CIP No.	Type	2010 - 11	2011 - 12	2012 - 13	2013 - 14	2014 - 15	Remaining	Total	Primary Project Purpose	Allocation Status
<b>5 Grit and Screening System Improvements for Pump Station # 1 and # 2</b>		<b>2008</b>	<b>1189</b>	C			5,000	8,000	2,800		15,800	2	CTA

*The scope of work includes modifications and improvements of the existing grit and screening handling system at pump stations 1 and 2.*

**Secondary Treatment**

<b>6 Aeration System Improvements</b>		<b>2008</b>	<b>1194</b>	C			5,000	11,800	6,900		23,700	2	CTA
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*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.*

<b>7 Process Improvements for the Secondary Treatment at WWTP</b>		<b>2008</b>	<b>1195</b>	C		1,000	285				1,285	2	CTA
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*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.*

**Sewage Disposal System  
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(000)**

Project Title	Contract No.	Year	CIP No.	Type	2010 - 11	2011 - 12	2012 - 13	2013 - 14	2014 - 15	Remaining	Total	Primary Project Purpose	Allocation Status
<b>Solids Handling</b>													
8 <b>Renovation of Operation Spaces</b>		2004	1039	S/D/C						712	712	3	CTA
<i>This project will involve demolishing existing operator booths in Incineration Complex I, providing new booths in compliance with all relevant codes and standards, and meeting minimum requirements for continuous occupancy.</i>													
9 <b>Rehabilitation of Upper Level Belt Filter Presses for Complex II Dewatering</b>		2006	1144	C		2,000	6,900	5,800	1,250		15,950	2	CTA
<i>The work will consist of rehabilitation of 12 Upper Level Belt Filter Presses for Complex II Dewatering, SFE booster pumps, and all related supportive equipment including control panels and associated wiring.</i>													
10 <b>Replacement of Lower Level Complex II Dewatering Centrifuges</b>		2010	1220	S/D/C		50	500	1,200	10,000	13,250	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>													

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Projected Expenditures Spread by Fiscal Year  
New Projects  
(000)**

Project Title	Contract No.	Year	CIP No.	Type	2010 - 11	2011 - 12	2012 - 13	2013 - 14	2014 - 15	Remaining	Total	Primary Project Purpose	Allocation Status
<b>11 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>12 Long Term Biosolid Disposal Alternatives</b>		<b>2010</b>	<b>1231</b>	S/D/C		1,100	5,200	8,400	43,150	343,150	401,000	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>													

**Disinfection**

<b>13 Replacement of Chlorination and Dechlorination Equipment at the WWTP</b>		<b>2010</b>	<b>1222</b>	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>													

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(000)**

Project Title	Contract No.	Year	CIP No.	Type	2010 - 11	2011 - 12	2012 - 13	2013 - 14	2014 - 15	Remaining	Total	Primary Project Purpose	Allocation Status
<b>General Purpose</b>													
14 <b>Underground Electrical Duct Bank Repair and EB-1, EB-2, and EB-10 Primary Power Service Improvements - WWTP</b>		1998	366	C	200	8,000	12,000	6,000	2,800		29,000	2	CTA
<i>This project will include replacement of 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>													
15 <b>Potable Water Backflow Prevention Improvements</b>		2001	620	D/C		100	487	900	100		1,587	3	CTA
<i>The overall goal of this project is to ensure safe drinking water on site at WWTP through providing adequate backflow prevention and eliminating cross connections.</i>													
16 <b>WWTP Work Environment Improvement</b>		2003	972	S/D		100	400	190	100		790	3	CTA
<i>The work to be completed under this contract includes the study and design work for implementing plant-wide lighting, changing site access, improving Jefferson Frontage, improving vehicle and pedestrian routing, and enhancing the landscape.</i>													
17 <b>WWTP Work Environment Improvement</b>		2003	972	C				3,500	1,000		4,500	3	CTA
<i>The work to be completed under this contract includes implementing plant-wide lighting, changing site access, improving Jefferson Frontage, improving vehicle and pedestrian routing, and enhancing the landscape.</i>													

**Sewage Disposal System  
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New Projects  
(000)**

Project Title	Contract No.	Year	CIP No.	Type	2010 - 11	2011 - 12	2012 - 13	2013 - 14	2014 - 15	Remaining	Total	Primary Project Purpose	Allocation Status
<b>18 Plant-wide Fire Alarm Systems Upgrade/ Integration and Fire Protection Improvements</b>		<b>2004</b>	<b>1028</b>	C	250	2,500	3,800	1,050			7,600	3	CTA
<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>													
<b>19 Study/ Repair Potable Water, Screened Final Effluent, Natural Gas and Compressed Air Pipe Lines at the WWTP</b>		<b>2006</b>	<b>1140</b>	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>													
<b>20 As-needed Survey Services (1)</b>		<b>2006</b>	<b>1146</b>	D		50	750	750	750	200	2,500	3	CTA
<i>The work will include aerial photography, related aerial survey, ground survey, and related services on an as-needed basis.</i>													
<b>21 DWSD Main Office Building Improvements (1)</b>		<b>2008</b>	<b>1187</b>	S/D/C	600						600	4	CTA
<i>The scope of work includes study, design, and construction services for replacing existing temperature controls and rebuilding chiller compressors and its accessories at the DWSD main office building.</i>													

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New Projects  
(000)**

Project Title	Contract No.	Year	CIP No.	Type	2010 - 11	2011 - 12	2012 - 13	2013 - 14	2014 - 15	Remaining	Total	Primary Project Purpose	Allocation Status
<b>22 Central Services Facility (CSF) Improvements (1)</b>		<b>2008</b>	<b>1188</b>	C	50	2,000	3,000	1,100			6,150	4	CTA
<i>The scope of work includes HVAC system improvements, security improvements, improvements for salt barn, overhead doors and other rehabilitative work at CSF.</i>													
<b>23 Low Voltage Wiring III (1)</b>		<b>2009</b>	<b>1205</b>	IT		50	1,500	2,000	1,200		4,750	4	CTA
<i>The scope of work consists of installing and upgrading the Department's low voltage wiring, telephone and cable, data connections, antenna mounting and connections, instrument wiring, fiber networks, speaker, paging systems and code call system. It will also include system improvements and planning, system configuration and material procurement in support of the activities required for completing each task.</i>													
<b>24 As Needed Instrumentation and Control System Services</b>		<b>2010</b>	<b>1219</b>	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 the services for new and existing control systems at WWTP and CSO Basins.</i>													
<b>25 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>													

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New Projects  
(000)**

Project Title	Contract No.	Year	CIP No.	Type	2010 - 11	2011 - 12	2012 - 13	2013 - 14	2014 - 15	Remaining	Total	Primary Project Purpose	Allocation Status
<b>26 Replacement of LIMS / PIMS Software System</b>		<b>2010</b>	<b>1224</b>	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>													
<b>27 Design and Installation of a Multi-Point Fluid Dispensing System at C.S.F. Garage (1)</b>		<b>2010</b>	<b>1229</b>	S/D/C	557						557	2	CTA
<i>The work consists of the study, design and installation of an advanced Multi-Point Fluid Dispensing System in compliance with all regulatory rules at CSF garage.</i>													

**Sewer Interceptor System**

<b>28 Sewer Meter Replacement</b>		<b>2007</b>	<b>1167</b>	C	100	2,000	1,900				4,000	4	CTA
<i>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.</i>													

**Combined Sewer System**

<b>29 Outfall Improvements Allowance</b>			<b>440</b>	D/C			4,000	4,000	4,000		12,000	3	CTA
<i>This project will provide an annual allowance for outfall improvements.</i>													

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Projected Expenditures Spread by Fiscal Year  
New Projects  
(000)**

Project Title	Contract No.	Year	CIP No.	Type	2010 - 11	2011 - 12	2012 - 13	2013 - 14	2014 - 15	Remaining	Total	Primary Project Purpose	Allocation Status
<b>30 CSO Control Facilities - Mechanical, Electrical, and Structural Improvements</b>  <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>		<b>2008</b>	<b>1190</b>	C				6,000	6,255		12,255	2	83/17
<b>31 Disposable Nets with Disinfection Pilot Facilities at Adair, Joseph Campau and Helen Outfalls and Diversion of Meldrum Sewer to Existing Leib Screening and Disinfection Facility</b>  <i>The scope of the work provides for the performance assessment for the Pilot Disinfection Facilities (Netting Facilities) at Adair, Joseph Campau, and Helen Outfalls. This also includes the collection and evaluating of data collection from DWSD facilities' sites, equipment inspection, existing design information and built drawings, and conducting geotechnical analysis to determine surface and subsurface soil conditions for proposed construction. The performance assessment phase will develop work plans for implementing schedules describing the sampling and analysis to evaluate the performance of these pilot facilities.</i>		<b>2009</b>	<b>1204</b>	C						15,080	15,080	2	83/17
<b>32 Replacement of Corroded Sanitary Headers at North East Sewage Pumping Station</b>  <i>The work consists of the assessment, design and installation of six (6) Discharge Headers and replacement of corroded pipes.</i>		<b>2010</b>	<b>1214</b>	S/D/C				250	350	200	800	3	OMID

**Sewage Disposal System  
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(000)**

Project Title	Contract No.	Year	CIP No.	Type	2010 - 11	2011 - 12	2012 - 13	2013 - 14	2014 - 15	Remaining	Total	Primary Project Purpose	Allocation Status
<b>33 Replacement of Four (4) Mixed Flow Sanitary Pumps at Fairview Sewage Pumping Station</b>		<b>2010</b>	<b>1217</b>	S/D/C				400	2,000	3,700	6,100	3	CTA
<i>The work consists of study, design, and installation of four (4) Mixed Flow Sanitary Pumps.</i>													
<b>34 Replacement of Pressurized Manhole Covers on Wetwells at Freud Sewage Pumping Station</b>		<b>2010</b>	<b>1218</b>	S/D/C	150	376					526	2	CTA
<i>The scope of work includes study, design, and replacement of four (4) pressurized manhole covers and to enable the facilitation of inspections for periodic maintenance to the wet wells.</i>													
<b>35 Replacement of Screening Equipment at Baby Creek CSO Facility</b>		<b>2010</b>	<b>1225</b>	S/D/C	100	800	600	9,000	12,000	4,000	26,500	1	83/17
<i>The work consists of the study, design, and 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>													

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(000)**

Project Title	Contract No.	Year	CIP No.	Type	2010 - 11	2011 - 12	2012 - 13	2013 - 14	2014 - 15	Remaining	Total	Primary Project Purpose	Allocation Status
<b>Lateral Sewer Replacement</b>													
36 Lateral Sewer Replacement Allowance			448	D/C	1,000	5,000	20,000	20,000	20,000		66,000	3	D
<i>Yearly allowance to replace aging lateral sewer lines in the City.</i>													
					<u>\$4,607</u>	<u>\$37,126</u>	<u>\$94,541</u>	<u>\$116,243</u>	<u>\$126,434</u>	<u>\$380,442</u>	<u>\$759,393</u>		