

**Materials and Services**

The proposed Materials and Services budget totaling \$4,012,756 represents a total FY 08-09 increase of \$402,149 which is 11%. The major changes are in the following budget categories:

**Fleet Operating Charges – \$256,019 [Decrease of (\$31,868) or (11%)]**

- Each year fleet rates are estimated by proportioning historic costs by vehicle category. The decrease in this line item is due to a reduction of Fleet Rates on some vehicle categories.

**Maintenance of Equipment & Facilities – \$381,999 [Increase of \$88,252 or 30%]**

- The increase is primarily due to budgeting for the increasing demand for maintenance related to the operations of the Biocycle Farm at the Biosolids Management Facility, caused by the completion of several expansion phases over the past several years.

**Contractual Services – \$391,323 [Increase of \$46,695 or 14%]**

- This line account includes \$20,000 to meet the seasonal workload of the biocycle and biosolids reuse facility. Also, an increase in anticipated audit and consulting costs was partially offset by a decrease in anticipated laboratory analysis costs.

**Materials & Program Expense - \$582,102 [Increase of \$39,799 or 7%]**

- The increase in this budget category is primarily comprised of increases for small equipment, staff training related to operation and maintenance of the co-generator engine, office furniture, laundry service, gas and oil and a reduction in legal expenses.

**Parts & Components – \$236,997 [Decrease of (\$11,516) or (5%)]**

- The decrease is a net effect of an anticipated increased need of the Biosolids Management Facility coupled with a decreased expected need by the Treatment Plant.

**Computer Equipment, Supplies, Maintenance \$152,936 [Decrease of (\$20,845) or (12%)]**

- This line item reflects the reduction from a one time Data Historian software purchase in the FY07-08 budget.

**Indirects – Budget Request \$955,000 [Increase of \$296,000 or 45%]**

- During FY 06-07 the City of Eugene Public Works Administration met with the Eugene and Springfield Finance Staff to find the best methodology to recover central services allocations from the regional fund. The discussion was still in process during the FY 07-08 budget process and the FY 07-08 indirect budget was calculated with the information available at that time. The FY 07-08 estimate was lower than the FY 06-07 budget and has since proved to be lower than actual requirements. The FY 08-09 indirect budget was increased to be back

in line with the intergovernmental agreement provisions. Discussions are ongoing between the City staffs to develop a recommendation to the Commission on an efficient methodology with which to calculate indirect charges assessed to the regional wastewater program.

**Capital Outlay**

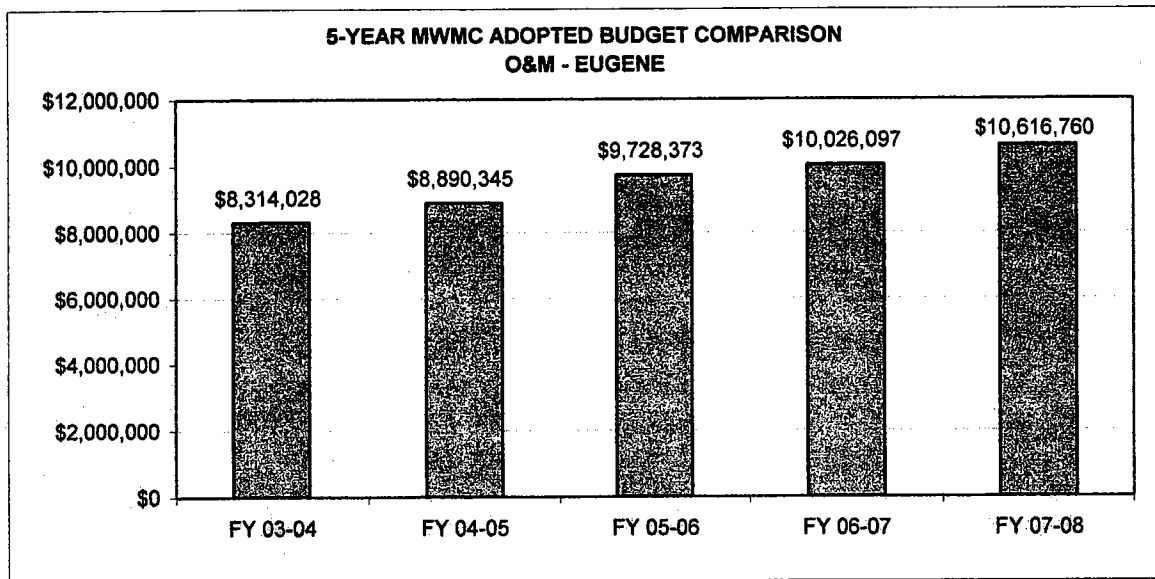
**Capital Outlay - Other - \$10,000**

- Laboratory Moisture/Solids Analyzer \$ 10,000

**EXHIBIT 10**

**O & M - CITY OF EUGENE PROGRAM  
PROPOSED FY 08-09  
BUDGET SUMMARY**

	ACTUAL FY 06-07	ADOPTED BUDGET FY 07-08	AMENDED BUDGET FY 07-08	PROPOSED BUDGET FY 08-09	CHANGE *	
					INCR/(DECR)	
Personnel Services	\$5,937,791	\$6,360,990	\$6,360,990	\$6,594,004	\$233,014	4%
Materials & Services	\$3,531,009	\$3,610,607	\$3,610,607	\$4,012,756	402,149	11%
Capital Outlay	179,243	54,500	54,500	10,000	(44,500)	-82%
<b>Budget Summary</b>	<b>\$9,648,043</b>	<b>\$10,026,097</b>	<b>\$10,026,097</b>	<b>\$10,616,760</b>	<b>\$590,663</b>	<b>6%</b>



Note: \* Change column and Percent Change column compare proposed FY 08-09 budget to originally adopted FY 07-08 budget.

**EXHIBIT 11  
O&M - CITY OF EUGENE  
LINE ITEM BUDGET SUMMARY**

	ACTUAL FY 06-07	ADOPTED BUDGET FY 07-08	AMENDED BUDGET FY 07-08	PROPOSED BUDGET FY 08-09	CHANGE INCR/(DECR)	
<b><u>PERSONNEL SERVICES</u></b>						
Regular Wages	\$3,703,685	\$4,005,633	\$4,005,633	\$4,166,834	\$161,201	4%
Extra Help	(742)	0	0	0	0	NA
Overtime	48,452	60,950	60,950	57,450	(3,500)	-6%
Employee Benefits	1,343,862	1,346,256	1,346,256	1,398,867	52,331	4%
Health Insurance	751,010	862,083	862,083	877,958	15,875	2%
Workers' Comp/Unemploy Ins	91,524	86,068	86,068	92,175	7,107	8%
<b>TOTAL PERSONNEL SERVICES</b>	<b>5,937,791</b>	<b>6,360,990</b>	<b>6,360,990</b>	<b>6,594,004</b>	<b>233,014</b>	<b>4%</b>
FTE	73.42	75.42	75.42	75.57	0.15	0%
<b><u>MATERIALS &amp; SERVICES</u></b>						
Utilities	676,146	688,499	688,499	690,092	1,534	0%
Fleet Operating Charges	255,085	287,887	287,887	256,019	(31,868)	-11%
Maintenance-Equip & Facilities	315,706	293,747	293,747	381,939	88,252	30%
Contractual Services	288,355	344,628	344,628	391,374	46,695	14%
Materials & Program Expense	543,122	542,303	542,303	582,102	39,799	7%
Chemicals	265,089	233,078	233,078	226,560	(4,512)	-2%
Parts & Components	214,139	248,513	248,513	246,992	(1,516)	-5%
Laboratory Equipment & Supplies	60,878	90,811	90,811	90,226	(585)	-1%
Risk Insurance - Employee Liability	52,493	48,360	48,360	47,355	(805)	-2%
Computer Equip, Supplies, Maint	135,266	173,781	173,781	152,936	(20,845)	-12%
Indirects	724,730	659,000	659,000	955,000	296,000	45%
<b>TOTAL MATERIALS &amp; SERVICES</b>	<b>3,531,009</b>	<b>3,610,607</b>	<b>3,610,607</b>	<b>4,032,756</b>	<b>402,149</b>	<b>11%</b>
<b><u>CAPITAL OUTLAY</u></b>						
Motorized Vehicles	\$71,803	\$54,500	\$54,500	\$0	(\$54,500)	NA
Capital Outlay-Other	107,440	0	0	10,000	10,000	NA
<b>TOTAL CAPITAL OUTLAY</b>	<b>179,243</b>	<b>54,500</b>	<b>54,500</b>	<b>10,000</b>	<b>(44,500)</b>	<b>-82%</b>
<b>LINE ITEM SUMMARY: EUGENE</b>	<b>9,648,043</b>	<b>10,026,097</b>	<b>10,026,097</b>	<b>10,616,760</b>	<b>590,663</b>	<b>6%</b>
<b>EQUIPMENT REPLACEMENT</b>	<b>\$ 384,485</b>	<b>\$ 486,534</b>	<b>\$ 486,534</b>	<b>\$ 569,010</b>	<b>\$ 82,476</b>	<b>17%</b>
<b>MAJOR REHAB</b>	<b>\$ 96,793</b>	<b>\$ 270,000</b>	<b>\$ 439,300</b>	<b>\$ 900,000</b>	<b>\$ 630,000</b>	<b>143%</b>
<b>MAJOR CAPITAL OUTLAY</b>	<b>\$ 165,000</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>NA</b>

## REGIONAL WASTEWATER PROGRAM CAPITAL PROGRAMS

### Overview and Goals

The FY 08-09 Regional Wastewater Program (RWP) Capital Budget and the FY 08-13 five-year Capital Improvement Program (CIP) are based on the MWMC Facilities Plan, which was approved by MWMC, the governing bodies of Eugene, Springfield and Lane County, and the Oregon Department of Environmental Quality in 2004. The Facilities Plan, and its 20-year capital project list, was the result of a comprehensive evaluation of the regional wastewater treatment facilities serving the Eugene-Springfield metropolitan area. The Plan built on previous targeted studies, including the 1997 Master Plan, 1997 Biosolids Management Plan, 2001 Wet Weather Flow Management Plan (WWFMP), and the 2003 Management Plan for a Dedicated Biosolids Land Application Site. The Facilities Plan is intended to identify facility enhancements and expansions that are needed to meet increased regulatory and wet weather flow requirements and to serve the community's wastewater capacity and treatment needs through 2025.

The objectives of the Capital Program are:

- Compliance with applicable local, state, and federal laws and regulations;
- Protection of the health and safety of people and property from exposure to hazardous conditions such as exposure to untreated or inadequately treated wastewater;
- Provision of adequate capacity to facilitate community growth in the Eugene-Springfield metropolitan area consistent with adopted land use plans;
- Construction, operation, and management of MWMC facilities in a manner that is as cost-effective, efficient, and affordable to the community as possible in the short and long term;
- Implementation of Citizens Advisory Committee recommendations, which represent diverse community interests, values and involvement, and that have been adopted by the Commission as MWMC plans and policies; and
- Mitigation of potential negative impacts of MWMC facilities on adjacent uses and surrounding neighborhoods (ensuring that MWMC facilities are "good neighbors" as judged by the community).

Attaining these objectives is the basis for the projects included in the five-year CIP and FY 08-09 Capital Projects budget administered by the Capital Projects Section staff in the City of Springfield. Particular emphasis has been placed on getting projects completed which will allow for conveyance and treatment of peak wet weather flows by the end of 2009.

The capital program objectives also guide the capital projects administered by the City of Eugene which extend the life of the existing facilities through equipment replacement, facility rehabilitation and capital outlay.

### **CIP Financial Planning and Policy Overview**

The RWP CIP is funded primarily through proceeds from revenue bond sales, system development charges, and transfers from the operating fund to Capital Reserves. This year, staff will also apply for loan funding through the State Revolving Fund loan program. The operating fund derives the majority of its revenue from wastewater user charges that are collected by Eugene and Springfield from their respective customers. Transfers from the operating fund are budgeted annually consistent with the MWMC Financial Plan to meet the financial needs of the capital projects. The RWP uses these transfers to reduce the amount of borrowing necessary to finance the capital program.

For each fiscal planning cycle, only one year of budget authority is appropriated. The remaining four years of the CIP are important and useful for fiscal and work planning purposes, but the funds in the outer years of the CIP are only planned for, not appropriated. The full amount of obligated multi-year project costs is typically appropriated in the first year of the project, unless a smaller subset of the project, such as project design, can be identified and funded without budgeting the full projected project cost. For these multi-year contracts, unspent funds from one fiscal year will be carried over to subsequent fiscal years until the project is completed.

The RWP CIP reflects projected price changes over time that affect the cost of materials and services. Until about 2003, the 20-year average Engineering News Record inflationary factor for construction served as a good predictor for future inflation and was used for projecting MWMC costs. Initial cost projections for projects included in the Facilities Plan were included in the Plan based on January 2004 construction costs. In recent years however, construction inflation has accelerated and local construction cost inflation has even accelerated faster than the ENR average and MWMC has modified its inflationary projections accordingly. In early 2006, MWMC hired CH2M Hill to perform a comprehensive update of project cost estimates. Following that update, the RWP CIP assumes general prices change at five percent per year over the planning period. This does not reflect a projection of any single inflation index but was developed by CH2M Hill to reflect a reasonable aggregate rate of increases for the next five years, based on the historical activity of both construction and non-construction price indices. Indices tracked include the Engineering News Record Construction Cost Index, the Turner Building Cost Index, and the Consumer Price Index.

### **Regional Wastewater Program Capital Projects Budget**

The following is a summary of the status of capital projects which are currently budgeted in the FY 07-08 Regional Wastewater Program Capital Budget and those included in the new FY 08-09 Capital Budget.

The Regional Wastewater Program Capital Projects budget consists of the projects in the first year of the FY 08-13 five-year CIP, totaling \$95,144,404, plus the Capital Projects managed by Eugene staff at the Wastewater Facility (consisting of Equipment Replacement, Major Capital Outlay, and Major Rehabilitation), totaling \$1,758,010.

Information regarding each project included in the FY 08-09 Capital Projects budget is included in the CIP project summary sheets included in this document. Each summary sheet provides a

description of the project, the project purpose and what is driving the timing of the project, the funding schedule, and the expected final cost and cash flow for the project. For those projects which are in progress, a short status report is included on the summary sheet.

### **Completed Capital Projects (Scheduled Completion by June 30, 2008)**

In FY 07-08, several on-going capital projects are being completed and closed out. Those projects projected to be closed out in FY 07-08 are listed below. No CIP summary sheets are included in this document for these projects because there is no expected carryover of project funds to FY 08-09, and therefore no requested budget for these projects in FY 08-09. All projects completed in FY 07-08 have been completed within the Commission-approved capital budgets for each project.

The **Primary and Secondary Clarifier Improvements** project, which combined three projects from the 2004 Facilities Plan (Primary Clarifier Enhancements, Secondary Clarifier Enhancements, and 9<sup>th</sup> and 10<sup>th</sup> Secondary Clarifier) plus some scheduled equipment replacement and rehabilitation in the clarifiers, is expected to be completed by the end of the fiscal year and conservatively \$1.8 million under the \$17,480,000 budget. Final performance testing is expected to occur this winter under stressed flow conditions.

The **Digester Mixing Improvements** project is projected to finish in spring, 2008. Two of the three digesters to be modified for improved mixing have already been fully completed and placed on line and are operating successfully. The project is expected to come in just under the \$2,957,000 budget.

The project to **Line Biosolids Lagoon – Phase 1** will be completed by the end of the fiscal year. The lining of the lagoon has been completed and the contractor is finishing up the dredge movement system to serve all four sludge lagoons. Also, extensive work has been completed to upgrade the electrical system for all four lagoons. The project is expected to be completed for approximately \$250,000 less than the \$3,600,000 budget.

**Biocycle Farm Poplar Plantation – Phase 2** (which was expected to be completed in FY 06-07) has now been fully completed and the newly planted trees are growing vigorously. The project was completed at about \$50,000 under the \$319,000 budget.

**River Avenue Improvements** were completed by the City of Eugene and we are anticipating a bill for the assessed amount of the project by the spring of 2008. The current anticipated assessment is expected to be covered by the \$500,000 budget for the project.

### **Carryover Capital Projects (Projects Initiated in FY 07-08 or Earlier)**

A number of capital projects which were started or on-going in FY 07-08 are not scheduled for completion until FY 08-09 or beyond. Therefore, remaining funding for these projects is carried over in this FY 08-09 budget. CIP project summary sheets for these carryover projects are included in this document. All funding for these projects continues to be consistent with the CH2M Hill 2006 recosting of capital projects.

**The on-going carryover projects are:**

**Biocycle Farm Poplar Plantation – Phase 3**  
**Wet Weather Flow Management Plan (WWFMP) Update**  
**Facilities Plan Engineering Services**  
**Influent Pumping Improvements and Headworks Expansion**  
**Aeration Basin Improvements – Phase 1**  
**Sodium Hypochlorite Conversion**  
**Peak Flow Management Improvements**  
**Odorous Air Treatment – Phase 1**  
**Primary Sludge Thickening**  
**Tertiary Filtration – Phase 1**  
**Effluent Reuse – Phase 1**

**New Projects for the FY 08-09 Capital Budget**

Consistent with the Facilities Plan project list and consistent with the FY 07-08 CIP, several additional projects are rolling from the second year of the adopted FY 07-12 CIP, into the first year of the FY 08-13 CIP, and therefore into the FY 08-09 Capital Budget. CIP project summary sheets for these projects are included in this document.

**New projects added in the FY 08-09 Capital budget are:**

**Line Biosolids Lagoon – Phase 2**  
**Odorous Air Treatment – Phase 2**

**Summary of FY 07-08 Capital Budget**

The following summary table shows the adjusted budget and end-of-year estimates for expenditures for the FY 07-08 Capital Budget and the amount of funding which is expected to be carried over to FY 08-09 for those projects that are ongoing and continuing to FY 08-09. Also shown is additional funding and new projects in the FY 08-09 Capital Budget. The projects are organized in the table by where they are in the funding cycle, i.e. projects completed in FY 07-08, projects to be carried over from the FY 07-08 budget to the FY 08-09 budget, and projects which are newly budgeted. These projects and funding are consistent with the planning and funding as presented in the approved FY 07-12 CIP, with the exception of the funding for the Sodium Hypochlorite Conversion project, which has been increased by \$80,000 to prepare for inclusion of the State sponsored (and paid for) boat waste receiving station in that project, and inflationary adjustments to Odorous Air Treatment – Phase 1, Primary Sludge Thickening, and Effluent Reuse – Phase 1 projects. In addition, we are taking advantage of an opportunity to do some equipment replacement at the Willakenzie Pump Station as part of the Influent Pumping and Headworks Expansion Project. The replacement of existing equipment at the pump station will be paid for through the Equipment Replacement Reserve with money set aside for this purpose.

**EXHIBIT 12****Summary of FY 07-08 MWMC Construction Program Capital Budget**

	<b>FY 07-08 ADJUSTED BUDGET</b>	<b>FY 07-08 ESTIMATED ACTUALS</b>	<b>FY 07-08 CARRYOVER TO FY 08-09</b>	<b>NEW FUNDING PROGRAMMED FOR FY 08-09</b>	<b>TOTAL PROPOSED FY 08-09 BUDGET</b>
<b>Projects Completed in FY 07-08</b>					
Clarifier Improvements	6,893,969	5,000,000	0	0	0
Digester Mixing Improvements	737,407	737,407	0	0	0
Line Biosolids Lagoon - Phase 1	3,194,587	2,950,000	0	0	0
Biocycle Farm Poplar Plantation- Phase 2	78,238	24,566	0	0	0
Biocycle Farm Hose Reels	15,439	0	0	0	0
River Avenue Improvements	498,544	498,544	0	0	0
<b>Projects to be Carried Over to FY 08-09</b>					
Biocycle Farm Poplar Plantation- Phase 3	372,000	18,000	354,000	0	354,000
WWFMP Update	439,077	145,901	293,176	0	293,176
Facilities Plan Engineering Services	55,125	32,000	0	57,881	57,881
Influent Pumping and Headworks Exp (1)	27,379,359	2,692,000	24,687,359	282,000	24,969,359
Aeration Basin Improvements - Phase 1	8,667,143	4,900,064	3,767,000	0	3,767,000
Sodium Hypochlorite Conversion (1)	7,808,647	510,000	7,298,647	80,000	7,378,647
Peak Flow Management Improvements	24,945,087	3,366,000	21,579,087	0	21,579,087
Odorous Air Treatment - Phase 1 (2)	9,464,254	535,000	8,929,254	1,324,000	10,253,254
Primary Sludge Thickening (2)	4,371,000	190,000	4,181,000	127,000	4,308,000
Tertiary Filtration - Phase 1 (3)	1,500,000	317,000	1,183,000	13,185,000	14,368,000
Effluent Reuse - Phase 1 (2)	2,884,000	100,000	2,784,000	434,000	3,218,000
<b>Newly Budgeted Projects for FY 08-09</b>					
Line Biosolids Lagoon - Phase 2	0	0	0	2,894,000	2,894,000
Odorous Air Treatment - Phase 2	0	0	0	1,704,000	1,704,000
<b>TOTAL (4)</b>	<b>99,303,876</b>	<b>22,016,482</b>	<b>75,056,523</b>	<b>20,087,881</b>	<b>95,144,404</b>

(1) \$80,000 in new funding for FY 08-09 for a State-funded boat waste receiving facility has been added to the Sodium Hypochlorite Conversion project. This funding will be received from the State Marine Board. \$282,000 in new funding added to the Influent Pumping and Headworks Expansion Project to pay for replacement of some existing equipment in the Willakenzie Pump Station - funded by Equipment Replacement Reserves.

(2) These projects have an adjusted budget related to inflation from moving the project time frames.

(3) Only engineering services for the Tertiary Filtration Project were budgeted in FY 07-08. The construction budget is being added in this FY 08-09 budget.

(4) Actual spending in the construction capital program is expected to be around \$65,900,000 in FY 08-09.



**Regional Wastewater Program FY 07-12 Five-Year CIP**

The projects in the out years of the Regional Wastewater Program FY 08-13 Five-Year CIP are based almost exactly on the programming of regional capital projects in the current adopted FY 07-12 CIP. Most of the significant changes from the current CIP are additions of projects in the outer years of the CIP. These **added projects include:** the last phase of the relining of the sludge lagoons (**Line Biosolids Lagoon – Phase 4**); the third phase of the effluent reuse projects (**Effluent Reuse – Phase 3**); and the provision of greater sludge digestion capacity either through addition of an added digester, or adoption of newer technologies to produce Class A Biosolids (**Increase Digestion Capacity and Provide Class A Capability**).

Staff has continued, as in past CIPs, to organize the projects in the CIP based on categories that illustrate the major functions they serve in the wastewater system. The classification system groups capital projects in four main project categories as follows:

- a. Biosolids Management,
- b. Non-Process Facilities and Facilities Planning,
- c. Conveyance Systems, and
- d. Plant Facilities Improvements.

The above classifications of projects are used to organize projects in the summary table for the FY 08-13 CIP below, and to organize the CIP summary sheets that describe each project.

**EXHIBIT 13**  
**Regional Wastewater 5-Year Capital Programs**

	FY 08-09	FY 09-10	FY 10-11	FY 11-12	FY 12-13	TOTAL
<b>CAPITAL PROJECTS</b>						
<b>Biosolids Management</b>						
Biocycle Farm - Poplar Plantation III	354,000					354,000
Line Biosolids Lagoon - Phase II	2,894,000					2,894,000
Line Biosolids Lagoon - Phase III		100,000	3,091,000			3,191,000
Line Biosolids Lagoon - Phase IV				100,000	3,250,000	3,350,000
Repair/Replace of Biosolids Force Main			100,000	1,400,000		1,500,000
<b>Non-Process Facilities and Facilities Planning</b>						
WWFMP Update	293,176					293,176
Facility Plan Engineering Services	57,881	60,775	63,814	67,005	70,355	319,830
2010 Facility Plan Update			221,000			221,000
<b>Conveyance Systems</b>						
Influent Pumping & Headworks	24,969,359					24,969,359
Glenwood Pump Station Upgrade			741,500			741,500
<b>Plant Performance Improvements</b>						
Aeration Basin Improvements Phase I	3,767,000					3,767,000
Sodium Hypochlorite Conversion	7,378,647					7,378,647
Peak Flow Management Improvements	21,579,087					21,579,087
Odorous Air Treatment I	10,253,254					10,253,254
Odorous Air Treatment II	1,704,000					1,704,000
Primary Sludge Thickening	4,308,000					4,308,000
Tertiary Filtration I	14,368,000					14,368,000
Effluent Reuse I	3,218,000					3,218,000
Effluent Reuse II		5,152,000				5,152,000
Effluent Reuse III				6,542,000		6,542,000
Waste Activated Sludge Thickening					3,901,000	3,901,000
Increased Digestion Capacity/Class A					25,777,000	25,777,000
<b>TOTAL CAPITAL PROJECTS</b>	<b>95,144,404</b>	<b>5,312,775</b>	<b>4,217,314</b>	<b>8,109,005</b>	<b>32,998,355</b>	<b>145,781,853</b>
<b>ASSET MANAGEMENT</b>						
Equipment Replacement	569,010	576,012	1,180,695	2,272,569	1,292,962	5,891,248
Major Rehab	900,000	425,000	930,000	318,764	332,425	2,906,189
Major Capital Outlay	289,000	258,931				547,931
<b>TOTAL ASSET MANAGEMENT</b>	<b>1,758,010</b>	<b>1,259,943</b>	<b>2,110,695</b>	<b>2,591,333</b>	<b>1,625,387</b>	<b>9,345,368</b>
<b>TOTAL CAPITAL IMPROVEMENTS</b>	<b>96,902,414</b>	<b>6,572,718</b>	<b>6,328,009</b>	<b>10,700,338</b>	<b>34,623,742</b>	<b>155,127,221</b>

The FY 08-13 five-year CIP for Regional Capital Projects amounts to \$145,781,853. When Asset Management Capital Program planned expenditures (administered by the City of Eugene) are added in, the total five-year CIP comes to \$155,127,221. Information regarding each capital project in the FY 08-13 CIP is included in the CIP summary sheets included in this document. This includes those projects in the first year of the CIP, which constitute the FY 08-09 Capital Budget. Each summary sheet provides a description of the project, the project purpose and what is driving the timing of the project, the funding schedule, and the expected final cost and cash flow

for the project. For those projects which are in progress, a short status report is included on the summary sheet.

### **Regional Wastewater Asset Management Capital Program**

Another category of projects in the MWMC Capital Budget are those capital projects and capital purchases that are administered by the City of Eugene for MWMC, and which provide for major reconstruction, replacement, repairs, and purchases necessary to maintain functionality, lifespan, and effectiveness of existing facility assets. We call this the Asset Management Capital Program. Three sub-categories are included in the Asset Management category:

- a. Equipment Replacement –
- b. Major Rehabilitation –
- c. Major Capital Outlay –

### **FY 08-09 Asset Management Capital Program Budget**

- **Equipment Replacement Program - Budget**

The FY 08-09 Capital Programs budget includes \$569,010 in Equipment Replacement purchases, which are identified on the table below.

<b>Equipment Replacement Projects - FY 08-09</b>	
<b>Description</b>	<b>FY 08-09 Proposed Budget</b>
Programmable Logic Controller for Glenwood Pump Station	\$19,000
Variable Frequency Drives (2) for Gravity Belt Thickeners	\$20,000
HVAC Control Panels for Secondary, Final, and Digester Complexes	\$77,004
W2 Water Pumps (2)	\$106,000
Variable Frequency Drives (2) for W2 Pumps	\$44,228
W2 Control Panel	\$13,000
Air Flow Control Valves (2) for Aeration Basins	\$24,000
Uninterruptible Power Supply	\$52,877
FIA/IC Autoanalyzer for Laboratory	\$68,848
Computer Replacement	\$33,500
Fleet Replacement	\$110,553

Programmable Logic Controller for Glenwood Pump Station – The programmable logic controllers (PLC) provide for reliable automated operation of the station and alarm notification. The Glenwood Pump Station was constructed in 1995 and the original PLC has reached the end of its useful life.

Variable Frequency Drives for Gravity Belt Thickeners – The variable frequency drives for the gravity belt thickener (GBT) process provide automated adjustable belt speed control which is required for its operation. The VFDs are 15 years old and have reached the end of their useful life.

HVAC Control Panels for Secondary, Final, and Digester Complexes – All of the HVAC Control Panels to be replaced are 25 or more years old and have been in service since the original regional plant construction.

W2 Water Pumps, Variable Frequency Drives, and Control Panel – The W2 Pumps provide many critical process and support functions for the regional treatment plant: supply water or chlorination, cogeneration cooling water, pump seal water, surface spray water, washdown water, and irrigation. The VFDs provide for continuous adjustment of motor speed to meet changing flow demand and pressure of the W2 system. The pumps, their VFDs, and control panel have reached the end of their useful life and require replacement for critical process reliability.

Air Flow Control Valves for Aeration Basins – The air flow control valves provide for control of aeration to the activated sludge process. Their operation serves a critical function for accurate control of dissolved oxygen which is a critical operational control parameter for effective treatment.

Uninterruptible Power Supply – The uninterruptible power supply serves as an emergency power supply for the Operations building where the Operations Console Room is located. This emergency equipment ensures a constant power supply for the Distributed Control System which monitors and controls the regional treatment facility and 47 pump stations.

The FIA/IC Autoanalyzer is a laboratory analyzer used to detect and measure a variety of pollutants and water quality parameters such as nitrates and chlorides for process control and regulatory monitoring. The analyzer has reached the end of its useful life and replacement is needed to maintain productivity and accuracy for measurement of pollutants in effluent, groundwater wells, biosolids, soils, and reclaimed water.

Computer replacement includes replacement of nine personal computers, monitors, and a file server.

Fleet replacement consists of replacement of one portable trailer mounted pump and a contribution to the purchase of a Brown Bear biosolids mixer. The mixer facilitates drying of biosolids in the air drying beds.

- **Major Rehabilitation Program - Budget**

The FY 08-09 Capital Programs budget includes \$900,000 for Major Rehabilitation projects, which are identified on the table below.

<b>Major Rehab Projects - FY 08-09</b>	
<b>Description</b>	<b>FY 08-09 Proposed Budget</b>
Operations/Maint Building Improvements	\$50,000
Roof Replacement, Service Station	\$35,000
Roof Replacement, SIWS Bldg	\$45,000
Resurface Air Drying Beds (6)	\$770,000

Operations Building Improvements – This expenditure will go towards miscellaneous repairs and renovation to maintain and improve the functionality of the Operations and/or Maintenance Building for staff. Business functions and staff size have changed substantially for office and technical staff since original construction of the Operations and Maintenance buildings. Rehabilitation and functionality improvements help to delay the need for additional floor space.

Roof Replacements – Roofs will be rebuilt on two structures as identified in the above table. All replacements were identified in the course of carrying out our comprehensive roof inspection and testing program. In addition to visual inspections the program includes testing for moisture penetration. Timely replacement avoids more extensive and costly repairs when roof problems are otherwise ignored or delayed.

Resurfacing of Air Drying Beds – The air drying beds are used for drying biosolids prior to their application to agricultural land. The deteriorating condition of six beds due to age and wear requires resurfacing to extend their useful life. Failure to resurface would eventually require extensive rebuilds at substantially greater cost.

- **Major Capital Outlay - Budget**

The FY 08-09 Capital Programs budget includes \$289,000 for Major Capital Outlay, which is identified on the table below.

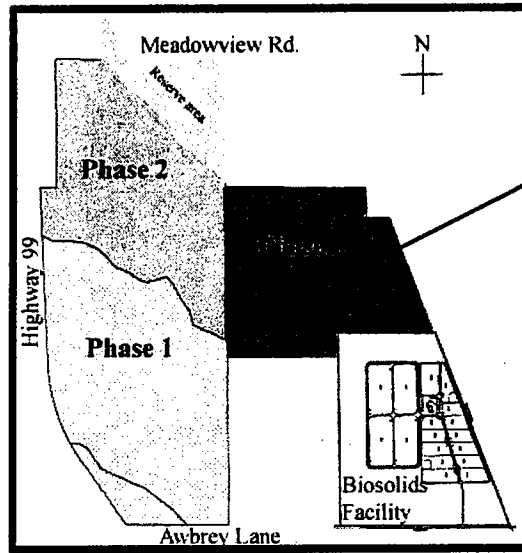
<b>Major Capital Outlay - FY 08-09</b>	
<b>Description</b>	<b>FY 08-09 Proposed Budget</b>
Biosolids Mixer – Heavy Equipment	\$289,000

Biosolids Mixer – A new biosolids mixer will improve reliability for daily mixing of biosolids in air drying beds. This activity is essential for meeting annual volume processing requirements and avoiding severe odor issues that occur without daily mixing. The current mixer is 10 years old with increasing risk of failure during the height of biosolids processing.

**Summary of FY 08-09 Asset Management Capital Budget**

<b><u>Category of Capital Expense</u></b>	<b><u>FY 08-09 Proposed Budget</u></b>
Equipment Replacement	\$569,010
Major Rehabilitation	\$900,000
Major Capital Outlay	\$289,000
<b>TOTAL</b>	<b>\$1,758,010</b>

**BIOCYCLE FARM POPLAR PLANTATION - PHASE 3**



**Description:** Phase 3 of the poplar plantation (approximately 117 acres) at the Biocycle Farm. Site preparation should begin as early as summer/fall 2008.

**Justification:** Land already purchased and provides additional area adjacent to Biosolids Management Facility (BMF) for application of liquid and dewatered biosolids. Expansion of the Biocycle Farm provides the Metropolitan Wastewater Management Commission (MWMC) with more flexibility and control of overall biosolids management program.

**Project Driver:** Increased solids production at the Eugene/Springfield Water Pollution Control Facility (WPCF).

**Project Trigger:** Biocycle Farm Phases 1 and 2 loading limits for liquid and dewatered biosolids will be reaching capacity. The planting must fit into the planned cycle of growing and harvesting of poplar trees.

**Project Type:** 100% Performance

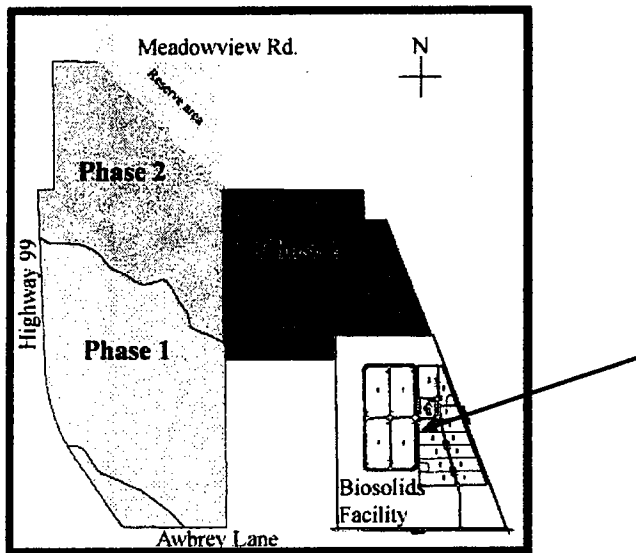
**Improvement SDC Eligibility:** 22%

**Estimated Project Cost:** \$372,000

**Expected Cash Flow:** FY 07-08 = \$18,000; FY 08-09 = \$354,000

<u>Expenditure/Category:</u>	<u>Prior Years</u>	<u>2007-08 Est. Act.</u>	<u>2008-09</u>	<u>2009-10</u>	<u>2010-11</u>	<u>2011-12</u>	<u>2012-13</u>	<u>Total</u>
Design/Construction	0	\$18,000	\$354,000	0	0	0	0	\$372,000
Other	0	0	0	0	0	0	0	0
<b>Total Cost</b>	<b>\$0</b>	<b>\$18,000</b>	<b>\$354,000</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$372,000</b>

LINE BIOSOLIDS LAGOONS – PHASE 2



- Description:** Reline existing lagoons, Phase 2 at the Biosolids Management Facility (BMF).
- Justification:** Existing clay lagoon liners are reaching the end of the material's useful life. A new synthetic liner will be installed in the lagoons. In Phase I, the liner material of choice was high density polyethylene. In the Phase 1 project implementation, the contractor is installing the main components for a new dredge lateral movement system for all four lagoons, for improved operational safety and efficiency.
- Project Driver:** MWMC proactively desires to improve the safety of BMF staff, improve operational reliability of the facultative lagoons, and ensure DEQ compliance related to groundwater protection.
- Project Trigger:** Monitoring will be conducted to determine the effectiveness of the first phase of the lagoon lining project. MWMC anticipates rehabilitating all four existing lagoon liners in four separate phased projects.
- Project Type:** 100% Rehabilitation

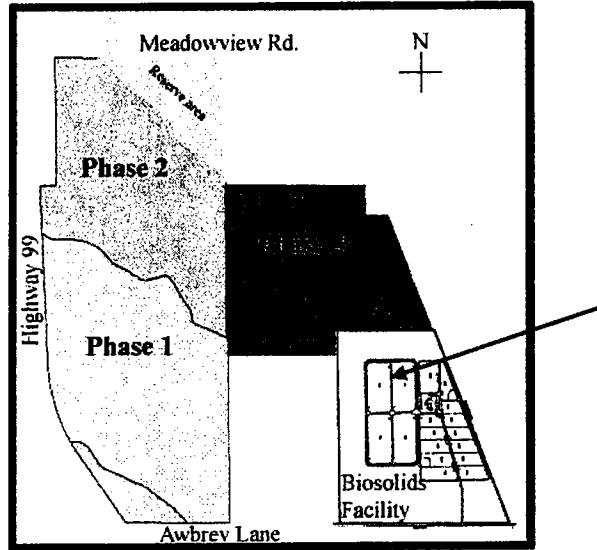
**Estimated Project Cost: \$2,894,000**

**Expected Cash Flow:** FY 08-09 = \$630,000; FY 09-10 = \$2,264,000

<u>Expenditure/Category:</u>	<u>Prior Years</u>	<u>2007-08 Est. Act.</u>	<u>2008-09</u>	<u>2009-10</u>	<u>2010-11</u>	<u>2011-12</u>	<u>2012-13</u>	<u>Total</u>
Design/Construction	0	0	\$2,894,000	0	0	0	0	\$2,894,000
Other	0	0	0	0	0	0	0	0
<b>Total Cost</b>	<b>\$0</b>	<b>\$0</b>	<b>\$2,894,000</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$2,894,000</b>



LINE BIOSOLIDS LAGOONS – PHASE 3



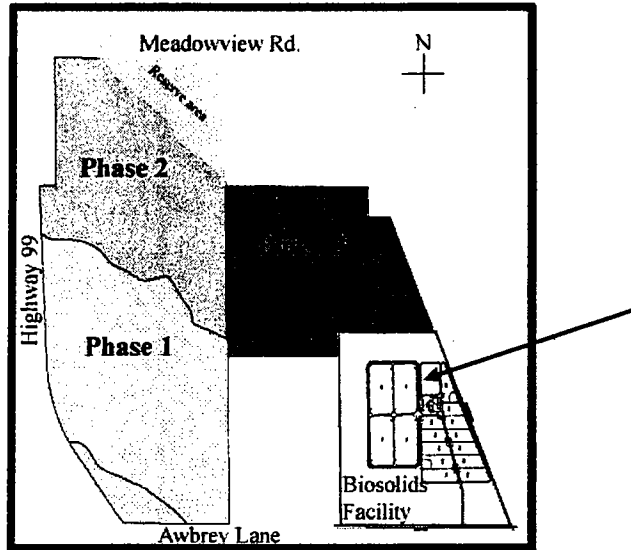
- Description:** Reline existing lagoons, Phase 3 at the Biosolids Management Facility (BMF).
- Justification:** Existing clay lagoon liners are reaching the end of the material’s useful life. A new synthetic liner will be installed in the lagoons. In Phase I, the liner material of choice was high density polyethylene. In the Phase 1 project implementation, the contractor is installing the main components for a new dredge lateral movement system for all four lagoons, for improved operational safety and efficiency.
- Project Driver:** MWMC proactively desires to improve the safety of BMF staff, improve operational reliability of the facultative lagoons, and ensure DEQ compliance related to groundwater protection.
- Project Trigger:** Monitoring will be conducted to determine the effectiveness of the first and second phase of the lagoon lining projects. MWMC anticipates rehabilitating all four existing lagoon liners in four phased projects and will monitor the new liner improvements.
- Project Type:** 100% Rehabilitation

**Estimated Project Cost:** \$3,400,000 (Note: The estimated project budget need has been increased by \$209,000 from the FY 07-08 estimate of \$3,191,000 due to the anticipated cost of a construction access road and the uncertainty of the structural integrity of the existing lagoon bottom.)

**Expected Cash Flow:** FY 09-10 = \$100,000; FY 10-11 = \$1,500,000; FY 11-12 = \$1,800,000

Expenditure/Category:	Prior	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	Total
	Years	Est. Act.						
Design/Construction	0	0	0	100,000	3,300,000	0	0	\$3,400,000
Other	0	0	0	0	0	0	0	0
<b>Total Cost</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$100,000</b>	<b>\$3,300,000</b>	<b>\$0</b>	<b>\$0</b>	<b>\$3,400,000</b>

LINE BIOSOLIDS LAGOONS – PHASE 4



**Description:** Reline existing lagoons, Phase 4 at the Biosolids Management Facility (BMF). Phase 4 rehabilitation work is anticipated to be completed in 2013.

**Justification:** Existing clay lagoon liners are reaching the end of the material's useful life. A new synthetic liner will be installed in the lagoons. In Phase I, the liner of choice was high density polyethylene. In the Phase 1 project implementation, the contractor is installing the main components for a new dredge lateral movement system for improved operational safety and efficiency.

**Project Driver:** MWMC proactively desires to improve the safety of BMF staff, improve operational reliability of the facultative lagoons, and ensure DEQ compliance related to groundwater protection.

**Project Trigger:** Monitoring will be conducted to determine the effectiveness of the first, second and third phases of the lagoon lining projects. MWMC anticipates rehabilitating all four existing lagoon liners in four separate phased projects.

**Project Type:** 100% Rehabilitation

**Estimated Project Cost:** \$3,200,000

**Expected Cash Flow:** FY 11-12 = \$100,000; FY 12-13 = \$1,600,000; FY 13-14 = \$1,500,000

<u>Expenditure/Category:</u>	<u>Prior Years</u>	<u>2007-08 Est. Act.</u>	<u>2008-09</u>	<u>2009-10</u>	<u>2010-11</u>	<u>2011-12</u>	<u>2012-13</u>	<u>Total</u>
Design/Construction	0	0	0	0	0	100,000	3,100,000	\$3,200,000
Other	0	0	0	0	0	0	0	0
<b>Total Cost</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$100,000</b>	<b>\$3,100,000</b>	<b>\$3,200,000</b>

**REPAIR AND/OR PARTIAL REPLACEMENT OF BIOSOLIDS FORCE MAIN**

**Description:** Repair and/or replace sections of the biosolids force main (piping system) where struvite deposits reduce the pipe diameter and cannot be removed by an acid washing method. The piping system connects the Water Pollution Control Facility (WPCF) to the Biosolids Management Facility (BMF).

**Justification:** Project will rehabilitate portions of the existing biosolids conveyance system.

**Project Driver:** Maintain system functionality of the biosolids conveyance system.

**Project Trigger:** Functionality issues within the existing pipeline.

**Project Type:** 100% Rehabilitation

**Estimated Project Cost:** \$1,500,000

**Expected Cash Flow:** FY 10-11 = \$70,000; FY 11-12 = \$1,430,000.

<u>Expenditure/Category:</u>	<u>Prior</u> <u>Years</u>	<u>2007-08</u> <u>Est. Act.</u>	<u>2008-09</u>	<u>2009-10</u>	<u>2010-11</u>	<u>2011-12</u>	<u>2012-13</u>	<u>Total</u>
Design/Construction	0	0	0	0	\$100,000	\$1,400,000	0	\$1,500,000
Other	0	0	0	0	0	0	0	0
<b>Total Cost</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$100,000</b>	<b>\$1,400,000</b>	<b>\$0</b>	<b>\$1,500,000</b>

## WET WEATHER FLOW MANAGEMENT PLAN UPDATE

**Description:** Evaluate collection system flow monitoring data collected since the original WWFMP was finalized in 2000, update and run collection system model and confirm (revise) convey and treat approach. Review importance of private lateral rehabilitation and investigate ways to encourage or require private lateral repairs. This project is a combination of two original projects – one for the update of the WWFMP report, and one for the further pursuit of a private lateral program.

**Status:** The Model Update portion of the work has been completed. A planning effort is now underway to update the WWFMP report and develop a private lateral improvement program.

**Project Driver:** Ongoing monitoring data might impact I/I reduction priorities and will affect future decisions regarding transport and treatment capacity to be planned for. Private lateral infiltration remains an important issue to address.

**Project Trigger:** Scheduled update.

**Improvement SDC Eligibility:** 11%

**Estimated Project Cost:** \$532,000

**Expected Cash Flow:** FY 05-06 = \$6,028; FY 06-07 = \$86,895; FY 07-08 = \$145,901; FY 08-09 = \$115,000, FY 09-10 = \$160,000, FY 10-11 = \$18,176

<u>Expenditure/Category:</u>	<u>Prior Years</u>	<u>2007-08 Est. Act.</u>	<u>2008-09</u>	<u>2009-10</u>	<u>2010-11</u>	<u>2011-12</u>	<u>2012-13</u>	<u>Total</u>
Design/Construction	0	0	0	0	0	0	0	0
Other	\$92,923	\$145,901	\$293,176	0	0	0	0	\$532,000
<b>Total Cost</b>	<b>\$92,923</b>	<b>\$145,901</b>	<b>\$293,176</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$532,000</b>

**FACILITY PLAN ENGINEERING SERVICES**

**Description:** Engineering services for analysis, project definition, cost estimating, and general consultation regarding the 20-Year Facilities Plan.

**Status:** This year, work has been completed to assist with overall coordination of utility needs for the various projects in the capital program at the plant, to assist with the Conditional Use Permit application, and also to provide consultation and more detailed definition of the drivers and design criteria for various projects.

**Justification:** Projects were developed to varying levels of specificity in the 20-Year Facilities Plan and there is an on-going need to have a consistent resource to help in further refining projects and generally assisting with implementation of the plan. Another need addressed by this resource is assurance that the new improvements maintain the overall integrity of the plan in terms of treatment processes and hydraulics.

**Project Driver:** Ongoing goal to efficiently follow and update the 20-Year Facilities Plan.

**Project Trigger:** On-going need.

**Estimated Project Cost:** \$401,830

**Expected Cash Flow:** FY 08-09 = \$57,881; FY 09-10 = \$60,775; FY 10-11 = \$63,814; FY 11-12 = \$67,005; FY 12-13 = \$70,355

<u>Expenditure/Category:</u>	<u>Prior Years</u>	<u>2007-08 Est. Act</u>	<u>2008-09</u>	<u>2009-10</u>	<u>2010-11</u>	<u>2011-12</u>	<u>2012-13</u>	<u>Total</u>
Design/Construction	0	0	0	0	0	0	0	0
Other	\$50,000	\$32,000	\$57,881	\$60,775	\$63,814	\$67,005	\$70,355	\$401,830
<b>Total Cost</b>	<b>\$50,000</b>	<b>\$32,000</b>	<b>\$57,881</b>	<b>\$60,775</b>	<b>\$63,814</b>	<b>\$67,005</b>	<b>\$70,355</b>	<b>\$401,830</b>

2010 PARTIAL FACILITY PLAN UPDATE

**Description:** Review of the Facilities Plan assumptions and costs. Consideration of new regulations, information, and technology to modify the plan.

**Justification:** Regulatory requirements and system data are not static and the plan may require course correction to meet new needs.

**Project Driver:** Ongoing goal to keep planning up to date.

**Project Trigger:** Scheduled update.

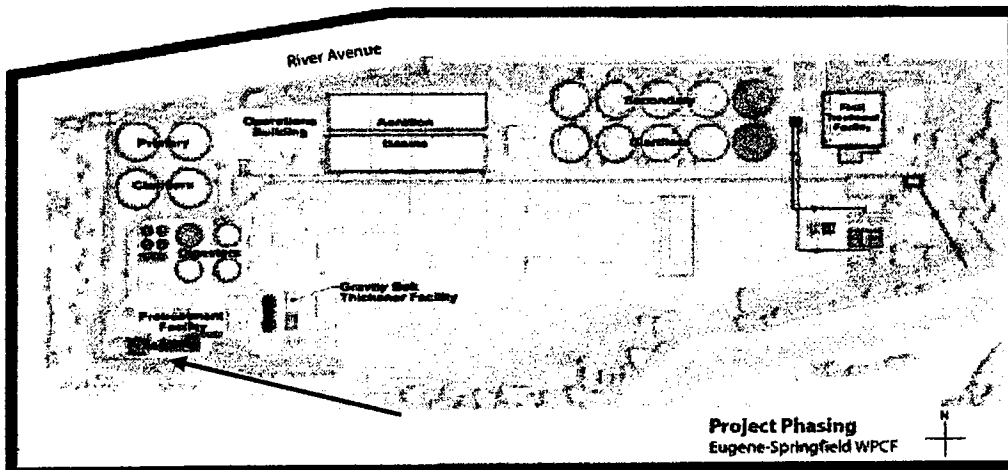
**Improvement SDC Eligibility:** 21%

**Estimated Project Cost:** \$221,000

**Expected Cash Flow:** FY 10-11 = \$221,000

<u>Expenditure/Category:</u>	<u>Prior Years</u>	<u>2007-08 Est. Act</u>	<u>2008-09</u>	<u>2009-10</u>	<u>2010-11</u>	<u>2011-12</u>	<u>2012-13</u>	<u>Total</u>
Design/Construction	0	0	0	0	0	0	0	0
Other	0	0	0	0	\$221,000	0	0	\$221,000
<b>Total Cost</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$221,000</b>	<b>\$0</b>	<b>\$0</b>	<b>\$221,000</b>

**INFLUENT PUMPING IMPROVEMENTS AND HEADWORKS EXPANSION**



**Description:** This project provides influent pumping improvements and headworks expansion required to accommodate the 2025 peak wet weather flow of 277 mgd. The budget for this project includes a total of \$687,000 that was transferred from the Equipment Replacement Reserve. Of this, \$405,000 was transferred in the FY 07-08 budget and \$282,000 was newly included in the FY 08-09 budget. The funds from the Equipment Replacement Reserve will be used at the Willakenzie Pump to replace existing knife gate valves in the existing force mains and to replace and variable frequency drives for five of the existing 300 horse power pumps. The \$405,000 that was transferred in FY 07-08 included \$360,000 for valve replacement, and \$45,000 for the replacement of fans in the odor control system. Finally, \$12,000 was transferred to the project budget in FY 07-08 from the Major Rehabilitation Reserves for the refurbishment of two grit channel metal rails. The project also includes landscaping and screening around the new construction area. Due to the time critical nature of this project, it is being delivered using a Construction Manager/General Contract (CM/GC) project delivery process.

**Status:** Detailed design stage. The CM/GC has been selected for preconstruction services.

**Justification:** Improved influent pumping and headworks hydraulic capacity are required to increase total plant influent hydraulic capacity to 277 mgd and to meet redundancy requirements for pumping and screening.

**Project Driver:** Ability to provide treatment to peak flows and systematic elimination of sanitary sewer overflows by the year 2010.

**Project Trigger:** Collection system computer model estimates the current wet weather peak flow to plant to be 264 mgd. Overall existing peak flow capacity is 175 mgd so there is already a capacity deficit.

**Project Type:** 100% Capacity

**Improvement SDC Eligibility:** 38%

**Estimated Project Cost:** \$28,054,000

**Expected Cash Flow:** FY 05-06 = \$16,348; FY 06-07 = \$376,293; FY 07-08 = \$2,692,000; FY 08-09 = \$14,682,000; FY 09-10 = 10,287,359

<u>Expenditure/Category:</u>	<u>Prior Years</u>	<u>2007-08 Est. Act.</u>	<u>2008-09</u>	<u>2009-10</u>	<u>2010-11</u>	<u>2011-12</u>	<u>2012-13</u>	<u>Total</u>
Design/Construction	\$392,641	\$2,692,000	\$24,969,359	0	0	0	0	\$28,054,000
Other	0	0	0	0	0	0	0	0
<b>Total Cost</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$28,054,000</b>

**GLENWOOD PUMP STATION UPGRADE**

**Description:** Expand Glenwood Pump Station capacity. The existing pump station is built to be expandable in capacity when the need arises.

**Justification:** Additional pumping capacity will be required at this Regional pump station to handle increasing flows in Glenwood and the Laurel Hill area of Eugene.

**Project Driver:** Keep up with capacity needs, maintain required pumping redundancy, and prevent overflows.

**Project Trigger:** The regional sewer system computer model estimates that a capacity increase will be needed by about 2010. Continued monitoring of flows and updating of the model will determine when the improvements are actually needed. The timing will be impacted by the effectiveness of I/I removal in the contributing sewer basins and the rate and type of development in the area.

**Project Type:** 100% Capacity

**Improvement SDC Eligibility:** 38%

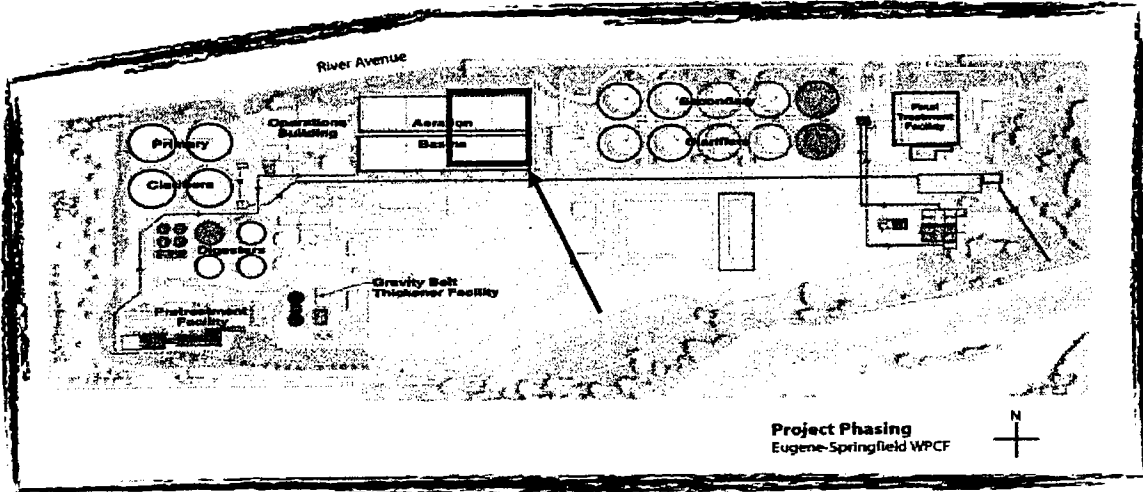
**Estimated Project Cost:** \$741,500

**Expected Cash Flow:** FY 10-11 = \$200,000; FY 11-12 = \$541,500

<u>Expenditure/Category:</u>	<u>Prior Years</u>	<u>2007-08</u>		<u>2008-09</u>	<u>2009-10</u>	<u>2010-11</u>	<u>2011-12</u>	<u>2012-13</u>	<u>Total</u>
		<u>Est.</u>	<u>Act.</u>						
Design/Construction	0	0	0	0	0	\$741,500	0	0	\$741,500
Other	0	0	0	0	0	0	0	0	0
<b>Total Cost</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$741,500</b>	<b>\$0</b>	<b>\$0</b>	<b>\$741,500</b>



**AERATION BASIN IMPROVEMENTS – PHASE 1**



**Description:** Add step feed, anoxic selectors, and fine bubble diffusers to 4 of the 8 cells of the aeration basins and make hydraulic improvements. This project was originally the South Aeration Basin Improvements project, however further study showed that improvements to the 4 eastern most basins as a first phase would allow for better hydraulics and more operational flexibility. The project budget also includes \$312,000 of funding from the Equipment Replacement Reserve for the replacement of older aeration diffusers equipment.

**Status:** The construction contract notice to proceed was issued to 2G Construction in April of 2007. As of December of 2007, the contractor is upgrading the south easterly aeration basins with new concrete partition walls, system piping and diffuser components.

**Justification:** Increase the dry weather aeration basin treatment capacity to 65 mgd with respect to ammonia (with nitrification) and increase the wet weather treatment capacity to 130 mgd.

**Project Driver:** NPDES permit includes ammonia limit requiring nitrification in dry weather and expansion of wet weather capacity to treat wet weather flows to meet NPDES permit monthly and weekly suspended solids limits.

**Project Trigger:** Maximum month dry weather flow of 25 mgd requires nitrification. Peak wet weather flows above 103 mgd require hydraulic modifications.

**Project Type:** 50% Capacity; 50%Performance

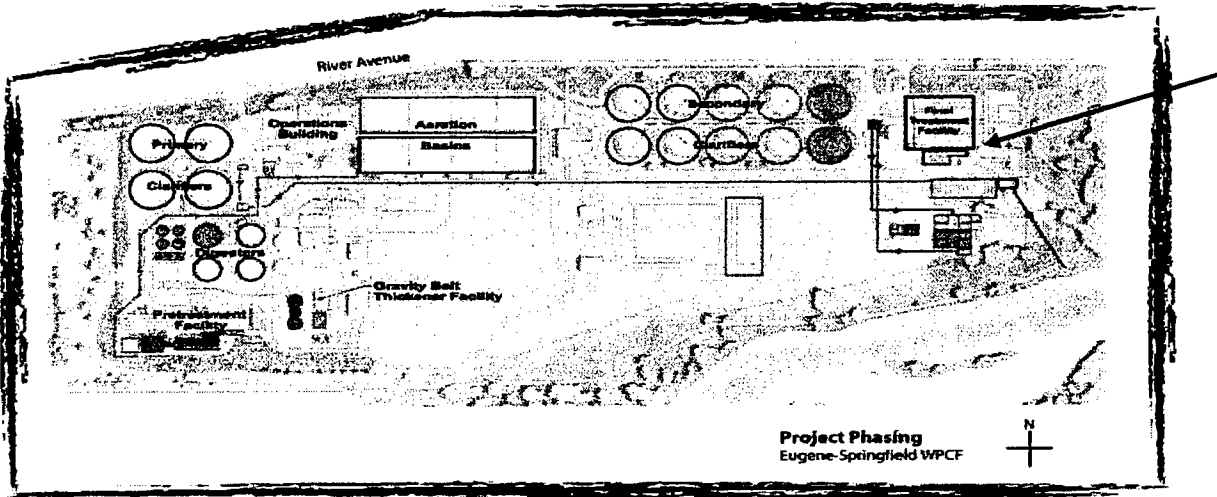
**Improvement SDC Eligibility:** 59%

**Estimated Project Cost:** \$10,189,680

**Expected Cash Flow:** FY 04-05 = \$10,078; FY 05-06 = \$193,552; FY 06-07 = \$1,318,986; FY 07-08 = \$4,900,064; FY 08-09 = \$3,767,000

Expenditure/Category:	Prior Years	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	Total
		Est. Act.						
Design/Construction	\$1,522,616	\$4,900,064	\$3,767,000	0	0	0	0	\$10,189,680
Other	0	0	0	0	0	0	0	0
<b>Total Cost</b>	<b>\$1,522,616</b>	<b>\$4,900,064</b>	<b>\$3,767,000</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$10,189,680</b>

SODIUM HYPOCHLORITE CONVERSION



**Description:** Convert existing chlorine gas system to sodium hypochlorite for the base flow. Retain the existing chlorine contact basins for the disinfection process. Install system with capability for high rate disinfection of primary effluent diversion using dosages of sodium hypochlorite into a new contact basin structure. The new contact basin has been split off of this project and is now part of a different MWMC project (Peak Flow Management Improvements), so the budget for that portion of the project has been moved also. Staff anticipates including upgrades of the existing recreational vehicle (RV) wastewater dump station to accommodate boat wastewater dumping in the construction bid documents for the sodium hypochlorite conversion project. The boat wastewater dump modification will be designed and funded by the Oregon State Marine Board that the MWMC approved for implementation at the September 21, 2006 public meeting. The recommended project budget below (\$7,890,000) includes \$80,000 of new money allocated to the project for the boat wastewater dump that will be reimbursed by the State agency after construction is completed.

**Status:** Under design by HDR Engineering.

**Justification:** Liquid sodium hypochlorite and sodium bisulfite system will replace the existing chlorine and sulfur dioxide gas systems and increase the disinfection capacity from 175 mgd to 277 mgd. The high rate disinfection of the primary effluent is a key component of the primary/secondary split treatment, which is needed for meeting the peak flow capacity needs of the treatment plant.

**Project Driver:** Operator and community safety issues and meeting flow capacity requirements for peak flows.

**Project Trigger:** Phasing with other related projects and need to meet peak flow treatment requirements.

**Project Type:** 50% Capacity; 50% Performance

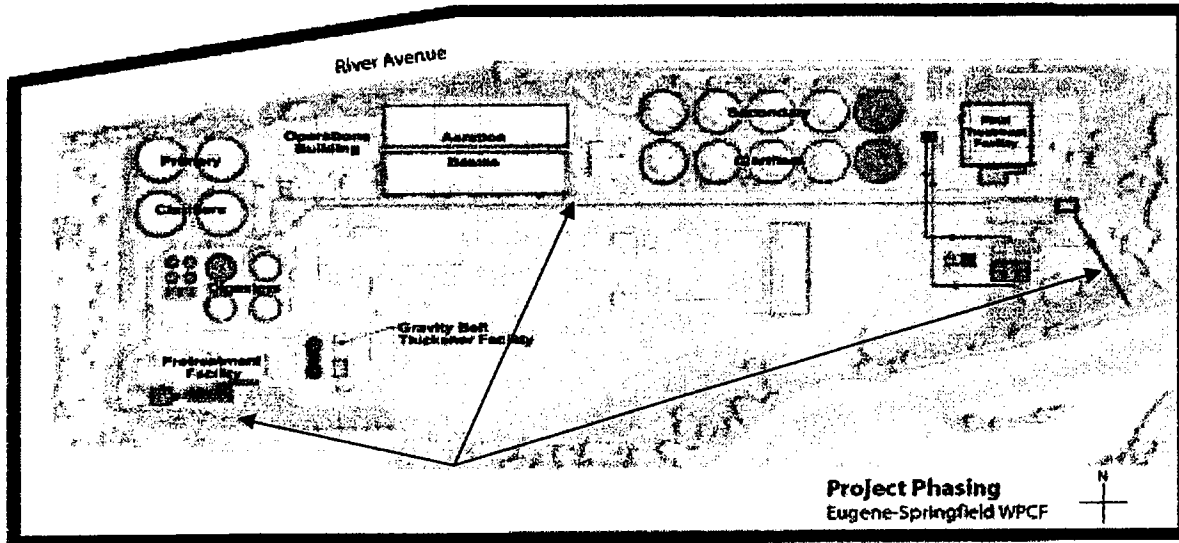
**Improvement SDC Eligibility:** 15%

**Estimated Project Cost:** \$7,890,000

**Expected Cash Flow:** FY 06-07 = \$1,353; FY 07-08 = \$510,000; FY 08-09 = \$4,140,000; FY 09-10 = \$3,238,647

Expenditure/Category:	Prior Years	2007-08 Est. Act.	2008-09	2009-10	2010-11	2011-12	2012-13	Total
Design/Construction	\$1,353	\$510,000	\$7,378,647	0	0	0	0	\$7,890,000
Other	0	0	0	0	0	0	0	0
<b>Total Cost</b>	<b>\$1,353</b>	<b>\$510,000</b>	<b>\$7,378,647</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$7,890,000</b>

PEAK FLOW MANAGEMENT IMPROVEMENTS



**Description:** The Peak Flow Management project combines several project elements described in the 2004 Facilities Plan into one project. The individual projects elements included in the Peak flow Management project are 1) The Parallel Primary/Secondary Treatment project, 2) the Bankside Outfall project, 3) the Outfall Mixing Zone Study, and 4) the design and construction of the high rate disinfection basins, which was pulled out of the Sodium Hypochlorite Conversion project and added to the Peak Flow Management project. These project elements combine to provide the hydraulic infrastructure necessary to convey the peak flow through the plant, split the flow into the parallel primary and secondary treatment trains, provide additional disinfection capacity, and discharge the treated flow in accordance with the 2004 Facilities Plan.

**Status:** Detailed design stage. Construction contract should be entered into by end of year.

**Justification:** This project expands the peak wet weather treatment capacity to 277 mgd through flow management techniques.

**Project Driver:** DEQ requirement that the peak wet weather flow (5-year, 24-hour rain event) be treated by the E/S WPCF and meet secondary effluent standards (diverted blended flow receives equivalent of primary treatment).

**Project Trigger:** Elimination of sanitary sewer overflows by the year 2010.

**Project Type:** 100% Capacity

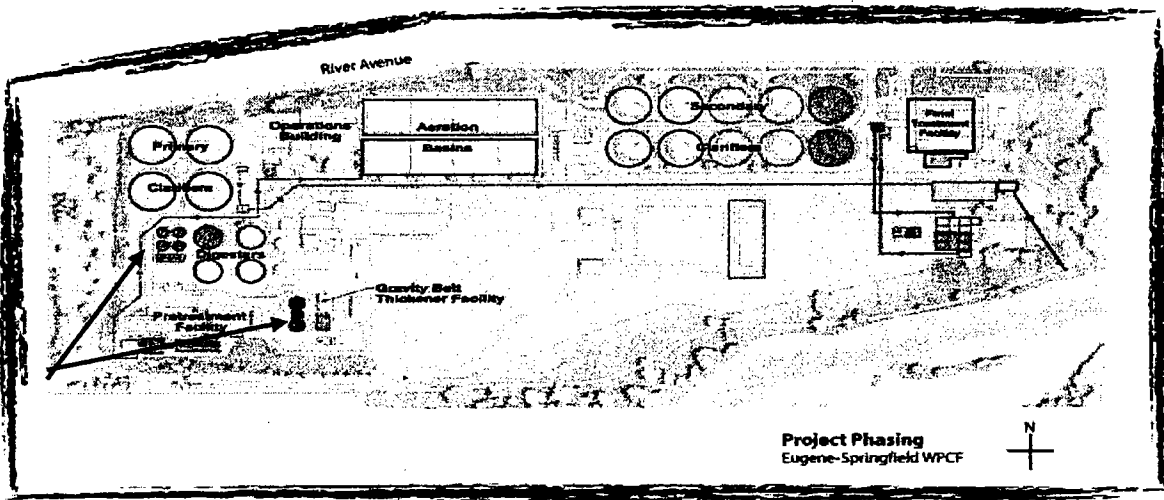
**Improvement SDC Eligibility:** 30.2%

**Estimated Project Cost:** \$24,974,000

**Expected Cash Flow:** FY 06-07 = \$28,913; FY 07-08 = \$3,366,000; FY 08-09 = \$13,500,000, FY 09-10 = \$8,079,087

<u>Expenditure/Category:</u>	<u>Prior Years</u>	<u>2007-08 Est. Act.</u>	<u>2008-09</u>	<u>2009-10</u>	<u>2010-11</u>	<u>2011-12</u>	<u>2012-13</u>	<u>Total</u>
Design/Construction	\$28,913	\$3,366,000	\$21,579,087	0	0	0	0	\$24,974,000
Other	0	0	0	0	0	0	0	0
<b>Total Cost</b>	<b>\$28,913</b>	<b>\$3,366,000</b>	<b>\$21,579,087</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$24,974,000</b>

ODOROUS AIR TREATMENT – PHASE 1



**Description:** Biofilters or other treatment for odors from primary clarifiers, expanded pretreatment area and new influent pumping station. Includes the complete covering of the primary clarifiers, which would be a deviation from the Facilities Plan concept of covering only the weirs and launders in the clarifiers.

**Justification:** Primary clarifiers are odor sources. Although the Facilities Plan indicated that most odors are generated and can be captured at the weirs and launders of the clarifiers, information from other treatment plants which have used this technology indicates that the only effective means of odor control on the primaries would be complete coverage. This change in concept must be further investigated and approved through the Commission before implementation. The expanded pretreatment facilities and new influent pumping station will also be additional odor sources that must be dealt with.

**Status:** Preliminary design stage.

**Project Driver:** Maintain MWMC's status as environmental stewards. Address neighborhood odor complaints and community concerns regarding odors.

**Project Trigger:** Coordination with the design of the pretreatment expansion and influent pumping expansion and must be on-line in coordination with construction of those facilities.

**Project Type:** 100% Performance

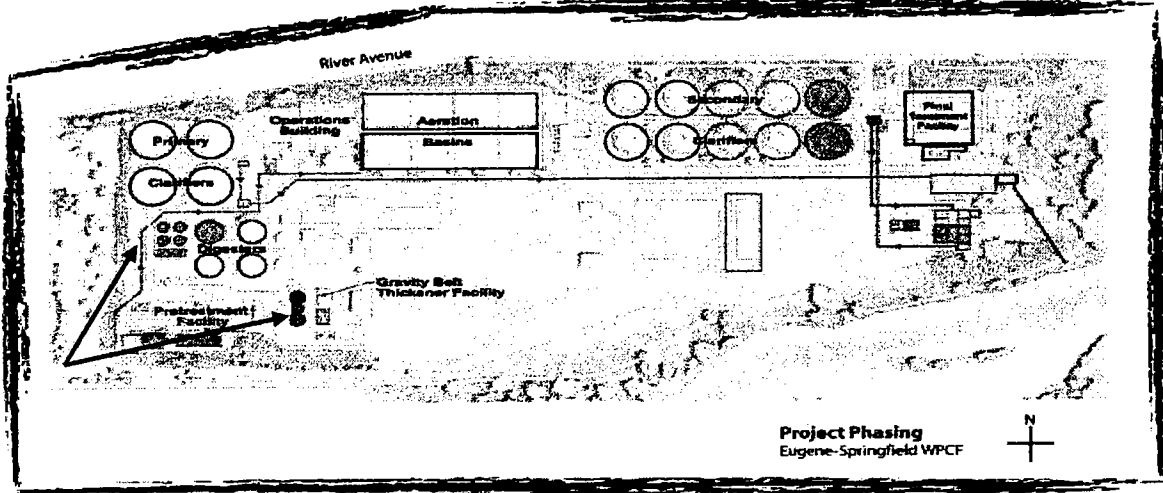
**Improvement SDC Eligibility:** 26%

**Estimated Project Cost:** \$10,834,000. (Note that the project cost was increased from the FY 07/08 budget to account for inflation associated with a more than one year postponement of the project. The project was postponed to accommodate focused attention on capacity-related projects, which have a higher schedule priority. The budget is consistent with the CH2M HILL 2006 cost estimate for the project inflated to the midpoint of construction).

**Expected Cash Flow:** FY 06-07 = \$45,746; FY 07-08 = \$535,000; FY 08-09 = \$4,000,000; FY 09-10 = \$6,253,254

<u>Expenditure/Category:</u>	<u>Prior Years</u>	<u>2007-08 Est. Act.</u>	<u>2008-09</u>	<u>2009-10</u>	<u>2010-11</u>	<u>2011-12</u>	<u>2012-13</u>	<u>Total</u>
Design/Construction	\$45,746	\$535,000	\$10,253,254	0	0	0	0	\$10,834,000
Other	0	0	0	0	0	0	0	0
<b>Total Cost</b>	<b>\$45,746</b>	<b>\$535,000</b>	<b>\$10,253,254</b>	<b>\$ 0</b>	<b>\$ 0</b>	<b>\$ 0</b>	<b>\$ 0</b>	<b>\$10,834,000</b>

ODOROUS AIR TREATMENT – PHASE 2



**Description:** Provide covers over new Gravity Sludge Thickeners (primary sludge thickeners) and convey odorous air to biofilters. Expand biofilters to accommodate the additional needed odor control.

**Justification:** Gravity Sludge Thickeners will be a significant source of odor if not controlled.

**Status:** Planning stage.

**Project Driver:** Maintain MWMC’s status as environmental stewards. Address neighborhood odor complaints and community concerns regarding odors.

**Project Trigger:** New construction requires expanded odor control. Must be coordinated with the construction of Gravity Sludge Thickeners

**Project Type:** 100% Performance

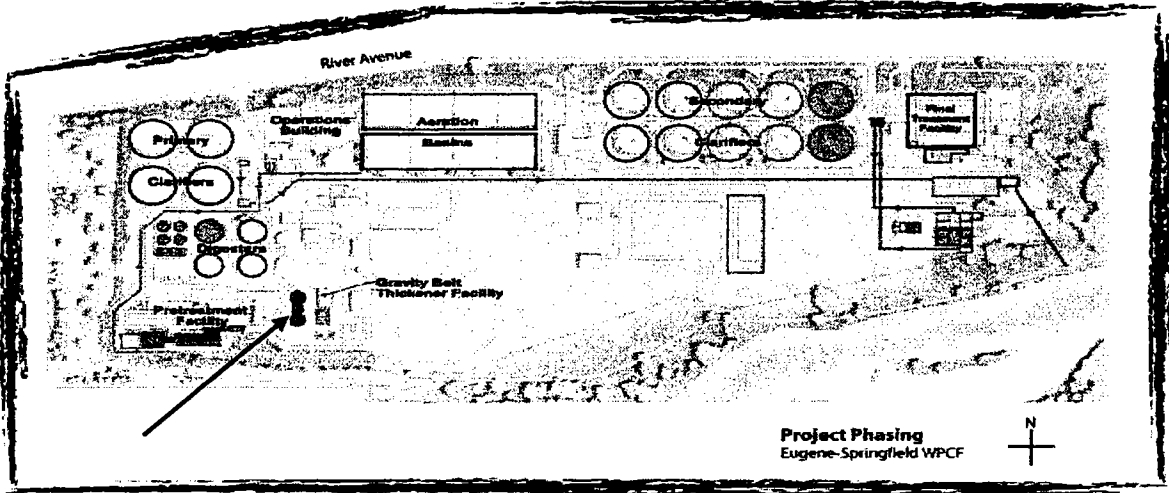
**Improvement SDC Eligibility:** 26%

**Estimated Project Cost:** \$1,704,000

**Expected Cash Flow:** FY 08-09 = \$252,000, FY 09-10 = \$1,452,000

<u>Expenditure/Category:</u>	<u>Prior Years</u>	<u>2007-08 Est. Act.</u>	<u>2008-09</u>	<u>2009-10</u>	<u>2010-11</u>	<u>2011-12</u>	<u>2012-13</u>	<u>Total</u>
Design/Construction	0	0	\$1,704,000	0	0	0	0	\$1,704,000
Other	0	0	0	0	0	0	0	0
<b>Total Cost</b>	<b>0</b>	<b>0</b>	<b>\$1,704,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>\$1,704,000</b>

**PRIMARY SLUDGE THICKENING**



**Description:** Thin primary sludge pumping and piping systems to gravity thickeners, two 50' foot diameter gravity thickeners (covered for odor control), supernatant overflow pumping and piping, thickened sludge piping/pumping to digesters. Includes funds for landscaping in vicinity of thickeners. See Odorous Air Treatment for treatment of odors.

**Status:** Planning phase.

**Justification:** Meet class B biosolids requirements without building additional digester capacity. Also, keep sludge blanket lower in primary clarifiers to avoid washout of blanket during peak flow events.

**Project Driver:** Meet class B biosolids requirements during peak two-week solids loading event with all three digesters in service.

**Project Trigger:** Availability of sludge thickening capacity is required prior to next scheduled digester cleaning (i.e., before 2013).

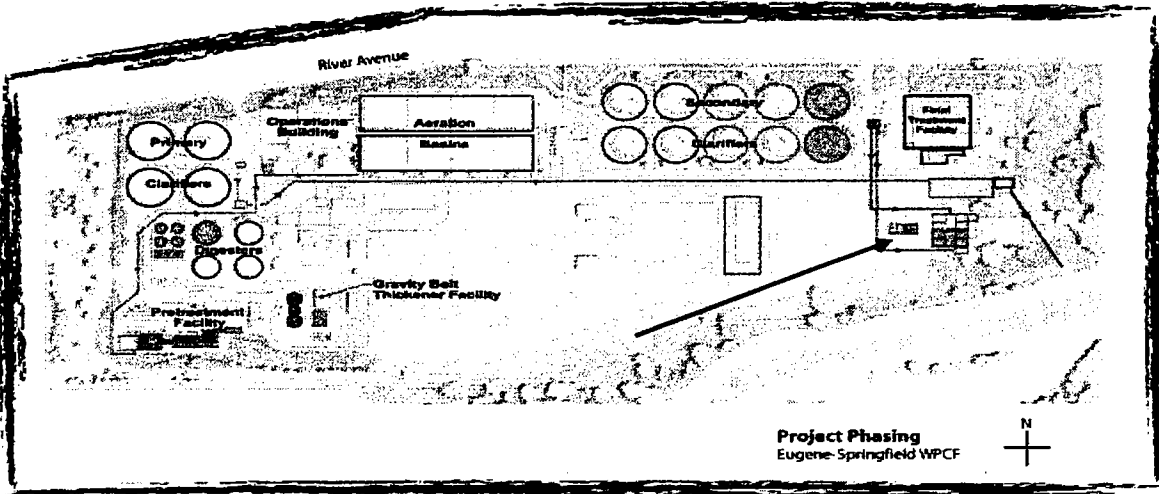
**Improvement SDC Eligibility:** 65%

**Estimated Project Cost:** \$4,498,000 (Note that the budget for this project was adjusted to account for inflation. The adjusted budget reflects the 2006 cost estimate adjusted for inflation at a rate of 5% per year).

**Expected Cash Flow:** FY 07-08 = \$190,000; FY 08-09 = \$1,692,000, FY 09-10 = \$2,616,000

<u>Expenditure/Category:</u>	<u>Prior Years</u>	<u>2007-08 Est. Act.</u>	<u>2008-09</u>	<u>2009-10</u>	<u>2010-11</u>	<u>2011-12</u>	<u>2012-13</u>	<u>Total</u>
Design/Construction	0	\$190,000	\$4,308,000	0	0	0	0	\$4,498,000
Other	0	0	0	0	0	0	0	0
<b>Total Cost</b>	<b>\$0</b>	<b>\$190,000</b>	<b>\$4,308,000</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$4,498,000</b>

TERTIARY FILTRATION - PHASE 1



**Description:** This project installs infrastructure/support facilities for 30 mgd of filters for tertiary filtration of secondary treated effluent; however, this first phase only installs filter cells sufficient for 10 mgd of treatment. Future phases of the project will install the remaining filter cells. Includes funds for landscaping in vicinity of facilities.

**Justification:** Up to 10 mgd of filtration is required by 2010 to meet dry season mass limits, with the need for filtration increasing to up to 30 mgd by the end of the planning period (2025). The Facilities Plan proposes phasing filters on an as-needed basis, including as needed to facilitate development of Level 4 reuse. Filtration provides high quality secondary effluent and potential level 4 reuse water. Also, filtration is needed to assist with meeting wet season mass load requirements during peak flow events.

**Status:** Planning stage.

**Project Driver:** Performance reliability to meet the dry weather NPDES total suspended solids limits of less than 10 mg/L, reuse development, and compliance with effluent limits during peak flow conditions.

**Project Trigger:** NPDES permit compliance for TSS: Dry weather maximum month flow in excess of 49 mgd. Also, initially to provide higher quality effluent so that reuse can be developed.

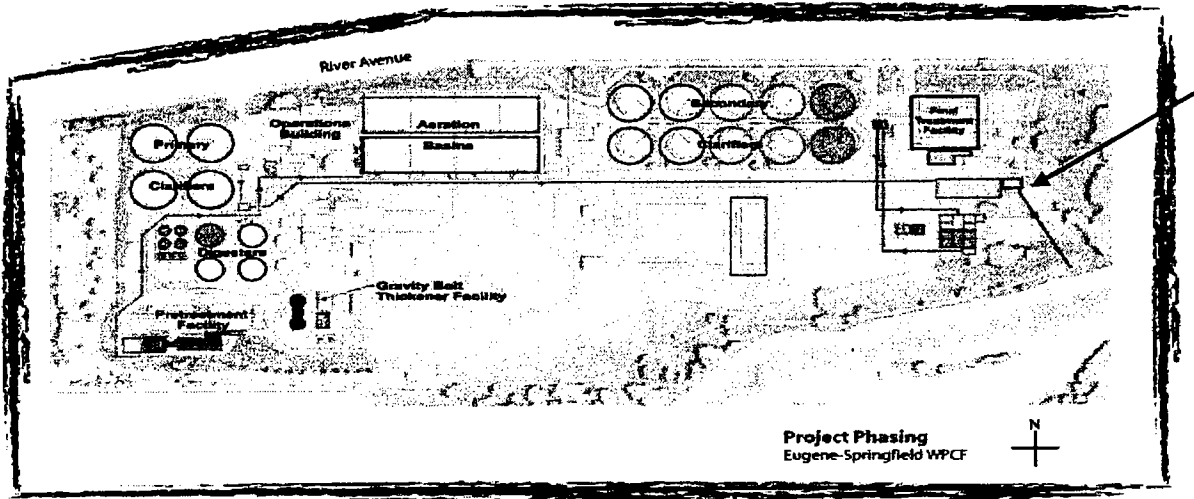
**Improvement SDC Eligibility:** 42%

**Estimated Project Cost:** \$14,685,000

**Expected Cash Flow:** FY 07-08 = \$317,000; FY 08-09 = \$2,600,000; FY 09-10 = \$8,000,000; FY 10-11 = \$3,768,000

<u>Expenditure/Category:</u>	<u>Prior Years</u>	<u>2007-08 Est. Act.</u>	<u>2008-09</u>	<u>2009-10</u>	<u>2010-11</u>	<u>2011-12</u>	<u>2012-13</u>	<u>Total</u>
Design/Construction	0	\$317,000	\$14,368,000	0	0	0	0	\$14,685,000
Other	0	0	0	0	0	0	0	0
<b>Total Cost</b>	<b>0</b>	<b>\$317,000</b>	<b>\$14,368,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>\$14,685,000</b>

EFFLUENT REUSE - PHASE 1



**Description:** This project is the first package of funding for wastewater effluent reuse to address thermal load issues and for multiple environmental benefits. This project combines two projects identified in the 2004 Facilities Plan; the Level II Reuse at Seasonal Industrial Waste and Level 4 Effluent Reuse Demonstration Projects. Project components may include additional treatment, disinfection, pumping, pipeline, and distribution/irrigation systems. The projects will be better defined as the planning for reuse continues and as markets for reuse are identified.

**Status:** Planning Stage

**Justification:** Implements reuse so that thermal load is removed from the Willamette River and for multiple environmental benefits.

**Project Driver:** Expansion of effluent reuse programs. Current NPDES thermal load compliance.

**Project Trigger:** Potential exceedance of NPDES thermal load limit. Identification of water needs for potential clients.

**Project Type:** 100% Performance

**Improvement SDC Eligibility:** 26%

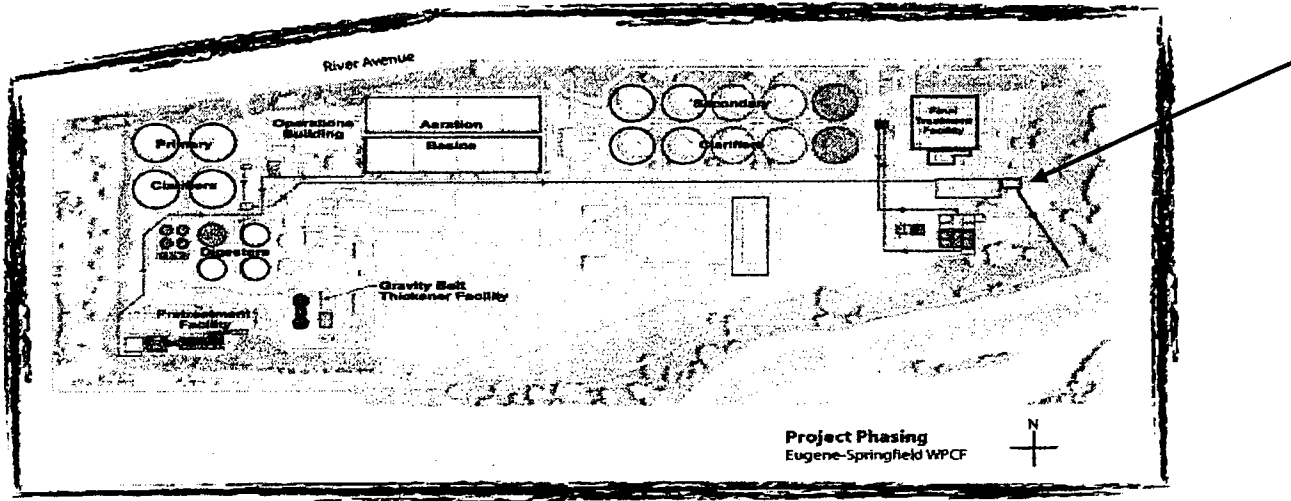
**Estimated Project Cost:** \$3,325,000 (2006 cost inflated to FY08-09).

**Expected Cash Flow:** FY 08-09 = \$2,000,000; FY 09-10 = \$1,218,000

<u>Expenditure/Category:</u>	<u>Prior Years</u>	<u>2007-08 Est. Act.</u>	<u>2008-09</u>	<u>2009-10</u>	<u>2010-11</u>	<u>2011-12</u>	<u>2012-13</u>	<u>Total</u>
Design/Construction	\$7,000	\$100,000	\$3,218,000	0	0	0	0	\$3,325,000
Other	0	0	0	0	0	0	0	0
<b>Total Cost</b>	<b>\$7,000</b>	<b>\$100,000</b>	<b>\$3,218,000</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$3,325,000</b>



EFFLUENT REUSE - PHASE 2



**Description:** This project is identified as Level II Effluent Reuse at the Biocycle Farm in the 2004 Facilities Plan. Provide 1.5 mgd of Level 2 reuse water at the Biocycle Farm. Installation of dedicated reuse irrigation pipeline and microspray system. Total reuse of 3.75 mgd in July and August. The project may change as planning progresses and other opportunities for reuse emerge.

**Justification:** Implements Level 2 reuse so that thermal load is removed from the Willamette River.

**Project Driver:** Expansion of dry weather effluent reuse programs. Current NPDES thermal load compliance.

**Project Trigger:** Potential exceedance of NPDES thermal load limit.

**Project Type:** 100% Performance

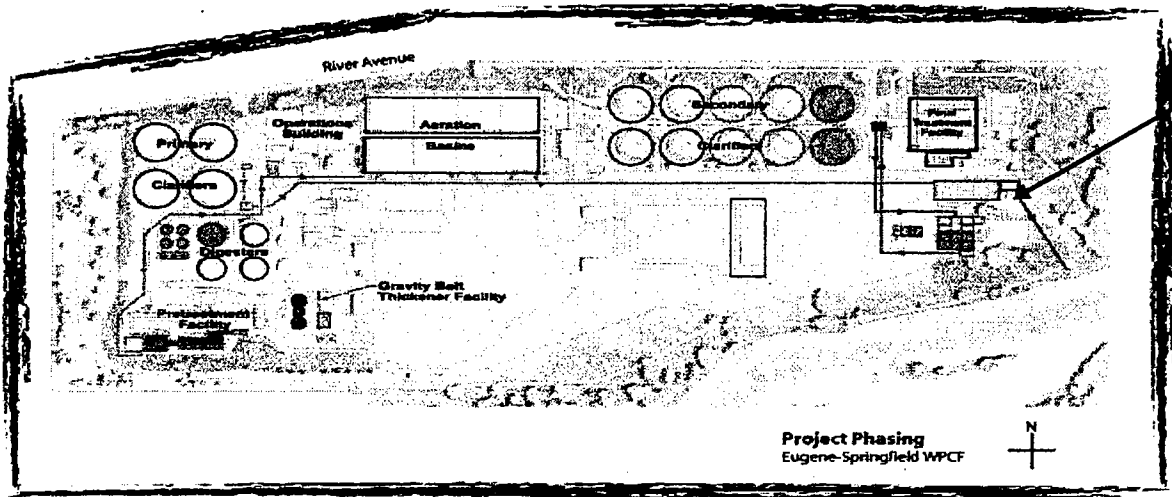
**Improvement SDC Eligibility:** 26%

**Estimated Project Cost:** \$5,152,000

**Expected Cash Flow:** FY 09-10 = \$2,500,000; FY 10-11 = \$2,652,000

<u>Expenditure/Category:</u>	<u>Prior Years</u>	<u>2007-08 Est. Act</u>	<u>2008-09</u>	<u>2009-10</u>	<u>2010-11</u>	<u>2011-12</u>	<u>2012-13</u>	<u>Total</u>
Design/Construction	0	0	0	\$5,152,000	0	0	0	\$5,152,000
Other	0	0	0	0	0	0	0	0
<b>Total Cost</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$5,152,000</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$5,152,000</b>

EFFLUENT REUSE - PHASE 3



**Description:** This project is the Facilities Plan project known as Permanent Level IV Reuse. It is to provide 2.5 mgd of permanent Level IV reuse water to local greenspaces and community areas. Project components may include additional treatment, disinfection with UV system, pumping, pipeline, and distribution/irrigation systems. The project will be better defined as the planning for reuse continues and as markets for reuse are identified.

**Status:** Planning Stage

**Justification:** Implements reuse so that thermal load is removed from the Willamette River and for multiple environmental benefits.

**Project Driver:** Expansion of effluent reuse programs. Current NPDES thermal load compliance.

**Project Trigger:** Potential exceedance of NPDES thermal load limit. Identification of water needs for potential clients.

**Project Type:** 100% Performance

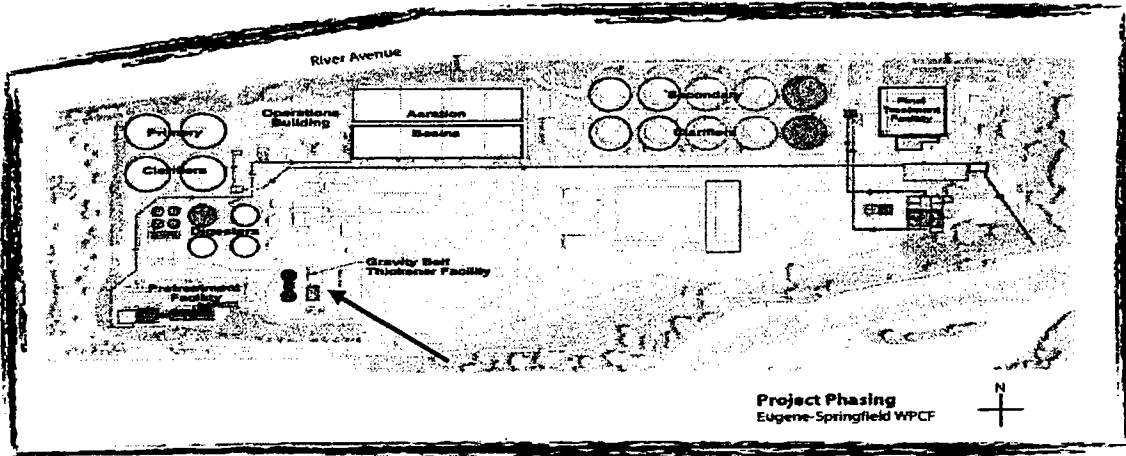
**Improvement SDC Eligibility:** 26%

**Estimated Project Cost:** \$6,542,000

**Expected Cash Flow:** FY 11-12 = \$1,699,000; FY 12-13 = \$4,843,000

<u>Expenditure/Category:</u>	<u>Prior Years</u>	<u>2007-08 Est. Act.</u>	<u>2008-09</u>	<u>2009-10</u>	<u>2010-11</u>	<u>2011-12</u>	<u>2012-13</u>	<u>Total</u>
Design/Construction	0	0	0	0	0	\$6,542,000	0	\$6,542,000
Other	0	0	0	0	0	0	0	0
<b>Total Cost</b>	<b>\$ 0</b>	<b>\$ 0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$6,542,000</b>	<b>\$0</b>	<b>\$6,542,000</b>

**WASTE ACTIVATED SLUDGE THICKENING**



**Description:** Third gravity belt thickener (GBT) with associated at grade building. Assumes additional basement floor space is not required. Includes funds for landscaping in vicinity of thickeners.

**Justification:** Provides additional capacity for Waste Activated Sludge (WAS) thickening and, along with addition of primary sludge thickening, will help to eliminate the need for additional digester capacity.

**Status:** Planning stage.

**Project Driver:** Additional capacity to provide WAS thickening with one unit offline at upper limit flow projections. Nitrification required by the NPDES permit and increasing wastewater flows and loads generates more WAS solids. Provide ability to conduct recuperative thickening so that need for additional digestion volume can potentially be deferred.

**Project Trigger:** Exceeding solids and hydraulic loading rate design criteria. The latest evaluations of need for Waste Activated Sludge thickening indicates a need by about 2012 or later. After the secondary treatment modifications are completed and operational for a time, the timing of need for this project should be reevaluated.

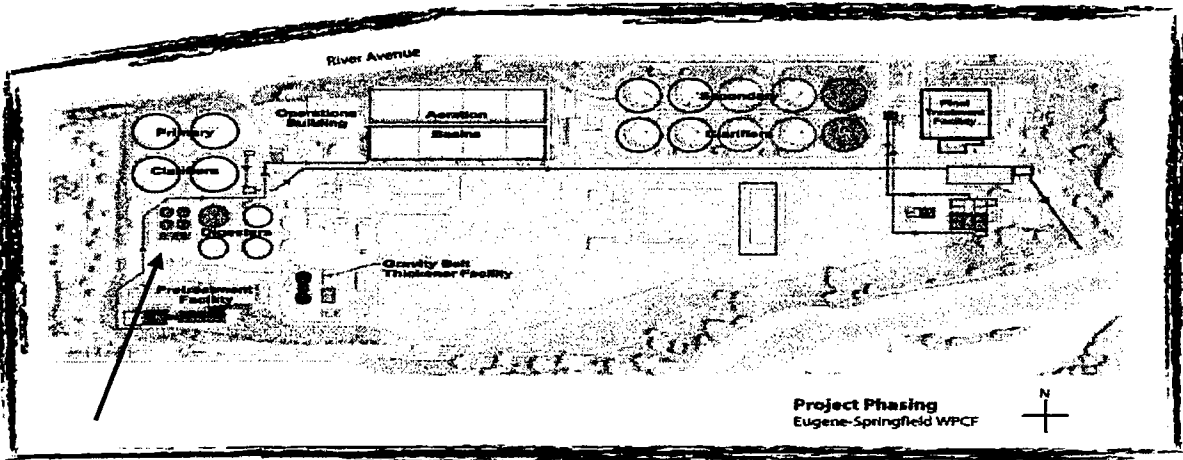
**Estimated Project Cost:** \$3,901,000

**Improvement SDC Eligibility:** 100%

**Expected Cash Flow:** FY 12-13 = \$3,901,000

<u>Expenditure/Category:</u>	<u>Prior Years</u>	<u>2007-08 Est. Act.</u>	<u>2008-09</u>	<u>2009-10</u>	<u>2010-11</u>	<u>2011-12</u>	<u>2012-13</u>	<u>Total</u>
Design/Construction	0	0	0	0	0	0	\$3,901,000	\$3,901,000
Other	0	0	0	0	0	0	0	0
<b>Total Cost</b>	<b>\$ 0</b>	<b>\$ 0</b>	<b>\$ 0</b>	<b>\$ 0</b>	<b>\$ 0</b>	<b>\$ 0</b>	<b>\$3,901,000</b>	<b>\$3,901,000</b>

**INCREASE DIGESTION CAPACITY AND PROVIDE CLASS A CAPABILITY**



**Description:** Installation of either a fourth conventional high rate digester for continued production of Class B biosolids, or conversion of existing conventional anaerobic digestion system to an advanced digestion system capable of producing Class A biosolids.

**Justification:** Continue to meet, at a minimum, the requirements for Class B with the ability to take one digester out of service for cleaning.

**Project Driver:** This project addresses 1) the future need for more anaerobic digestion capacity, and 2) the potential future need to change the existing digestion process to produce Class A biosolids as a strategy to secure a wider range of future beneficial end-use options. The capacity issue will be influenced by several operational factors including the effectiveness of new primary sludge and expanded WAS thickening processes, as well as digester cleaning protocols and schedules. Likewise, the decision to invest in an advanced digestion process to produce Class A biosolids will depend on the course of regulatory policy, scientific findings, and public attitudes toward land application of Class B biosolids over the next several years. In both cases, observation over the next several years is required prior to making a decision on what type of digestion facilities are needed and when they will be needed. A study of the anaerobic digestions system capacity and process alternatives is planned to begin in FY 2011. This study will be conducted as part of the Facilities Plan Engineering Services contract with CH2M HILL.

**Project Trigger:** The trigger for design and construction of new digestion facilities will depend on the findings of the digestion system capacity and process alternatives study, which will be started in FY 2011 under the continuing Facilities Plan Engineering Services contract.

**Improvement SDC Eligibility:** 54%

**Estimated Project Cost:** \$25,777,000

**Expected Cash Flow:** FY 12-13 = \$2,034,000; FY 13-14 = \$16,765,000; FY 14-15 = \$6,978,000

<u>Expenditure/Category:</u>	<u>Prior Years</u>	<u>2007-08 Est. Act</u>	<u>2008-09</u>	<u>2009-10</u>	<u>2010-11</u>	<u>2011-12</u>	<u>2012-13</u>	<u>Total</u>
Design/Construction	0	0	0	0	0	0	\$25,777,000	\$25,777,000
Other	0	0	0	0	0	0	0	0
<b>Total Cost</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$25,777,000</b>	<b>\$25,777,000</b>