

Fund:  
**WATERWORKS and SEWERAGE**

Department:  
**PUBLIC WORKS**

Division:  
**SOUTHEAST WASTEWATER TREATMENT PLANT**

Division No.: **47022**

**MISSION:**

The mission of the Southeast Wastewater Treatment Plant (SWWWTP) is to reclaim wastewater so that it may be returned to natural waterways in compliance with state and federal environmental laws, regulations and standards.

**SERVICES:**

The Southeast Wastewater Treatment Plant processes wastewater from the central and eastern parts of Carbondale and from the Southern Illinois University-Carbondale campus. The effluent is discharged into Crab Orchard Creek.

**SIGNIFICANT GOALS AND OBJECTIVES:**

**GOAL:**

A. Operate an efficient waste water treatment facility that continually meets community needs and complies with all applicable state and federal environmental laws, regulations and standards.

**Objective:**

1. Utilize available resources in a cost-effective manner and enhance the efficiency of plant operations

**Strategies:**

- a. Maintain constant control over purchasing of plant needs
- b. Utilize the plant Supervisory Control and Data Acquisition (SCADA) system to monitor and achieve maximum plant operating efficiencies
- c. Maintain a preventive maintenance program on all motors, pumps, equipment, tanks and appurtenances

**Objective:**

2. Achieve excellence in regard to plant safety

**Strategies:**

- a. Periodically conduct employee safety meetings
- b. Purchase required safety items and provide safety training for personnel
- c. Identify and reduce personal hazards in the work

environment and encourage employee input in recognizing workplace hazards

**Objective:**

3. Reduce storm water infiltration that must be treated at the plant

**Strategies:**

- a. Continue search for infiltration and identify lines with inflow problems
- b. Place lines with inflow problems in Community Investment Program

**Objective:**

4. Meet Federal 503 Sludge Regulations

**Strategies:**

- a. Sample sludge to assure compliance with regulations
- b. Work with Central Laboratory to monitor sludge and make recommendations on improving sludge quality

**GOAL:**

B. Promote Illinois Environmental Protection Agency certification for plant personnel

**Objective:**

1. Obtain the highest certification for which each employee qualifies

**Strategies:**

- a. Provide educational material for state certification
- b. Maintain, update and continue an employee in-house educational training program

**PROGRAM HIGHLIGHTS:**

In FY 2016, the Southeast Wastewater Treatment Plant continued to produce high quality effluent that met or exceeded the standards set forth by the State and Federal National Pollution Discharge Elimination System (NPDES) permit as issued by the Illinois Environmental Protection Agency (IEPA).

In FY 2016, the third year of a multi-year Sanitary Sewer Inflow and Infiltration Study (CIP #SS1301) was completed. The purpose of this intensive study is to identify major and minor sources of sanitary sewer inflow and infiltration. Reducing significant inflow and infiltration will help reduce operational costs of the Southeast Wastewater Treatment Plant.

In FY 2016, variable speed drives were added to two of the oxidation ditch motors to increase their energy efficiency and increase nutrient removal as required by the IEPA.

In FY 2017, two more variable speed drives will be installed to increase treatment efficiency and reduce energy consumption.

Also in FY 2017, one sludge pump will be replaced.

**PERFORMANCE MEASUREMENTS:**

<b>Performance Measurements</b>	<b>Division Goal/ Objective</b>	<b>Actual FY 2015</b>	<b>Authorized Budget FY 2016</b>	<b>Estimated Actual FY 2016</b>	<b>Budget FY 2017</b>
Total Million Gallons of Water Treated	A-1	1,237	1,250	1,221	1,250
Average Million Gallons of Water Treated Per Day	A-1	3.4	3.7	3.4	3.4
Cost Per 1,000 Gallons of Water Treated (Dollars)	A-1	\$0.80	\$0.74	\$0.77	\$0.82
Dry Tons of Sewage Sludge Produced	A-1	321	350	382	375

**NUMBER OF FULL-TIME EQUIVALENT EMPLOYEES:**

<b>POSITION TITLE</b>	<b>ACTUAL FY 2015</b>	<b>AUTHORIZED BUDGET FY 2016</b>	<b>ESTIMATED ACTUAL FY 2016</b>	<b>BUDGET FY 2017</b>	<b>\$ AMOUNT BUDGET FY 2017</b>
Southeast Wastewater Treatment Plant Superintendent	1.00	1.00	1.00	1.00	\$67,496
Plant Operator	7.00	7.00	7.13	7.00	\$326,889
<b>TOTAL</b>	8.00	8.00	8.13	8.00	\$394,385

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EXPENDITURE CLASSIFICATION	AUTHORIZED		ESTIMATED	
	ACTUAL FY2015	BUDGET FY2016	ACTUAL FY2016	BUDGET FY2017
<b>PERSONAL SERVICES</b>				
100 Employee Salary and Wages	383,097	397,588	392,475	394,385
110 Employee Overtime	10,665	10,028	12,036	12,171
112 Employee Premium Payments	16,857	16,623	13,164	17,609
130 Employee Health Ins. Benefits	75,505	71,547	88,588	94,605
131 Employee Retirement Benefits	88,468	81,221	80,114	80,114
140 Employee Work. Comp. Benefits	23,594	21,738	19,265	20,819
150 Special Contractual Benefits	5,950	5,950	5,950	5,950
<b>TOTAL PERSONAL SERVICES</b>	<b>604,136</b>	<b>604,695</b>	<b>611,592</b>	<b>625,653</b>
<b>DIRECT OPERATING CHARGES &amp; SERVICES</b>				
220 Communications-Telephone	552	540	528	540
221 Communications-Data	559	516	506	516
222 Communications-Postage	259	240	180	240
230 Utilities-Electric	141,256	147,876	152,400	162,791
231 Utilities-Gas	2,593	4,831	2,400	4,031
240 Travel, Conferences, Training	775	896	851	1,016
250 Repairs & Maint.-Equip.	36,778	56,558	58,500	62,950
251 Repairs & Maint.-Bldg & Struc.	1,293	11,028	1,700	3,948
252 Repairs & Maint.-Other Improv.	9,972	9,975	18,500	16,975
260 Rental Charges	0	0	0	200
271 Other Outside Services	58,130	42,346	45,000	42,350
272 Office Supplies	338	283	275	270
273 Operating Supplies & Materials	10,373	9,060	11,100	10,460
275 Motor Fuels and Lubricants	6,767	15,122	7,320	13,655
299 Operating Equipment	0	5,850	5,850	0
<b>TOTAL DIR. OPER. CHRGS. &amp; SRVCS.</b>	<b>269,645</b>	<b>305,121</b>	<b>305,110</b>	<b>319,942</b>
<b>SERVICES AND CHARGES TRANSFERRED IN</b>				
310 Veh. & Equip.-Labor & Overhead	9,344	7,104	10,000	7,965
311 Vehicle & Equipment-Parts	10,903	8,100	9,950	9,100
315 Building & Structure-Maint.	760	2,130	1,000	2,181
316 Street Maintenance Services	4,694	1,576	900	1,502
332 Information Systems Services	0	0	0	600
361 Forestry Services	0	383	200	533
<b>TOTAL SRVCS. &amp; CHRGS. TRANS IN</b>	<b>25,701</b>	<b>19,293</b>	<b>22,050</b>	<b>21,881</b>
<b>CAPITAL OUYLAY</b>				
503 Machinery and Equipment	89,406	0	0	57,300
<b>TOTAL CAPITAL OUTLAY</b>	<b>89,406</b>	<b>0</b>	<b>0</b>	<b>57,300</b>
<b>TOTAL EXPENDITURES</b>	<b>988,888</b>	<b>929,109</b>	<b>938,752</b>	<b>1,024,776</b>