

Fund:
WATERWORKS and SEWERAGE

Department:
PUBLIC WORKS

Division:
NORTHWEST WASTEWATER TREATMENT PLANT

Division No.: **47023**

MISSION:

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

SERVICES:

The Northwest Wastewater Treatment Plant treats all the wastewater from the western portion of Carbondale. The facility also receives industrial wastewater from the Bicentennial Industrial Park, Carbondale Industrial Park and the industrial transfer sewer. The industrial wastewater is initially processed at the industrial pre-treatment plant and then its effluent is discharged into and treated in the domestic plant. All the effluent is discharged to the Big Muddy River or used to irrigate the Hickory Ridge Golf Course.

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 SCADA (Supervisory Control and Data Acquisition) 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, 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. Reduce peak demand charges for electricity

Strategies:

- a. Communicate with Egyptian Electric for possible reduction of peak demand charges
- b. Continue to replace pumps and motors with newer energy-efficient equipment as older equipment fails
- c. Rebuild pumps and adjust to maintain efficiencies
- d. Continue to utilize the generator for peak shaving under high flows

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 materials for state certification
- b. Maintain and update an employee in-house educational training program

PROGRAM HIGHLIGHTS:

In FY 2013, the Northwest Wastewater Treatment Plant met and 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). The treatment facility has continued to maintain a high removal rate on the Biochemical Oxygen Demand (B.O.D) and Suspended Solids (S.S.)

In FY 2013, an Ultraviolet Disinfection System was installed; this system will allow the decommissioning of the existing chlorine gas disinfection system.

In FY 2013, the first year of a multi-year Sanitary Sewer Inflow and Infiltration Study (CIP #SS1301) was begun. The purpose of this intensive study is to identify major and

minor sources of sanitary sewer inflow and infiltration; reducing significant inflow and infiltration should help reduce operational costs of the Northwest Wastewater Treatment plant.

Also in FY2013 the dilapidated piping in the industrial effluent pump building was replaced.

In FY 2014, the center column of the trickling filter will be replaced; the distribution arms of the trickling filter will also be rebuilt.

In FY2014, Northwest Wastewater Treatment personnel will continue to replace and/or paint handrails around the plant facility as needed.

PERFORMANCE MEASUREMENTS:

Performance Measurements	Division Goal/ Objective	Actual FY 2012	Authorized Budget FY 2013	Estimated Actual FY 2013	Budget FY 2014
Total Million Gallons Treated	A-1	636	520	520	630
Average Million Gallons Treated Per Day	A-1	1.74	1.44	1.43	1.73
Cost Per 1,000 Gallons Treated (Dollars)	A-1	\$1.59	\$1.93	\$2.09	\$1.75
Dry Tons of Sewage Sludge Produced	A-1	103	190	180	180

NUMBER OF FULL-TIME EQUIVALENT EMPLOYEES:

POSITION TITLE	ACTUAL FY 2012	AUTHORIZED BUDGET FY 2013	CURRENT ACTUAL FY 2013	BUDGET FY 2014	\$ AMOUNT BUDGET FY 2014
Northwest Wastewater Treatment Plant Superintendent	1.00	1.00	1.00	1.00	\$55,812
Plant Operator	6.79	7.00	7.06	7.00	\$323,008
TOTAL	7.79	8.00	8.06	8.00	\$378,820

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EXPENDITURE CLASSIFICATION	AUTHORIZED		ESTIMATED	
	ACTUAL FY2012	BUDGET FY2013	ACTUAL FY2013	BUDGET FY2014
PERSONAL SERVICES				
100 Employee Salary and Wages	374,868	368,087	363,498	378,820
110 Employee Overtime	28,482	26,683	18,113	14,866
112 Employee Premium Payments	0	0	7,987	14,344
130 Employee Health Ins. Benefits	78,932	87,078	81,550	72,062
131 Employee Retirement Benefits	76,183	78,165	77,109	82,817
140 Employee Work. Comp. Benefits	38,508	42,098	33,498	19,490
141 Employee Unemployment. Comp.	0	0	0	0
150 Special Contractual Benefits	2,337	4,200	3,500	3,850
TOTAL PERSONAL SERVICES	599,310	606,311	585,255	586,249
DIRECT OPERATING CHARGES & SERVICES				
220 Communications-Telephone	750	1,260	1,260	900
221 Communications-Data	0	0	0	360
222 Communications-Postage	382	420	400	420
230 Utilities-Electric	194,708	222,281	225,200	227,384
231 Utilities-Gas	2,590	5,143	4,300	4,342
232 Utilities-Water and Sewer	40	0	0	0
240 Travel, Conferences, Training	567	1,958	1,958	2,199
250 Repairs & Maint.-Equip.	34,178	31,300	32,500	32,625
251 Repairs & Maint.-Bldg & Struc.	6,327	5,696	5,600	5,725
252 Repairs & Maint.-Other Improv.	14,796	23,675	20,200	20,600
271 Other Outside Services	22,420	22,135	22,135	22,045
272 Office Supplies	179	305	300	305
273 Operating Supplies & Materials	14,135	7,675	7,650	7,675
275 Motor Fuels and Lubricants	29,371	34,511	38,000	38,288
299 Operating Equipment	4,965	0	0	0
TOTAL DIR. OPER. CHRGS. & SRVCS.	325,408	356,359	359,503	362,868
SERVICES AND CHARGES TRANSFERRED IN				
310 Veh. & Equip.-Labor & Overhead	4,326	4,385	4,385	4,478
311 Vehicle & Equipment-Parts	3,927	3,500	3,500	3,500
315 Building & Structure-Maint.	232	1,024	1,024	2,000
316 Street Maintenance Services	0	361	361	377
361 Forestry Services	0	176	176	206
TOTAL SRVCS. & CHRGS. TRANS IN	8,485	9,446	9,446	10,561

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EXPENDITURE CLASSIFICATION	ACTUAL	AUTHORIZED	ESTIMATED	BUDGET
	FY2012	BUDGET	ACTUAL	FY2014
	FY2013	FY2013	FY2013	
CAPITAL OUTLAY				
501 Buildings & Structures	0	93,715	9,000	68,000
503 Machinery and Equipment	75,836	40,000	49,726	75,000
504 Licensed Vehicles	0	6,525	6,525	0
TOTAL CAPITAL OUTLAY	75,836	140,240	65,251	143,000
TOTAL EXPENDITURES	<u>1,009,039</u>	<u>1,112,356</u>	<u>1,019,455</u>	<u>1,102,678</u>