

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 2014, 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.)

During FY 2014, the second 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 should help reduce operational costs of the Northwest Wastewater Treatment plant.

In FY 2014, the center column of the trickling filter was replaced; and the distribution arms of the trickling filter were also rebuilt.

In FY 2014, the trickling filter pump pit and the industrial raw influent basin were lined to help prevent the concrete from eroding due to corrosive sewer gases.

In FY 2015, Northwest Wastewater Treatment personnel will continue to replace and/or paint handrails around the plant facility as needed.

In FY 2015, Northwest Wastewater Treatment personnel will start sandblasting and painting of the primary clarifiers, and other structures to help extend the life of these units.

PERFORMANCE MEASUREMENTS:

Performance Measurements	Division Goal/ Objective	Actual FY 2013	Authorized Budget FY 2014	Estimated Actual FY 2014	Budget FY 2015
Total Million Gallons Treated	A-1	636	630	632	635
Average Million Gallons Treated Per Day	A-1	1.74	1.73	1.73	1.75
Cost Per 1,000 Gallons Treated (Dollars)	A-1	\$1.56	\$1.79	\$1.72	\$1.57
Dry Tons of Sewage Sludge Produced	A-1	104	180	112	120

NUMBER OF FULL-TIME EQUIVALENT EMPLOYEES:

POSITION TITLE	ACTUAL FY 2013	AUTHORIZED BUDGET FY 2014	CURRENT ACTUAL FY 2014	BUDGET FY 2015	\$ AMOUNT BUDGET FY 2015
Northwest Wastewater Treatment Plant Superintendent	1.00	1.00	1.00	1.00	\$56,919
Plant Operator	7.11	7.00	7.04	7.00	\$323,875
TOTAL	8.11	8.00	8.04	8.00	\$380,794

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EXPENDITURE CLASSIFICATION	ACTUAL FY2013	AUTHORIZED	ESTIMATED	BUDGET FY2015
		BUDGET FY2014	ACTUAL FY2014	
PERSONAL SERVICES				
100 Employee Salary and Wages	363,715	378,820	365,472	380,794
110 Employee Overtime	18,094	14,866	12,843	16,930
112 Employee Premium Payments	8,426	14,344	13,764	14,530
130 Employee Health Ins. Benefits	81,440	72,062	76,722	85,167
131 Employee Retirement Benefits	78,420	82,817	80,413	87,830
140 Employee Work. Comp. Benefits	33,498	19,490	19,056	19,457
141 Employee Unemployment. Comp.	0	0	0	0
150 Special Contractual Benefits	5,697	3,850	4,928	5,950
TOTAL PERSONAL SERVICES	589,290	586,249	573,198	610,658
DIRECT OPERATING CHARGES & SERVICES				
220 Communications-Telephone	714	900	700	540
221 Communications-Data	0	360	350	360
222 Communications-Postage	270	420	360	420
230 Utilities-Electric	217,706	227,384	226,312	227,384
231 Utilities-Gas	2,808	4,342	3,000	4,342
240 Travel, Conferences, Training	2,139	2,199	2,199	2,420
250 Repairs & Maint.-Equip.	30,352	75,537	64,000	37,850
251 Repairs & Maint.-Bldg & Struc.	5,068	5,725	5,500	5,725
252 Repairs & Maint.-Other Improv.	22,136	20,600	17,000	20,600
271 Other Outside Services	19,730	22,045	22,045	22,795
272 Office Supplies	304	305	350	305
273 Operating Supplies & Materials	8,495	12,175	9,600	9,064
275 Motor Fuels and Lubricants	11,250	27,788	19,000	31,063
282 Licenses and Taxes	107	0	0	0
299 Operating Equipment	0	0	0	0
TOTAL DIR. OPER. CHRGS. & SRVCS.	321,079	399,780	370,416	362,868
SERVICES AND CHARGES TRANSFERRED IN				
310 Veh. & Equip.-Labor & Overhead	3,680	4,478	4,400	4,198
311 Vehicle & Equipment-Parts	2,500	3,500	3,400	3,500
315 Building & Structure-Maint.	1,007	2,000	2,000	2,171
316 Street Maintenance Services	8,837	377	377	1,578
361 Forestry Services	0	206	206	206
TOTAL SRVCS. & CHRGS. TRANS IN	16,024	10,561	10,383	11,653

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EXPENDITURE CLASSIFICATION	ACTUAL FY2013	AUTHORIZED	ESTIMATED	BUDGET FY2015
		BUDGET FY2014	ACTUAL FY2014	
CAPITAL OUTLAY				
501 Buildings & Structures	46,964	68,000	63,860	0
503 Machinery and Equipment	10,200	61,695	67,192	0
504 Licensed Vehicles	6,525	0	0	0
TOTAL CAPITAL OUTLAY	63,689	129,695	131,052	0
TOTAL EXPENDITURES	<u>990,082</u>	<u>1,126,285</u>	<u>1,085,049</u>	<u>985,179</u>