

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 2015, 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 2015, 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 should help reduce operational costs of the Northwest Wastewater Treatment plant.

In FY 2015, Northwest Wastewater Treatment personnel replaced and/or painted handrails around the plant facility as needed.

In FY 2015, Northwest Wastewater Treatment personnel started sandblasting and painting of the primary clarifiers, and other structures to help extend the life of these units. This work will continue in FY 2016.

In FY 2015, the Final Clarifier Renovation Project (CIP WW1004) was begun, this project will be completed in FY 2016.

In FY 2016, staff will continue to maintain the plant and keep everything in good working order.

PERFORMANCE MEASUREMENTS:

Performance Measurements	Division Goal/ Objective	Actual FY 2014	Authorized Budget FY 2015	Estimated Actual FY 2015	Budget FY 2016
Total Million Gallons Treated	A-1	501	635	526	600
Average Million Gallons Treated Per Day	A-1	1.37	1.75	1.44	1.64
Cost Per 1,000 Gallons Treated (Dollars)	A-1	\$2.19	\$1.55	\$1.74	\$1.61
Dry Tons of Sewage Sludge Produced	A-1	102	120	131	125

NUMBER OF FULL-TIME EQUIVALENT EMPLOYEES:

POSITION TITLE	ACTUAL FY 2014	AUTHORIZED BUDGET FY 2015	CURRENT ACTUAL FY 2015	BUDGET FY 2016	\$ AMOUNT BUDGET FY 2016
Northwest Wastewater Treatment Plant Superintendent	1.00	1.00	0.80	1.00	\$55,875
Plant Operator	7.04	7.00	6.91	7.00	\$324,545
TOTAL	8.04	8.00	7.71	8.00	\$380,420

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EXPENDITURE CLASSIFICATION	AUTHORIZED		ESTIMATED	
	ACTUAL FY2014	BUDGET FY2015	ACTUAL FY2015	BUDGET FY2016
PERSONAL SERVICES				
100 Employee Salary and Wages	367,588	380,794	364,517	380,420
110 Employee Overtime	12,581	16,930	15,983	13,119
112 Employee Premium Payments	13,267	14,530	15,618	16,431
130 Employee Health Ins. Benefits	70,591	85,167	69,010	75,195
131 Employee Retirement Benefits	83,754	87,830	80,808	78,999
140 Employee Work. Comp. Benefits	22,528	19,457	19,555	20,728
141 Employee Unemp. Comp. Benefits	0	0	0	0
150 Special Contractual Benefits	4,928	5,950	5,950	5,950
TOTAL PERSONAL SERVICES	575,237	610,658	571,441	590,842
DIRECT OPERATING CHARGES & SERVICES				
220 Communications-Telephone	473	540	464	540
221 Communications-Data	298	360	316	360
222 Communications-Postage	199	420	135	250
230 Utilities-Electric	224,506	227,384	222,706	230,124
231 Utilities-Gas	2,128	4,342	2,221	4,396
240 Travel, Conferences, Training	1,980	2,420	836	861
250 Repairs & Maint.-Equip.	80,914	18,350	18,255	47,264
251 Repairs & Maint.-Bldg & Struc.	4,189	5,725	5,700	5,775
252 Repairs & Maint.-Other Improv.	10,872	17,600	20,600	12,300
271 Other Outside Services	20,218	34,795	32,300	22,795
272 Office Supplies	362	305	300	339
273 Operating Supplies & Materials	7,113	9,064	9,100	9,200
275 Motor Fuels and Lubricants	17,656	31,063	10,600	28,663
282 Licenses and Taxes	107	0	0	0
299 Operating Equipment	410	3,000	2,776	0
TOTAL DIR. OPER. CHRGS. & SRVCS.	371,425	355,368	326,309	362,867
SERVICES AND CHARGES TRANSFERRED IN				
310 Veh. & Equip.-Labor & Overhead	4,429	4,198	3,282	4,144
311 Vehicle & Equipment-Parts	4,586	3,500	4,265	3,500
315 Building & Structure-Maint.	2,300	2,171	1,767	2,130
316 Street Maintenance Services	5,507	1,578	750	1,576
332 Information Systems Services	0	0	0	0
361 Forestry Services	0	206	100	287
TOTAL SRVCS. & CHRGS. TRANS IN	16,822	11,653	10,164	11,637

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EXPENDITURE CLASSIFICATION	ACTUAL	AUTHORIZED	ESTIMATED	
	FY2014	BUDGET	ACTUAL	BUDGET
		FY2015	FY2015	FY2016
CAPITAL OUTLAY				
501 Buildings & Structures	67,341	0	0	0
503 Machinery and Equipment	<u>66,051</u>	<u>7,500</u>	<u>8,000</u>	<u>58,000</u>
TOTAL CAPITAL OUTLAY	133,392	7,500	8,000	58,000
TOTAL EXPENDITURES	<u><u>1,096,876</u></u>	<u><u>985,179</u></u>	<u><u>915,914</u></u>	<u><u>1,023,346</u></u>