

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 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 to search for infiltration and identify lines with inflow problems
- b. Place lines with inflow problems in the 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 make adjustments 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 2016, 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 2016, Northwest Wastewater Treatment personnel replaced and/or painted handrails around the plant facility as needed.

In FY 2016, Northwest Wastewater Treatment personnel started sandblasting and painting the primary clarifiers and other structures to help extend the life of those units. This work will continue in FY 2017.

In FY 2016, the Final Clarifier Renovation Project (CIPWW1004) was completed.

In FY 2017, the Bar Screen Replacement Project (CIPWW1002) will begin.

In FY 2017, the River Vault Replacement Project (CIPWW1601) will begin.

In FY 2017, staff will continue to maintain the plant and keep everything in good working order. Maintenance projects will include replacement of the asphalt pad for sludge storage to maintain EPA sludge storage compliance, refinishing and sealing the roof of the control building and replacement of the enclosures for the 2 vacuum stations.

***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 Treated	A-1	539	600	607	600
Average Million Gallons Treated Per Day	A-1	1.48	1.64	1.66	1.64
Cost Per 1,000 Gallons Treated (Dollars)	A-1	\$1.66	\$1.71	\$1.68	\$1.80
Dry Tons of Sewage Sludge Produced	A-1	87	125	100	125

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

<b>POSITION TITLE</b>	<b>ACTUAL FY 2015</b>	<b>AUTHORIZED BUDGET FY 2016</b>	<b>CURRENT ACTUAL FY 2016</b>	<b>BUDGET FY 2017</b>	<b>\$ AMOUNT BUDGET FY 2017</b>
Northwest Wastewater Treatment Plant Superintendent	1.00	1.00	1.00	1.00	\$64,875
Plant Operator	7.00	7.00	7.00	7.00	\$351,995
<b>TOTAL</b>	8.00	8.00	8.00	8.00	\$416,870

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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	352,063	380,420	385,430	416,870
110 Employee Overtime	18,080	13,119	14,825	15,893
112 Employee Premium Payments	16,498	16,431	14,098	17,453
130 Employee Health Ins. Benefits	65,365	66,615	65,118	74,512
131 Employee Retirement Benefits	81,822	78,999	79,467	85,988
140 Employee Work. Comp. Benefits	22,459	20,728	18,291	19,610
141 Employee Unemp. Comp. Benefits	0	0	0	0
150 Special Contractual Benefits	5,950	5,950	5,950	5,950
<b>TOTAL PERSONAL SERVICES</b>	<b>562,237</b>	<b>582,262</b>	<b>583,179</b>	<b>636,276</b>
<b>DIRECT OPERATING CHARGES &amp; SERVICES</b>				
220 Communications-Telephone	528	540	492	498
221 Communications-Data	389	360	360	360
222 Communications-Postage	132	250	145	150
230 Utilities-Electric	225,018	230,124	230,400	230,124
231 Utilities-Gas	2,962	4,396	3,500	4,396
240 Travel, Conferences, Training	20	861	865	981
250 Repairs & Maint.-Equip.	19,502	41,738	41,400	42,339
251 Repairs & Maint.-Bldg & Struc.	1,775	13,301	13,300	12,499
252 Repairs & Maint.-Other Improv.	6,594	15,300	12,250	7,505
260 Rental Charges	0	0	0	500
271 Other Outside Services	33,401	22,795	22,792	24,785
272 Office Supplies	183	339	300	320
273 Operating Supplies & Materials	11,555	12,200	11,200	14,015
275 Motor Fuels and Lubricants	12,575	25,663	19,770	26,113
299 Operating Equipment	2,776	2,289	2,289	0
<b>TOTAL DIR. OPER. CHRGS. &amp; SRVCS.</b>	<b>317,410</b>	<b>370,156</b>	<b>359,063</b>	<b>364,585</b>
<b>SERVICES AND CHARGES TRANSFERRED IN</b>				
310 Veh. & Equip.-Labor & Overhead	2,324	4,144	4,144	4,256
311 Vehicle & Equipment-Parts	3,159	3,500	5,600	3,500
315 Building & Structure-Maint.	1,303	2,130	2,130	2,181
316 Street Maintenance Services	0	1,576	1,576	1,502
360 Property Management Services	783	0	0	0
361 Forestry Services	46	287	287	399
<b>TOTAL SRVCS. &amp; CHRGS. TRANS IN</b>	<b>7,615</b>	<b>11,637</b>	<b>13,737</b>	<b>11,838</b>

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EXPENDITURE CLASSIFICATION	ACTUAL	AUTHORIZED	ESTIMATED	
	FY2015	BUDGET	ACTUAL	BUDGET
		FY2016	FY2016	FY2017
<b>CAPITAL OUTLAY</b>				
501 Buildings and Structures	0	5,580	15,000	55,000
503 Machinery and Equipment	<u>7,599</u>	<u>53,711</u>	<u>47,590</u>	<u>0</u>
TOTAL CAPITAL OUTLAY	7,599	59,291	62,590	55,000
<b>TOTAL EXPENDITURES</b>	<u>894,861</u>	<u>1,023,346</u>	<u>1,018,569</u>	<u>1,067,699</u>