

# **Water & Resource Recovery Center**

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## WATER & RESOURCE RECOVERY CENTER DEPARTMENT

Budget Highlights	FY 2018 Actual	FY 2019 Budget	FY 2020 Requested	% Change From FY 2019 Budget
<u>Expenses</u>				
Employee Expense	1,533,344	1,476,394	1,448,236	(1.9)%
Supplies and Services	2,627,010	2,870,704	2,963,561	3.2 %
Payment to Construction Fund	181,114	845,000	458,758	(45.7)%
Machinery and Equipment	10,477	29,570	128,275	333.8 %
Engineering - Sewer Administration	190,435	234,473	280,899	19.8 %
Public Works Sewer Maintenance Charges	730,507	830,141	758,438	(8.6)%
Administrative Overhead Recharge	1,407,393	1,376,688	1,444,114	4.9 %
Payment in Lieu of Taxes	142,884	142,884	142,884	— %
Debt Service	6,131,146	5,275,393	5,229,832	(0.9)%
Total Expenses	12,954,310	13,081,247	12,854,997	(1.7)%
<u>Resources</u>				
Operating Revenue	13,796,771	13,090,204	12,905,459	(1.4)%
Total Resources	13,796,771	13,090,204	12,905,459	(1.4)%
Net Operating Surplus (Deficit)	842,461	8,957	50,462	41,505
<b>Personnel - Authorized FTE</b>	<b>17.00</b>	<b>15.00</b>	<b>15.00</b>	
<b>Sanitary User Fee Rate Increase</b>	<b>3.00%</b>	<b>3.00%</b>	<b>4.50%</b>	
<b>Revenue 1% Rate Increase Generates</b>			<b>\$ 96,813</b>	

### Improvement Package Summary

#### **1 of 4**

This improvement package would provide funding for a carbon fiber repair kit that would provide materials and training to expedite a spot repair to the 42" pre-stressed concrete cylinder pipe (PCCP) which conveys wastewater from the Terminal Street Valve House to the Water & Resource Recovery Center. This improvement would allow City staff to expeditiously restore service in the event of a failure of the 42" PCCP, minimizing the effects of an extended sanitary bypass. This improvement supports the City Goals of Financially Responsible, High-Performance City Organization: Sustainable, Equitable, and Effective Service Delivery, and Sustainable Environment: Preserving and Enhancing Natural Resources.

Related Cost:	<u>\$15,668</u>	Sanitary User Fee	Non-Recurring	<b>Recommend - Yes</b>
Sanitary User Fee Impact		0.16%		
Activity: Plant Operations				

#### **2 of 4**

This improvement package would provide funding for an exhaust wall to evacuate painting/chemical fumes from the maintenance work space. This improvement allows for additional painting/finishing of components in-house. This improvement also provides a safer working environment for maintenance staff. Filtration of paint/fumes produces cleaner exhaust. This improvement supports the goals of Vibrant Community: Healthy and Safe, and Sustainable Environment: Preserving and Enhancing Natural Resources.

Related Cost:	<u>\$3,500</u>	Sanitary User Fee	Non-Recurring	<b>Recommend - Yes</b>
Sanitary User Fee Impact		0.04%		
Activity: Plant Operations				

### 3 of 4

This improvement package would provide funding for a spare pump for the W&RRC Disinfected Effluent Water (DEW) system. This improvement would facilitate faster replacement of one of the systems three identical pumps. Many processes at W&RRC depend on an adequate supply of DEW for heating, cooling, and washing. Utilization of DEW reduces the consumption of potable city water. This improvement supports the City Goals of Financially Responsible, High-Performance City Organization: Sustainable, Equitable and Effective Service Delivery, and Sustainable Environment: Preserving and Enhancing Natural Resources.

Related Cost:	<u>\$6,950</u>	Sanitary User Fee	Non-Recurring	<b>Recommend - Yes</b>
Sanitary User Fee Impact		0.07%		
Activity: Plant Operations				

### 4 of 4

This improvement package would provide funding for a spare pump and a pump rebuild kit for the Lake Eleanor Road Lift Station. The additional pump and rebuild kit would expedite replacement of one of the two existing pumps, allow sufficient time for rebuild of a pump removed from service, and provides a layer of protection in the case of a pump failure. The additional pump greatly reduces the likelihood of a sanitary sewer overflow associated with pump failure. This Improvement supports the City Goal of Financially Responsible, High-Performance City Organization: Sustainable, Equitable, and Effective Service Delivery.

Related Cost:	<u>\$9,800</u>	Sanitary User Fee	Non-Recurring	<b>Recommend - Yes</b>
Sanitary User Fee Impact		0.10%		
Activity: Plant Operations				

### Significant Line Items

#### **Employee Expense**

1. FY 2020 employee expense reflects a 1.5% wage package increase.
2. The Iowa Public Employee Retirement System (IPERS) City contribution of 9.44% is unchanged from FY 2019. The employee contribution of 6.29% is unchanged from FY 2019.
3. The City portion of health insurance expense is decreased from \$1,193 in FY 2019 to \$921 in FY 2020 per month per contract which results in an annual cost savings of \$52,111 or 22.77%.
4. Overtime is unchanged from \$59,350 in FY 2019 to \$59,350 in FY 2020. FY 2018 actual was \$52,395.
5. Sick leave payout is decreased from \$14,720 in FY 2019 to \$11,225 in FY 2020.
6. The FY 2019 budget recommendation included elimination of a Plant Operator Position effective January 1, 2019. This results in a savings of \$38,716 in FY 2020 (-0.50 FTE or 1,040 hours annually).

#### **Supplies & Services**

7. Property Insurance decreased from \$84,857 in FY 2019 to \$79,951 in FY 2020 based on FY 2018 actual plus 8%.

8. Sales Tax increased from \$307,767 in FY 2019 to \$324,762 in FY 2020 based on increased sanitary sewer rates in FY 2020. This expense is directly offset by sales tax revenue.
9. Electricity Utility Expense unchanged from \$424,777 in FY 2019 to \$424,777 in FY 2020 based on FY 2019 budget. Electrical expense for the W&RRC plant in FY 2020 is \$227,486, which includes increased microturbine output and \$79,766 for the estimated BioResource Development electrical usage which will be reimbursed on a monthly basis. The lift station electrical expense in FY 2020 is estimated to be \$197,291. FY 2018 actual was \$384,033.
10. Gas Utility Expense increased from \$65,204 in FY 2019 to \$87,710 in FY 2020 based on FY 2018 actual.
11. Property Maintenance decreased from \$91,050 in FY 2019 to \$66,350 in FY 2020 based on FY 2018 actual of \$69,433.
12. Machinery and Equipment Maintenance increased from \$186,277 in FY 2019 to \$309,625 in FY 2020. FY 2018 actual was \$195,639. The increase is due to increasing digester cleaning (+\$20,000) due to quotes coming in higher, increasing pump, grinder, and mixer maintenance (+\$16,000) due to more frequent repair of equipment due to heavy wear from grit and struvite, increasing siloxane media replacement (+\$35,720) and increasing hydrogen sulfide media replacement (+\$36,060) due to more frequent replacement due to BioResource Development, adding monthly jetting digester heat exchange maintenance (+\$3,000) which was previously budgeted in the Property Maintenance line item, and adding HVAC maintenance (+\$10,000) due to the age of HVAC units and more frequent repairs. This line item represents samplers and lab equipment maintenance (\$2,817), digester cleaning (\$60,000), pump, grinder and mixer maintenance (\$36,000), primary and final clarifier maintenance (\$10,000), boiler treatment (\$6,900), siloxane media replacement (\$35,720), hydrogen sulfide media replacement (\$111,060), ultraviolet lamp replacement (\$25,500), water based parts washer maintenance (\$3,328), citric acid (\$1,000), backflow testing (\$2,500), monthly jetting digester heat exchanger maintenance (\$3,000), and HVAC maintenance (\$10,000)
13. Major Repair Element is unchanged from \$75,000 in FY 2019 to \$75,000 in FY 2020.
14. Equipment Maintenance Contract Expense increased from \$76,634 in FY 2019 to \$77,293 in FY 2020 based on FY 2019 plus 1%. FY 2018 actual was \$78,527.
15. Lift Station Maintenance decreased from \$163,200 in FY 2019 to \$138,155 in FY 2020 based on a three year average. FY 2018 actual was \$113,091.
16. Polymer Expense decreased from \$245,985 in FY 2019 to \$226,100 in FY 2020 based on bid results in FY 2019. FY 2018 actual was \$227,424.
17. Liquid Oxygen increased from \$426,734 in FY 2019 to \$427,536 in FY 2020. The FY 2020 budget includes \$27,536 for tank rental and \$400,000 for oxygen based on the expected loading. FY 2018 actual was \$434,495.
18. Environmental Testing/Monitoring Expense decreased from \$59,663 in FY 2019 to \$25,000 in FY 2020 based on FY 2018 actual of \$24,967.
19. Hauling Service decreased from \$276,722 in FY 2019 to \$274,300 in FY 2020 based on FY 2018 actual \$265,376 plus 3%.

## Machinery & Equipment

20. Equipment replacement items include (\$128,275):

<u>Administration</u>	
Smart Phone	\$ 346
<u>Plant Operations</u>	
Heavy Duty Pickup Truck	\$ 36,000
Compact Pickup Truck	\$ 14,500
Forklift	\$ 27,500
Steam Pressure Washer	\$ 5,000
Shop Equipment	\$ 14,519
Cell Phones	\$ 60
<u>Environmental Monitoring</u>	
Laboratory Equipment	\$ 11,900
<b>Recommended Improvement Packages</b>	
	<b>\$ 18,450</b>
<b>Total Equipment</b> <u>\$ 128,275</u>	

## Debt Service

21. Annual debt service payments for FY 2020 are as follows (\$5,229,832):

Amount	Debt Series	Source	Purpose	Final Payment	Call Date
\$ 62,400	G.O. 2017A	Sanitary Fees	Sanitary Sewer Improvements	2030	2025
\$ 95,273	G.O. 2011A	Sanitary Fees	Sanitary Sewer Improvements	2031	2018
\$ 43,507	G.O. 2012E	Sanitary Fees	Sanitary Forcemain Repairs	2032	2018
\$ 110,944	G.O. 2012D	Sanitary Fees	Sanitary Sewer Improvements	2033	2019
\$ 445,075	G.O. 2014B	Sanitary Fees	Sanitary Sewer Improvements	2034	2021
\$ 165,406	G.O. 2016C	Sanitary Fees	Sanitary Sewer Improvements	2035	2024
\$ 62,622	SRF 2006	Sanitary Fees	Northfork Catfish Creek	2031	
\$ 218,550	SRF 2009	Sanitary Fees	Meter Change-Out	2031	
\$ 3,696,980	SRF 2010	Sanitary Fees	W&RRC Plant Upgrade	2039	
\$ 186,141	SRF 2013	Sanitary Fees	W&RRC Cogeneration	2033	
\$ 118,061	SRF 2018	Sanitary Fees	Kerper Boulevard Sanitary	2038	
\$ 24,873	Planned	Sanitary Fees	Outfall Manhole Sanitary	2039	
<b>\$ 5,229,832</b>	<b>Total Sanitary Annual Debt Service</b>				

## Revenue

22. Sewage Fees decreased from \$10,366,756 in FY 2019 to \$10,116,942 in FY 2020 based on a 4.50% rate increase in FY 2020 and a 7% decrease in consumption in FY 2019.

23. Sewage dumping fees increased from \$124,964 in FY 2019 to \$130,148 in FY 2020 based on FY 2018 actual of \$130,148.

24. Late Payment Penalties increased from \$97,800 in FY 2019 to \$126,353 in FY 2020 based on FY 2018 actual of \$306,353 less one-time payments.
25. The Water and Resource Recovery Center's pre-treatment largest industrial customers projected changes in revenues as follows:
  - Prairie Farms decreased from \$472,345 in FY 2019 to \$424,132 in FY 2020 based on FY 2018 actual of \$405,868 plus 4.50%;
  - Inland Protein increased from \$170,017 in FY 2019 to \$191,967 in FY 2020 based on FY 2018 actual of \$183,701 plus 4.50%; and
  - Rousselot is decreased from \$900,000 in FY 2019 to \$882,331 in FY 2020 based on FY 2018 actual of \$844,336 plus 4.50%.
26. High Strength Waste revenue decreased from \$190,000 in FY 2019 to \$189,644 in FY 2020 based on FY 2018 actual of \$189,644. This revenue represents other entities paying the City to take high strength waste which will be used in the anaerobic digesters to generate additional energy using the micro-turbines.
27. Gas Revenue increased from \$214,354 in FY 2019 to \$221,609 in FY 2020 . This line item represents 5% of the gross revenue for BioResource Development (\$63,843), lease of the site (\$10,000), staff time reimbursement (\$56,000), reimbursement of gas (\$12,000) and electric cost (\$79,766).
28. Fats, Oils and Grease Permit and Dumping fees decreased from \$30,000 in FY 2019 to \$24,614 in FY 2020 based on FY 2018 actual of \$24,614.

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# WATER & RESOURCE RECOVERY CENTER

The Water & Resource Recovery Center uses technology to clean the water used by the community to allow its safe return to the environment. The process provides the opportunity to extract resources from the water for use within the Center and the surrounding community.

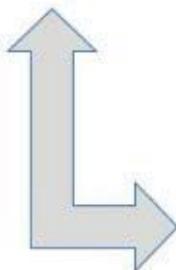


## SUCCESS IS ABOUT PLANNING, PARTNERSHIPS AND PEOPLE LEADING TO OUTCOMES



### PEOPLE

W&RRC Staff, Health Department, Engineering and Public Works provided the majority of our City relationships. We also maintain relationships with local industries, the Resilient Community Advisory Commission and Regional/Local Engineers.



### PLANNING

The W&RRC has ongoing planning and implementation for several environmental issues including spill prevention plans, Bio-Solids Management and Nutrient Reduction.



### PARTNERSHIPS

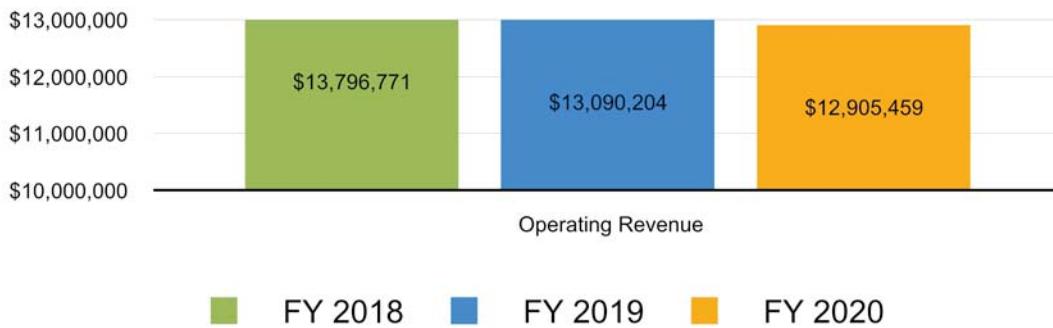
The W&RRC maintains partnerships with City Departments, Iowa Department of Natural Resources, USEPA, Local Industries and local/regional/service providers.



# WATER & RESOURCE RECOVERY CENTER

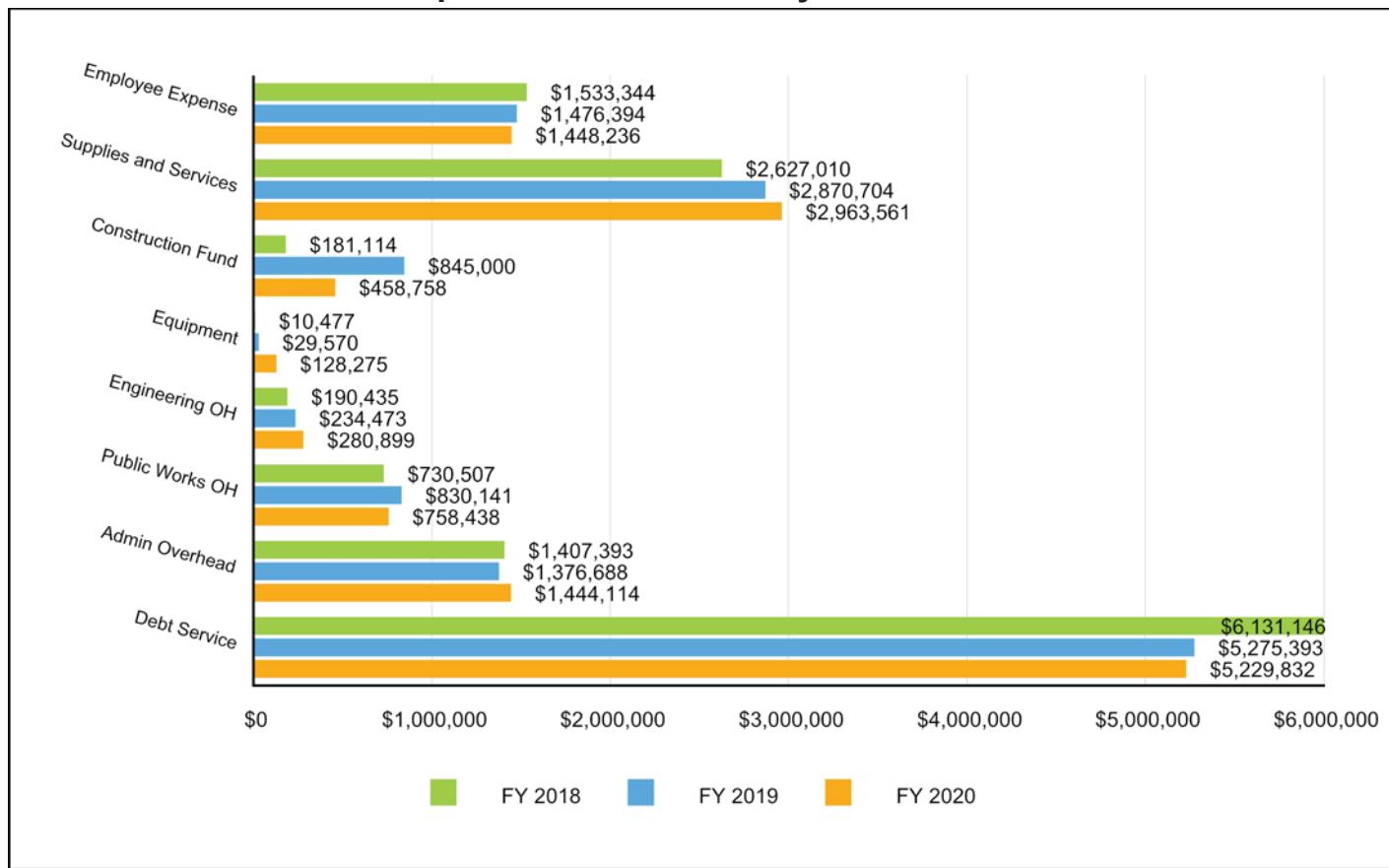
	FY 2018	FY 2019	FY 2020
Full-Time Equivalent	17.00	15.00	15.00

## Resources



The Water Resource Recovery Center is supported by 15.00 full-time equivalent employees, which accounts for 28.97% of the department expense as seen below. Overall, the department's expenses are expected to decrease by -2% in FY 2020 compared to FY 2019.

## Expenditures and Debt by Fiscal Year

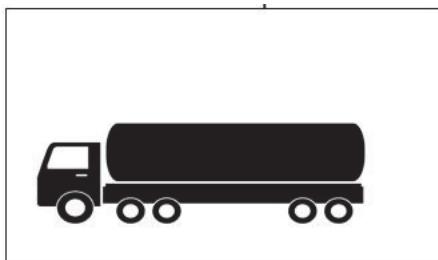


# WATER & RESOURCE RECOVERY CENTER

## Operations and Maintenance

### Overview

Operations and maintenance of the W&RRC consists of maintaining equipment and records necessary to collect, pump, treat and dispose of the liquid wastes discharged into the sanitary sewer system as required by state and federal regulatory agencies at the lowest possible cost while sustaining appropriate maintenance programs for plant reliability; operating and maintaining 20 pumping stations located throughout the City of Dubuque; Repair and maintain all equipment required for the successful and efficient operation of the W&RRC. Stock essential spare parts and maintain records for effective operation of the W&RRC.

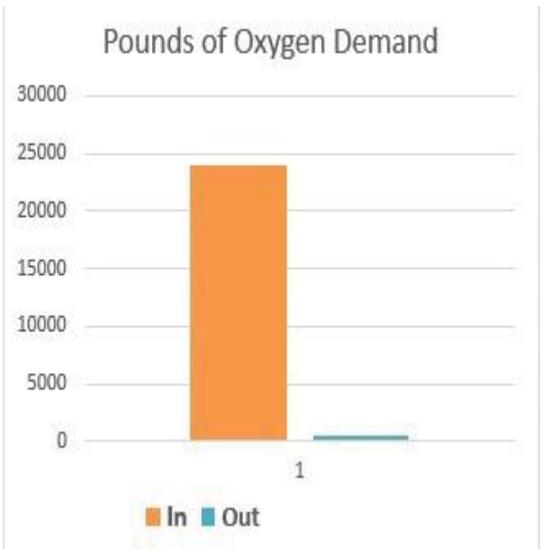


### Center Operations

For FY18 the Water & Resource Recovery Center (W&RRC) treated an average 7.02 million gallons per day (M.G.D.) or 2,562 million gallons for the year.

7.02 million gallons is equal to about 1400 semi-tanker loads of sewer water per day.

The average BOD or Biochemical Oxygen Demand was 24,500 pounds of Oxygen per day of which 23,900 pounds was removed or about **97.6** percent removal.



That means that each day we kept 23,900 pounds of Oxygen from being removed from the waters of the Mississippi River.

# WATER & RESOURCE RECOVERY CENTER

12.5 tons of soil amendment (fertilizer) are produced **PER DAY** during the process of cleaning the wastewater.



That is an average of eight semi loads per week of useful material being safely returned to a beneficial purpose.

Operations and Maintenance Funding Summary			
	FY 2018 Actual	FY 2019 Budget	FY 2020 Requested
Expenditures	\$9,827,182	\$9,144,151	\$9,289,084
Resources	\$13,454,137	\$12,928,424	\$12,738,062

Operations and Maintenance Position Summary	
	FY 2020
WRRC MANAGER	1.00
MAINTENANCE SUPERVISOR WWT	1.00
W&RRC OPERATIONS SUPERVISOR	1.00
EQUIPMENT MECHANIC - WWT	2.00
INDUSTRIAL ELECTRONICS TECH	1.00
WRRC OPERATOR CERT GR II	2.00
PLANT OPERATOR GRADE III & IV	2.00
CONFIDENTIAL ACCOUNT CLERK	1.00
<b>Total FT Equivalent Employees</b>	<b>11.00</b>

# WATER & RESOURCE RECOVERY CENTER

## Performance Measures

### Operations and Maintenance - Activity Statement

Maintain efficient operations and maintenance of the W&RRC to assure for treatment of the City of Dubuque's waste water in the most cost effective manner possible while protecting the environment and citizens from exposure to pollution in the Mississippi River.



**Outcome #1: Maintain proper operation and maintenance of pumping stations throughout the City of Dubuque to ensure that untreated wastewater is not discharged to streets, storm sewers or creeks/rivers where citizens may come in contact with this potentially dangerous material.**

All pumping stations are connected with the W&RRC computer system to allow for real-time monitoring of the operations of the stations. Stations are visited by the W&RRC Maintenance staff at least weekly to check for proper operations. Three of the major stations are checked daily during the work week. Three of the pumping stations have permanently installed standby power generators and the others can be powered by the three portable generators owned by the W&RRC. This capability along with the standby generators at the W&RRC assures the businesses and citizens of the City of Dubuque that even during power outages the W&RRC will continue to operate and provide essential services to our citizens.

### All operations staff to have at least Grade II Certification

Training is provided to employees of the W&RRC to equip all employees with the required skills to successfully operate a complex technical facility, to maintain and upgrade certifications required by IDNR and keep abreast of current regulations and technologies. A higher level of training for all operators will lead to a more efficient operation of the W&RRC.



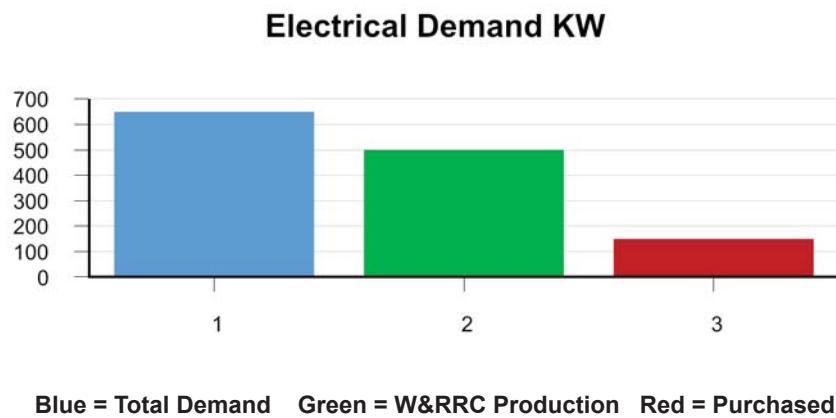
**Outcome #2: Increased Energy Production for use at the W&RRC**

*Increased addition of HSW to the digesters provides for additional revenue for the W&RRC and over time will allow the W&RRC to produce most of the energy needed to operate the Center.*

**The W&RRC produces 75% to 85% of the electrical needs for the Center.**

- Increased Gas Production via the Introduction of HSW
- Matching Center KW Demands with HSW Introduction
- Alliant agreement to allow increase KW production

# WATER & RESOURCE RECOVERY CENTER



# WATER & RESOURCE RECOVERY CENTER

## Environmental Monitoring

### Overview

The Environmental Monitoring Section performs the chemical, biological and bacterial sampling and analysis associated with the operations of the W&RRC and assists in the operations of additional City Departments and the community by providing analytical services.

The function of the Industrial Pretreatment Program is to eliminate from industrial sources those materials which may cause pass through and/or interference with the operation of the City of Dubuque's Publicly Owned Treatment Works.

Working in conjunction with many City of Dubuque Departments to operate and maintain the Fats, Oils and Grease program. The program is aimed at eliminating Sanitary Sewer Overflows caused by the discharge of excessive amount of fats, oils and greases into the sanitary sewer system.

Environmental Monitoring Funding Summary			
	FY 2018 Actual	FY 2019 Budget	FY 2020 Requested
Expenditures	\$454,902	\$492,422	\$462,900
Resources	\$338,259	\$151,819	\$158,258

Environmental Monitoring Position Summary	
	FY 2020
Lab Supervisor	1.00
Lab Technician	2.00
Environmental Coordinator	1.00
<b>Total FT Equivalent Employees</b>	<b>4.00</b>

### Highlights of the Past Year

The Environmental Monitoring Activity created the position of Laboratory Supervisor from one of the existing Laboratory Technician positions. This new position provides a staffing structure that improves the efficiency and effectiveness of laboratory activities.

### Future Initiatives

The Laboratory is currently pursuing state certification in the analysis of the nutrients phosphorus and nitrogen.

### Performance Measures

#### Environmental Monitoring - Activity Statement

Monitor the quality of water discharged from the Water & Resource Recovery Center to assure environmental stewardship and adherence to State and Federal regulations and the environmental goals of the Citizens of Dubuque.

# WATER & RESOURCE RECOVERY CENTER

**Outcome #1: Maintain a Fats, Oil and Grease program to protect the sanitary sewer system from blockages caused by excessive buildup in the system helping eliminate sanitary sewer overflows caused by Fats, Oils and Grease.**



**Outcome #2: Ensure a safe water supply - In support of the Water Department**

**Collect and analyze 16 water samples per week from various locations within the City of Dubuque.**

*The assurance of safe drinking water is essential for the health and safety of the community.*

## Recommended Operating Revenue Budget - Department Total

### 43 - WATER & RESOURCE RECOVERY

Fund	Account	Account Title	FY17 Actual Revenue	FY18 Actual Revenue	FY19 Adopted Budget	FY20 Recomm'd Budget
610	42230	SEWAGE DISPOSAL PERMITS	1,150	1,485	1,150	1,485
610	42237	FOG PERMITS	37,325	38,850	37,325	38,850
610	42331	FOG INSPECTION FEES	50	250	50	250
<b>42 - LICENSES AND PERMITS</b>			<b>38,525</b>	<b>40,585</b>	<b>38,525</b>	<b>40,585</b>
610	43110	INVESTMENT EARNINGS	32,547	44,481	12,810	51,786
<b>43 - USE OF MONEY AND PROPERTY</b>			<b>32,547</b>	<b>44,481</b>	<b>12,810</b>	<b>51,786</b>
610	51,185	WATER TESTS-OUTSIDE	47,728	40,293	47,728	40,293
610	51,205	SEWAGE FEES	9,929,090	10,106,780	10,366,756	10,116,942
610	51,215	LATE PAYMENT PENALTY	97,800	306,353	97,800	126,353
610	51,216	FOG PENALTIES	1,800	2,750	1,800	2,750
610	51,218	ARTCO FLEETING	0	1,318	0	1,318
610	51,220	SWISS VALLEY FARMS	472,345	405,868	472,345	424,132
610	51,225	INLAND PROTEIN	170,017	183,701	170,017	191,967
610	51,227	HIGH STRENGTH WASTE	274,326	189,644	190,000	189,644
610	51,230	SEWAGE DUMPING FEES	124,964	130,148	124,964	130,148
610	51,231	FOG DUMPING FEES	28,006	24,614	30,000	24,614
610	51,235	WW IND. PRETREATMENT	36,341	35,990	36,341	35,990
610	51,240	SAN ROUESSLOT	853,196	844,336	900,000	882,331
610	51,256	BRD LEASE	0	0	0	10,000
610	51,257	BRD STAFF REIMBURSEMENT	0	0	0	56,000
610	51,258	BRD GAS REIMBURSEMENT	0	0	0	12,000
610	51,259	BRD ELECTRIC REIMB	0	0	0	79,766
610	51,260	BRD GROSS REVENUE	25,500	0	214,354	63,843
610	51261	BRD ELECTRIC USE PROFIT	0	0	0	25,000
610	51,690	LANDFILL PAYMENT-LAB TEST	6,773	1,177	0	1,177
610	51,964	ARENA NOVELT	250	415	250	415
<b>51 - CHARGES FOR SERVICES</b>			<b>12,068,136</b>	<b>12,273,386</b>	<b>12,652,355</b>	<b>12,414,683</b>
610	53201	REFUNDS	0	50	0	50
610	53204	IOWA FUEL TAX REFUND	2,044	0	2,044	0
610	53520	WATER SAMPLING-PLANT	613	695	613	695
610	53521	WWT SAMPLING-AIRPORT	41,318	37,344	41,318	37,344
610	53523	WWT SAMPLING-OUTSIDE	24,366	24,870	24,366	24,870
610	53610	INSURANCE CLAIMS	34,289	0	0	0
610	53620	REIMBURSEMENTS-GENERAL	79	1,375	79	1,375
610	53630	SALES TAX COLLECTION	290,086	324,422	307,767	324,762
<b>53 - MISCELLANEOUS</b>			<b>392,796</b>	<b>388,756</b>	<b>376,187</b>	<b>389,096</b>
610	54109	SALVAGE SALES	366	170	366	170
610	54210	GO BOND PROCEEDS	652,158	1,030,001	0	0
610	54220	BOND DISCOUNT	21,006	15,018	0	0
<b>54 - OTHER FINANCING SOURCES</b>			<b>673,531</b>	<b>1,045,189</b>	<b>366</b>	<b>170</b>
610	59710	FR SANITARY SEWER CONST	20,000	0	0	0
<b>59 - TRANSFER IN AND INTERNAL</b>			<b>20,000</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>43 - WATER &amp; RESOURCE RECOVERY TOTAL</b>			<b>13,225,535</b>	<b>13,792,396</b>	<b>13,080,243</b>	<b>12,896,320</b>

## Recommended Operating Expenditure Budget - Department Total

### 43 - WATER & RESOURCE RECOVERY

Fund	Account	Account Title	FY17 Actual Expense	FY18 Actual Expense	FY19 Adopted Budget	FY 20 Recomm'd Budget
610	61,010	FULL-TIME EMPLOYEES	965,479	964,031	961,728	990,095
640	61,010	FULL-TIME EMPLOYEES	0	809	0	0
610	61,020	PART-TIME EMPLOYEES	0	638	0	0
610	61,030	SEASONAL EMPLOYEES	22,612	4,473	0	0
100	61,050	OVERTIME PAY	0	42	0	0
610	61,050	OVERTIME PAY	55,670	52,124	59,350	59,350
640	61,050	OVERTIME PAY	0	230	0	0
610	61,071	HOLIDAY PAY-OVERTIME	23,739	24,601	17,221	17,221
640	61,071	HOLIDAY PAY-OVERTIME	0	355	0	0
610	61,091	SICK LEAVE PAYOFF	24,172	14,843	14,720	11,225
100	61,310	IPERS	0	4	0	0
610	61,310	IPERS	94,388	93,513	98,016	100,694
640	61,310	IPERS	0	124	0	0
100	61,320	SOCIAL SECURITY	0	3	0	0
610	61,320	SOCIAL SECURITY	80,088	76,654	80,556	82,458
640	61,320	SOCIAL SECURITY	0	101	0	0
100	61,410	HEALTH INSURANCE	0	12	0	0
610	61,410	HEALTH INSURANCE	270,316	254,095	214,651	162,540
640	61,410	HEALTH INSURANCE	0	293	0	0
610	61,415	WORKMENS' COMPENSATION	40,971	38,766	29,293	23,810
100	61,416	LIFE INSURANCE	0	0	0	0
610	61,416	LIFE INSURANCE	768	752	859	843
640	61,416	LIFE INSURANCE	0	1	0	0
610	61,640	SAFETY EQUIPMENT	4,690	6,837	0	0
610	61,660	EMPLOYEE PHYSICALS	121	42	0	0
<b>61 - WAGES AND BENEFITS</b>			<b>1,583,015</b>	<b>1,533,344</b>	<b>1,476,394</b>	<b>1,448,236</b>
610	62010	OFFICE SUPPLIES	1,318	2,298	1,318	2,194
610	62011	UNIFORM PURCHASES	2,414	2,425	2,500	2,500
610	62030	POSTAGE AND SHIPPING	2,692	3,492	2,692	3,597
610	62032	FLAGS	0	90	135	135
610	62061	DP EQUIP. MAINT CONTRACTS	9,942	8,898	8,610	8,808
610	62062	JANITORIAL SUPPLIES	0	1,470	1,000	1,724
610	62065	LAB SUPPLIES	19,648	40,082	19,648	40,082
610	62090	PRINTING & BINDING	2,502	1,725	2,502	4,541
610	62110	COPYING/REPRODUCTION	774	321	773	336
610	62130	LEGAL NOTICES & ADS	73	3,575	73	100
610	62140	PROMOTION	0	0	0	600
610	62170	SUBSCRIPTIONS-BOOKS-MAPS	0	0	0	300
610	62190	DUES & MEMBERSHIPS	875	409	1,125	885
610	62204	REFUNDS	7,208	11,065	7,208	11,065
610	62206	PROPERTY INSURANCE	78,795	73,943	84,857	79,951
610	62208	GENERAL LIABILITY INSURAN	15,408	13,763	11,750	10,684
610	62210	SALES TAX	291,779	325,418	307,767	324,762
610	62310	TRAVEL-CONFERENCES	3,290	1,975	4,450	3,450
610	62320	TRAVEL-CITY BUSINESS	144	159	290	390
610	62360	EDUCATION & TRAINING	8,990	8,893	4,853	11,330
610	62411	UTILITY EXP-ELECTRICITY	334,908	384,033	424,777	424,777
610	62412	UTILITY EXP-GAS	62,099	87,710	65,204	87,710

**Recommended Operating Expenditure Budget - Department Total**  
**43 - WATER & RESOURCE RECOVERY**

Fund	Account	Account Title	FY17 Actual Expense	FY18 Actual Expense	FY19 Adopted Budget	FY 20 Recomm'd Budget
610	62415	UTILITY EXPENSE STORMWATR	5,991	11,606	6,395	13,181
610	62416	UTILITY EXP-WATER	47,805	39,101	51,209	42,034
610	62421	TELEPHONE	6,838	7,184	6,857	7,173
610	62424	RADIO/PAGER FEE	2,026	2,758	2,067	2,869
610	62431	PROPERTY MAINTENANCE	86,412	69,433	91,050	66,350
610	62435	ELEVATOR MAINTENANCE	2,736	2,845	2,178	2,845
610	62436	RENTAL OF SPACE	480	480	480	480
610	62438	FIRE SUPPRESSION	0	0	0	5,770
610	62511	FUEL, MOTOR VEHICLE	7,781	10,285	7,937	10,285
610	62513	FUEL, DIESEL	2,436	389	2,436	389
610	62521	MOTOR VEHICLE MAINT.	9,497	7,260	7,454	7,405
610	62528	MOTOR VEH. MAINT. OUTSOUR	1,127	100	1,150	1,742
610	62611	MACH/EQUIP MAINTENANCE	154,385	195,639	186,277	309,625
610	62612	MAJOR REPAIR ELEMENT	0	0	75,000	75,000
610	62613	METER MAINTENANCE	9,057	5,500	9,057	0
610	62614	EQUIP MAINT CONTRACT	74,879	78,527	76,634	77,293
610	62621	O2 PLANT MAINTENANCE	0	100	0	0
610	62622	BELT FILTER MAINTENANCE	76,333	0	0	0
610	62623	CETRIFUGE MAINTENANCE	36,729	33,924	36,729	34,942
610	62625	LIFT STATION MAINTENANCE	148,495	113,091	163,200	138,155
610	62628	INSTRUMENTATION MAINT	3,072	0	3,072	13,000
610	62629	INSTR MAINT CONTRACT	6,720	3,798	17,500	22,500
610	62631	LIME	906	0	906	960
610	62633	CHLORINE	9,630	13,892	9,630	11,000
610	62638	POLYMER	245,985	227,424	245,985	226,100
610	62639	LIQUID CO2/O2	548,121	434,495	426,734	427,536
610	62663	SOFTWARE LICENSE EXP	6,354	14,546	6,353	9,541
610	62666	CREDIT CARD CHARGE	0	0	0	600
610	62667	DATA SERVICES	86	395	444	480
610	62676	PIPE-SPECIAL FITTINGS	0	0	0	12,253
610	62678	EDUCATIONAL MATERIALS	0	120	0	0
610	62681	LUBRICATION PRODUCTS	5,043	4,577	5,043	4,577
610	62692	LANDFILL FEES	18,752	10,281	31,700	51,531
610	62696	OUTSIDE COLLECTOR EXPENSE	8,291	6,962	8,291	6,961
610	62710	CONTRACTOR SERVICES	0	0	8,000	0
610	62712	CONSULTING ENGINEERS	0	19,088	0	0
610	62713	LEGAL SERVICES	5,692	7,242	5,692	5,752
610	62716	CONSULTANT SERVICES	9,773	8,727	60,000	12,500
610	62721	FINANCIAL CONSULTANT	1,177	7,043	1,177	1,177
610	62726	AUDIT SERVICES	2,200	2,200	2,750	2,200
610	62731	MISCELLANEOUS SERVICES	3,421	10,152	0	0
610	62732	TEMP HELP/CONTRACT SERV.	0	0	0	20,000
610	62733	CONTRACT CUSTODIAL	29,851	12,838	17,700	17,700
610	62736	CATERING SERVICES	0	82	0	300
610	62747	MACH/EQUIPMENT RENTAL	1,500	0	0	0
610	62763	PAYMENT TO IOWA DNR	6,470	2,839	5,700	2,134
610	62767	ENVIRON. TESTING/MON.	59,663	24,967	59,663	25,000
610	62780	HAULING SERVICES	276,722	265,376	276,722	274,300

## **Recommended Operating Expenditure Budget - Department Total**

### **43 - WATER & RESOURCE RECOVERY**

Fund	Account	Account Title	FY17 Actual Expense	FY18 Actual Expense	FY19 Adopted Budget	FY 20 Recomm'd Budget
		<b>62 - SUPPLIES AND SERVICES</b>	<b>2,765,294</b>	<b>2,627,010</b>	<b>2,870,704</b>	<b>2,963,561</b>
610	71120	PERIPHERALS, COMPUTER	156	801	0	0
610	71314	TRUCK-REPLACEMENT	0	0	0	50,500
610	71318	HEAVY EQUIP-REPLACEMENT	0	0	0	27,500
610	71410	SHOP EQUIPMENT	7,953	133	10,000	14,519
610	71413	LABORATORY EQUIPMENT	1,066	7,296	19,100	11,900
610	71421	HIGH PRESSURE SPRAY	0	0	0	5,000
610	71511	PUMPS	0	0	0	14,950
610	71520	HVAC	0	0	0	3,500
610	71610	CUSTODIAL EQUIPMENT	242	0	0	0
610	72418	TELEPHONE RELATED	46	291	470	406
610	72515	TEST EQUIPMENT, OTHER	0	1,956	0	0
		<b>71 - EQUIPMENT</b>	<b>9,463</b>	<b>10,477</b>	<b>29,570</b>	<b>128,275</b>
610	74111	PRINCIPAL PAYMENT	3,742,470	4,301,389	3,454,212	3,511,282
610	74112	INTEREST PAYMENT	1,881,718	1,829,757	1,821,181	1,718,550
		<b>74 - DEBT SERVICE</b>	<b>5,624,188</b>	<b>6,131,146</b>	<b>5,275,393</b>	<b>5,229,832</b>
610	91100	TO GENERAL	1,301,957	1,550,277	1,519,572	1,586,998
610	91710	TO SANITARY SEWER CONST	1,736,000	181,114	845,000	458,758
		<b>91 - TRANSFER TO</b>	<b>3,037,957</b>	<b>1,731,391</b>	<b>2,364,572</b>	<b>2,045,756</b>
		<b>43 - WATER &amp; RESOURCE RECOVERY TOTAL</b>	<b>13,019,916</b>	<b>12,033,368</b>	<b>12,016,633</b>	<b>11,815,660</b>

## Recommended Expenditure Budget Report by Activity & Funding Source

### 43 - WATER & RESOURCE RECOVERY

#### UNDISTRIBUTED - 10610

##### FUNDING SOURCE: SEWAGE FACILITY OPERATION

Account	FY18 Actual Expense	FY19 Adopted Budget	FY20 Recomm'd Budget
SUPPLIES AND SERVICES	17,920	15,488	17,920
TRANSFER TO	1,731,391	2,364,572	2,045,756
UNDISTRIBUTED	1,749,311	2,380,060	2,063,676
<b>WPC ADMINISTRATION</b>	<b>- 43100</b>		

##### FUNDING SOURCE: SEWAGE FACILITY OPERATION

Account	FY18 Actual Expense	FY19 Adopted Budget	FY20 Recomm'd Budget
DEBT SERVICE	6,131,146	5,275,393	5,229,832
EQUIPMENT	291	—	346
SUPPLIES AND SERVICES	398,037	341,880	381,272
WAGES AND BENEFITS	139,845	141,586	148,217
WRRP ADMINISTRATION	6,669,319	5,758,859	5,759,667
<b>WPC PLANT OPERATIONS</b>	<b>- 43400</b>		

##### FUNDING SOURCE: SEWAGE FACILITY OPERATION

Account	FY18 Actual Expense	FY19 Adopted Budget	FY20 Recomm'd Budget
EQUIPMENT	133	10,470	116,029
SUPPLIES AND SERVICES	2,121,570	2,413,525	2,476,877
WAGES AND BENEFITS	1,001,189	929,014	903,060
WRR PLANT OPERATIONS	3,122,893	3,353,009	3,495,966
<b>FATS OILS GREASE</b>	<b>- 43500</b>		

##### FUNDING SOURCE: SEWAGE FACILITY OPERATION

Account	FY18 Actual Expense	FY19 Adopted Budget	FY20 Recomm'd Budget
EQUIPMENT	1,956	—	—
SUPPLIES AND SERVICES	7,148	6,856	8,791
WAGES AND BENEFITS	25,866	25,427	24,660
FATS OILS GREASE	34,970	32,283	33,451
<b>WATER MAIN REPLACEMENTS</b>	<b>- 43755</b>		

##### FUNDING SOURCE: WATER UTILITY OPERATION

Account	FY18 Actual Expense	FY19 Adopted Budget	FY20 Recomm'd Budget
WAGES AND BENEFITS	1,913	—	—
ENVIRON-MONITORING	1,913	—	—
<b>ENVIRON-MONITORING</b>	<b>- 43700</b>		

##### FUNDING SOURCE: SEWAGE FACILITY OPERATION

Account	FY18 Actual Expense	FY19 Adopted Budget	FY20 Recomm'd Budget
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EQUIPMENT	8,097	19,100	11,900
SUPPLIES AND SERVICES	82,334	92,955	78,701
WAGES AND BENEFITS	364,470	380,367	372,299
ENVIRON-MONITORING	454,902	492,422	462,900
WATER & RESOURCE RECOVERY TOTAL \$	12,033,367.74 \$	12,016,633.00 \$	11,815,660.00

CITY OF DUBUQUE, IOWA  
 DEPARTMENT DETAIL - PERSONNEL COMPLEMENT  
 43 WATER AND RESOURCE RECOVERY CENTER

FD	JC	WP-GR	JOB CLASS	FY 2018		FY 2019		FY 2020	
				FTE	BUDGET	FTE	BUDGET	FTE	BUDGET
<b>61010 Full Time Employee Expense</b>									
610	5080	GE-40	WRRC MANAGER	1.00	\$ 92,652	1.00	\$ 99,913	1.00	\$ 108,576
610	3300	GE-35	WRRC ASSIST. MANAGER	1.00	\$ —	0.00	\$ —	0.00	\$ —
610	3030	GE-34	MAINTENANCE SUPERVISOR WWT	1.00	\$ 79,395	1.00	\$ 80,590	1.00	\$ 82,420
610		GE-33	W&RRC OPERATIONS SUPERVISOR	0.00	\$ —	1.00	\$ 66,218	1.00	\$ 67,792
610		GE-33	LAB SUPERVISOR	1.00	\$ 75,273	1.00	\$ 76,418	1.00	\$ 78,150
610		GE-31	ENVIRONMENTAL COORDINATOR	1.00	\$ 59,966	1.00	\$ 60,860	1.00	\$ 65,706
610	2100	GE-31	LAB TECHNICIAN II	2.00	\$ 119,167	2.00	\$ 123,350	2.00	\$ 121,973
610		GE-25	CONFIDENTIAL ACCOUNT CLERK	1.00	\$ 47,651	1.00	\$ 48,373	1.00	\$ 49,535
610	2400	OE-14	EQUIPMENT MECHANIC - WWT	2.00	\$ 117,126	2.00	\$ 119,494	2.00	\$ 122,200
610	2800	OE-14	MAINTENANCE ELECTRICIAN	1.00	\$ 57,983	1.00	\$ 58,864	1.00	\$ 62,125
610		OE-14	WRRC OPERATOR CERT GR IV	0.00	\$ —	1.00	\$ 55,910	1.00	\$ 63,243
610		OE-13	WRRC OPERATOR CERT GR III	2.00	\$ 113,035	1.00	\$ 56,563	1.00	\$ 59,102
610	2500	OE-12	WRRC OPERATOR CERT GR II	2.00	\$ 113,879	2.00	\$ 115,175	2.00	\$ 109,273
610	2450	OE-11	WRRC OPERATOR (NC/GR I C)	2.00	\$ 108,559	0.00	\$ —	0.00	\$ —
<b>TOTAL FULL TIME EMPLOYEES</b>				17.00	\$ 984,686	15.00	\$ 961,728	15.00	\$ 990,095
<b>61030 SEASONAL EMPLOYEES</b>									
610		NA-38	INTERN	0.00	\$ —	0.00	\$ —	0.00	\$ —
<b>TOTAL SEASONAL EMPLOYEES</b>				0.00	\$ —	0.00	\$ —	0.00	\$ —
<b>TOTAL WATER &amp; RESOURCE RECOVERY CENTER</b>				17.00	\$ 984,686	15.00	\$ 961,728	15.00	\$ 990,095

**CITY OF DUBUQUE, IOWA**  
**ACTIVITY PERSONNEL COMPLEMENT SUMMARY**

ACCT	FD	JC	WP-GR	POSITION CLASS	FY 2018		FY 2019		FY 2020		
					FTE	BUDGET	FTE	BUDGET	FTE	BUDGET	
<b>Water &amp; Resource Recovery Center Administration</b>											
61043100	61010	610	3300	GE-40	WASTEWATER PLANT MANAGER	1.00	\$ 92,652	1.00	\$ 99,913	1.00	\$ 108,576
					<b>Total</b>	1.00	\$ 92,652	1.00	\$ 99,913	1.00	\$ 108,576
<b>Water &amp; Resource Recovery Center Plant Operation</b>											
61043100	61010	610	3300	GE-35	W&RRC ASSIST PLANT MGR	1.00	\$ —	0.00	\$ —	0.00	\$ —
61043400	61010	610	3030	GE-34	MAINTENANCE SUPERVISOR W&RRC	1.00	\$ 79,395	1.00	\$ 80,590	1.00	\$ 82,420
61043400	61010	610		GE-33	W&RRC OPERATIONS SUPV	0.00	\$ —	1.00	\$ 66,218	1.00	\$ 67,792
61043400	61010	610	2400	OE-14	EQUIPMENT MECHANIC - W&RRC	2.00	\$ 117,126	2.00	\$ 119,494	2.00	\$ 122,200
61043400	61010	610	2228	GE-31	ENVIRONMENTAL COORDINATOR	0.00	\$ —	0.00	\$ —	0.00	\$ —
61043400	61010	610	1000	GE-25	CONFIDENTIAL ACCOUNT CERK	0.65	\$ 30,973	0.65	\$ 31,443	0.65	\$ 32,198
61043400	61010	610	3942	OE-13	W&RRC OPERATOR GR III/IV	2.00	\$ 113,035	2.00	\$ 112,473	2.00	\$ 122,345
61043400	61010	610	2500	OE-12	W&RRC OPERATOR GR II	2.00	\$ 113,879	2.00	\$ 115,175	2.00	\$ 109,273
61043400	61010	610	2450	OE-11	W&RRC PLANT OP (NC/GR I C)	2.00	\$ 108,559	0.00	\$ —	0.00	\$ —
61043400	61010	610	2800	OE-14	MAINTENANCE ELECTRICIAN	1.00	\$ 57,983	1.00	\$ 58,864	1.00	\$ 62,125
					<b>Total</b>	11.65	\$ 620,950	9.65	\$ 584,257	9.65	\$ 598,353
<b>Environmental Monitoring Lab-FT</b>											
61043700	61010	610		GE-33	LAB SUPERVISOR	1.00	\$ 75,273	1.00	\$ 76,418	1.00	\$ 78,150
61043700	61010	610	2100	GE-31	LAB TECHNICIAN II	2.00	\$ 119,167	2.00	\$ 123,350	2.00	\$ 121,973
61043700	61010	610	2228	GE-31	ENVIRONMENTAL COORDINATOR	1.00	\$ 59,966	1.00	\$ 60,860	1.00	\$ 65,706
					<b>Total</b>	4.00	\$ 254,406	4.00	\$ 260,628	4.00	\$ 265,829
<b>Fat Oils and Grease-FT</b>											
61043500	61010	610	1000	GE-25	CONFIDENTIAL ACCOUNT CLERK	0.35	\$ 16,678	0.35	\$ 16,930	0.35	\$ 17,337
						0.35	\$ 16,678	0.35	\$ 16,930	0.35	\$ 17,337
<b>Environmental Monitoring Lab-Seasonal</b>											
61043700	61030	610	650	NA-38	FINANCE INTERN-SEASONAL	0.00	\$ —	0.00	\$ —	0.00	\$ —
					<b>Total</b>	0.00	\$ —	0.00	\$ —	0.00	\$ —
<b>TOTAL WATER &amp; RESOURCE RECOVERY DEPARTMENT</b>											
						17.00	\$ 984,686	15.00	\$ 961,728	15.00	\$ 990,095

Capital Improvement Projects by Department/Division					
WATER & RESOURCE RECOVERY					
CIP Number	Capital Improvement Project Title	FY 17 Actual Expense	FY 18 Actual Expense	FY 19 Adopted Budget	FY 20 Recomm'd Budget
71010710	UNDISTRIBUTED	20,000	—	—	—
7101339	SCADA SYSTEM UPGRADE	—	—	50,000	50,000
7101730	ALT O2 STUDY & IMPLEMENTA	—	—	—	—
7101731	DOG TRACK LIFT STATION	—	—	25,000	—
7101837	WRR PLANT RENOVATION	75,954	—	—	—
7102211	TERMINAL ST MAG METER REP	203,852	—	—	—
7102412	CEDAR LIFT PUMP/GEN/TRAIL	—	—	100,000	55,000
7102474	BRADLEY/PERRY FORCE MAIN	—	—	—	—
7102529	NUTRIENT REDUCT STRATEGY	212	—	—	—
7102530	OUTFALL MANHOLE	—	—	400,000	—
7102538	AIRPORT LS UPGRADES	—	—	15,000	—
7102598	CLARIFIER REALIGN/REPAIR	13,981	19,325	—	130,000
7102599	KERPER PUMP MOTOR/CONTROL	—	—	—	—
7102601	REPLACEMENT OF RADIOS	—	—	—	—
7102659	NUTRIENT RED/BASIN MOD 1	—	—	—	—
7102697	ASH POND ABANDONMENT	62,534	116,589	—	—
7102698	METHANE GAS SYSTEM WRRCC	25,479	31,449	—	—
7102699	STRUVITE AIRPREX PILOT	29,518	—	—	—
7102700	LEVEL 4 AGREEMENT	10,099	19,569	—	—
7102701	HS WASTE RECEIVE & STORE	14,998	—	—	—
7102730	FRACK TANK	10,125	10,468	—	—
7102749	KW CAR WASH LIFT STATION	—	—	27,500	—
7102750	GRANGER CREEK LIFT STATIO	—	—	12,000	—
7102787	WRRCC CAMERAS	—	—	—	45,900
<b>WATER &amp; RESOURCE RECOVERY TOTAL</b>		<b>466,750</b>	<b>197,400</b>	<b>629,500</b>	<b>280,900</b>

PRGRM /DEPT	PROJECT DESCRIPTION	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	TOTAL	PAGE
<b>WATER &amp; RESOURCE RECOVERY CENTER</b>								
<b>Business Type</b>								
	Final Clarifier Drive Pier	\$ 130,000	\$ 130,000	\$ 130,000	\$ 130,000	\$ —	\$ 520,000	95
	Realignment and Drive Repair	\$ 55,000	\$ —	\$ —	\$ —	\$ —	\$ 55,000	96
	Catfish Lift Station Spare Pump	\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000	\$ 250,000	97
	Lift Station SCADA Upgrades	\$ 45,900	\$ —	\$ —	\$ —	\$ —	\$ 45,900	98
	Camera System Upgrade	\$ —	\$ —	\$ —	\$ —	\$ —	\$ 1,483,950	99
	High-Strength Waste Receiving & Storage	\$ —	\$ —	\$ 522,155	\$ 961,795	\$ —	\$ 1,260,000	100
	Nitrogen Reduction	\$ —	\$ —	\$ 70,000	\$ 98,000	\$ 1,092,000	\$ 1,260,000	1010
	UV Disinfection System Modifications	\$ —	\$ —	\$ —	\$ 10,000	\$ 225,000	\$ 235,000	102
	Side-Stream Phosphorous Removal	\$ —	\$ —	\$ —	\$ —	\$ 300,000	\$ 300,000	102

Total - Water & Resource Recovery Center \$ 280,900 \$ 180,000 \$ 772,155 \$ 1,249,795 \$ 1,667,000 \$ 4,149,850