

Enterprise Fund

Policy Objectives:

These funds are used to account for operations that are financed and operated in a manner similar to private business enterprise. They provide a full range of public facilities and services to meet the community's desires.

WATER FUND

Water Production and Treatment

Program Mission: *To provide great tasting water to all EAJA customers.*

Description:

This program provides for the production and treatment of quality potable water from both surface and groundwater supply sources. This activity is directed in accordance with strict Federal and State regulations pertaining to public water suppliers. Activity operations are carried out by Borough of Ephrata staff under contract with the Ephrata Area Joint Authority.

2015 Program Accomplishments

- Continued to improve and expand the capabilities of the automation system for the entire water system in order to improve operational efficiencies and to ensure system reliability
- Completed next phase of the plant upgrades including bulk tank, windows, doors and exterior and interior painting
- Assessed physical security needs at each of the EAJA water facilities and began installation of security measures at high value locations to protect supply sources
- Achieved Phase IV Presidents Award for the Partnership for Safe Water Program in order to improve water quality and to increase the level of public confidence in the safety of the water provided
- Water Division Chief Operator, Joe Pezzino, received Pennsylvania Rural Water Association's Award of Excellence for Operator of the Year
- Received EPA & PA DEP Area Wide Optimization Program Award for the Filter Plant's performance and consistent high water quality

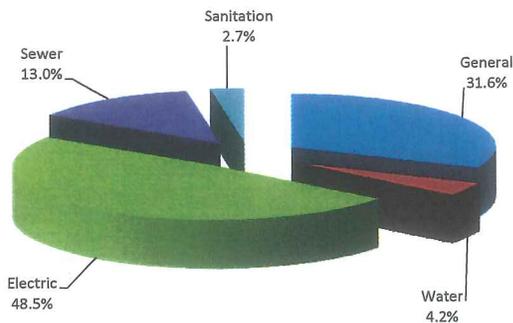
2016 Program Objectives

- Continue to improve and expand the capabilities of the automated system for the entire water system in order to improve operational efficiencies and to ensure system reliability, including SCADA, automated pump stations, increased speed of the network, etc.
- Rehabilitation of the Filter Plants sedimentation basins & equipment
- Improve and update the backwash system by increasing flow to become more efficient
- Work towards Phase IV Excellence for the Partnership for Safe Water Program in order to improve water quality and to increase the level of public confidence in the safety of the water provided

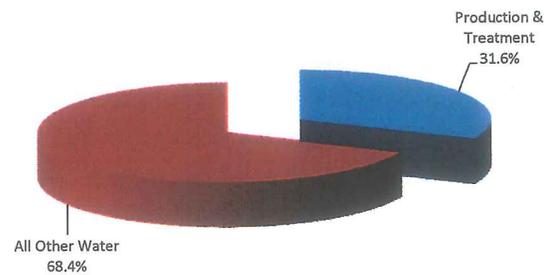
WATER FUND
Water Production & Treatment
06-45-610

<u>Type of Appropriation</u>	<u>2014 Actual</u>	<u>2015 Budget</u>	<u>2015 Actual</u>	<u>2016 Budget</u>
Personal Services	381,047	409,709	429,177	441,883
Professional Services	0	0	0	0
Services and Charges	7,056	9,505	9,547	7,821
Materials and Supplies	3,397	4,750	2,773	5,000
Capital Outlay	0	0	0	0
Sundry	3,086	3,086	3,086	3,163
Total	394,586	427,050	444,583	457,867
Staffing allocations - full time equivalents		3.44		3.74
Percent change from prior year budget				7.22%

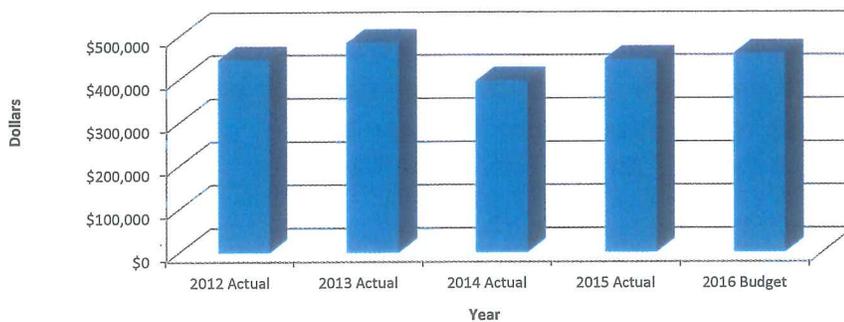
Water as a % of the Operating Funds



Production & Treatment as a % of the Water Fund



Five Year Trend Analysis



WATER FUND

Distribution System O&M

Program Mission: *To provide reliable water service to EAJA customers and to minimize unaccounted for water losses.*

Description:

This program provides for operation and maintenance of the Authority's water distribution system, including repair of all leaks and main breaks, installation, maintenance and repair of valves, maintenance and repair of fire hydrants and installation of new water service laterals. Leak detection is an important task of this activity. Most services rendered are carried out by Borough of Ephrata staff contracted with the Authority.

2015 Program Accomplishments

- Maintained chlorine residual levels at 0.5 mg/l, the established target concentration in all parts of the water distribution system, by effectively flushing at targeted areas
- Optimized the flushing program to minimize water used to eliminate dead zones in the system
- Repaired all leaks identified from a system wide leak detection
- Managed installation of the new leak detection data loggers and collection gathering software for early detection and repair of leaks thus preventing small leaks from becoming large ones
- Replaced 10 plastic services with copper pipe
- Replaced 3 defected hydrants
- Painted and performed maintenance on 75 hydrants
- Adjusted valve boxes on Route 322 in conjunction with Penn DOT street project
- Continued to work toward achieving Phase II of the Partnership for Safe Water Program for Distribution

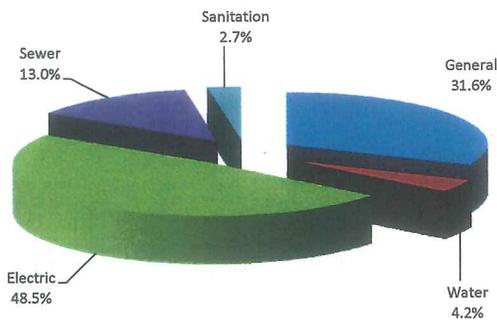
2016 Program Objectives

- Maintain chlorine residual levels at 0.5 mg/l, the established target concentration in all parts of the water distribution system, by effectively flushing at targeted areas
- Repair all leaks that are identified from the Alpha Leak Detection Program
- Paint and perform maintenance on 75 hydrants
- Continue work on Phase II of the Partnership for Safe Water Program for Distribution
- Perform system wide flushing of the entire distribution system in the spring
- Drain, clean and perform maintenance of Pine & Walnut tanks
- Comply with the EPA & PA DEP revised Total Chloroform Rule

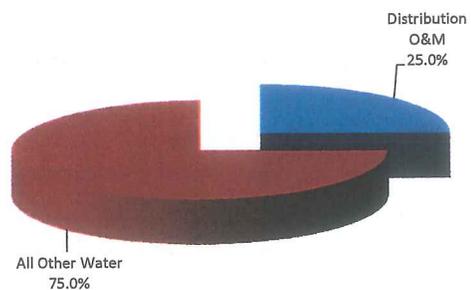
WATER FUND
Distribution System Operation & Maintenance
06-43-611

<u>Type of Appropriation</u>	<u>2014 Actual</u>	<u>2015 Budget</u>	<u>2015 Actual</u>	<u>2016 Budget</u>
Personal Services	248,569	259,199	308,015	318,355
Professional Services	0	0	0	0
Services and Charges	20,300	31,572	23,813	24,643
Materials and Supplies	7,594	5,000	5,629	5,750
Capital Outlay	0	0	0	0
Sundry	13,005	13,005	13,005	13,330
Total	289,468	308,776	350,462	362,078
Staffing allocations - full time equivalents		2.70		3.30
- part time/seasonal		1.00		1.00
Percent change from prior year budget				17.26%

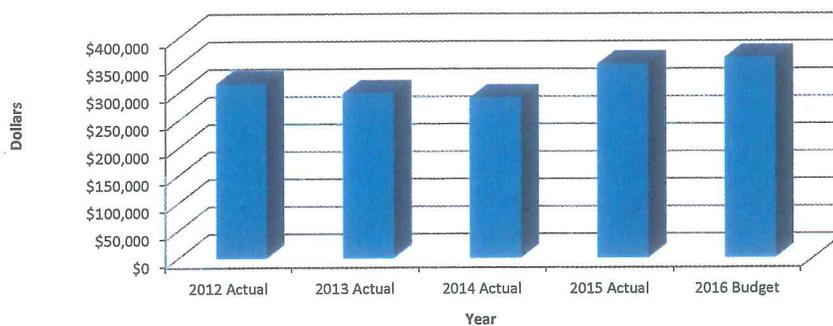
Water as a % of the Operating Funds



Distribution as a % of the Water Fund



Five Year Trend Analysis



WATER FUND

Meter Installation & Repair

Program Mission: *To assure the accurate measurements & usage for both EAJA & Borough of Ephrata sewer customers.*

Description:

This program provides for installation, maintenance and repair of water meters in the Authority's system. This activity includes periodic testing of meters and remote reading systems to ensure accuracy of metering equipment for billing purposes.

2015 Program Accomplishments

- Installed approximately 50 meters for new customers
- Replaced approximately 250 stopped or defective meters and tested 100% of the meters for accuracy
- Tested sixteen large meters and made repairs as needed as part of the large meter testing program
- Replaced 4 inch meter with new OMNI meter at 405 S Reading Rd (WWTP#1) and at 99 Bethany Rd (Ephrata Manor) and a 3 inch meter at 957 Hammon Ave (Middle School) as part of the large meter replacement program
- Checked 50 % of meter pits for leaks
- Trained all employees on Kamstrup meter software

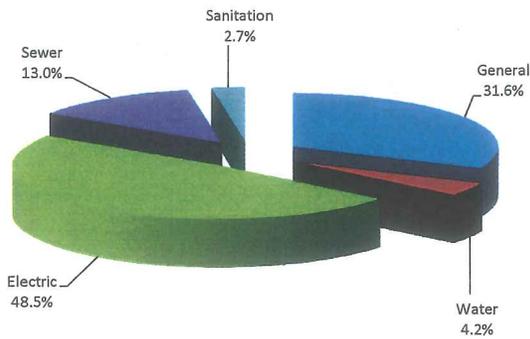
2016 Program Objectives:

- Install meters for all new customers
- Replace all stopped or defective meters and test all meters that are removed
- Replace 20 large water meters in the system as part of a large meter change out program
- Check 100% of meter pits for leaks and issues
- Continue development of Kamstrup meter program

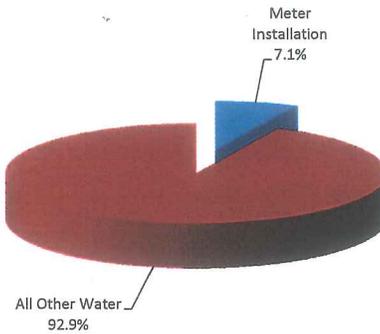
WATER FUND
Meter Installation & Repair
06-43-612

<u>Type of Appropriation</u>	<u>2014 Actual</u>	<u>2015 Budget</u>	<u>2015 Actual</u>	<u>2016 Budget</u>
Personal Services	80,844	96,594	88,299	96,342
Professional Services	0	0	0	0
Services and Charges	413	1,000	365	2,800
Materials and Supplies	2,669	3,000	1,918	3,000
Capital Outlay	0	0	0	0
Sundry	0	0	0	0
Total	83,926	100,594	90,582	102,142
Staffing allocations - full time equivalents		1.10		1.10
Percent change from prior year budget				1.54%

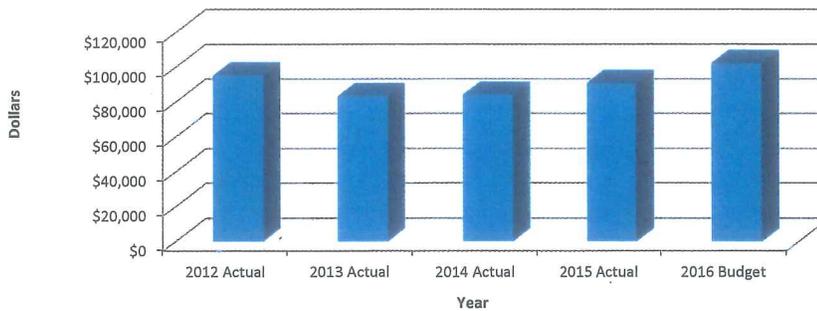
Water as a % of the Operating Funds



Meters as a % of the Water Fund



Five Year Trend Analysis



WATER FUND

Water Division - Management Support Services

Program Mission: *To provide management oversight and strategic planning services to EAJA to ensure high quality water, service reliability and competitive rates.*

Program Description:

This program promotes the Borough's Vision of being a municipal leader in utility services in Northern Lancaster County through its management agreement on behalf of the Ephrata Area Joint Authority. Services provided to the Joint Authority water system include general management, customer services, billing and collections, and technical and engineering support.

2015 Program Accomplishments:

- Prepared and distributed the 2014 Annual Consumer Confidence Reports to all Authority customers by June 30, 2015
- Maintained requirements for stage two disinfection by-products to comply with DEP regulations
- Applied for phase IV for Partnership for Safe Water Program and received Presidents Award
- Analyzed an internal cost of water study to determine costs for each water resource. Modified operating plan to optimize cost of water
- Analyzed the need for an automated leak detection system, using the new system to identify and prevent system wide leaks
- Used system demand information and a leak detection system to minimize unaccounted for water
- Began evaluation of increasing filter plant permit capacity and impact on SRBC water resource plan

2016 Program Objectives:

- Prepare and distribute the 2015 Annual Consumer Confidence Reports to all Authority customers by May 31, 2016
- Maintain all DEP regulations
- Meet new requirements for Total Coliform Version 2 to comply with new DEP regulations
- Apply for phase IV Excellence Award for Partnership for Safe Water Program
- Modify operating plan to optimize cost of water
- Complete evaluation of increased filter plant permitted capacity and impact on SRBC water resource plan and if successful evaluate increased filter plant capacity versus new sources of water

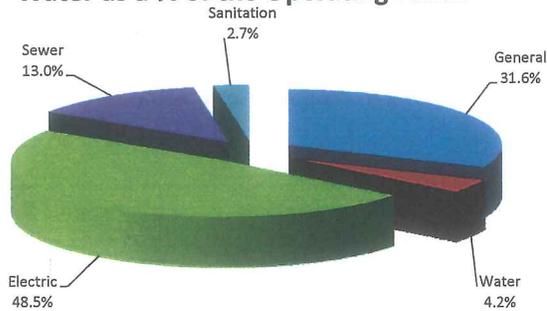
WATER FUND
Management Support Services
06-65-613

<u>Type of Appropriation</u>	<u>2014 Actual</u>	<u>2015 Budget</u>	<u>2015 Actual</u>	<u>2016 Budget</u>
Personal Services	0	0	0	0
Professional Services	2,484	3,200	2,782	3,200
Services and Charges	57,704	60,998	58,304	66,489
Materials and Supplies	3,317	6,500	4,042	5,500
Capital Outlay	0	0	43	5,000
Sundry	423,572	434,101	434,101	444,954
Total	487,077	504,799	499,272	525,143

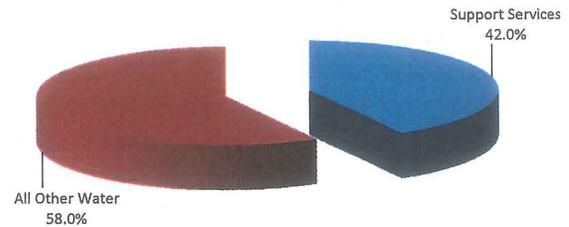
Staffing allocations - none

Percent change from prior year budget 4.03%

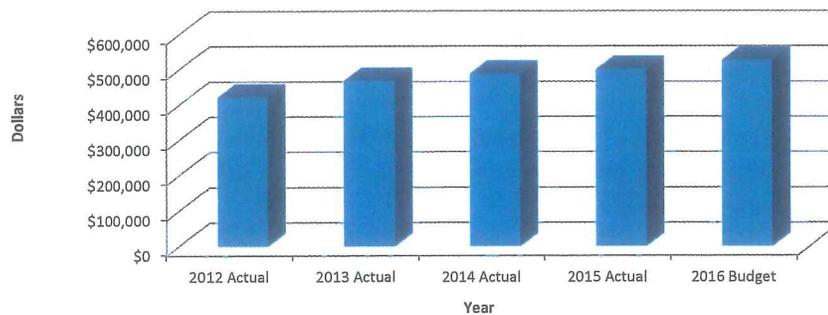
Water as a % of the Operating Funds



Support Svc as a % of the Water Fund



Five Year Trend Analysis



ELECTRIC FUND

Electric Division - Distribution System Operation & Maintenance

Program Mission: *To provide safe, reliable electric service to Borough customers.*

Program Description:

This program operates and maintains the Electric Distribution System, serving over 6,600 residential, commercial and industrial customers. The goal of this program is to proactively predict and prevent system failures while providing the delivery of safe, reliable electric energy to customers. This program also provides for traffic signal maintenance.

2015 Program Accomplishments:

- Evaluated new safety guidelines and technology, and provided electric personnel with essential equipment and training necessary to safely and efficiently perform their duties
- Inspected and provided remedial treatment of 796 utility poles within Circuits 2 and 3
- Finished the replacement of AB Chance porcelain switches within Circuit 1, and began porcelain switch replacement within Circuit 2
- Upgraded Circuit 8 from 4kv to 12470/7200 volt, and decommissioned 4kv Cloverleaf Substation
- Initiated the installation of a SCADA system at the Church Avenue Substation to automate crucial electrical data and control
- Updated Geographic Information System (GIS) to support proposed, and future Smart Grid Projects
- Evaluated Smart Grid technology and recommend future projects to further improve system efficiencies & reliability
- Achieved APPA RP3 Platinum Award level
- Evaluated current energy efficient street lighting technology options
- Terminated existing traffic signal maintenance contract due to poor performance and entered into a new contract with a different vendor

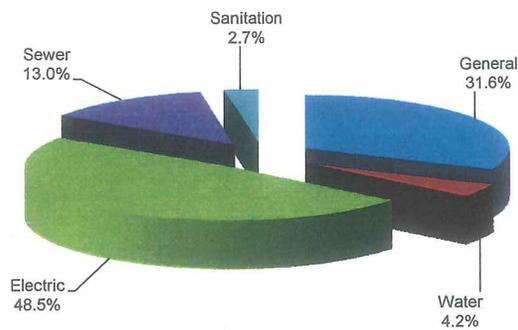
2016 Program Objectives:

- Mitigate critical infrastructure threats by identifying vulnerabilities and implementing security systems and procedures for the Church Street Substation and Electric Distribution System
- Install an Advanced Meter Infrastructure with Outage Notification and Web Presentment to increase system efficiencies, reliability, and customer information
- Inspect and provide remedial treatment of 382 poles in Circuit #4
- Deploy a Vegetation Management Program recognized and approved by the National Arborist Association, to ensure safe, reliable electric service, while preserving the health of trees trimmed within the power line right-of-way
- Initiate the replacement or restoration of 64 rejected poles within circuits 2 and 3
- Install a 12,480 volt solar distribution line from Ephrata Solar Site to Church Ave. Substation, for purpose of behind the meter generation
- Continual replacement of remaining AB Chance porcelain cutouts
- Continual evaluation of Smart Grid technology to recommend future projects to further improve system efficiencies & reliability
- Complete the installation of the Church Street Substation SCADA system, and initiate analyzing 7 feeder circuits for loading and power quality
- Begin three year program to place emergency vehicle pre-emption equipment at six traffic signals
- Replace 8" signal heads with 12" signal heads at 4 locations along Main Street in the CBD
- Install countdown pedestrians signals at the Main and State intersection

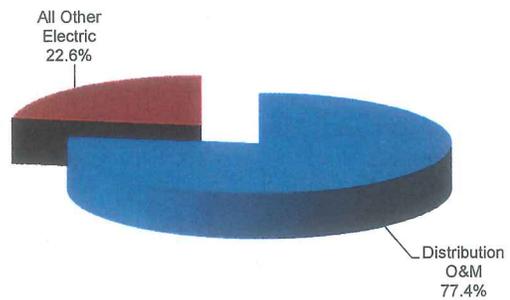
ELECTRIC FUND
Distribution System Operation & Maintenance
07-61-710

<u>Type of Appropriation</u>	<u>2014 Actual</u>	<u>2015 Budget</u>	<u>2015 Actual</u>	<u>2016 Budget</u>
Personal Services	952,487	1,117,767	1,028,278	1,110,384
Professional Services	18,904	50,000	40,208	50,000
Services and Charges	13,903,846	11,358,346	11,312,281	11,543,323
Materials and Supplies	155,116	132,000	97,165	141,000
Capital Outlay	154,628	142,000	80,908	131,010
Sundry	75,735	77,694	77,694	80,321
Total	15,260,716	12,877,807	12,636,534	13,056,038
Staffing allocations - full time equivalents		8.23		8.23
Percent change from prior year budget				1.38%

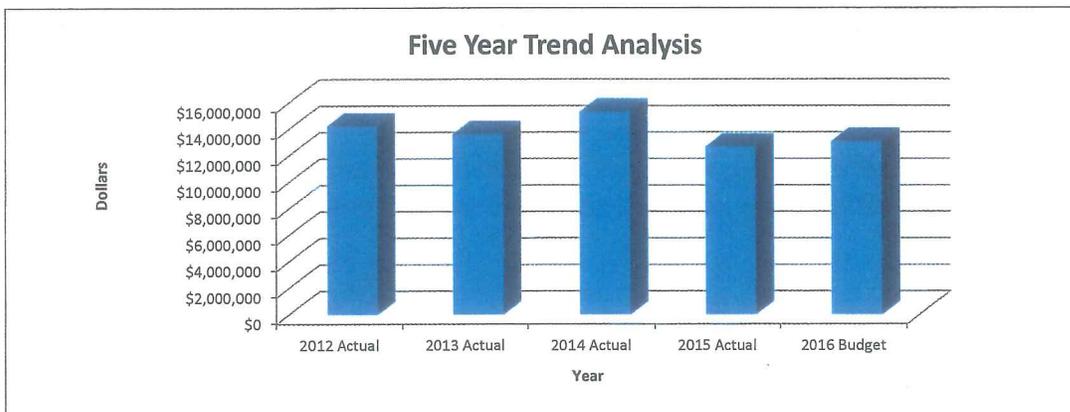
Electric as a % of the Operating Funds



Distribution as a % of the Electric Fund



Five Year Trend Analysis



ELECTRIC FUND

Electric Division - Management Support Services

Program Mission: *To provide management oversight and strategic planning services for electric operations to assure competitive rates.*

Program Description:

This program provides general management and technical support for the electric distribution serving 6,600 customers. In addition, this program reimburses the General Fund for the financial, accounting, billing, collections, and human resources support of the Administration. Interfund transfers and debt service are budgeted in this program. Procurement of power and administration of power supply contracts is a primary concern of this program.

2015 Program Accomplishments:

- Managed implementation of new rates per Cost of Service and Rate Study
- Modified Power Cost Adjustment rider to minimize impact of individual monthly variations.
- Established Base Power Supply Cost per Cost of Service Study and monitored monthly performance of Power Cost Adjustment rider
- Provided support for electric system SCADA improvements, GIS infrastructure, and other automation efforts
- Participated with AMP to manage roll out of new Advanced Meter Infrastructure program
- Implemented next phase of Power Supply Master Plan
- Worked toward identifying new power generation opportunities, including both conventional and renewable energy sources inside the Borough's power distribution system
- Initiated a Power Purchase Agreement for Behind the Meter Solar Power
- Achieved APPA RP3 Platinum Award level

2016 Program Objectives:

- Work with Solar Power Provider and manage project to deliver behind the meter solar power
- Obtain zoning, land development, and stormwater approvals for solar power site
- Manage installation of new distribution line from solar site to Borough substation
- Participate in AMP Project for funding and installation of smart meter technology
- Manage roll out of new smart meters to all Borough customers
- Explore options for taking advantage of new smart meter technology to reduce system losses and improve system reliability
- Provide support for substation automation efforts
- Continue to work toward identifying new power generation opportunities, including both conventional and renewable energy sources inside the Borough's power distribution system

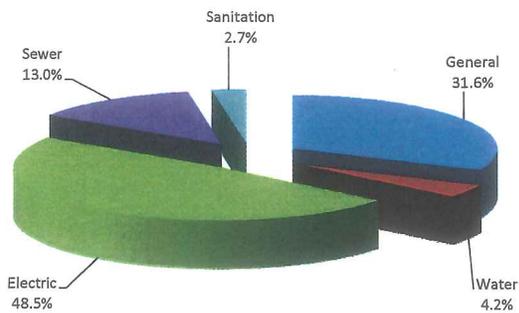
ELECTRIC FUND
Management Support Services
07-65-711

<u>Type of Appropriation</u>	<u>2014 Actual</u>	<u>2015 Budget</u>	<u>2015 Actual</u>	<u>2016 Budget</u>
Personal Services	0	0	0	0
Professional Services	174,921	264,979	170,730	219,500
Services and Charges	253,318	272,969	251,546	299,878
Materials and Supplies	6,013	9,500	9,429	8,500
Capital Outlay	2,150	5,300	2,976	18,575
Sundry	3,134,898	3,416,113	3,326,597	3,276,577
Total	3,571,300	3,968,861	3,761,278	3,823,030

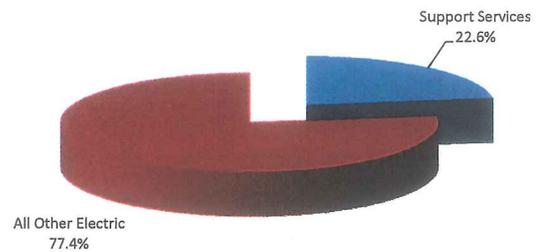
Staffing allocations - none

Percent change from prior year budget -3.67%

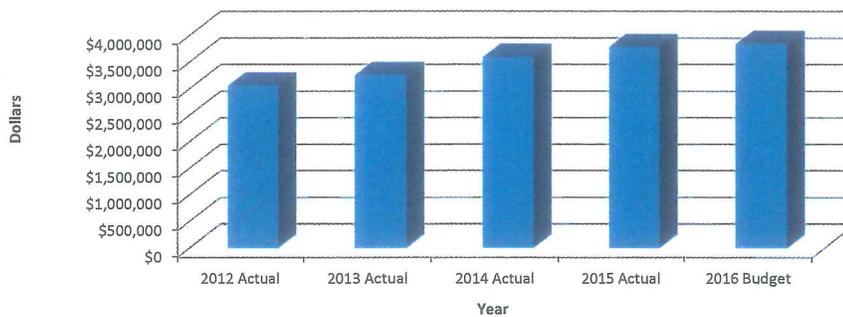
Electric as a % of the Operating Funds



Support Svc as a % of the Electric Fund



Five Year Trend Analysis



SEWER FUND

Wastewater Division - Plant One Operation & Maintenance

Program Mission: *To provide environmentally safe wastewater treatment.*

Program Description:

This program provides for the operation and maintenance of Wastewater Treatment Plant One. This includes plant operations for treating wastewater by means of physical and biological processes to ensure compliance with the Department of Environmental Protection regulations. The program includes preventive maintenance, repair and replacement of plant equipment as well as plant operations.

2015 Program Accomplishments:

- Replaced the heat and AC unit in the control building
- Met all NPDES requirements as well as the BNR requirements for total nitrogen and phosphorus
- Replaced the control panel in the process water pump house
- Completed phase III and phase IV of the SCADA project. WWTP 1 is now fully alarmed and has the capability to have the alarms texted or forwarded to the on-call operator
- Continued to explore operational techniques to gain control of the current BNR oxidation ditch process and limit the deficiencies during the winter months
- Finished updating the operations and maintenance manual for WWTP 1

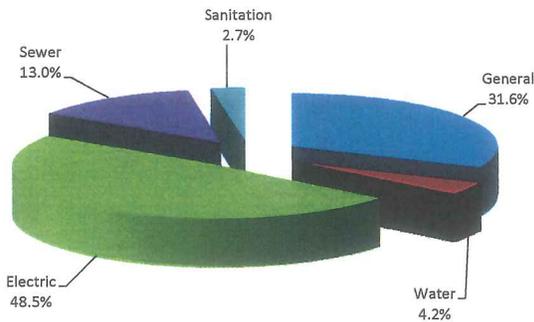
2016 Program Objectives:

- Meet all NPDES permit requirements
- Replace the blowers in the modified digester building
- Replace the 6 inch trash pump
- Upgrade the outdated and overloaded electric control panel and electric system that feeds power to the area around the oxidation ditch

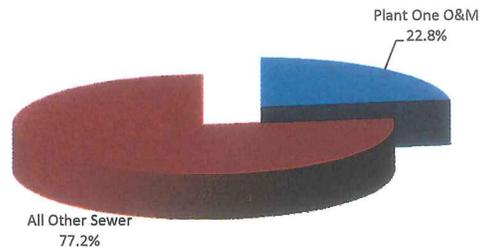
SEWER FUND
Plant One Operation & Maintenance
08-46-811

<u>Type of Appropriation</u>	<u>2014 Actual</u>	<u>2015 Budget</u>	<u>2015 Actual</u>	<u>2016 Budget</u>
Personal Services	424,163	508,908	504,203	579,566
Professional Services	2,945	10,000	1,528	80,000
Services and Charges	252,304	274,630	255,920	286,556
Materials and Supplies	58,261	73,717	67,428	85,880
Capital Outlay	7,895	0	0	0
Sundry	1,525	1,525	1,525	1,563
Total	747,093	868,780	830,604	1,033,565
Staffing allocations - full time equivalents		5.36		6.06
Percent change from prior year budget				18.97%

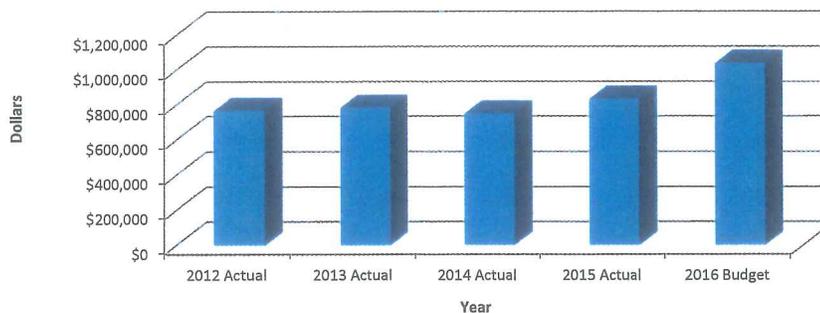
Sewer as a % of the Operating Funds



Plant One O & M as a % of the Sewer Fund



Five Year Trend Analysis



SEWER FUND

Wastewater Division - Plant One Biosolids Recycling

Program Mission: *To recycle or dispose of all wastewater solids in the most environmentally sound and cost effective manner.*

Program Description:

Provide environmentally safe and economical Wastewater Treatment Plant Class B biosolids for recycling and grit and screenings for disposal. Grit and screenings are unable to be recycled, so they go to the landfill. Primary solids are settled and removed from the sewage flow for anaerobic digestion. Waste activated sludge (W.A.S.) is removed and mixed with the primary solids for dewatering by means of a belt filter press. All finished biosolids are applied to PA DEP permitted farm fields in the Ephrata area if they meet class B; otherwise they are hauled to the landfill.

2015 Program Accomplishments:

- Painted the steel beam structure at the “old” biosolids storage area and cleaned and recoated the resolute roof
- Evaluated the “Quick wash” process to achieve Class A biosolids and removed phosphorus from the biosolids
- Evaluated the bio fermentation process that would help reduce W.A.S. volume and settle ability and came to the conclusion it was not cost effective
- Met all DEP and EPA regulations related to sludge disposal

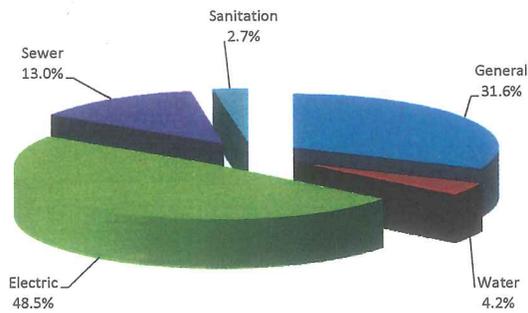
2016 Program Objectives:

- Replace both polymer pumps at the BFP
- Continue to the evaluation options to achieve Class A sludge including the “Quick wash” process
- Continue evaluation of other economically feasible recycling or disposal processes of the solids material
- Meet all DEP and EPA solids regulations

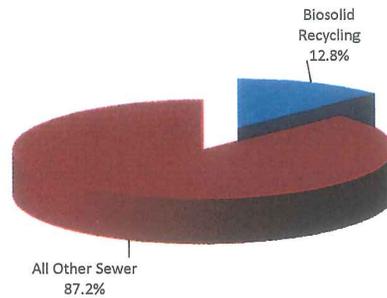
SEWER FUND
Plant One Biosolid Recycling
08-46-812

<u>Type of Appropriation</u>	<u>2014 Actual</u>	<u>2015 Budget</u>	<u>2015 Actual</u>	<u>2016 Budget</u>
Personal Services	169,254	193,214	190,722	169,228
Professional Services	0	0	0	0
Services and Charges	139,580	306,949	302,604	355,270
Materials and Supplies	45,588	48,880	33,215	49,800
Capital Outlay	0	0	0	0
Sundry	5,253	5,253	5,253	5,384
Total	359,675	554,296	531,794	579,682
Staffing allocations - full time equivalents		1.90		1.70
Percent change from prior year budget				4.58%

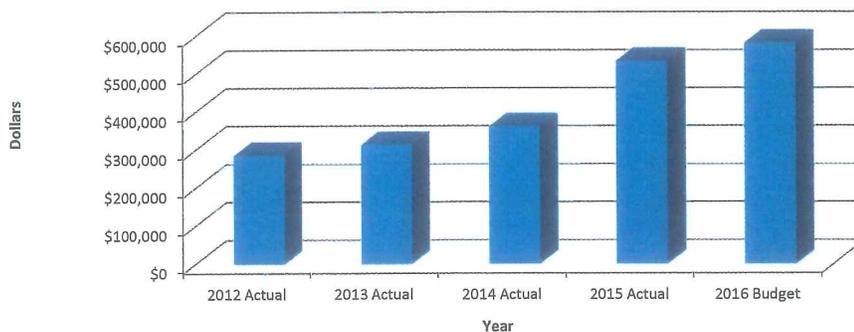
Sewer as a % of the Operating Funds



Biosolids as a % of the Sewer Fund



Five Year Trend Analysis



SEWER FUND

Wastewater Division - Interceptor Operation & Maintenance

Program Mission: *To maintain all wastewater interceptor lines and the Mission pump station.*

Program Description:

This program provides operation, maintenance and repair of sewer interceptor manholes, pipes and related equipment, including the Mission Pump Station, and the interceptor lines between Denver Borough and Plant Two, between Plant Two and the Mission Pump Station, and between West Main Street and Plant One. This program includes conveyance of wastewater from portions of Ephrata Borough and Ephrata Township and all of Denver and East Cocalico Township.

2015 Program Accomplishments:

- Completed final design plans and cost recommendations for the Mission Pumping Station and force main rehabilitation/replacement project

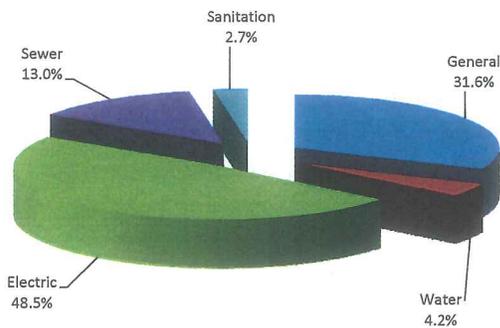
2016 Program Objectives:

- Start construction for the Mission Pumping Station and force main rehabilitation/replacement project

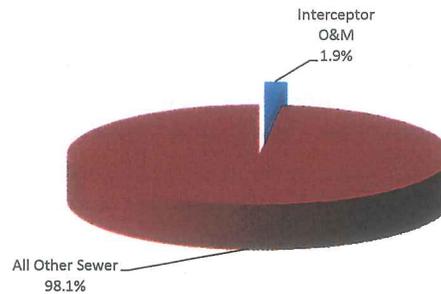
SEWER FUND
Interceptor Operation & Maintenance
08-46-813

<u>Type of Appropriation</u>	<u>2014 Actual</u>	<u>2015 Budget</u>	<u>2015 Actual</u>	<u>2016 Budget</u>
Personal Services	6,155	12,532	8,811	9,456
Professional Services	44,900	18,000	-26,900	20,000
Services and Charges	15,338	23,175	11,994	19,125
Materials and Supplies	16,952	18,500	10,227	38,000
Capital Outlay	0	0	0	0
Sundry	0	0	0	0
Total	83,345	72,207	4,132	86,581
Staffing allocations - full time equivalents		0.13		0.09
Percent change from prior year budget				19.91%

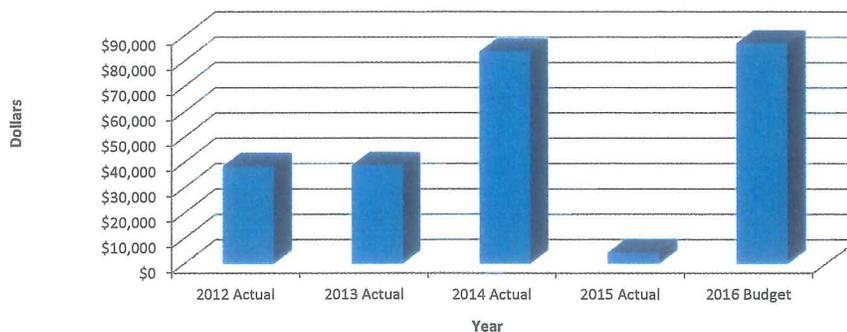
Sewer as a % of the Operating Funds



Interceptor O&M as a % of the Sewer Fund



Five Year Trend Analysis



SEWER FUND

Wastewater Division – Collection System Operation & Maintenance

Program Mission: *To maintain all Borough wastewater collection mains and pump stations.*

Program Description:

This program provides for the operation and maintenance of the Borough's sixty-eight miles of lines in the wastewater collection system. This program also provides for the operation and maintenance of nine Ephrata Borough pumping stations located throughout the collection system to ensure that wastewater flows are conveyed to the wastewater treatment plant in compliance with Department of Environmental Protection permit requirements. All pump stations are inspected weekly and cleaned bi-weekly in the summer and as needed in winter.

2015 Program Accomplishments:

- Replaced the float controls with ultrasonic controls at Saw Mill Pump Station
- Replaced two pumps at Wissler Road Pump Station
- Coordinated a multi-municipality effort aimed at Fats, Oil, and Grease (FOG) removal by chemically treating five locations in Ephrata Borough, Akron Borough and Ephrata Twp. Resolving the FOG problem will improve settle ability and overall operation at the plant
- Inspected through televising 10,000 linear feet of sewer mains
- Inspected 44 manholes and repaired or adjusted to street grade 15 manholes
- Acquired Category 26 Sewer Root Control from the Department of Agriculture

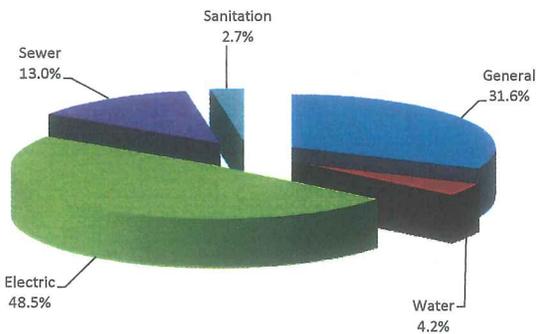
2016 Program Objectives:

- Re-build the pumps at the Saw Mill and Gross Run pump stations
- Continue the FOG removal program at all locations started in 2015 and monitor the results of the settling and W.A.S. microscopic exams at WWTP 1 as we move through winter and spring
- Reduce the bi-weekly cleaning of the pump station wet wells to quarterly cleaning pending results of the chemical addition to reduce FOG
- Televis sewer mains to find leaks and breaks in order to reduce infiltration
- Inspect manholes and repair or adjust to street grade to improve drivability and lessen water infiltration

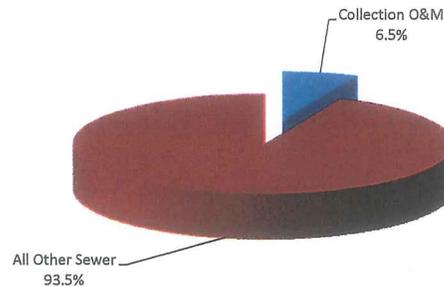
SEWER FUND
Collection System Operation & Maintenance
08-46-814

<u>Type of Appropriation</u>	<u>2014 Actual</u>	<u>2015 Budget</u>	<u>2015 Actual</u>	<u>2016 Budget</u>
Personal Services	137,760	137,630	133,028	121,358
Professional Services	0	0	0	0
Services and Charges	42,867	48,285	28,083	53,162
Materials and Supplies	31,568	70,700	57,686	89,850
Capital Outlay	0	31,000	25,233	32,500
Sundry	0	0	0	0
Total	212,195	287,615	244,030	296,870
Staffing allocations - full time equivalents		1.21		1.15
Percent change from prior year budget				3.22%

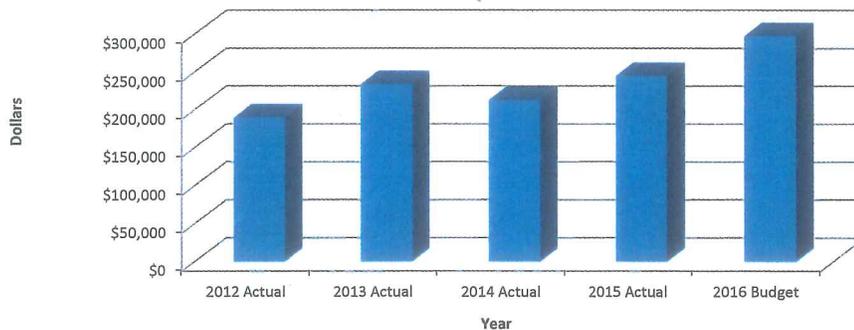
Sewer as a % of the Operating Funds



Collection O&M as a % of the Sewer Fund



Five Year Trend Analysis



SEWER FUND

Wastewater Division - Plant One Management Support Services

Program Mission: *To provide management oversight and strategic planning services for Plant One operations.*

Program Description:

Plant One serves Akron Borough, portions of Clay Township (as Ephrata Borough customers), Ephrata Borough and Ephrata Township. Services of this program include finance and accounting, technical and engineering, planning, project management and personnel management under the 1981 Wastewater Treatment Services Agreement and the 1995 Sewage Services Agreement. This program also reimburses the Borough General Fund for administrative services.

2015 Program Accomplishments:

- Applied knowledge and experience obtained over the past few years with the BNR treatment process to optimize the nutrient reduction process
- Met specific NPDES permit requirements for accumulated nutrient reductions for the water year (October 1, 2014 to September 30, 2015)
- Monitored the maximum daily limits (TMDL's) for nitrogen and phosphorus discharges to the Cocalico Creek
- Evaluated options for cost effective wastewater solids disposal from Plant One
- Implemented final phases of SCADA control program to improve operator information and control of the Waste Water Treatment process
- Developed design plans and cost estimates for the Mission Pump Station and force main rehabilitation/replacement project
- Evaluated personnel and resource needs for operations and maintenance of Plant One

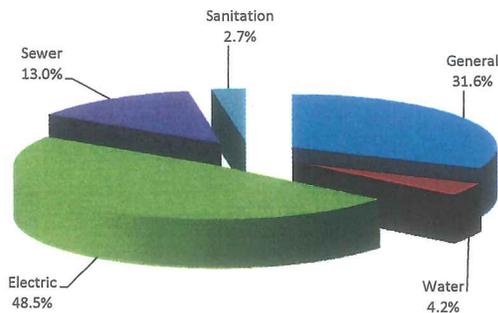
2016 Program Objectives:

- Meet specific NPDES permit requirements for accumulated nutrient reductions for the water year (October 1, 2015 to September 30, 2016)
- Monitor the maximum daily limits (TMDL's) for nitrogen and phosphorus discharges to the Cocalico Creek
- Evaluate options for cost effective wastewater solids disposal from Plant One
- Evaluate installed SCADA control system and recommend improvements
- Obtain funding and implement plans for the Mission Pump Station and force main rehabilitation/replacement project

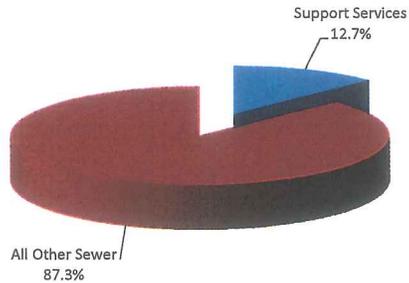
SEWER FUND
Plant One Management Support Services
08-65-815

<u>Type of Appropriation</u>	<u>2014 Actual</u>	<u>2015 Budget</u>	<u>2015 Actual</u>	<u>2016 Budget</u>
Personal Services	0	0	0	0
Professional Services	13,182	15,400	13,106	15,400
Services and Charges	29,308	33,026	30,184	34,275
Materials and Supplies	2,863	3,000	2,922	4,500
Capital Outlay	2,150	2,800	2,785	6,075
Sundry	699,594	468,513	537,098	517,459
Total	747,097	522,739	586,095	577,709
Staffing allocations - none				
Percent change from prior year budget				10.52%

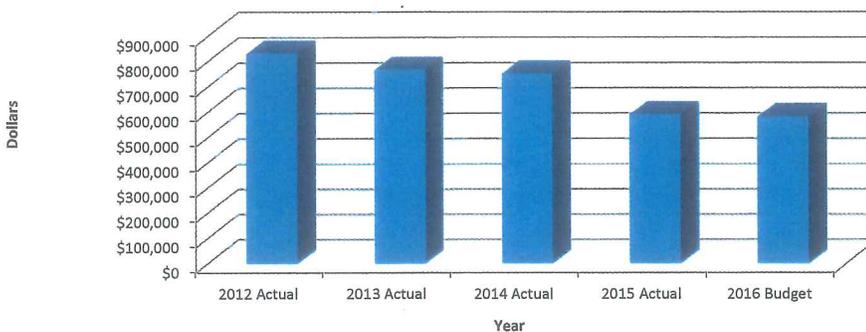
Sewer as a % of the Operating Funds



Support Svc as a % of the Sewer Fund



Five Year Trend Analysis



SEWER FUND

Wastewater Division - Plant Two Operation & Maintenance

Program Mission: *To provide environmentally safe wastewater treatment.*

Program Description:

This program provides the operation and maintenance of Wastewater Treatment Plant Two. It includes plant operations for treating raw wastewater by means of physical and biological processes, including chemical addition and precipitation processes to ensure NPDES permit compliance. This program also includes maintenance, repair and replacement of plant equipment.

2015 Program Accomplishments:

- Met all NPDES requirements for ammonia nitrogen, BOD, suspended solids, phosphorus, fecal coliform, chlorine residual and D.O. as well as the BNR requirements for total nitrogen and phosphorus
- Replaced the Heat/AC units in the Lab Building
- Replaced two (2) blowers that supply air to the grit/grease channel

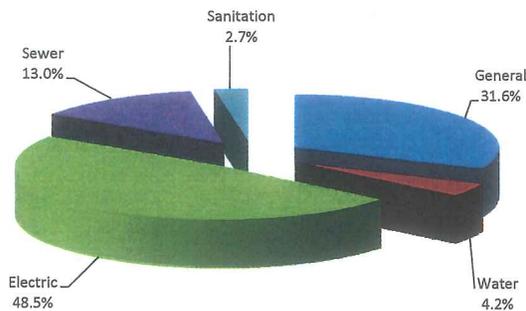
2016 Program Objectives:

- Meet all NPDES requirements for ammonia nitrogen, BOD, suspended solids, phosphorus, fecal coliform, chlorine residual and D.O. as well as the BNR requirements for total nitrogen and phosphorus
- Replace two (2) volutes in the pumps at Trout Run pump station

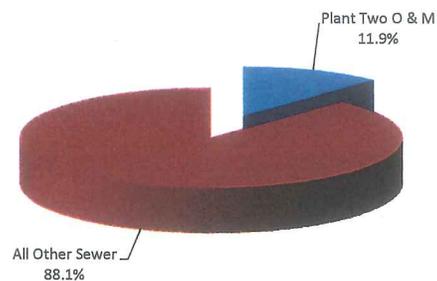
SEWER FUND
Plant Two Operation & Maintenance
08-46-816

<u>Type of Appropriation</u>	<u>2014 Actual</u>	<u>2015 Budget</u>	<u>2015 Actual</u>	<u>2016 Budget</u>
Personal Services	249,706	251,935	250,842	236,505
Professional Services	2,445	10,000	6,426	15,000
Services and Charges	197,781	233,425	187,576	208,991
Materials and Supplies	49,708	60,700	44,324	61,500
Capital Outlay	62,813	21,452	21,452	18,000
Sundry	1,525	1,525	1,525	1,563
Total	563,978	579,037	512,145	541,559
Staffing allocations - full time equivalents		2.58		2.33
Percent change from prior year budget				-6.47%

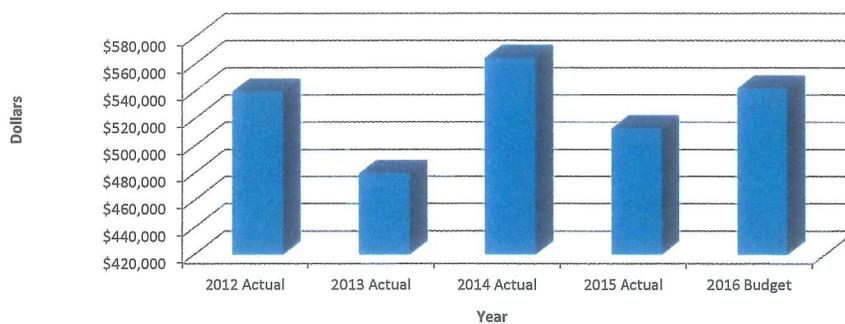
Sewer as a % of the Operating Funds



Plant Two O & M as a % of the Sewer Fund



Five Year Trend Analysis



SEWER FUND

Wastewater Division - Industrial Waste Monitoring

Program Mission: *To assure customer compliance with industrial waste regulations.*

Program Description:

Monitor nonresidential customers' wastewater streams for regulated constituents that may interfere with treatment processes and contaminate plant effluent or resulting biosolids. Focus on assisting customers with implementing waste reduction or water management plans through process redesign or pretreatment. Billing surcharges are sent to customers with high strength waste to recover the extra cost to treat the waste. This program is conducted throughout all municipalities served by the Ephrata Area wastewater treatment system.

2015 Program Accomplishments:

- Conducted the required on-site inspection at the two (2) significant user facilities
- Continued monitoring the system for illegal discharges into sanitary sewer
- EPA audited the Approved Pretreatment Program finding only minor areas suggesting minor improvements

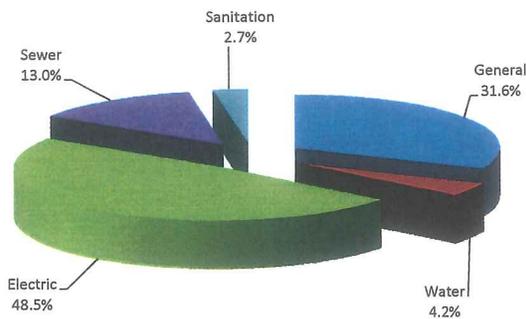
2016 Program Objectives:

- Conduct the required on-site inspection at the two (2) significant industrial user facilities
- Continue monitoring the system for illegal discharges into the sanitary sewer
- Resolve the deficiencies found in the 2015 EPA audit

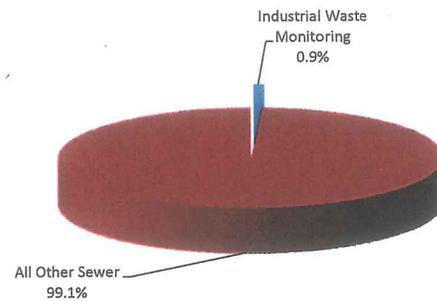
SEWER FUND
Industrial Waste Monitoring
08-46-817

<u>Type of Appropriation</u>	<u>2014 Actual</u>	<u>2015 Budget</u>	<u>2015 Actual</u>	<u>2016 Budget</u>
Personal Services	34,894	37,688	35,815	38,981
Professional Services	0	0	0	0
Services and Charges	130	900	243	360
Materials and Supplies	154	4,750	3,173	500
Capital Outlay	0	0	0	0
Sundry	0	0	0	0
Total	35,178	43,338	39,231	39,841
Staffing allocations - full time equivalents		0.35		0.35
Percent change from prior year budget				-8.07%

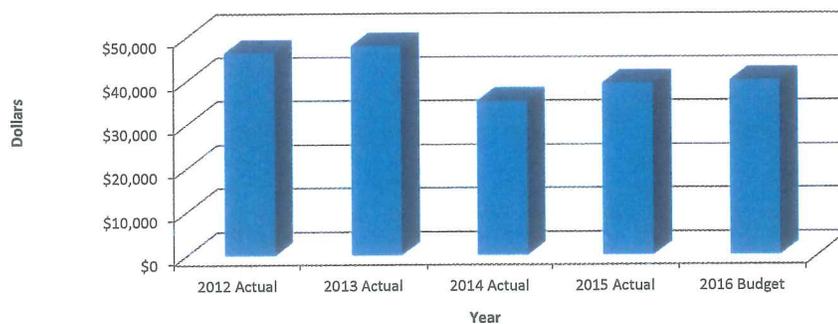
Sewer as a % of the Operating Funds



Industrial Waste as a % of the Sewer Fund



Five Year Trend Analysis



SEWER FUND

Wastewater Division - Plant Two Biosolids Recycling

Program Mission: *To recycle or dispose of all wastewater solids in the most environmentally sound and cost effective manner.*

Program Description:

Provide for environmentally safe and economical Wastewater Treatment Plant Class A biosolids for recycling and grit, grease and screenings for disposal. Finished biosolids may be applied to farm fields in the Ephrata area without DEP permits if the farm has an approved soil conservation plan and a nutrient management plan. Grit and screenings are unable to be recycled, so they go to the landfill. The current strategy is to increase the amount of Class A biosolids applied to farm fields not requiring permits by the DEP, reserving permitted fields for Class B biosolids of Plant One.

2015 Program Accomplishments:

- Land applied all available biosolids to farm fields
- Continued to monitor copper level on a quarterly basis
- Replaced gas fired heat unit in the solids building
- Installed AC unit for climate control in the polymer room eliminating polymer waste by the system not clogging improving operation economics

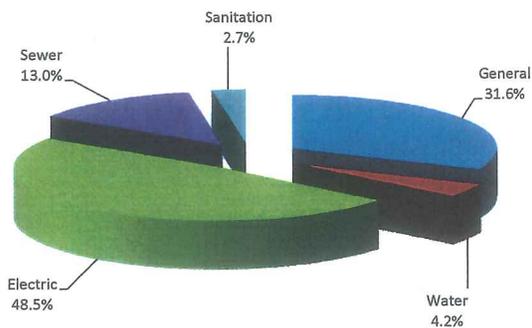
2016 Program Objectives:

- Replace the temperature gauges and level sensors in the ATAD
- Land apply all available biosolids to farm fields
- Continue to monitor copper levels on a quarterly basis

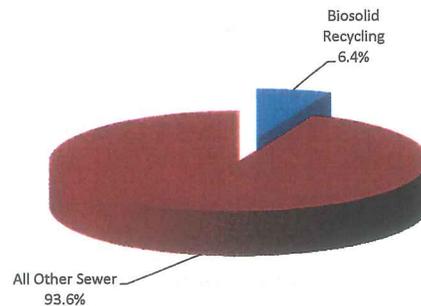
SEWER FUND
Plant Two Biosolid Recycling
08-46-818

<u>Type of Appropriation</u>	<u>2014 Actual</u>	<u>2015 Budget</u>	<u>2015 Actual</u>	<u>2016 Budget</u>
Personal Services	161,410	173,200	168,207	156,828
Professional Services	0	0	0	0
Services and Charges	48,774	59,590	28,643	48,250
Materials and Supplies	53,297	57,850	58,541	66,950
Capital Outlay		50,000	45,585	14,000
Sundry	5,406	5,406	5,406	5,541
Total	268,887	346,046	306,382	291,569
Staffing allocations - full time equivalents		1.73		1.53
Percent change from prior year budget				-15.74%

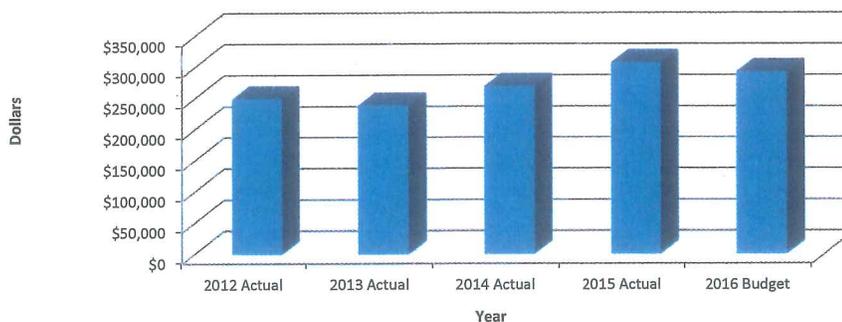
Sewer as a % of the Operating Funds



Biosolids as a % of the Sewer Fund



Five Year Trend Analysis



SEWER FUND

Wastewater Division - Plant Two Management Support Services

Program Mission: *To provide management oversight and strategic planning services for Plant Two operations.*

Program Description:

Plant Two services Denver Borough, East Cocalico Township, and portions of Ephrata Borough and Ephrata Township. Services include financial and accounting, technical and engineering, planning, project management and personnel management under the 1995 Sewage Services Agreement. This program reimburses the Borough General Fund for a proportionate share of administrative services.

2015 Program Accomplishments:

- Maintained EQ status of Plant Two biosolids while minimizing or eliminating the need to mix with Plant One material
- Met specific NPDES permit requirements for accumulated nutrient reductions for the water year (October 1, 2014 to September 30, 2015)
- Monitored the regulated total maximum daily limits (TMDL's) for nitrogen and phosphorus discharges to the Cocalico Creek
- Prepared plans for SCADA controls to improve operator information and control of the process
- Evaluated personnel and resource needs for operations and maintenance of Plant Two

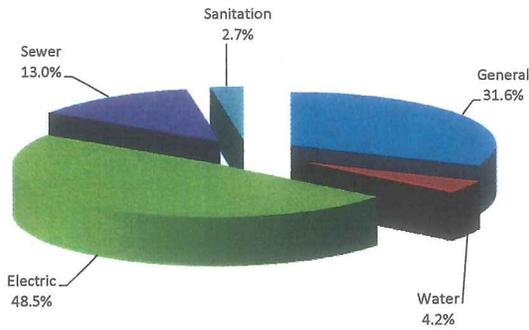
2016 Program Objectives:

- Maintain EQ status of Plant Two biosolids while minimizing or eliminating the need to mix with Plant One material
- Meet specific NPDES permit requirements for accumulated nutrient reductions for the water year (October 1, 2015 to September 30, 2016)
- Monitor the regulated total maximum daily limits (TMDL's) for nitrogen and phosphorus discharges to the Cocalico Creek
- Implement plans for SCADA controls to improve operator information and control of the process

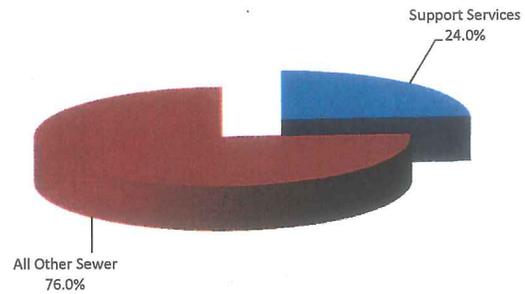
SEWER FUND
Plant Two Management Support Services
08-65-819

<u>Type of Appropriation</u>	<u>2014 Actual</u>	<u>2015 Budget</u>	<u>2015 Actual</u>	<u>2016 Budget</u>
Personal Services	0	0	0	0
Professional Services	2,771	3,900	3,315	3,900
Services and Charges	23,227	26,950	23,824	29,198
Materials and Supplies	2,211	4,500	2,457	4,500
Capital Outlay	0	0	0	0
Sundry	1,131,526	1,169,268	1,177,783	1,053,813
Total	1,159,735	1,204,618	1,207,379	1,091,411
Staffing allocations - none				
Percent change from prior year budget				-9.40%

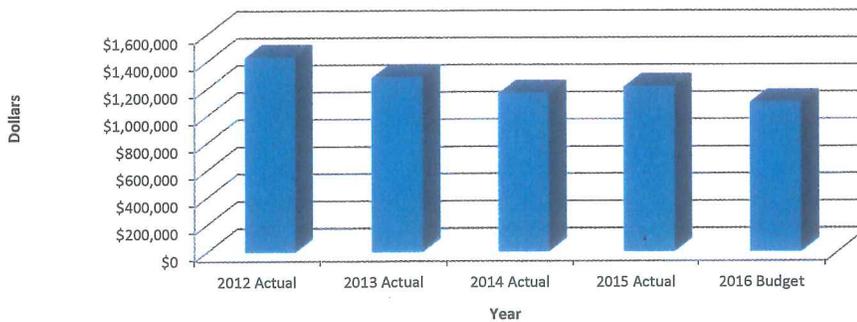
Sewer as a % of the Operating Funds



Support Svc as a % of the Sewer Fund



Five Year Trend Analysis



SANITATION FUND
Refuse Collection & Disposal

Program Mission: *To provide an effective option to Borough residents for collection and disposal of refuse.*

Program Description:

This program offers an option for refuse collection and disposal service to the residents of the Borough of Ephrata. This service is offered as an alternative to private collection contractors as an added customer service. Service includes one (1) collection per week consisting of up to three (3) thirty-two gallon cans or bags. Refuse customers may purchase extra bag tags and oversized refuse item tags as needed. Waste disposal is through the Lancaster County Solid Waste Management Authority.

2015 Program Accomplishments:

- Maintained acceptable service levels in the second year of the Ream Disposal contract

2016 Program Objectives:

- Maintain acceptable service levels in the final year of the Ream Disposal contract
- Bid and award a new refuse contract

SANITATION FUND
Refuse Collection & Disposal
09-65-911

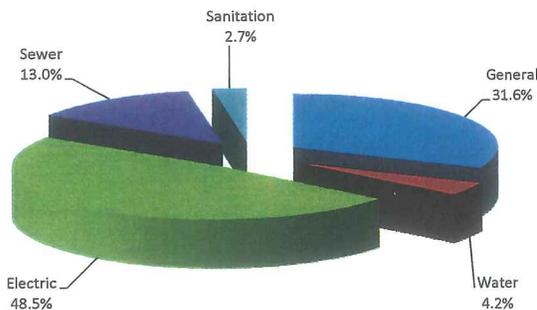
<u>Type of Appropriation</u>	<u>2014 Actual</u>	<u>2015 Budget</u>	<u>2015 Actual</u>	<u>2016 Budget</u>
Personal Services	0	0	0	0
Professional Services	0	300	300	300
Services and Charges	433,107	471,475	430,712	478,015
Materials and Supplies	537	1,000	682	1,000
Capital Outlay	1,098	2,600	1,366	1,766
Sundry	200,797	206,015	205,400	210,999
Total	635,539	681,390	638,460	692,080

Staffing allocations - none

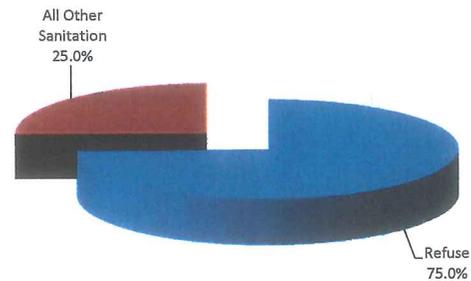
Percent change from prior year budget

1.57%

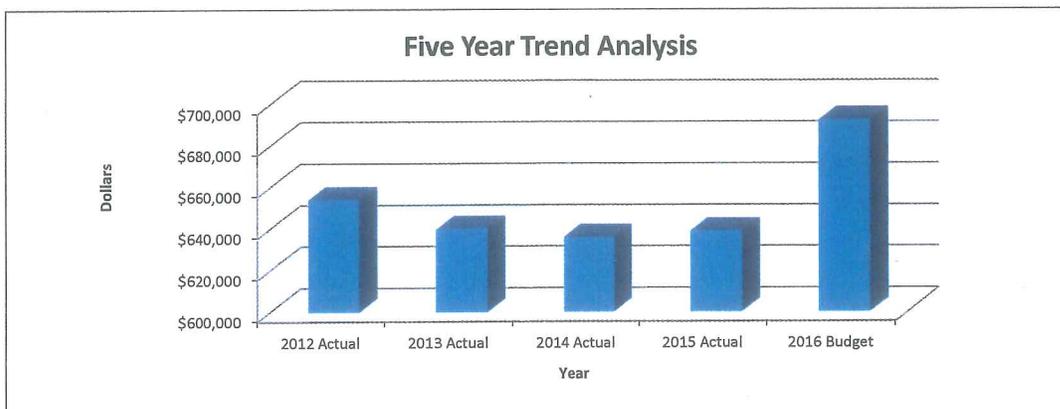
Sanitation as a % of the Operating Funds



Refuse as a % of the Sanitation Fund



Five Year Trend Analysis



SANITATION FUND
Recycling Collection & Disposal

Program Mission: *To provide an effective recycling program.*

Program Description:

This program provides recycling collection and disposal service to Borough residents living in structures of four or fewer dwelling units. Commercial and industrial customers are also required to recycle per Borough Ordinance and Act 101. The Borough will continue to educate residents and businesses through newspaper advertisements and bill stuffers. Recycled materials include glass, plastics and containers #1 through #7 and bottles with necks smaller than their bases, metal and aluminum cans, newsprint, office paper, envelopes & junk mail, paperboard, cardboard boxes, blacktop, leaves, yard waste, Christmas trees, tires and white goods. In addition, the Borough provides a drop off location for corrugated cardboard and glossy magazines.

2015 Program Accomplishments:

- Maintained acceptable service levels in the second year of the Ream Disposal contract
- Provided data to the Lancaster County Solid Waste Management Authority for Ephrata Borough's application for a Section 902 Performance Grant
- Contracted with the Illusion Maker to sponsor recycling education awareness events at Borough elementary schools and the Ephrata Middle School

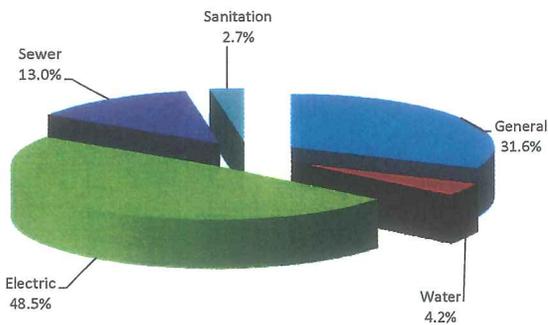
2016 Program Objectives:

- Maintain acceptable service levels in the final year of the Ream Disposal contract
- Attend the annual recycling coordinators meeting hosted by the LCSWMA
- Bid and award a new recycling contract

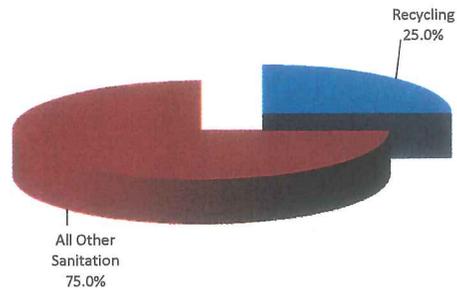
SANITATION FUND
Recycling Collection & Disposal
09-65-912

<u>Type of Appropriation</u>	<u>2014 Actual</u>	<u>2015 Budget</u>	<u>2015 Actual</u>	<u>2016 Budget</u>
Personal Services	0	0	0	0
Professional Services	0	300	300	300
Services and Charges	187,287	203,930	192,320	203,695
Materials and Supplies	16,294	25,500	20,020	25,500
Capital Outlay	1,099	2,700	1,322	1,809
Sundry	0	0	0	0
Total	204,680	232,430	213,962	231,304
Staffing allocations - none				
Percent change from prior year budget				-0.48%

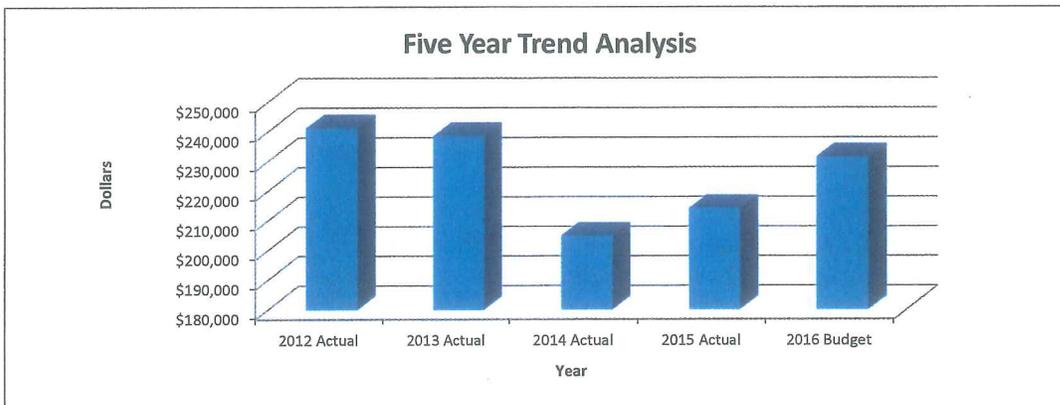
Sanitation as a % of the Operating Funds



Recycling as a % of the Sanitation Fund



Five Year Trend Analysis



2016 CAPITAL OUTLAY DETAIL

<u>ACTIVITY</u>	<u>EXPENDITURE DESCRIPTION</u>	<u>AMOUNT</u>
<u>Water Division</u>		
Management Support (06-65-613)	Computer Servers	\$5,000
Total Water Department		\$5,000
<u>Electric Division</u>		
Distribution System (07-61-711)	Pad Mount and Transformers	\$30,000
	AB Chance Switch Replacement	\$20,000
	Inspect & Treat 382 Wood Poles in Circuit 4	\$21,010
	Replace 64 Poles in Circuit 2 & 3	\$55,000
	LED Traffic Signal Modules	\$5,000
	Substation Security System	\$200,000
	Solar Farm Transmission Line	\$300,000
Management Support (07-65-711)	Computer Equipment & Servers	\$18,575
Total Electric Department		\$649,585
<u>Sewer Fund</u>		
Collection System (08-46-814)	Rebuilt Pumps at Saw Mill and Gross Run PS	\$32,500
Plant Two Maintenance (08-46-816)	Replace two Volutes at Trout Run PS	\$18,000
Plant Two Biosolid Recycling (08-46-818)	ATAD Two Level & Temperature Sensors	\$14,000
Management Support (08-65-815)	Computer Equipment & Servers	\$6,075
Total Sewer Fund		\$70,575
<i>(Sewer Plant One Projects will be paid from the 2014 Construction Fund - see page 134 for details.)</i>		
<u>Sanitation Fund</u>		
Refuse Collection (09-65-911)	Computer Equipment & Servers	\$1,766
Recycling Collection (09-65-912)	Computer Equipment & Servers	\$1,809
Total Sanitation Fund		\$3,575

Electric Division Five-Year Capital Plan

2016

Project	Amount	Funding Source
AB Chance Switch Replacement	\$20,000	Electric Fund
Inspect & Treat 382 Wood Poles in Circuit #4	\$21,010	Electric Fund
Replace 64 Poles in Circuits #2 & #3	\$55,000	Electric Fund
LED Traffic Sighal Modules	\$5,000	Electric Fund
Substation Security System	\$200,000	Electric Fund Balance
0	\$300,000	Electric Fund Balance

2017

Project	Amount	Funding Source
Osmose Inspection / Treatment of 363 Wood Poles in Circuit #5	\$21,780	Electric Fund
Deteriorated Pole Replacement Circuits #3 & #4	\$70,000	Electric Fund
Circuit #2 Re-Conductor	\$715,322	Electric Bond

2018

Project	Amount	Funding Source
Osmose Inspection /Treatment of 377 Wood Poles in Circuits #6 & #7	\$22,620	Electric Fund
Deteriorated Pole Replacement Circuit #5	\$30,000	Electric Fund
Circuit #3 Re-Conductor	\$756,350	Electric Bond

2018

Project	Amount	Funding Source
Osmose Inspection /Treatment of 280 Wood Poles in Circuit #1	\$16,800	Electric Fund
Deteriorated Pole Replacement Circuit #6 & #7	\$75,000	Electric Fund
Circuit #5 Re-Conductor	\$560,180	Electric Fund Balance

2020

Project	Amount	Funding Source
Deteriorated Pole Replacement Circuit #1	\$40,000	Electric Fund
Circuit #6 Re-Conductor	\$246,780	Electric Fund

Sewer Division Five-Year Capital Plan

2016

Project	Amount	Funding Source
Replace (4) 33 year old blowers in Modified Digester Building	\$33,000	2014 Sewer Bond
Replace 6" trash pump at WWTP 1	\$50,000	2014 Sewer Bond
Switch Gear Maintenance / 200 Amp Service Installation	\$17,536	2014 Sewer Bond
Spare Actuators (2) WWTP 1	\$12,000	2014 Sewer Bond
Replace polymer pumps at BFP WWTP # 1	\$15,000	2014 Sewer Bond
Replace Waste Gas Burner	\$10,000	2014 Sewer Bond
Re-build pumps at Saw Mill & Gross Run PS	\$32,500	Sewer Fund
Replace (2) Volutes at Trout Run PS Raw Sewage Pumps	\$18,000	Sewer Fund
ATAD Level Sensors (2) and ATAD Temperature Sensors (2)	\$14,000	Sewer Fund
Relocate Mission Pump Station & Wet Well	\$2,500,000	Revenue Bond 2015
PLC/Rack replacement at WWTP 2 (solids building)	\$90,000	Revenue Bond 2015
PLC/Rack replacement at WWTP 2 (trout run pump station)	\$90,000	Revenue Bond 2015
PLC/Rack replacement at WWTP 2 (chemical building)	\$85,000	Revenue Bond 2015
BNR oxidation ditch control, mixers / add drives	\$500,000	Revenue Bond 2015
Belt Filter Press Upgrade @ WWTP # 1 (conveyors)	\$200,000	Revenue Bond 2015
Biosolids Upgrade Design (to achieve class A @ WWTP 1)	\$100,000	Revenue Bond 2015

2017

Project	Amount	Funding Source
New Windows WWTP 1 Administration Building	\$12,000	Sewer Fund
New Roof WWTP 1 Administration Building	\$18,000	Sewer Fund
Replace VFD's RAS/WAS pumps	\$24,000	Sewer Fund
Replace the discharge piping at the Hackman Rd PS	\$25,000	Sewer Fund
Spare Mixer for Oxidation Ditch - WWTP 2	\$22,000	Sewer Fund

2018

Project	Amount	Funding Source
Paint new biosolids storage pit steel structure at Plant 1	\$20,000	Sewer Fund
Center circulator replacement on ATAD at Plant 2	\$30,000	Sewer Fund
Foam Cutter replacement on ATAD at Plant 2	\$20,000	Sewer Fund
Add Aeration at the Post ATAD @ WWTP # 2	\$100,000	Sewer Fund
Spiral Aerator replacement on ATAD at Plant 2	\$20,000	Sewer Fund
Rebuild Rotor Gearbox at WWTP 2	\$25,000	Sewer Fund

2019

Project	Amount	Funding Source
Biofilter Media Replacement at WWTP 2	\$20,000	Sewer Fund
VFD / RS pump upgrade/replace WWTP 1	\$50,000	Sewer Fund
Rebuild Rotor Gearbox at WWTP 2	\$25,000	Sewer Fund
Replace the Rotomat at WWTP 2	\$250,000	Revenue Bond 2019
RAS pump replacement at WWTP 1	\$148,000	Revenue Bond 2019

2020

Project	Amount	Funding Source
BFP at WWTP # 2 overhaul	\$56,000	Sewer Fund
Replace Sludge Recirculation pumps at WWTP 1	\$30,000	Sewer Fund
Spare gear box for oxidation ditch at WWTP 1	\$20,000	Sewer Fund