



UTILITIES DEPARTMENT

MONTHLY ACTIVITY REPORT

OCTOBER 2023

BCWWTP	
10/20/2023	-Plant staff replaced heater in fine screen building.
10/23/2023	-Operators replaced pump controller display at ATAD odor control panel.
10/24/2023	-Replaced seal water line for primary pump #1 and removed the pump to replace a leaking mechanical seal.
10/24/2023	-Annual Generator PM performed by Penn Power Systems.
10/25/2023	-Operators replaced lights in primary sludge gallery.
11/6/2023	-Plant staff rebuild bisulfite pump feed panel #1.
11/7/2023	-Troubleshoot faulting circular aerator on ATAD reactor 1A.
Franklin Acres Pump Station	-10/23-Annual Generator PM performed by Penn Power Systems.
Briar Creek Pump Station	-10/17-Annual Generator PM performed by Penn Power Systems.
Wolfe Run Pump Station	-10/17-Plant staff troubleshoot tripped wet well mixer. -10/23-Annual Generator PM performed by Penn Power Systems.
Laurel Point Lift Station	-No Operational Issues.
Water Supply	-10/17-Plant staff collected fourth quarter TTHM samples.
**Commonly Used Acronyms	<p>IPS: Influent Pump Station, EPS: Effluent Pump Station, RDT: Rotating Drum Thickener, ATAD: Autothermal Thermophilic Aerobic Digestion, MCC: Motor Control Center FOG: Fats, Oils and Grease, OCV: Automatic Control Valve, NASSC: National Association of Sewer Service Companies, BOD: Biochemical Oxygen Demand, RAS: Return Activated Sludge, MBR: Membrane Bioreactors, UPS: Uninterruptible Power Supply, FAPS: Franklin Acres Pump Station, WRPS: Wolfe Run Pump Station, BCTP: Brush Creek Treatment Plant POTW: Publicly owned treatment works, OTP: One time programmable, ORP: Oxidation Reduction Potential, PLC: Programmable Logic Controller, UPS: Uninterruptable Power Supply.</p>
PRETREATMENT	
Industrial Users	-Fresenius-Kabi is sampling for 3 consecutive months to establish an analytical baseline. -Annual inspections and sampling are being scheduled for Kawneer, Peterson Cartridge, Fresenous- Kabi, C.U.E. Inc. and Paragon Foods.
Incoming FOG Users	-Cenci's Pizza (New Building)- Grease Interceptor Installed.
Existing FOG Maintenance	-Performing FOG permit renewal inspections. -Site visits for "Non-compliant" and "No Pump Outs" FOG user. -8 Establishments are non-compliant with their pump out schedule.
Flow Metering	-46 SmartCover Flow Monitors are installed on the interceptors and sub-basins.
Manhole Assessment Program	<p>-Phase 2 (sub-basin manholes). -Inspection of Interceptor 3 sub-basins 51% complete. -Inspection of Interceptor 4 sub-basins 54% complete. -Inspection of Interceptor 5 sub-basins 63% complete. -Inspection of Interceptor 13 sub-basins 86% complete. -Inspection of Interceptor 14 sub-basins completed. -Inspection of Interceptor 15 sub-basins 46% complete. -Collection system 52% complete. Note: Inspections are on hold until the 2 new sewer & water employees receive adequate training.</p>
Sewer Repair & Maint.	-No operational issues.

PRETREATMENT CONT...		
Force Main	-11/02- Preventative maintenance was performed on the Wolfe Run force main air relief valves.	
Inflow & Infiltration (I&I)	-No operational issues.	
Miscellaneous	-No operational issues.	
WATER DISTRIBUTION		
10/16/2023	-Personnel excavated and repaired a leaking 3/4" water service line at 222 Brookston Dr. in the Valley Brook plan of homes. This service line was struck by the directional drilling crew working in the area.	
10/18/2023	-Crew repaired a 3/4" service line at 223 Whispering Oaks Dr. in the Settlers Grove plan of homes. This leak was detected by the water distribution system leak detection survey crew.	
10/26/2023	-Excavated and repaired a leaking 3/4" water service line at 204 Wyndemere Dr. in the Valley Brook plan of homes. This service line was struck by the directional drilling crew working in the area.	
10/27/2023	-Personnel excavated and repaired a leaking 1.5-inch water service line at 220 Executive Dr.	
10/27/2023	-The annual water distribution system leak detection survey was completed on October 26 th . Nineteen leaks were detected. Fourteen of the leaks are the responsibility of Cranberry Township to repair.	
11/07/2023	-Crew excavated and repaired a leak on the 6-inch main in front of 815 Timberwood Dr. in the Fox Run plan of homes. This service line was struck by the directional drilling crew working in the area.	
PA One-Calls	-Operations stopped receiving routine One-Call tickets (other than emergency after-hours) on October 16, 2023. Third party contractor began receiving tickets for locating on October 16.	
Flushing Program	-Due to State DEP Declaration, S&W Field Operations has suspended flushing as of this time. Seven weeks of flushing out of the thirteen scheduled have been completed.	
Curb Box Maintenance	-No operational issues.	
Hydrant Maintenance	-10/23- Crew repaired a leak on the hydrant at the intersection of Ogle View Rd. and Unionville Rd. near the round-a-bout. This leak was detected by the water distribution system leak detection survey crew. -10/25- Installed a new hydrant at 20808 Route 19. This hydrant was damaged in a vehicle accident. -11/01- Personnel repaired a leak on the hydrant near 271 Jefferson Ln. in the Traditions of America plan of homes. This leak was detected by the water distribution system leak detection survey crew.	
Valve Maintenance	-Issues resolved; program restart required.	
Monthly Utility Counts: October 2023	Meter Replacements: 9	Inspections (Water, Sewer & Development): 33
	TAPS: 0	Meter Installs: 26

BRUSH CREEK SEWAGE TREATMENT PLANT

Flow History

** Flow is in millions of gallons multiply x 1.0 Brush Creek Capacity 8.7 mgd Marshall Allocation .135 mg Purchased Water (West View) Annual allocation 4.150 MGD

NOTE: As of 7/9/2020 all flow data is based on Marshall Twp billing cycle and NOT monthly averages since billing is not based on a calendar month.

2023	12/8/22 -1/9/23	1/9/23-2/9/23	2/9/23-3/9/23	3/9/23-4/10/23	4/10/23-5/8/23	5/8/23-6/8/23	6/8/23-7/10/23	7/10/23-8/10/23	8/10/23-9/11/23	9/11/23-10/9/23	TO DATE
B.C.T.P. FLOW	129.711	132.773	106.815	123.043	100.74	94.940	111.604	98.57	111.6	84.7640	1094.56
DAILY AVG.	4.0530	4.2830	3.815	3.8450	3.5979	3.0630	3.4876	3.1800	3.4880	3.0270	35.8395
MARSHALL FLOW	22.526	23.662	19.896	21.021	17.251	16.513	17.984	16.701	19.505	15.727	190.786
DAILY AVG.	0.7039	0.7633	0.7106	0.6569	0.6112	0.5327	0.5620	0.5387	0.6095	0.5617	6.2505
NEW SEWICKLEY	0.353	0.272	0.246	0.291	0.277	0.306	0.323	0.328	0.338	0.259	2.993
DAILY AVG.	0.0110	0.0088	0.0088	0.0091	0.0099	0.0099	0.0100	0.0106	0.0110	0.0091	0.0982
RAIN FALL	2.79	2.84	2.27	1.95	2.94	.9	7.05	4.81	4.68	1.02	31.25
PURCHASED WATER	75.402	74.645	65.576	76.131	72.363	101.832	93.396	93.694	92.928	79.064	825.031
DAILY AVG.	2.356	2.408	2.342	2.379	2.584	3.284	2.919	3.022	2.904	2.824	2.702

2022	12/9-1/6/22	1/6/22-2/7/22	2/7/22-3/7/22	3/7/22-4/8/22	4/8/22-5/5/22	5/5/22-6/8/22	6/8/22-7/7/22	7/7/22-8/8/22	8/8/22-9/8/22	9/8/22-10/6/22	10/6/22-11/7/22	11/7/22-12/8/22
B.C.T.P. FLOW	122.499	126.136	138.835	134.762	115.835	140.809	107.708	109.676	110.422	96.1810	100.175	121.396
DAILY AVG.	4.3740	3.9420	4.958	4.2110	4.2900	4.1440	3.7140	3.4270	3.5620	3.4350	3.1304	3.9160
MARSHALL FLOW	24.089	25.748	28.338	23.582	19.576	22.307	18.288	19.118	19.592	16.750	18.304	21.844
DAILY AVG.	0.8603	0.8046	1.0207	0.7369	0.7250	0.6561	0.6306	0.5974	0.6320	0.5982	0.5720	0.7046
NEW SEWICKLEY	0.310	0.326	0.241	0.294	0.251	0.293	0.290	0.316	0.328	0.280	0.339	0.329
DAILY AVG.	0.0111	0.0102	0.0086	0.0092	0.0093	0.0086	0.0100	0.0099	0.0110	0.0100	0.0106	0.0106
RAIN FALL	4.47	3.75	4.56	3.62	4.01	7.33	4.65	5.84	5.04	2.72	2.04	5.0
PURCHASED WATER	62.339	77.364	67.024	76.310	65.179	92.296	89.578	97.305	84.574	73.673	78.617	73.66
DAILY AVG.	2.226	2.417	2.394	2.385	2.414	2.7146	3.0889	3.0401	2.728	2.631	2.457	2.376

NPDES Compliance History Report 2023

Brush Creek Water Pollution Control Facility

Parameter

Limit mg/L	CBOD 10/20*	Total	Ammonia Nitrogen 2/5*	Dissolved Oxygen 5 min	Phosphorus 2.0	Chlorine Residual 0.18	p H** standard units 6.0	Flow MG/D 8.73	Fecal Coliform 200/100* 2100/100*	Total Nitrogen M&R	Regulatory Compliance Y/N	
		Suspended solids 30										
January	< 2.0	< 2.0	< 0.03	8.09	0.8	0	6.8	8.8	4.402	<1.0	22	Y
February	< 2.0	< 2.0	< 0.03	8.44	0.88	0	6.9	7.3	3.523	<1.0	19.9	Y
March	< 2.0	< 2.0	< 0.03	8.18	0.7	0	6.8	7.3	3.885	<1.0	24.4	Y
April	< 2.0	< 2.0	< 0.03	6.68	0.79	0	6.8	7.4	3.262	<1.0	17.6	Y
May	< 2.0	< 2.0	< 0.03	7.8	1.16	0	6.9	7.4	3.335	<1.0	30.5	Y
June	< 2.0	< 2.0	< 0.03	7.33	1.38	0	6.9	7.3	2.987	<1.0	21.7	Y
July	< 2.0	< 2.0	< 0.03	6.89	1.43	0	7.0	7.4	3.498	<5.0	12.85	Y
August	< 2.0	< 2.0	< 0.03	6.28	1.36	0	6.7	7.5	3.593	<1.0	19.5	Y
September	< 2.0	< 2.0	< 0.03	7.43	1.23	0	6.7	7.5	2.977	<1.0	26.5	Y
October	< 2.0	< 2.0	< 0.03	7.36	1.28	0	6.5	7.5	3.063	<1.0	16.6	Y
November												Y
December												Y
Yearly Avg.	0.0	0.0	0.0	7.4	1.1	0.000	6.8	7.5	3.5	0.0	21.2	Y

* different limits during the summer and winter months (seasonal limits)

** Between 6.0 and 9.0 standard units

M&R - Monitor and Report only

NOTE: ALL DATA (INCLUDING FLOW) VALUES ARE MONTHLY AVERAGES AS REQUIRED BY PERMIT

Definitions:

Ammonia Nitrogen	Ammonia nitrogen (NH ₃ -N) is a measure for the amount of ammonia, a toxic pollutant often found in sewage. It can also be used as a measure of the health of water in natural bodies such as rivers or lakes and creeks.
Chlorine Residual	Chlorine is added to kill harmful bacteria, residual chlorine even at low concentrations, can be toxic to aquatic life and must be removed.
Dissolved Oxygen	The dissolved oxygen (DO) is oxygen that is dissolved in water. It is essential for the survival of fish & other aquatic organisms.
Fecal Coliform	Coliform bacteria generally originate in the intestines of warm-blooded animals. Large quantities of fecal coliform bacteria in water may indicate a higher risk of pathogens being present in the water.
Flow	Average Daily Flow is the average of 24-hour volumes to be received by the wastewater system for a continuous 12-month period. Treatment plants are designed to operate at a certain hydraulic capacity
pH	pH is measured by a logarithmic scale from 0-14. If the pH of water is too high or too low, the aquatic organisms living within it will die the majority of aquatic life prefer a pH range of 6.5-9.0.
Phosphorus	Phosphorus removal is vital to ensuring public safety and protecting the environment. Removal of this nutrient from waste streams is key to preventing eutrophication – a natural process inciting algae blooms.
Seasonal Limits	Recreational water quality criteria that provides an appropriate level of protection or those recreating in Pennsylvania's surface waters.
Total Suspended solids	Total suspended solids are any particles that floats or "suspends" in water, including sand, sediment, or organic matter. High solids entering a receiving water may decrease water's natural dissolved oxygen levels and increase water temperature.
Total Nitrogen	Nitrogen is found in human waste, foods, cleaning detergents and discharges from industrial and commercial sources. Urea/urine is the largest source of nitrogen in residential wastewater. Nitrogen is a nutrient and can cause algae blooms.

Backflow Program

Program Start Date: 2/7/2022

Compliance Percentage: 42.14

Total # of Devices: 1495

Total Tests Performed: 630

Total Tests Passed: 607

Water/Sewer/Storm (CA1) One Call Utility Locates

Last 30 Days

Tickets Closed: 172

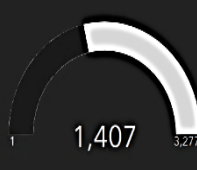
Design: 1

Emergency: 2

Locate CA1: 180

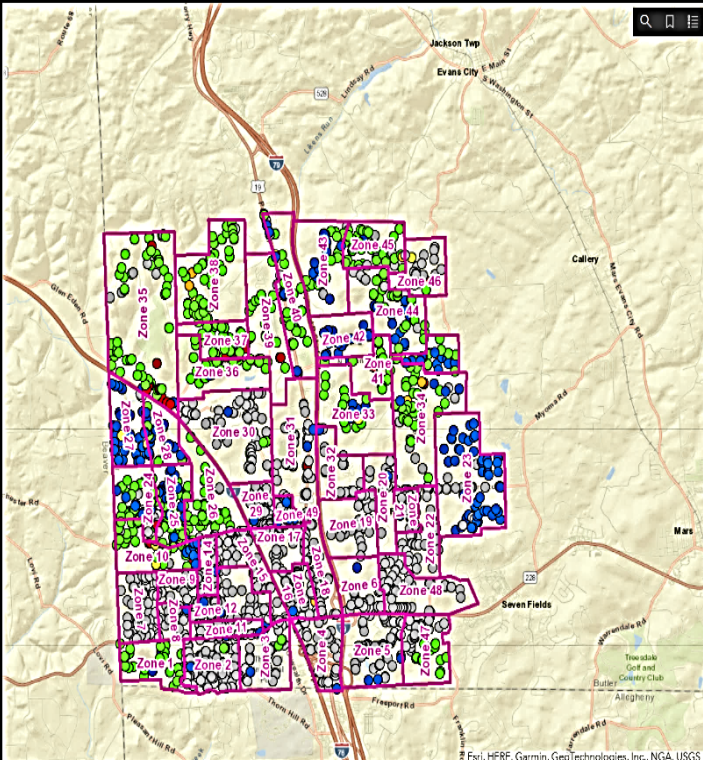
Isolation Valve Operation Status

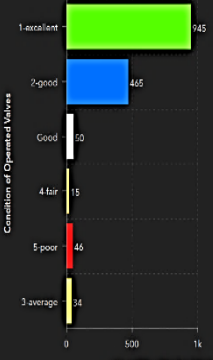
Isolation Valve Operation Status - 1/13/2020 through 1/14/2023



1,407 / 3,277

Valves Operated
Last update: a few seconds ago

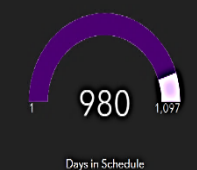




1-excellent 945
2-good 466
Good 50
4-fair 15
5-poor 46
3-average 34

Last update: a few seconds ago

43% Work Complete
Last update: a few seconds ago



980 / 1,097

Days in Schedule
Last update: a few seconds ago

89% Schedule Complete
Last update: a few seconds ago

107 Open Munis Work orders
Last update: a few seconds ago

- SysV4780 in Zone 40
Munis WO: 328237
- SysV1760 in Zone 34
Munis WO: 329937
- SysV2861 in Zone 34
Munis WO: 329943
- SysV2863 in Zone 34
Munis WO: 329944
- SysV2866 in Zone 34
Munis WO: 329945
- SysV5501 in Zone 34
Munis WO: 329947
- SysV10103 in Zone 23
Munis WO: 333906
- SysV2895 in Zone 23
Munis WO: 333945
- SysV2896 in Zone 23
Munis WO: 333946
- SysV2897 in Zone 23
Munis WO: 333947
- SysV2898 in Zone 23
Munis WO: 333948
- SysV2902 in Zone 23
Munis WO: 333949
- SysV2904 in Zone 23
Munis WO: 333950
- SysV2906 in Zone 23
Munis WO: 333951
- SysV2907 in Zone 23
Munis WO: 333952

Latest Operated Valves

- SysV2667, 4/27/2022
- SysV2037, 11/10/2021
- SysV2044, 11/10/2021
- SysV2048, 11/10/2021
- SysV2050, 11/10/2021
- SysV13804, 11/10/2021
- SysV13015, 11/10/2021
- SysV2570, 11/3/2021

Last update: a few seconds ago