



UTILITIES DEPARTMENT

MONTHLY ACTIVITY REPORT

SEPTEMBER 2023

BCWWTP	
10/9/2023	-Plant staff winterized the primary clarifier misting system.
Franklin Acres Pump Station	-No operational issues.
Briar Creek Pump Station	-No operational issues.
Wolfe Run Pump Station	-9/25-Operators installed a rebuild grinder.
Laurel Point Lift Station	-10/5-Staff worked with Streets Dept. to install bollards around building and pump house. -10/6-Operators insulated roll door and reinstalled driveway markers. -10/10-Installed conduit and wiring for rain gauge and man door motion switch.
Water Supply	-9/27-Plant staff rebuilt West and North tank chlorine pumps.
**Commonly Used Acronyms	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: Uninterruptible Power Supply.
PRETREATMENT	
Industrial Users	-Fresenius-Kabi is sampling for 3 consecutive months to establish an analytical baseline.
Incoming FOG Users	-Cenci's Pizza (New Building)- Grease Interceptor Installed. - Pizza IQ-Open.
Existing FOG Maintenance	-Performing FOG permit renewal inspections. -Site visits for "Non-compliant" and "No Pump Outs" FOG user. -12 Establishments are non-compliant with their pump out schedule.
Flow Metering	-46 SmartCover Flow Monitors are installed on the interceptors and sub-basins. -Monitoring shows high inflow and infiltration in Cranberry Village.
Manhole Assessment Program	-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.
Sewer Repair & Maint.	-No operational issues.
Force Main	-No operational issues.
Inflow & Infiltration (I&I)	-No operational issues.
Miscellaneous	-Two (2) new employees reported to work for the vacant laborer positions in Sewer & Water: James Hohman on 10/9/2023 and Josh DeNardo on 10/16/2023.

WATER DISTRIBUTION		
9/14/2023	-Field personnel excavated and repaired a leaking 3/4" water service line at 707 Skyview Dr. in the Fox Run plan of homes. This service line was struck by the directional drilling crew working in the area.	
9/20/2023	-Personnel repaired a 3/4" service line at 214 East commons Dr. in the Pineridge apartment complex. The line was struck by the contractor installing the water main for the Township.	
9/21/2023	-Crew assisted contractor with a solution to a leaking one-inch service tap in the Pineridge complex, corporation stop was leaking. The contractor was installing new service taps as part of the Pineridge water line replacement project.	
9/26/2023	-Repaired a leak on the eight-inch water main at the intersection of Bayberry Ln. and St. Phillips Ct. in the Manor Creek Farms plan of homes. The water main was struck by the directional drilling crew working in the area.	
9/27/2023	-Personnel excavated and repaired a leak on the eight-inch water main near 16 pin Oak Ct. in the Clearbrook plan of homes.	
9/27/2023	-Excavated and repaired a leaking 3/4" water service line at 205 Kirkwood Dr. in the Woodlands plan of homes. This service line was struck by the directional drilling crew working in the area.	
10/02/2023	-Personnel along with subcontractor Municipal Management began the annual water distribution system leak detection survey. As of this time, five hydrants have been found leaking with four repaired, two service line leaks, one Township's responsibility for repair, one property owners.	
10/03/2023	-Excavated and repaired a leaking 3/4" water service line at 134 Bayberry Ln. in the Manor Creek Farms plan of homes. This service line was struck by the directional drilling crew working in the area.	
10/04/2023	-Crew excavated and repaired a leak on the six-inch water main along Mystic Pine Trl. near 100 Valley Forge Dr. in the Freedom Woods plan of homes.	
10/05/2023	-Field personnel excavated and repaired a leaking 3/4" water service line at 302 Larkwood Ct. in the Creekwood plan of homes.	
10/10/2023	-Personnel excavated and repaired a leaking 3/4" water service line at 814 Timberwood Dr. in the Fox Run plan of homes. This service line was struck by the directional drilling crew working in the area.	
10/12/2023	-Excavated and repaired a leaking 3/4" water service line at 329 Haldeman Dr. in the Clearbrook plan of homes. This service line was struck by the directional drilling crew working in the area.	
PA One-Calls	-During the months of September & October, Pa One-Call tickets have been arriving at a pace greater than what S&W Field personnel can complete within the legal time restraints. An alternate plan is in the works with a subcontractor.	
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	- No operational issues.	
Valve Maintenance	-Issues resolved; program restart required.	
Monthly Utility Counts: September 2023	Meter Replacements: 8	Inspections (Water, Sewer & Development): 23
	TAPS: 11	Meter Installs: 14

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												Y
November												Y
December												Y
Yearly Avg.	0.0	0.0	0.0	7.5	1.1	0.000	6.8	7.5	3.5	0.0	21.7	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: 42.09

Total # of Devices: 1492

Total Tests Performed: 628

Total Tests Passed: 605

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

Last 30 Days

Tickets Closed: 226

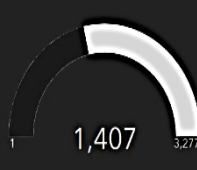
Design: 10

Emergency: 33

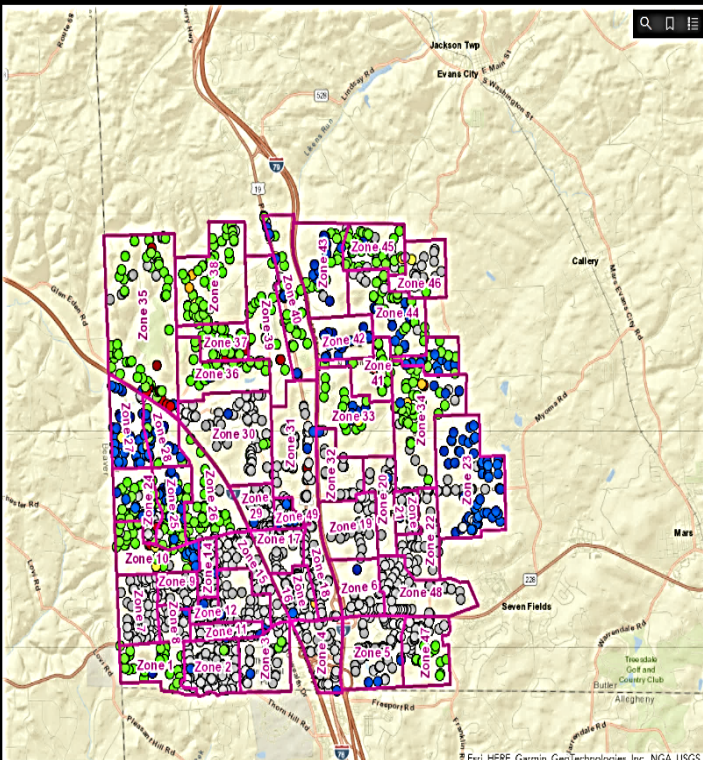
Locate CA1: 890

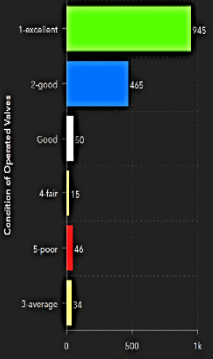
Isolation Valve Operation Status

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



Valves Operated
Last update: a few seconds ago

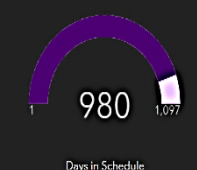




Commitment of Operated Valves

43%
Work Complete

Last update: a few seconds ago



Days in Schedule
Last update: a few seconds ago

107
Open Munis Work orders

Last update: a few seconds ago

89%
Schedule Complete

Last update: a few seconds ago

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

- 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