



UTILITIES DEPARTMENT

MONTHLY ACTIVITY REPORT

DECEMBER 2022

BCWWTP	
11/18/2022	-Operators completed annual PM on primary clarifiers 3&4.
11/09/2022	-Plant staff installed new hot water heater in dewatering building.
11/10/2022	-Staff removed golf course irrigation pump #2 for scheduled PM.
11/14/2022	-Plant operators replaced batteries in both Franklin Acres and Wolf Run generators.
11/15/2022	-Completed inspection of all odor control and process water heat tracing.
11/25/2022	-Staff troubleshoot and repaired chlorine contact tank OTP control system.
11/28/2022	-Operators troubleshoot and repaired reaeration tank ORP controller display.
12/06/2022	-Plant staff replaced old incandescent lights in ATAD MCC room and Headworks' Pipe Gallery with more efficient LED's.
12/25/2022	-Abnormally cold temperatures prompted staff to thaw out the scum and grease tank drain line and ATAD Feed Valve 2B.
12/25/2022	-The heating system in the Master Control Building was not heating properly. The vendor was contacted, and a service call was scheduled to resolve the issue.
1/5/2023	-Plant staff replaced diaphragm on Ferric Pump #1.
Franklin Acres Pump Station	-11/28/22- Plant staff removed pump #2 for repairs, the lower bearing housing was bad and needs to be machined. -12/9/22- Operators worked with Xylem to install a temporary diesel pump for wet weather vents while Pump #2 is being repaired.
Briar Creek Pump Station	-11/25/22- Operators troubleshoot and repaired flow totalizer. -01/07/23- Operators troubleshoot/replaced faulty level transducer.
Wolfe Run Pump Station	-No operational issues.
Laurel Point Lift Station	-12/24/22- Both electric and diesel pump suction lines froze. Operators utilized torches and torpedo heaters to thaw out the lines. A technician from the pump manufacturer responded to assist. The electric pump was placed into hand mode to try and keep line from freezing.
Water Supply	-12/24/22- Operators troubleshoot a frozen pressure gauge line at the North Tank. The frozen line was causing the level to be incorrect.
**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
PRETREATMENT	
Industrial Users	-No issues with Industrial Users -Annual inspections and analytical testing have been completed. -Fresenius Kabi is a new Industrial User. An initial inspection took place, and a permit has been drafted.
Incoming FOG Users	-Sunbelt Rentals. -Henry's Meat Market. -Sheetz – 1665 Rt. 228. -Capriotti's Sandwich Shop.
Existing FOG Maintenance	-Performing FOG permit renewal inspections. -Site visits for "Non-compliant" and "No Pump Outs" FOG user. -14 establishments are non-compliant with their pump out schedule.

PRETREATMENT CONT...		
Flow Metering	-SmartCover-24 SmartCover Flow Monitors are installed on the interceptors and sub-basins.	
Manhole Assessment Program	-Phase 2 (sub-basin manholes) -Inspection of Interceptor 14 sub-basins completed. -Inspection of Interceptor 13 sub-basins 86% complete. -Inspection of Interceptor 3 sub-basins 39% complete. -Inspection of Interceptor 15 sub-basins 15% complete. -Inspection of Interceptor 4 sub-basins 30% complete. -Inspection of Interceptor 5 sub-basins 54% complete. -Collection system 37% complete.	
Sewer Repair & Maint.	-A sewer lateral located in the road right-of-way at 8 Dover Drive was found damaged and repaired by the Sewer & Water Crew.	
Force Main	-No operational issues.	
Inflow & Infiltration (I&I)	-Fox Run Drive is being investigated for I&I with 4 SmartCover flow monitoring units installed in the plan.	
WATER DISTRIBUTION		
11/10/2022	-Personnel excavated and repaired a leak on the 6” water main leak near 11 Rolling Rd. in the Sun Valley plan of homes.	
11/16/2022	-Excavated and repaired a leak on the 6” water main near 110 Wisconsin Ave. (Rochester Village/Rite-Aid).	
11/23/2022	-Crew excavated and replaced a malfunctioning water service valve (curb stop) at 120 Robinhood Dr. in the Fernway plan of homes.	
12/7/2022	-Personnel excavated and repaired a leak on the 1.5” copper loop around the cul-de-sac at 319 Winchester Ct. in the Crossing plan of homes. This leak was detected during the annual water distribution system leak detection program.	
12/12/2022	-Excavated and repaired a leak on the 1.5” copper loop around the cul-de-sac at 317 Winchester Ct. in the Crossing plan of homes. This leak was detected during the annual water distribution system leak detection program.	
12/21/2022	-Installed a 1” water sampling station along Tuscarora Dr. in the Park Place Development.	
12/27/2022	-Personnel excavated and repaired a leak on an 8” water main near 105 LaPorte Dr. in the Sun Valley plan of homes.	
12/31/2022	-Crew excavated and repaired leak on the 6” water main leak near 151 McDonald Dr. in the Cranberry Estates plan of homes. -Excavated and repaired a leak on the 1” water service crossing at 324 Caledonia Pl. in the Park Place development.	
01/01/2023	-Excavated and repaired leak on the 6” water main leak near 151 McDonald Dr. in the Cranberry Estates plan of homes.	
01/10/2023	-Personnel excavated and replaced a malfunctioning service termination valve (curb stop) at 118 LaPorte Dr. in the Sun Valley plan of homes.	
01/17/2023	-Crew excavated and replaced a collapsed 4” sewer lateral at 91 Robinhood Dr. in the Fernway plan of homes.	
01/18/2023	-Personnel excavated and repaired leak on the 1.5” copper loop near 402 Lehigh Dr. in the Manorline plan of homes.	
Flushing Program	-No operational issues.	
Curb Box Maintenance	-Excavated and repaired multiple service curb boxes and main line valve boxes throughout the water distribution system during the months of November & December 2022.	
Hydrant Maintenance	-Personnel excavated and replaced a hydrant along Autumn Hill Dr. near the intersection with Auburn Hill Ct. This hydrant was struck by a Vehicle. -Performed routine maintenance and minor repairs on multiple hydrants throughout the water distribution system in November & December 2022.	
Valve Maintenance	-Equipment Warranty Issue - Resolution Target 2/6/2023.	
Monthly Utility Counts: December 2022	Meter Replacements: 9	Inspections (Water, Sewer & Development): 15
	TAPS: 4	Meter Installs: 10

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											
B.C.T.P. FLOW	129.711											
DAILY AVG.	4.0530											
MARSHALL FLOW	22.526											
DAILY AVG.	0.7039											
NEW SEWICKLEY	0.353											
DAILY AVG.	0.0110											
RAIN FALL	2.79											
PURCHASED WATER	75.402											
DAILY AVG.	2.356											

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 2022

Brush Creek Water Pollution Control Facility

Parameter

Limit mg/L		Total					Chlorine Residual	p H**		Flow MG/D	Fecal	Total Nitrogen M&R	Regulatory Compliance
		Suspended	Ammonia	Dissolved	Phosphorus	standard units		Coliform					
		solids	Nitrogen	Oxygen				200/100*					
	CBOD												
	10/20*	30	2/5*	5 min	2.0	0.18	6.0	9.0	8.73	2100/100*		Y/N	
	January	< 2.0	<2.0	0.49	6.84	1.12	0	6.9	7.3	3.747	<1.0	14.5	Y
	February	< 2.0	<2.0	0.45	6.3	0.41	0	6.9	7.3	5.023	<1.0	10.9	Y
	March	< 2.0	<2.0	0.62	6.57	0.68	0	7	7.2	3.987	<1.0	16.1	Y
	April	< 2.0	<2.0	0.48	5.55	0.83	0	6.8	7.2	4.068	<1.0	15.8	Y
	May	< 2.0	<2.0	0.15	7.54	0.84	0	6.7	7.4	4.171	<1.0	16.9	Y
	June	< 2.0	<2.0	0.03	7.45	1.64	0	6.8	7.5	3.581	<1.0	20.2	Y
	July	< 2.0	< 2.0	0.03	7.73	1.57	0	7.0	7.6	3.308	<3.0	20.9	Y
	August	< 2.0	< 2.0	0.03	5.58	1.31	0	6.9	7.6	3.323	<1.0	24	Y
	September	< 2.0	< 2.0	0.03	5.64	1.37	0	6.9	7.4	3.526	<1.0	18.4	Y
	October	< 2.0	< 2.0	0.03	7.5	1.49	0	6.9	7.4	3.047	<1.0	23.5	Y
	November	< 2.0	< 2.0	0.03	4.5	1.01	0	6.7	7.3	3.639	<1.0	21.3	Y
	December	< 2.0	< 2.0	0.03	8.3	0.9	0	6.7	7.3	3.766	<1.0	18.4	Y
	Yearly Avg.	0.0	0.0	0.2	6.6	1.1	0.000	6.9	7.4	3.8	0.0	18.4	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: 22.87%



Total # of Devices
1430



Total Tests Performed
327



Total Tests Passed
317

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

Last 30 Days

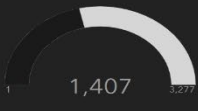
Tickets Closed: 119

Design: 3

Emergency: 14

Locate CA1: 46

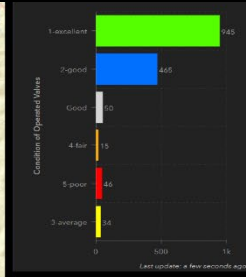
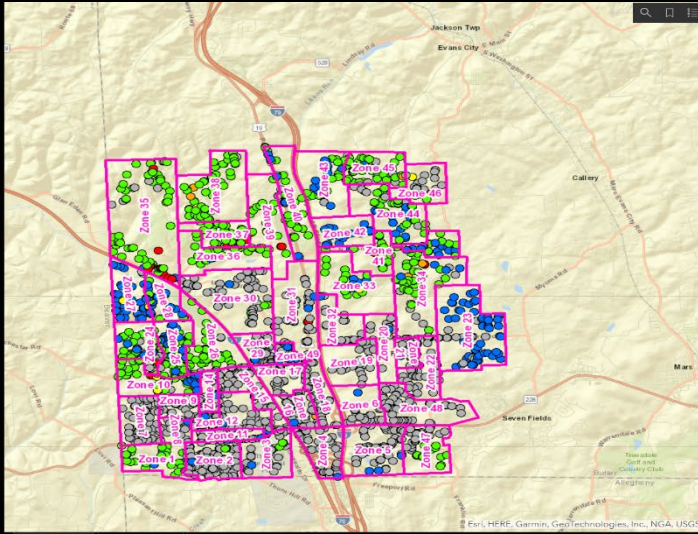
Isolation Valve Operation Status



43%
Work Complete
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
- 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
- Last update: a few seconds ago

Sanitary Manhole Inspection

Sanitary Manhole Inspection 9/24/2021 to 9/24/2024

Interceptor Entire System



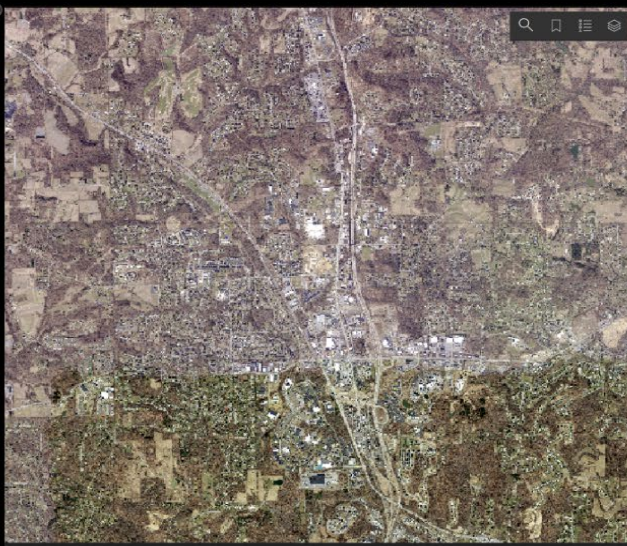
Manholes Inspected
per Selection
Last update: a minute ago

32%
Work Complete
Last update: a few seconds ago



Days In Schedule
Last update: a minute ago

37.6%
Last update: a few seconds ago



Not fully configured

Latest Inspected
Manholes
per Selection

- Interceptor04, MH10457, 10/25/2022
 - Interceptor04, MH10423, 10/25/2022
 - Interceptor04, MH10124, 10/25/2022
 - Interceptor04, MH10079, 10/25/2022
- Last update: a minute ago

of manholes
Inspected
Per Interceptor

