



# UTILITIES DEPARTMENT

## MONTHLY ACTIVITY REPORT

### OCTOBER 2022

<b>BCWWTP</b>	
<b>9/18/2022</b>	-All membrane trains went into alarm and shut down, operators troubleshot the system and found a broken airline on train four. The system was isolated and repairs to the line were made.
<b>9/24/2022</b>	-Operators replaced a bad second stage sump pump at the dewatering odor scrubber.
<b>9/28/2022</b>	-Plant Staff replaced all wear shoes on the grit classifier, as well as, replacing an output bearing and performing scheduled routine maintenance.
<b>10/8/2022</b>	-At 8:30p.m. operators were alerted of a wet well level alarm, upon arrival a problem with pump 126 was discovered. It was taken out of service until it could be further inspected.
<b>Franklin Acres Pump Station</b>	-9/20-Staff responded to an excessive flow alarm at <b>FAPS</b> . No rainfall had occurred to cause such an alarm. Upon arrival, operators found rags bridging between the high-water level floats. -10/8-Staff responded again to an alarm on pump #1. An air leak in the vacuum pump system was the cause.
<b>Briar Creek Pump Station</b>	-No operational issues.
<b>Wolfe Run Pump Station</b>	-10/5-Plant staff reinstalled and rebuilt pump #1.
<b>Laurel Point Lift Station</b>	-No operational issues.
<b>Water Supply</b>	-No operational issues.
<b>**Commonly Used Acronyms</b>	<b>IPS:</b> Influent Pump Station, <b>EPS:</b> Effluent Pump Station, <b>RDT:</b> Rotating Drum Thickener, <b>ATAD:</b> Autothermal Thermophilic Aerobic Digestion, <b>FOG:</b> Fats, Oils and Grease, <b>OCV:</b> Automatic Control Valve, <b>NASSC:</b> National Association of Sewer Service Companies, <b>BOD:</b> Biochemical Oxygen Demand, <b>RAS:</b> Return Activated Sludge, <b>MBR:</b> Membrane Bioreactors, <b>UPS:</b> Uninterruptible Power Supply, <b>FAPS:</b> Franklin Acres Pump Station, <b>WRPS:</b> Wolfe Run Pump Station, <b>BCTP:</b> Brush Creek Treatment Plant <b>POTW:</b> Publicly owned treatment works.
<b>PRETREATMENT</b>	
<b>Industrial Users</b>	-No operational issues. -Annual sampling to take place next month.
<b>Incoming FOG Users</b>	-Sunbelt Rentals. -Henry's Meat Market -Sankalp Restaurant. -Condado Taco. -Sheetz – 1665 Rt. 228. -Mintt Pizza (formerly Pizza Palermo). -Maxine's Coffee. -Capriotti's Sandwich Shop.
<b>Existing FOG Maintenance</b>	-Performing <b>FOG</b> permit renewal inspections. -Site visits for "Non-compliant" and "No Pump Outs" <b>FOG</b> user. -11 users are non-compliant with their pump out schedule.
<b>Flow Metering</b>	-14 SmartCover Flow Monitors are installed on the interceptors. -4 SmartCover units are installed in the Fox Run Plan.
<b>Manhole Assessment Program</b>	-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 14% complete. -Inspection of Interceptor 4 sub-basins 18% complete. -Inspection of Interceptor 5 sub-basins 54% complete. -Collection system 32% complete.
<b>Sewer Repair &amp; Maint.</b>	-1 manhole raised.

PRETREATMENT CONT...		
Force Main	-2 Air reliefs were changed out for preventative maintenance.	
Inflow & Infiltration (I&I)	-Fox Run Dr. is being investigated for I&I.	
WATER DISTRIBUTION		
9/22/2022	-Excavated/repared a leaking 3/4" water service road crossing at 101 Preserve Valley Dr. in the Preserve plan of homes. This leak was detected during the annual water distribution system leak detection program.	
9/28/2022	-Personnel excavated/repared a leak on the 1.5" copper loop around the cul-de-sac at 318 Winchester Ct. in the Crossing plan of homes. This leak was detected during the annual water distribution system leak detection program.	
10/01/2022	-Crew excavated/repared a leak on a 6" valve near 1628 Rt. 228 (Red Robin).	
10/03/2022	-Excavated/repared a leaking 1" water service road crossing at 8038 Maureen Dr. in the Marshall Heights plan of homes. This leak was detected during the annual water distribution system leak detection program.	
10/04/2022	-Field personnel excavated/repared 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.	
10/05/2022	-Excavated/repared a leaking 3/4" water service road crossing at 200 Chadwick Tr. in the Cranberry Heights plan of homes. This leak was detected during the annual water distribution system leak detection program.	
10/09/2022	-Personnel excavated/repared a leak on the 6" water main in front of 825 Timberwood Dr. in the Fox Run plan of homes.	
10/10/2022	-Crew excavated/repared a leaking 3/4" water service road crossing at 207 Cashmere Dr. in the Shadow Creek plan of homes. This leak was detected during the annual water distribution system leak detection program.	
10/11/2022	- Excavated/repared a leaking 3/4" water service road crossing at 101 Preserve Valley Dr. in the Preserve plan of homes. This leak was detected during the annual water distribution system leak detection program.	
10/11/2022	-The annual water distribution system leak detection program finished up on this day identifying three (3) water main leaks, six (6) hydrant leaks, eleven (11) service line leaks and six (6) customer leaks.	
10/12/2022	-Crew excavated/repared a leak on the 3/4" service tap at 301 Leatherbark Rd. in the Creekwood plan of homes. This leak was detected during the annual water distribution system leak detection program.	
10/17/2022	-Personnel excavated/repared a leaking 3/4" water service road crossing at 202 Boardwalk Dr. in the Park Place plan of homes. This leak was detected during the annual water distribution system leak detection program.	
10/18/2022	-Excavated/repared a leaking 3/4" water service road crossing at 341 Wealdstone Rd. in the BelleVue Park plan of homes. This leak was detected during the annual water distribution system leak detection program.	
Flushing Program	-9/29-Excavated/repared the water blow-off assembly near 10 Pin Oak Ct. in the Clearbrook plan of homes.	
Curb Box Maintenance	-No operational issues.	
Hydrant Maintenance	-9/20-Repaired a leaking hydrant near 1298 Freedom Rd. This leak water detected during the annual water distribution system leak detection program. -9/21-Personnel repaired a leaking hydrant near 112 Wiegand Rd. This leak water detected during the annual water distribution system leak detection program. -9/26-Excavated/replaced a malfunctioning hydrant near 226 & 228 Old Farm Rd. in the Fox Run plan of homes. This hydrant was found leaking during the annual water distribution system leak detection program.	
Valve Maintenance	-On hold, equipment issues.	
Monthly Utility Counts: September 2022	Meter Replacements: 3	Inspections (Water, Sewer & Development): 32
	TAPS: 1	Meter Installs: 15

## BRUSH CREEK SEWAGE TREATMENT PLANT

## Flow History

\*\* Flow is in millions of gallons multiply x 1,000,000      Brush Creek Capacity 8.7 mgd Marshall Allocation 1.35 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.**

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	TO DATE
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	1202.863
DAILY AVG.	4.3740	3.9420	4.958	4.2110	4.2900	4.1440	3.7140	3.4270	3.5620	3.4350	40.057
MARSHALL FLOW	24.089	25.748	28.338	23.582	19.576	22.307	18.288	19.118	19.592	16.750	217.388
DAILY AVG.	0.8603	0.8046	1.0207	0.7369	0.7250	0.6561	0.6306	0.5974	0.6320	0.5982	7.2618
NEW SEWICKLEY	0.310	0.326	0.241	0.294	0.251	0.293	0.290	0.316	0.328	0.280	2.929
DAILY AVG.	0.0111	0.0102	0.0086	0.0092	0.0093	0.0086	0.0100	0.0099	0.0110	0.0100	0.0979
RAIN FALL	4.47	3.75	4.56	3.62	4.01	7.33	4.65	5.84	5.04	2.72	45.99
PURCHASED WATER	62.339	77.364	67.024	76.310	65.179	92.296	89.578	97.305	84.574	73.673	785.642
DAILY AVG.	2.226	2.417	2.394	2.385	2.414	2.7146	3.0889	3.0401	2.728	2.631	2.604

2021	2/10-1/11/21	1/11-2/8/21	2/8-3/8/21	3/8-4/8/21	4/8-5/12/21	5/12-6/9/21	6/9-7/8/21	7/8-8/9/21	8/9-9/9/21	9/9-10/11/21	10/11-11/0/21	11/0-12/9/21	TO DATE
B.C.T.P. FLOW	140.664	99.09	117.027	122.558	137.075	99	105.227	108.496	134.625	100.5940	98.271	103.574	1366.693
DAILY AVG.	4.3960	3.5390	4.179	3.9470	4.0316	3.4310	3.6281	3.3905	4.3430	3.1440	3.5100	3.3410	44.8802
MARSHALL FLOW	27.620	19.812	23.451	23.821	25.6	19.237	19.062	20.871	26.806	20.579	18.959	32.86	278.678
DAILY AVG.	0.8631	0.7076	0.8375	0.7684	0.7528	0.6870	0.6573	0.6522	0.8650	0.6431	0.5309	1.0600	9.0249
NEW SEWICKLEY	0.263	0.207	0.214	0.250	0.298	0.243	0.162	0.191	0.187	0.180	0.296	0.335	2.826
DAILY AVG.	0.0082	0.0074	0.0076	0.0081	0.0087	0.0087	0.0056	0.0060	0.0060	0.0056	0.1057	0.1080	0.2856
RAIN FALL	3.85	1.24	0.95	2.78	5	2.89	5.48	4.4	7.77	2.63	3.16	1.7	42.22
PURCHASED WATER	74.578	70.844	68.448	73.484	87.059	78.983	87.134	89.703	82.502	81.843	64.65	65.65	924.878
DAILY AVG.	2.330	2.285	2.444	2.37	2.561	2.723	2.904	2.718	2.661	2.558	2.309	2.117	2.498

## NPDES Compliance History Report 2022

## Brush Creek Water Pollution Control Facility

Limit mg/L	Parameter										Total Nitrogen	Regulatory Compliance
	Total Suspended Solids		Ammonia Nitrogen	Dissolved Oxygen	Phosphorus	Chlorine Residual	p H**		Flow	Fecal Coliform		
	CBOD	solids					standard units		MG/D	200/100*	M&R	Y/N
	10/20*	30	2/5*	5 min	2.0	0.18	6.0	9.0	8.73	2100/100*		
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												
November												
December												
Yearly Avg.	0.0	0.0	0.3	6.6	1.1	0.000	6.9	7.4	3.9	0.0	17.5	

\* 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:

<b>Ammonia Nitrogen</b>	Ammonia nitrogen (NH <sub>3</sub> -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.
<b>Chlorine Residual</b>	Chlorine is added to kill harmful bacteria, residual chlorine even at low concentrations, can be toxic to aquatic life and must be removed.
<b>Dissolved Oxygen</b>	The dissolved oxygen (DO) is oxygen that is dissolved in water. It is essential for the survival of fish & other aquatic organisms
<b>Fecal Coliform</b>	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.
<b>Flow</b>	Average Daily Flow is the average of 24-hour volumes to be received by the wastewater system for a continuous 12-month
<b>pH</b>	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.
<b>Phosphorus</b>	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.
<b>Seasonal Limits</b>	Recreational water quality criteria that provides an appropriate level of protection or those recreating in Pennsylvania's surface waters.
<b>Total Suspended solids</b>	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.
<b>Total Nitrogen</b>	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.



# UTILITIES AT A GLANCE

## OCTOBER 2022

### Backflow Program

Program Start Date: 2/7/2022

Compliance Percentage: 6.48%



Total # of Devices  
**1426**



Total Tests Performed  
**220**



Total Tests Passed  
**217**

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

Last 30 Days

Tickets Closed: 362

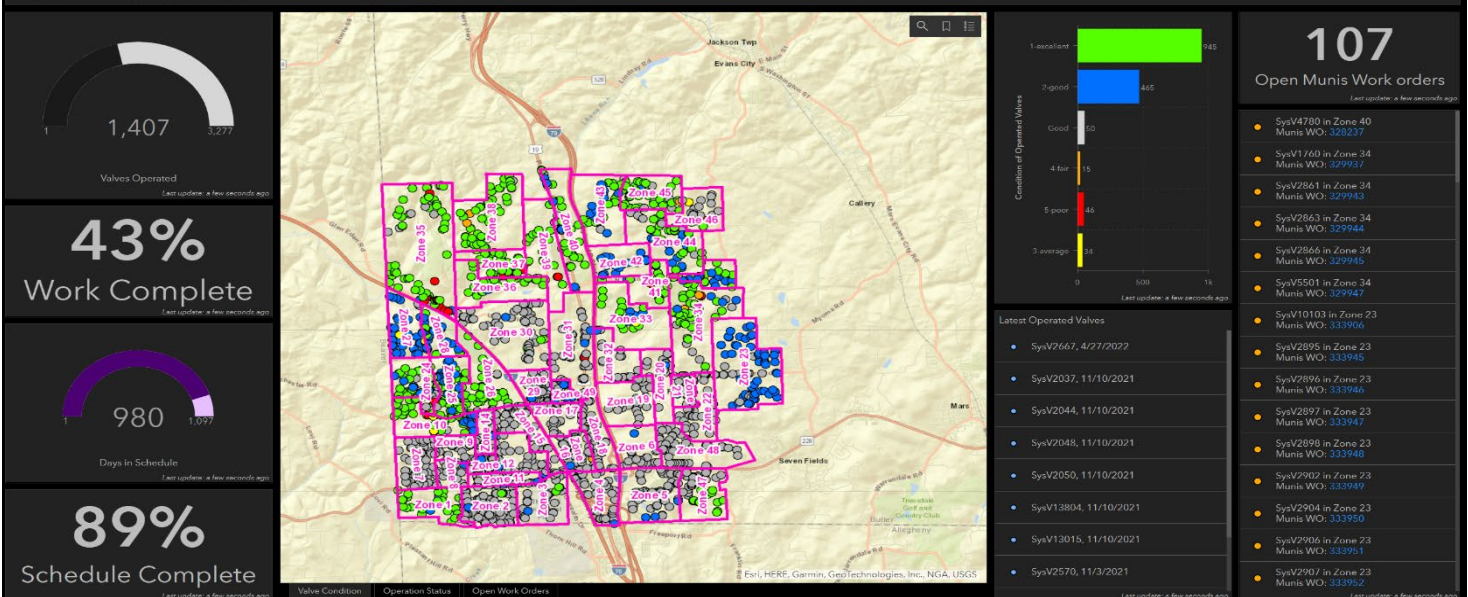
Design: 5

Emergency: 22

Locate CA1: 170

### Isolation Valve Operation Status

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



### Sanitary Manhole Inspection

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

Interceptor Entire System

