



UTILITIES DEPARTMENT

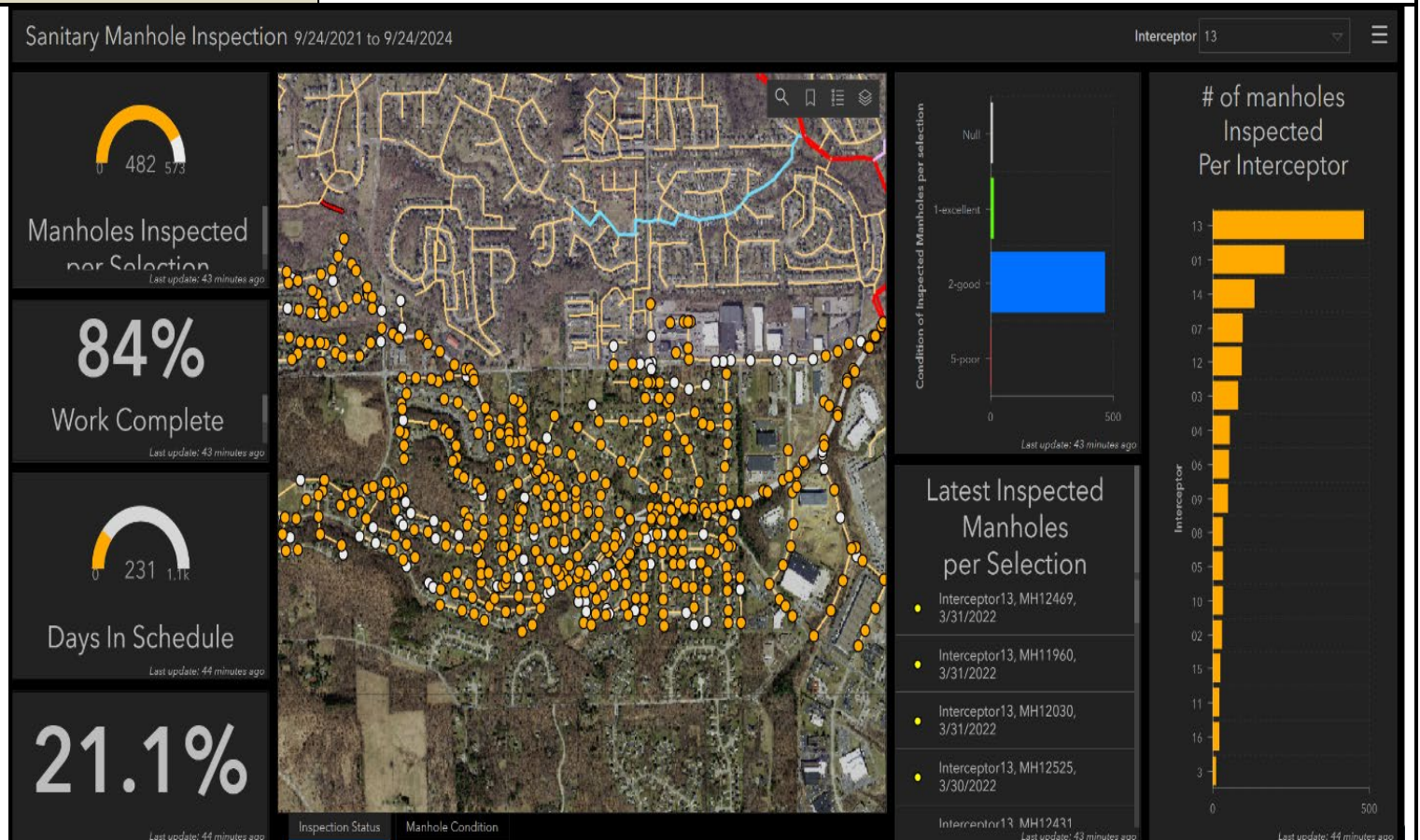
MONTHLY ACTIVITY REPORT

MAY 2022

BCTP	
4/20-21/2022	-Staff completed a 2-day hands on course for electrical safety and troubleshooting.
4/22/2022	-Operators completed annual inspection and audit of the five chemical scrubbers. Only minor repairs were made, such as piping, leaks, and replacing 3 pH probes.
4/25/2022	-Initiated new biosolids disposal contract with Vogel.
4/25/2022	-Installed new piping in scum and grease tank to improve contents mixing and unclogged feed line.
4/28/2022	-Acid flushed caustic feed line to primary clarifiers to ensure good pH control to bioreactors.
5/02/2022	-Inspected, cleaned, and repaired diffuser piping in bioreactor #3.
5/04/2022	-Transferred contents from bioreactor 1 to 3. Reactor #1 was cleaned, inspected, and repairs to several frozen mud valves were made.
5/06/2022	-A rainfall event prompted staff to operate the plant from 7:00 a.m. through 5:00 p.m. Saturday (total rainfall 2.34 inches).
Franklin Acres Pump Station	-4/21- at 11:00 p.m., The auto dialer alerted staff of both pumps running alarms at FAPS . No rainfall had occurred to trigger the alert. Staff responded and found pump #1 running but not pumping. It was taken out of service and was troubleshot the following day.
Briar Creek Pump Station	-No operational issues.
Wolfe Run Pump Station	-4/15 – At 7p.m. the auto dialer alerted staff of a power loss at the Wolfe run pump station.
Laurel Point Lift Station	-No operational issues.
Water Supply	-No operational issues.
**Commonly Used Acronyms	IPS: Influent Pump Station, EPS: Effluent Pump Station, RDT: Rotating Drum Thickener, ATAD: Autothermal Thermophilic Aerobic Digestion, 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.
PRETREATMENT	
IPP Program Submittal	-EPA's approval letter for the Pretreatment Program was received on March 15th.
Industrial Users	-No operational issues.
Incoming FOG Users	- Sunbelt Rentals -The Good Slice/Sim Clubz – formerly Quaker Steak & Lube -Henry's Meat Market – Butcher shop in planning stage -Sankalp Restaurant -Condado Taco -Sheetz – 1665 Rt 228.
Existing FOG Maintenance	-Performing FOG permit renewal inspections. -Site visits for “Non-compliant” and “No Pump Outs” FOG user. -10 users are non-compliant with their pump out schedule.
Flow Metering	-Sub-basin I14S14A identified as area with high I&I. Sub-basin will be smoke & dye tested along with 4 other sub-basins. -SmartCover – demo of collection system flow monitoring technology completed. Recommendation for Capital purchase.

PRETREATMENT CONT...

Manhole Assessment Program	<ul style="list-style-type: none"> -Phase 2 (sub-basin manholes). -Inspection of Interceptor 14 sub-basins completed. -Inspection of Interceptor 13 sub-basins 84% complete. -Collection system 25% complete.
Sewer Flow Meters	<ul style="list-style-type: none"> -202 Kirkwood Dr.- Roots removed from the tap. -211 Bellwood Ct.- Roots removed from the tap.
Force Main	-No operational issues.
Miscellaneous	-No operational issues.

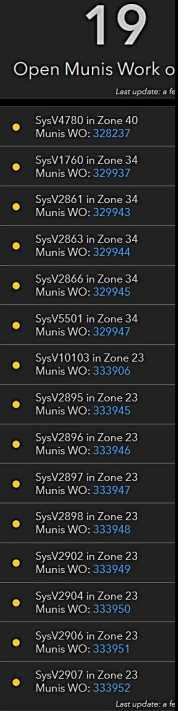
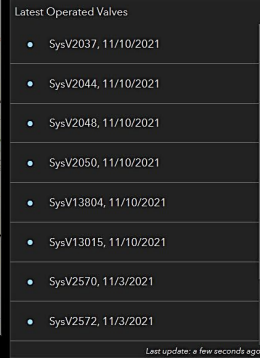
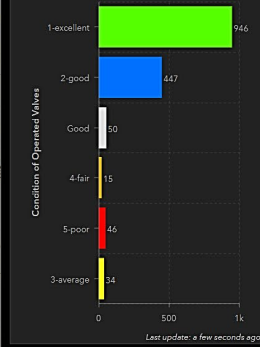
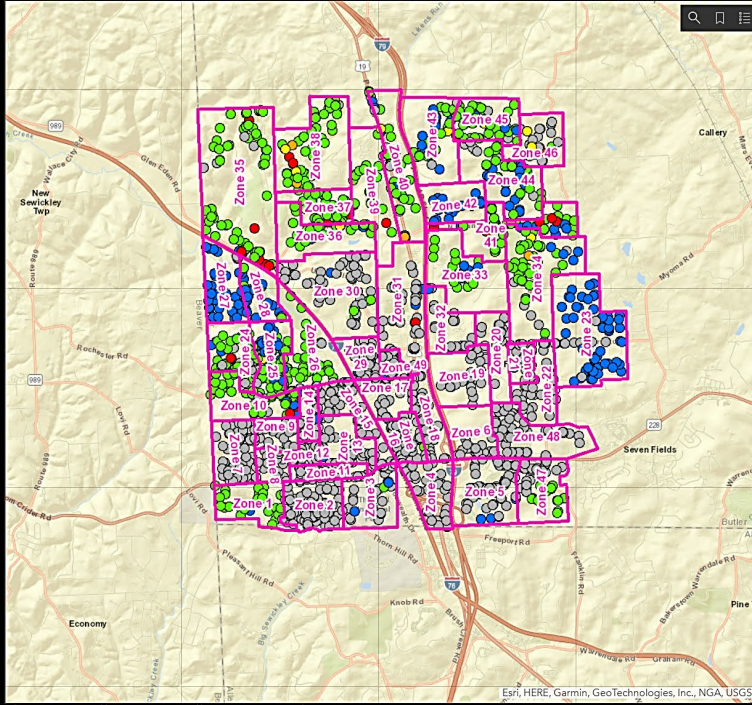
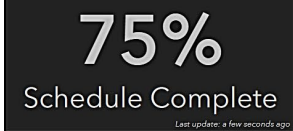
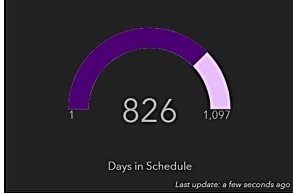
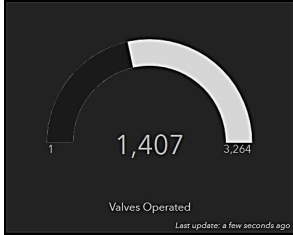


WATER DISTRIBUTION

4/20/2022	-Personnel excavated and straightened a water service curb box at 105 Chadborne Dr. In the Fernway plan of homes.
4/22/2022	-Excavated, repaired, and straightened two water service curb boxes in the Traditions of America plan of homes, 285 & 287 Jefferson Ln. that were damaged by a landscaping company.
4/25/2022	-Repaired leaks on two eight-inch gate valves at 1717 Rt 228, next to the Target Store.
5/02/2022	-Installed four automatic hydrant flushing devices to assist in water quality and maintaining disinfectant level in the water system.
Flushing Program	-Personnel have completed the first four weeks of the annual water distribution system flushing program.
Curb Box Maintenance	<ul style="list-style-type: none"> -5/9- Excavated and straightened a water service curb box at 112 Wayne Dr. in the Manorline plan of homes. -5/12- Crew excavated, repaired, and straightened a water service curb box at 102 Fox Run Rd. in the Fox Run plan of homes.
Valve Maintenance	-On hold, equipment issues.

WATER DISTRIUTION CONT...

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



Monthly Utility Counts: APRIL 2022

TAPS: 14

METER INSTALLS: 22

METER REPLACEMENTS: 7

INSPECTIONS (Water, Sewer & Development): 17

BACKFLOW PROGRAM

Program Start Date: 2/7/2022



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

Ticket summary PA811- Water Sewer Storm, 01 Apr 2022 - 30 Apr 2022

Ticket summary



Tickets by type



Response codes



Tickets by assignee



Service areas



NPDES Compliance History Report 2022

Brush Creek Water Pollution Control Facility

Limit mg/L	Parameter											
	Total		Ammonia Nitrogen 2/5*	Dissolved Oxygen 5 min	Phosphorus 2.0	Chlorine Residual 0.18	p H** standard units 6.0	9.0	Flow MG/D 8.73	Fecal Coliform 200/100* 2100/100*	Total Nitrogen M&R	Regulatory Compliance Y/N
	CBOD 10/20*	Suspended solids 30										
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												
June												
July												
August												
September												
October												
November												
December												
Yearly Avg.	0.0	0.0	0.5	6.3	0.8	0.000	6.9	7.3	4.2	0.0	14.3	

* different limits during the summer and winter months (seasonal limits)
M&R - Monitor and Report only

** Between 6.0 and 9.0 standard units

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.
CBOD	Carbonaceous Biochemical Oxygen Demand (CCOD) Measures the potential of wastewater to deplete the oxygen level of the receiving waters
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 provide an appropriate level of protection for those recreating in Pennsylvania's surface waters.
Total Suspended solids	Total suspended solids are any particles that float or "suspend" 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

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 Alllocation .135 mg Purchased Water (West View) Annual allocation 4.150 MGD

NOTE: as of 7/9 2020 all flow data is based on Marshal Township billing cycle and NOT montly averages since billing is not based on a calandar 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								TO DATE
B.C.T.P. FLOW	122.499	126.136	138.835	134.762	115.835								638.067
DAILY AVG.	4.3740	3.9420	4.958	4.2110	4.2900								21.775
MARSHALL FLOW	24.089	25.748	28.338	23.582	19.576								121.333
DAILY AVG.	0.8603	0.8046	1.0207	0.7369	0.7250								4.1475
NEW SEWICKLEY	0.310	0.326	0.241	0.294	0.251								1.422
DAILY AVG.	0.0111	0.0102	0.0086	0.0092	0.0093								0.0484
RAIN FALL	4.47	3.75	4.56	3.62	4								20.41
PURCHASED WATER	62.339	77.364	67.024	76.310	65.179								348.216
DAILY AVG.	2.226	2.417	2.394	2.385	2.414								2.367

2021	12/10-1/11/21	1/11/21-2/8/21	2/8/21-3/8-21	3/8/21-4/8/21	4/8/21-5/12/21	5/12/21-6/9/21	6/9/21-7/8/21	7/8/21-8/9/21	8/9/21-9/9/21	9/9/21-10/11/21	10/11/21-11/08/21	11/8/21-12/9/21	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

2020	JAN.	FEB.	MARCH	APRIL	MAY	JUNE	JULY	7/9-8/17	8/17-9/11	9/11-10/9	9/10-11/12	11/12-12-10	TO DATE
B.C.T.P. FLOW	118.587	140.084	125.275	160.622	105.106	97.92	85.039	99.411	85.576	86.6160	111.833	105.269	1321.338
DAILY AVG.	4.0890	4.2450	4.474	4.5770	4.3794	2.9670	2.7430	2.5490	3.4230	3.0930	3.2890	3.7560	3.6320
MARSHALL FLOW	23.435	28.565	23.078	27.011	17.597	19.247	18.376	24.625	17.442	17.608	22.066	20.235	259.285
DAILY AVG.	0.8370	0.8927	0.8242	0.7717	0.7332	0.6015	0.5928	0.6314	0.6976	0.6289	0.6490	0.7227	0.7152
NEW SEWICKLEY	0.246	0.244	0.205	0.268	0.269	0.287	0.263	0.433	0.266	0.266	0.169	0.237	3.153
DAILY AVG.	0.0087	0.0070	0.0073	0.0076	0.0112	0.0089	0.0085	0.0111	0.0106	0.0095	0.0049	0.0085	0.0087
RAIN FALL	3.31	3.94	5.85	4.33	3	1.28	1.31	5.73	1.63	3.51	3.04	3.1	39.66
PURCHASED WATER	71.543	67.245	71.452	71.857	68.774	83.449	78.906	129.52	64.1294	66.793	84.496	65.348	76.9594
DAILY AVG.	2.313	2.299	2.285	2.264	2.5481	3.1338	3.431	3.238	2.466	2.385	2.485	2.333	2.5984