

**Application of Pennsylvania-American Water Company for Acquisition of
the Wastewater Assets of Butler Area Sewer Authority (“BASA”)**

66 Pa. C.S. § 1329

Application Filing Checklist – Water/Wastewater

Docket No. A-2022-3037047

20. Proof of Compliance. Provide proof of compliance with applicable design, construction and operation standards of DEP or of the county health department, or both, including:
- c. For **wastewater** system acquisitions, provide a copy of the Chapter 94 Municipal Wasteload Management Report that was most recently submitted to DEP.

RESPONSE:

- c. Attached as **Appendix A-20-c** is Butler Area Sewer Authority’s 2021 Chapter 94 Report.



Butler Area Sewer Authority Annual Wasteload Management Report

NPDES Permit No. PA0026697

January 25, 2022

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2021

Butler Area Sewer Authority
Municipal Wasteload Management Report
Operating Year 2021

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Butler Area Sewer Authority
Municipal Wasteload Management Report
Operating Year 2021

Summary

This Municipal Wasteload Management Report has been prepared by the Butler Area Sewer Authority (“BASA” or Authority”) to fulfill the requirements of Chapter 94, Municipal Wasteload Management of the Commonwealth of Pennsylvania Department of Environmental Protection’s Rules and Regulations. The report describes the hydraulic and organic loadings placed on the BASA Wastewater Treatment Plant (WWTP) during the 2021 year and projects the future loadings on the treatment facilities to ensure that there is sufficient time to anticipate and plan for necessary sewage treatment facility expansions. In addition to evaluating plant loadings and forecasting necessary expansions, the annual Wasteload Management Report is also intended to indicate the need for sewer connection and extension limitations for systems that are currently overloaded or are projected to be overloaded in the near future.

Based on the Authority’s billing records, the BASA WWTP served an average of 23,541 Equivalent Dwelling Units (EDUs) in 2021. The “New EDU” projected value of 227 EDUs/year was based upon the historic five-year average EDU increase per year value (139) and the projected annual EDU value from approved development (88). The projected EDU value from approved development stemmed from 440 proposed EDUs from incoming development plans. BASA doesn’t know if or when the additional EDUs will join the WWTP. For this reason, the future EDUs were evenly factored into the projected loading calculations.

Having the lowest flow of the past five years, the annual average daily flow during 2021 was 5.698 million gallons per day (MGD). During the past 5-year period, the monthly average daily flow exceeded the BASA’s WWTP’s permitted hydraulic capacity of 10.0 MGD six (6) times due to wet weather conditions. Three (3) of the occurrences occurred in 2018, two (2) in 2019 and one (1) in 2020. All hydraulic capacity exceedances were caused either or in part by heavy rainfall, snowmelt and ground saturation conditions. In spite of these high monthly flows, the permit capacity was not exceeded for three consecutive months at any time over the last five years. Based on the treatment plant flow data and EDU growth trend, the projected 2026 annual average daily flow is 7.182 MGD and maximum three-month average daily flow is 9.331 MGD.

The 2021 annual average daily organic loading value is 6,373 lbs BOD₅/day. Slightly higher than the annual average organic loading value, the 2026 projected annual average daily organic loading value is 6,546 lbs BOD₅/day with a projected maximum average of 7,627 lbs BOD₅/day. During the past 5-year period, the monthly average organic loading value hasn't exceeded the organic design capacity of 12,750 lbs BOD₅/day.

All of the projected hydraulic flows and organic loading values are well below the NPDES permit limits of 10 MGD and 12,750 lbs BOD₅/day. Given that the actual EDU trends from 2017 to 2021 were used to project future hydraulic and organic loadings, no treatment plant overloads, as defined by the Chapter 94 Regulations, are expected during the next five-year period.

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Description of System and EDUs Serviced

The Butler Area Sewer Authority (“BASA” or “Authority”) primarily serves the City of Butler, Butler Township, Center Township, Summit Township, and East Butler Borough, as well as a limited number of customers in Connoquenessing and Oakland Townships. The 32.5-mile sewer service area contains 23 sewage pumping stations and 230 miles of mainline sewer pipe to serve approximately 15,000 customers. The two-stage biological wastewater treatment plant (WWTP) currently has a permitted hydraulic capacity of 10.0 million gallons per day (MGD) and a permitted organic loading of 12,750 lbs BOD₅/day.

Table 1 presents historic and projected service area populations tributary to the Butler Area WWTP. The population estimates are presented as EDUs to represent contributions from residential, commercial, and industrial sources. The 2017 through 2021 figures are average EDU values based on quarterly and monthly customer billing records. Estimates for the years 2022 through 2026 were projected using the average annual increase of 139 EDUs experienced during the 2017 through 2021 period, plus an additional 88 EDUs/year from current development under construction.

Table 1 Butler Area Sewer Authority Historic and Projected EDU's Serviced	
<u>Year</u>	<u>Average EDUs Served</u>
2017	22,984
2018	23,678
2019	23,473
2020	23,108
2021	23,541
2022	23,768
2023	23,995
2024	24,222
2025	24,449
2026	24,676

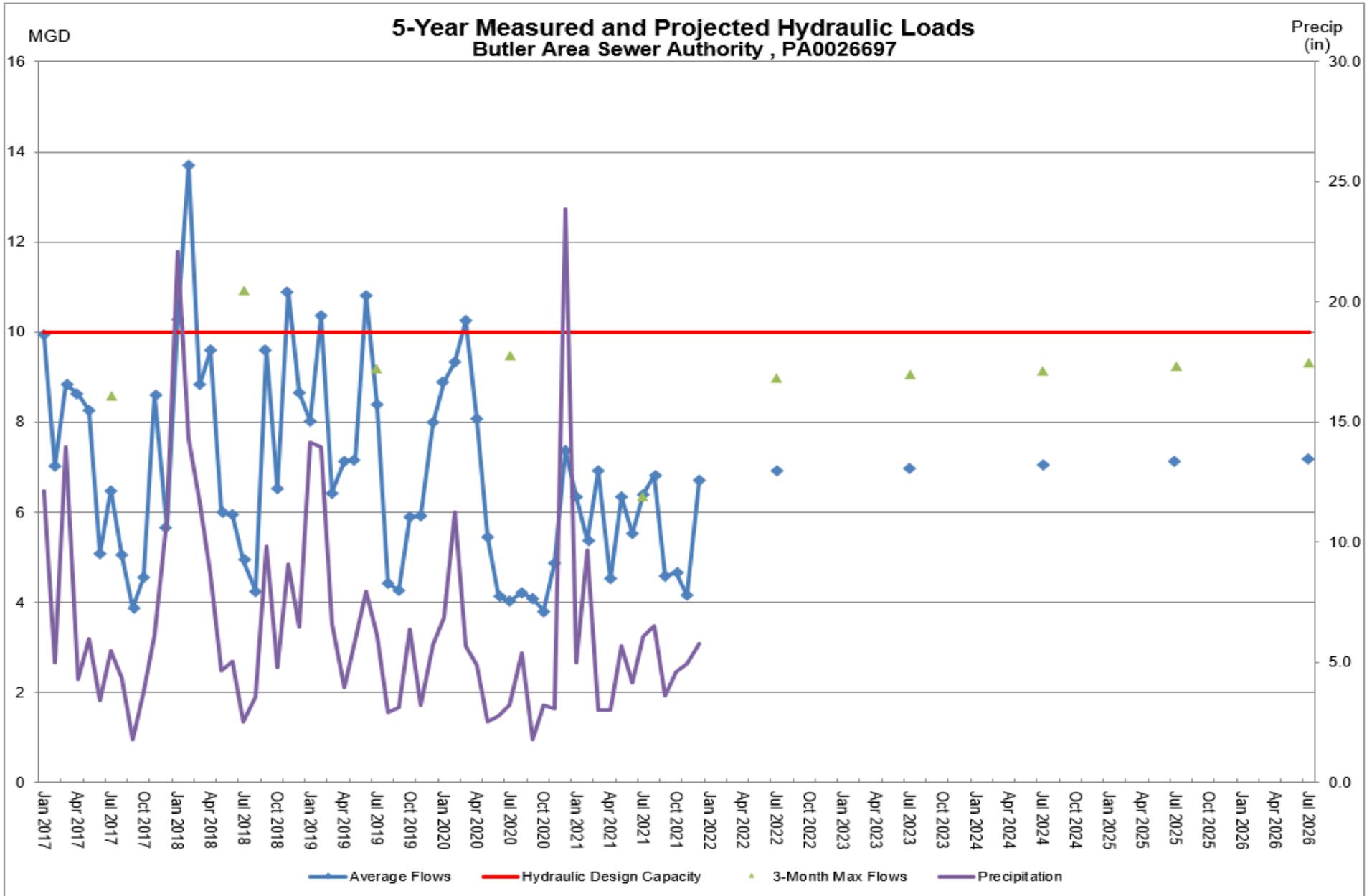
Section 1: Hydraulic & Organic Loading Graphs

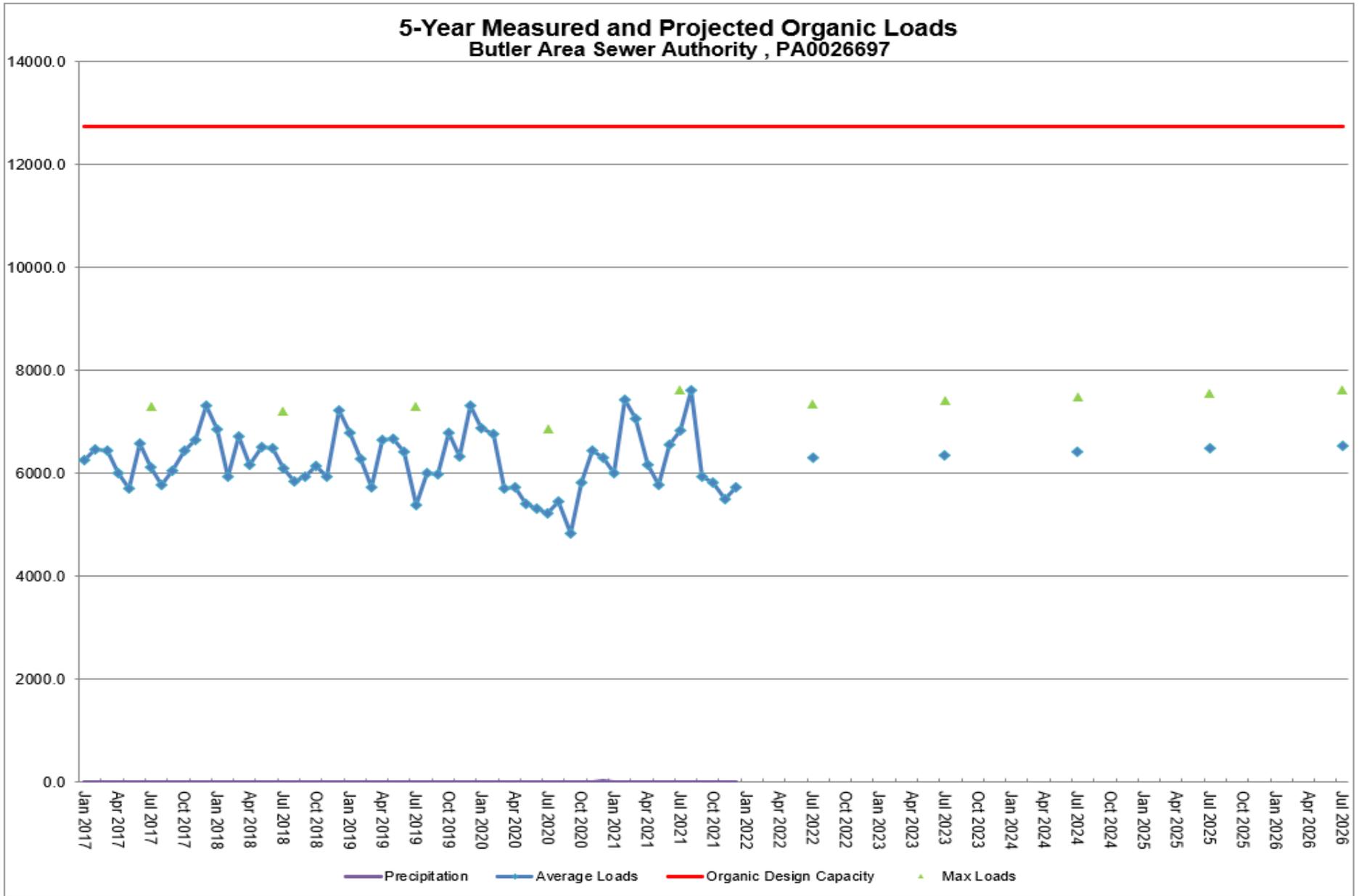
Figures 1 and 2 illustrate the historic and projected hydraulic and organic loadings at the BASA WWTP from 2017 to 2026. The historic flow and organic loading was obtained through plant operating records and monthly discharge monitoring reports, while the projected data for 2022-2026 was calculated using the PA DEP Chapter 94 Spreadsheet. Please find all supporting data and calculations in Appendix B.

The plant flows are continuously measured by a Parshall flume flow meter located in the effluent channel after the primary settling tanks. The metered recirculation flow from the sludge thickener to the primary tanks, which also passes through this Parshall flume flow meter, is subtracted from the Parshall flume flow to determine the reported NPDES Permit discharge flow. The Authority had been under a contract with Total Instrument Maintenance (TIM) of Elizabeth, Pennsylvania to service and calibrate all plant flow meters. After their last calibration visit on March 31, 2021, the Authority chose to begin calibrating all meters internally. Copies of the 2021 calibration work orders are attached in Appendix A.

The organic loading values, also known as biological oxygen demand (BOD₅), is collected daily at BASA's WWTP influent auto sampling station. Our operators prepare samples for our subcontracted laboratory, CWM Environmental, to pick up and analyze.

The BASA WWTP average annual flow (5.698 MGD) and max three-month average flow (6.355 MGD) was influenced by a low total rainfall value of 62.2 inches. Unaffected by rainfall, the 2021 annual organic loading value (6,373 lbs BOD₅/day) and max monthly average organic loading value (7,625 lbs BOD₅/day) were consistent with the past five years. As shown in Figures 1 and 2, all projected hydraulic flows and organic loadings between 2022-2026 are predicted to remain below the Butler Area WWTP's permitted capacity leading to the conclusion that the BASA WWTP isn't expected to be hydraulically or organically overloaded as defined under Chapter 94 of the DEP's Rules and Regulations through the year 2026.





Section 2: Industrial Wastes

A. Permitted Industrial User Summary

The Authority has an EPA-approved Industrial Pretreatment Program governed under the Chapter 400, Industrial Sewer Use Rules and Regulations, that can be accessed through the BASA website. The 2021, Annual Pretreatment Report can be found attached as Appendix C. Several attachments within the annual pretreatment report including: Attachment E2, "Permitted Industrial Users (part 2 of 2)"; Attachment F, "IU's in SNC During the Reporting Period"; Attachment G, "Modification History", weren't included in Appendix C as they didn't apply to the Authority in the 2021 reporting period.

As seen in Table 2 below, the Authority currently has permits with one (1) Categorical Industrial User (CIU), three (3) Significant Non-Categorical Industrial Users (SNIUs), and three (3) Non-Significant Industrial Users that discharge, or may discharge, process wastewater. Wastewater permits for North American Steel & Wire, as well as Serv-A-Care have been voided and the companies are no longer discharging process wastewater.

With the exception of JSP International and Pennsylvania American Water Company's monthly compliance reporting requirements, all other permitted users are required to submit quarterly compliance reports. Only two (2) minor Notice of Violations (NOV) were issued in 2021 with no permitted users falling into Significant Non-Compliance as defined by 40 CFR § 403.8. The first NOV was issued to JSP International on April 14, 2021 for a flow exceedance occurring the previous day. JSP demonstrated that flows retreated into the permit limits bringing them back into compliance. The second NOV was in response to MCE's late third quarterly report that has now been submitted. Both NOVs can be seen in Appendix C.

Facility inspections and compliance samples were completed for all IUs during the calendar year. All 2021 compliance samples conducted by the Authority were within the industrial users wastewater discharge permit limits. During inspections, chemical inventory, chemical quantities, chemical locations, hazardous materials, floor drains, production values, process wastewater sources, process water/wastewater generated, environmental permits, and ERP plans were discussed. In addition to the annual inspections held with permitted industrial users, 17 inspections were carried out to evaluate the community's industrial sources. None of the facilities aligned with the federal categorical industrial user definitions. Although

some of the facilities generated process wastewater, the contents and quantity were not of concern to the Authority at this time.

For more information on the Authority's Industrial Pretreatment Program, please find the "2021 Annual Industrial Pretreatment Report" attached as Appendix C.

B. Slug Discharges

The WWTP was receiving intermittent, high-strength BOD₅ slug discharges from an unidentified, industrial wastewater source, or sources from late 2019 to early 2021. Although we received high strength discharges, the WWTP maintained its ability to effectively treat the wastes. All monthly average organic loading values during the period in which BASA received slug discharges were well within the limitations of the plant's design capacity.

The Authority has taken several proactive measures to identify and suspend the continuous discharges including the development of ammonia-nitrogen local limit (value of 30 mg/L) as of January 1, 2021, pH monitoring of the collection system, and onsite inspections of various industry.

As of February, 2021, high-strength BOD₅ slug discharges have been suspended. In the case that the WWTP receives future slug discharges, the Authority will utilize the full powers of its EPA-approved pretreatment program to eliminate any illegal industrial waste discharges.

**Table 2
Butler Area Sewer Authority
2021 Permitted Industrial User List**

Categorical Industrial Users (CIUs)			
Metalized Ceramics For Electronics	119 Grant Avenue East Butler, Pa 16029	Permit Number: 0922014	Average Flow: 80 gal batch discharge in 2021
North American Steel & Wire	629 East Butler Road Butler, Pa 16002	Permit Number: 0622022 Permit Voided 07/31/2021	Average Process Flow: Zero Discharge
Significant Noncategorical Industrial Users (SNIUs)			
Cleveland Cliffs Steel Corporation	210 Pittsburgh Road Butler, Pa 16001	Permit Number: 1123011	Average Process Flow: Zero Discharge
JSP International, LLC	150 East Brook Land Butler, Pa 16002	Permit Number: 1224012	Average Process Flow: 29,133 gpd
Pennsylvania American water Co.	207 Oneida Valley Rd. Butler, Pa 16001	Permit Number: 1122005	Average Process Flow: 28,509 gpd
Non-Significant Industrial User			
Linde Gas North America, LLC	Inside Cleveland Cliffs Facility	Permit Number: 0521006	Average Process Flow: 4,957 gpd
Air Products and Chemicals	300 Schaffner Road Lyndora, Pa 16045	Permit Number: 0822009	Average Process Flow: 7,551 gpd
IDL Worldwide	500 Grant Avenue East Butler, Pa 16029	Permit Number: 0722019	Average Process Flow: 1,890
Serv-A-Care	431 E Jefferson Street Butler, Pa 16001	Permit Number: 1122007 Permit Voided 04/01/2021	Average Process Flow: Zero Discharge

Section 3: Sewer Extensions

Beginning in 2021 and continuing to the current date on this report there are two active sewer extensions under construction including Autumn Woods and Forest Edge. One other sewer extension, Highfield Trails, has been approved but has not begun construction. The Authority received and reviewed five (5) Sewage Facilities Planning Module Applications for new land development/subdivision plans in 2021 with a total of 39 DEP EDUs, based on 400 gpd/EDU, proposed to be added to the Authority's sewer system. As for the other EDUs as outlined in the Table 3, those respective planning modules were completed in prior years and are now being constructed. A map concerning the proposed land development/subdivision plans can be found in Appendix D. At this time, it is unclear when some of the development will take place.

Table 3 Butler Area Sewer Authority 2021 Planning Module Applications			
Project Name		Proposed EDU's	DEP
Roberson		1	
Douthett		2	
Highfield Trails	Phase #1	76	
	Phase #2	24	
Duffy Highlands	Phase #1	5	
	Phase #2-4	81	
Benevan Square		17	
Autumn Woods		95	
Wyncrest Drive		5	
Butler CTY Comm. College		2	
Diehl Volkswagen		17	
Modwash Car Wash		18	
Popeyes		2	
East Butler Condominiums		6	
438 South Chestnut Street		2	
Forest Oaks		87	
Total Proposed EDU's		440	
*1 DEP EDU = 400 gal/day		176,000 gal/day	

Section 4: Normal Sewer Inspection and Maintenance

Necessary inspection and maintenance of the sewer system is performed as required by a field supervisor and four sewer crew operators. When called upon, they are assisted by two additional general sewer crew positions. To ensure that adequate material selection and installation practices are taking place, new service lateral lines are inspected. Maintenance tasks performed by the crew include: isolated point, manhole, force main and service lateral repairs, as well as cleaning and flushing of mainline collection systems at 96 set locations or as needed. During 2021, the Authority received and responded to a total of 230 sewer calls regarding the public or private sewer collection system.

Due to the degradation and suboptimal performance of BASA's 2008 vector sewer cleaner truck, the Authority has invested in a 2021 900 Eco Sewer Equipment of America Combination truck to aid in daily maintenance tasks. The new equipment offers a 4,400 CFM twin rotary lobe vacuum positive displacement pump, 1,300 gallons of water tank retention capacity, roughly 2,423 gallons of debris storage, 600 ft of 1-inch mainline jetting hose, and 200 ft of ½ inch lateral jetting hose. Along with the Authority's new vector truck, the following equipment is utilized for normal sewer inspection and maintenance:

- 2021 900 Sewer Equipment of America Vector Truck
- 2011 International Model 4400 5-ton dump truck
- 2011 Ford-450SD 1.5-ton dump truck
- 2011 Ford E-350 customized sewer televising van (Aries Pathfinder line camera system)
- 2011 Kubota KX121R3TA compact excavator
- 2011 Viking (14,000-pound GVWR) equipment trailer
- 2000 John Deer 310SE backhoe
- 1997 sewer cleaning truck
- Godwin Dri-Prime NC150 trailer-mounted 6-inch pump
- Seven (7) RIDGID 200-foot Mini-See Snake color sewer camera and reel systems
- Four (4) Navitrak locators

Section 5: Sewer System Monitoring and Rehabilitation

The Authority continually makes a concerted effort to sustain the sewer system by reducing inflow and infiltration (I/I) and/or by making necessary repair or replacement of the existing infrastructure. I/I is pursued by the Authority through manhole or mainline inspections, flow monitoring, and our realty inspection program. Necessary repairs, replacements or upgrades to the treatment or collection system are organized to account for aging infrastructure or expanding customer sewer taps.

A. Manhole Inspection

During 2021, a total of 117 manhole inspections were completed. 58 of the inspections were accomplished by BASA staff by utilizing a newly created GIS manhole inspection app. Contracted through the North Hills Council of Governments (NHCOG) bid, State Pipe Services was hired to inspect the remaining 59 manholes. Aside from these inspections, BASA Staff had prior data in the GBB & FBB CAP areas that identified several manholes with defects. In 2021, 122 of the manholes identified with underlying issues were repaired by State Pipe Services. State Pipe Services used sealing, coating, height adjustment and grouting techniques. They also cleaned and removed debris to allow for proper conveyance of wastewater. 113 of rehabilitated manholes were located within the GBB and FBB CAP areas. The Authority's manhole inspections were primarily focused on manholes within the western and northern portions of the sewer collection system known as the Deshon and Sullivan Run Sub-Basin, respectively. While these Sub-basins include the GBB and FBB CAP areas, they also took into account other sewer sheds.

In 2021, 587 manholes were converted from theoretical digitized points within the system to actual Global Positioning System (GPS) data points via the Authority's GPS surveying equipment. By identifying manhole locations, sewer mainline segments, lengths and locations were properly plotted. Accurate collection system information allows for the Authority to properly plan for rehabilitation projects and ensures the proper investment of funds. The Authority owns and utilizes the following GPS equipment to aid in the GIS sewer mapping:

- Trimble R2 Sub-Foot Rover – GPS/GLONASS, NMEA (4 inch)
- iPad 7th generation
- KeyNet VRS Mapping Grade Subscription

To help customers, outside contractors, and engineers to plan for sewer system connections and additions, a public GIS sewer system map is to be published on BASA's website by early 2022. The map will allow users to view the entire service area; show them municipal and Township boundaries; identify sewer main lines, manholes, pump stations (hereinafter referred to as PSs), and the treatment plant; indicate the difference between public and private manholes; and provide basic tools for measurement and site identification. By providing the basic data listed above the public will be better equipped to make informed decisions concerning the sewer system.

B. Flow Monitoring Programs

During an Internal staff meeting held at the beginning of the year, it was determined that flow monitoring equipment was to be placed in high I/I areas according to the staff's historical insight. Sewer sheds #55 and #25 were selected as the areas of interest. Sewer shed #55 collects all wastewater received by the Township Line PS located in southernmost portion of the system, while #25 correlates with the Cupps PS as mentioned in the previous section.

Four monitors were placed into sewer shed #55 between March and June. After internal review of the data, it was inconclusive as to the amount of I/I that was taking place in the localized lines. The monitors were transitioned to the base of sewer shed #25 until November of this year. In response to the flow monitoring data evaluation, the meters were moved further into the eastern mainline collection branch for further analysis. Once the high I/I areas are identified, the Authority intends to use outside contractors to televise the mainlines and schedule appropriate repair or replacement work.

C. Realty Inspection Program

The Authority realty inspection program is led by a program supervisor with a four-person sewer crew to proactively identify inflow and infiltration stemming from leaking lateral lines, sump pumps, downspouts and stormwater drainage. This is completed through the use of closed-circuit television inspections and dye testing. Under this program, the property owner must repair or replace any sources of inflow and infiltration prior to the ownership transfer of the home. The Authority requires that inspection tees are installed on all lateral line replacements or repairs such as property transfers, new construction or failing lateral lines that are identified through general inspections. The Authority also routinely installs inspection tees on service lines at the edge of the public right-of-way where recurring blockages and/or suspected infiltration and inflow problems are encountered.

In 2021, 587 reality inspections were completed. 341 inspections passed, while 246 failed. Of the 246 failures, 210 have made the necessary repairs to bring them into compliance and 131 were required to install inspection tees.

D. Sludge Thickener Repair

After inspection of the deteriorating sludge thickener and parts of the sludge thickener building, the Authority requested, and Hatch Engineers provided, a proposal to repair and/or replace sludge thickener equipment, ventilation and lighting and roof drain equipment. Specifically, the sludge thickener will have the existing walkway and center platform rebuilt. A new motor, mechanical rake and control panels will be installed. For future ease of maintenance, a davit crane will be installed close to the center platform. The work was publicly bid February 19, 2021 for two separate contracts: general construction and electrical construction. Eight bids were received for the general contract and three bids were received for the electrical contract. Ray Showman, Jr. Excavating was awarded the general contract and Bronder Technical Services was awarded the electrical contract. Work is to begin sometime early in 2022 and scheduled to be completed by April of 2022.

While the sludge thickener is out of service, all sludge generated in the wastewater treatment process will be diverted to the primary sedimentation tanks where it will be collected and sent to BASA's rotary presses for dewatering. Internal testing confirmed that sludge cake derived from the primary sedimentation tanks was similar in water content to that of the sludge thickener after it passed through the rotary press.

E. Equalization Tank Inspections

BASA owns and operates seven equalization tanks totaling 22.6 million gallons worth of storage capacity. All seven tanks were constructed at approximately the same time and became operational in 2013. Initiative was taken in 2020 to have KTA-Tator inspect three (3) tanks at our Central Storage location to identify any structural issues and to inform us of any preventative maintenance practices that we should be taking. The remaining four (4) tanks linked to the Deshon and Monroe Street pump were completed in 2021. KTA-Tator's inspection reports showed all but one tank is in good condition. The outlier was one of our Deshon equalization tanks that was listed as fair condition. Common callouts for all of the tanks included exterior shotcrete layer flaking, rust and corrosion on the exterior steel piping and flanges and the need for toeboards on the railing system for each

of the tanks. Concrete cracking varied from tank to tank. BASA plans to repair the callouts for each equalization tank over the course of five years.

Section 6: Pump Stations

Appendix E presents the location of the Authority's 23 continuous-duty, sewage PSs and four (4) wet weather diversion PSs within the sewer service area. A SCADA monitoring system provides operating/alarm status, pump run times, and flows for the majority of the PSs. The PSs are routinely checked and maintained during normal weekdays by two dedicated PS operators. Additional operations and maintenance personnel are available and on-call to respond to alarm conditions detected by the SCADA monitoring system and perform scheduled preventative maintenance.

Table 4 lists the name and year each PS was originally constructed, design average capacity, estimated 2021 annual average daily flow, estimated percent utilization of the design average capacity and the projected 2-year maximum flows. The design capacity of each station was calculated by dividing the design peak flow capacity reported in the design modules for each PS by a design peaking factor of 2.5. The 2021 average daily flow for sixteen (16) PSs was determined by actual flow meter data; five (5) are based off of actual pump hours, one (1) uses pump power usage, and one (1) relies upon estimated flows from a small amount of homes. The Authority's historic five-year average annual flows for each PS, historic five-year EDU values, and future EDUs were used to calculate the 2023 projected daily flows. Similar to the method used to project the WWTP flows, the new EDU flow (0.0665 MGD) was added to each PS for each future year. The difference between the two calculation methods is that a percentage of the new EDU flow, rather than the whole new EDU flow, was applied to the individual PSs five-year average annual flow. The percentage was based upon the individual PSs five-year average annual flow contribution.

Although the projected average 2023 Daily flow value for all of the PSs are all within the design capacity listed for each PS, wet weather events, the possibility of incoming development and aging infrastructure has spurred the need for repair, replacement and/or an increase in design capacity at Rocklick, Greenwood, Benbrook, Bryson, Fisher Heights, Brewster and Brewster Booster PSs. See the following sections for further details concerning the repair, replacement and increase in design capacity at these locations.

Table 4
Butler Area Sewer Authority
Estimated 2021 and Projected 2023 Pump Station Flows

Pump Station	Year Built	Design Capacity		Estimated Average 2021 Daily Flow	Estimated Average Percent Utilization	Projected Average 2023 Daily Flow (GPD)
		(GPM)	(GPD)			
* Brewster Road	1979-80	600	345,600	108,014	31.3%	212,264
* Brewster Booster	1979-80	600	345,600	93,365	27.0%	154,418
* Bryson Road	1979-80	500	288,000	227,809	79.1%	235,870
* Center Avenue	1963	300	172,800	60,940	35.3%	109,218
* Cupps Road	1979-80	400 (1) 700 (2)	576,000	305,038	53.0%	396,399
* Deshon	1980	1,750 (2)	2,016,000	1,120,456	55.6%	1,429,941
* Diamond Street	1975	100	57,600	21,529	37.4%	23,633
* Fisher Heights	1979-80	250	144,000	14,984	10.4%	37,316
* Greenwood Drive	1979-80	500	288,000	226,138	78.5%	202,293
* Karns Crossing	1979-80	1,800 (2)	2,073,600	688,790	33.2%	760,248
* Monroe Street	1979-80	2,250 (2)	2,592,000	1,262,204	48.7%	1,464,059
* Negley Avenue	2018	420	241,920	85,156	35.2%	104,597
* Northvue	1979-80	280	161,280	4,906	3.0%	7,776
* Rock Lick	1979-80	550 (1) 1,050 (2)	892,800	335,380	37.6%	414,643
* Township Line	1999	90 (2)	86,400	25,983	30.1%	35,829
* Zeigler Avenue	2016	150	86,400	11,250	13.0%	12,854
° Benbrook Road	1979-80	500	288,000	54,024	18.8%	120,544
° Garden Grove	1972	320	184,320	21,746	11.8%	67,441
° Pullman Center	2010	65	12,000	823	6.9%	2,274
° September Drive	1988	75	43,200	2,962	6.9%	4,599
° Sugar Creek	2005	80	46,080	1,454	3.2%	3,183
+ Links	1991	30	2,450	530	21.6%	535
◇ Foxcroft	2004	40	23,040	5,405	23.5%	10,175
* Based on Flow Metering Data						
+ Based on estimated flow from four existing homes (133 gpd/home)						
◇ Based on kilowatt hours						
° Based on actual pump operating hours						

A. Rocklick Pump Station Repairs

Provoked by the aging infrastructure found at our Rocklick PS, as well as two mainline breaks that occurred in March and August of this year, the Authority has consulted with HRG Engineering to provide plans to restore the facility. Restoration of the facility includes an in-kind replacement of discharge piping, fittings, and appurtenances in the dry well; installation of a permanent bypass connection that will be used during a planned force main replacement; and to accommodate for a magnetic flow meter. The work was to be authorized in January, put out to bid in February and awarded in March.

By chance, Connoquenessing Twp. approached the Authority shortly after plans were being developed for the Rocklick PS to request an extension of the collection system in sewer shed #25 located in the Cupps PS collection area. Partially located in Connoquenessing Twp., the Cupps PS diverts all flow to the Rocklick PS. Connoquenessing Twp. requested 210 EDUs or an additional 50,400 gpd of wastewater flow. Initially, The Authority responded to Connoquenessing Twp.'s request advising them that the collection system in that area was lacking capacity. At a later date, the Authority offered a cost sharing option to increase the design capacity of the collection system, Rocklick PS and the receiving collection system if required and requested that Connoquenessing Twp. submits formal plans to the Authority. Connoquenessing Twp. was informed that it is the Authority's intent to move forward with the Rocklick PS repair and replacement project without increasing the design capacity if an agreement was not made. At that time, Connoquenessing Twp. notified the Authority that they couldn't meet the project's current timeline. With the unstable condition of the Rocklick PS and its force main, the repair and replacement project is to move forward without delay.

B. 2019 Corrective Action Plan (CAP):

In accordance with the DEP's Chapter 94 Regulations, the Authority submitted the 2019 Corrective Action Plan (CAP) on March 11, 2019 to the DEP to assess and address the recurring wet weather sanitary sewer overflows (SSOs) during the 2018 record rainfall year that were associated with six (6) of the Authority's sewage PSs. The DEP formally approved the plan on March 26, 2019 and required the Authority to submit quarterly progress reports within 30 days after the end of each calendar quarter, beginning with the second quarter of 2019. As of December 31, 2021, the Authority has submitted the required quarterly progress reports in a timely manner. Refer to these quarterly progress reports for the details and status of the individual corrective actions for each system.

The six (6) PSs outlined in the CAP include Fisher, Brewster, Brewster Booster (FBB) located in the northwest portion of the collection system and Greenwood, Benbrook, Bryson (GBB) found on the western edge. Apart from the two different locations in the collection system, FBB and GBB are similar in that the three PSs associated with each system directly influence one another by pumping wastewater from one to the next in the respective order that they are listed.

The Authority has hired Herbert Rowland & Grubic, Inc. (HRG) to assist with the design, permitting, bidding and construction for each of the systems. HRG submitted two separate design evaluation reports, in the third quarter 2020, one for FBB and one for GBB, that provided several building options to address wet weather situations. After review of the evaluation reports it was the Authority's decision to upgrade all PSs with the exception of the Benbrook PS located in the GBB system. Upgrades included new submersible and immersible pumps with higher flow capacity ratings, pump control systems, magnetic flow meters, valve vaults, bypass connections, discharge and force main piping, trash baskets, and cranes. Benbrook PS is to be demolished so that all flows from Greenwood PS are transferred directly to Bryson PS. In addition to the upgrades previously mentioned, three (3) wet weather equalization tanks; two (2) in the FBB system and one (1) in the GBB system will be installed. Details such as tank and pump sizes are currently being established.

As referenced in Appendix F, HRG has broken down the project into the design evaluation (Phase 1 & 2), Sewage Facilities Planning (Phase 3), Design and Permitting (Phase 4 & 5), and Bidding and Construction (Phase 6). Currently, the design evaluation (Phase 1 & 2) and Sewage Facilities Planning (Phase 3) have been completed. Phase 3 called for the preparation and submission of the planning modules to BASA, the planning commissioners, Butler and Center Township, and DEP. Approval from all organizations was received by the third quarter 2021. As part of Phase 4, HRG completed all survey work and wetland delineation. Currently, permit application preparation is taking place and BASA is awaiting the 60% design drawings.

C. Pump Station Flow Monitoring Data

To improve the accuracy of our PS flow records, BASA began a flow meter standardization project in 2021. Prior to the initiative, our twenty-three continuous-duty PSs were gathering flow data using five (5) different types of wastewater meters, pump run times, and electricity usage. The aim of the project was to only use magnetic flow meters where applicable. Magnetic flow meters were chosen as the standard; because historically, they have proven that they require less maintenance and provide accurate wastewater flow

readings. As seen in Table 5, only seven (7) of the PSs had magnetic flow meters prior to the standardization project. By the end of 2021, new magnetic flow meters were installed into Center Avenue, Diamond Street and Sugar Creek PS. While the majority of the future meter replacements will be completed by internal staff, Rocklick, Fisher Heights, Brewster, Brewster Booster, Greenwood Drive and Bryson will be changed by contractors during the time of the PS upgrades. Unfortunately, the small force main line size and limited flow at the Foxcroft and Links PS will disable BASA from installing meters at those locations.

In unison with the flow meter standardization project, the Authority is having its supervisory control and data acquisition (SCADA) system updated by an outside contractor called Process and Data Automation. The update focuses on treatment plant and PS processes. In relation to the PS processes, the new SCADA system will track real time flows from the magnetic flow meters as they are replaced and will provide the ability to create flow meter reports. Currently, BASA is reliant upon field staff to gather the flow data from data loggers at each of the PSs. The data is then manually processed and reported. The current method is time consuming and can be problematic when periodic PS flow monitoring or data logging errors occur. Once the SCADA system is operational, the data will be stored in two locations eliminating data loss.

Table 5
Butler Area Sewer Authority
Pump Station Flow Meter Replacement Schedule

Pump Station	Meter Model	Replaced 2021	Meter Replacement Priority	Tentative Replacement Year
Center Avenue	Toshiba Mag	✓	#1	2021
Diamond Street	Toshiba Mag	✓	#2	2021
Sugar Creek	Toshiba Mag	✓	#3	2021
Rocklick	SIGMA2410		#4	2022-2023
Cupps Road	SIGMA950		#5	2022-2023
Garden Grove	No Meter		#6	2022-2023
September Drive	No Meter		#7	2022-2023
Northvue	FL1500		#8	2022-2023
Fisher Heights	FL1500		#9	2023-2024
Brewster Road	FL1500		#10	2023-2024
Brewster Booster	FL1500		#11	2023-2024
Greenwood Drive	FL1500		#12	2023-2024
Bryson	FL1500		#13	2023-2024
Negley Avenue	Toshiba Mag	-	-	-
Zeigler Avenue	Toshiba Mag	-	-	-
Monroe Street	Toshiba Mag	-	-	-
Deshon	Toshiba Mag	-	-	-
Karns Crossing	Toshiba Mag	-	-	-
Township Line	Alternative Mag meter	-	-	-
Pullman Center	Alternative Mag meter	-	-	-
Foxcroft	No Meter	-	Unable to install Mag Meter	-
Links	No Meter	-	Unable to install Mag Meter	-
Benbrook Road	No Meter	-	PS Demolition 2024-2025	-

Section 7: Solids Management Inventory:

The BASA WWTP generates sludge from our primary and secondary sedimentation tanks, as well as our final clarifiers. All of these waste sludge/solids flows are combined and thickened in a single, gravity sludge thickener. The thickened sludge solids are dewatered using a rotary press and chemically stabilized with granular lime. Finally, the lime stabilized/dewatered biosolids are hauled to a permitted sanitary landfill for disposal. All lime-stabilized, dewatered sewage sludge generated by the Butler Area WWTP in 2021 was transported to Carbon Limestone Landfill in Lowellville, Ohio. As seen in Table 6, a total of 4,942 wet tons or 1,369 dry tons of lime stabilized, dewatered biosolids were taken to Carbon Limestone Landfill via DBA Republic Services of Youngstown.

Table 6 Butler Area Sewer Authority 2021 Sludge Production and Disposal					
Month		Total Sludge Produced/ Landfilled (Wet Tons)	Monthly Average Dry Solids (% Solids)	Total Sludge Production (Dry Tons)	Total Sludge Production (Dry Metric Tons)
January	*	380.05	29.04	110.94	101
February	*	346.02	27.47	92.34	84
March	*	393.13	28.91	56.71	51
April	*	440.75	27.48	120.00	109
May	*	502.87	26.58	133.21	121
June	*	439.00	29.67	123.18	112
July	*	427.31	29.15	124.33	113
August	*	536.09	30.58	161.39	146
September	*	387.75	30.11	116.94	106
October	*	353.56	32.18	113.83	103
November	*	349.98	31.17	109.58	99
December	*	385.02	29.54	106.69	97
Total	*	4,941.53	----	1,369.14	1,242.1
Average	*	411.79	29.32	114.10	103.5

* Contract No. 2020-04 with Browning-Ferris Industries of Ohio, Inc, dba Republic Services of Youngstown, Carbon Limestone Landfill, Lowellville, OH

Signature Requirements

Responsible Official Certification

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowledge of violations. See 18 Pa. C.S. § 4904 (relating to unsworn falsification).

Duane E. McKee
Name of Responsible Official

Duane E. McKee
Signature

724-282-1978
Telephone No.

02/01/2022
Date

Preparer Certification

I certify under penalty of law that this document and all attachments were prepared by me or otherwise under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. The information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowledge of violations. See 18 Pa. C.S. § 4904 (relating to unsworn falsification).

Mason Miller
Name of Responsible Official

Mason Miller
Signature

724-282-1978 Ext 120
Telephone No.

02/01/2022
Date

Appendix A

Supporting Data

2021 Plant Flow Meter Calibration Work Orders

Customer Service Report
Total Instrument Maintenance
 423 Stoneybrook Drive • Elizabeth, PA 15037
 412-384-3818



INVOICE # _____

BILL TO ADDRESS	SITE ADDRESS
	B.A.S.A. PHONE # _____ / _____

REQUESTED SERVICE: _____

PO # / SO # _____ MODEL # _____ SERIAL # _____	OTHER _____ _____ _____
--	-------------------------------

DESCRIPTION / CAUSE OF PROBLEM:	QTY	PART/PRODUCT NUMBER	AMOUNT
P.M.			
CORRECTIVE ACTION / WORK PERFORMED: Cleaned, checked the 5 records (13) inputs in the M.C.P. Checked the Plant Influent ultrasonic flow xmtr. Checked the Trickling Filter Remote flow indicator + the Return Sludge flow computer. Checked outputs + indications at 0-28-50-75 + 100%. No adjustments needed.			
		[A] PARTS TOTAL	➤
		LABOR (REG) HRS @ /HR	
		LABOR (O.T.) HRS @ /HR	
		TRAVEL HRS @ /HR	
		[B] LABOR TOTAL	➤
		EXPENSES (TOLLS, ROOMS, MEALS)	
		MILEAGE MILES @ /MILE	
		AIR AND/OR CAR RENTAL	
		[C] EXPENSE TOTAL	➤
		[D] SHIPPING CHARGES	➤
		TOTAL [A] + [B] + [C] + [D]	➤
FUTURE ACTION/WORK REQUIRED: YES <input type="checkbox"/> NO <input type="checkbox"/> % COMP <input type="text"/>		C. A. CODE ()	
		SALES TAX OR TAX ID # []	
		COUNTY TAX OR TAX ID # []	
		TERMS: NET 30 DAYS	FINAL AMOUNT DUE ➤

I HEREBY ACCEPT AND APPROVE ALL WORK AS DEFINED ABOVE.

 Ryszki TECH (PRINT)	 Jim Pezalla TECH (SIGNATURE)	3/31/04 DATE	 Dennis Mike CUSTOMER (PRINT)	 CUSTOMER (SIGNATURE)	3/31/04 DATE
----------------------------	-------------------------------------	-----------------	-------------------------------------	--------------------------	-----------------

Calibration Certification

Equipment ID	<u>FIT</u> <u>724-01 Final Certifier sludge</u>	Site	<u>BASA</u>
Type Of Meter	<u>Vega Level Transmitter converter well</u>	Location	<u>Plant Sludge metering room</u>
Manufacturer	<u>VEGA</u>	Unit Status	<u>Activated</u>
Model No.	<u>861</u>	Technician	<u>Rich D. Bias</u>
Size/ Range	_____		

Cal. Date	<u>9/5/21</u>	Frequency	<u>Semi Annual</u>
Due Date	<u>Mar 22</u>	Visual Condition	<u>good / New</u>

Remarks
Installed 9-14-21

Input Type
 Physical Signal or Both Physical Verified

Output Type
 Physical Signal or Both _____ Verified

Equipment Used
Pole ruler (Tape Measure)

Equipment Used
Fluke Amp meter

% Error Found 1.2%

% Error Found < .5%

Adjustment : YES NO

Adjustment : YES NO

% Error Post < 1%

% Error Post _____

Notes:
Error was in setup measurement

Notes:

Calibrator Signature *Rich D. Bias* Date 9-15-21

Calibration Certification

Equipment ID	<u>FIT 724-05 Waste sludge flow</u>	Site	<u>BASA</u>
Type Of Meter	<u>Radar Level Transmitter on weir</u>	Location	<u>Plant Sludge Metering Room</u>
Manufacturer	<u>VEGA</u>	Unit Status	<u>Activated</u>
Model No.	<u>Puls C21 w/ BNET 861</u>	Technician	<u>Rich DiBiase</u>
Size/ Range	<u></u>		
Cal. Date	<u>9/15/21</u>	Frequency	<u>Semi Annual</u>
Due Date	<u>Mar. 2022</u>	Visual Condition	<u>New</u>

Remarks Installed 9-14-21

Input Type Radar to 4-20 mA
 Physical, Signal or Both Physical Verified

Output Type 4-20 mA
 Physical, Signal or Both Signal Verified

Equipment Used
Tape measure and pole

Equipment Used
Fluke multi meter

% Error Found < 1%
 Adjustment : YES NO
 % Error Post

% Error Found < .5%
 Adjustment : YES NO
 % Error Post

Notes:

Notes:

Calibrator Signature *Rich DiBiase* Date 9-15-21

Calibration Certification

Equipment ID	<u>724-02 Primary Sludge Level Radar transmitter</u>	Site	<u>BASA</u>
Type Of Meter	<u>VEGA C21 w/ VEGAPULS 861</u>	Location	<u>Plant Sludge metering room</u>
Manufacturer	<u>VEGA</u>	Unit Status	<u>Activated</u>
Model No.	<u>Puls C21 w/ VEGAPULS 861</u>	Techician	<u>Rich D. Brase</u>
Size/ Range	_____		

Cal. Date	<u>9-15-21</u>	Frequency	<u>Semi Annual</u>
Due Date	<u>Mar. 22</u>	Visual Condition	<u>New</u>

Remarks: Installed 9-14-21

Input Type
Physical, Signal or Both physical Verified

Output Type
Physical, Signal or Both Signal Verified

Equipment Used
Tape measure and pole

Equipment Used
Fluke multi meter

% Error Found 5.0%
Adjustment : YES NO
% Error Post < 1%

% Error Found _____
Adjustment : YES NO
% Error Post _____

Notes:
Error in setup measurement

Notes:

Calibrator Signature Rich D. Brase Date 9-15-21

Calibration Certification

Equipment ID	<u>FIT 733-01</u>	Site	<u>BASA</u>
Type Of Meter	<u>FL1500 Open Channel Flowmeter</u>	Location	<u>Plant outfall chamber</u>
Manufacturer	<u>HACH</u>	Unit Status	<u>Operational</u>
Model No.	<u>FL1500</u>	Techician	<u>Rich D. Base / Bob Vornack</u>
Size/ Range	_____		
Cal. Date	<u>9-21-21</u>	Frequency	<u>Qtrly 4 Times / yr</u>
Due Date	<u>January 22</u>	Visual Codition	<u>Good</u>

Remarks Installed on 9-21-21

Input Type _____
 Physical, Signal or Both Physical Verified

Output Type No output
 Physical, Signal or Both _____ Verified

Equipment Used
Measure stick
Computer

Equipment Used

% Error Found $\frac{13-12}{13} = 7.6\%$

% Error Found _____

Adjustment : YES NO

Adjustment : YES NO

% Error Post 1.5%

% Error Post _____

Notes: Initial setup adj

Notes:

Calibrator Signature *Bob Vornack* Date 9/21/21

Calibration Certification

Equipment ID	<u>FIT 723-01 Trickler Flow</u>	Site	<u>BASA</u>
Type Of Meter	<u>Level probe w/display weir</u>	Location	<u>Plant 100 Litchman Rd Butler PA</u>
Manufacturer	<u>Vega</u>	Unit Status	<u>Active</u>
Model No.	<u>Vega P1615 c 21 / Vegamet 861</u>	Technician	<u>Richard DiBiase</u>
Size/ Range	<u>-</u>		
Cal. Date	<u>10-14-21</u>	Frequency	<u>Annual</u>
Next Due Date	<u>10/22</u>	Visual Condition	<u>New</u>

Remarks	<u>Installed in July</u>
---------	--------------------------

Input Type	<u>analog to 4-20mA</u>	Output Type	<u>0-20mA</u>
Physical, Signal or Both	<u>Both</u>	Physical, Signal or Both	<u>Signal</u>

Equipment Used	<u>Transmation meter and Fluke multi meter and tape measure</u>
----------------	---

Equipment Used	<u>Transmation meter Fluke multi meter</u>
----------------	--

% Error Found 0.9 %

Adjustment : YES NO

% Error Post 0.9 %

% Error Found 1 %

Adjustment : YES NO

% Error Post 1 %

Notes:	
--------	--

Notes:	
--------	--

Calibrator Signature  Date 10/14/21

Calibration Certification

Equipment ID: LIT 703-01 Main Pump level

Site: BASA

Type Of Meter: Level Transducer and display

Location: Plant

Manufacturer: VEGA

Unit Status: Operating / Going Active

Model No.: vegpuls c21 & vegamet 861

Technician: Richard DiBiase

Size/ Range: 0 to 25 ft

Cal. Date: 10/15/2021

Frequency: Annual

Due Date: 22-Oct

Visual Codition: New

Remarks New install to replace bubbler control This month.

Input Type Radar /4-20mA

Output Type 4-20mA

Physical, Signal or Both Both Verified

Physical, Signal or Both Signal Verified

Equipment Used
Transmation meter, Fluke meter and Tape Measure

Equipment Used
Transmation meter, Fluke meter.

% Error Found <1%

% Error Found <1%

Adjustment : NO

Adjustment : NO

% Error Post <1%

% Error Post <1%

Notes:

New install

Notes:

New Install

Calibrator Signature



Date

10-15-21

Appendix B

Supporting Data
2021 Loading Calculation



PADEP Chapter 94 Spread: Sewage Treatment P

Reporting Year:

Facility Name:

Permit No.:

Persons/EDU:

Existing Hydraulic Design Capacity: MGD
 Upgrade Planned in Next 5 Years? Year:
 Future Hydraulic Design Capacity: MGD

Existing Organic Design Capacity: lbs BOD5/day
 Upgrade Planned in Next 5 Years? Year:
 Future Organic Design Capacity: lbs BOD5/day

Monthly Average Flows for Past Five Years (MGD)

Month	2017	2018	2019	2020	2021
January	9.946	10.285	8.026	8.894	6.335
February	7.019	13.696	10.357	9.328	5.365
March	8.839	8.821	6.438	10.251	6.931
April	8.631	9.599	7.137	8.064	4.517
May	8.261	6.005	7.164	5.459	6.342
June	5.095	5.962	10.818	4.132	5.523
July	6.492	4.932	8.369	4.02	6.398
August	5.053	4.26	4.416	4.213	6.827
September	3.877	9.6	4.261	4.076	4.582
October	4.566	6.534	5.899	3.811	4.675
November	8.608	10.909	5.92	4.863	4.174
December	5.666	8.664	7.977	7.364	6.709

Monthly Average BOD5 Loads for Past Five Years (lbs/day)

Month	2017	2018	2019	2020	2021
January	6,271	6,863	6,803	6,883	6,002
February	6,460	5,949	6,284	6,767	7,440
March	6,441	6,728	5,734	5,717	7,067
April	6,003	6,161	6,656	5,734	6,166
May	5,701	6,522	6,683	5,408	5,789
June	6,579	6,496	6,426	5,314	6,558
July	6,119	6,095	5,386	5,232	6,839
August	5,791	5,840	6,009	5,465	7,625
September	6,063	5,932	5,990	4,841	5,939
October	6,449	6,148	6,782	5,819	5,815
November	6,662	5,938	6,338	6,458	5,496
December	7,320	7,223	7,311	6,304	5,742

Annual Avg	6.838	8.272	7.232	6.206	5.698
Max 3-Mo Avg	8.601	10.934	9.2	9.491	6.355
Max : Avg Ratio	1.26	1.32	1.27	1.53	1.12
Existing EDUs	22,984.0	23,678.0	23,473.0	23,108.0	23,541.0
Flow/EDU (GPD)	297.5	349.4	308.1	268.6	242.0
Flow/Capita (GPD)	85.0	99.8	88.0	76.7	69.2
Exist. Overload?	NO	NO	NO	NO	NO

Annual Avg	6,322	6,325	6,367	5,829	6,373
Max Mo Avg	7,320	7,223	7,311	6,883	7,625
Max : Avg Ratio	1.16	1.14	1.15	1.18	1.20
Existing EDUs	22,984	23,678	23,473	23,108	23,541
Load/EDU	0.275	0.267	0.271	0.252	0.271
Load/Capita	0.079	0.076	0.077	0.072	0.077
Exist. Overload?	NO	NO	NO	NO	NO

Projected Flows for Next Five Years (MGD)

	2022	2023	2024	2025	2026
New EDUs	227.0	227.0	227.0	227.0	227.0
New EDU Flow	0.0665	0.0665	0.0665	0.0665	0.0665
Proj. Annual Avg	6.916	6.9825	7.049	7.1155	7.182
Proj. Max 3-Mo Avg	8.986	9.072	9.159	9.245	9.331
Proj. Overload?	NO	NO	NO	NO	NO

Projected BOD5 Loads for Next Five Years (lbs/day)

	2022	2023	2024	2025	2026
New EDUs	227	227	227	227	227
New EDU Load	60.670	60.670	60.670	60.670	60.670
Proj. Annual Avg	6,304	6,364	6,425	6,486	6,546
Proj. Max Avg	7,344	7,415	7,486	7,557	7,627
Proj. Overload?	NO	NO	NO	NO	NO

Show Precipitation Data on Hydraulic Graph?

Total Monthly Precipitation for Past Five Years (Inches)

Month	2017	2018	2019	2020	2021
January	12.15	22.09	14.17	6.88	4.99
February	4.98	14.31	13.95	11.25	9.68
March	13.97	11.7	6.61	5.71	3.05
April	4.3	8.62	3.97	4.88	3.05
May	6.0	4.66	5.92	2.52	5.68
June	3.41	5.06	7.94	2.8	4.16
July	5.5	2.53	6.11	3.23	6.06
August	4.35	3.59	2.92	5.38	6.52
September	1.8	9.83	3.13	1.78	3.62
October	3.79	4.82	6.39	3.23	4.62
November	6.15	9.07	3.24	3.06	4.94
December	10.97	6.46	5.75	23.84	5.79

Appendix C

2021 Annual Pretreatment Report

EPA Region 3 Industrial Pretreatment Program

Annual Report of POTW Implementation

Last Updated: 11-22-2021

Disclaimer

This model is intended to be used as a tool to submit the Pretreatment Annual Report of the EPA Region 3 Industrial Pretreatment Program. All other uses are strictly prohibited. Unless specified otherwise, enter data for the reporting year.

Accept

Exit

Disclaimer accepted on 1/19/2022 12:53:40 PM by Usermmiller

Reporting Period

January 1 to December 31 of year	2021
----------------------------------	------

POTW Contacts

Control Authority Name	Butler Area STP
NPDES Permit No	PA0026697
Permit Issuance Date	9/1/2018
Permit Expiration Date	10/31/2023
Facility Name	Butler Area Sewer Authority
Facility Address1	100 Litman Road
Facility Address2	
Facility City	Butler
Facility State	PA
Facility Zip	16001

Pretreatment Contact(s) - List all Pretreatment Personnel

Name	Title	Email
Mason Miller	Pretreatment Coordinator	mmiller@basapa.org

Permit Signatory	Mason Miller
Permit Signatory Title	Pretreatment Coordinator
Contact Phone	724- 282-1978
Contact Email	mmiller@basapa.org
POTW Site Address	100 Litman Road, Butler, Pa 16001

Additional Information

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POTW Information

NPDES Effluent Violations?	Yes	Parameter(s)	
Date of Violations	05/10/2021 06/11/2021 07/18/2021 08/31/2021		
Cause of NPDES permit violations?	05/10/2021 - Fecal coliform exceedance from 1.83 inches of heavy rainfall occurring on the same day. 06/11/2021 - Fecal coliform exceedance from 1.6 inches of heavy rainfall occurring on the same day. 07/18/2021 - Fecal coliform exceedance from 1.35 inches of heavy rainfall occurring on the previous day. 08/31/2021 - Fecal coliform exceedance. Although there was 0.5 inches of rainfall the previous day The Authority suspects a lab error.		
Sludge Disposal Method 1	LANDFILL		
Sludge Disposal Method 2			
Sludge Disposal Method 3			
Highest Treatment Level	Secondary		

Treatment Types

Primary Clarification?	Yes	Lagoon?	No
Secondary Clarification?	Yes	Anaerobic Digestion?	No
Activated Sludge?	Yes	Aerobic Digestion?	Yes
Trickling Filter?	Yes	Chlorination?	Yes
Oxidation Ditch?	No	Dechlorination?	No
Biotowers?	No	UV Disinfection?	No
Rotating Biological Contacts?	No	BNR?	No
Other?			

POTW Design Flow (mgd)	10
POTW Actual Flow (mgd)	5.698
Total SIU Flow (mgd)	0.108
% Industrial Flow	2.3 %
POTW Organic (BOD) Design Capacity (lbs/day)	12750
POTW TSS Design Capacity (lbs/day)	15,000
POTW Ammonia (NH3) Design Capacity (lbs/day)	1,251
Actual or Estimated total Flow for Commercial (Non-SIU) Dischargers (mgd)	0.07713

Additional Information

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Program Implementation

Number of Permitted Industrial Users as of December 31

CIUs	1	
Total SIUs	4	<i>includes CIUs + SIUs</i>
Other Permitted IUs	3	
Zero-Discharge CIUs	0	
Permitted Zero-Discharge CIUs	0	
Middle-Tier CIUs	0	
Non-Significant CIUs	0	

SIUs with No/Expired Permit as of December 31	0
SIUs with Administratively Extended Permits >180 Days	0
Number of SIUs with current control mechanisms	4
Number of NSCIUs that have violated any pretreatment standard	0

Number of SIUs in significant non-compliance (SNC) as of December 31

	CIUs	Non Categorical SIUs	Total SIUs
SNC Self-monitoring	0	0	0
SNC Reporting	0	0	0
SNC PT Standards	0	0	0
SNC Prohibitions	0	0	0
SNC Compliance Schedule	0	0	0
SNC Pass Through/Interference	0	0	0
SNC Other SNC Violations	0	0	0

Number of SIUs in significant non-compliance (SNC) at any time	0
Number of non-SIUs in significant non-compliance (SNC) at any time	0
Number of SIUs in SNC during the previous calendar year	0
SNC during the July to December period	0

# Permitted Non-SIUs With Unknown Compliance Status	0
# SIUs With Unknown Compliance Status	0
Does the ERP include escalating enforcement actions for SNC	Yes

	CIUs	Non Categorical SIUs	Total SIUs
Number of SIUs with compliance schedule as of December 31	0	0	0

Additional Information

--

Enforcement Actions

	Non-SIUs	SIUs	CIUs
Number of NOVs	0	2	1
Number of Formal Enforcement Actions	0	0	0
Number of different IUs with Formal Enforcement Actions	0	0	0
Number of SIUs on formal compliance schedule	0	0	0

Formal actions include Administrative Orders, show cause hearings, out-of-court settlements that are formal settlements, termination of service, formal compliance schedules, penalty actions EXCEPT civil or criminal suits.

	Civil	Criminal	Total
Number of suits filed against SIUs	0	0	0

	Non-SIUs	SIUs
Number of Different IUs From Whom Penalties Were Collected	0	0
Total Penalties Collected		

Number of IUs Published As Being In SNC	0
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Additional Information

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Compliance Monitoring

	Non-SIU	SIU
Number of individual permits issued	3	5
Number of general permits issued	0	0
Number of inspections in the reporting year	3	4

Overview description of Non-SIU inspections

Linde Gas of America, Air Products and Chemicals, and iDL Worldwide were inspected on 11/02/2021, 10/20/2022 and 12/15/2022 respectively. Linde Gas uses fractional distillation of air to produce oxygen, nitrogen, and crude argon. Air Products and Chemicals is a hydrogen production facility. IDL Worldwide designs, prints, manufactures and fabricates point-of-purchase displays for major U.S. brand name companies. Business name, location, production/operation information, wastewater types and quantities, environmental permits, ERP plans, and hazardous materials were all discussed and updated as needed during the

Number of SIUs not inspected during the reporting year	1
Number of SIUs that submitted required Self-Monitoring Reports	5
Number of SIUs not sampled during the reporting year	1
Number of SIUs in SNC With Self-Monitoring Requirements That Were Not Inspected or Samp	0

Additional Information

National American Steel and Wire (NASW), a CIU in the metal finishing category, no longer creates process wastewater. Therefore, the Authority voided the wastewater permit 07/31/2021. This is why one inspection and sampling event weren't completed during the reporting year.

Program Implementation - Resources

Number of Pretreatment FTEs	1
Significant Changes (+/- 20%) to The POTW's Pretreatment Program Budget or Staffing	No
Source of Budget	Account 10538
Total Pretreatment Program Budget	\$ 37,946

Number of Jurisdictions Covered By Pretreatment Program	8
Adequate delegation in each jurisdiction?	Yes
Miscellaneous Developments and Special Initiatives?	No

Additional Information

Program Implementation - Hauled Waste

Does the POTW receive any discharges of

Receive Groundwater From Hydrocarbon Cleanup Site?	No
Receive Hauled Septage (Domestic Only)?	No
Receive Hauled Waste From Industrial Sources?	No
Receive Hauled Waste From Commercial Sources?	No
Receive Hauled Categorical Waste?	No
Receive Hauled Grease Interceptor/Trap Waste?	No
Receive Landfill Leachate?	No
Receive CERCLA Cleanup Wastes?	No
Receive Hazardous (RCRA) Waste?	No
RV Dump Stations in Service Area?	No
Receive Other Unique Waste?	No
Receive Oil & Gas Waste from Stripper wells?	No

If you accept any trucked or hauled waste, indicate all of the following that apply to your

Legal Authority To Control Hauled Waste?	Yes
POTW Issues Permits For Hauled Wastes?	Yes
POTW Has A Designated Disposal Site For Hauled Wastes?	Yes
POTW Controls Access At The Designated Disposal Station?	Yes
POTW Uses A Manifest System To Track/Control Hauled Wastes?	Yes
POTW Believes That Illegal Dumping May Be Occurring In Its Jurisdiction?	No

What parameter if any do you surcharge

Surcharge for BOD?	Yes
Surcharge for TSS?	Yes
Surcharge for Oil and Grease?	No
Surcharge for Flow?	No
Surcharge for Ammonia?	No
Surcharge for COD?	No
Surcharge for TKN?	No
Surcharge for Other Parameters?	No

Additional Information

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Attachment A: List of CIUs/SIUs

SIU	PERMIT INFO				Address	SIU Info					Limits Type	MWG	Jurisdiction	SIC Code1	SIC Code2	Categorical Standard	Total Average Process Flow (gpd)	Total Average Facility Flow (gpd)	MTCIU or		Discharge Status	Description	SNC?
	Issued	Effective	Expires	Permit Type		Sampled	Inspected	MRS	# of self-monitorings conducted/required	NSCIU?									Justification				
Metalized Ceramics	2/23/2021	3/9/2021	9/30/2022	IP	119 Grant Street, East Butler, Pa 16029	10/26/2021	10/26/2021	4	1/1	Concentration-based		East Butler Borough	3417		Metal Finisher	3.8	44			Active	Manufacture Ceramic to met	No	
North American Ste	2/23/2021	3/9/2021	7/31/2021	IP	629 East Butler Road, Butler, Pa 16002	Zero Dischar	11/25/2020	7	0/0	Concentration-based		Summit Township	3315	3471	Metal Finisher	0	204			Zero Discharge	Staple Manufacturer. CIU und	No	
Pa American Water	2/23/2021	3/9/2021	11/30/2022	IP	207 Oneida Valley Road, Butler, Pa 1600	11/3/2021	11/3/2021	12	12/12	Concentration-based		Oakland Township	4941			28,119	28,420			Active	Public water supply treatmer	No	
JSP International, L	2/23/2021	3/9/2021	12/31/2024	IP	150 East Brook Lane, Butler, Pa 16002	11/23/2021	11/23/2021	12	26/26	Concentration-based		Summit Township	3086			29,133	33,078			Active	Extrusion of polypropylene p	No	
Cleveland-Cliffs Ste	3/2/2021	3/2/2021	11/30/2023	IP	210 Pittsburgh Road, Butler, Pa 16001	Zero Dischar	10/13/2021	4	0/0	Concentration-based		Butler Township	3,312	3316		0	46,205			Zero Discharge	& electrical steel from scrap	No	

Attachment B: Copy of Newspaper Notice of SNC

Provide a copy of the newspaper notice identifying all IUs which were in SNC during the reporting period. The notice must show the name of the paper and the date of publication.

Copy of Newspaper Notice of SNC submitted?

Additional Information

Attachment E1: Permitted Industrial Users (part 1 of 2)

Provide a printout or listing of all permitted non-SIUs

	Permitted Non-SIUs	Rationale for permitting these non-SIUs
01	Linde Gas of America	The amount of process wastewater discharged, 4,957 gpd average and the pollutant concentrations produced by the closed loop cooling tower blowdowns, compressor condensate, sand filter backwashes, and periodic wastewater from the draining and cleaning of the cooling tower recirculation basins were BASA's motive to permit this facility. Pollutants of concern covered under their wastewater permit include copper and zinc. All permit limits correspond to local limit values and specific prohibitions found in BASA's rules and regulations.
02	Air Products and Chemicals	The amount of process wastewater discharged, 7,068 gpd average and the pollutant concentrations produced by the boiler feed system and cooling tower blowdown wastewater was BASA's motive to permit this facility. Pollutants of concern covered under their wastewater permit include copper, zinc and pH. All permit limits correspond to local limit values and specific prohibitions found in BASA's rules and regulations.
03	iDL Worldwide	The pollutant concentrations produced by the former film development process and the current screen printing/reclamation processes was BASA's motive to permit this facility. Pollutants of concern covered under their wastewater permit include BOD, TSS, silver, copper, and zinc. All permit limits correspond to local limit values and specific prohibitions found in BASA's rules and regulations.
04		Permit Voided 04/01/2021. The amount of process/domestic wastewater previously discharged, 2,379 gpd average and the pollutant concentrations produced by cleaning and regeneration of water softener tanks, iron and carbon filter tanks, and neutralization tanks was BASA's motive to permit this facility. Pollutants of concern covered under their wastewater permit include copper, zinc, and pH. All permit limits correspond to local limit values and specific prohibitions found in BASA's rules and regulations.
05	Serv-A-Care	
06		
07		
08		
09		
10		
11		
12		
13		
14		
15		
16		
17		
18		
19		
20		

Add more rows

Additional Information

Attachment H: Influent/Effluent and Biosolids Monitoring

Influent Monitoring Results Submitted or Attached	Yes
Effluent Monitoring Results Submitted or Attached	Yes
Biosolids Monitoring Results Submitted or Attached	Yes

Additional Information

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Appendix A-20-c

Facility Name:	BUTLER AREA SEWER AUTHORITY														
Facility ID:	PAP026697	UNITS:	MG/KG												
Location:	SLUDGE		DRY WT	Date	Date	Date	Date	Date	Date	Date	Date	Date	Date	Date	Date
	Pollutant	Goals	Frequency	1/19/2021	5/19/2021	7/28/2021	8/25/2021	10/6/2021							
01002	ARSENIC- TOTAL	41	4	10.2	7.19	9.03		9.07							
00310	BOD- 5-DAY	No Goal	0												
01027	CADMIUM- TOTAL	39	4	1.1	<0.087	<1.57		<1.53							
01034	CHROMIUM- TOTAL	Monitor	4	17	27.8	25		24.7							
01042	COPPER- TOTAL	1500	4	232	233	139		201							
00720	CYANIDE- TOTAL	Monitor	4	<2.2	<2.3	1.47		2.85							
01051	LEAD- TOTAL	300	4	15.7	16.7	13.2		16.6							
71900	MERCURY- TOTAL	17	4	<0.31	0.944	0.160283		0.625							
01062	MOLYBDENUM- TOTAL	75	4	<4.0	<0.534	9.3		3.28							
01067	NICKEL- TOTAL	420	4	12.8	13.2	18.4		10.5							
00610	NITROGEN- AMMONIA	Monitor	4		1290	245	6830	869							
04166	PCB- TOTAL	Monitor	1	<13.52											
00665	PHOSPHORUS- TOTAL	No Goal	0												
01147	SELENIUM- TOTAL	100	4	<2	<1.92	<6.27		<6.14							
01077	SILVER- TOTAL	Monitor	4	<0.34	<0.278	<1.57		<1.53							
00530	SOLIDS- TOTAL SUSPENDED	No Goal	0												
01092	ZINC- TOTAL	2800	4	340	315	264		324							
				Non-detect "J" values											

Email File to EPA Region 3

The signature certification page **must** be printed, signed, and sent in hard copy to US EPA Region 3 at the following address:

Pretreatment Coordinator
 US EPA Region 3
 Mail Code 3WD41
 1650 Arch Street
 Philadelphia, PA 19103-2029

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

#NAME?

Mason Miller
 Authorized Signatory Official

01/20/2022
 Date

Mason Miller: Pretreatment Coordinator
 Print or type name and title

Note: The Signatory Official is the person authorized by the POTW to sign the Annual Report (see 40 CFR Section 403.12(m)).

The following documents may be attached to the email or hard copies can be mailed to US EPA Region 3

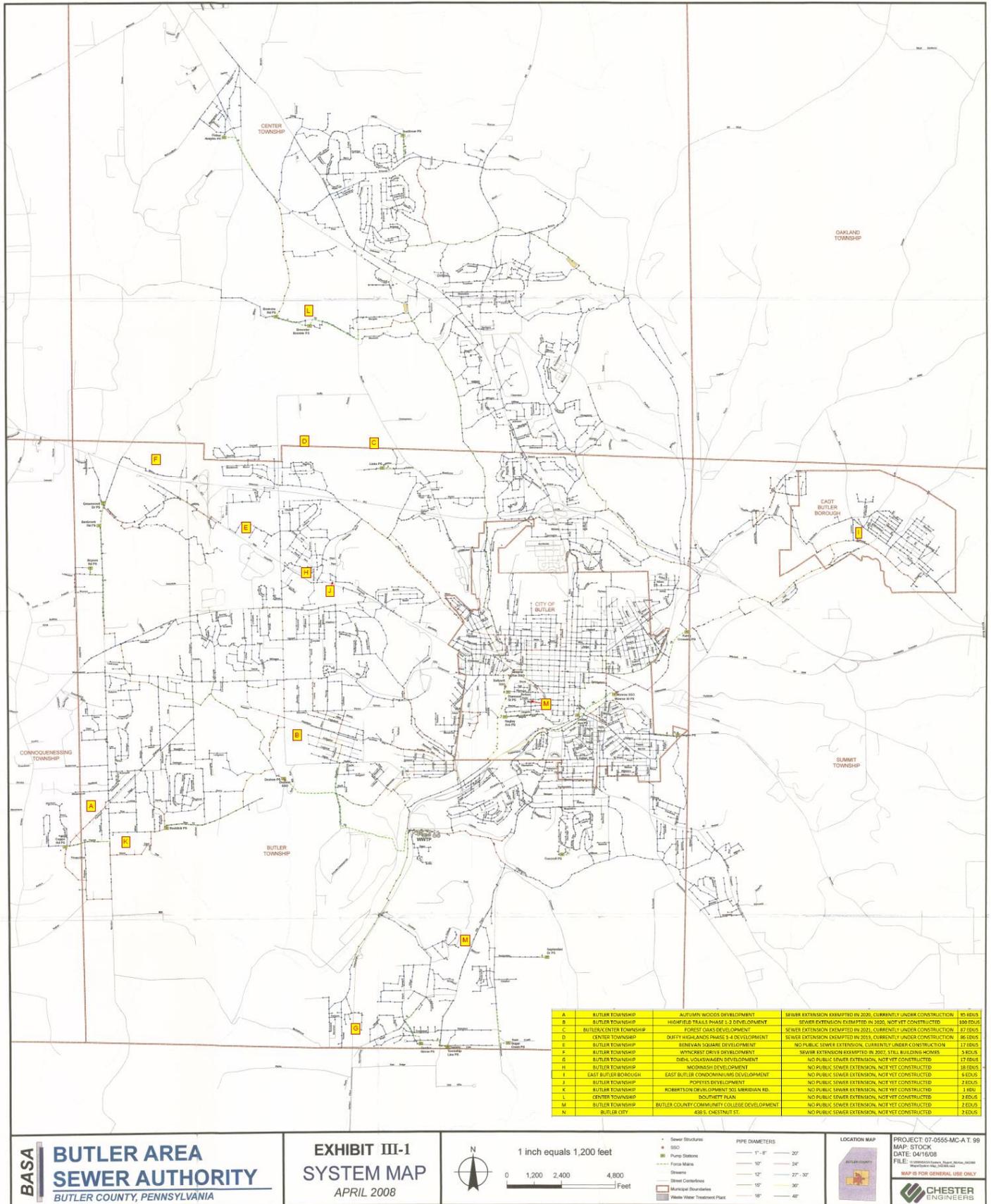
1. A copy of the newspaper notice identifying all IUs which were in SNC during the reporting period. The notice must show the name of the paper and the date of publication.
2. The results of all influent monitoring results that were performed as required in the Pretreatment section of your state issued NPDES permit. The results must include the name of the pollutant, measured concentration, analytical method used, detection
3. The results of all effluent monitoring results from the monitoring required by the Pretreatment section of your state issued NPDES permit. Provide monitoring results for those pollutants that were reported above the detection limit. The results must include the
4. The results of all monitoring results for biosolids (sludge) monitoring for any pollutants listed in 40 CFR Part 122, Appendix D, Table II, III, and V. This is for final sludge to disposal only. This monitoring may have been required by your state issued NPDES permit, or

Time Stamp:

User Stamp:

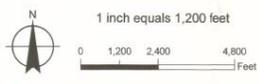
Appendix D

2021 Planning Module Land Development Map



BASA
BUTLER AREA SEWER AUTHORITY
 BUTLER COUNTY, PENNSYLVANIA

EXHIBIT III-1
SYSTEM MAP
 APRIL 2008



Symbol	Label	Symbol	Label
Circle with cross	Sewer Structure	Line	PIPE DIAMETERS
Square with cross	SSO	Line	1" - 8"
Circle with cross	Pump Station	Line	10"
Circle with cross	Force Mains	Line	24"
Circle with cross	Shower	Line	27" - 30"
Circle with cross	Street Collection	Line	36"
Circle with cross	Municipal Boundaries	Line	48"
Circle with cross	Waste Water Treatment Plant		

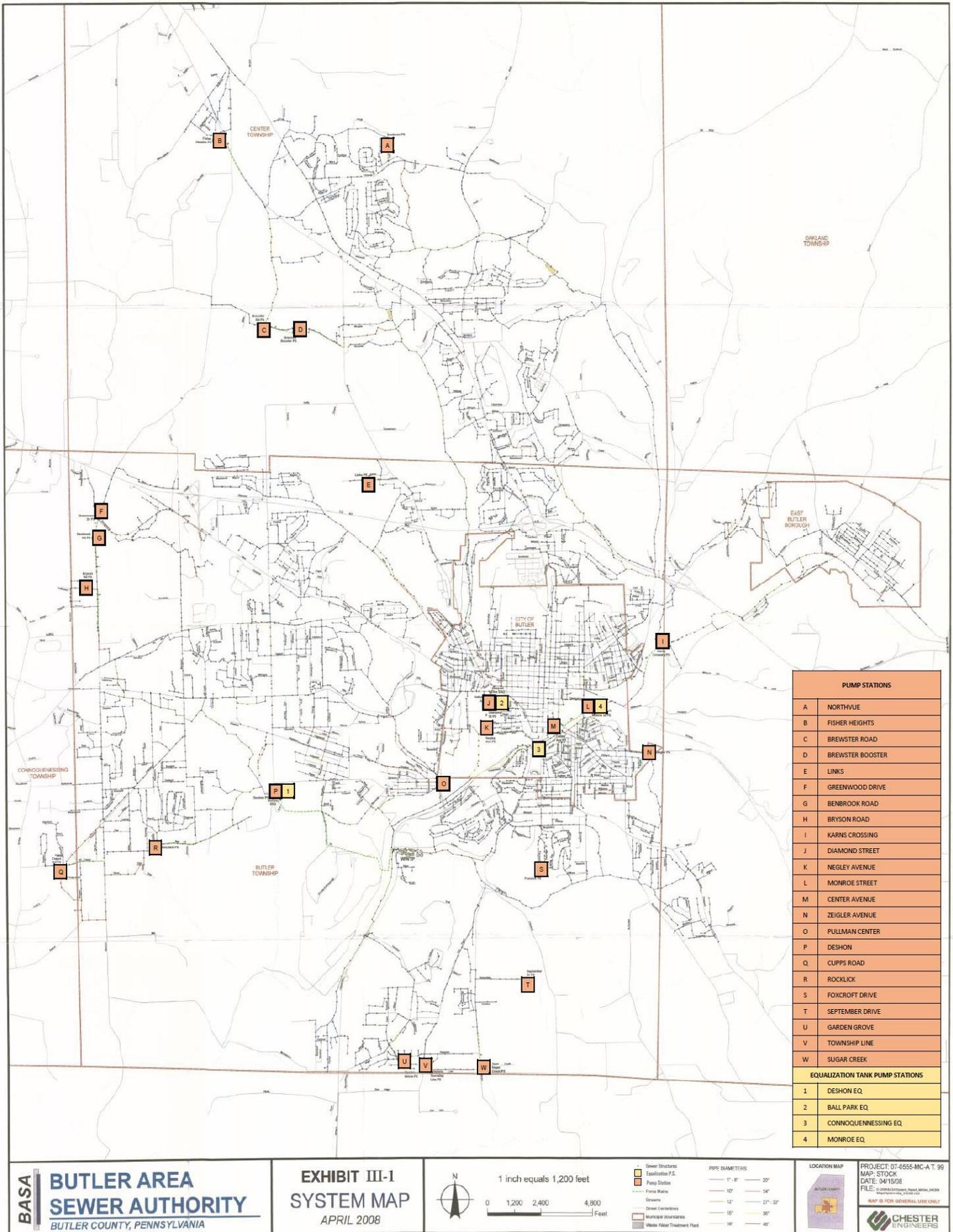
LOCATION MAP

PROJECT: 07-0555-MC-AT-99
 MAP: STOCK
 DATE: 04/16/08
 FILE: \\server\projects\07-0555-MC-AT-99\Map\Stock.mxd
 MAP IS FOR GENERAL USE ONLY

CHESTER ENGINEERS

Appendix E

Pump Station Map

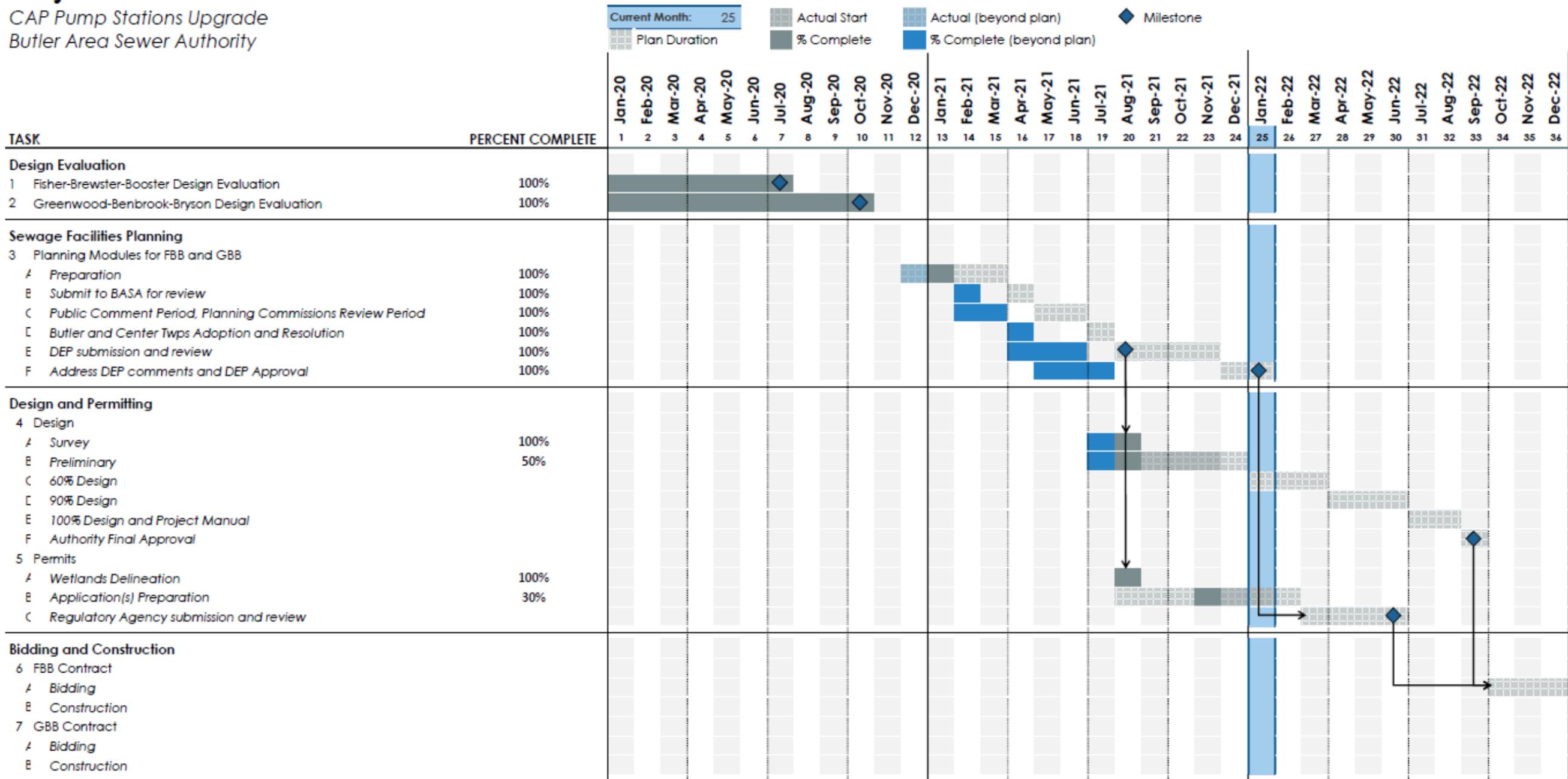


Appendix F

CAP Progress Schedule

Project Schedule

CAP Pump Stations Upgrade
Butler Area Sewer Authority



Project Schedule

CAP Pump Stations Upgrade
Butler Area Sewer Authority

