pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Northcentral Regional Office
CLEAN WATER PROGRAM

Application Type	**Renewal**	Application No.	**PA0036820**
Facility Type	**Municipal**	APS ID	**911964**
Major / Minor	**Minor**	Authorization ID	**1131708**

NPDES PERMIT FACT SHEET INDIVIDUAL SEWAGE

Applicant and Facility Information

Applicant Name	**Galeton Borough Authority**	Facility Name	**Galeton Borough Authority Sewer System STP**
Applicant Address	15 West Street	Facility Address	Mill Street
	Galeton, PA 16922-1264		Galeton, PA 16922
Applicant Contact	Trixie Blass	Facility Contact	Trixie Blass
Applicant Phone	(814) 435-2275	Facility Phone	(814) 435-2275
Client ID	1669	Site ID	248335
Ch 94 Load Status	Not Overloaded	Municipality	Galeton Borough
Connection Status	No Limitations	County	Potter
Date Application Received	April 1, 2016	EPA Waived?	No
Date Application Accepted	April 14, 2016	If No, Reason	Significant CB Discharge

Purpose of Application: Application for the renewal of the existing individual NPDES permit.

Summary of Review

The Galeton Borough Authority has submitted an application for the renewal of the existing NPDES Permit PA0036820 for the Department's review. DEP will publish notice of the receipt of the NPDES permit application and a tentative decision to issue the individual NPDES permit in the *Pennsylvania Bulletin* in accordance with 25 Pa. Code § 92a.82. Upon publication in the *Pennsylvania Bulletin*, DEP will accept written comments from interested persons for a 30-day period (which may be extended for one additional 15-day period at DEP's discretion), which will be considered in making a final decision on the application. Any person may request or petition for a public hearing with respect to the application. A public hearing may be held if DEP determines that there is significant public interest in holding a hearing. If a hearing is held, notice of the hearing will be published in the *Pennsylvania Bulletin* at least 30 days prior to the hearing and in at least one newspaper of general circulation within the geographical area of the discharge.

Approve	Deny	Signatures	Date
X		*Jonathan P. Peterman* Jonathan P. Peterman / Project Manager	February 26, 2021
X		*Nicholas W. Hartranft* Nicholas W. Hartranft, P.E. / Environmental Engineer Manager	March 11, 2021

Discharge, Receiving Waters and Water Supply Information

Outfall No.	002	Design Flow (MGD)	N/A
Latitude	41º 44' 1.05"	Longitude	-77º 38' 28.87"
Quad Name	Galeton	Quad Code	0524
Wastewater Description:	Combined Sewer Overflow		

Receiving Waters	Pine Creek (EV (existing use))	Stream Code	21166
NHD Com ID	66536899	RMI	71.53
Drainage Area	177	Yield (cfs/mi^2)	0.04
Q_{7-10} Flow (cfs)	7.09	Q_{7-10} Basis	Gage No. 1548500
Elevation (ft)	1292	Slope (ft/ft)	0.00334
Watershed No.	9-A	Chapter 93 Class.	HQ-CWF
Existing Use	EV (EXCEPTIONAL VALUE)	Existing Use Qualifier	RBP - Antidegradation
Exceptions to Use	None.	Exceptions to Criteria	None.
Assessment Status	Attaining Use(s)		
Cause(s) of Impairment	N/A		
Source(s) of Impairment	N/A		
TMDL Status	N/A	Name	N/A

Nearest Downstream Public Water Supply Intake	Jersey Shore Area Joint Water Authority		
PWS Waters	Pine Creek	Flow at Intake (cfs)	39
PWS RMI	1.92	Distance from Outfall (mi)	69.61

Discharge, Receiving Waters and Water Supply Information

Outfall No.	001	Design Flow (MGD)	0.5
Latitude	41º 44' 1.05"	Longitude	-77º 38' 28.87"
Quad Name	Galeton	Quad Code	0524
Wastewater Description:	Sewage Effluent		
Receiving Waters	Pine Creek (EV (existing use))	Stream Code	21166
NHD Com ID	66536899	RMI	71.53
Drainage Area	177	Yield (cfs/mi^2)	0.04
Q_{7-10} Flow (cfs)	7.09	Q_{7-10} Basis	Gage No. 1548500
Elevation (ft)	1292	Slope (ft/ft)	0.00334
Watershed No.	9-A	Chapter 93 Class.	HQ-CWF
Existing Use	EV (EXCEPTIONAL VALUE)	Existing Use Qualifier	RBP - Antidegradation
Exceptions to Use	None.	Exceptions to Criteria	None.
Assessment Status	Attaining Use(s)		
Cause(s) of Impairment	N/A		
Source(s) of Impairment	N/A		
TMDL Status	N/A	Name	N/A
Nearest Downstream Public Water Supply Intake	Jersey Shore Area Joint Water Authority		
PWS Waters	Pine Creek	Flow at Intake (cfs)	39
PWS RMI	1.92	Distance from Outfall (mi)	69.61

Changes Since Last Permit Issuance: The updated Q_{7-10} data was obtained from the updated stream gage information obtained from *Stuckey, M.H., and Roland, M.A., 2011, Selected Streamflow Statistics for Streamgage Locations In and Near Pennsylvania*. Given that there is a stream gage located downstream (Pine Creek at Cedar Run, PA 1548500) of the discharge location, a simple comparative stream analysis is needed. This analysis reveals that the Q_{7-10} is 7.09 cfs. Q_{7-10} calculations are attached in Appendix A. The previous review utilized 6.96 cfs.

Other Comments: None.

DEP has evaluated information indicating that the existing use of the receiving waters is different than the designated use under 25 Pa. Code § 93.9. In developing the draft NPDES permit, DEP is proposing to protect the existing use of the receiving waters. Following DEP's notice of the receipt of the application and the draft permit in the Pennsylvania Bulletin, DEP will accept written comments during the public comment period regarding DEP's tentative determination to protect the existing use. DEP will make a final determination on existing use protection for the receiving waters as part of the final permit action.

Treatment Facility Summary

Treatment Facility Name: Galeton Borough WWTP

WQM Permit No.	Issuance Date
5302402	8/7/2000
5305401	4/4/2006
5309401	8/28/2009

Waste Type	Degree of Treatment	Process Type	Disinfection	Avg Annual Flow (MGD)
Sewage	Secondary	Extended Aeration	No Disinfection	0.5

Hydraulic Capacity (MGD)	Organic Capacity (lbs/day)	Load Status	Biosolids Treatment	Biosolids Use/Disposal
0.5	340	Not Overloaded	Aerobic Digestion	Land Application

Treatment System Components:
- One (1) Influent Mechanical Bar Screen.
- One (1) Influent Lift Station.
- Two (2) Combination Circular Aeration Basins with interior clarifiers.
- One (1) Chlorine Disinfection System.
- One (1) Chlorine Contact Tank.
- One (1) Dechlorination System.
- One (1) Outfall 001.
- One (1) CSO Outfall 002.

- One (1) Sludge Drying Bed.

Changes Since Last Permit Issuance: None.
Other Comments: See Appendix D for the facility schematic.

Industrial/ Commercial Wastewater Contributions

The application indicates that there are no industrial users.

Trucked-In Waste

The application indicates that the facility receives hauled-in waste from residential septage haulers. The annual average volume is approximately 100,000 gallons. A Part-C condition will be placed in the draft permit.

Anti-Backsliding

In accordance with 40 CFR 122.44(l)(1) and (2), this permit does not contain effluent limitations, standards, or conditions that are less stringent than the previous permit.

Chesapeake Bay Requirements

In order to address the TMDL, Pennsylvania developed a Chesapeake Watershed Implementation Plan (WIP) – Phase I. Since the publication of Pennsylvania's Phase I Chesapeake WIP in January 2011 and the Chesapeake Bay TMDL, several activities have occurred that necessitated the development of the Phase II WIP. Initially, a phased approach was utilized which imposed TN and TP cap loads in reissued permits for significant sewage dischargers. Accordingly, Galeton Borough Authority's renewed permit, issued 9/29/11, included these TN and TP cap loads. In accordance with the Wastewater Supplement to Phase II WIP, these cap loads will remain in the permit. Per the April 6, 2015 revisions to the

Chesapeake Bay Watershed Implementation Plan (WIP), Phase II, the monitoring frequencies for the Nitrogen series and Total Phosphorus have been increased from 1/week to 2/week. Additionally, the Chesapeake Bay language at Part C I of the permit has been revised to reflect the revised WIP.

The limitations and monitoring requirements specified below are proposed for the draft permit, to comply with Pennsylvania's Chesapeake Bay Tributary Strategy:

Outfall 001, Effective Period: Permit Effective Date through Permit Expiration Date

Discharge Parameter	Effluent Limitations					Monitoring Requirements	
	Mass Units (lbs/day)		Concentrations (mg/L)			Minimum Measurement Frequency	Required Sample Type
	Monthly	Annual	Minimum	Monthly Average	Maximum		
Ammonia---N	Report	Report Total Annual		Report		2/week	8-Hr Comp.
Kjeldahl---N	Report			Report		2/week	8-Hr Comp.
Nitrate-Nitrite as N	Report			Report		2/week	8-Hr Comp.
Total Nitrogen	Report	Report Total Annual		Report		1/month	Calculation
Total Phosphorus	Report	Report Total Annual		Report		2/week	8-Hr Comp.
Net Total Nitrogen	Report	9,132* Total Annual				1/month	Calculation
Net Total Phosphorus	Report	1,218** Total Annual				1/month	Calculation

*TN = 0.5 MGD x 6.0 mg/l x 8.34 x 365 days/yr = 9,132 lb/yr
**TP = 0.5 MGD x 0.8 mg/l x 8.34 x 365 days/yr = 1,218 lb/yr

Combined Sewer Overflow

Galeton has one remaining Combined Sewer Overflow (CSO) Outfall 002 that is located at the WWTP. When the influent flow rate exceeds the facility's hydraulic design capacity during wet weather events, this CSO Outfall 002 is used to divert both sewage and stormwater flows directly to the receiving stream. The combined flow is diverted using an overflow channel that is usually closed off by a manually operated slide gate. An elevation difference between the two channels ultimately controls the discharge. From the overflow channel the combined flow connects with the facility's treated effluent piping and discharges into Pine Creek at Outfall 001.

Name of Outfall	Receiving Stream Name	Location	
		Latitude	Longitude
Mill Street (002)	Pine Creek	41° 44‘ 14“	77° 38‘ 03“

CSO dischargers are required to demonstrate implementation of the Nine Minimum Controls (NMCs) and develop a Long-Term Control Plan (LTCP). Galeton's current LTCP is to complete a full separation of the collection system. The last update to LTCP was in November of 2012 where the cost estimates of the final phases were provided. This LTCP will be revised once funding is secured and projected completion dates can be established.

The remaining interim milestones of the 2012 LTCP are as follows.

Event	Date
Phase 3B of the South Sewershed Improvements	To Be Determined
Phase 3C of the South Sewershed Improvements	To Be Determined

The Annual CSO Status Reports have been submitted as part of the permittee's annual Chapter 94 Municipal Wasteload Management Report. In 2019 there were a total of 60 CSO events. No dry weather events were recorded. The

Department has requested that an update to the existing LTCP be submitted to account for the additional separation projects that have been completed.

The Department conducted discussions with EPA prior to the drafting of this permit. The final correspondence, dated 2/5/21, is attached. The following changes PADEP made to the permit based on these discussions are as follows:

- To provide clarity into the reporting of nutrient limits, "Total Annual" was added in Part A.I.C of the permit.
- The part C conditions were updated to reflect the "Bypass" scenario.
- The Department has updated Part C.III.B.3 of the permit to reflect the final LTCP goal of complete separation.
- The Department has updated the implementation schedule in Part C.III.B.3 of the permit. The Permittee will be required to "Provide the Department with an LTCP update" with two years of permit issuance (April 1, 2023). This date will be verified by the permittee.
    - Additionally, this update should include a post construction monitoring program plan adequate to verify compliance with water quality standards and protection of designated uses as well as to ascertain the effectiveness of CSO controls. This water quality compliance monitoring program should include a plan to be approved by the Department that details the monitoring protocols to be followed.
    - The LTCP should develop updated design conditions through characterization, monitoring, and modeling of the Combined Sewer System.
- The Permittee will be required to verify the LTCP Final Compliance Date of 2042.
- The Department will be in contact with the permittee regarding the "bypass".

Existing Effluent Limitations and Monitoring Requirements

Existing Limits – Outfall 001

Discharge Parameter	Limitations							
	Mass (lb/day)		Concentration (mg/L)				Monitoring Requirements	
	Monthly Average	Daily Maximum	Minimum	Average Monthly	Average Weekly	Instantaneous Maximum	Minimum Frequency	Sample Type
Flow (MGD)	Report	Report					Continuous	Metered
C-BOD_5	100	165		25	40	50	1/ Week	8-Hr Comp
TSS	125	185		30	45	60	1/ Week	8-Hr Comp
pH (Std. Units)			6.0			9.0	1/ Day	Grab
TRC				Report		0.05	1/ Day	Grab
NH3-N (5/1-10/31)	50	75		12	18	24	1/ Week	Grab
Fecal Coliforms (5/1-9/30)	200 colonies/100 ml as a geometric mean					1,000	1/ Week	Grab
Fecal Coliforms (10/1-4/30)	2,000 colonies/100 ml as a geometric mean					10,000		

*The existing effluent limits for Outfall 001 were based on a design flow of 0.5 MGD.

Development of Effluent Limitations

Outfall No. 002 **Design Flow (MGD)** 0
Latitude 41º 44' 17.10" **Longitude** -77º 38' 5.20"
Wastewater Description: Combined Sewer Overflow

Outfall No. 001 **Design Flow (MGD)** 0.5
Latitude 41º 44' 14.50" **Longitude** -77º 38' 1.10"
Wastewater Description: Sewage Effluent

Technology-Based Limitations

The following technology-based limitations apply, subject to water quality analysis and BPJ where applicable:

Pollutant	Limit (mg/l)	SBC	Federal Regulation	State Regulation
$CBOD_5$	25	Average Monthly	133.102(a)(4)(i)	92a.47(a)(1)
	40	Average Weekly	133.102(a)(4)(ii)	92a.47(a)(2)
Total Suspended Solids	30	Average Monthly	133.102(b)(1)	92a.47(a)(1)
	45	Average Weekly	133.102(b)(2)	92a.47(a)(2)
pH	6.0 – 9.0 S.U.	Min – Max	133.102(c)	95.2(1)
Fecal Coliform (5/1 – 9/30)	200 / 100 ml	Geo Mean	-	92a.47(a)(4)
Fecal Coliform (5/1 – 9/30)	1,000 / 100 ml	IMAX	-	92a.47(a)(4)
Fecal Coliform (10/1 – 4/30)	2,000 / 100 ml	Geo Mean	-	92a.47(a)(5)
Fecal Coliform (10/1 – 4/30)	10,000 / 100 ml	IMAX	-	92a.47(a)(5)
Total Residual Chlorine	0.5	Average Monthly	-	92a.48(b)(2)

Water Quality-Based Limitations

To establish whether or not water-quality based effluent limitations (WQBELs) are required, the Department models in-stream conditions. In order to determine limitations for CBOD5, ammonia-N and dissolved oxygen, the Department utilizes the WQM 7.0 v1.0b model and in order to determine limitations for toxics, the Department utilizes the PENTOXSD v2.0d model.

WQM 7.0 for Windows, Version 1.0b, Wasteload Allocation Program for Dissolved Oxygen and Ammonia Nitrogen

The model was run using the Q7-10 stream flow, background water quality, average annual design flow, and other discharge characteristics. The existing water technology-based limits for $CBOD_5$ (25 mg/l) and water quality-based NH3-N (12.0 mg/l) were used as inputs for the modeling. The DO minimum daily average criterion from §93.7 (6.0 mg/L for CWF) was used for the in-stream objective for the model. The summary of the output is as follows:

Parameter	Effluent Limit		
	30 Day Average	Maximum	Minimum
CBOD5	25	N/A	N/A
Ammonia-N	12.8	240	N/A
Dissolved Oxygen	N/A	N/A	3

The previous model did not recommend more stringent water-quality based effluent limitations with regards to CBOD5, ammonia-nitrogen, and dissolved oxygen. Refer to Appendix B for the previous WQM 7.0 inputs and results.

PENTOXSD for Windows Version 2.0d

PENTOXSD V2.0d is a single discharge Wasteload Allocation (WLA) program for toxics that uses a mass-balance water quality analysis to determine recommended water quality-based effluent limits. The model incorporates consideration for mixing, first-order decay and other factors to computes a WLA for each applicable criterion. Finally, the model determines a maximum water quality-based effluent limitation (WQBEL) for each parameter and outputs the more stringent of the WQBEL or the input concentration. The output of which is the recommended average monthly and maximum daily effluent limitations.

In order to determine which parameters are required to be analyzed in the PENTOXSD model, a Toxics Screening Analysis is used to identify toxic pollutants of concern. In this particular case, sampling for pollutants was submitted with the application. This is required by the application given the types of industrial users connected to the collection system. These values were input into the Toxics Screening Analysis v2.7 spreadsheet to determine if each pollutant was a candidate for PENTOXSD modeling (pollutant of concern). Refer to Appendix C for the Toxics Screening Analysis v2.7.

The Toxics Screening Analysis v2.7 determines pollutants of concern using the following logic:

- All toxic pollutants whose maximum concentrations, as reported in the permit application or on DMRs, that are greater than the most stringent applicable water quality criterion were considered to be pollutants of concern.
- Also, where the maximum reported value in an application for a pollutant is less than the detection limit using the most sensitive analytical method listed in Chapter 16, the parameter is not a parameter of concern, even if the maximum reported value exceeds the applicable Chapter 93 criterion.
- Where the maximum reported values in an application for a parameter is less than the detection limit for some analytical method other than the most sensitive analytical method listed in Chapter 16, the parameter is a pollutant of concern if the maximum reported value exceeds the Chapter 93 criterion, even if the value is reported as "non-detect."

The PENTOXSD model was then run for all parameters of concern to evaluate reasonable potential (RP) for other toxic pollutants to cause an excursion above water quality standards. See Appendix D for the PENTOXSD model input/output. The most stringent WQBEL recommended by the model was then entered back into the same Toxics Screening Analysis v2.7 spreadsheet in order to determine which action to take regarding the pollutant. The permit recommendations of Monitor, Establish Limits, or to take no action (-) are established in the Toxics Screening Analysis v2.7 spreadsheet for each pollutant based upon the following logic:

- Establish average monthly and IMAX limits in the draft permit where the maximum reported concentration exceeds 50% of the WQBEL.
- For non-conservative pollutants, establish monitoring requirements where the maximum reported concentration is between 25% - 50% of the WQBEL.
- For conservative pollutants, establish monitoring requirements where the maximum reported concentration is between 10% - 50% of the WQBEL.

A "Reasonable Potential Analysis" (See Appendix C) determined that the following parameters were candidates for monitoring or limitations shown below:

Parameter	Effluent Limit (µg/l)	Governing Criterion	Max Daily Limit (µg/l)	WQBEL (µg/l)	WQBEL Criterion	Permit Recommendation
Total Copper	9.92	INPUT	15.477	48.129	AFC	Monitor

Comments: See the Total Copper effluent limit section below.

Best Professional Judgment (BPJ) Limitations

See D.O. and Ammonia-Nitrogen section below.

Proposed Effluent Limitations and Monitoring Requirements

The limitations and monitoring requirements specified below are proposed for the draft permit and reflect the most stringent limitations amongst the abovementioned technology, water quality, and BPJ. Instantaneous Maximum (IMAX) limits are determined using multipliers of 2 (conventional pollutants) or 2.5 (toxic pollutants). Sample frequencies and types are derived from the "NPDES Permit Writer's Manual" (362-0400-001) and/or BPJ.

Proposed Limits - Outfall 001, Effective Period: Permit Effective Date through Permit Expiration Date

Discharge Parameter	Limitations							
	Mass (lb/day)		Concentration (mg/L)				Monitoring Requirements	
	Monthly Average	Daily Maximum	Minimum	Average Monthly	Average Weekly	Instantaneous Maximum	Minimum Frequency	Sample Type
Flow (MGD)	Report	Report					Continuous	Metered
C-BOD_5	100	165		25	40	50	1/ Week	8-Hr Comp
BOD_5 Raw Sewage Influent	Report	Report		Report			1/ Week	8-Hr Comp

TSS	125	185		30	45	60	1/ Week	8-Hr Comp
TSS Raw Sewage Influent	Report	Report		Report			1/ Week	8-Hr Comp
D.O.				Report			1/ Day	Grab
pH (Std. Units)			6.0			9.0	1/ Day	Grab
TRC				Report		0.5	1/ Day	Grab
Total Copper				Report			1/ Month	8-Hr Comp
NH3-N (5/1-10/31)	50	75		12	18	24	1/ Week	Grab
NH3-N (11/1-4/30)	Report	Report		Report	Report	Report		
Fecal Coliforms (5/1-9/30)	200 colonies/100 ml as a geometric mean					1,000	1/ Week	Grab
Fecal Coliforms (10/1-4/30)	2,000 colonies/100 ml as a geometric mean					10,000		

*The proposed effluent limits for Outfall 001 were based on a design flow of 0.5 MGD.

Effluent Limit Determination for Outfall 001

General Information
The associated mass-based limits (lbs/day) for all parameters were based on the formula: design flow (average annual) (MGD) x concentration limit (mg/L) at design flow x conversion factor (8.34). All effluent limits were then rounded down in accordance with the rounding rules established in the *Technical Guidance for the Development and Specification of Effluent Limitations (362-0400-001)*, Chapter 5 - Specifying Effluent Limitations in NPDES Permits. The existing monitoring frequencies and sample types for these parameters generally correspond with the *Technical Guidance for the Development and Specification of Effluent Limitations* (362-0400-001) Table 6-3 and will remain.

Flow
Reporting of the average monthly and daily maximum flow is consistent with monitoring requirements for other treatment plants of this size.

Carbonaceous Biochemical Oxygen Demand ($CBOD_5$)
The results of the WQM 7.0 model show that the previously applied secondary treatment standards (25 PA Code §92a.47 (a) (1&2)) for $CBOD_5$ are protective of water quality and will remain.

Total Suspended Solids (TSS)
The previously applied technology based secondary treatment standards (25 PA Code §92a.47 (a) (1&2)) for TSS will remain as well.

pH
CFR Title 40 §133.102(c) and 25 PA Code §95.2(1) provide the basis of effluent limitations for pH. The existing limits will remain.

Fecal Coliforms
The existing fecal coliform limits with I-max limits were updated from the previous Chapter 92 code to correspond with what is specified in the updated 25 PA Code § 92a.47 (a)(4)&(5) and will remain.

Ammonia-Nitrogen (NH3-N)
The results of the WQM 7.0 model show that the previously applied water quality-based limits for Ammonia-Nitrogen are protective of water quality and will remain. The Implementation Guidance also states that the winter seasonal limits shall be 3.0 times the summer limits. However, effluent concentrations of NH3-N are not expected to exceed 25 mg/l which is considered a conventional influent level (*Table 7-3, Metcalf & Eddy).* Therefore, in order to maintain consistency with

other sewage facilities, monitoring of NH3-N concentrations in the effluent will be established as a minimum BPJ requirement for the winter months.

Influent BOD_5 and TSS
The Department requires the reporting of raw sewage influent monitoring for BOD_5 and TSS in all POTW permits. This provides the Department with the ability to monitor the percent removal of each parameter as stipulated in section 2 of the Part A conditions and maintain records of the BOD_5 loading as required by 25 Pa. Code Chapter 94. The monitoring frequencies and sample types are identical to the effluent sampling.

Dissolved Oxygen (DO)
Given results of the WQM 7.0 model, a discharge of effluent from this facility with a DO concentration of 3 mg/l would not result in an exceedance of water quality requirements for this stream. It is anticipated, based on similar technology, that the DO concentration in the effluent would be greater than 3.0 mg/l. Therefore, based on BPJ, only monitoring will be required for this facility. This will also provide historical data to establish baseline DO levels in the effluent for future reviews.

Total Copper
The Reasonable Potential Analysis / Toxics Screening Analysis v2.7 spreadsheet suggests establishing a monitoring only requirement for Total Copper. Therefore, monitoring for total copper will be required over the next permit term.

Total Residual Chlorine (TRC)
Under the authority of 25 Pa. Code § 93.4c, the use of chlorine for disinfection will generally not be authorized special protection watersheds. Given that the use of chlorine is approved, the average monthly effluent limitation will be set to 0.02 mg/l (“non-detect”) and the associated Part C language will be used. The previous permit established an IMAX non-detect limit of 0.05 mg/l. However, current policy dictates that the average monthly MDL in NPDES permits for TRC should be specified as 0.02 mg/L, which is believed to be reasonable for standardized TRC methods. The permittee is not authorized to discharge chlorine in detectable quantities, therefore, no compliance schedule is required.

Part C Requirements

The proposed permit contains the following requirements in Part C:

- Chesapeake Bay Nutrient Requirements
- Combined Sewer Overflows
- Solids Management
- TRC Effluent Limitations Below Quantitation Limits
- Other Requirements

Compliance History

Summary of Inspections -The most recent Clean Water Program onsite inspections for this facility were a Compliance Evaluation Inspection on 08/21/2019, and a Combined Sewer Overflow inspection on 09/11/2019. A recent Compliance Evaluation was completed on 3/19/20. The inspection reports indicated that the facility was operating normally.

WMS Query Summary - A WMS Query was run at *Reports - Violations & Enforcements – Open Violations for Client Report* to determine whether there are any unresolved violations associated with the client that will affect issuance of the permit (per CSL Section 609). This query revealed the following open violations:

CLIENT ID	CLIENT	INSP PROGRAM	VIOLATION ID	VIOLATION DATE	VIOLATION CODE	VIOLATION	PF INSPECTOR
1669	GALETON BORO AUTH	Safe Drinking Water	875213	01/30/2020	C1A	FAILURE TO MEET DESIGN AND CONSTRUCTION STANDARDS	ACCETTULLA, MARK

	POTTER CNTY						
1669	GALETON BORO AUTH POTTER CNTY	Safe Drinking Water	875214	01/30/2020	C1A	FAILURE TO MEET DESIGN AND CONSTRUCTION STANDARDS	ACCETTULLA, MARK
1669	GALETON BORO AUTH POTTER CNTY	Safe Drinking Water	875329	01/30/2020	C1A	FAILURE TO MEET DESIGN AND CONSTRUCTION STANDARDS	ACCETTULLA, MARK

These violations will need to be under the process of being corrected to the satisfaction of the Safe Drinking Water Program or closed prior to issuance of this permit. The NCRO Safe Drinking Water program will be contacted regarding these violations.

eDMRs Summary - Upon review of the eDMR's, the facility has generally been in compliance with the existing effluent limits. A slight exceedance was recorded on 05/31/19 for $CBOD_5$. This was resolved by the next month's report.

Compliance History

DMR Data for Outfall 001 (from April 1, 2019 to March 31, 2020)

Parameter	MAR-20	FEB-20	JAN-20	DEC-19	NOV-19	OCT-19	SEP-19	AUG-19	JUL-19	JUN-19	MAY-19	APR-19
Flow (MGD) Average Monthly	0.244	0.210	0.166	0.168	0.136	0.109	0.089	0.100	0.134	0.184	0.192	0.202
Flow (MGD) Daily Maximum	0.404	0.342	0.241	0.320	0.253	0.207	0.202	0.289	0.289	0.328	0.297	0.297
pH (S.U.) Minimum	6.30	6.00	6.00	6.05	6.00	6.00	6.00	6.00	6.00	6.04	6.00	6.03
pH (S.U.) Maximum	7.00	6.98	6.76	6.88	7.31	6.70	6.59	6.46	7.18	6.83	6.82	6.62
TRC (mg/L) Average Monthly	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
TRC (mg/L) Instantaneous Maximum	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
CBOD5 (lbs/day) Average Monthly	3	3	3	3	3	2	2	2	2	4	32	5
CBOD5 (lbs/day) Weekly Average	6	4	4	5	4	4	3	4	4	5	82	8
CBOD5 (mg/L) Average Monthly	2	2	2	2	2	3	2	2	2	2	17	3
CBOD5 (mg/L) Weekly Average	2	2	3	3	3	4	3	2	2	3	43	3
TSS (lbs/day) Average Monthly	6	9	5	8	6	4	4	7	4	8	8	7
TSS (lbs/day) Weekly Average	10	14	7	19	8	7	8	12	6	12	12	10
TSS (mg/L) Average Monthly	4	6	4	5	5	4	5	8	4	5	4	4
TSS (mg/L) Weekly Average	4	11	4	8	6	5	7	11	4	7	5	4
Fecal Coliform (CFU/100 ml) Geometric Mean	16.6831	4.24268	3.20701	2.27365	1.69221	2.54003	2.2544	4.40337	2.01238	5.57347	2.40269	7.85303
Fecal Coliform (CFU/100 ml) Instantaneous Maximum	1986.3	20.1	8.6	9.8	4.1	10.9	6.3	72.3	4.1	14.6	6.3	13.1

Nitrate-Nitrite (mg/L) Average Monthly	4.4	8	8	8.6	12.1	16.7	19.9	16.9	10.2	9.1	8.9	6.3
Nitrate-Nitrite (lbs) Total Monthly	187	313	338	348	427	456	449	402	304	449	525	308
Total Nitrogen (mg/L) Average Monthly	6.8	9.8	9.4	10.1	15.6	18.8	21	19	11.7	10.1	10.3	7.9
Total Nitrogen (lbs) Effluent Net Total Monthly	304	393	397	411	545	512	475	447	347	502	609	401
Total Nitrogen (lbs) Total Monthly	304	393	397	411	545	512	475	447	347	502	609	401
Total Nitrogen (lbs) Effluent Net Total Annual							5554					
Total Nitrogen (lbs) Total Annual							5554					
Ammonia (lbs/day) Average Monthly						0.53	0.26	0.43	0.65	0.27	0.48	
Ammonia (lbs/day) Weekly Average						1.23	0.38	0.85	1.42	0.34	1.01	
Ammonia (mg/L) Average Monthly	1.41	0.51	0.14	0.53	2.15	0.68	0.42	0.61	0.63	0.18	0.28	0.19
Ammonia (mg/L) Weekly Average						1.8	0.68	1.6	1.5	0.26	0.77	
Ammonia (lbs) Total Monthly	69	28	6	17	65	17	8	13	16	8	15	11
Ammonia (lbs) Total Annual							351					
TKN (mg/L) Average Monthly	2.5	1.8	1.4	1.6	3.5	2.1	1.1	2.1	1.5	1.0	1.4	1.7
TKN (lbs) Total Monthly	118	81	59	63	119	55	26	45	42	53	84	92
Total Phosphorus (mg/L) Average Monthly	0.54	0.5	0.6	0.91	1.01	3.2	2.1	5.2	1.72	1.43	1.09	0.51
Total Phosphorus (lbs) Effluent Net Total Monthly	27	21	25	35	35	87	44	127	44	73	69	26
Total Phosphorus (lbs) Total Monthly	27	21	25	35	35	87	44	127	44	73	69	26
Total Phosphorus (lbs) Effluent Net Total Annual							641					

Total Phosphorus (lbs) Total Annual							641					

Compliance History

Effluent Violations for Outfall 001, from: May 1, 2019 To: March 31, 2020

Parameter	Date	SBC	DMR Value	Units	Limit Value	Units
CBOD5	05/31/19	Wkly Avg	43	mg/L	40	mg/L

Tools and References Used to Develop Permit	
☒	Q7-10 Analysis and Stream Data (see Appendix **A**)
☒	WQM 7.0 Model Input/Output (see Appendix **B**)
☒	Toxics Screening Analysis v2.4 (see Appendix **C**)
☒	PENTOXSD v2.0d Model Input/Output (see Appendix **D**)
☒	Facility Map and Schematic (see Appendix **E**)
☐	TRC Evaluation Spreadsheet (see Appendix)
☐	Lake Model Output (see Appendix)
☐	WETT Spreadsheet (see Appendix)
☒	Water Quality Toxics Management Strategy, 361-0100-003, 4/06.
☒	Technical Guidance for the Development and Specification of Effluent Limitations, 362-0400-001, 10/97.
☐	Policy for Permitting Surface Water Diversions, 362-2000-003, 3/98.
☐	Policy for Conducting Technical Reviews of Minor NPDES Renewal Applications, 362-2000-008, 11/96.
☐	Technology-Based Control Requirements for Water Treatment Plant Wastes, 362-2183-003, 10/97.
☐	Technical Guidance for Development of NPDES Permit Requirements Steam Electric Industry, 362-2183-004, 12/97.
☐	Pennsylvania CSO Policy, 385-2000-011, 9/08.
☐	Water Quality Antidegradation Implementation Guidance, 391-0300-002, 11/03.
☐	Implementation Guidance Evaluation & Process Thermal Discharge (316(a)) Federal Water Pollution Act, 391-2000-002, 4/97.
☒	Determining Water Quality-Based Effluent Limits, 391-2000-003, 12/97.
☐	Implementation Guidance Design Conditions, 391-2000-006, 9/97.
☒	Technical Reference Guide (TRG) WQM 7.0 for Windows, Wasteload Allocation Program for Dissolved Oxygen and Ammonia Nitrogen, Version 1.0, 391-2000-007, 6/2004.
☐	Interim Method for the Sampling and Analysis of Osmotic Pressure on Streams, Brines, and Industrial Discharges, 391-2000-008, 10/1997.
☐	Implementation Guidance for Section 95.6 Management of Point Source Phosphorus Discharges to Lakes, Ponds, and Impoundments, 391-2000-010, 3/99.
☐	Technical Reference Guide (TRG) PENTOXSD for Windows, PA Single Discharge Wasteload Allocation Program for Toxics, Version 2.0, 391-2000-011, 5/2004.
☒	Implementation Guidance for Section 93.7 Ammonia Criteria, 391-2000-013, 11/97.
☐	Policy and Procedure for Evaluating Wastewater Discharges to Intermittent and Ephemeral Streams, Drainage Channels and Swales, and Storm Sewers, 391-2000-014, 4/2008.
☒	Implementation Guidance Total Residual Chlorine (TRC) Regulation, 391-2000-015, 11/1994.
☐	Implementation Guidance for Temperature Criteria, 391-2000-017, 4/09.
☐	Implementation Guidance for Section 95.9 Phosphorus Discharges to Free Flowing Streams, 391-2000-018, 10/97.
☐	Implementation Guidance for Application of Section 93.5(e) for Potable Water Supply Protection Total Dissolved Solids, Nitrite-Nitrate, Non-Priority Pollutant Phenolics and Fluorides, 391-2000-019, 10/97.
☐	Field Data Collection and Evaluation Protocol for Determining Stream and Point Source Discharge Design Hardness, 391-2000-021, 3/99.
☐	Implementation Guidance for the Determination and Use of Background/Ambient Water Quality in the Determination of Wasteload Allocations and NPDES Effluent Limitations for Toxic Substances, 391-2000-022, 3/1999.
☒	Design Stream Flows, 391-2000-023, 9/98.
☐	Field Data Collection and Evaluation Protocol for Deriving Daily and Hourly Discharge Coefficients of Variation (CV) and Other Discharge Characteristics, 391-2000-024, 10/98.
☐	Evaluations of Phosphorus Discharges to Lakes, Ponds and Impoundments, 391-3200-013, 6/97.
☒	Pennsylvania's Chesapeake Bay Tributary Strategy Implementation Plan for NPDES Permitting, 4/07.
☒	SOP: New and Reissuance Sewage Individual NPDES Permit Applications - Version 1.9 – 1/6/20
☒	SOP: Establishing Effluent Limitations for Individual Sewage Permits– Version 1.7 – 1/6/20
☐	Other:

Attachments

Appendices

APPENDIX A

Q_{7-10} ANALYSIS AND STREAM DATA

USGS
science for a changing world

Prepared in cooperation with the Pennsylvania Department of Environmental Protection

Selected Streamflow Statistics for Streamgage Locations in and near Pennsylvania

Open-File Report 2011–1070

U.S. Department of the Interior
U.S. Geological Survey

Table 2. Selected low-flow statistics for streamgage locations in and near Pennsylvania.—Continued

[ft³/s, cubic feet per second; —, statistic not computed; <, less than]

Streamgage number	Period of record used in analysis[1]	Number of years used in analysis	1-day, 10-year (ft³/s)	7-day, 10-year (ft³/s)	7-day, 2-year (ft³/s)	30-day, 10-year (ft³/s)	30-day, 2-year (ft³/s)	90-day, 10-year (ft³/s)
01546000	1912–1934	17	1.8	2.2	6.8	3.7	12.1	11.2
01546400	1986–2008	23	13.5	14.0	19.6	15.4	22.3	18.7
01546500	1942–2008	67	26.8	29.0	41.3	31.2	44.2	33.7
01547100	1969–2008	40	102	105	128	111	133	117
01547200	1957–2008	52	99.4	101	132	106	142	115
01547500	[2]1971–2008	38	28.2	109	151	131	172	153
01547500	[3]1956–1969	14	90.0	94.9	123	98.1	131	105
01547700	1957–2008	52	.5	.6	2.7	1.1	3.9	2.2
01547800	1971–1981	11	1.6	1.8	2.4	2.1	2.9	3.5
01547950	1970–2008	39	12.1	13.6	28.2	17.3	36.4	23.8
01548005	[2]1971–2000	25	142	151	206	178	241	223
01548005	[3]1913–1969	58	105	114	147	125	165	140
01548500	1920–2008	89	21.2	24.2	50.1	33.6	68.6	49.3
01549000	1910–1920	11	26.0	32.9	78.0	46.4	106	89.8
01549500	1942–2008	67	.6	.8	2.5	1.4	3.9	2.6
01549700	1959–2008	50	33.3	37.2	83.8	51.2	117	78.4
01550000	1915–2008	94	6.6	7.6	16.8	11.2	24.6	18.6
01551500	[2]1963–2008	46	520	578	1,020	678	1,330	919
01551500	[3]1901–1961	61	400	439	742	523	943	752
01552000	1927–2008	80	20.5	22.2	49.5	29.2	69.8	49.6
01552500	1942–2008	67	.9	1.2	3.1	1.7	4.4	3.3
01553130	1969–1981	13	1.0	1.1	1.5	1.3	1.8	1.7
01553500	[2]1968–2008	41	760	838	1,440	1,000	1,850	1,470
01553500	[3]1941–1966	26	562	619	880	690	1,090	881
01553700	1981–2008	28	9.1	10.9	15.0	12.6	17.1	15.2
01554000	[2]1981–2008	28	1,830	1,990	3,270	2,320	4,210	3,160
01554000	[3]1939–1979	41	1,560	1,630	2,870	1,880	3,620	2,570
01554500	1941–1993	53	16.2	22.0	31.2	25.9	35.7	31.4
01555000	1931–2008	78	33.5	37.6	58.8	43.4	69.6	54.6
01555500	1931–2008	78	4.9	6.5	18.0	9.4	24.3	16.6
01556000	1918–2008	91	43.3	47.8	66.0	55.1	75.0	63.7
01557500	1946–2008	63	2.8	3.2	6.3	4.2	8.1	5.8
01558000	1940–2008	69	56.3	59.0	79.8	65.7	86.2	73.7
01559000	1943–2008	66	104	177	249	198	279	227
01559500	1931–1958	28	9.3	10.5	15.0	12.4	17.8	15.8
01559700	1963–1978	16	.1	.1	.2	.1	.3	.2
01560000	1941–2008	68	8.5	9.4	15.6	12.0	20.2	16.2
01561000	1932–1958	27	.4	.5	1.6	.8	2.5	1.7
01562000	1913–2008	96	64.1	67.1	106	77.4	122	94.5
01562500	1931–1957	27	1.1	1.6	3.8	2.3	5.4	3.7
01563200	[2]1974–2008	35	—	—	—	112	266	129
01563200	[3]1948–1972	25	10.3	28.2	86.1	64.5	113	95.5
01563500	[2]1974–2008	35	384	415	519	441	580	493
01563500	[3]1939–1972	34	153	242	343	278	399	333
01564500	1940–2008	69	3.6	4.2	10.0	6.2	14.4	10.6

Table 1. List of U.S. Geological Survey streamgage locations in and near Pennsylvania with updated streamflow statistics.—Continued

[Latitude and Longitude in decimal degrees; mi², square miles]

Streamgage number	Streamgage name	Latitude	Longitude	Drainage area (mi²)	Regulated[1]
01541303	West Branch Susquehanna River at Hyde, Pa.	41.005	-78.457	474	Y
01541308	Bradley Run near Ashville, Pa.	40.509	-78.584	6.77	N
01541500	Clearfield Creek at Dimeling, Pa.	40.972	-78.406	371	Y
01542000	Moshannon Creek at Osceola Mills, Pa.	40.850	-78.268	68.8	N
01542500	WB Susquehanna River at Karthaus, Pa.	41.118	-78.109	1,462	Y
01542810	Waldy Run near Emporium, Pa.	41.579	-78.293	5.24	N
01543000	Driftwood Branch Sinnemahoning Creek at Sterling Run, Pa.	41.413	-78.197	272	N
01543500	Sinnemahoning Creek at Sinnemahoning, Pa.	41.317	-78.103	685	N
01544000	First Fork Sinnemahoning Creek near Sinnemahoning, Pa.	41.402	-78.024	245	Y
01544500	Kettle Creek at Cross Fork, Pa.	41.476	-77.826	136	N
01545000	Kettle Creek near Westport, Pa.	41.320	-77.874	233	Y
01545500	West Branch Susquehanna River at Renovo, Pa.	41.325	-77.751	2,975	Y
01545600	Young Womans Creek near Renovo, Pa.	41.390	-77.691	46.2	N
01546000	North Bald Eagle Creek at Milesburg, Pa.	40.942	-77.794	119	N
01546400	Spring Creek at Houserville, Pa.	40.834	-77.828	58.5	N
01546500	Spring Creek near Axemann, Pa.	40.890	-77.794	87.2	N
01547100	Spring Creek at Milesburg, Pa.	40.932	-77.786	142	N
01547200	Bald Eagle Creek below Spring Creek at Milesburg, Pa.	40.943	-77.786	265	N
01547500	Bald Eagle Creek at Blanchard, Pa.	41.052	-77.604	339	Y
01547700	Marsh Creek at Blanchard, Pa.	41.060	-77.606	44.1	N
01547800	South Fork Beech Creek near Snow Shoe, Pa.	41.024	-77.904	12.2	N
01547950	Beech Creek at Monument, Pa.	41.112	-77.702	152	N
01548005	Bald Eagle Creek near Beech Creek Station, Pa.	41.081	-77.549	562	Y
01548500	Pine Creek at Cedar Run, Pa.	41.522	-77.447	604	N
01549000	Pine Creek near Waterville, Pa.	41.313	-77.379	750	N
01549500	Blockhouse Creek near English Center, Pa.	41.474	-77.231	37.7	N
01549700	Pine Creek below Little Pine Creek near Waterville, Pa.	41.274	-77.324	944	Y
01550000	Lycoming Creek near Trout Run, Pa.	41.418	-77.033	173	N
01551500	WB Susquehanna River at Williamsport, Pa.	41.236	-76.997	5,682	Y
01552000	Loyalsock Creek at Loyalsockville, Pa.	41.325	-76.912	435	N
01552500	Muncy Creek near Sonestown, Pa.	41.357	-76.535	23.8	N
01553130	Sand Spring Run near White Deer, Pa.	41.059	-77.077	4.93	N
01553500	West Branch Susquehanna River at Lewisburg, Pa.	40.968	-76.876	6,847	Y
01553700	Chillisquaque Creek at Washingtonville, Pa.	41.062	-76.680	51.3	N
01554000	Susquehanna River at Sunbury, Pa.	40.835	-76.827	18,300	Y
01554500	Shamokin Creek near Shamokin, Pa.	40.810	-76.584	54.2	N
01555000	Penns Creek at Penns Creek, Pa.	40.867	-77.048	301	N
01555500	East Mahantango Creek near Dalmatia, Pa.	40.611	-76.912	162	N
01556000	Frankstown Branch Juniata River at Williamsburg, Pa.	40.463	-78.200	291	N
01557500	Bald Eagle Creek at Tyrone, Pa.	40.684	-78.234	44.1	N
01558000	Little Juniata River at Spruce Creek, Pa.	40.613	-78.141	220	N
01559000	Juniata River at Huntingdon, Pa.	40.485	-78.019	816	LF
01559500	Standing Stone Creek near Huntingdon, Pa.	40.524	-77.971	128	N
01559700	Sulphur Springs Creek near Manns Choice, Pa.	39.978	-78.619	5.28	N
01560000	Dunning Creek at Belden, Pa.	40.072	-78.493	172	N

Q_{7-10} Analysis

Facility:	Galeton Borough Authority	NPDES Permit No.:	PA0036820
Outfall:	001	RMI at Outfall:	71.53 Elev. 1292

Reference Stream Gage Information	
Stream Name	Pine Creek
Reference Gage	1548500
Station Name	Pine Creek at Cedar Run, PA
Gage Drainage Area (sq. mi.)	604
Q_{7-10} at gage (cfs)	24.2
Yield Ratio (cfs/mi^2)	0.0401

Was Ecoflows Used?	
Correlation From Ecoflows	

Check Dilution Ratio		
Discharge at Outfall (wf) (mgd)	0.5	
	sf (cfs)	wf (cfs)
Dilution Ratio = sf/wf	7.0917	0.773614376
Dilution Ratio =	9.166998541 to 1	

Q_{7-10} at Outfall	
Drainage Area at site (sq. mi.)	177
Q_{7-10} at discharge site (cfs)	7.0917
Q_{7-10} at discharge site (mgd)	4.5835
Low Flow Yield Ratio of 0.1 cfs/mi^2 (For Approx. Comparison Only)	
Q_{7-10} at discharge site (cfs)	17.7000
Q_{7-10} at discharge site (mgd)	11.4398

Q_{7-10} at Downstream Reach #1	
Drainage Area at Reach (sq. mi.)	184
RMI	70.68
Q_{7-10} at reach (cfs)	7.3722
Q_{7-10} at reach (mgd)	4.7648
	Elev. 1277

Q_{7-10} at Downstream Reach #2	
Drainage Area at Reach (sq. mi.)	[Drainage Area @ Reach #2]
RMI	[RMI @ Reach #2]
Q_{7-10} at reach (cfs)	#VALUE!
Q_{7-10} at reach (mgd)	#VALUE!

Q_{7-10} at Downstream Reach #3	
Drainage Area at Reach (sq. mi.)	[Drainage Area @ Reach #3]
RMI	[RMI @ Reach #3]
Q_{7-10} at reach (cfs)	#VALUE!
Q_{7-10} at reach (mgd)	#VALUE!

Basin Map at Outfall

APPENDIX B

WQM 7.0 MODEL INPUT/OUTPUT

Input Data WQM 7.0

SWP Basin	Stream Code	Stream Name	RMI	Elevation (ft)	Drainage Area (sq mi)	Slope (ft/ft)	PWS Withdrawal (mgd)	Apply FC
09A	21166	PINE CREEK	71.530	1292.00	177.00	0.00000	0.00	☑

Stream Data

Design Cond.	LFY (cfsm)	Trib Flow (cfs)	Stream Flow (cfs)	Rch Trav Time (days)	Rch Velocity (fps)	WD Ratio	Rch Width (ft)	Rch Depth (ft)	Tributary Temp (°C)	Tributary pH	Stream Temp (°C)	Stream pH
Q7-10	0.100	0.00	7.09	0.000	0.000	0.0	0.00	0.00	20.00	7.00	0.00	0.00
Q1-10		0.00	0.00	0.000	0.000							
Q30-10		0.00	0.00	0.000	0.000							

Discharge Data

Name	Permit Number	Existing Disc Flow (mgd)	Permitted Disc Flow (mgd)	Design Disc Flow (mgd)	Reserve Factor	Disc Temp (°C)	Disc pH
Galeton	PA0036820	0.5000	0.5000	0.5000	0.000	25.00	7.00

Parameter Data

Parameter Name	Disc Conc (mg/L)	Trib Conc (mg/L)	Stream Conc (mg/L)	Fate Coef (1/days)
CBOD5	25.00	2.00	0.00	1.50
Dissolved Oxygen	3.00	8.24	0.00	0.00
NH3-N	12.00	0.00	0.00	0.70

WQM 7.0 Hydrodynamic Outputs

SWP Basin	Stream Code	Stream Name
09A	21166	PINE CREEK

RMI	Stream Flow (cfs)	PWS With (cfs)	Net Stream Flow (cfs)	Disc Analysis Flow (cfs)	Reach Slope (ft/ft)	Depth (ft)	Width (ft)	W/D Ratio	Velocity (fps)	Reach Trav Time (days)	Analysis Temp (°C)	Analysis pH
Q7-10 Flow												
71.530	7.09	0.00	7.09	.7735	0.00334	.782	48.72	62.32	0.21	0.252	20.49	7.00
Q1-10 Flow												
71.530	6.37	0.00	6.37	.7735	0.00334	NA	NA	NA	0.20	0.265	20.54	7.00
Q30-10 Flow												
71.530	8.30	0.00	8.30	.7735	0.00334	NA	NA	NA	0.22	0.232	20.43	7.00

WQM 7.0 Modeling Specifications

Parameters	Both	Use Inputted Q1-10 and Q30-10 Flows	☑
WLA Method	EMPR	Use Inputted W/D Ratio	☐
Q1-10/Q7-10 Ratio	0.899	Use Inputted Reach Travel Times	☐
Q30-10/Q7-10 Ratio	1.17	Temperature Adjust Kr	☑
D.O. Saturation	90.00%	Use Balanced Technology	☑
D.O. Goal	6		

WQM 7.0 Wasteload Allocations

SWP Basin	Stream Code	Stream Name
09A	21166	PINE CREEK

NH3-N Acute Allocations

RMI	Discharge Name	Baseline Criterion (mg/L)	Baseline WLA (mg/L)	Multiple Criterion (mg/L)	Multiple WLA (mg/L)	Critical Reach	Percent Reduction
71.530	Galeton	9.3	24	9.3	24	0	0

NH3-N Chronic Allocations

RMI	Discharge Name	Baseline Criterion (mg/L)	Baseline WLA (mg/L)	Multiple Criterion (mg/L)	Multiple WLA (mg/L)	Critical Reach	Percent Reduction
71.530	Galeton	1.86	12	1.86	12	0	0

Dissolved Oxygen Allocations

RMI	Discharge Name	CBOD5		NH3-N		Dissolved Oxygen		Critical Reach	Percent Reduction
		Baseline (mg/L)	Multiple (mg/L)	Baseline (mg/L)	Multiple (mg/L)	Baseline (mg/L)	Multiple (mg/L)		
71.53	Galeton	25	25	12	12	3	3	0	0

WQM 7.0 D.O.Simulation

SWP Basin	Stream Code	Stream Name
09A	21166	PINE CREEK

RMI	Total Discharge Flow (mgd)	Analysis Temperature (°C)	Analysis pH
71.530	0.500	20.492	7.000
Reach Width (ft)	**Reach Depth (ft)**	**Reach WDRatio**	**Reach Velocity (fps)**
48.716	0.782	62.318	0.206
Reach CBOD5 (mg/L)	**Reach Kc (1/days)**	**Reach NH3-N (mg/L)**	**Reach Kn (1/days)**
4.26	0.794	1.18	0.727
Reach DO (mg/L)	**Reach Kr (1/days)**	**Kr Equation**	**Reach DO Goal (mg/L)**
7.727	6.634	Tsivoglou	6
Reach Travel Time (days)			
0.252			

Subreach Results

TravTime (days)	CBOD5 (mg/L)	NH3-N (mg/L)	D.O. (mg/L)
0.025	4.18	1.16	7.73
0.050	4.09	1.14	7.73
0.075	4.01	1.12	7.73
0.101	3.93	1.10	7.74
0.126	3.85	1.08	7.75
0.151	3.77	1.06	7.77
0.176	3.69	1.04	7.78
0.201	3.62	1.02	7.80
0.226	3.55	1.00	7.82
0.252	3.47	0.98	7.83

WQM 7.0 Effluent Limits

SWP Basin	Stream Code	Stream Name
09A	21166	PINE CREEK

RMI	Name	Permit Number	Disc Flow (mgd)	Parameter	Effl. Limit 30-day Ave. (mg/L)	Effl. Limit Maximum (mg/L)	Effl. Limit Minimum (mg/L)
71.530	Galeton	PA0036820	0.500	CBOD5	25		
				NH3-N	12	24	
				Dissolved Oxygen			3

Friday, May 22, 2020 Version 1.0b Page 1 of 1

APPENDIX C

TOXIC SCREENING ANALYSIS

TOXICS SCREENING ANALYSIS
WATER QUALITY POLLUTANTS OF CONCERN
VERSION 2.7

Facility: Galeton
NPDES Permit No.: PA0036820
Outfall: 001
Analysis Hardness (mg/L): 100
Discharge Flow (MGD): 0.5
Analysis pH (SU): 7
Stream Flow, Q_{7-10} (cfs): 7.09

	Parameter		Maximum Concentration in Application or DMRs (µg/L)	Most Stringent Criterion (µg/L)	Candidate for PENTOXSD Modeling?	Most Stringent WQBEL (µg/L)	Screening Recommendation
Group 1	Total Dissolved Solids		237000	500000	No		
	Chloride		58400	250000	No		
	Bromide	<	100	N/A	No		
	Sulfate		29400	250000	No		
Group 2	Total Aluminum			750			
	Total Antimony			5.6			
	Total Arsenic			10			
	Total Barium			2400			
	Total Beryllium			N/A			
	Total Boron			1600			
	Total Cadmium			0.271			
	Total Chromium			N/A			
	Hexavalent Chromium			10.4			
	Total Cobalt			19			
	Total Copper		9.92	9.3	Yes	48.129	Monitor
	Free Available Cyanide			5.2			
	Total Cyanide			N/A			
	Dissolved Iron			300			
	Total Iron			1500			
	Total Lead	=	0.5	3.2	No (Value = QL)		
	Total Manganese			1000			
	Total Mercury			0.05			
	Total Nickel			52.2			
	Total Phenols (Phenolics)			5			
	Total Selenium			5.0			
	Total Silver			3.8			
	Total Thallium			0.24			
	Total Zinc		60.2	119.8	No		
	Total Molybdenum			N/A			
Group 3	Acrolein	<		3			
	Acrylonitrile	<		0.061			
	Benzene	<		1.2			
	Bromoform	<		4.3			
	Carbon Tetrachloride	<		0.23			
	Chlorobenzene	<		130			
	Chlorodibromomethane	<		0.4			
	Chloroethane	<		N/A			
	2-Chloroethyl Vinyl Ether	<		3500			
	Chloroform	<		5.7			
	Dichlorobromomethane	<		0.55			
	1,1-Dichloroethane	<		N/A			
	1,2-Dichloroethane	<		0.38			
	1,1-Dichloroethylene	<		33			
	1,2-Dichloropropane	<		2200			
	1,3-Dichloropropylene	<		0.34			
	1,4-Dioxane	<		N/A			
	Ethylbenzene	<		530			
	Methyl Bromide	<		47			
	Methyl Chloride	<		5500			
	Methylene Chloride	<		4.6			
	1,1,2,2-Tetrachloroethane	<		0.17			
	Tetrachloroethylene	<		0.69			
	Toluene	<		330			
	1,2-trans-Dichloroethylene	<		140			
	1,1,1-Trichloroethane	<		610			
	1,1,2-Trichloroethane	<		9.99			
	Trichloroethylene	<		2.5			
	Vinyl Chloride	<		0.025			
Group 4	2-Chlorophenol	<		81			
	2,4-Dichlorophenol	<		77			
	2,4-Dimethylphenol	<		130			
	4,6-Dinitro-o-Cresol	<		13			
	2,4-Dinitrophenol	<		69			
	2-Nitrophenol	<		1600			
	4-Nitrophenol	<		470			
	p-Chloro-m-Cresol	<		30			
	Pentachlorophenol	<		0.27			
	Phenol	<		10400			
	2,4,6-Trichlorophenol	<		1.4			

Galeton Toxics Screening Analysis Spreadsheet (v 2.7).xlsm, 5/22/2020

APPENDIX D

PENTOXSD MODELING

PENTOXSD

Modeling Input Data

Stream Code	RMI	Elevation (ft)	Drainage Area (sq mi)	Slope	PWS With (mgd)	Apply FC
21166	71.53	1292.00	177.00	0.00000	0.00	☑

Stream Data

	LFY (cfsm)	Trib Flow (cfs)	Stream Flow (cfs)	WD Ratio	Rch Width (ft)	Rch Depth (ft)	Rch Velocity (fps)	Rch Trav Time (days)	Tributary Hard (mg/L)	Tributary pH	Stream Hard (mg/L)	Stream pH	Analysis Hard (mg/L)	Analysis pH
Q7-10	0.1	0	7.09	0	0	0	0	0	100	7	100	0	0	0
Qh		0	0	0	0	0	0	0	100	7	0	0	0	0

Discharge Data

Name	Permit Number	Existing Disc Flow (mgd)	Permitted Disc Flow (mgd)	Design Disc Flow (mgd)	Reserve Factor	AFC PMF	CFC PMF	THH PMF	CRL PMF	Disc Hard (mg/L)	Disc pH
Galeton	PA0036820	0.5	0.5	0.5	0	0	0	0	0	100	7

Parameter Data

Parameter Name	Disc Conc (µg/L)	Trib Conc (µg/L)	Disc Daily CV	Disc Hourly CV	Steam Conc (µg/L)	Stream CV	Fate Coef	FOS	Crit Mod	Max Disc Conc (µg/L)
COPPER	9.92	0	0.5	0.5	0	0	0	0	1	0

Stream Code	RMI	Elevation (ft)	Drainage Area (sq mi)	Slope	PWS With (mgd)	Apply FC
21166	70.68	1277.00	184.00	0.00000	0.00	☑

Stream Data

	LFY (cfsm)	Trib Flow (cfs)	Stream Flow (cfs)	WD Ratio	Rch Width (ft)	Rch Depth (ft)	Rch Velocity (fps)	Rch Trav Time (days)	Tributary Hard (mg/L)	Tributary pH	Stream Hard (mg/L)	Stream pH	Analysis Hard (mg/L)	Analysis pH
Q7-10	0.1	0	7.37	0	0	0	0	0	100	7	100	0	0	0
Qh		0	0	0	0	0	0	0	100	7	0	0	0	0

Discharge Data

Name	Permit Number	Existing Disc Flow (mgd)	Permitted Disc Flow (mgd)	Design Disc Flow (mgd)	Reserve Factor	AFC PMF	CFC PMF	THH PMF	CRL PMF	Disc Hard (mg/L)	Disc pH
		0	0	0	0	0	0	0	0	100	7

Parameter Data

Parameter Name	Disc Conc (µg/L)	Trib Conc (µg/L)	Disc Daily CV	Disc Hourly CV	Steam Conc (µg/L)	Stream CV	Fate Coef	FOS	Crit Mod	Max Disc Conc (µg/L)
COPPER	0	0	0.5	0.5	0	0	0	0	1	0

Friday, May 22, 2020 Version 2.0d Page 1 of 1

PENTOXSD Analysis Results

Hydrodynamics

SWP Basin	Stream Code:	Stream Name:
09A	21166	PINE CREEK

RMI	Stream Flow (cfs)	PWS With (cfs)	Net Stream Flow (cfs)	Disc Analysis Flow (cfs)	Reach Slope	Depth (ft)	Width (ft)	WD Ratio	Velocity (fps)	Reach Trav Time (days)	CMT (min)
Q7-10 Hydrodynamics											
71.530	7.09	0	7.09	0.7735	0.0033	0.7817	48.716	62.318	0.2065	0.2516	66.179
70.680	7.37	0	7.37	NA	0	0	0	0	0	0	NA
Qh Hydrodynamics											
71.530	41.158	0	41.158	0.7735	0.0033	1.6327	48.716	29.838	0.5272	0.0985	25.984
70.680	42.575	0	42.575	NA	0	0	0	0	0	0	NA

PENTOXSD Analysis Results

Wasteload Allocations

RMI	Name	Permit Number
71.53	Galeton	PA0036820

AFC

Q7-10: CCT (min) 15 PMF 0.476 Analysis pH 7 Analysis Hardness 100

Parameter	Stream Conc (µg/L)	Stream CV	Trib Conc (µg/L)	Fate Coef	WQC (µg/L)	WQ Obj (µg/L)	WLA (µg/L)
COPPER	0	0	0	0	13.439	13.999	75.089

Dissolved WQC. Chemical translator of 0.96 applied.

CFC

Q7-10: CCT (min) 66.179 PMF 1 Analysis pH 7 Analysis Hardness 100

Parameter	Stream Conc. (µg/L)	Stream CV	Trib Conc. (µg/L)	Fate Coef	WQC (µg/L)	WQ Obj (µg/L)	WLA (µg/L)
COPPER	0	0	0	0	8.956	9.329	94.839

Dissolved WQC. Chemical translator of 0.96 applied.

THH

Q7-10: CCT (min) 66.179 PMF NA Analysis pH NA Analysis Hardness NA

Parameter	Stream Conc (µg/L)	Stream CV	Trib Conc (µg/L)	Fate Coef	WQC (µg/L)	WQ Obj (µg/L)	WLA (µg/L)
COPPER	0	0	0	0	NA	NA	NA

CRL

Qh: CCT (min) 25.984 PMF 1

Parameter	Stream Conc (µg/L)	Stream CV	Trib Conc (µg/L)	Fate Coef	WQC (µg/L)	WQ Obj (µg/L)	WLA (µg/L)
COPPER	0	0	0	0	NA	NA	NA

PENTOXSD Analysis Results

Recommended Effluent Limitations

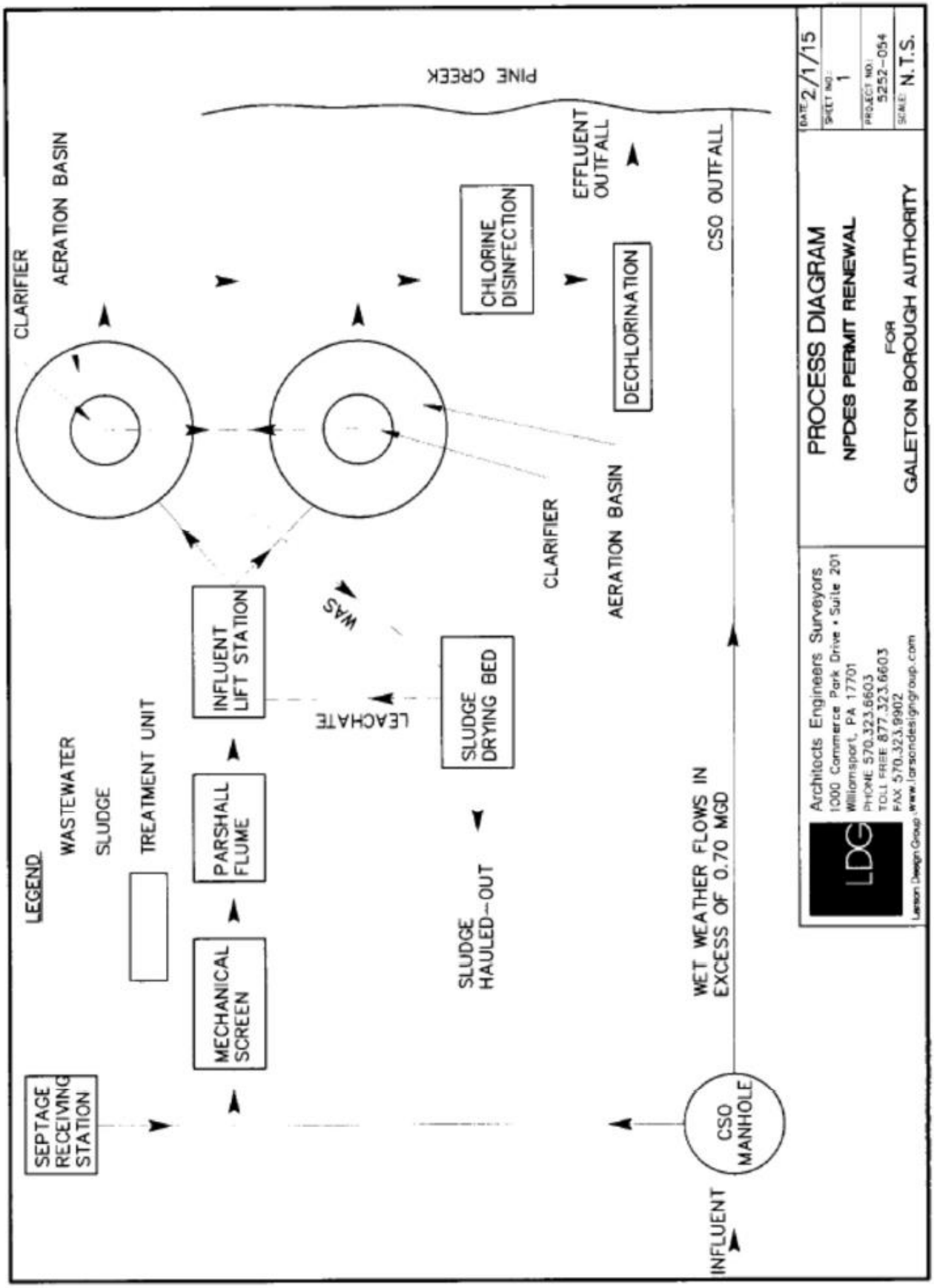
SWP Basin	Stream Code:	Stream Name:
09A	21166	PINE CREEK

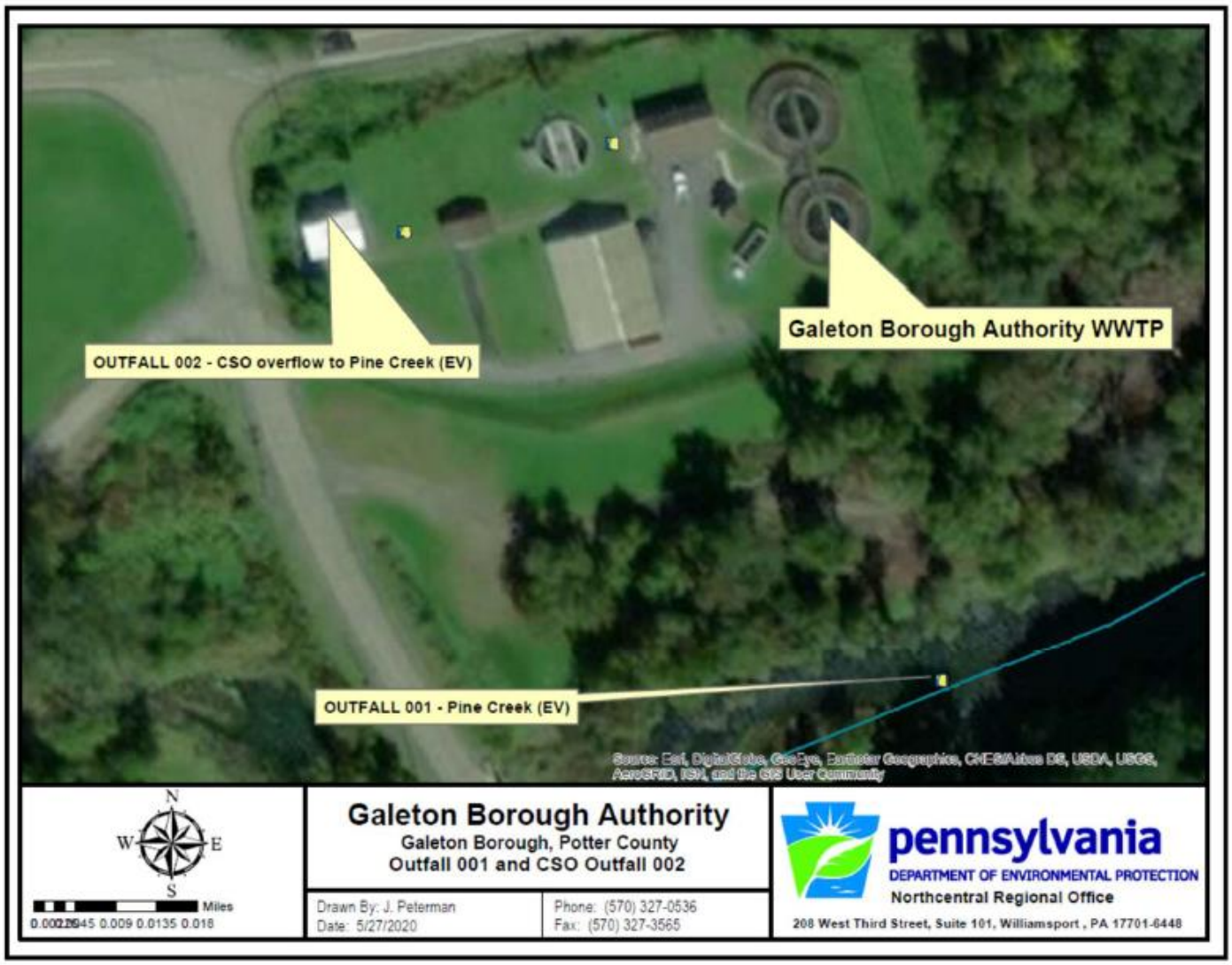
RMI	Name	Permit Number	Disc Flow (mgd)
71.53	Galeton	PA0036820	0.5000

Parameter	Effluent Limit (µg/L)	Governing Criterion	Max. Daily Limit (µg/L)	Most Stringent WQBEL (µg/L)	Most Stringent WQBEL Criterion
COPPER	9.92	INPUT	15.477	48.129	AFC

APPENDIX E

FACILITY MAP AND SCHEMATIC


PINE CREEK
CLARIFIER
AERATION BASIN
EFFLUENT OUTFALL
CHLORINE DISINFECTION
DECHLORINATION
CSO OUTFALL
LEGEND
WASTEWATER
SLUDGE
TREATMENT UNIT
MECHANICAL SCREEN
PARSHALL FLUME
INFLUENT LIFT STATION
WAS
LEACHATE
SLUDGE DRYING BED
SLUDGE HAULED-OUT
WET WEATHER FLOWS IN EXCESS OF 0.70 MGD
SEPTAGE RECEIVING STATION
CSO MANHOLE
INFLUENT
PROCESS DIAGRAM
NPDES PERMIT RENEWAL
FOR
GALETON BOROUGH AUTHORITY
DATE 2/1/15
SHEET NO. 1
PROJECT NO. 5252-054
SCALE N.T.S.
Architects Engineers Surveyors
1000 Commerce Park Drive • Suite 201
Williamsport, PA 17701
PHONE 570.323.6603
TOLL FREE 877.323.6603
FAX 570.323.9902
Larson Design Group www.larsondesigngroup.com


OUTFALL 002 - CSO overflow to Pine Creek (EV)
Galeton Borough Authority WWTP
OUTFALL 001 - Pine Creek (EV)
N
W
E
S
Miles
0.0045 0.009 0.0135 0.018
Galeton Borough Authority
Galeton Borough, Potter County
Outfall 001 and CSO Outfall 002
Drawn By: J. Peterman
Date: 5/27/2020
Phone: (570) 327-0536
Fax: (570) 327-3565
pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION
Northcentral Regional Office
208 West Third Street, Suite 101, Williamsport , PA 17701-6448

EPA Pre-Draft Comments/Discussion

From:	Price-Fay, Michelle
To:	Randis, Thomas
Cc:	Hartranft, Nicholas; Peterman, Jonathan; Furjanic, Sean; Patel, Jay (DEP); Hales, Dana; Martinsen, Jessica
Subject:	[External] PA0036820 Galeton CSO comments
Date:	Friday, February 5, 2021 8:09:52 PM
Attachments:	CSO_LETTER_TO_EPA_09June2020_.pdf 4 15 POLICY WP Memo to Begin Rulemaking Chapter 92a.pdf

ATTENTION: *This email message is from an external sender. Do not open links or attachments from unknown sources. To report suspicious email, forward the message as an attachment to CWOPA_SPAM@pa.gov.*

Hello Tom,

EPA is pleased to provide preliminary informal comments based upon its review of the draft PADEP CSO permit (provided to EPA on October 22, 2020) and associated Long Term Control Plan for:

Galeton Borough Authority Sewer System STP
Permit Number: PA0036820

The draft permit and fact sheet were submitted to EPA for informal review. EPA review and the comments provided reflect the recent understanding between the EPA Region III Water Director and PADEP Deputy Secretary for Water Programs regarding how to proceed with reissuance of permits with CSOs and LTCPs consistent with Section 402(q) of the CWA and EPA's 1994 CSO Policy. As you know, consistent with that understanding, PADEP has committed to making changes to its CSO program as noted in the its June 9, 2020 letter to EPA and its April 15, 2020 memo (see attached). PADEP's memo documents its commitment to initiate the regulatory revisions process for modifying its compliance schedule regulations at 25 Pa. Code § 92a.51(a), so that schedules for LTCP implementation can be placed in an NPDES permit. PADEP will draft CSO permits using the template language agreed upon by PADEP and EPA. EPA notes that once PADEP's compliance schedule regulations are revised and final, the template language will need to be modified to incorporate a CSO compliance schedule that meets the requirements of 40 CFR 122.47 and includes the final compliance date for LTCP implementation. EPA's Phase 2 e-Reporting rule requires electronic reporting of Sewer Overflow/Bypass Events, and PADEP will need to make modifications to this template that will be necessary to address the requirements of the e-Reporting rule that is effective at the time that the permit is issued.

In addition, consistent with the understanding between EPA and PADEP, once PADEP's proposed seasonal E. coli standard becomes effective, PADEP will then incorporate E. coli monitoring in subsequently reissued NPDES permits and ensure it is included in CSO post-construction compliance monitoring (PCCM) plans to verify compliance with water quality standards and designated uses. Consistent with the CSO Policy, EPA notes that there will also need to be a requirement added to implement a PCCM plan with an established schedule in the NPDES permit once the facility begins to implement its approved plan.

EPA offers the following comments based on the Galeton draft permit and supporting documents, as well as the phone conversation between EPA and PADEP on January 14, 2021:

1. Regarding the permit:

a. Based on our phone conversation and email correspondence, it is understood that at this time Galeton will be fully separating its combined system. If that remains accurate, EPA recommends that PADEP impose complete separation of the combined sewer system as the performance standard in Part C.II.C.2. (CSO Water Quality-Based Effluent Limit) of the permit. PADEP could choose to impose the 85% capture by volume standard now, and the separation standard once the facility documents it has achieved 85% capture, but as discussed this is not an expectation of EPA's CSO Policy.
b. If the 85% capture standard remains in the permit, we would recommend that the facility define the design conditions under which 85% capture by volume is expected to be achieved and that this be included in Part C.II.C.2 of the permit (when available).
c. As PADEP works with Galeton, it should ensure that the end date of 2042 is the appropriate date for completing implementation of the LTCP when considering the remaining work to be undertaken by the community.

2. Regarding the Fact Sheet:
   a. The fact sheet explains that CSO outfall 002 bypasses the primary treatment units at the plant, although flows do receive solids and floatable removal and disposal. Per our email and phone conversations, this discharge is not a CSO (as it is located after the headworks of the plant) and cannot be considered a CSO-related bypass since it does not meet the minimum expectations of the CSO Policy. EPA recommends that this discharge would be most appropriate handled by an enforcement action outside of the permit. As they are currently configured, the permit would not be able to authorize discharges via outfall 002.

   b. Please revise the fact sheet to clarify or document any changes PADEP will make to the permit based on our discussions and/or conversations with the community.

3. Regarding the LTCP:
   a. The LTCP did not appear to have a PCCM plan. PADEP should ensure that Galeton develops this plan and that its implementation is required in the permit, when appropriate. Even for collection systems that are fully separating, PCCM is important to define the steps by which the permittee will document full separation of its system, which could even include monitoring of former CSO outfalls that are not closed/sealed but are converted into stormwater outfalls.
   b. EPA recognizes the amount of progress made by this community to date on CSO outfall removal.

Thank you for all of your discussions regarding this permit. Should you have any questions, please feel free to contact me or Dana Hales, the lead permit reviewer for Pennsylvania. Dana is copied on this email and can be reached via telephone at 215-814-2928.

Sincerely,
Michelle