pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Northeast Regional Office
CLEAN WATER PROGRAM

Application Type	**Renewal**	Application No.	**PA0026361**
Facility Type	**Municipal**	APS ID	**570358**
Major / Minor	**Major**	Authorization ID	**1206630**

NPDES PERMIT FACT SHEET INDIVIDUAL SEWAGE

Applicant and Facility Information

Applicant Name	**Lower Lackawanna Valley Sanitary Authority**	Facility Name	**Lower Lackawanna Valley Sanitary Authority**
Applicant Address	PO Box 2067 398 Cotton Road	Facility Address	Coxton Road
	Duryea, PA 18642-0067		Duryea, PA 18642-2067
Applicant Contact	John Mekilo	Facility Contact	John Mekilo
Applicant Phone	(570) 655-1665	Facility Phone	(570) 655-1665
Client ID	2235	Site ID	245511
Ch 94 Load Status	Not Overloaded	Municipality	Duryea Borough
Connection Status	No Limitations	County	Luzerne
Date Application Received	November 8, 2017	EPA Waived?	No
Date Application Accepted	November 8, 2017	If No, Reason	Major Facility, Pretreatment, Significant CB Discharge

Purpose of Application: Renewal of NPDES permit for discharge of treated Sewage.

Summary of Review

The permittee is requesting the renewal of an NPDES permit which authorizes the discharge of treated sewage to the Lackawanna River(CWF, MF), in State Water Plan Basin 5A (Lackawanna River). It is classified for Cold Water Fishes and Migratory Fishes, aquatic life, water supply and recreation. As per the Department's current existing use list, the receiving streams do not have an existing use classification that is more protective than the designated use. The discharge is not expected to affect public water supplies. The Outfall 001 effluent limits are based on an annual design discharge rate of 6.0 MGD.

LLVSA does not own, operate, or maintain any collection sanitary lines. These sanitary lines are owned by their respective municipality. The LLVSA does own, operate, and maintain its sanitary interceptor piping system. All the CSO Outfalls are listed after the effluent development section.

Municipalities Served	Flow Contribution (%)	Type of Sewer System		Population
		Separate (%)	Combined (%)	
Old Forge Borough	28.4	25	75	100
Taylor Borough	22.3	25	75	100
Avoca Borough	9.2	50	50	100
Dupont Borough	9.4	100	0	100
Duryea Borough	15.5	90	10	100
Pittston Township	1.0	100	0	100
Moosic Borough	14.2	75	25	100

Approve	Deny	Signatures	Date
X		Bernard Feist (signed) Bernard Feist, P.E. / Environmental Engineer	May 25, 2021
X		Amy M. Bellanca (signed) Amy M. Bellanca, P.E. / Environmental Engineer Manager	6-1-21

Summary of Review

The CSO receiving streams are Unnamed Tributary to Keyser Creek (CWF, MF), Lackawanna River (CWF, MF), Saint John's Creek (CWF, MF), Mill Creek (CWF), Keyser Creek (CWF), and Unnamed Tributary to Saint John's Creek (CWF), they are located in State Water Plan watershed 5-A and they are classified for Cold Water Fishes and Migratory Fishes, aquatic life, water supply and recreation.

Combined Sewer Overflow (CSO) Policy

The goals of the EPA's 1994 Combined Sewer Overflow (CSO) Control Policy (Volume 59 of the Federal Register (FR) 18688 and 18689, April 19, 1994) are :

1. To ensure that if CSOs occur, they are only as a result of wet weather,
2. To bring all wet weather CSO discharge points into compliance with the technology-based and water quality-based requirements of the Clean Water Act (CWA) and
3. To minimize water quality, aquatic biota and human health impacts from CSOs from all Publicly Owned Treatment Works (POTW) Treatment Plants (as defined in Title 40 of the Code of Federal Regulations (CFR) Part 403.3(p))."

NPDES Compliance - EPA Publication Number: 305-K-17-001 Interim Revised Version, January 2017

EPA's CSO Policy outlines the NMCs and the minimum elements of an LTCP. Table 12-1 lists the NMCs, while Table 12-2 lists the elements of the LTCP.

Table 12-1. Nine Minimum CSO Controls

- Proper operation and regular maintenance programs for the sewer system and the CSOs.
- Maximum use of the collection system for storage.
- Review and modification of pretreatment requirements to ensure that CSO impacts are minimized.
- Maximization of flow to the POTW for treatment.
- Prohibition of CSOs during dry weather.
- Control of solid and floatable materials in CSOs.
- Establishment of pollution prevention programs.
- Public notification to ensure that the public receives adequate notification of CSO occurrences and CSO impacts.
- Monitoring to effectively characterize CSO impacts and the efficacy of CSO controls.

Table 12-2. Elements of the Long-Term CSO Control Plan

- Characterization, monitoring, and modeling of the Combined Sewer System
- Public Participation
- Consideration of Sensitive Areas
- Evaluation of Alternatives
- Cost/Performance Considerations
- Operational Plan
- Maximizing Treatment at the Existing POTW Treatment Plant
- Implementation Schedule
- Post-Construction Compliance Monitoring Program

https://www.epa.gov/sites/production/files/2017-03/documents/npdesinspect-chapter-12.pdf

The key elements to CSO control are to:

• Eliminate or relocate overflows that discharge to sensitive areas wherever physically possible and economically achievable, and where not possible, provide treatment necessary to meet WQS for full protection of existing and designated uses.

Summary of Review

• Coordinate the review and appropriate revision of water quality standards and implementation procedures on CSO-impacted waters with development of long-term CSO control plans.
• Evaluate a reasonable range of alternatives for the CSO control plan that could achieve the necessary level of control/treatment and select the controls to be implemented based on cost/performance evaluations.
• Develop an implementation schedule based on the relative importance of adverse impacts on WQS and designated uses, priority projects identified in the long-term plan LTCP, and on the permittee's financial capability.
• Maximize treatment of wet weather flows at the existing POTW treatment plant.

All future PaDEP Inspections and Permits will obtain information to determine compliance in the following areas:

1. CSO prevention during dry weather.
2. Implementation of the nine minimum CSO controls.
3. Adherence to a schedule for development, submission, and implementation of a LTCP, including any interim deliverables.
4. Adherence to schedule for implementation of the CSO controls selected from the LTCP.
5. Elimination or relocation of overflows from identified sensitive areas, as defined in the approved LTCP.
6. Meeting narrative, performance-based, or numerical water quality-based effluent limitations.
7. Monitoring program, including baseline information on frequency, duration, and impacts of CSOs.
8. Once PADEP's proposed E. coli standard becomes effective, PADEP will incorporate E. coli limits in subsequently reissued NPDES permits and require that it is included in CSO post-construction compliance monitoring (PCCM) plans to verify compliance with water quality standard and designated uses.

The Department wants the Applicant to be aware of a guidance document offered by the Environmental Protection Agency. It is a planning tool for the development of LTCPs in Small Communities (jurisdictions with populations under 75,000), which might be useful in development of any revised LTCP. The links to the instructions and LTCP-EZ Template can be found at: https://www.epa.gov/npdes/npdes-cso-guidance-documents.

Long Term Control Plan

The required Long-Term Control Plan (LTCP) is a document by which the permittee evaluates the existing CSS infrastructure and the hydraulic relationship between the CSS, wet weather, overflows and treatment capacity. Cost effective alternatives for reducing or eliminating overflows are evaluated and a plan forward to eventually meet water quality standards is selected. An implementation schedule is then developed to achieve that goal. The three LTCP options are demonstrative, presumptive and total separation. The demonstrative approach shows that the current plan is adequate to meet the water quality-based requirements of the CWA based on data, while the presumptive approach will implement a minimum level of treatment that is presumed to meet the water quality-based requirements of the CWA.

PaDEP's Annual CSO Status Report (Chapter 94 Report)

The Annual CSO Status Report is part of the permittee's annual Chapter 94 Municipal Wasteload Management Report. In this annual report, the permittee includes

1. The summary of the frequency, duration and volume of the CSO events from the past year,
2. The operational status of the CSO outfalls,
3. Identification of any known in-stream water quality impacts,
4. A summary of all actions taken to implement NMCs and the LTCP and effectiveness of those actions,
5. A progress report and evaluation of the NMC implementation,
6. Rain gauge data for each event and
7. Documentation of annual inspections and maintenance.

The permittee shall comply with a minimum of one of the following under design conditions:

1) A planned control program that has been demonstrated to be adequate to meet the water quality-based requirements of the CWA ("demonstration approach"), or

2) A minimum level of treatment that is presumed to meet the water quality-based requirements of the CWA, unless data indicate otherwise ("presumption approach"):

   a. Eliminate or capture for treatment, or storage and subsequent treatment, at least 85% of the system-wide combined sewage volume collected in the combined sewer system during precipitation events under design conditions; or
   b. Discharge no more than an average of [4, 5, or 6] overflow events per year; or

Summary of Review

c. Eliminate or remove no less than the mass of the pollutants identified as causing water quality impairment, for the volumes that would be eliminated or captured for treatment under the 85% capture by volume approach.

The WMS Report query “Water Management System Inspections” was run. On 09/02/2020 a Routine Inspection was done with No Violations noted.

The WMS “Open Violations by Client Report" was run and there are No Open Violations.

The Existing Permit expired (Admin Extension) and the renewal was submitted in a timely manner on November 8, 2017.

Sludge use and disposal description and location(s): PA DEP Permitted Landfill

Public Participation

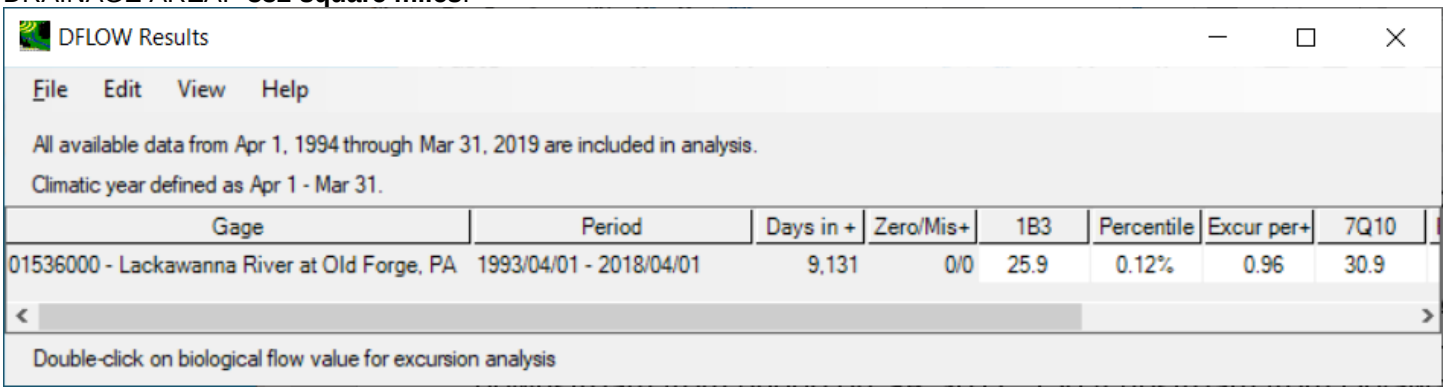
DEP will publish notice of the receipt of the NPDES permit application and a tentative decision to issue the individual NPDES permit in the *Pennsylvania Bulletin* in accordance with 25 Pa. Code § 92a.82. Upon publication in the *Pennsylvania Bulletin*, DEP will accept written comments from interested 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.

Discharge, Receiving Waters and Water Supply Information

Outfall No.	001	Design Flow (MGD)	6
Latitude	41º 20' 54.62"	Longitude	-75º 46' 49.73"
Quad Name		Quad Code	
Wastewater Description:	Sewage Effluent		
Receiving Waters	Lackawanna River (CWF, MF)	Stream Code	28374
NHD Com ID	65631645	RMI	0.98
Drainage Area	348	Yield (cfs/mi^2)	.094 --> (**0.1 default**)
Q_{7-10} Flow (cfs)	34.8	Q_{7-10} Basis	DFlow gage 01536000
Elevation (ft)	539	Slope (ft/ft)	.0041
Watershed No.	5-A	Chapter 93 Class.	CWF, MF
Existing Use		Existing Use Qualifier	
Exceptions to Use	na	Exceptions to Criteria	
Assessment Status	Attaining Use(s) : Aquatic Life		
Cause(s) of Impairment	Metals, pH , Siltation, Flow Alterations		
Source(s) of Impairment	Abandoned Mine Drainage		
TMDL Status	Final; March 9, 2005	Name	Lackawanna River Watershed
Nearest Downstream Public Water Supply Intake	Danville Water Supply		
PWS Waters	Susquehanna	Flow at Intake (cfs)	
PWS RMI	122.947	Distance from Outfall (mi)	>61

Outfall 001 : 41 20 55 -75 46 50 Lackawanna River CWF Aquatic Life Impaired by Abandoned Mine Drainage - Metals , pH, Siltation, Flow Alterations

USGS STATION.--**01536000** LACKAWANNA RIVER AT OLD FORGE, PA
LOCATION.--Lat 41`21'33", long 75`44'41", Lackawanna County, Hydrologic Unit 02050107, on right bank 100 ft downstream from bridge on SR 3017, 150 ft upstream from Delaware, Lackawanna, and Western Railroad bridge in Old Forge, and 0.5 mi upstream from St. Johns Creek.
DRAINAGE AREA.--**332 square miles**.



LFY = Q_{7-10} LowFlowYield (cfs/mi^2)= 0.094 - -> (**0.1 Default**)

Drainage areas were delineated using USGS's StreamStats
Outfall Point 0.98 Drainage Area (square miles)= 348 (Elev 539') at GPS 41.3486 -75.7806
Point 0.00 Drainage Area (square miles)= 9899 (Elevation 521')
Slope ft/ft 0.004 Stream Code 28374

Other Comments:

Lackawanna River Watershed

The Lackawanna River Watershed is affected by pollution from AMD. This pollution has caused high levels of metals and low pH in the mainstem and in several tributaries such as Aylesworth Creek, Grassy Island Creek, Powderly Creek, and Wilson Creek. There are numerous mine seeps, boreholes and outfalls throughout the watershed. Mine drainage is entering the Lackawanna River either directly or via its tributaries. Abandoned mine lands (AMLs) also contribute to the degradation of the watershed. The coal industry, through Pa. DEP-promoted remining efforts, can help to eliminate some sources of AMD and conduct some of the remediation through the permitting, mining, and reclamation of abandoned and disturbed mine lands. Special consideration should be given to potential remining projects within these areas as the environmental benefit versus cost ratio is generally very high.

Two primary programs that provide reasonable assurance for maintenance and improvements of water quality in the watershed are in effect. The Pa. DEP's efforts to reclaim AMLs, coupled with its duties and responsibilities for issuing mining NPDES permits, will be the focal points in water quality improvement. Since the AMD TMDLs did not consider sewage dischargers, there are no WLAs to apply. Quarterly AMD monitoring will continue to support the TMDL. In addition, Aluminum has modelled required limits (see the water quality modeling section).

In general, DEP establishes limits in the draft permit where the effluent concentration exceeds 50% of the WQBEL. For non-conservative pollutants establish monitoring requirements where the effluent concentration determined is between 25% - 50% of the WQBEL. For conservative pollutants, establish monitoring requirements where the effluent concentration determined is between 10% - 50% of the WQBEL.

The applicant is implementing an approved pretreatment program administered by EPA.

Treatment Facility Summary

Treatment Facility Name: Lower Lackawanna Valley Sanitary Authority

WQM Permit No.	Issuance Date
4010404	10/25/2010
4010403	05/13/2010

Waste Type	Degree of Treatment	Process Type	Disinfection	Avg Annual Flow (MGD)
Sewage	Secondary With Ammonia And Phosphorus	Activated Sludge	Chlorine	6

Hydraulic Capacity (MGD)	Organic Capacity (lbs/day)	Load Status	Biosolids Treatment	Biosolids Use/Disposal
8.5	25490	Not Overloaded	Belt Filtration	Landfill

The existing WWTP is an integrated fixed film system - activated sludge and provides for biological reduction of total nitrogen and phosphorous with aluminum sulfate addition. The process consists of flow entering 4 incline screw pumps and rising to flow through 2 mechanical screens and 2 grit chambers, and then to 6 process aeration tanks with bio nutrient removal grids, flow then proceeds to 6 settling tanks and 2 chlorine contact disinfection tanks. Solids are sent to a dissolved air flotation thickener and 4 sludge holding tanks and belt filter press for processing. The Sludge is thickened in the dissolved air flotation thickener, and dewatered in the belt filter press, sludge cake has lime added for disinfection and pathogen reduction prior to disposal in a landfill.

WQM Permit # 4010404 was issued 10/25/10 to upgrade the existing facility to reduce nutrient loadings of Total Nitrogen and Total Phosphorus. The upgrade increases the design organic capacity of the plant to 25,490 pounds BOD5 per day (maximum daily). The hydraulic design capacity is 6.0 MGD Annual Average Flow and 8.5 MGD Maximum Monthly Average Flow. Peak hourly design flow is 19.5 MGD.

Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** 6
Latitude 41º 20' 55.00" **Longitude** -75º 46' 50.00"
Wastewater Description: Sewage Effluent

The limitations and monitoring requirements specified below are proposed for the draft permit, and reflect the most stringent limitations amongst 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), Chesapeake Bay agreement, and/or BPJ.

Technology-Based Limitations

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

Parameter	Minimum	Average Monthly	Average Weekly	IMAX	Basis
Flow (MGD)	XXX	Report	Report Max Daily	XXX	§§ 92a.27, 92a.61
CBOD5 (mg/L)	XXX	25	40	50	§ 92a.47
TSS (mg/L)	XXX	30	45	60	§ 92a.47
TRC (mg/L)	XXX	0.5	XXX	1.6	§§ 92a.47-48
NH3-N (mg/L)	XXX	25	XXX	50	BPJ
D.O. (mg/L)	4	XXX	XXX	XXX	BPJ
pH (SU)	6	XXX	XXX	9	§ 92a.47, § 95.2
Total N (mg/L)	XXX	Report	XXX	XXX	§ 92a.61
Total P (mg/L)	XXX	Report	XXX	XXX	§ 92a.61
Fecal Coliform (No./100 ml) (May-Sept)	XXX	200 Geo Mean	XXX	1,000	§ 92a.47
Fecal Coliform (No./100 ml) (Oct-April)	XXX	2,000 Geo Mean	XXX	10,000	§ 92a.47
E. Coli (No./100 ml)*	XXX	XXX	XXX	Report	§ 92a.61

Comments: Chesapeake Bay Requirements

The limitations and monitoring requirements specified below are to comply with Pennsylvania's Chesapeake Bay Tributary Strategy.

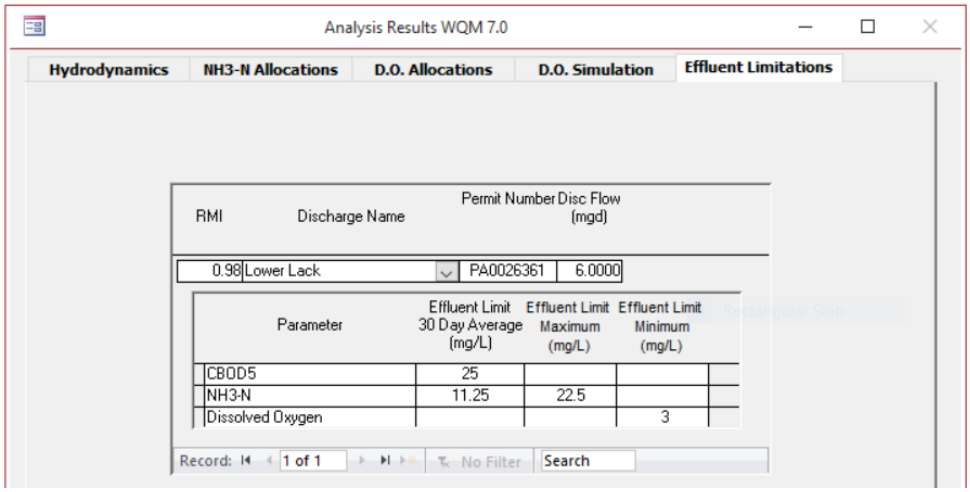
Parameter	Effluent Limitations					Monitoring Requirements	
	Mass Units (lbs/day)		Concentrations (mg/L)			Minimum Measurement Frequency	Required Sample Type
	Monthly	Annual	Minimum	Monthly Average	Maximum		
Ammonia---N	Report	Report		Report		2/week	24-Hr Composite
Kjeldahl---N	Report			Report		2/week	24-Hr Composite
Nitrate-Nitrite as N	Report			Report		2/week	24-Hr Composite
Total Nitrogen	Report	Report		Report		1/month	Calculation
Total Phosphorus	Report	Report		Report		2/week	24-Hr Composite

Parameter	Effluent Limitations					Monitoring Requirements	
	Mass Units (lbs/day)		Concentrations (mg/L)			Minimum Measurement Frequency	Required Sample Type
	Monthly	Annual	Minimum	Monthly Average	Maximum		
Net Total Nitrogen	Report	109,588*				1/month	Calculation
Net Total Phosphorus	Report	14,612*				1/month	Calculation

*Table 9-1. Chesapeake Bay TMDL total nitrogen (TN) annual allocations (pounds per year) by Chesapeake Bay segment to attain Chesapeake Bay WQS Nitrogen Delivery Ratio :0.733 ; Phosphorus Delivery Ratio : 0.436

Water Quality-Based Limitations

A "Reasonable Potential Analysis" determined the following parameters were candidates for limitations:



	B	C	D	E	F	G
2	TRC EVALUATION			Enter Facility Name in E3		
3	Input appropriate values in B4:B8 and E4:E7			Lower Lack		
4	34.8	= Q stream (cfs)		0.5	= CV Daily	
5	6	= Q discharge (MGD)		0.5	= CV Hourly	
6	4	= no. samples		1	= AFC_Partial Mix Factor	
7	0.3	= Chlorine Demand of Stream		1	= CFC_Partial Mix Factor	
8	0	= Chlorine Demand of Discha		15	= AFC_Criteria Compliance Time (min)	
9	0.5	= BAT/BPJ Value		720	= CFC_Criteria Compliance Time (min)	
	0	= % Factor of Safety (FOS)			=Decay Coefficient (K)	
10	Source	Reference	AFC Calculations		Reference	CFC Calculations
11	TRC	1.3.2.iii	WLA afc = 1.215		1.3.2.iii	WLA cfc = 1.177
12	PENTOXSD TRG	5.1a	LTAMULT afc = 0.373		5.1c	LTAMULT cfc = 0.581
13	PENTOXSD TRG	5.1b	LTA_afc= 0.453		5.1d	LTA_cfc = 0.684
14						
15	Source		Effluent Limit Calculations			
16	PENTOXSD TRG	5.1f	AML MULT = 1.720			
17	PENTOXSD TRG	5.1g	AVG MON LIMIT (mg/l) = 0.500		BAT/BPJ	
18			INST MAX LIMIT (mg/l) = 1.170			

The following Toxics limitations were determined through water quality modeling (output files attached):

The Toxics Management Spreadsheet (TMS) modeling recommended effluent limitations or monitoring requirements for several pollutants. Limitations will come into effect three years after the permit effective date. Those parameters are identified below, and the permittee may choose to re-sample for them during the draft permit review period at the Department's target QLs (or sufficiently sensitive QLs) found in the current application instructions document.

TMS Limits for : Total Aluminum, Total Cadmium , Hexavalent Chromium, Total Copper, Free Cyanide, Total Silver, Acrolein, and Acrylamide

TMS Monitor and Report for : Total Antimony , Dissolved Iron, and Total Zinc

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Toxics Management Spreadsheet
Version 1.3, March 2021

Model Results

Lower Lack 2021, NPDES Permit No. PA0026361, Outfall 001

Instructions | Results | RETURN TO INPUTS | SAVE AS PDF | PRINT | All | Inputs | Results | Limits

	Mass Limits		*Concentration Limits*						
Pollutants	AML (lbs/day)	MDL (lbs/day)	AML	MDL	IMAX	Units	Governing WQBEL	WQBEL Basis	Comments
Total Aluminum	52.6	82.0	1,051	1,640	2,627	µg/L	1,051	AFC	Discharge Conc ≥ 50% WQBEL (RP)
Total Antimony	Report	Report	Report	Report	Report	µg/L	26.6	THH	Discharge Conc > 10% WQBEL (no RP)
Total Cadmium	0.064	0.1	1.29	2.01	3.21	µg/L	1.29	CFC	Discharge Conc ≥ 50% WQBEL (RP)
Hexavalent Chromium	1.14	1.78	22.8	35.6	57.1	µg/L	22.8	AFC	Discharge Conc ≥ 50% WQBEL (RP)
Total Copper	0.98	1.53	19.6	30.6	49.0	µg/L	19.6	AFC	Discharge Conc ≥ 50% WQBEL (RP)
Free Cyanide	0.95	1.48	19.0	29.6	47.5	µg/L	19.0	THH	Discharge Conc ≥ 50% WQBEL (RP)
Dissolved Iron	Report	Report	Report	Report	Report	µg/L	1,425	THH	Discharge Conc > 10% WQBEL (no RP)
Total Silver	0.27	0.41	5.3	8.27	13.3	µg/L	5.3	AFC	Discharge Conc ≥ 50% WQBEL (RP)
Total Zinc	Report	Report	Report	Report	Report	µg/L	168	AFC	Discharge Conc > 10% WQBEL (no RP)
Acrolein	0.21	0.33	4.2	6.56	10.5	µg/L	4.2	AFC	Discharge Conc ≥ 50% WQBEL (RP)
Acrylamide	0.066	0.1	1.32	2.05	3.29	µg/L	1.32	CRL	Discharge Conc ≥ 50% WQBEL (RP)

TMS PA0026361 2021.pdf

To remain consistent with 40 CFR 122.47, milestones are added to Part C requiring the permittee to develop a schedule/plan for meeting the final WQBELs for all new water-quality based effluent limitations in the permit.

The Part C condition regarding Toxics Reduction Evaluations (TREs) is added to the permit and applies to each of the toxic pollutants above where new limitations and monitoring requirements are to be established. The permittee will have the option to accept the implementation of the limitations or to perform site-specific studies to verify or refine the WQBELs.

Best Professional Judgment (BPJ) Limitations

Comments: PFBC's Lackawanna River Recommendation Report has found that the TMDL is improving enough to support aquatic life. Wet Testing will continue.

Pa Fish Lack River.pdf

Anti-Backsliding

na

IDENTIFICATION OF ACTIVE OUTFALLS INCLUDED IN PERMITTEE CSO SYSTEM

The outfalls identified below serve as combined sewer overflows necessitated by storm water entering the sewer system and exceeding the hydraulic capacity of the sewers and/or the treatment plant and are permitted to discharge only for this reason. Dry weather discharges from these outfalls are prohibited. Each discharge shall be monitored for cause, frequency, duration, and quantity of flow. The data must be recorded on the Department-provided DMR for CSOs form and reported monthly as an attachment to the regular Discharge Monitoring Report (DMR) or as otherwise provided for in the permit. Monitoring and compliance with the requirements specified above shall be performed in accordance with NPDES Permit Condition Part C - on combined sewer overflows.

OUTFALL NUMBER (List)	LATITUDE			LONGITUDE			RECEIVING WATER (Name)
	1. DEG.	2 MIN.	3. SEC.	1. DEG	2. MIN.	3. SEC	
002	41	21	06	75	46	08	LACKAWANNA RIVER
006	41	21	25	75	45	13	LACKAWANNA RIVER
007	41	21	36	75	44	57	LACKAWANNA RIVER
008	41	21	34	75	44	42	LACKAWANNA RIVER
009	41	21	30	75	45	41	LACKAWANNA RIVER
011	41	22	21	75	43	28	LACKAWANNA RIVER
012	41	22	33	75	43	12	LACKAWANNA RIVER
015	41	23	15	75	42	28	KEYSER CREEK
021	41	20	30	75	44	40	MILL CREEK
022	41	21	00	75	48	12	LACKAWANNA RIVER
025	41	23	48	75	41	10	LACKAWANNA RIVER
026	41	21	12	75	46	02	LACKAWANNA RIVER
029	41	21	33	75	45	56	LACKAWANNA RIVER
030*	41	22	16	75	43	52	ST. JOHNS CREEK

* Outfall 030 --- Old Forge, Eagle II, 17, 18, 24 Combined

IDENTIFICATION OF INACTIVE OUTFALLS THAT ARE REPORTED AS ELIMINATED OR SEALED

OUTFALL NUMBER (List)	LATITUDE			LONGITUDE			RECEIVING WATER (Name)
	1. DEG.	2 MIN.	3. SEC.	1. DEG	2. MIN.	3. SEC	
003	41	21	09	75	46	04	LACKAWANNA RIVER
004	41	21	18	75	45	53	LACKAWANNA RIVER
005	41	21	15	75	45	38	LACKAWANNA RIVER
013	41	22	56	75	42	32	LACKAWANNA RIVER
014	41	23	12	75	42	32	KEYSER CREEK
017*	41	22	51	75	44	31	ST. JOHNS CREEK
018*	41	22	27	75	44	40	ST. JOHNS CREEK
019	41	20	47	75	44	30	MILL CREEK

020	41	20	16	75	44	54	MILL CREEK
023	41	21	24	75	44	32	LACKAWANNA RIVER
024*	41	22	25	75	44	32	ST. JOHNS CREEK
027	41	21	12	75	45	44	LACKAWANNA RIVER
028	41	20	27	75	45	18	MILL CREEK

* Outfall 030 --- Old Forge, Eagle II, 17, 18, 24 Combined

Whole Effluent Toxicity (WET)

For Outfall 001, ☐ **Acute** ☒ **Chronic** WET Testing was completed:

☐ For the permit renewal application (4 tests).
☐ Quarterly throughout the permit term.
☐ Quarterly throughout the permit term and a TIE/TRE was conducted.
☒ Other: **PaDEP Yearly Policy unless there is a failure (then quarterly)**

Q7-10 Flow* 32.7 cfs PMFa* 0.311 PMFc* 1.0 WETT Required by Permit? ☑
IWCa 47.72 % Test Type Chronic Test Type for Failures(s) WETT Failure(s)? ☐
IWCc 22.11 % Test Type (Other)
TIWC 22 % Dilution Series 1st 6, 2nd 11, 3rd 22, 4th 61, 5th 100 Comments

Species

Species Type*	
CDUBI	Ceriodaphnia Dubia
PPROM	Pimephales Promelas

Summary of Test Results

Application submission:

WHOLE EFFLUENT TOXICITY

1. Summarize the results of all Whole Effluent Toxicity (WET) tests completed in the last five years (or attach a separate sheet with these results). **Submit the four most recent WET test reports if you have not previously submitted them.** See instructions.

Outfall tested: 001

Type of tests completed: ☒ Chronic ☐ Acute

	Ceriodaphnia Results				Pimephales Results			
Test Date	Survival NOEC	Reproduction NOEC	LC50	Pass/Fail	Survival NOEC	Growth NOEC	LC50	Pass/Fail
8/6/13	100%	62%	100%	Pass	62%	100%	>100%	Pass
7/8/14	100%	95%	100%	Pass	62%	62%	100%	Pass
7/14/15	100%	62%	100%	Pass	100%	100%	>100%	Pass
7/19/16	100%	62%	>100%	Pass	100%	100%	100%	Pass
7/25/17	100%	12%	>100%	Pass	100%	100%	>100%	Pass

Updates from the application:

2018 WET Testing.pdf
2019 Wet Testing.pdf
2020 WETT Testing a.pdf
2020 WETT Testing b.pdf

Annual sampling will continue for Ceriodaphnia dubia and Pimephales promelas with this permit renewal. Results are reviewed by the regional biologist and the Program Water Quality Specialists continue to upload the results into the eDMR system.

WET Limits

Has reasonable potential been determined? ☐ YES ☒ NO

Will WET limits be established in the permit? ☐ YES ☒ NO

Compliance History

DMR Data for Outfall 001 (from April 1, 2020 to March 31, 2021)

Parameter	MAR-21	FEB-21	JAN-21	DEC-20	NOV-20	OCT-20	SEP-20	AUG-20	JUL-20	JUN-20	MAY-20	APR-20
Flow (MGD) Average Monthly	3.7757	3.2134	2.9779	4.2862	3.1642	3.0823	2.9957	3.3236	3.2225	3.4781	3.6666	4.0646
Flow (MGD) Daily Maximum	7.5053	6.0859	4.1657	28.952	6.0739	9.2745	6.0151	9.001	10.149	5.7525	5.1584	7.0883
pH (S.U.) Minimum	6.7	6.76	6.88	6.50	6.92	6.67	6.44	6.35	6.58	6.5	6.87	6.93
pH (S.U.) Maximum	7.67	7.44	8.14	7.32	7.44	7.30	7.24	7.22	7.23	7.27	7.28	7.29
DO (mg/L) Minimum	6.75	5.43	6.32	5.48	6.49	5.61	5.75	5.84	5.73	5.19	6.05	6.02
TRC (mg/L) Average Monthly	0.31	0.3	0.16	0.09	0.08	0.07	0.1	0.07	0.06	0.11	0.11	0.11
TRC (mg/L) Instantaneous Maximum	0.87	0.70	0.51	0.65	0.60	0.44	0.73	0.35	0.26	0.57	1.00	0.36
CBOD5 (lbs/day) Average Monthly	260	221	230	253	130	127	97	107	141	163	198	206
CBOD5 (lbs/day) Weekly Average	290	292	340	628	143	243	130	143	270	236	268	276
CBOD5 (mg/L) Average Monthly	8.0	7.9	9.0	5.8	4.9	4.30	3.7	3.8	4.8	5.5	6.5	6.0
CBOD5 (mg/L) Weekly Average	9.9	9.3	12.0	10.1	5.3	5.30	4.5	5.2	6.5	6.9	8.7	9.0
BOD5 (lbs/day) Influent Average Monthly	9154	8991	8113	8288	8195	7753	7915	7697	8315	9074	7678	7388
BOD5 (lbs/day) Influent Weekly Average	9953	9484	9320	12104	8608	10685	8743	8795	10750	9926	9823	9554
BOD5 (mg/L) Influent Average Monthly	300	338	329	273	308	306	325	288	316	317	254	218
BOD5 (mg/L) Influent Weekly Average	323	358	374	319	346	346	336	362	340	318	326	307
TSS (lbs/day) Average Monthly	653	350	379	1713	253	229	155	165	208	493	375	467
TSS (lbs/day) Influent Average Monthly	11202	10978	8151	8492	9336	12050	7874	7513	9398	10969	7620	7498
TSS (lbs/day) Influent Weekly Average	13850	13194	9865	9710	1030	17351	12051	10132	15435	13412	11003	11293
TSS (lbs/day) Weekly Average	1042	546	492	6797	292	458	215	218	386	1148	467	939
TSS (mg/L) Average Monthly	21.0	12.0	15.0	15.0	10.0	8.0	6.0	6.0	8.0	17.0	12.0	14.0
TSS (mg/L) Influent Average Monthly	350	405	331	305	356	449	300	264	335	372	254	227
TSS (mg/L) Influent Weekly Average	396	429	397	357	421	471	414	339	386	409	367	360
TSS (mg/L) Weekly Average	32.0	16.0	19.0	37.0	11.0	12.0	8.0	7.0	11.0	36.0	15.0	23.0
Fecal Coliform (CFU/100 ml) Geometric Mean	5	9	10.0	1.0	5.0	7.0	4.0	20.0	3.0	5.0	2.0	2.0
Fecal Coliform (CFU/100 ml) Instantaneous Maximum	2419.6	2419.6	2419.6	2419.6	1011.2	2419.6	191.8	192	59.0	1600	48.0	10000
Nitrate-Nitrite (mg/L) Average Monthly	2.37	2.64	1.84	3.95	4.64	5.86	1.79	4.71	3.76	2.59	3.13	2.39

Nitrate-Nitrite (lbs) Total Monthly	2021	1853	1409	3103	3275	4212	1276	3487	2849	2086	2781	2224
Total Nitrogen (mg/L) Average Monthly	16.05	17.09	16.5	10.09	8.84	8.53	4.73	6.83	5.39	6.25	16.04	14.33
Total Nitrogen (lbs) Effluent Net Total Monthly	13487	12157	12670	7919	6212	6188	3542	5119	4074	5095	14418	13167
Total Nitrogen (lbs) Total Monthly	13487	12157	12670	7919	6212	6188	3542	5119	4074	5095	14418	13167
Total Nitrogen (lbs) Effluent Net Total Annual							102899					
Total Nitrogen (lbs) Total Annual							102899					
Ammonia (lbs/day) Average Monthly	327	299	252	109	55	32	22.0	9.0	7.0	54	247	254
Ammonia (mg/L) Average Monthly	12.06	11.7	10.48	4.3	2.364	1.329	0.876	0.386	0.276	1.942	8.51	8.36
Ammonia (lbs) Total Monthly	10138	8369	7806	3391	1661	991	671	289	210	1612	7644	7632
Ammonia (lbs) Total Annual							55687					
TKN (mg/L) Average Monthly	13.68	14.5	14.7	6.14	4.19	2.66	2.94	2.2	1.84	101	12.91	11.97
TKN (lbs) Total Monthly	11466	10305	11260	4816	2936	1976	2269	1698	1383	3029	11637	10962
Total Phosphorus (mg/L) Average Monthly	0.421	0.356	0.518	0.384	0.571	0.474	0.295	1.333	0.885	0.562	0.726	0.436
Total Phosphorus (lbs) Effluent Net Total Monthly	359	266	413	301	401	346	214	970	670	452	650	409
Total Phosphorus (lbs) Total Monthly	359	266	413	301	401	346	214	970	670	452	650	409
Total Phosphorus (lbs) Effluent Net Total Annual							7767					
Total Phosphorus (lbs) Total Annual							7767					
Total Aluminum (lbs/day) Average Quarterly	2.84			2.29			2.38			2.84		
Total Aluminum (mg/L) Average Quarterly	0.1			0.1			0.1			0.1		
Dissolved Iron (lbs/day) Average Quarterly	4.54			1.49			1.64			2.13		
Dissolved Iron (mg/L) Average Quarterly	0.16			0.065			0.69			0.75		
Total Iron (lbs/day) Average Quarterly	18.70			2.88			3.60			4.97		
Total Iron (mg/L) Average Quarterly	0.659			0.126			0.151			0.175		

Total Manganese (lbs/day) Average Quarterly	6.50			1.69			1.55			4.97		
Total Manganese (mg/L) Average Quarterly	0.229			0.074			0.65			0.175		

Effluent Violations for Outfall 001, from: May 1, 2020 To: March 31, 2021

Parameter	Date	SBC	DMR Value	Units	Limit Value	Units
TSS	12/31/20	Avg Mo	1713	lbs/day	1501	lbs/day
TSS	12/31/20	Wkly Avg	6797	lbs/day	2252	lbs/day
Fecal Coliform	06/30/20	IMAX	1600	CFU/100 ml	1000	CFU/100 ml
Ammonia	02/28/21	Avg Mo	11.7	mg/L	11.2	mg/L
Ammonia	03/31/21	Avg Mo	12.06	mg/L	11.2	mg/L

Other Comments:

Sewage 2020 PaDEP Inspection Report

LVSA 2020 Sewage Inspection.pdf

CSO 2020 PaDEP Inspection Report

2020 LLVSA CSO Inspection.pdf

CSO LLVSA 2020 Report

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2016 LLVSA LTCP

LLVSA LTCP 2016.pdf