pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Northeast Regional Office
CLEAN WATER PROGRAM

NPDES PERMIT FACT SHEET
INDIVIDUAL SEWAGE

Application Type	**Renewal**	Application No.	**PA0027693**
Facility Type	**Municipal**	APS ID	**626326**
Major / Minor	**Major**	Authorization ID	**1243149**

Applicant and Facility Information

Applicant Name	**Minersville Borough Sewer Authority**	Facility Name	**Minersville Sewer Authority WWTP**
Applicant Address	2 E Sunbury Street	Facility Address	State Route 901
	Minersville, PA 17954-1719		Minersville, PA 17954
Applicant Contact	Joseph Bass	Facility Contact	Raymond Sukeena
Applicant Phone	(570) 544-2149	Facility Phone	(570) 544-6843
Client ID	74952	Site ID	258146
Ch 94 Load Status	Not Overloaded	Municipality	Minersville Borough
Connection Status	No Limitations	County	Schuylkill
Date Application Received	**August 27, 2018**	EPA Waived?	No
Date Application Accepted	**December 26, 2018**	If No, Reason	Major Facility with CSOs

Purpose of Application: RENEWAL OF EXISTING NDPES PERMIT.

Summary of Review

The applicant is requesting renewal of an NPDES permit to discharge treated sewage to the West Branch Schuylkill River (CWF-MF), a cold water fishery, migratory fishery-designated receiving stream in State Water Plan Basin 03A (Upper Schuylkill River). The average annual design flow is 1.0 MGD, which is the same as the previous permit. 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.

For outfall 001 the CBOD5, TSS, Fecal Coliform, TRC and pH limits are technology-based. The NH3-N (summer), TDS, and WET limits are water quality-based.

A TMDL (Total Maximum Daily Load) for the West Branch Schuylkill River Watershed was approved by EPA on April 1, 2005. The TMDL addresses metals (iron, manganese, and aluminum) and depressed pH associated with acid mine drainage (AMD). The TMDL allocations apply to nonpoint sources of pollution from mining sites, and to one point-source permitted mine drainage discharge. Per the SOP for Establishing Effluent Limitations for Individual Sewage Permits, for renewals, if there are Waste Load Allocations (WLAs) that are specific to the discharge then consistent effluent limits should be established in the permit. Since the TMDL did not consider sewage dischargers, there are no WLAs to apply. Since there are industrial users, monitoring for iron, manganese and aluminum will be continued to allow assessment of existing loadings without limits.

Quarterly limit for Total Dissolved Solids per DRBC Docket No. D-1970-201 will be introduced. Toxic modelling has produced no other limits.

For Outfall 002 (stormwater only) the monitoring requirements will be updated accordingly for parameters and frequency of the present state-wide NPDES PAG-03 General Permit Appendix J.

Approve	Deny	Signatures	Date
X		Bernard Feist (signed) Bernard Feist, P.E. / Environmental Engineer	April 1, 2021
X		Amy M. Bellanca (signed) Amy M. Bellanca, P.E. / Environmental Engineer Manager	4-6-21

Summary of Review

Combined Sewer Overflow (CSO)
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 of CSO control is 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.
• 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.

Summary of Review

All future PADEP Inspections and Permits will obtain information to determine compliance in the following areas:
• CSO prevention during dry weather.
• Implementation of the nine minimum CSO controls.
• Adherence to a schedule for development, submission, and implementation of a LTCP, including any interim deliverables.
• Adherence to schedule for implementation of the CSO controls selected from the LTCP.
• Elimination or relocation of overflows from identified sensitive areas, as defined in the approved LTCP.
• Meeting narrative, performance-based, or numerical water quality-based effluent limitations.
• Monitoring program, including baseline information on frequency, duration, and impacts of CSOs.
• PADEP will incorporate E. coli monitoring in subsequently reissued NPDES permits and ensure 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.

Minersville has four (4) CSOs remaining within the collection system permitted under NPDES Permit No. PA0027693. The Authority had previously abandoned and eliminated a total of six (6) CSOs as part of two (2) separation and upgrade projects. Currently, overflows would occur only when the combined sewer system exceeds conveyance and wastewater treatment capacities during wet weather periods. At no time are there dry weather discharges through a CSO. Weir plate elevations are designed above manhole inverts which hold solids below weir elevations plus there are approximately 450 catch basins located in the service area. Any observed objects, contributing to a partial restriction, which may have been removed from a CSO are taken to the WWTP for proper disposal.

Items listed in their Long Term Control Plan include:

The Borough has implemented a regular street sweeping program and inlet/catch basin cleaning and lists any combined sewer system issues on their monthly agenda for the public meeting each month.

Summary of Review

CSO # / DEP Outfall #	Latitude	Longitude	Receiving Water
CSO-002 / Outfall 003	40°41'21"	76°15'26"	Culvert which discharges to West Branch of Schuylkill River
CSO-004 / Outfall 004	40°41'27"	76°15'24"	West Branch of Schuylkill River
CSO-006 / Outfall 005	40°41'39"	76°15'50"	Wolf Creek Culvert
CSO-007 / Outfall 006	40°41'34"	76°15'48"	Wolf Creek Culvert

The Minersville Sewer Authority has chosen to proceed with the **EPA "demonstrated goal" procedure** to demonstrate the attainment of compliance with the CSO LTCP. Sampling of the West Branch with and without active CSO discharges was conducted in October 2018.

Pollutant Parameter	West Branch Dry Weather No Active CSOs	West Branch Wet Weather – Outfall 004 and 005/006 Active			
		Above Outfall #004	Below Outfall #004	Above Outfalls #005/#006	Below Outfalls #005/#006
BOD 5 (mg/L)	ND	ND	2	ND	ND
Fecal Coliform (#/100ml)	100	5,400	15,200	9,200	5,800
pH (S.U.)	6.66	6.47	6.50	6.37	6.42
TDS (mg/L)	394	276	276	240	164
TSS (mg/L)	18	1490	1120	950	910
Aluminum (mg/L)	1.01	9.48	10.5	9.45	8.75
Iron (mg/L)	4.29	25.0	27	23.2	20.9
Manganese (mg/L)	1.84	1.77	1.61	1.68	1.69

The Authority must submit an annual report to DEP providing documentation on action taken by the Authority during the previous calendar year to implement the NMCs. The Authority's CSO Status Report is due by March 31st of each year. Special supplemental CSO Discharge Monitoring Reports are also required as part of the Authority's current NPDES Permit.

Summary of Review

Minersville Borough Combined Sewer Overflow Summary for 2017

Month	WWTP Average Flow MGD	WWTP Max Daily Flow MGD	Outfall 003 Flow MGD (# Events)	Outfall 004 Flow MGD (# Events)	Outfall 005 Flow MGD (# Events)	Outfall 006 Flow MGD (# Events)
January	0.521	1.119	0.000	0.000	0.000	0.000
February	0.437	0.931	0.000	0.000	0.009 (1)	0.009 (1)
March	0.606	0.955	0.000	0.000	0.018 (1)	0.018 (1)
April	0.8	3.043	0.000	0.000	0.048 (1)	0.048 (1)
May	0.597	1.594	0.000	0.000	0.000	0.000
June	0.488	1.269	0.000	0.000	0.012 (1)	0.012 (1)
July	0.77	2.495	0.000	0.000	0.029 (2)	0.029 (2)
August	0.594	1.505	0.000	0.000	0.023 (1)	0.000
September	0.391	0.846	0.000	0.000	0.000	0.000
October	0.525	1.225	0.000	0.000	0.000	0.000
November	0.434	0.734	0.000	0.000	0.000	0.000
December	0.383	0.713	0.000	0.000	0.000	0.000

As required, signs are installed near each CSO, which identifies its location, designation, and contact information. There are currently no sensitive areas in the vicinity of the CSO outfalls. The impaired quality of the West Branch does not provide for recreation or public uses.

303(d) Sub-List

State Water Plan (SWP) Subbasin: 03-A West Branch Schuylkill River

Year	Miles	Segment ID Assessment ID	DEP Stream Code	Stream Name	Designated Use	Data Source	Source	EPA 305(b) Cause Code
1996	9	0446	02329	West Branch Schuylkill River	CWF	305(b) Report	Resource Extraction	metals
1998	9.02	0446	02329	West Branch Schuylkill River	CWF	SWMP	AMD	metals
2002	12.9	20000718-0800-CJD	02329	West Branch Schuylkill River	CWF	SWAP	AMD	siltation

Cold Water Fishes=CWF
Surface Water Monitoring Program = SWMP
Surface Water Assessment Program = SWAP

Summary of Review

RPT.LTCP
Minersville.103018 F

The NMS query "Inspections & Inspectors – Inspections – Inspection History by Permit" was run. An Administrative/File Review Compliance Evaluation was done on 04/27/2020 with No Violations Noted.

The NMS query "Violations – eFACTS – Open Violations for Client was run. There are currently no open violations.

The existing permit is Administratively extended and the application was received on August 27, 2018.

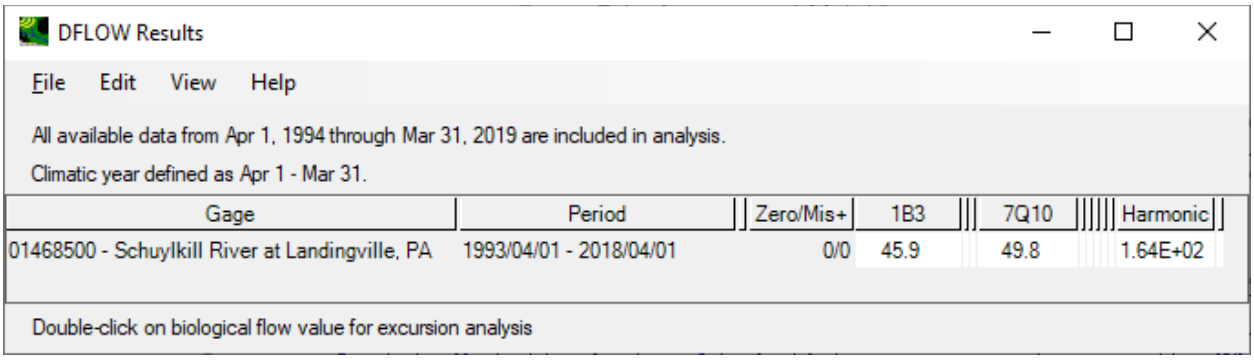
Public Participation

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)	1
Latitude	40º 40' 51.29"	Longitude	-76º 14' 58.82"
Quad Name		Quad Code	
Wastewater Description:	Sewage Effluent		
Receiving Waters	West Branch Schuylkill River (CWF)	Stream Code	2329
NHD Com ID	25982480	RMI	7.6
Drainage Area	20.8	Yield (cfs/mi^2)	0.37
Q_{7-10} Flow (cfs)	7.7	Q_{7-10} Basis	USGS 01468500 DFlow
Elevation (ft)		Slope (ft/ft)	0.0044
Watershed No.	3-A	Chapter 93 Class.	CWF,MF
Existing Use		Existing Use Qualifier	
Exceptions to Use		Exceptions to Criteria	
Assessment Status	Impaired		
Cause(s) of Impairment	flow regime modification, habitat alterations, habitat, metals, pcb's, siltation, acid mine drainage, channelization, highway/road/bridge runoff		
Source(s) of Impairment	source unknown, streambank modifications/destabilization, urban runoff/storm sewers		
TMDL Status	Final, Final, Tentative	Name	Schuylkill River PCB TMDL Upper Schuylkill River West Branch Schuylkill River Watershed
Nearest Downstream Public Water Supply Intake	Pottstown Borough Water Authority		
PWS Waters	Schuylkill River	Flow at Intake (cfs)	
PWS RMI		Distance from Outfall (mi)	Approximately 60 miles

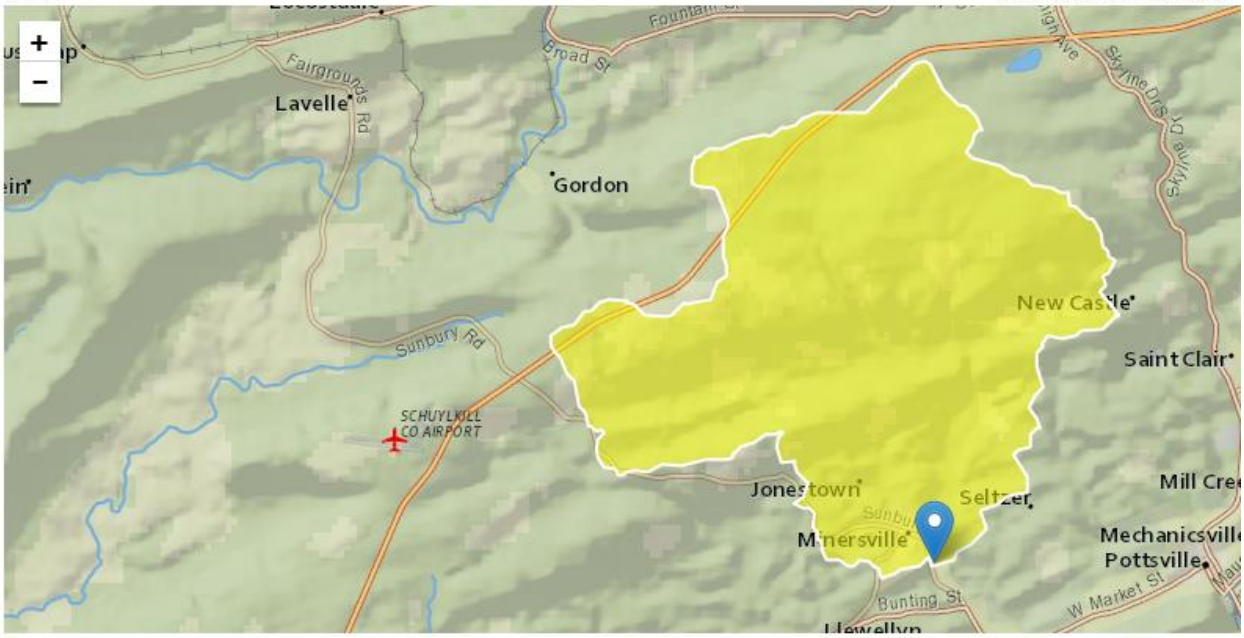
River Mile: 7.6 WRDS: 2329 HUC 8 Code: 02040203
STATION.--01468500 SCHUYLKILL RIVER AT LANDINGVILLE, PA
LOCATION.--Lat 40`37'45", long 76`07'30", Schuylkill County, Hydrologic Unit 02040203, on left bank 10 ft upstream from highway bridge on SR 2011 at Landingville, 0.1 mi upstream from Mahannon Creek, and 5.0 mi downstream from West Branch Schuylkill River.
DRAINAGE AREA.--133 square miles.



DFLOW Results 01468500 - Schuylkill River at Landingville, PA
Q_{7-10} LowFlowYield (cfs/mi^2)= 49.8/133 = 0.37

RMI 7.6 Outfall 001 Elevation of 684 feet at River Mile: 7.6 WRDS: 2329 HUC 8 Code: 02040203

Clicked Point (Latitude, Longitude): 40.68575, -76.25494
Time: 2019-05-20 14:02:35



Low-Flow Statistics Parameters [Low Flow Region 2]

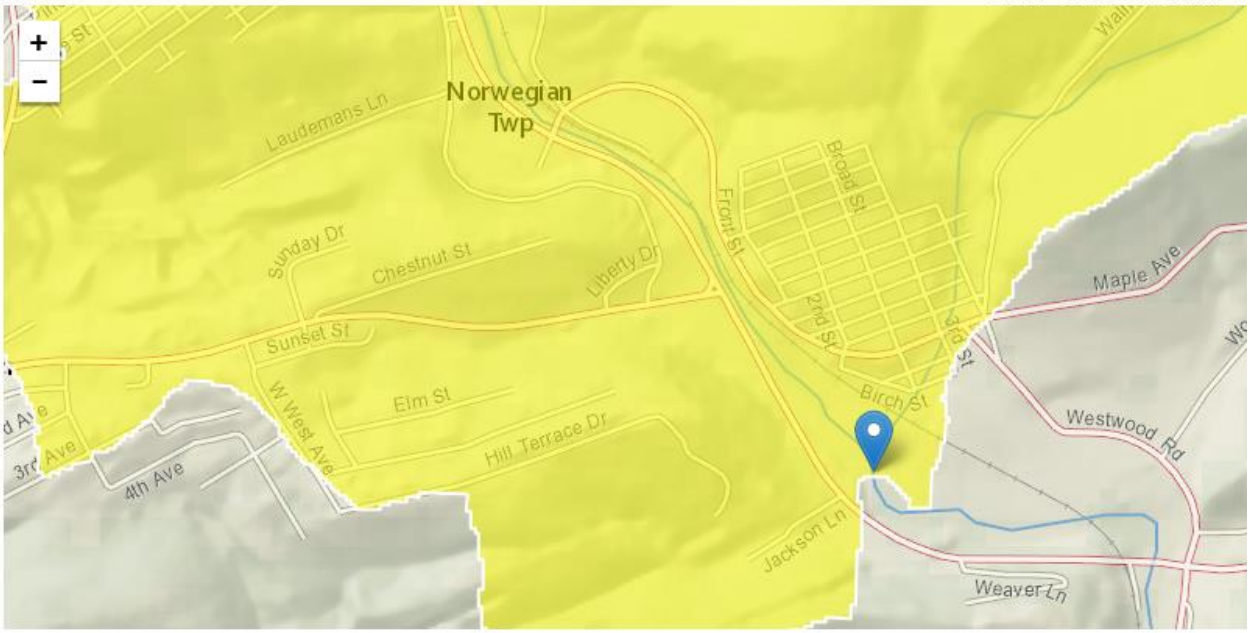
Parameter Code	Parameter Name	Value	Units
DRNAREA	Drainage Area	20.8	square miles

7 Day 10 Year Low Flow	6.29	ft^3/s

Streamflow = 0.37 * 20.8 = 7.7 CFS; Dilution = 5:1

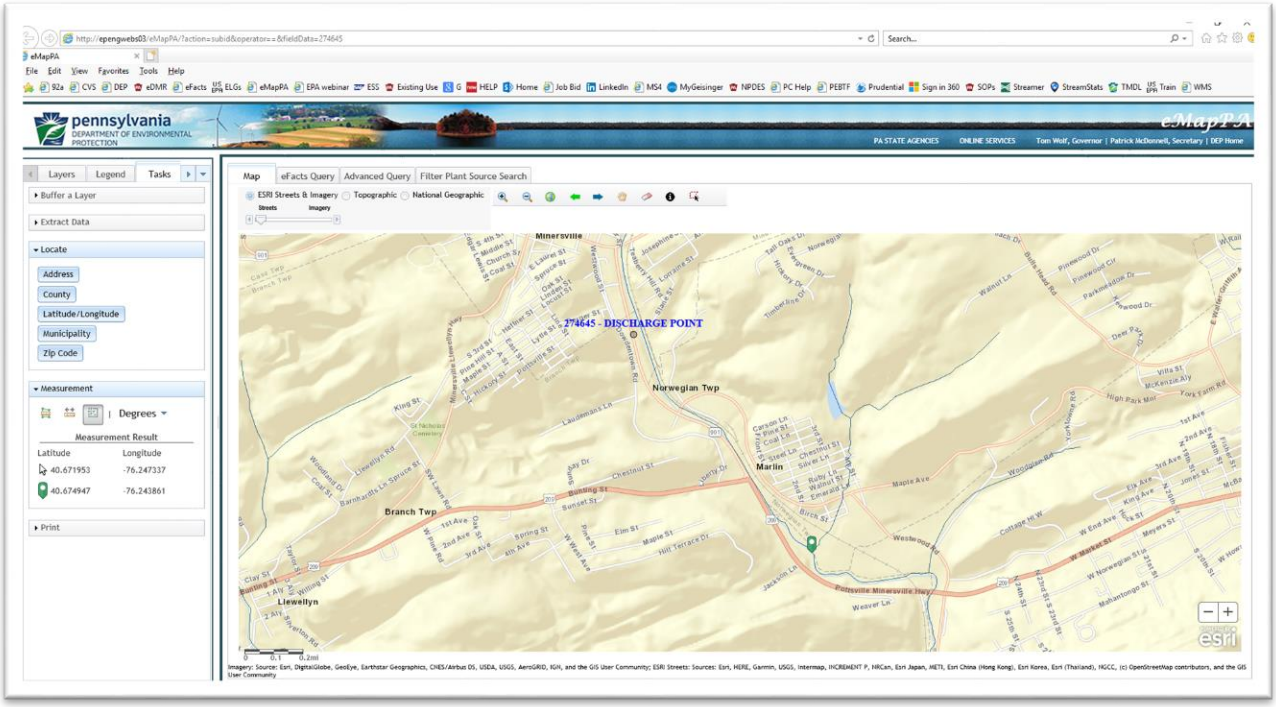
RMI 6.55 at confluence with trib 02345 elevation 675 ft

Clicked Point (Latitude, Longitude): 40.67484, -76.24374
Time: 2019-05-20 14:23:14 -0



Low-Flow Statistics Parameters [Low Flow Region 2]

Parameter Code	Parameter Name	Value	Units
DRNAREA	Drainage Area	22.8	square miles



Treatment Facility Summary

Treatment Facility Name: Minersville Sewer Authority WWTP

WQM Permit No.	Issuance Date
5470403	12/3/1970

Waste Type	Degree of Treatment	Process Type	Disinfection	Avg Annual Flow (MGD)
Sewage	Secondary	Activated Sludge	Chlorine	1.0

Hydraulic Capacity (MGD)	Organic Capacity (lbs/day)	Load Status	Biosolids Treatment	Biosolids Use/Disposal
1.0	1,360	Not Overloaded	Aerobic Digestion	Combination of methods

The Minersville Sewer Authority (Authority) owns the wastewater collection, conveyance, and treatment facilities serving the Borough and portions of Norwegian, Branch and Cass Townships.

The WWTP facilities consist of a fine screen, a grit collector, a pump house, two splitter boxes, two aeration tanks, two clarifiers, a sludge thickening tank, two aerobic digesters, a plat and frame press, and two chlorine contact tanks.

Wasted sludge will continue to be hauled off-site by a licensed hauler for disposal at an approved facility. Class B biosolids are land applied by Reading Anthracite Company under Permit PAG082220 @ 90 Dry Tons/year.

The two (2) industries that are connected to the sewer system are “dry” and only discharge domestic wastewater and non-contact cooling water. First, Tredegar discharges domestic wastewater and non-contact cooling water only. Second, World Resources Company, Inc. discharges domestic wastewater only to the collection system, any industrial flow is hauled to the WWTP by tanker truck. An average of 14,000 gallons per week is received at the WWTP and tankers are randomly sampled and analyzed with no historical problems.

The wastewater collection system consists of separate sanitary and combined sewers. Combined sewers collect a combination of sanitary and stormwater flows. Combined sewer flows were originally regulated at ten (10) Combined Sewer Overflows (CSOs). In 2006 and 2007, three (3) CSOs were abandoned and separation projects have eliminated an additional three (3) CSOs leaving four (4) permitted CSOs currently in the system. The receiving stream for all of the Minersville CSOs is the West Branch of the Schuylkill River (West Branch) which is affected by pollution from Acid Mine Drainage (AMD).

The population of the Borough of Minersville, based on the 2010 US Census is approximately 4,397, well below the designation for small systems.

Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** 1.0
Latitude 40º 41' 9.00" **Longitude** -76º 15' 20.00"
Wastewater Description: Sewage Effluent

Technology-Based Limitations

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

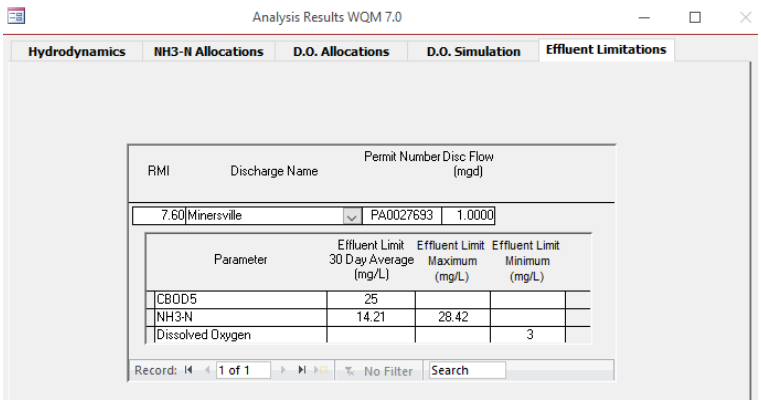
Parameter	Minimum	Average Monthly	Average Weekly	IMAX	Basis
Flow (MGD)	XXX	Report	Report Max Daily	XXX	§§ 92a.27, 92a.61
CBOD5 (mg/L)	XXX	25	40	50	§ 92a.47
TSS (mg/L)	XXX	30	45	60	§ 92a.47
TRC (mg/L)	XXX	0.5	XXX	1.6	§§ 92a.47-48
NH3-N (mg/L)	XXX	25	XXX	50	BPJ
D.O. (mg/L)	4	XXX	XXX	XXX	BPJ
pH (SU)	6	XXX	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

*2021 update - Sewage discharges will include monitoring, at a minimum, for E. Coli, in new and reissued permits, with a monitoring frequency of 1/month for design flows >= 1 MGD, 1/quarter for design flows >= 0.05 and < 1 MGD, 1/year for design flows of 0.002 – 0.05 MGD.

Water Quality-Based Limitations

The following limitations were determined through water quality modeling (output files in Appendix A):

Parameter	Limit (mg/l)	SBC	Model
NH_3-N	12 existing	Average Monthly	WQM 7.0



TRC EVALUATION

Input appropriate values in A3:A9 and D3:D9 — Minerville 2019

7.7	= Q stream (cfs)	0.5	= CV Daily
1	= Q discharge (MGD)	0.5	= CV Hourly
30	= no. samples	1	= AFC_Partial Mix Factor
0.3	= Chlorine Demand of Stream	1	= CFC_Partial Mix Factor
0	= Chlorine Demand of Discharge	15	= AFC_Criteria Compliance Time (min)
0.5	= BAT/BPJ Value	720	= CFC_Criteria Compliance Time (min)
0	= % Factor of Safety (FOS)		=Decay Coefficient (K)

Source	Reference	AFC Calculations	Reference	CFC Calculations
TRC	1.3.2.iii	WLA afc = 1.607	1.3.2.iii	WLA cfc = 1.559
PENTOXSD TRG	5.1a	LTAMULT afc = 0.373	5.1c	LTAMULT cfc = 0.581
PENTOXSD TRG	5.1b	LTA_afc= 0.599	5.1d	LTA_cfc = 0.906

Source		Effluent Limit Calculations	
PENTOXSD TRG	5.1f	AML MULT = 1.231	
PENTOXSD TRG	5.1g	AVG MON LIMIT (mg/l) = 0.500	BAT/BPJ
		INST MAX LIMIT (mg/l) = 1.635	

Toxics Screening Analysis revealed these items of concern.

☑ ***Recommended WQBELs & Monitoring Requirements***

No. Samples/Month: 4

	Mass Limits		*Concentration Limits*						
Pollutants	AML (lbs/day)	MDL (lbs/day)	AML	MDL	IMAX	Units	Governing WQBEL	WQBEL Basis	Comments
Total Aluminum	Report	Report	Report	Report	Report	µg/L	1,977	AFC	Discharge Conc > 10% WQBEL (no RP)
Total Copper	Report	Report	Report	Report	Report	µg/L	38.2	AFC	Discharge Conc > 10% WQBEL (no RP)
Total Zinc	Report	Report	Report	Report	Report	µg/L	326	AFC	Discharge Conc > 10% WQBEL (no RP)

TMS%20PA0027693%202021%20v1.3.pd

TMS v1.3

EFFLUENT TABLE A-2: DRBC Parameters Not Included in NPDES Permit

OUTFALL 001 (Discharging to West Branch Schuylkill River)		
PARAMETER	**LIMIT**	**MONITORING**
Total Dissolved Solids*	1,000 mg/l*	Quarterly

DRBC Docket

Best Professional Judgment (BPJ) Limitations

WEST BRANCH SCHUYLKILL RIVER WATERSHED TMDL For Acid Mine Drainage Affected Segments No required reductions of permit limits are needed at this time. All necessary reductions are assigned to mining non-point sources.

FINAL UPPER SCHUYLKILL RIVER WATERSHED TMDL For Acid Mine Drainage Affected Segments All impairments resulted from acid drainage from abandoned coalmines. The TMDL addresses the three primary metals associated with acid mine drainage (iron, manganese, aluminum) and pH. The twelve (12) major discharges in the watershed are all caused by abandoned mines and are treated as non-point sources.

Anti-Backsliding

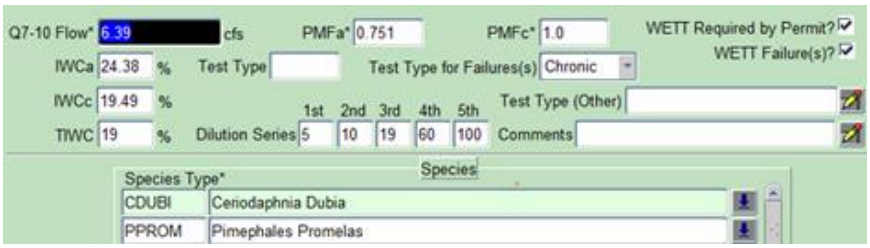
The previous existing Permit limits will be retained. M&R for Copper & Zinc will be added as recommended by TMS v1.3.

Whole Effluent Toxicity (WET)

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

Type of WET Test	Date of Test Completion	Pass/Fail	Analysis T-Test/ LC50 NOEC	Re-test (Pass/Fail and Date)

Utilizing :



☐ For the permit renewal application (4 tests).
☐ Quarterly throughout the permit term.
☐ Quarterly throughout the permit term and a TIE/TRE was conducted.
☒ Other: See Permit Part C Yearly requirements

The dilution series used for the tests was: 100%, 60%,19%,10%, and 5%. The Target Instream Waste Concentration (TIWC) to be used for analysis of the results is: 19.

Miner%202019%20Wet.pdf	Miner%202020%20Wet.pdf
2019 Results-Pass	2020 Results-Pass

Anti-Backsliding

The existing Dilution Series and 5.26 Survival (TUc) limits will be retained.

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 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), SOPs and/or BPJ.

Outfall 001 Sewage Effluent:

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (2) Measurement Frequency	Required Sample Type
	Average Monthly	Weekly Average	Minimum	Average Monthly	Daily Maximum	Instant. Maximum		
Flow (MGD)	Report	Report Daily Max	XXX	XXX	XXX	XXX	Continuous	Recorded
pH (S.U.)	XXX	XXX	6.0	XXX	9.0 Max	XXX	1/day	Grab
TRC	XXX	XXX	XXX	0.5	XXX	1.6	1/day	Grab
CBOD5	208	334	XXX	25.0	40.0 Wkly Avg	50.0	1/week	24-Hr Composite
BOD5 Raw Sewage Influent	Report	Report Daily Max	XXX	Report	XXX	XXX	1/week	24-Hr Composite
TSS Raw Sewage Influent	Report	Report Daily Max	XXX	Report	XXX	XXX	1/week	24-Hr Composite
TSS	250	375	XXX	30.0	45.0 Wkly Avg	60.0	1/week	24-Hr Composite
Fecal Coliform (CFU/100 ml) Oct 1 - Apr 30	XXX	XXX	XXX	2,000 Geo Mean	XXX	10,000	1/week	Grab
Fecal Coliform (CFU/100 ml) May 1 - Sep 30	XXX	XXX	XXX	200 Geo Mean	XXX	1,000	1/week	Grab
Ammonia Nov 1 - Apr 30	Report	XXX	XXX	Report	XXX	XXX	1/week	24-Hr Composite
Ammonia May 1 - Oct 31	100	XXX	XXX	12.0	XXX	24.0	1/week	24-Hr Composite
TKN	Report Avg Qrtly	XXX	XXX	Report Avg Qrtly	XXX	XXX	1/quarter	24-Hr Composite
Total Phosphorus	Report Avg Qrtly	XXX	XXX	Report Avg Qrtly	XXX	XXX	1/quarter	24-Hr Composite
Total Aluminum	Report Avg Qrtly	XXX	XXX	Report Avg Qrtly	XXX	XXX	1/quarter	24-Hr Composite
Total Iron	Report Avg Qrtly	XXX	XXX	Report Avg Qrtly	XXX	XXX	1/quarter	24-Hr Composite

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (2) Measurement Frequency	Required Sample Type
	Average Monthly	Weekly Average	Minimum	Average Monthly	Daily Maximum	Instant. Maximum		
Total Manganese	Report Avg Qrtly	XXX	XXX	Report Avg Qrtly	XXX	XXX	1/quarter	24-Hr Composite
Total Copper	Report Avg Qrtly	XXX	XXX	Report Avg Qrtly	XXX	XXX	1/quarter	24-Hr Composite
Zinc	Report Avg Qrtly	XXX	XXX	Report Avg Qrtly	XXX	XXX	1/quarter	24-Hr Composite
Total Dissolved Solids	Report Avg Qrtly	XXX	XXX	1,000	XXX	XXX	1/quarter	24-Hr Composite
Nitrate-Nitrite	Report Avg Qrtly	XXX	XXX	Report Avg Qrtly	XXX	XXX	1/quarter	24-Hr Composite
Total Nitrogen	Report Avg Qrtly	XXX	XXX	Report Avg Qrtly	XXX	XXX	1/quarter	Calculation
E. Coli (No./100 ml)	XXX	XXX	XXX	Report	XXX	XXX	1/Month	24-Hr Composite
Chronic WET - Ceriodaphnia Survival (TUc)	XXX	XXX	XXX	XXX	5.26	XXX	See Permit	24-Hr Composite
Chronic WET - Ceriodaphnia Reproduction (TUc)	XXX	XXX	XXX	XXX	5.26	XXX	See Permit	24-Hr Composite
Chronic WET - Pimephales Survival (TUc)	XXX	XXX	XXX	XXX	5.26	XXX	See Permit	24-Hr Composite
Chronic WET - Pimephales Growth (TUc)	XXX	XXX	XXX	XXX	5.26	XXX	See Permit	24-Hr Composite

Outfall 002 Stormwater:

PAG 03 General Stormwater Appendix J Standards

Parameter	Monitoring Requirements		Benchmark Values
	Minimum Measurement Frequency	Sample Type	
Total Suspended Solids (TSS) (mg/L)	1 / 6 months	Grab	100
Oil and Grease (mg/L)	1 / 6 months	Grab	30

Compliance History

DMR Data for Outfall 001 (from February 1, 2020 to January 31, 2021)

Parameter	JAN-21	DEC-20	NOV-20	OCT-20	SEP-20	AUG-20	JUL-20	JUN-20	MAY-20	APR-20	MAR-20	FEB-20
Flow (MGD) Average Monthly	0.484	0.587	0.42	0.355	0.366	0.412	0.36	0.588	0.585	0.602	0.504	0.466
Flow (MGD) Daily Maximum	0.941	2.376	0.687	1.298	0.751	0.911	0.663	1.301	1.343	1.186	0.935	0.818
pH (S.U.) Minimum	6.0	6.0	6.1	6.0	6.0	6.3	6.1	6.1	6.0	6.1	6.4	6.7
pH (S.U.) Maximum	7.1	7.0	6.8	6.6	7.0	7.2	7.0	7.1	6.8	7.7	7.6	7.8
TRC (mg/L) Average Monthly	0.44	0.42	0.49	0.49	0.44	0.49	0.47	0.49	0.49	0.50	0.43	0.46
TRC (mg/L) Instantaneous Maximum	0.72	0.72	0.78	0.73	0.83	0.75	0.99	0.98	0.9	0.97	0.8	0.82
CBOD5 (lbs/day) Average Monthly	< 8	< 9	< 6	< 5	< 8	< 7	< 7	< 11	< 11	< 18	2	< 14
CBOD5 (lbs/day) Weekly Average	< 9	< 11	< 7	< 6	16	13	12	< 15	< 15	39	12	25
CBOD5 (mg/L) Average Monthly	< 2	< 2	< 2	< 2	< 2	< 3	< 2	< 2	< 2	< 4	< 3	< 3
CBOD5 (mg/L) Weekly Average	< 2	< 2	< 2	< 2	4	5	3	3	2	10	3	4
BOD5 (lbs/day) Raw Sewage Influent Average Monthly	459	690	511	446	511	564	455	556	692	790	616	632
BOD5 (lbs/day) Raw Sewage Influent Daily Maximum	495	861	594	557	717	1075	633	805	1130	999	854	962
BOD5 (mg/L) Raw Sewage Influent Average Monthly	124	169	162	171.4	171	210	157	121.1	124	175.9	193	137
TSS (lbs/day) Average Monthly	< 15	< 10	< 13	< 8	7	3	12	29	< 8	16	< 8	25
TSS (lbs/day) Raw Sewage Influent Average Monthly	292	357	1272	264	290	194	251	316	295	287	484	380
TSS (lbs/day) Raw Sewage Influent Daily Maximum	332	432	3670	348	657	293	373	417	639	381	844	573
TSS (lbs/day) Weekly Average	19	< 14	24	18	12	5	22	52	17	53	12	68
TSS (mg/L) Average Monthly	< 4	< 2	< 4	< 3	2	1	4	6	< 2	4	< 3	5
TSS (mg/L) Raw Sewage Influent Average Monthly	75	84	420	100	98	73	89	67	50	64	151	83
TSS (mg/L) Weekly Average	5	4	7	6	4	2	7	10	3	13	3	10
Total Dissolved Solids (lbs/day) Average Quarterly		338			977			2090			1118	
Total Dissolved Solids (mg/L) Average Quarterly		83			328			351			350	
Fecal Coliform (CFU/100 ml) Geometric Mean	10	1	2	2	2	1	1	17	2	28	2	11
Fecal Coliform (CFU/100 ml) Instantaneous Maximum	100	1	10	30	10	1	1	4000	10	8000	30	40

Nitrate-Nitrite (lbs/day) Average Quarterly		11			32			65			28	
Nitrate-Nitrite (mg/L) Average Quarterly		2.61			10.8			10.9			8.7	
Total Nitrogen (lbs/day) Average Quarterly		11			35			113			33	
Total Nitrogen (mg/L) Average Quarterly		2.61			11.59			18.94			10.33	
Ammonia (lbs/day) Average Monthly	< 0.4	< 0.5	< 0.5	< 0.3	< 0.5	< 1	< 3	< 3	< 0.5	< 0.5	< 0.3	< 1
Ammonia (mg/L) Average Monthly	< 0.1	< 0.1	< 1	< 0.1	< 0.1	< 1	< 1	< 1	< 0.1	< 0.1	< 0.1	< 0.1
TKN (lbs/day) Average Quarterly		< 2			2			48			5	
TKN (mg/L) Average Quarterly		< 0.5			0.79			8.04			1.63	
Total Phosphorus (lbs/day) Average Quarterly		1			5			12			5	
Total Phosphorus (mg/L) Average Quarterly		0.29			1.54			2			1.53	
Total Aluminum (lbs/day) Average Quarterly		0.1			< 0.06			0.5			0.2	
Total Aluminum (mg/L) Average Quarterly		0.03			< 0.02			0.08			0.06	
Total Iron (lbs/day) Average Quarterly		0.2			0.2			0.5			0.2	
Total Iron (mg/L) Average Quarterly		0.05			0.06			0.08			0.07	
Total Manganese (lbs/day) Average Quarterly		0.2			0.2			0.6			0.3	
Total Manganese (mg/L) Average Quarterly		0.037			0.078			0.104			0.108	
Chronic WET - Ceriodaphnia Survival (TUc) Daily Maximum		GG			5.26			GG			GG	
Chronic WET - Ceriodaphnia Reproduction (TUc) Daily Maximum		GG			5.26			GG			GG	
Chronic WET - Pimephales Survival (TUc) Daily Maximum		GG			5.26			GG			GG	
Chronic WET - Pimephales Growth (TUc) Daily Maximum		GG			5.26			GG			GG	

DMR Data for Outfall 002 (from February 1, 2020 to January 31, 2021)

Parameter	JAN-21	DEC-20	NOV-20	OCT-20	SEP-20	AUG-20	JUL-20	JUN-20	MAY-20	APR-20	MAR-20	FEB-20
TSS (mg/L) Daily Maximum		3										
TKN (mg/L) Daily Maximum		< 0.50										
Total Iron (mg/L) Daily Maximum		< 0.02										