pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Southcentral Regional Office
CLEAN WATER PROGRAM

Application Type	**Renewal**	Application No.	**PA0261432**
Facility Type	**Industrial**	APS ID	**712206**
Major / Minor	**Minor**	Authorization ID	**1064329**

NPDES PERMIT FACT SHEET INDIVIDUAL INDUSTRIAL WASTE (IW) AND IW STORMWATER

Applicant and Facility Information

Applicant Name	**Newport Borough Water Authority Perry County**	Facility Name	**Newport Borough Filtration Plant**
Applicant Address	497 N Front Street	Facility Address	497 N Front Street
	Newport, PA 17074-1533		Newport, PA 17074-1609
Applicant Contact	Trevor Kaufman	Facility Contact	Dean Miller
Applicant Phone	(717) 567-6373	Facility Phone	(717) 567-6373
Client ID	51684	Site ID	730290
SIC Code	4941	Municipality	Newport Borough
SIC Description	Trans. & Utilities - Water Supply	County	Perry
Date Application Received	March 4, 2015	EPA Waived?	Yes
Date Application Accepted	August 1, 2017	If No, Reason	

Purpose of Application: This is an application for NPDES renewal.

Summary of Review

Approve	Deny	Signatures	Date
X		Nicholas Hong, P.E. / Environmental Engineer Nick Hong (via electronic signature)	June 9, 2021
x		Daniel W. Martin, P.E. / Environmental Engineer Manager *Maria D. Bebenek for Daniel W. Martin*	June 15, 2021
x		Maria D. Bebenek, P.E. / Environmental Program Manager *Maria D. Bebenek*	June 15, 2021

Summary of Review

The application submitted by the applicant requests a NPDES renewal permit for the Newport Borough Water Filtration Plant located at 497 North Front Street, Newport, PA 17074 in Perry County, municipality of Newport Borough. The existing permit became effective on August 1, 2010 and expired on July 31, 2015. The application for renewal was received by DEP Southcentral Regional Office (SCRO) on March 4, 2015. Due to the length of time between the initial submittal and processing of the NPDES renewal, DEP requested that the application be re-submitted. The resubmission of the application occurred on January 2021.

The purpose of this Fact Sheet is to present the basis of information used for establishing the proposed NPDES permit effluent limitations. The Fact Sheet includes a description of the facility, a description of the facility's receiving waters, a description of the facility's receiving waters attainment/non-attainment assessment status, and a description of any changes to the proposed monitoring/sampling frequency. Section 6 provides the justification for the proposed NPDES effluent limits derived from technology based effluent limits (TBEL), water quality based effluent limits (WQBEL), total maximum daily loading (TMDL), antidegradation, anti-backsliding, and/or whole effluent toxicity (WET). A brief summary of the outlined descriptions has been included in the Summary of Review section.

The subject facility is a 0.5 MGD hydraulic design treatment facility. The facility is a 0.0311 MGD average design flow facility. The applicant anticipates the following proposed upgrades to the treatment facility in the next five years: (a) Upgrade to the metering technology at the facility; (2) Intake flows at the River Filtration Plant will transition from the current batched approach to continuous flow. The NPDES application has been processed as an Industrial Wastewater due to the type of wastewater and the design flow rate for the facility. The applicant disclosed the Act 14 requirement to Perry County Planning Commission, Newport Borough, Oliver Township, and Howe Township and the notice was received by the parties on November 2020. A planning approval letter was not necessary as the facility is neither new or expanding.

Utilizing the DEP's web-based Emap-PA information system, the receiving waters has been determined to be the Juniata River. The sequence of receiving streams that the Juniata River discharges into is the Susquehanna River which eventually drains into the Chesapeake Bay. The subject site is not subject to the Chesapeake Bay implementation requirements. The receiving water has protected water usage for warm water fishes (WWF) and migratory fishes (MF). No Class A Wild Trout fisheries are impacted by this discharge. The absence of high quality and/or exceptional value surface waters removes the need for an additional evaluation of anti-degradation requirements.

The Juniata River is a Category 5 stream listed in the 2020 Integrated List of All Waters (formerly 303d Listed Streams). This stream is an impaired stream for aquatic life. The receiving waters is not subject to a total maximum daily load (TMDL) plan to improve water quality in the subject facility's watershed.

The existing permit and proposed permit differ as follows:

- **There are no changes to the monitoring frequency or effluent performance limits.**

Sludge use and disposal description and location(s): The facility contracts with a licensed hauler to remove biosolids from the facility. In 2020 a total of 72,000 gallons of biosolids were pumped from the plant.

The proposed permit will expire five (5) years from the effective date.

Based on the review in this report, it is recommended that the permit be drafted. 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.

Any additional information or public review of documents associated with the discharge or facility may be available at PA DEP Southcentral Regional Office (SCRO), 909 Elmerton Avenue, Harrisburg, PA 17110. To make an appointment for file review, contact the SCRO File Review Coordinator at 717.705.4700.

1.0 Applicant

1.1 General Information

This fact sheet summarizes PA Department of Environmental Protection's review for the NPDES renewal for the following subject facility.

Facility Name:	Newport Borough Water Filtration Plant
NPDES Permit #	PA0261432
Physical Address:	497 North Front Street Newport, PA 17074
Mailing Address:	497 North Front Street Newport, PA 17074
Contact:	Trevor Kaufman Chairperson
Consultant:	Robert Hasemeier, PE Barton and Louguidice 3901 Hartzdale Drive Camp Hill, PA 17011 rhasemeier@bartonandloguidice.com Dean Miller Operator Miller Environmental, Inc. 320 South 17th Street Reading, PA 19602 dmiller@miller-env.com

1.2 Permit History

Description of Facility

A Consent Order and Agreement was signed to address drinking water treatment, monitoring, and reporting violations that occurred in 2013 and 2014.

The facility was shut down in June 2014. The facility was operational for approximately 1,083 hours in 2020. Operations are typically limited to between six to ten hours per day Monday through Friday, except holidays, with occasional operations occurring outside of these times. The plant cannot operate during times of high turbidity in the Juniata River as the membrane filters clog requiring additional maintenance and greatly reduced production of treated water.

The NPDES renewal processing was significantly delayed due to open violations in the Safe Drinking Water Program.

Permit submittal included the following information.

- NPDES Application
- Flow Diagrams
- Influent Sample Data
- Effluent Sample Data

2.0 Treatment Facility Summary

2.1.1 Site location

The physical address for the facility is 497 North Front Street, Newport, PA 17074. A topographical and an aerial photograph of the facility are depicted as Figure 1 and Figure 2.

Figure 1: Topographical map of the subject facility

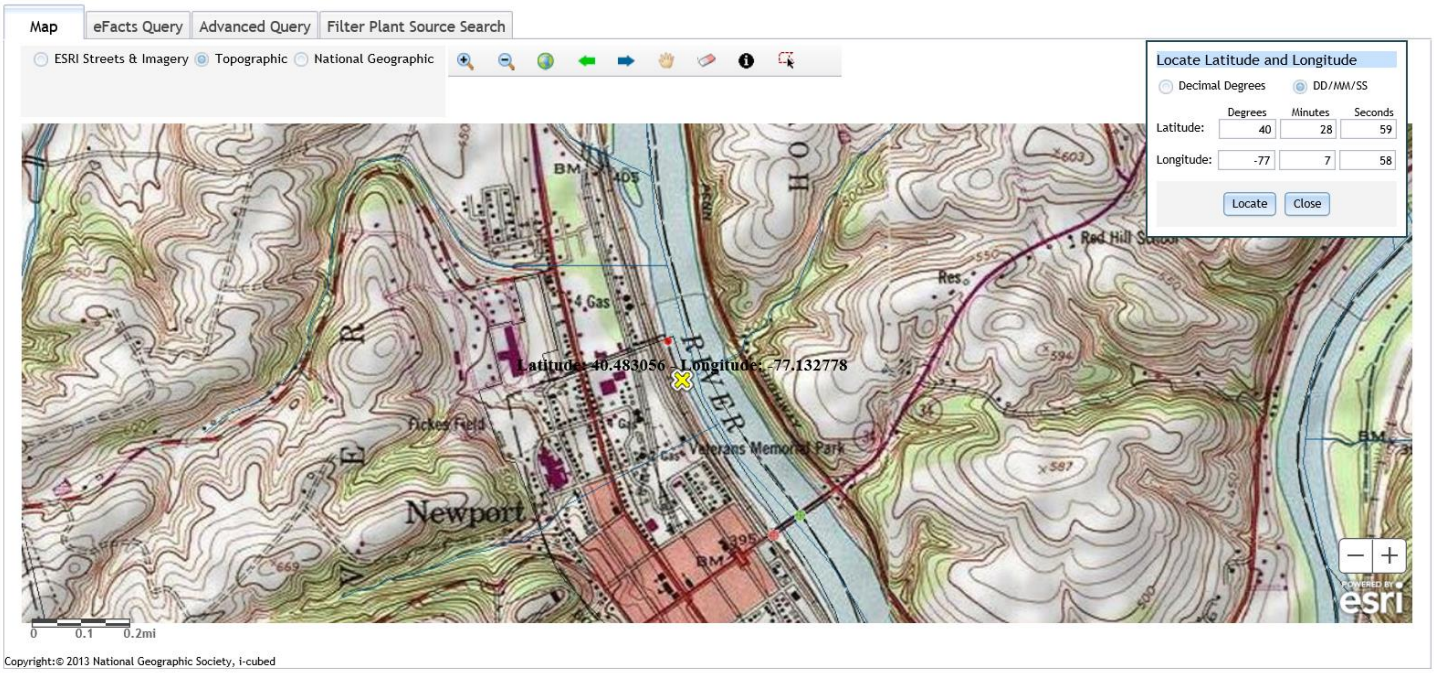
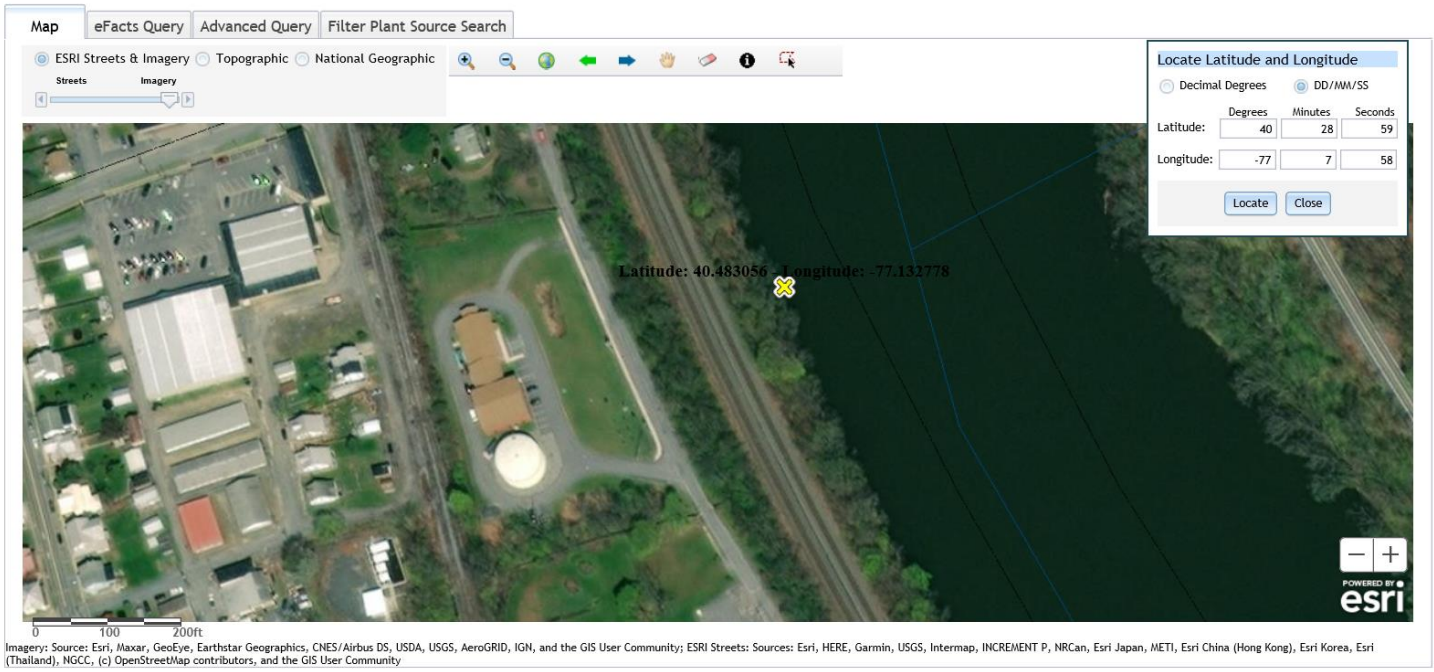


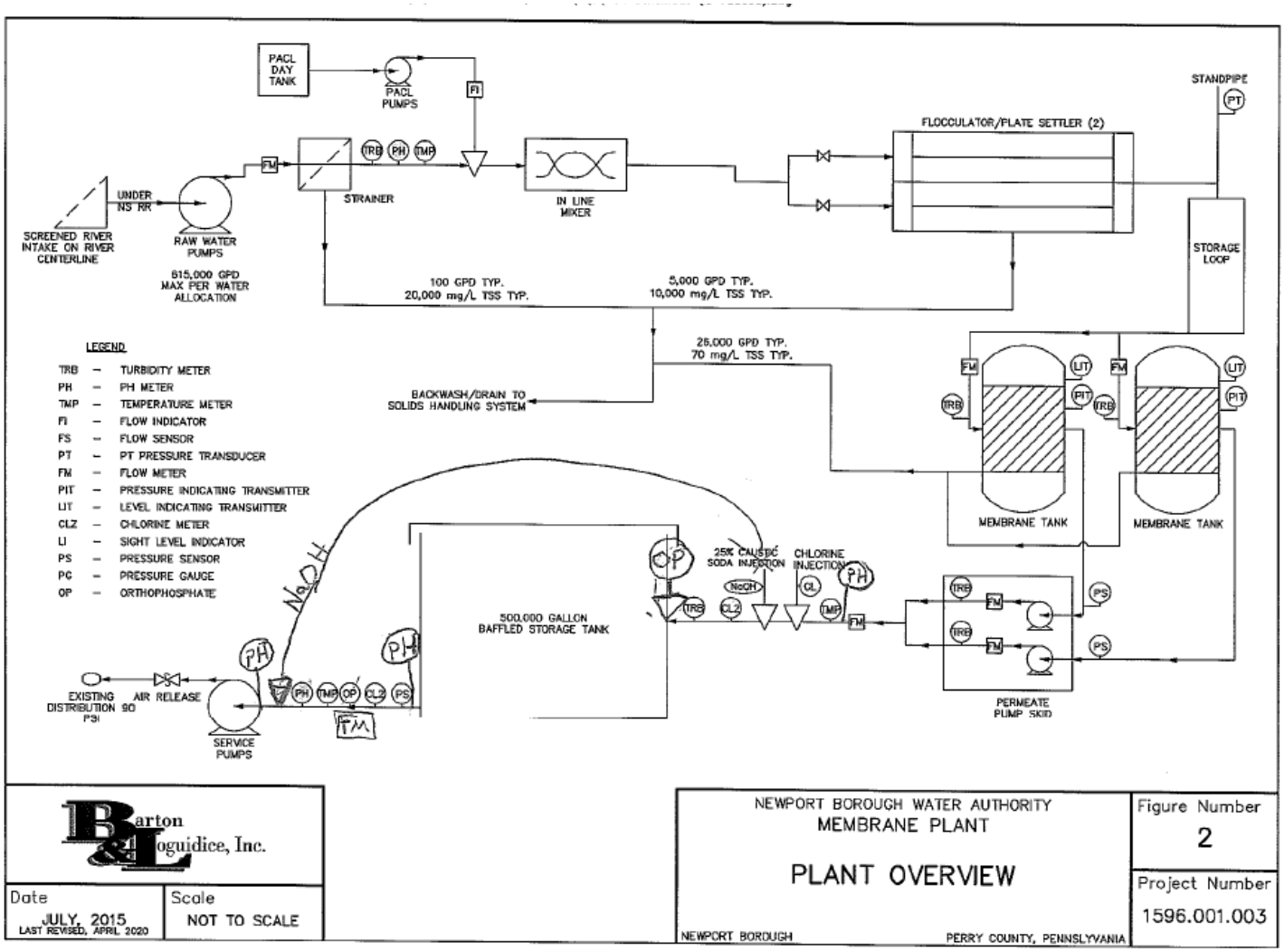
Figure 2: Aerial Photograph of the subject facility



2.2 Description of Wastewater Treatment Process

The subject facility is a 0.5 MGD hydraulic design flow facility. The facility is a 0.0311 MGD average design flow facility. The average/maximum effluent flow is limited by the permitted withdrawal limit and not anticipated to exceed a maximum flow of 0.115 MGD. This was indicated as such in the NPDES application in the Discharge Characterization for design flow volume. The subject facility treats drinking water using an initial water screening, a settling process, a membrane filtration, and disinfection prior to discharge to the distribution system. Wastewater is discharged from the solids handling system through Outfall 001. The facility is being evaluated for flow, pH, TSS, Total Aluminum, Total Manganese, and Total Iron. The existing permits limits for the facility is summarized in Section 2.4.

A schematic of the flow process is shown in the figure.



2.3 Facility Outfall Information

The facility has the following outfall information for wastewater.

Outfall No.	001	**Design Flow (MGD)**	.5
Latitude	40º 28' 59.00"	**Longitude**	-77º 7' 58.00"
Wastewater Description:	IW Process Effluent without ELG		

2.3.1 Operational Considerations- Chemical Additives

Chemical additives are chemical products introduced into a waste stream that is used for cleaning, disinfecting, or maintenance and which may be detected in effluent discharged to waters of the Commonwealth. Chemicals excluded are those used for neutralization of waste streams, the production of goods, and treatment of wastewater.

The subject facility utilizes the following chemicals as part of their drinking water treatment process.

- Aluminum Chlorhydrate (PACL2000) for coagulation
- Citric Acid for cleaning
- Sodium Hypochlorite for cleaning
- Sodium Hydroxide for neutralizing
- Sodium Bisulphite for neutralizing
- Chlorine (gaseous) for disinfection
- Superfloc N-1986 for dewatering

2.4 Existing NPDES Permits Limits

The existing NPDES permit limits are summarized in the table.

3800-PM-WSWM0011 Rev. 3/2009
Permit

Permit No. PA 0261432

PART A - EFFLUENT LIMITATIONS, MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS

I. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

A. For Outfall 001, Latitude 40°28'59", Longitude 77°07'58", River Mile Index 12.65, Stream Code 11414, Discharging to Juniata River

which receives wastewater from the water treatment plant.

1. The permittee is authorized to discharge during the period from August 1, 2010 through July 31, 2015.

2. Based on the production data and anticipated wastewater characteristics and flows described in the permit application and its supporting documents and/or amendments, the following effluent limitations and monitoring requirements apply (see also Additional Requirements, Footnotes, and Supplemental Information).

Discharge Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (2) Measurement Frequency	Required Sample Type
	Monthly Average	Daily Maximum	Minimum	Monthly Average	Daily Maximum	Instantaneous Maximum		
Flow (MGD)	Report	Report	XXX	XXX	XXX	XXX	Continuous	Measured
pH (S.U.)	XXX	XXX	6.0	XXX	XXX	9.0	1/day	Grab
Total Suspended Solids	7.8	15.5	XXX	30	60	75	2/month	8-hr comp
Total Aluminum	1.04	2.07	XXX	4	8	10	2/month	8-hr comp
Total Manganese	0.26	0.52	XXX	1	2	2.5	2/month	8-hr comp
Total Iron	0.52	1.04	XXX	2	4	5	2/month	8-hr comp

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s):

° at discharge from facility.

3.0 Facility NPDES Compliance History

3.1 Summary of Inspections

A summary of the most recent inspections during the existing permit review cycle is as follows.

The DEP inspector noted the following during the inspection.

03/24/2016:

- The facility was cited for failure to monitor effluent in compliance with the NPDES permit.

- DMRs were submitted for December 2015 to January 2016 indicating that sampling was not done according to the NPDES permit.
- The facility was advised to check and log the sludge depth in the settling tanks using a sludge judge at least weekly. A standard operating procedure should be developed.
- The composite sampler was not connected to the flow meter signal to facilitate flow pacing of the composite sample. The facility was advised to connect the composite sampler to the flow meter signal output and program the composite sampler to collect flow paced composite samples.
- DMRs showed no discharge from August 2014 (when Newport began using eDMR) through November 2015.
- The December 2015 DMR reported discharge on 11 days beginning December 2, 2015.
- In January 2016, there was only 3 days of flow (1/28/16 to 1/30/16).
- In February 2016, there was 21 days of discharge. The DMR did not include the results of the composite samples.

02/16/2017:

- The facility was cited for failure to properly operate and maintain the wastewater treatment system.
- The facility was in the process of placing the plant into production. Disinfection in the 600,000 gal storage tank was being filled with chlorinated water. The chlorine concentration in the water in the storage tank used for disinfection was too high to send to the distribution system. Operators were draining it to the wastewater system. The facility intended on draining the storage and dechlorinate before discharging through the outfall to the Juniata River.
- The pump station includes an emergency gravity overflow to the Newport Borough wastewater collection system
- During the inspection, the first stage settling tank was surcharged. The water level in the tank was within 2' of the top of the access hatch. Wastewater was observed leaking from the access hatch risers onto the ground through small holes and electrical conduit penetrations.
- The facility stated that they did not know the last time the sludge was removed from the tanks to the phase separator.
- The effluent pump station appeared to be in high water level condition. Effluent was observed flowing from the effluent pump station into the gravity overflow to the Newport Borough Municipal Authority wastewater collection system.

2/28/2017:

- This inspection was a follow-up to the inspection on 02/16/2017.
- The facility stated that chlorine levels in the storage tank have decreased sufficiently to allow release of finished water from the storage tank to the distribution system. This decreased the amount of water released to the wastewater system.
- The facility ran the sludge pumps and measured sludge levels in both settling tanks on a daily basis.
- The facility was advised to (a) troubleshoot and repair the effluent pump; (b) remove solids from the settling tanks; (c) continue measuring and logging sludge levels in the settling tanks; (d) develop SOP for the wastewater system. The SOP should establish maximum solid levels in the settling tanks and pumping procedures; (e) install high level alarm floats in the settling tanks and in the effluent pump station.

03/09/2017:

- There was nothing significant to report

3.2 Summary of DMR Data

A review of approximately 1-year of DMR data shows that the monthly average flow data for the facility below the design capacity of the treatment system. The maximum average flow data for the DMR reviewed was 0.0221 MGD. The design capacity of the treatment system is 0.50 MGD.

The off-site laboratory used for the analysis of the parameters was Analytical Laboratory Services, Inc, located at 34 Dogwood Lane, Middletown, PA 17057.

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	0.0187	0.0178	0.0188	0.0197	0.0154	0.0221	0.0199	0.0149	0.00171	0.0174	0.017	0.02
Flow (MGD) Daily Maximum	0.0437	0.0405	0.0398	0.0381	0.0346	0.0442	0.0365	0.0381	0.0063	0.0415	0.0027	0.0383
pH (S.U.) Minimum	7.61	7.78	7.75	7.79	7.97	7.86	8.0	7.83	7.12	7.99	7.0	7.28
pH (S.U.) Maximum	8.17	8.31	8.29	8.65	8.38	8.49	8.67	8.46	7.43	8.47	8.42	8.84
TSS (lbs/day) Average Monthly	4.0	< 0.5	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 0.10	1.0	< 2.0	1.0
TSS (lbs/day) Daily Maximum	6.0	< 0.9	2.0	< 1.0	< 1.0	< 2.0	< 1.0	< 2.0	< 0.30	2.0	< 2.0	1.0
TSS (mg/L) Average Monthly	15	< 6.0	< 8.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5	< 5	5.0	< 6	8.0
TSS (mg/L) Daily Maximum	23	7.0	11	5.0	< 5.0	< 5.0	< 5.0	< 5	< 5	5.0	6	9.0
Total Aluminum (lbs/day) Average Monthly	2.00	0.20	0.40	0.20	0.20	0.20	0.10	0.10	< 0.001	0.20	0.30	0.30
Total Aluminum (lbs/day) Daily Maximum	3.00	0.50	0.40	0.20	0.20	0.20	0.10	0.20	< 0.003	0.20	0.30	0.30
Total Aluminum (mg/L) Average Monthly	8.1	2.6	1.6	0.88	0.8	0.72	0.61	0.5	< 0.05	0.60	0.93	1.48
Total Aluminum (mg/L) Daily Maximum	11.7	2.6	1.7	0.91	0.81	0.74	0.68	0.58	< 0.05	0.68	1.2	2.0
Total Iron (lbs/day) Average Monthly	0.02	0.005	< 0.20	< 0.009	< 0.032	< 0.009	< 0.006	< 0.007	< 0.0008	< 0.009	0.009	< 0.009
Total Iron (lbs/day) Daily Maximum	0.03	0.008	< 0.008	0.009	0.033	< 0.009	< 0.007	< 0.007	< 0.002	0.01	0.01	0.01
Total Iron (mg/L) Average Monthly	0.098	0.117	< 0.03	< 0.032	< 0.3	< 0.03	< 0.03	< 0.03	< 0.03	< 0.0031	0.034	< 0.051
Total Iron (mg/L) Daily Maximum	0.13	0.19	< 0.03	0.033	0.009	< 0.03	< 0.03	< 0.03	< 0.03	0.0031	0.036	0.071
Total Manganese (lbs/day) Average Monthly	0.004	0.0004	< 0.02	< 0.0008	< 0.0033	< 0.0009	0.001	0.002	< 0.00007	0.002	0.002	< 0.0008
Total Manganese (lbs/day) Daily Maximum	0.004	0.0007	< 0.0006	0.0008	0.004	0.001	0.001	0.003	< 0.001	0.002	0.003	0.001

Total Manganese (mg/L) Average Monthly	0.015	0.0044	< 0.0025	< 0.0027	< 0.0009	< 0.0031	0.0061	0.0072	< 0.0025	0.0052	0.0089	< 0.0048
Total Manganese (mg/L) Daily Maximum	0.018	0.0048	< 0.0025	0.0029	0.001	0.0036	0.0062	0.0088	< 0.0025	0.0065	0.0094	0.0072

3.3 Non-Compliance

3.3.1 Non-Compliance- NPDES Effluent

A summary of the non-compliance to the permit limits for the existing permit cycle is as follows.

From the DMR data beginning in August 1, 2010 and ending April 30, 2021, the following were the observed effluent non-compliances.

Summary of Non Compliance with NPDES Permit Limits
Beginning August 1, 2010 and Ending April 30, 2021

NON COMPLIANCE DATE	PARAMETER	SAMPLE VALUE	VIOLATION CONDITION	PERMIT VALUE	UNIT OF MEASURE	STATISTICAL BASE CODE
05/01/2016	Aluminum, Total	5.9	>	4.0	mg/L	Average Monthly
05/01/2016	Aluminum, Total	1.67	>	1.04	lbs/day	Average Monthly
08/22/2017	Aluminum, Total	4.1	>	4.0	mg/L	Average Monthly
02/26/2018	Aluminum, Total	5.7	>	4.0	mg/L	Average Monthly
02/26/2018	Aluminum, Total	9.9	>	8.0	mg/L	Daily Maximum
02/26/2018	Aluminum, Total	2.00	>	1.04	lbs/day	Average Monthly
02/26/2018	Aluminum, Total	3.00	>	2.07	lbs/day	Daily Maximum
01/24/2019	Aluminum, Total	4.37	>	4.0	mg/L	Average Monthly
01/24/2019	Aluminum, Total	3.00	>	2.07	lbs/day	Daily Maximum
02/27/2019	Aluminum, Total	6.4	>	4.0	mg/L	Average Monthly
02/27/2019	Aluminum, Total	2.00	>	1.04	lbs/day	Average Monthly
02/27/2019	Total Suspended Solids	8.0	>	7.8	lbs/day	Average Monthly
03/19/2019	Aluminum, Total	6.94	>	4.0	mg/L	Average Monthly
03/19/2019	Total Suspended Solids	39	>	30	mg/L	Average Monthly
03/19/2019	Aluminum, Total	12.9	>	8.0	mg/L	Daily Maximum
03/19/2019	Total Suspended Solids	72	>	60	mg/L	Daily Maximum
04/26/2019	Aluminum, Total	18.1	>	4.0	mg/L	Average Monthly
04/26/2019	Total Suspended Solids	50	>	30	mg/L	Average Monthly
04/26/2019	Aluminum, Total	18.1	>	8.0	mg/L	Daily Maximum
04/26/2019	Total Suspended Solids	87	>	60	mg/L	Daily Maximum
04/26/2019	Aluminum, Total	2.00	>	1.04	lbs/day	Average Monthly
04/25/2021	Aluminum, Total	8.1	>	4.0	mg/L	Average Monthly
04/25/2021	Aluminum, Total	11.7	>	8.0	mg/L	Daily Maximum
04/25/2021	Aluminum, Total	2.00	>	1.04	lbs/day	Average Monthly
04/25/2021	Aluminum, Total	3.00	>	2.07	lbs/day	Daily Maximum

3.3.2 Non-Compliance- Enforcement Actions

A summary of the non-compliance enforcement actions for the current permit cycle is as follows:

Beginning in August 1, 2010 to April 30, 2021, the following were the observed enforcement actions.

Summary of Enforcement Actions
Beginnning August 1, 2010 and ending April 30, 2021

ENF ID	ENF TYPE DESC	ENF CREATION DATE	EXECUTED DATE	VIOLATIONS	ENF FINALSTATUS	ENF CLOSED DATE
375316	Notice of Violation	05/24/2019	05/23/2019	92A.44	Comply/Closed	06/07/2019
320409	Notice of Violation	02/19/2015	02/04/2015	92A.75(A)	Comply/Closed	03/04/2015
351417	Notice of Violation	03/03/2017	03/03/2017	92A.41(A)5	Comply/Closed	03/09/2017
346500	Notice of Violation	09/01/2016	09/01/2016	92A.62	Comply/Closed	09/22/2016

3.4 Summary of Biosolids Disposal

A summary of the biosolids disposed of from the facility is as follows.

The facility contracts with a licensed hauler to remove biosolids from the facility. In 2020 a total of 72,000 gallons of biosolids were pumped from the plant.

3.5 Open Violations

No open violations existed as of June 2021.

4.0 Receiving Waters and Water Supply Information Detail Summary

4.1 Receiving Waters

The receiving waters has been determined to be the Juniata River. The sequence of receiving streams that the Juniata River discharges into is the Susquehanna River which eventually drains into the Chesapeake Bay.

4.2 Public Water Supply (PWS) Intake

The closest PWS to the subject facility is Suez Water (PWS ID #7220015) located approximately 22 miles downstream of the subject facility on the Susquehanna River. Based upon the distance and the flow rate of the facility, the PWS should not be impacted.

4.3 Class A Wild Trout Streams

Class A Wild Trout Streams are waters that support a population of naturally produced trout of sufficient size and abundance to support long-term and rewarding sport fishery. DEP classifies these waters as high-quality coldwater fisheries.

The information obtained from EMAP suggests that no Class A Wild Trout Fishery will be impacted by this discharge.

4.4 2020 Integrated List of All Waters (303d Listed Streams):

Section 303(d) of the Clean Water Act requires States to list all impaired surface waters not supporting uses even after appropriate and required water pollution control technologies have been applied. The 303(d) list includes the reason for impairment which may be one or more point sources (i.e. industrial or sewage discharges) or non-point sources (i.e. abandoned mine lands or agricultural runoff and the pollutant causing the impairment such as metals, pH, mercury or siltation).

States or the U.S. Environmental Protection Agency (EPA) must determine the conditions that would return the water to a condition that meets water quality standards. As a follow-up to listing, the state or EPA must develop a Total Maximum Daily Load (TMDL) for each waterbody on the list. A TMDL identifies allowable pollutant loads to a waterbody from both point and non-point sources that will prevent a violation of water quality standards. A TMDL also includes a margin of safety to ensure protection of the water.

The water quality status of Pennsylvania's waters uses a five-part categorization (lists) of waters per their attainment use status. The categories represent varying levels of attainment, ranging from Category 1, where all designated water uses are met to Category 5 where impairment by pollutants requires a TMDL for water quality protection.

The receiving waters is listed in the 2020 Pennsylvania Integrated Water Quality Monitoring and Assessment Report as a Category 5 waterbody. The surface waters is impaired due to pH from a unknown source. The designated use has been classified as protected waters for warm water fishes (WWF) and migratory fishes (MF).

4.5 Low Flow Stream Conditions

Water quality modeling estimates are based upon conservative data inputs. The data are typically estimated using either a stream gauge or through USGS web based StreamStats program. The NPDES effluent limits are based upon the combined flows from both the stream and the facility discharge.

A conservative approach to estimate the impact of the facility discharge using values which minimize the total combined volume of the stream and the facility discharge. The volumetric flow rate for the stream is based upon the seven-day, 10-year low flow (Q710) which is the lowest estimated flow rate of the stream during a 7 consecutive day period that occurs once in 10 -year time period. The facility discharge is based upon a known design capacity of the subject facility.

The closest WQN station to the subject facility is the Juniata River station at Newport, PA (WQN214). This WQN station is located approximately 0.3 miles downstream of the subject facility.

The closest gauge station to the subject facility is the Juniata River station at Newport, PA (USGS station number 1567000). This gauge station is located approximately 0.3 miles downstream of the subject facility.

For WQM modeling, pH and stream water temperature data from the water quality network station was used. pH was estimated to be 8.4 and the stream water temperature was estimated to be 23.97 C.

The hardness of the stream was estimated by collecting a sample upstream of the facility. The sampling result was 86 mg/l $CaCO_3$. The data was produced from the Lead and Copper Control Desktop Study Report dated for December 2019.

The low flow yield and the Q710 for the subject facility was estimated as shown below.

Gauge Station Data			
USGS Station Number	01567000		
Station Name	Juniata River at Newport, PA		
Q710	367	ft^3/sec	
Drainage Area (DA)	3354	mi^2	
Calculations			
The low flow yield of the gauge station is:			
Low Flow Yield (LFY) = Q710 / DA			
LFY =	(367 ft^3/sec / 3354 mi^2)		
LFY =	0.1094	$ft^3/sec/mi^2$	
The low flow at the subject site is based upon the DA of		3350	mi^2
Q710 = (LFY@gauge station)(DA@Subject Site)			
Q710 = (0.1094 $ft^3/sec/mi^2$)(3350 mi^2)			
Q710 =	366.562	ft^3/sec	

4.6 Summary of Discharge, Receiving Waters and Water Supply Information

Outfall No.	001	Design Flow (MGD)	.5
Latitude	40º 29' 0.28"	Longitude	-77º 7' 55.38"
Quad Name		Quad Code	
Wastewater Description:	IW Process Effluent without ELG		

Receiving Waters	Juniata River (WWF)	Stream Code	11492
NHD Com ID	133431242	RMI	12.5
Drainage Area	3350	Yield (cfs/mi^2)	0.1094
Q_{7-10} Flow (cfs)	366.56	Q_{7-10} Basis	StreamStats/Streamgauge
Elevation (ft)	369	Slope (ft/ft)	
Watershed No.	12-B	Chapter 93 Class.	WWF, MF
Existing Use	Same as Chapter 93 class	Existing Use Qualifier	
Exceptions to Use		Exceptions to Criteria	
Assessment Status	Impaired for aquatic life		
Cause(s) of Impairment	Unknown source		
Source(s) of Impairment	pH		
TMDL Status	Not appl.	Name	

Background/Ambient Data		Data Source
pH (SU)	8.4	WQN214; median July to Sept
Temperature (°C)	23.97	WQN214; median July to Sept
Hardness (mg/L)	86	Lead/Copper Control Desk Study report dated 12/2019
Other:		

Nearest Downstream Public Water Supply Intake		Suez Water	
PWS Waters	Susquehanna River	Flow at Intake (cfs)	
PWS RMI	75	Distance from Outfall (mi)	22

5.0: Overview of Presiding Water Quality Standards

5.1 General

There are at least six (6) different policies which determines the effluent performance limits for the NPDES permit. The policies are technology based effluent limits (TBEL), water quality based effluent limits (WQBEL), antidegradation, total maximum daily loading (TMDL), anti-backsliding, and whole effluent toxicity (WET) The effluent performance limitations enforced are the selected permit limits that is most protective to the designated use of the receiving waters. An overview of each of the policies that are applicable to the subject facility has been presented in Section 6.

5.2.1 Technology-Based Limitations

TBEL treatment requirements under section 301(b) of the Act represent the minimum level of control that must be imposed in a permit issued under section 402 of the Act (40 CFR 125.3).

The presiding sources for the basis for the effluent limitations are governed by either federal or state regulation. Permit limits for water treatment plant wastes are subject to handling and disposal of water treatment plant (WTP) using Best Practicable Control Technology (BPCT) currently available. Waste water from treatment of WTP sludges and filter backwash shall have the following permit limits.

Parameter	Monthly Average	Daily Max
	mg/l	mg/l
Suspended Solids	30	60
Iron (total)	2	4
Aluminum (total)	4	8
Manganese (total)	1	2
pH	6 - 9	-----
TRC	0.5	1
Notes:		
Source: TECHNOLOGY-BASED CONTROL REQUIREMENTS FOR WATER TREATMENT PLANT WASTES		

5.3 Water Quality-Based Limitations

WQBEL are based on the need to attain or maintain the water quality criteria and to assure protection of designated and existing uses (PA Code 25, Chapter 92a.2). The subject facility that is typically enforced is the more stringent limit of either the TBEL or the WQBEL.

Determination of WQBEL is calculated by spreadsheet analysis or by a computer modeling program developed by DEP. DEP permit engineers utilize the following computing programs for WQBEL permit limitations: (1) MS Excel worksheet for Total Residual Chorine (TRC); (2) WQM 7.0 for Windows Wasteload Allocation Program for Dissolved Oxygen and Ammonia Nitrogen Version 1.1 (WQM Model) and (3) Toxics Management Spreadsheet for Toxics pollutants.

5.3.1 Water Quality Modeling 7.0

The facility is not subject to WQM.

5.3.2 Toxics Modeling

The Toxics Management Spreadsheet model is a computer model that is used to determine effluent limitations for toxics (and other substances) for single discharge wasteload allocations. This computer model uses a mass-balance water quality analysis that includes consideration for mixing, first-order decay, and other factors used to determine recommended water quality-based effluent limits. Toxics Management Spreadsheet does not assume that all discharges completely mix with the stream. The point of compliance with water quality criteria are established using criteria

compliance times (CCTs). The available CCTs are either acute fish criterion (AFC), chronic fish criterion (CFC), or human health criteria (THH & CRL).

Acute Fish Criterion (AFC) measures the criteria compliance time as either the maximum criteria compliance time (i.e.15 minutes travel time downstream of the current discharge) or the complete mix time whichever comes first. AFC is evaluated at Q710 conditions.

Chronic Fish Criterion (CFC) measures the criteria compliance time as either the maximum criteria compliance time (i.e. 12 hours travel time downstream of the current discharge) or the complete mix time whichever comes first. CFC is evaluated at Q710 conditions.

Threshold Human Health (THH) measures the criteria compliance time as either the maximum criteria compliance time (i.e. 12 hours travel time downstream of the current discharge) or the estimated travel time downstream to the nearest potable water supply intake whichever comes first. THH is evaluated at Q710 conditions.

Cancer Risk Level (CRL) measures the criteria compliance time as either the maximum criteria compliance time (i.e. 12 hours travel time downstream of the current discharge) or the complete mix time whichever comes first. CRL is evaluated at Qh (harmonic mean or normal flow) conditions.

The Toxics Model requires several input values for calculating output values. The source of data originates from either EMAP, the National Map, or Stream Stats. Data for stream gauge information, if any, was abstracted from USGS Low-Flow, Base-Flow, and Mean-Flow Regression Equations for Pennsylvania Streams authored by Marla H. Stuckey (Scientific Investigations Report 2006-5130).

The input values utilized for the modeling are summarized in the table which can be found in Attachment B.

5.3.2.1 Determining if NPDES Permit Will Require Monitoring/Limits in the Proposed Permit for Toxic Pollutants

To determine if Toxics modeling is necessary, DEP has developed a Toxics Management Spreadsheet to identify toxics of concern. Toxic pollutants whose maximum concentrations as reported in the permit application or on DMRs are greater than the most stringent applicable water quality criterion are pollutants of concern. A Reasonable Potential Analysis was utilized to determine (a) if the toxic parameters modeled would require monitoring or (b) if permit limitations would be required for the parameters. The toxics reviewed for reasonable potential were the pollutants in Groups 1 through 2.

Based upon the SOP- Establishing Water Quality-Based Effluent Limitations (WQBELs) and Permit Conditions for Toxic Pollutants (Revised January 10, 2019), monitoring and/or limits will be established as follows.

(a) When reasonable potential is demonstrated, establish limits where the maximum reported concentration equals or exceeds 50% of the WQBEL.
(b) For non-conservative pollutants, establish monitoring requirements where the maximum reported concentration is between 25% - 50% of the WQBEL.
(c) For conservative pollutants, establish monitoring requirements where the maximum reported concentration is between 10% - 50% of the WQBEL.

Applicable monitoring or permit limits for toxics are summarized in Section 6.

The Toxics Management Spreadsheet output has been included in Attachment B.

5.4 Total Maximum Daily Loading (TMDL)

5.4.1 TMDL

The goal of the Clean Water Act (CWA), which governs water pollution, is to ensure that all of the Nation's waters are clean and healthy enough to support aquatic life and recreation. To achieve this goal, the CWA created programs designed to regulate and reduce the amount of pollution entering United States waters. Section 303(d) of the CWA requires states to assess their waterbodies to identify those not meeting water quality standards. If a waterbody is not meeting standards, it is listed as impaired and reported to the U.S. Environmental Protection Agency. The state then develops a plan to clean up the impaired waterbody. This plan includes the development of a Total Maximum Daily Load (TMDL) for the pollutant(s) that were found to be the cause of the water quality violations. A Total Maximum Daily Load

(TMDL) calculates the maximum amount of a specific pollutant that a waterbody can receive and still meet water quality standards.

Pennsylvania has committed to restoring all impaired waters by developing TMDLs and TMDL alternatives for all impaired waterbodies. The TMDL serves as the starting point or planning tool for restoring water quality.

5.4.1.1 Local TMDL

The subject facility does not discharge into a local TMDL.

5.4.1.2 Chesapeake Bay TMDL Requirement

The Chesapeake Bay Watershed is a large ecosystem that encompasses approximately 64,000 square miles in Maryland, Delaware, Virginia, West Virginia, Pennsylvania, New York and the District of Columbia. An ecosystem is composed of interrelated parts that interact with each other to form a whole. All of the plants and animals in an ecosystem depend on each other in some way. Every living thing needs a healthy ecosystem to survive. Human activities affect the Chesapeake Bay ecosystem by adding pollution, using resources and changing the character of the land.

Most of the Chesapeake Bay and many of its tidal tributaries have been listed as impaired under Section 303(d) of the federal Water Pollution Control Act ("Clean Water Act"), 33 U.S.C. § 1313(d). While the Chesapeake Bay is outside the boundaries of Pennsylvania, more than half of the State lies within the watershed. Two major rivers in Pennsylvania are part of the Chesapeake Bay Watershed. They are (a) the Susquehanna River and (b) the Potomac River. These two rivers total 40 percent of the entire Chesapeake Bay watershed.

The overall management approach needed for reducing nitrogen, phosphorus and sediment are provided in the Bay TMDL document and the Phase I, II, and III WIPs which is described in the Bay TMDL document and Executive Order 13508.

The Bay TMDL is a comprehensive pollution reduction effort in the Chesapeake Bay watershed identifying the necessary pollution reductions of nitrogen, phosphorus and sediment across the seven Bay watershed jurisdictions of Delaware, Maryland, New York, Pennsylvania, Virginia, West Virginia and the District of Columbia to meet applicable water quality standards in the Bay and its tidal waters.

The Watershed Implementation Plans (WIPs) provides objectives for how the jurisdictions in partnership with federal and local governments will achieve the Bay TMDL's nutrient and sediment allocations.

Phase 3 WIP provides an update on Chesapeake Bay TMDL implementation activities for point sources and DEP's current implementation strategy for wastewater. The latest revision of the supplement was December 17, 2019.

The Chesapeake Bay TMDL (Appendix Q) categorizes point sources into four sectors:

- Sector A- significant sewage dischargers;
- Sector B- significant industrial waste (IW) dischargers;
- Sector C- non-significant dischargers (both sewage and IW facilities); and
- Sector D- combined sewer overflows (CSOs).

All sectors contain a listing of individual facilities with NPDES permits that were believed to be discharging at the time the TMDL was published (2010). All sectors with the exception of the non-significant dischargers have individual wasteload allocations (WLAs) for TN and TP assigned to specific facilities. Non-significant dischargers have a bulk or aggregate allocation for TN and TP based on the facilities in that sector that were believed to be discharging at that time and their estimated nutrient loads.

Based upon the supplement the subject facility has been categorized as a Sector C discharger. The supplement defines Sector C as a non-significant discharger that includes sewage facilities (Phase 4 facilities: ≥ 0.2 MGD and < 0.4 MGD and Phase 5 facilities: > 0.002 MGD and < 0.2 MGD), small flow/single residence sewage treatment facilities (≤ 0.002 MGD), and non-significant IW facilities, all of which may be covered by statewide General Permits or may have individual NPDES permits.

At this time, there are approximately 850 Phase 4 and 5 sewage facilities, approximately 715 small flow sewage treatment facilities covered by a statewide General Permit, and approximately 300 non-significant IW facilities.

For non-significant IW facilities, monitoring and reporting of TN and TP will be required throughout the permit term in renewed or amended permits anytime the facility has the potential to introduce a net TN or TP increase to the load contained within the intake water used in processing.

Non-significant IW facilities that propose expansion or production increases and as a result will discharge at least 75 lbs/day TN or 25 lbs/day TP (on an annual average basis), will be classified as Significant IW dischargers and receive Cap Loads in their permits based on existing performance (existing TN/TP concentrations at current average annual flow).

In general, for new non-significant IW discharges (including existing facilities discharging without a permit), DEP will issue permits containing Cap Loads of "0" and these facilities will be expected to purchase credits and/or apply offsets to achieve compliance.

Since this facility is a water treatment plant where contributions of nitrogen and phosphorus are minimal, this facility is not subject to Sector C monitoring requirements.

5.5 Anti-Degradation Requirement

Chapter 93.4a of the PA regulations requires that surface water of the Commonwealth of Pennsylvania may not be degraded below levels that protect the existing uses. The regulations specifically state that *Existing instream water uses and the level of water quality necessary to protect the existing uses shall be maintained and protected*. Antidegradation requirements are implemented through DEP's guidance manual entitled Water Quality Antidegradation Implementation Guidance (Document #391-0300-02).

The policy requires DEP to protect the existing uses of all surface waters and the existing quality of High Quality (HQ) and Exceptional Value (EV) Waters. Existing uses are protected when DEP makes a final decision on any permit or approval for an activity that may affect a protected use. Existing uses are protected based upon DEP's evaluation of the best available information (which satisfies DEP protocols and Quality Assurance/Quality Control (QA/QC) procedures) that indicates the protected use of the waterbody.

For a new, additional, or increased point source discharge to an HQ or EV water, the person proposing the discharge is required to utilize a nondischarge alternative that is cost-effective and environmentally sound when compared with the cost of the proposed discharge. If a nondischarge alternative is not cost-effective and environmentally sound, the person must use the best available combination of treatment, pollution prevention, and wastewater reuse technologies and assure that any discharge is nondegrading. In the case of HQ waters, DEP may find that after satisfaction of intergovernmental coordination and public participation requirements lower water quality is necessary to accommodate important economic or social development in the area in which the waters are located. In addition, DEP will assure that cost-effective and reasonable best management practices for nonpoint source control in HQ and EV waters are achieved.

The subject facility's discharge will be to a non-special protection waters and the permit conditions are imposed to protect existing instream water quality and uses. Neither HQ waters or EV waters is impacted by this discharge.

5.6 Anti-Backsliding

Anti-backsliding is a federal regulation which prohibits a permit from being renewed, reissued, or modified containing effluent limitations which are less stringent than the comparable effluent limitations in the previous permit (40 CFR 122.l.1 and 40 CFR 122.l.2). A review of the existing permit limitations with the proposed permit limitations confirm that the facility is consistent with anti-backsliding requirements. The facility has proposed effluent limitations that are as stringent as the existing permit.

6.0 NPDES Parameter Details

The basis for the proposed sampling and their monitoring frequency that will appear in the permit for each individual parameter are itemized in this Section. The final limits are the more stringent of technology based effluent treatment (TBEL) requirements, water quality based (WQBEL) limits, TMDL, antidegradation, anti-degradation, or WET.

The reader will find in this section:

a) a justification of recommended permit monitoring requirements and limitations for each parameter in the proposed NPDES permit;
b) a summary of changes from the existing NPDES permit to the proposed permit; and
c) a summary of the proposed NPDES effluent limits.

6.1 Recommended Monitoring Requirements and Effluent Limitations

A summary of the recommended monitoring requirements and effluent limitations are itemized in the tables. The tables are categorized by (a) Conventional Pollutants and Disinfection and (b) Toxics.

6.1.1 Conventional Pollutants and Disinfection

Summary of Proposed NPDES Parameter Details for Conventional Pollutants and Disinfection
Newport Borough Water Authority, PA0261432

Parameter	Permit Limitation Required by[1]:	Recommendation	
pH (S.U.)	Technology Based Control Requirements for Water Treatment Plant Wastes	Monitoring:	The monitoring frequency shall be daily as a grab sample (Table 6-4).
		Effluent Limit:	Effluent limits may range from pH = 6.0 to 9.0
		Rationale:	The monitoring frequency has been assigned in accordance with Table 6-4 and the effluent limits assigned by Technology Based Control Requirements for Water Treatment Plant Wastes.
TSS	Technology Based Control Requirements for Water Treatment Plant Wastes	Monitoring:	The monitoring frequency shall be 2x/month as an 8-hr composite sample (Table 6-4).
		Effluent Limit:	Effluent limits shall not exceed 7.8 lbs/day and 30 mg/l as a monthly average.
		Rationale:	The monitoring frequency has been assigned in accordance with Table 6-3 and the effluent limits assigned by Technology Based Control Requirements for Water Treatment Plant Wastes. Effluent limits are assigned by Technology Based Control Requirements for Water Treatment Plant Wastes.

Notes:

1 The NPDES permit was limited by (a) anti-Backsliding, (b) Anti-Degradation, (c) SOP, (d) TBEL, (e) TMDL, (f) WQBEL, (g) WET, or (h) Other

2 Monitoring frequency based on flow rate of 0.0311 MGD.

3 Table 6-4 (Self Monitoring Requirements for Industrial Discharges) in Technical Guidance for the Development and Specification of Effluent Limitations and Other Permit Conditions in NPDES Permits) (Document # 362-0400-001) Revised 10/97

4 Water Quality Antidegradation Implementaton Guidance (Document # 391-0300-002)

5 Phase 2 Watershed Implementation Plan Wastewater Supplement, Revised September 6, 2017

6.1.2 Toxics

The Toxics Management Spreadsheet was modelled using a flow rate of 0.5 MGD for worst case scenario. The average annual design flow is 0.0331 MGD. Limits for toxics for the proposed permit shall be technology based effluent limits.

Summary of Proposed NPDES Parameter Details for Toxics

Newport Borough Water Authority, PA0261432

Parameter	Permit Limitation Required by[1]:	Recommendation	
Total Iron	Technology Based Control Requirements for Water Treatment Plant Wastes	Monitoring:	The monitoring frequency shall be 2x/mo as an 8-hr composite sample
		Effluent Limit:	Effluent limits shall not exceed 0.52 lbs/day and 2 mg/l as a monthly average.
		Rationale:	The effluent limits are prescribed by the Technology Based Control Requirements for Water Treatment Plant Wastes guidance document.
Total Aluminum	Technology Based Control Requirements for Water Treatment Plant Wastes	Monitoring:	The monitoring frequency shall be 2x/mo as an 8-hr composite sample
		Effluent Limit:	Effluent limits shall not exceed 1.04 lbs/day and 4 mg/l as a monthly average.
		Rationale:	The effluent limits are prescribed by the Technology Based Control Requirements for Water Treatment Plant Wastes guidance document.
Total Manganese	Technology Based Control Requirements for Water Treatment Plant Wastes	Monitoring:	The monitoring frequency shall be 2x/mo as an 8-hr composite sample
		Effluent Limit:	Effluent limits shall not exceed 0.26 lbs/day and 1 mg/l as a monthly average.
		Rationale:	The effluent limits are prescribed by the Technology Based Control Requirements for Water Treatment Plant Wastes guidance document.

Notes:

1 The NPDES permit was limited by (a) anti-Backsliding, (b) Anti-Degradation, (c) SOP, (d) TBEL, (e) TMDL, (f) WQBEL, (g) WET, or (h) Other

2 Monitoring frequency based on flow rate of 0.0311 MGD.

3 Table 6-4 (Self Monitoring Requirements for Industrial Discharges) in Technical Guidance for the Development and Specification of Effluent Limitations and Other Permit Conditions in NPDES Permits) (Document # 362-0400-001) Revised 10/97

4 Water Quality Antidegradation Implementaton Guidance (Document # 391-0300-002)

5 Phase 2 Watershed Implementation Plan Wastewater Supplement, Revised September 6, 2017

6.2 Summary of Changes From Existing Permit to Proposed Permit

A summary of how the proposed NPDES permit differs from the existing NPDES permit is summarized as follows.

There are no changes to the monitoring frequency or effluent performance limits.

6.3.1 Summary of Proposed NPDES Effluent Limits

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.

The proposed NPDES effluent limitations are summarized in the table below.

PART A - EFFLUENT LIMITATIONS, MONITORING, RECORDKEEPING AND REPORTING REQUIREMENTS

I. A. For Outfall 001 , **Latitude** 40° 28' 59.00" , **Longitude** 77° 7' 58.00" , **River Mile Index** 12.5 , **Stream Code** 11492

Receiving Waters: Juniata River (WWF)

Type of Effluent: IW Process Effluent without ELG

1. The permittee is authorized to discharge during the period from **Permit Effective Date** through **Permit Expiration Date**.
2. Based on the anticipated wastewater characteristics and flows described in the permit application and its supporting documents and/or amendments, the following effluent limitations and monitoring requirements apply (see also Additional Requirements and Footnotes).

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) [1]		Concentrations (mg/L)				Minimum [2] Measurement Frequency	Required Sample Type
	Average Monthly	Daily Maximum	Minimum	Average Monthly	Daily Maximum	Instant. Maximum		
Flow (MGD)	Report	Report	XXX	XXX	XXX	XXX	Continuous	Measured
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	1/day	Grab
Total Suspended Solids	7.8	15.5	XXX	30	60	75	2/month	8-Hr Composite
Aluminum, Total	1.04	2.07	XXX	4.0	8.0	10	2/month	8-Hr Composite
Iron, Total	0.52	1.04	XXX	2.0	4.0	5	2/month	8-Hr Composite
Manganese, Total	0.26	0.52	XXX	1.0	2.0	2.5	2/month	8-Hr Composite

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s):

at Outfall 001

6.3.2 Summary of Proposed Permit Part C Conditions

The subject facility has the following Part C conditions.

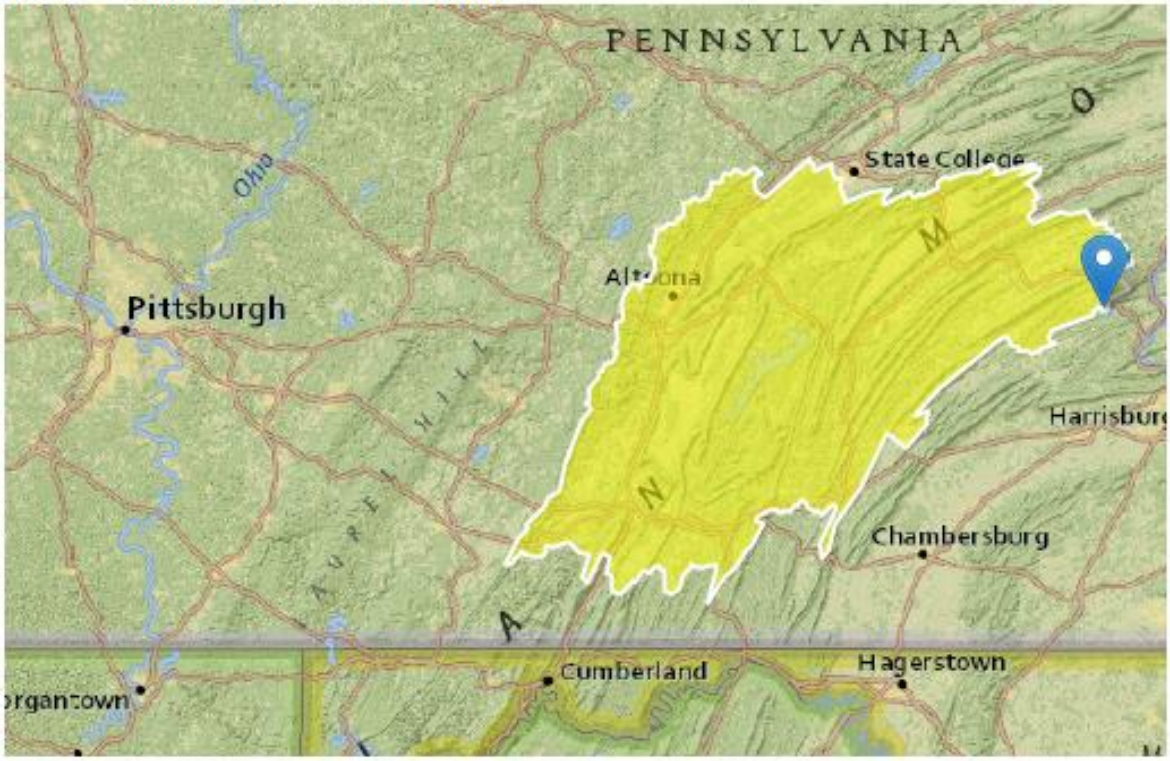
- Water Treatment Plant Cleaning

Attachment A

Stream Stats/Gauge Data

StreamStats Report

Region ID: PA
Workspace ID: PA20200805165202963000
Clicked Point (Latitude, Longitude): 40.48312, -77.13183
Time: 2020-08-05 12:52:24 -0400



Newport Borough Water Authority PA0261432 Modeling Point #1 August 2020

Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	3350	square miles
PRECIP	Mean Annual Precipitation	39.2	inches
STRDEN	Stream Density -- total length of streams divided by drainage area	1.94	miles per square mile

Parameter Code	Parameter Description	Value	Unit
ROCKDEP	Depth to rock	4.5	feet
CARBON	Percentage of area of carbonate rock	16.6	percent

Low-Flow Statistics Parameters[100 Percent (3350 square miles) Low Flow Region 2]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	3350	square miles	4.93	1280
PRECIP	Mean Annual Precipitation	39.2	inches	35	50.4
STRDEN	Stream Density	1.94	miles per square mile	0.51	3.1
ROCKDEP	Depth to Rock	4.5	feet	3.32	5.65
CARBON	Percent Carbonate	16.6	percent	0	99

Low-Flow Statistics Disclaimers[100 Percent (3350 square miles) Low Flow Region 2]

One or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errors

Low-Flow Statistics Flow Report[100 Percent (3350 square miles) Low Flow Region 2]

Statistic	Value	Unit
7 Day 2 Year Low Flow	601	ft^3/s
30 Day 2 Year Low Flow	726	ft^3/s
7 Day 10 Year Low Flow	403	ft^3/s
30 Day 10 Year Low Flow	488	ft^3/s
90 Day 10 Year Low Flow	625	ft^3/s

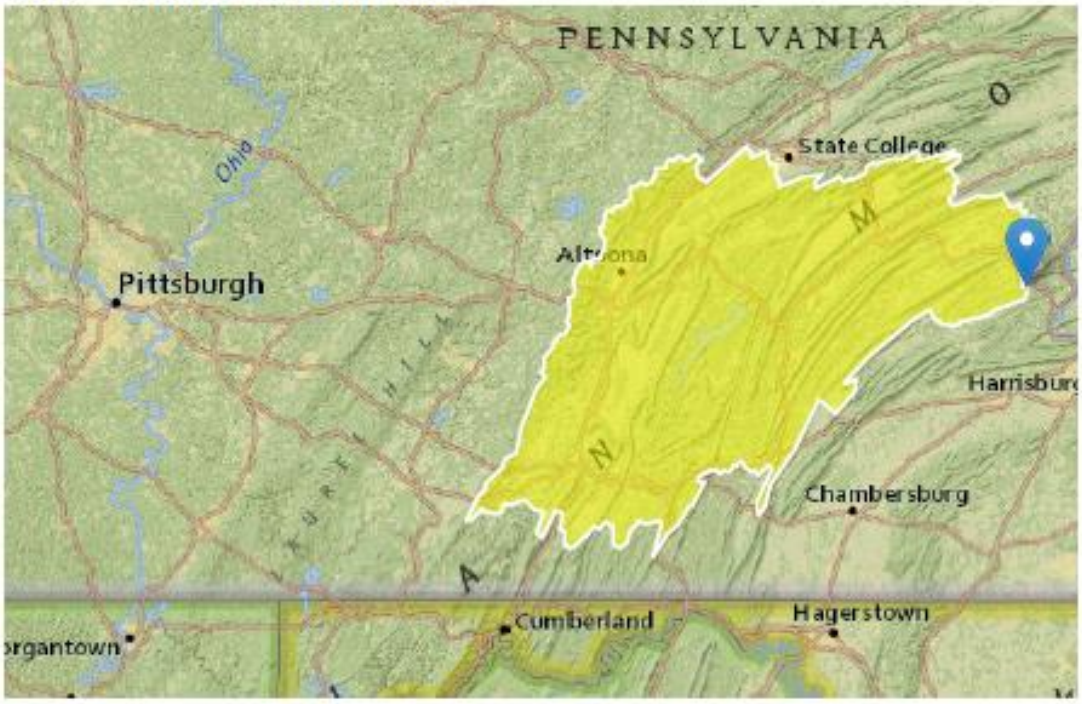
Low-Flow Statistics Citations

Stuckey, M.H.,2006, Low-flow, base-flow, and mean-flow regression equations for Pennsylvania streams: U.S. Geological Survey Scientific Investigations Report 2006-5130, 84 p. (http://pubs.usgs.gov/sir/2006/5130/)

Application Version: 4.3.11

StreamStats Report

Region ID: PA
Workspace ID: PA20200805170247551000
Clicked Point (Latitude, Longitude): 40.47740, -77.10761
Time: 2020-08-05 13:03:08 -0400



Newport Borough Water Authority PA0261432 Modeling Point #2 August 2020

Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	3370	square miles
PRECIP	Mean Annual Precipitation	39.2	inches
STRDEN	Stream Density -- total length of streams divided by drainage area	1.94	miles per square mile

Parameter Code	Parameter Description	Value	Unit
ROCKDEP	Depth to rock	4.5	feet
CARBON	Percentage of area of carbonate rock	16.6	percent

Low-Flow Statistics Parameters[100 Percent (3370 square miles) Low Flow Region 2]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	3370	square miles	4.93	1280
PRECIP	Mean Annual Precipitation	39.2	inches	35	50.4
STRDEN	Stream Density	1.94	miles per square mile	0.51	3.1
ROCKDEP	Depth to Rock	4.5	feet	3.32	5.65
CARBON	Percent Carbonate	16.6	percent	0	99

Low-Flow Statistics Disclaimers[100 Percent (3370 square miles) Low Flow Region 2]

One or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errors

Low-Flow Statistics Flow Report[100 Percent (3370 square miles) Low Flow Region 2]

Statistic	Value	Unit
7 Day 2 Year Low Flow	605	ft^3/s
30 Day 2 Year Low Flow	731	ft^3/s
7 Day 10 Year Low Flow	406	ft^3/s
30 Day 10 Year Low Flow	491	ft^3/s
90 Day 10 Year Low Flow	629	ft^3/s

Low-Flow Statistics Citations

Stuckey, M.H.,2006, Low-flow, base-flow, and mean-flow regression equations for Pennsylvania streams: U.S. Geological Survey Scientific Investigations Report 2006-5130, 84 p. (http://pubs.usgs.gov/sir/2006/5130/)

Application Version: 4.3.11

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]
01561000	Brush Creek at Gapsville, Pa.	39.956	-78.254	36.8	N
01562000	Raystown Branch Juniata River at Saxton, Pa.	40.216	-78.265	756	N
01562500	Great Trough Creek near Marklesburg, Pa.	40.350	-78.130	84.6	N
01563200	Raystown Branch Juniata River below Rays Dam nr Huntingdon, Pa.	40.429	-77.991	960	Y
01563500	Juniata River at Mapleton Depot, Pa.	40.392	-77.935	2,030	Y
01564500	Aughwick Creek near Three Springs, Pa.	40.213	-77.925	205	N
01565000	Kishacoquillas Creek at Reedsville, Pa.	40.655	-77.583	164	N
01565700	Little Lost Creek at Oakland Mills, Pa.	40.605	-77.311	6.52	N
01566000	Tuscarora Creek near Port Royal, Pa.	40.515	-77.419	214	N
01566500	Cocolamus Creek near Millerstown, Pa.	40.566	-77.118	57.2	N
01567000	Juniata River at Newport, Pa.	40.478	-77.129	3,354	Y
01567500	Bixler Run near Loysville, Pa.	40.371	-77.402	15.0	N
01568000	Sherman Creek at Shermans Dale, Pa.	40.323	-77.169	207	N
01568500	Clark Creek near Carsonville, Pa.	40.460	-76.751	22.5	LF
01569000	Stony Creek nr Dauphin, Pa.	40.380	-76.907	33.2	N
01569800	Letort Spring Run near Carlisle, Pa.	40.235	-77.139	21.6	N
01570000	Conodoguinet Creek near Hogestown, Pa.	40.252	-77.021	470	LF
01570500	Susquehanna River at Harrisburg, Pa.	40.255	-76.886	24,100	Y
01571000	Paxton Creek near Penbrook, Pa.	40.308	-76.850	11.2	N
01571500	Yellow Breeches Creek near Camp Hill, Pa.	40.225	-76.898	213	N
01572000	Lower Little Swatara Creek at Pine Grove, Pa.	40.538	-76.377	34.3	N
01572025	Swatara Creek near Pine Grove, Pa.	40.533	-76.402	116	N
01572190	Swatara Creek near Inwood, Pa.	40.479	-76.531	167	N
01573000	Swatara Creek at Harper Tavern, Pa.	40.403	-76.577	337	N
01573086	Beck Creek near Cleona, Pa.	40.323	-76.483	7.87	N
01573160	Quittapahilla Creek near Bellegrove, Pa.	40.343	-76.562	74.2	N
01573500	Manada Creek at Manada Gap, Pa.	40.397	-76.709	13.5	N
01573560	Swatara Creek near Hershey, Pa.	40.298	-76.668	483	N
01574000	West Conewago Creek near Manchester, Pa.	40.082	-76.720	510	N
01574500	Codorus Creek at Spring Grove, Pa.	39.879	-76.853	75.5	Y
01575000	South Branch Codorus Creek near York, Pa.	39.921	-76.749	117	Y
01575500	Codorus Creek near York, Pa.	39.946	-76.755	222	Y
01576000	Susquehanna River at Marietta, Pa.	40.055	-76.531	25,990	Y
01576085	Little Conestoga Creek near Churchtown, Pa.	40.145	-75.989	5.82	N
01576500	Conestoga River at Lancaster, Pa.	40.050	-76.277	324	N
01576754	Conestoga River at Conestoga, Pa.	39.946	-76.368	470	N
01578310	Susquehanna River at Conowingo, Md.	39.658	-76.174	27,100	Y
01578400	Bowery Run near Quarryville, Pa.	39.895	-76.114	5.98	N
01580000	Deer Creek at Rocks, Md.	39.630	-76.403	94.4	N
01581500	Bynum Run at Bel Air, Md.	39.541	-76.330	8.52	N
01581700	Winters Run near Benson, Md.	39.520	-76.373	34.8	N
01582000	Little Falls at Blue Mount, Md.	39.604	-76.620	52.9	N
01582500	Gunpowder Falls at Glencoe, Md.	39.550	-76.636	160	Y
01583000	Slade Run near Glyndon, Md.	39.495	-76.795	2.09	N
01583100	Piney Run at Dover, Md.	39.521	-76.767	12.3	N

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)
01565000	1941–2008	37	17.6	18.6	28.6	20.3	32.4	24.4
01565700	1965–1981	17	.4	.4	.9	.5	1.1	.8
01566000	1913–2008	52	4.3	7.9	18.8	12.4	25.6	19.2
01566500	1932–1958	27	1.7	2.4	4.0	3.2	5.7	4.9
01567000	[2]1974–2008	35	504	534	725	589	857	727
01567000	[3]1901–1972	72	311	367	571	439	704	547
01567500	1955–2008	54	2.0	2.2	3.3	2.6	3.8	3.1
01568000	1931–2008	78	12.7	15.5	25.5	19.2	32.0	26.0
01568500	[2]1943–1997	55	1.8	2.3	4.3	2.7	5.0	3.1
01569000	1939–1974	14	2.6	4.0	7.4	5.1	9.4	7.8
01569800	1978–2008	31	15.9	17.0	24.4	18.4	26.1	20.3
01570000	[3]1913–1969	35	—	63.1	110	76.1	124	95.3
01570000	[2]1971–2008	38	63.1	69.3	109	78.3	125	97.8
01570500	[3]1901–1972	72	2,310	2,440	4,000	2,830	4,950	3,850
01570500	[2]1974–2008	35	3,020	3,200	5,180	3,690	6,490	4,960
01571000	1941–1995	16	.1	.2	.6	.3	1.2	.8
01571500	1911–2008	62	81.6	86.8	115	94.0	124	105
01572000	1921–1984	14	2.1	2.3	4.8	3.0	6.5	4.5
01572025	1990–2008	17	15.2	16.4	26.7	18.5	34.6	27.7
01572190	1990–2008	17	19.1	20.5	36.2	23.9	45.8	35.3
01573000	1920–2008	89	18.0	22.0	52.0	30.8	69.2	50.9
01573086	1965–1981	17	.5	.6	2.6	.8	3.3	1.1
01573160	1977–1994	18	26.9	29.6	46.4	33.6	51.9	39.5
01573500	1939–1958	20	1.3	1.4	2.5	1.8	3.2	2.6
01573560	1977–2008	30	50.3	62.0	104	76.9	131	108
01574000	1930–2008	79	8.0	11.1	32.0	17.7	47.0	33.9
01574500	[2]1968–2008	41	14.2	24.0	35.9	29.4	42.0	33.3
01574500	[3]1930–1966	34	2.3	7.1	11.5	9.3	14.8	12.7
01575000	[2]1973–1995	23	.7	1.4	6.7	3.2	12.0	9.3
01575000	[3]1929–1971	43	.1	.6	10.3	2.3	15.0	6.1
01575500	[2]1948–1996	49	12.1	18.7	41.3	23.9	50.0	33.8
01576000	[3]1933–1972	40	2,100	2,420	4,160	2,960	5,130	4,100
01576000	[2]1974–2008	35	2,990	3,270	5,680	3,980	7,180	5,540
01576085	1984–1995	12	.4	.5	.8	.7	1.2	1.2
01576500	1931–2008	78	27.2	38.6	79.4	49.1	97.3	66.1
01576754	1986–2008	23	74.2	84.9	151	106	189	147
[4]01578310	1969–2008	40	549	2,820	5,650	4,190	7,380	6,140
01578400	1964–1981	18	1.4	1.5	2.7	1.9	3.2	2.5
[4]01580000	1928–2008	81	19.7	22.8	48.1	28.1	51.8	35.4
[4]01581500	1946–2008	28	.2	.3	1.2	.8	1.7	1.5
[4]01581700	1969–2008	40	4.7	5.5	17.5	8.1	18.3	12.0
[4]01582000	1946–2008	63	11.3	12.5	25.0	15.5	28.0	20.3
[4]01582500	1979–2008	27	41.2	43.9	78.8	53.8	90.6	74.1
[4]01583000	1949–1981	33	.3	.3	.7	.3	1.0	.6
[4]01583100	1984–2008	15	2.1	2.4	5.5	3.2	6.0	4.2

Attachment B
Toxics Management Spreadsheet

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Toxics Management Spreadsheet
Version 1.3, March 2021

Discharge Information

Instructions | Discharge | Stream

Facility: **Newport Borough Water Authority** NPDES Permit No.: **PA0261432** Outfall No.: **001**

Evaluation Type **Major Sewage / Industrial Waste** Wastewater Description: **Water Treatment Plant backwash**

Discharge Characteristics								
Design Flow (MGD)*	Hardness (mg/l)*	pH (SU)*	Partial Mix Factors (PMFs)				Complete Mix Times (min)	
			AFC	CFC	THH	CRL	Q_{7-10}	Q_h
0.5	105	8.02						

					0 if left blank		*0.5 if left blank*		*0 if left blank*			*1 if left blank*	
	Discharge Pollutant	Units	Max Discharge Conc		Trib Conc	Stream Conc	Daily CV	Hourly CV	Stream CV	Fate Coeff	FOS	Criteria Mod	Chem Transl
Group 1	Total Dissolved Solids (PWS)	mg/L		230									
	Chloride (PWS)	mg/L		44									
	Bromide	mg/L		0.2									
	Sulfate (PWS)	mg/L		25.9									
	Fluoride (PWS)	mg/L		0.2									
Group 2	Total Aluminum	mg/L		2.9									
	Total Antimony	mg/L		0.001									
	Total Arsenic	mg/L		0.0015									
	Total Barium	mg/L		0.039									
	Total Beryllium	mg/L		0.0005									
	Total Boron	mg/L		0.05									
	Total Cadmium	mg/L		0.0002									
	Total Chromium (III)	mg/L		0.001									
	Hexavalent Chromium	mg/L		0.000037									
	Total Cobalt	mg/L		0.0025									
	Total Copper	mg/L		0.0013									
	Free Cyanide	mg/L											
	Total Cyanide	mg/L		0.005									
	Dissolved Iron	mg/L		0.06									
	Total Iron	mg/L		0.061									
	Total Lead	mg/L		0.001									
	Total Manganese	mg/L		0.01									
	Total Mercury	mg/L		0.0002									
	Total Nickel	mg/L		0.0025									
	Total Phenols (Phenolics) (PWS)	mg/L		0.005									
	Total Selenium	mg/L		0.002									
	Total Silver	mg/L		0.0005									
	Total Thallium	mg/L		0.0005									
	Total Zinc	mg/L		0.0035									
	Total Molybdenum	mg/L		0.001									
	Acrolein	µg/L	<										
	Acrylamide	µg/L	<										
	Acrylonitrile	µg/L	<										
	Benzene	µg/L	<										
	Bromoform	µg/L	<										
	Carbon Tetrachloride	µg/L	<										
	Chlorobenzene	µg/L											
	Chlorodibromomethane	µg/L	<										
	Chloroethane	µg/L	<										
	2-Chloroethyl Vinyl Ether	µg/L	<										

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Toxics Management Spreadsheet
Version 1.3, March 2021

Stream / Surface Water Information

Newport Borough Water Authority, NPDES Permit No. PA0261432, Outfall 001

Instructions | Discharge | Stream

Receiving Surface Water Name: **Juniata River**

No. Reaches to Model: **1**

- (●) Statewide Criteria
- ( ) Great Lakes Criteria
- ( ) ORSANCO Criteria

Location	Stream Code*	RMI*	Elevation (ft)*	DA (mi^2)*	Slope (ft/ft)	PWS Withdrawal (MGD)	Apply Fish Criteria*
Point of Discharge	011492	12.5	369	3350			Yes
End of Reach 1	011492	10.33	363	3370			Yes

$Q_{7\text{-}10}$

Location	RMI	LFY (cfs/mi^2)*	Flow (cfs)		W/D Ratio	Width (ft)	Depth (ft)	Velocity (fps)	Travel Time	Tributary		Stream		Analysis	
			Stream	Tributary						Hardness	pH	Hardness*	pH*	Hardness	pH
Point of Discharge	12.5	0.1094										86	8.4		
End of Reach 1	10.33	0.1094										86	8.4		

Q_h

Location	RMI	LFY (cfs/mi^2)	Flow (cfs)		W/D Ratio	Width (ft)	Depth (ft)	Velocity (fps)	Travel Time	Tributary		Stream		Analysis	
			Stream	Tributary						Hardness	pH	Hardness	pH	Hardness	pH
Point of Discharge	12.5														
End of Reach 1	10.33														

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Toxics Management Spreadsheet
Version 1.3, March 2021

Model Results

Newport Borough Water Authority, NPDES Permit No. PA0261432, Outfall 001

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

☑ ***Hydrodynamics***

Q_{7-10}

RMI	Stream Flow (cfs)	PWS Withdrawal (cfs)	Net Stream Flow (cfs)	Discharge Analysis Flow (cfs)	Slope (ft/ft)	Depth (ft)	Width (ft)	W/D Ratio	Velocity (fps)	Travel Time	Complete Mix Time (min)
12.5	366.49		366.49	0.774	0.00052	1.192	359.662	301.787	0.857	0.155	5930.149
10.33	368.68		368.678								

Q_h

RMI	Stream Flow (cfs)	PWS Withdrawal (cfs)	Net Stream Flow (cfs)	Discharge Analysis Flow (cfs)	Slope (ft/ft)	Depth (ft)	Width (ft)	W/D Ratio	Velocity (fps)	Travel Time	Complete Mix Time (min)
12.5	1294.13		1294.13	0.774	0.00052	2.075	359.662	173.343	1.735	0.076	2589.32
10.33	1300.884		1300.88								

☑ ***Wasteload Allocations***

☑ *AFC* CCT (min): 15 PMF: 0.050 Analysis Hardness (mg/l): 86.765 Analysis pH: 8.38

Pollutants	Stream Conc	Stream CV	Trib Conc (µg/L)	Fate Coef	WQC (µg/L)	WQ Obj (µg/L)	WLA (µg/L)	Comments
Total Dissolved Solids (PWS)	0	0		0	N/A	N/A	N/A	
Chloride (PWS)	0	0		0	N/A	N/A	N/A	
Sulfate (PWS)	0	0		0	N/A	N/A	N/A	
Fluoride (PWS)	0	0		0	N/A	N/A	N/A	
Total Aluminum	0	0		0	750	750	18,622	
Total Antimony	0	0		0	1,100	1,100	27,312	
Total Arsenic	0	0		0	340	340	8,442	Chem Translator of 1 applied
Total Barium	0	0		0	21,000	21,000	521,419	
Total Boron	0	0		0	8,100	8,100	201,119	
Total Cadmium	0	0		0	1.754	1.85	45.8	Chem Translator of 0.95 applied
Total Chromium (III)	0	0		0	507.224	1,605	39,855	Chem Translator of 0.316 applied
Hexavalent Chromium	0	0		0	16	16.3	405	Chem Translator of 0.982 applied
Total Cobalt	0	0		0	95	95.0	2,359	
Total Copper	0	0		0	11.757	12.2	304	Chem Translator of 0.96 applied
Dissolved Iron	0	0		0	N/A	N/A	N/A	
Total Iron	0	0		0	N/A	N/A	N/A	

Total Lead	0	0		0	55.314	68.1	1,692	Chem Translator of 0.812 applied
Total Manganese	0	0		0	N/A	N/A	N/A	
Total Mercury	0	0		0	1.400	1.65	40.9	Chem Translator of 0.85 applied
Total Nickel	0	0		0	415.246	416	10,331	Chem Translator of 0.998 applied
Total Phenols (Phenolics) (PWS)	0	0		0	N/A	N/A	N/A	
Total Selenium	0	0		0	N/A	N/A	N/A	Chem Translator of 0.922 applied
Total Silver	0	0		0	2.520	2.96	73.6	Chem Translator of 0.85 applied
Total Thallium	0	0		0	65	65.0	1,614	
Total Zinc	0	0		0	103.900	106	2,638	Chem Translator of 0.978 applied

☑ *CFC* CCT (min): 720 PMF: 0.348 Analysis Hardness (mg/l): 86.114 Analysis pH: 8.40

Pollutants	Stream Conc	Stream CV	Trib Conc (µg/L)	Fate Coef	WQC (µg/L)	WQ Obj (µg/L)	WLA (µg/L)	Comments
Total Dissolved Solids (PWS)	0	0		0	N/A	N/A	N/A	
Chloride (PWS)	0	0		0	N/A	N/A	N/A	
Sulfate (PWS)	0	0		0	N/A	N/A	N/A	
Fluoride (PWS)	0	0		0	N/A	N/A	N/A	
Total Aluminum	0	0		0	N/A	N/A	N/A	
Total Antimony	0	0		0	220	220	36,541	
Total Arsenic	0	0		0	150	150	24,914	Chem Translator of 1 applied
Total Barium	0	0		0	4,100	4,100	680,992	
Total Boron	0	0		0	1,600	1,600	265,753	
Total Cadmium	0	0		0	0.222	0.24	40.2	Chem Translator of 0.915 applied
Total Chromium (III)	0	0		0	65.574	76.2	12,665	Chem Translator of 0.86 applied
Hexavalent Chromium	0	0		0	10	10.4	1,727	Chem Translator of 0.962 applied
Total Cobalt	0	0		0	19	19.0	3,156	
Total Copper	0	0		0	7.882	8.21	1,364	Chem Translator of 0.96 applied
Dissolved Iron	0	0		0	N/A	N/A	N/A	
Total Iron	0	0		0	1,500	1,500	712,211	WQC = 30 day average; PMF = 1
Total Lead	0	0		0	2.138	2.63	437	Chem Translator of 0.813 applied
Total Manganese	0	0		0	N/A	N/A	N/A	
Total Mercury	0	0		0	0.770	0.91	150	Chem Translator of 0.85 applied
Total Nickel	0	0		0	45.828	46.0	7,635	Chem Translator of 0.997 applied
Total Phenols (Phenolics) (PWS)	0	0		0	N/A	N/A	N/A	
Total Selenium	0	0		0	4.600	4.99	829	Chem Translator of 0.922 applied
Total Silver	0	0		0	N/A	N/A	N/A	Chem Translator of 1 applied
Total Thallium	0	0		0	13	13.0	2,159	
Total Zinc	0	0		0	104.084	106	17,533	Chem Translator of 0.986 applied

☑ *THH* CCT (min): 720 PMF: 0.348 Analysis Hardness (mg/l): N/A Analysis pH: N/A

Pollutants	Stream Conc	Stream CV	Trib Conc (µg/L)	Fate Coef	WQC (µg/L)	WQ Obj (µg/L)	WLA (µg/L)	Comments
Total Dissolved Solids (PWS)	0	0		0	500,000	500,000	N/A	
Chloride (PWS)	0	0		0	250,000	250,000	N/A	
Sulfate (PWS)	0	0		0	250,000	250,000	N/A	
Fluoride (PWS)	0	0		0	2,000	2,000	N/A	
Total Aluminum	0	0		0	N/A	N/A	N/A	

Total Antimony	0	0		0	5.6	5.6	930	
Total Arsenic	0	0		0	10	10.0	1,661	
Total Barium	0	0		0	2,400	2,400	398,629	
Total Boron	0	0		0	3,100	3,100	514,896	
Total Cadmium	0	0		0	N/A	N/A	N/A	
Total Chromium (III)	0	0		0	N/A	N/A	N/A	
Hexavalent Chromium	0	0		0	N/A	N/A	N/A	
Total Cobalt	0	0		0	N/A	N/A	N/A	
Total Copper	0	0		0	N/A	N/A	N/A	
Dissolved Iron	0	0		0	300	300	49,829	
Total Iron	0	0		0	N/A	N/A	N/A	
Total Lead	0	0		0	N/A	N/A	N/A	
Total Manganese	0	0		0	1,000	1,000	166,096	
Total Mercury	0	0		0	0.050	0.05	8.3	
Total Nickel	0	0		0	610	610	101,318	
Total Phenols (Phenolics) (PWS)	0	0		0	5	5.0	N/A	
Total Selenium	0	0		0	N/A	N/A	N/A	
Total Silver	0	0		0	N/A	N/A	N/A	
Total Thallium	0	0		0	0.24	0.24	39.9	
Total Zinc	0	0		0	N/A	N/A	N/A	

☑ *CRL* CCT (min): 720 PMF: 0.527 Analysis Hardness (mg/l): N/A Analysis pH: N/A

Pollutants	Stream Conc	Stream CV	Trib Conc (µg/L)	Fate Coef	WQC (µg/L)	WQ Obj (µg/L)	WLA (µg/L)	Comments
Total Dissolved Solids (PWS)	0	0		0	N/A	N/A	N/A	
Chloride (PWS)	0	0		0	N/A	N/A	N/A	
Sulfate (PWS)	0	0		0	N/A	N/A	N/A	
Fluoride (PWS)	0	0		0	N/A	N/A	N/A	
Total Aluminum	0	0		0	N/A	N/A	N/A	
Total Antimony	0	0		0	N/A	N/A	N/A	
Total Arsenic	0	0		0	N/A	N/A	N/A	
Total Barium	0	0		0	N/A	N/A	N/A	
Total Boron	0	0		0	N/A	N/A	N/A	
Total Cadmium	0	0		0	N/A	N/A	N/A	
Total Chromium (III)	0	0		0	N/A	N/A	N/A	
Hexavalent Chromium	0	0		0	N/A	N/A	N/A	
Total Cobalt	0	0		0	N/A	N/A	N/A	
Total Copper	0	0		0	N/A	N/A	N/A	
Dissolved Iron	0	0		0	N/A	N/A	N/A	
Total Iron	0	0		0	N/A	N/A	N/A	
Total Lead	0	0		0	N/A	N/A	N/A	
Total Manganese	0	0		0	N/A	N/A	N/A	
Total Mercury	0	0		0	N/A	N/A	N/A	
Total Nickel	0	0		0	N/A	N/A	N/A	
Total Phenols (Phenolics) (PWS)	0	0		0	N/A	N/A	N/A	
Total Selenium	0	0		0	N/A	N/A	N/A	
Total Silver	0	0		0	N/A	N/A	N/A	
Total Thallium	0	0		0	N/A	N/A	N/A	

Total Zinc	0	0		0	N/A	N/A	N/A	

☑ ***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	mg/L	11.9	AFC	Discharge Conc > 10% WQBEL (no RP)

☐ ***Other Pollutants without Limits or Monitoring***

Tools and References Used to Develop Permit	
☐	WQM for Windows Model (see Attachment)
☒	PENTOXSD for Windows Model (see Attachment)
☐	TRC Model Spreadsheet (see Attachment)
☐	Temperature Model Spreadsheet (see Attachment)
☐	Toxics Screening Analysis Spreadsheet (see Attachment)
☐	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.
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☐	Field Data Collection and Evaluation Protocol for Determining Stream and Point Source Discharge Design Hardness, 391-2000-021, 3/99.
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