Pennsylvania Department of Environmental Protection

Northcentral Regional Office
CLEAN WATER PROGRAM

NPDES PERMIT FACT SHEET INDIVIDUAL SEWAGE

Application Type	**Renewal**	Application No.	**PA0209520**
Facility Type	**Municipal**	APS ID	**1102370**
Major / Minor	**Minor**	Authorization ID	**1464468**

Applicant and Facility Information

Applicant Name	**LeRaysville Borough**	Facility Name	**LeRaysville Borough WWTP**
Applicant Address	130 East Street, P.O. Box 142	Facility Address	255 Main Street
	LeRaysville, PA 18829-0142		LeRaysville, PA 18829-0142
Applicant Contact	Richard Potter	Facility Contact	Richard Potter
Applicant Phone	570-637-0421	Facility Phone	570-637-0421
Client ID	96079	Site ID	466201
Ch 94 Load Status	Not Overloaded	Municipality	LeRaysville Borough
Connection Status	No Limitations	County	Bradford
Date Application Received	November 28, 2023	EPA Waived?	Yes
Date Application Accepted	February 26, 2024	If No, Reason	Not Applicable
Purpose of Application	Renewal of NPDES Permit		

Summary of Review

INTRODUCTION

The Council President of LeRaysville Borough, Richard C. Potter, proposes the renewal of the existing NPDES permit, which authorizes the discharge of treated effluent from the LeRaysville Borough Wastewater Treatment Facility (WWTF).

APPLICATION

Potter submitted the NPDES Application for Individual Permit to Discharge Sewage Effluent from Minor Sewage Facilities (DEP #3800-PM-BCW0342b). This application was received by the Department on November 28, 2023 and considered administratively complete on February 26, 2024. Potter is both the client and site contact for the application, in addition to also operating the WWTF as licensed operator. His contact information is (phone) 570-637-0421 and (email) ricksinspectionservice@gmail.com.

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.

The case file, permit application package and the draft permit will be available for public review at the Department's Northcentral Regional Office. The address is 208 West Third Street, Suite 101, Williamsport, PA 17701. An appointment can be made to review these materials during the comment period by calling the file coordinator at 570-327-3636.

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Approve	Return	Deny	Signatures	Date
X			Jeffrey J. Gocek, EIT Project Manager	12/11/2025
X			Nicholas W. Hartranft, PE Environmental Engineer Manager	12/11/2025

Discharge, Receiving Waters and Water Supply Information			
Outfall No.	001	Design Flow (MGD)	0.035
Latitude	41° 49' 46.30"	Longitude	-76° 10' 57.42"
Quad Name	LeRaysville, PA	Quad Code	0436
Wastewater Description:	Sewage Effluent		
Receiving Waters	Rockwell Creek	Stream Code	29664
NHD Com ID	66395743	RMI	6.15
Drainage Area	1.61	Yield (cfs/mi^2)	0.0353
Q_{7-10} Flow (cfs)	0.06	Q_{7-10} Basis	USGS Gage #01532850
Elevation (ft)	1199	Slope (ft/ft)	Not Applicable
Watershed No.	4-D	Chapter 93 Class.	WWF, MF
Existing Use	None	Existing Use Qualifier	Not Applicable
Exceptions to Use	None	Exceptions to Criteria	None
Assessment Status	Attaining Use(s)		
Cause(s) of Impairment	Not Applicable		
Source(s) of Impairment	Not Applicable		
TMDL Status	None	Name	Not Applicable
Nearest Downstream Public Water Supply Intake	Danville Municipal Water Authority		
PWS Waters	Susquehanna River	Flow at Intake (cfs)	1,100
PWS RMI	138.5	Distance from Outfall (mi)	131

$Q_{7,10}$ DETERMINATION

The $Q_{7,10}$ is the lowest seven consecutive days of flow in a 10-year period and is used for modeling wastewater treatment plant discharges. 25 PA § 96.1 defines $Q_{7,10}$ as "*the actual or estimated lowest 7 consecutive day average flow that occurs once in 10 years for a stream with unregulated flow, or the estimated minimum flow for a stream with regulated flow*".

A stream gage upstream of the existing discharge, "MB Wyalusing Creek near Birchardville, PA" (USGS #0532850) was selected as a reference gage. A $Q_{7,10}$ flow for that gage (0.2 CFS) was obtained from *Selected Streamflow Statistics for Streamgage Locations in and near Pennsylvania* (USGS Open Files Report 2011-1070). The drainage area at the point of discharge (1.61 mi^2) was calculated by the *USGS Pennsylvania StreamStats* application. Knowing the drainage area (1.61 mi^2) at the discharge and both the drainage area (5.67 mi^2) and $Q_{7,10}$ (0.20 CFS) at the reference gage, the $Q_{7,10}$ at the discharge was calculated to be 0.057 CFS.

See Attachment 01 for the $Q_{7,10}$ determination.

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TREATMENT FACILITY SUMMARY

LeRaysville Borough operates a WWTF plant serving LeRaysville Borough, Bradford.

See Attachment 02 for a map of the WWTF location.

The conveyance and collection system, constructed in the late 1990s, consists of approximately 14,400 linear feet of sanitary sewer (eight-inch PVC) and a grinder pump station. The wastewater treatment is accomplished by a 0.035 MGD extended aeration WWTF. The treatment consists of a comminuter (with a bar screen and bypass), flow equalization (2 tanks in series), extended aeration (6 tanks in series), clarification (2 clarifiers), ultraviolet disinfection, flow metering, post UV aeration (1 tank), and aerobic digestion/sludge holding (1 tank).

WWTP characteristics are as follows.

Waste Type	Degree of Treatment	Process Type	Disinfection	Average Annual Design Flow (MGD)
Sewage	Secondary	Extended Aeration	Ultraviolet	0.035
Hydraulic Capacity (MGD)	**Organic Capacity (lbs/day)**	**Load Status**	**Biosolids Treatment**	**Biosolids Use/Disposal**
0.035	60	Not Overloaded	Aerobic Digestion	Towanda WWTF

The original Water Quality Management (WQM) permit for this facility, #0898401, which was issued April 01, 1998. This permit authorized both the WWTF and the collection system.

The annual average flow of the year prior to application submission was 0.0144 MGD. The highest monthly average flow for the year prior to the application submission was 0.018 MGD (April 2022).

As a result of the POFU determination made in 2013, the Borough extended the effluent discharge pipe from the unnamed tributary directly to Rockwell Creek, where perennial stream flow occurs. This pipe extension was completed on June 20, 2013.

Sewage sludge is transported to the Towanda Municipal Authority for disposal. 9,000 gallons were sent for disposal in 2022.

COMPLIANCE HISTORY

The WMS Query *Open Violations for Client by Permit Number* revealed no open violations for LeRaysville Borough.

The most recent Department inspection, a compliance evaluation inspection (CEI), was conducted July 11, 2024. The treatment units were observed, and the onsite records were reviewed. No impact was observed at the outfall or upstream/downstream in the receiving stream. No violations were documented during the inspection.

Discharge Monitoring Report (DMR) data from October 2024 through September 2025 is presented below.

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Parameter	SEP-25	AUG-25	JUL-25	JUN-25	MAY-25	APR-25	MAR-25	FEB-25	JAN-25	DEC-24	NOV-24	OCT-24
Flow (MGD) Average Monthly	0.011	0.01	0.014	0.012	0.0167	0.013	0.016	0.013	0.013	0.017	0.0119	0.011
Flow (MGD) Daily Maximum	0.016	0.014	0.028	0.023	0.030	0.02	0.025	0.018	0.025	0.025	0.024	0.017
pH (S.U.) Instantaneous Minimum	7.4	7.3	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.3	7.3
pH (S.U.) Instantaneous Maximum	7.9	7.6	7.9	7.9	7.9	7.9	7.9	7.9	7.9	8.0	7.8	7.8
DO (mg/L) Instantaneous Minimum	5.0	5.0	5.2	5.4	5.5	5.5	5.5	5.5	5.6	5.4	5.6	5.5
CBOD5 (lbs/day) Average Monthly	0.5	0.4	0.9	0.3	0.4	1.0	0.6	0.3	0.3	0.6	0.5	< 0.2
CBOD5 (lbs/day) Weekly Average	0.5	0.5	1.0	0.3	0.4	1.0	0.06	0.4	0.4	0.9	0.8	< 0.3
CBOD5 (mg/L) Average Monthly	5.9	5.75	7.0	< 3.0	3.91	12.5	3.55	3.15	< 3.0	4.34	4.53	< 3.0
CBOD5 (mg/L) Weekly Average	6.43	6.13	11.0	< 3.0	4.81	13.4	4.09	3.29	< 3.0	5.47	6.06	< 3.0
BOD5 (lbs/day) Raw Sewage Influent Average Monthly	22	15	38	24	19	26	23	27	24	25	25	24
BOD5 (lbs/day) Raw Sewage Influent Daily Maximum	24	24	48	38	20	34	40	28	31	34	34	32
BOD5 (mg/L) Raw Sewage Influent Average Monthly	270	192	241	283	132	230	160	261	187	188	224	295
TSS (lbs/day) Average Monthly	0.5	1.0	8.0	0.3	0.7	2.0	0.8	0.2	0.03	2.0	1.0	0.4
TSS (lbs/day) Raw Sewage Influent Average Monthly	24	15	45	23	18	16	17	38	26	54	17	20
TSS (lbs/day) Raw Sewage Influent Daily Maximum	28	28	60	33	27	21	21	52	32	55	24	21
TSS (lbs/day) Weekly Average	0.8	2.0	4.0	0.4	0.9	3.0	1.0	0.3	0.05	3.0	2.0	0.8
TSS (mg/L) Average Monthly	8.0	15.0	22.2	3.4	7.2	22.0	4.4	2.34	2.8	9.6	9.4	5.8
TSS (mg/L) Raw Sewage Influent Average Monthly	283	190	281	224	140	155	119	384	206	443	153	264
TSS (mg/L) Weekly Average	10.0	28.0	32.4	4.4	7.6	23.6	5.2	2.67	4.0	14.6	15.6	10.0
Fecal Coliform (No./100 ml) Geometric Mean	< 1.0	2.0	< 3.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 1.0	4.0	1.0	3.0
Fecal Coliform (No./100 ml) Instantaneous Maximum	2.0	3.1	6.3	< 1.0	< 1.0	< 1.0	3.1	< 2.0	2.0	14.6	2.0	8.6
UV Intensity (mW/cm²) Instantaneous Minimum	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.2	6.2	6.0	5.9
Total Nitrogen (lbs/day) Annual Average										0.04		
Total Nitrogen (mg/L) Annual Average										0.5		
Ammonia (lbs/day) Average Monthly	0.05	0.2	0.2	0.02	< 0.01	2.0	0.3	0.05	0.02	0.02	0.04	0.07
Ammonia (lbs/day) Weekly Average	0.1	0.3	0.1	0.04	0.02	3.0	0.6	0.08	0.03	0.01	0.07	0.1
Ammonia (mg/L) Average Monthly	0.7	2.315	0.9042	0.252	0.134	1.99	2.27	0.604	0.22	< 0.1	0.5	0.9
Ammonia (mg/L) Weekly Average	1.2	3.516	1.505	0.403	0.161	3.663	4.29	0.713	0.33	< 0.1	0.8	1.7
Total Phosphorus (lbs/day) Annual Average										0.009		
Total Phosphorus (mg/L) Annual Average										1.12		

EXISTING PERMIT LIMITATIONS

The following limitations were established at the last renewal issuance, which occurred May 15, 2019.

Discharge Parameter	Mass Limits (lb/day)		Concentration Limits (mg/L)				Monitoring Requirements	
	Monthly Average	Weekly Average	Minimum	Monthly Average	Weekly Average	IMAX	Minimum Measurement Frequency	Required Sample Type
Flow (MGD)	Report	Report Daily Maximum	XXX	XXX	XXX	XXX	Continuous	Metered
pH (SU)	XXX	XXX	6.0	XXX	XXX	9.0	1/Day	Grab
Dissolved Oxygen	XXX	XXX	4.0	XXX	XXX	XXX	1/Day	Grab
BOD5 Raw Sewage Influent	Report	Report Daily Maximum	XXX	Report	XXX	XXX	2/Month	8 Hour Composite
TSS Raw Sewage Influent	Report	Report Daily Maximum	XXX	Report	XXX	XXX	2/Month	8 Hour Composite
CBOD5	23	38	XXX	25	40	50	2/Month	8 Hour Composite
Total Suspended Solids	28	43	XXX	30	45	60	2/Month	8 Hour Composite
Fecal Coliform (CFU/100mL) (05/01-09/30)	XXX	XXX	XXX	200 Geometric Mean	XXX	1,000	2/Month	Grab
Fecal Coliform (CFU/100mL) (10/01-04/30)	XXX	XXX	XXX	2,000 Geometric Mean	XXX	10,000	2/Month	Grab
UV Light Intensity (mW/cm^2)	XXX	XXX	Report	XXX	XXX	XXX	1/Day	Metered
Ammonia Nitrogen 05/01-10/31	0.8	1.0	XXX	3.0	4.5	6.0	2/Month	8 Hour Composite
Ammonia Nitrogen 11/01-04/30	2.5	3.5	XXX	9.0	13.5	18	2/Month	8 Hour Composite
Total Nitrogen	Report Annual Average	XXX	XXX	Report Annual Average	XXX	XXX	1/Year	8 Hour Composite
Total Phosphorus	Report Annual Average	XXX	XXX	Report Annual Average	XXX	XXX	1/Year	8 Hour Composite

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DEVELOPMENT OF EFFLUENT LIMITATIONS

The following effluent limitations have been developed for Outfall 001.

Technology-Based Limitations

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

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

Total Residual Chlorine

No analysis was performed since the WWTF employs ultraviolet (UV) disinfection.

Water Quality-Based Limitations

$CBOD_5$, NH_3-N and DO

WQM 7.0 for Windows is a DEP computer model used to determine wasteload allocations and effluent limitations for $CBOD_5$, NH_3-N and DO for single and multiple point source discharge scenarios. This model simulates two basic processes. The NH_3-N module simulates the mixing and degradation of NH_3-N in the stream and compares calculated instream NH_3-N concentrations to the water quality criteria. The DO module simulates the mixing and consumption of DO in the stream due to degradation of $CBOD_5$ and NH_3-N and compares the calculated instream DO concentrations to the water quality criteria. The model then determines the highest pollutant loading the stream can assimilate and still meet water quality under design conditions.

Using the same site and stream data from the 2013 renewal, the model recommended the following limitations.

Parameter	Effluent Limitations (mg/L)		
	30 Day Average	Maximum	Minimum
$CBOD_5$	25		
NH_3-N	4.16	8.32	
DO			4.0

See Attachment 03 for the WQM model output.

Best Professional Judgment (BPJ) Limitations

Dissolved Oxygen

A minimum limitation of 4.0 mg/L was established at a past permit renewal to ensure that the dissolved oxygen (DO) levels in the receiving stream do not drop below the regulatory criteria for Warm Water Fishes.

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Anti-Backsliding of Limitations

Ammonia Nitrogen

In order to comply with 40 CFR § 122.44(l) (anti-backsliding requirements), the Department must issue a renewed permit with limitations as stringent as that the of the previous permit. Since LeRaysville Borough is in compliance with the existing Ammonia limitations, established during the 2013 renewal, and, in order to comply with the anti-backsliding requirements, this permit will retain the existing Ammonia limitations. See below for those limitations.

Parameter	Effluent Limitations (mg/L)		
	30 Day Average	Maximum	Minimum
NH_3-N	3.0	9.0	

No backsliding is proposed.

RECEIVING STREAM

Stream Characteristics

The receiving stream is the Rockwell Creek, tributary to the Wyalusing Creek. This stream, according to 25 PA § 93.9L, is protected for *Warm Water Fishes* (WWF) and *Migratory Fishes* (MF). These are the streams *Designated Uses*, which is defined in 25 PA § 93.1 as "those uses specified in §§ 93.9a – 93.9z for each waterbody or segment whether or not the use is being attained". Designated uses are regulations promulgated by the Environmental Quality Board (EQB) throughout the rulemaking process. This stream currently has no *Existing Use*. Existing Use is defined in 25 PA § 93.1 as "those uses actually attained in the waterbody on or after November 28, 1975 whether or not they are included in the water quality standards".

Rockwell Creek is identified by Department stream code 29664. The stream is located in (Chapter 93) drainage list I and State Water Plan 4D (Wyalusing Creek).

Impairment

Rockwell Creek is attaining its designated uses for *Aquatic Life* and *Recreation*. No TMDL has been written for this stream.

DEVELOPMENT OF EFFLUENT MONITORING

Influent Sampling

In accordance with the Department's *SOP for New and Reissuance Sewage Individual NPDES Permit Applications* (unnumbered), influent sampling for BOD_5 and TSS is required for all POTWs with design flows greater than 2,000 gallons per day (gpd). The Department considers the existing 2/month monitoring adequate for characterizing the influent.

E.coli

The Department is requiring the monitoring of Eschericia coli (E. coli), a pathogenic bacterium normally found in the intestines of healthy people and animals which is used as a fecal contamination indicator in freshwater ecosystems. Section 303(c)(1) of the Clean Water Act requires that Pennsylvania periodically review and revise water quality standards, if necessary. The 2017 triennial review final form rulemaking, published in 2020, has revised the Chapter 93 water quality standards regulations for bacteria to include E. coli. To further characterize fecal contamination of surface waters during the swimming season, the Department is requiring the quarterly reporting of effluent E. coli effluent values. In accordance with 25 PA § 92a.61, the Department may impose reasonable monitoring requirements on pollutants which could have impact on the quality of the Commonwealth's waters or the quality of waters in other states.

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REMOVAL OF EFFLUENT MONITORING

Chesapeake Bay TMDL

Despite 25 years of extensive restoration efforts, the Chesapeake Bay Total Maximum Daily Load (TMDL) was prompted by insufficient progress and continued poor water quality in the Chesapeake Bay and its tidal tributaries. This TMDL, required by the Clean Water Act, is the largest ever developed by the Environmental Protection Agency (EPA). This document identifies the necessary pollution reductions of nitrogen, phosphorus and sediment across Delaware, Maryland, New York, Virginia, West Virginia, District of Columbia and Pennsylvania. It also sets pollution limits necessary to meet applicable water quality standards in the Bay, tidal rivers and embayments.

Pennsylvania explains how and when it will meet its pollution allocations in its Watershed Implementation Plan (WIP), which is incorporated into the TMDL. Pennsylvania's permitting strategy for significant dischargers has been outlined in the Phase I WIP and incorporated in the Phase II WIP by reference and imposes Total Nitrogen (TN) and Total Phosphorus (TP) cap loads on the significant dischargers.

Because the design of this facility is less than 0.2 MGD, the Department considers this an existing Phase 5 sewage facility for the purposes of implementing the Chesapeake Bay TMDL. This system has a design flow of 0.035 MGD. According to the Department's Wastewater Supplement to Phase II WIP (last revised April 02, 2025), renewed Phase 5 facilities are required to contain monitoring and reporting for TN and TP throughout the permit term at a frequency of no less than annually, unless the facility has conducted at least two years of nutrient monitoring.

Nutrient data was collected during the previous permit term. The data is summarized below.

Year	Parameter	Concentration (mg/L)	Loading (lb/day)
2019	Total Nitrogen	< 1.0	0.08
2019	Total Phosphorus	5.34	0.4
2020	Total Nitrogen	3.71	0.4
2020	Total Phosphorus	3.24	0.4
2021	Total Nitrogen	0.5	0.06
2021	Total Phosphorus	4.7	0.6
2022	Total Nitrogen	2.98	0.3
2022	Total Phosphorus	3.2	0.3
2023	Total Nitrogen	5.143	0.5
2023	Total Phosphorus	4.64	0.4
2024	Total Nitrogen	0.5	0.04
2024	Total Phosphorus	1.12	0.009

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ADDITIONAL CONSIDERATIONS

Hauled-In Wastes

According to the application materials, the LeRaysville Borough WWTF has received hauled-in wastes during the past three years and does anticipate receiving hauled-in wastes in the upcoming permit term. In the three years prior to application submission, LeRaysville Borough had accepted 30,000 gallons of municipal wastewater at the headworks (on an annual basis).

Sludge Disposal

Liquid sludge is aerobically digested and then trucked to the Towanda WWTF for disposal approximately three times per year.

Whole Effluent Toxicity (WET) Testing

According to the application materials, the LeRaysville Borough WWTF does not accept industrial wastewater. Because of this, a WET test evaluation is not required.

Mass Limitations

The existing mass limitations have been calculated for the WQBELs using the design flow of 0.035 MGD multiplied by the concentration (mg/L) and the conversion (8.34).

Rounding of Limitations

Limitations have been rounded in accordance with the *Department's Technical Guidance for the Development and Specification of Effluent Limitations and Other Permit Conditions in NPDES Permits* (#362-0400-001).

Limit Multipliers

The instantaneous maximum limitations have been calculated using multipliers of 2.0 (for domestic wastewater) and 2.5 (for industrial wastewater) times the monthly average. This is in accordance with the *Department's Technical Guidance for the Development and Specification of Effluent Limitations and Other Permit Conditions in NPDES Permits* (#362-0400-001).

Sample Frequencies and Types

The sample type and minimum measurement frequencies are in accordance with the *Department's Technical Guidance for the Development and Specification of Effluent Limitations and Other Permit Conditions in NPDES Permits* (#362-0400-001).

Standard Operating Procedures

The review of this permit application was in accordance with the Department's *Standard Operating Procedure (SOP) for New and Reissuance Sewage Individual NPDES Permit Applications* (unnumbered) and the *SOP for Establishing Effluent Limitations for Individual Sewage Permits* (SOP #BPNPSM-PMT-033).

Special Permit Conditions

Solids Management for Non-Lagoon Treatment Systems

Supplemental Discharge Monitoring Reports

Daily Effluent Monitoring
Non-Compliance Reporting
Biosolids Production and Disposal
Hauled-In Municipal Wastes
Influent and Process Control
Lab Accreditation

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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) and/or BPJ.

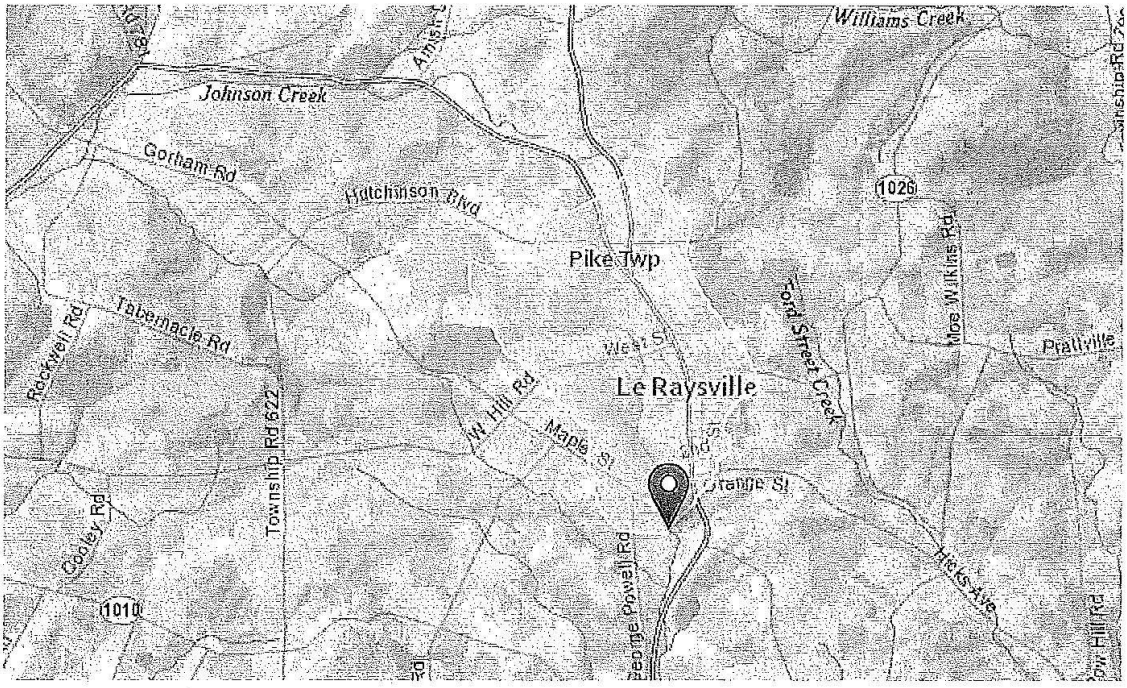
Outfall 001, Effective Period: Permit Effective Date through Permit Expiration Date

Discharge Parameter	Mass Limits (lb/day)		Concentration Limits (mg/L)				Monitoring Requirements	
	Monthly Average	Weekly Average	Minimum	Monthly Average	Weekly Average	IMAX	Minimum Measurement Frequency	Required Sample Type
Flow (MGD)	Report	Report Daily Maximum	XXX	XXX	XXX	XXX	Continuous	Metered
pH (SU)	XXX	XXX	6.0 Instantaneous Minimum	XXX	XXX	9.0	1/Day	Grab
Dissolved Oxygen	XXX	XXX	4.0 Instantaneous Minimum	XXX	XXX	XXX	1/Day	Grab
UV Light Intensity (mW/cm^2)	XXX	XXX	Report	XXX	XXX	XXX	1/Day	Metered
BOD5 Raw Sewage Influent	Report	Report Daily Maximum	XXX	Report	XXX	XXX	2/Month	8 Hour Composite
$CBOD_5$	23	38	XXX	25	40	50	2/Month	8 Hour Composite
TSS Raw Sewage Influent	Report	Report Daily Maximum	XXX	Report	XXX	XXX	2/Month	8 Hour Composite
Total Suspended Solids	28	43	XXX	30	45	60	2/Month	8 Hour Composite
Fecal Coliform (#/100mL) 05/01-09/30	XXX	XXX	XXX	200 Geometric Mean	XXX	1,000	2/Month	Grab
Fecal Coliform (#/100mL) 10/01-04/30	XXX	XXX	XXX	2,000 Geometric Mean	XXX	10,000	2/Month	Grab
Ammonia Nitrogen 05/01-10/31	0.8	1.0	XXX	3.0	4.5	6.0	2/Month	8 Hour Composite
Ammonia Nitrogen 11/01-04/30	2.5	3.5	XXX	9.0	13.5	18	2/Month	8 Hour Composite
E. Coli (No./100mL)	XXX	XXX	XXX	XXX	XXX	Report	1/Year	Grab

END of Fact Sheet.

LeRaysville Boro NPDES StreamStats Report

Region ID: PA
Workspace ID: PA20190226144905183000
Clicked Point (Latitude, Longitude): 41.82974, -76.18312
Time: 2019-02-26 09:49:19 -0500



NPDES #PA0209250

Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	1.61	square miles
PRECIP	Mean Annual Precipitation	37	inches
GLACIATED	Percentage of basin area that was historically covered by glaciers	100	percent
FOREST	Percentage of area covered by forest	42	percent
BSLOPD	Mean basin slope measured in degrees	5.8	degrees

Low-Flow Statistics Parameters [Low Flow Region 5]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	1.61	square miles	4.84	982
PRECIP	Mean Annual Precipitation	37	inches	33.1	47.1
GLACIATED	Percent of Glaciation	100	percent	0	100
FOREST	Percent Forest	42	percent	41	100

Low-Flow Statistics Disclaimers [Low Flow Region 5]

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

Low-Flow Statistics Flow Report [Low Flow Region 5]

Statistic	Value	Unit
7 Day 2 Year Low Flow	0.027	ft^3/s
30 Day 2 Year Low Flow	0.0454	ft^3/s
7 Day 10 Year Low Flow	0.00559	ft^3/s
30 Day 10 Year Low Flow	0.0113	ft^3/s
90 Day 10 Year Low Flow	0.0245	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/)

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]
01508803	West Branch Tioughnioga River at Homer, N.Y.	42.638	-76.176	71.5	N
01509000	Tioughnioga River at Cortland, N.Y.	42.603	-76.159	292	N
01510000	Otselic River at Cincinnatus, N.Y.	42.541	-75.900	147	N
01512500	Chenango River near Chenango Forks, N.Y.	42.218	-75.848	1,483	N
01515000	Susquehanna River near Waverly, N.Y.	41.985	-76.501	4,773	N
01516350	Tioga River near Mansfield, Pa.	41.797	-77.080	153	N
01516500	Corey Creek near Mainesburg, Pa.	41.791	-77.015	12.2	N
01518000	Tioga River at Tioga, Pa.	41.908	-77.129	282	Y
01518700	Tioga River at Tioga Junction, Pa.	41.953	-77.115	446	Y
01518862	Cowanesque River at Westfield, Pa.	41.923	-77.532	90.6	N
01520000	Cowanesque River near Lawrenceville, Pa.	41.997	-77.140	298	Y
01520500	Tioga River at Lindley, N.Y.	42.029	-77.132	771	Y
01521500	Canisteo River at Arkport, N.Y.	42.396	-77.711	30.6	Y
01523500	Canacadea Creek near Hornell, N.Y.	42.335	-77.683	57.9	Y
01524500	Canisteo River below Canacadea Creek at Hornell, N.Y.	42.314	-77.651	158	Y
01526500	Tioga River near Erwins, N.Y.	42.121	-77.129	1,377	Y
01527000	Cohocton River at Cohocton, N.Y.	42.500	-77.500	52.2	N
01527500	Cohocton River at Avoca, N.Y.	42.398	-77.417	152	N
01528000	Fivemile Creek near Kanona, N.Y.	42.388	-77.358	66.8	N
01529000	Mud Creek near Savona, N.Y.	42.308	-77.197	76.6	Y
01529500	Cohocton River near Campbell, N.Y.	42.253	-77.217	470	N
01529950	Chemung River at Corning, N.Y.	42.146	-77.057	2,006	Y
01530332	Chemung River at Elmira, N.Y.	42.086	-76.801	2,162	Y
01530500	Newtown Creek at Elmira, N.Y.	42.105	-76.798	77.5	Y
01531000	Chemung River at Chemung, N.Y.	42.002	-76.635	2,506	Y
01531500	Susquehanna River at Towanda, Pa.	41.765	-76.441	7,797	Y
01532000	Towanda Creek near Monroeton, Pa.	41.707	-76.485	215	N
01532850	MB Wyalusing Creek near Birchardville, Pa.	41.863	-76.007	5.67	N
01533400	Susquehanna River at Meshoppen, Pa.	41.607	-76.050	8,720	Y
01533500	North Branch Mehoopany Creek near Lovelton, Pa.	41.531	-76.156	35.2	N
01533950	SB Tunkhannock Creek near Montdale, Pa.	41.575	-75.642	12.6	N
01534000	Tunkhannock Creek near Tunkhannock, Pa.	41.558	-75.895	383	N
01534300	Lackawanna River near Forest City, Pa.	41.680	-75.472	38.8	Y
01534500	Lackawanna River at Archbald, Pa.	41.505	-75.542	108	Y
01536000	Lackawanna River at Old Forge, Pa.	41.359	-75.744	332	Y
01536500	Susquehanna River at Wilkes-Barre, Pa.	41.251	-75.881	9,960	Y
01537000	Toby Creek at Luzerne, Pa.	41.281	-75.896	32.4	Y
01537500	Solomon Creek at Wilkes-Barre, Pa.	41.228	-75.904	15.7	N
01538000	Wapwallopen Creek near Wapwallopen, Pa.	41.059	-76.094	43.8	N
01539000	Fishing Creek near Bloomsburg, Pa.	41.078	-76.431	274	N
01539500	Little Fishing Creek at Eyers Grove, Pa.	41.080	-76.511	56.5	N
01540200	Trexler Run near Ringtown, Pa.	40.853	-76.280	1.77	N
01540500	Susquehanna River at Danville, Pa.	40.958	-76.619	11,220	Y
01541000	West Branch Susquehanna River at Bower, Pa.	40.897	-78.677	315	N
01541200	West Branch Susquehanna River near Curwensville, Pa.	40.961	-78.519	367	Y

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]

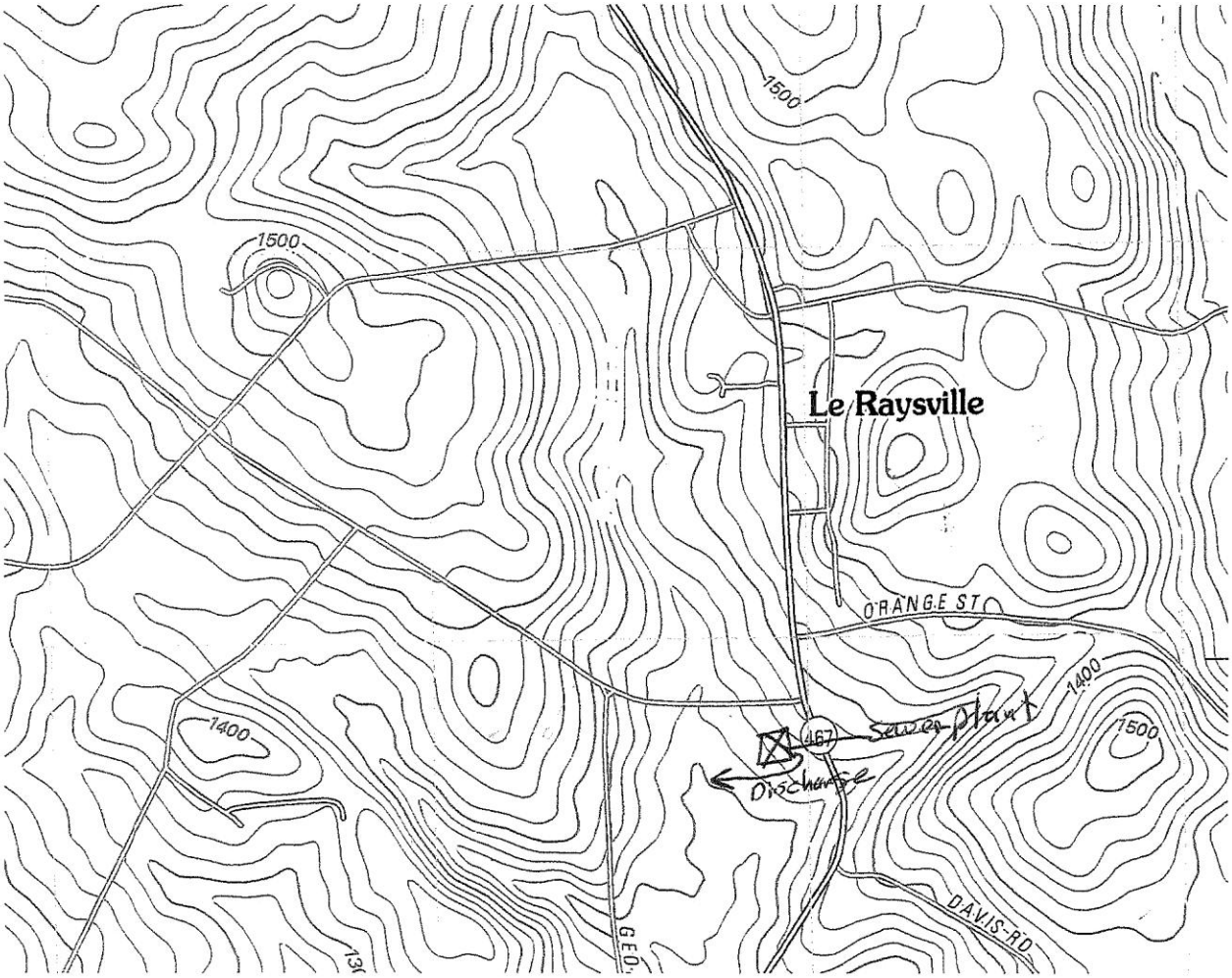
Streamgage number	Period of record used in analysis[1]	Number of years used in analysis	1-day, 10-year (ft³/s)	7-day, 10-year (ft³/s)	7-day, 2-year (ft³/s)	30-day, 10-year (ft³/s)	30-day, 2-year (ft³/s)	90-day, 10-year (ft³/s)
01530500	1940–2008	69	5.0	6.1	11.0	7.6	13	9.0
01531000	[2]1981–2008	28	138	147	237	169	296	203
01531000	[3]1905–1979	68	86.3	97.0	175	116	219	161
01531500	[2]1981–2008	28	550	592	1,030	733	1,340	952
01531500	[3]1915–1979	65	539	571	990	675	1,230	928
01532000	1915–2008	94	2.2	2.8	9.7	4.6	14.4	9.4
01532850	1967–1979	13	.1	.2	.4	.3	.8	.7
01533400	[2]1981–2008	28	602	648	1,110	790	1,430	1,060
01533500	1942–1958	17	.4	.6	1.5	.8	2.0	1.7
01533950	1962–1978	17	.2	.3	1.0	.6	1.4	1.0
01534000	1915–2008	94	15.2	17.3	35.9	24.2	51.0	38.7
01534300	1960–2008	49	1.1	1.7	5.1	2.8	7.6	4.8
01534500	[2]1961–2008	48	16.7	18.8	29.2	21.9	35.8	27.6
01534500	[3]1941–1959	19	18.8	23.0	33.3	25.6	39.2	34.9
01536000	[2]1961–2008	48	28.7	32.7	51.7	40.8	68.1	54.3
01536000	[3]1940–1959	20	77.8	93.9	119	105	138	124
01536500	[2]1981–2008	28	828	872	1,450	1,030	1,830	1,350
01536500	[3]1901–1979	79	778	811	1,350	927	1,640	1,260
01537000	1943–1993	51	1.3	2.0	4.9	3.1	6.4	4.7
01537500	1941–1990	50	.2	.3	1.9	.5	3.1	1.6
01538000	1921–2008	88	3.1	3.6	7.1	5.0	9.3	7.5
01539000	1940–2008	69	15.4	16.8	36.8	21.1	51.1	36.8
01539500	1942–1958	17	.1	.3	1.4	1.0	3.3	2.3
01540200	1965–1981	17	0	0	.3	.1	.3	.1
01540500	[2]1981–2008	28	1,080	1,120	1,870	1,320	2,330	1,690
01540500	[3]1906–1979	74	927	978	1,660	1,160	2,050	1,590
01541000	1915–2008	94	25.3	27.9	50.7	35.3	66.6	49.6
01541200	[2]1967–2008	40	34.6	45.2	66.0	63.1	100	92.4
01541200	[3]1957–1965	9	22.9	24.7	44.7	27.7	58.2	36.4
01541303	1980–2008	29	53.4	58.5	94.0	74.4	123	102
01541308	1969–1979	11	1.3	1.3	1.9	1.6	2.4	2.1
01541500	[2]1962–2008	47	39.0	41.9	66.5	51.9	86.3	70.6
01541500	[3]1915–1960	46	14.9	21.3	41.9	28.5	55.0	42.9
01542000	1942–1993	52	8.1	9.1	14.8	11.3	17.8	14.6
01542500	[2]1967–2008	33	216	235	326	285	435	402
01542500	[3]1941–1965	20	—	131	189	152	243	221
01542810	1966–2008	43	.1	.1	.3	.2	.5	.3
01543000	1915–2008	94	2.9	4.2	16.0	9.6	27.4	19.2
01543500	1940–2008	69	10.7	14.5	44.9	26.6	74.9	50.5
01544000	[2]1957–2008	52	3.3	6.9	19.0	11.2	31.1	19.0
01544500	1942–2008	67	4.2	4.9	12.5	7.5	17.4	11.7
01545000	[2]1964–2008	45	6.8	8.2	21.2	12.0	32.7	20.7
01545500	[2]1963–2008	46	217	238	446	306	629	428
01545500	[3]1909–1961	53	125	141	278	190	387	296
01545600	1966–2008	43	1.2	1.5	4.4	2.4	6.7	4.2

Q_{7-10} Analysis	
Facility:	LeRaysville Borough
Outfall:	001

NPDES Permit No.:	PA0209250
RMI at 001:	6.15

Reference Stream Gage Information	
Stream Name	Rockwell Creek
Reference Gage	01532850
Station Name	MB Wyalusing Creek near Birchardville, PA
Gage Drainage Area (sq. mi.)	5.67
Q_{7-10} at gage (cfs)	0.20
Yield Ratio (cfs/mi^2)	0.0353

Q7-10 at 001	
Drainage Area at 001 (sq. mi.)	1.61
Q7-10 at 001 (cfs)	0.057
Q7-10 at 001 (mgd)	0.0367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Le Raysville
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Sewage Plant
Discharge
DAVIS RD

WQM 7.0 Effluent Limits

SWP Basin	Stream Code	Stream Name
04D	29664	ROCKWELL CREEK

RMI	Name	Permit Number	Disc Flow (mgd)	Parameter	Effl. Limit 30-day Ave. (mg/L)	Effl. Limit Maximum (mg/L)	Effl. Limit Minimum (mg/L)
6.150	LeRaysville Bor	PA0209520	0.035	CBOD5	25		
				NH3-N	4.16	8.32	
				Dissolved Oxygen			4

Input Data WQM 7.0

SWP Basin	Stream Code	Stream Name	RMI	Elevation (ft)	Drainage Area (sq mi)	Slope (ft/ft)	PWS Withdrawal (mgd)	Apply FC
04D	29664	ROCKWELL CREEK	**6.150**	1199.00	1.55	0.00000	0.00	☑

Stream Data

Design Cond.	LFY (cfsm)	Trib Flow (cfs)	Stream Flow (cfs)	Rch Trav Time (days)	Rch Velocity (fps)	WD Ratio	Rch Width (ft)	Rch Depth (ft)	Tributary Temp (°C)	Tributary pH	Stream Temp (°C)	Stream pH
Q7-10	0.100	0.00	0.06	0.000	0.000	0.0	0.00	0.00	20.00	7.00	0.00	0.00
Q1-10		0.00	0.00	0.000	0.000							
Q30-10		0.00	0.00	0.000	0.000							

Discharge Data

Name	Permit Number	Existing Disc Flow (mgd)	Permitted Disc Flow (mgd)	Design Disc Flow (mgd)	Reserve Factor	Disc Temp (°C)	Disc pH
LeRaysville Bor	PA0209520	0.0350	0.0350	0.0350	0.000	25.00	7.00

Parameter Data

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

Input Data WQM 7.0

SWP Basin	Stream Code	Stream Name	RMI	Elevation (ft)	Drainage Area (sq mi)	Slope (ft/ft)	PWS Withdrawal (mgd)	Apply FC
04D	29664	ROCKWELL CREEK	**5.970**	1184.00	1.85	0.00000	0.00	☑

Stream Data

Design Cond.	LFY (cfsm)	Trib Flow (cfs)	Stream Flow (cfs)	Rch Trav Time (days)	Rch Velocity (fps)	WD Ratio	Rch Width (ft)	Rch Depth (ft)	Tributary Temp (°C)	Tributary pH	Stream Temp (°C)	Stream pH
Q7-10	0.100	0.00	0.17	0.000	0.000	0.0	0.00	0.00	20.00	7.00	0.00	0.00
Q1-10		0.00	0.00	0.000	0.000							
Q30-10		0.00	0.00	0.000	0.000							

Discharge Data

Name	Permit Number	Existing Disc Flow (mgd)	Permitted Disc Flow (mgd)	Design Disc Flow (mgd)	Reserve Factor	Disc Temp (°C)	Disc pH
		0.0000	0.0000	0.0000	0.000	25.00	7.00

Parameter Data

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

WQM 7.0 Hydrodynamic Outputs

SWP Basin	Stream Code	Stream Name
04D	29664	ROCKWELL CREEK

RMI	Stream Flow (cfs)	PWS With (cfs)	Net Stream Flow (cfs)	Disc Analysis Flow (cfs)	Reach Slope (ft/ft)	Depth (ft)	Width (ft)	W/D Ratio	Velocity (fps)	Reach Trav Time (days)	Analysis Temp (°C)	Analysis pH
Q7-10 Flow												
6.150	0.06	0.00	0.06	.0541	0.01578	.357	5.14	14.41	0.06	0.177	22.37	7.00
Q1-10 Flow												
6.150	0.04	0.00	0.04	.0541	0.01578	NA	NA	NA	0.06	0.199	22.93	7.00
Q30-10 Flow												
6.150	0.08	0.00	0.08	.0541	0.01578	NA	NA	NA	0.07	0.160	21.99	7.00

WQM 7.0 Modeling Specifications

Parameters	Both	Use Inputted Q1-10 and Q30-10 Flows	☑
WLA Method	EMPR	Use Inputted W/D Ratio	☐
Q1-10/Q7-10 Ratio	0.64	Use Inputted Reach Travel Times	☐
Q30-10/Q7-10 Ratio	1.36	Temperature Adjust Kr	☑
D.O. Saturation	90.00%	Use Balanced Technology	☑
D.O. Goal	6		

WQM 7.0 Wasteload Allocations

SWP Basin	Stream Code	Stream Name
04D	29664	ROCKWELL CREEK

NH3-N Acute Allocations

RMI	Discharge Name	Baseline Criterion (mg/L)	Baseline WLA (mg/L)	Multiple Criterion (mg/L)	Multiple WLA (mg/L)	Critical Reach	Percent Reduction
6.150	LeRaysville Bor	13.15	22.48	13.15	22.48	0	0

NH3-N Chronic Allocations

RMI	Discharge Name	Baseline Criterion (mg/L)	Baseline WLA (mg/L)	Multiple Criterion (mg/L)	Multiple WLA (mg/L)	Critical Reach	Percent Reduction
6.150	LeRaysville Bor	1.66	4.16	1.66	4.16	1	0

Dissolved Oxygen Allocations

RMI	Discharge Name	CBOD5		NH3-N		Dissolved Oxygen		Critical Reach	Percent Reduction
		Baseline (mg/L)	Multiple (mg/L)	Baseline (mg/L)	Multiple (mg/L)	Baseline (mg/L)	Multiple (mg/L)		
6.15	LeRaysville Bor	25	25	4.16	4.16	4	4	0	0

WQM 7.0 D.O.Simulation

SWP Basin	Stream Code	Stream Name
04D	29664	ROCKWELL CREEK

RMI	Total Discharge Flow (mgd)	Analysis Temperature (°C)	Analysis pH
6.150	0.035	22.372	7.000
Reach Width (ft)	**Reach Depth (ft)**	**Reach WDRatio**	**Reach Velocity (fps)**
5.139	0.357	14.405	0.062
Reach CBOD5 (mg/L)	**Reach Kc (1/days)**	**Reach NH3-N (mg/L)**	**Reach Kn (1/days)**
12.91	1.360	1.97	0.840
Reach DO (mg/L)	**Reach Kr (1/days)**	**Kr Equation**	**Reach DO Goal (mg/L)**
6.230	24.046	Owens	6
Reach Travel Time (days)			
0.177			

Subreach Results

TravTime (days)	CBOD5 (mg/L)	NH3-N (mg/L)	D.O. (mg/L)
0.018	12.57	1.94	6.58
0.035	12.24	1.92	6.83
0.053	11.91	1.89	7.00
0.071	11.60	1.86	7.13
0.088	11.29	1.83	7.22
0.106	10.99	1.81	7.29
0.124	10.70	1.78	7.35
0.141	10.42	1.75	7.40
0.159	10.14	1.73	7.44
0.177	9.88	1.70	7.48

Pennsylvania
Department of
Environmental Protection

Approve	Return	Deny	Signatures	Date
X			Jeffrey J. Gocek, EIT Project Manager	12/11/2025
X			Nicholas W. Hartranft, PE Environmental Engineer Manager	12/11/2025