Pennsylvania Department of Environmental Protection

Southcentral Regional Office
CLEAN WATER PROGRAM

NPDES PERMIT FACT SHEET INDIVIDUAL SEWAGE

Application Type	**Renewal**	Application No.	**PA0052400**
Facility Type	**Non-Municipal**	APS ID	**1125348**
Major / Minor	**Minor**	Authorization ID	**1505779**

Applicant and Facility Information

Applicant Name	**Irish Creek MHP, LLC**	Facility Name	**Irish Creek Village MHP**
Applicant Address	10045 Baltimore National Pike, A-7 #303 Ellicott City, MD 21042-3673	Facility Address	Blarney Circle, off 552 Irish Creek Road Mohrsville, PA 19541-9333
Applicant Contact	David Branton, Owner*	Facility Contact	David Branton
Applicant Phone	(410) 717-3274 / gbpaving@aol.com	Facility Phone	(410) 717-3274
Client ID	372705	Site ID	444143 (PF # 468651)
Ch 94 Load Status	Not applicable	Municipality	Centre Township
Connection Status	Not applicable	County	Berks
Date Application Received	July 3, 2024	EPA Waived?	Yes...no final TMDL and no change in limits for parameter for which receiving water is impaired
Date Application Accepted	September 23, 2024	If No, Reason	

Purpose of Application: Renewal / transfer of individual NPDES permit for treated sewage

*previous owner: Harold Spatz, at time of last permit issuance.

Summary of Review

The existing permit for this facility was issued March 21, 2019 to Irish Creek Village, with an expiration date of March 31, 2024. DEP received a permit application via DEP's Public Upload system (Reference #243640) on July 3, 2024, with a correction received (for signature on the application) on July 29, 2024, via email attachment, and an application fee received via Public Upload (same Ref. #243640) on September 20, 2024. Unresolved violations for this facility caused the DEP review of the NPDES application to be halted. Unresolved violations have now been closed and unpaid annual permit fees and an outstanding wastewater operator certification fee have been paid.

The transferred WQM permit (0685402) will be issued simultaneously with the final NPDES permit.

The earliest NPDES permit shown in DEP's eFacts database, coded as a renewal, was issued 8/19/1996. DEP microfiche records indicate that DER issued a NPDES permit 1985, seemingly the original NPDES permit. According to eFacts, Planning approval A3-06926-102-3 was issued 1/11/2008; it is labeled as "New" application type. DEP microfiche records show an earlier Planning approval, issued by DER in 1981: 25-06922-006-4.

Design Flow

The existing permit's limits were based on a design flow of 0.009 MGD. The renewal application indicated the same design flow. The eDMR data from January 1, 2023 through January 31, 2026 indicates an average monthly flow of 0.008 MGD and

Approve	Deny	Signatures	Date
X		*Bonnie Boylan* Bonnie Boylan / Environmental Engineering Specialist	March 17, 2026
x		*Maria D. Bebenek* for Daniel W. Martin, P.E. / Environmental Engineer Manager	March 26, 2026
x		*Maria D. Bebenek* Maria D. Bebenek, P.E. / Environmental Program Manager	March 26, 2026

Summary of Review

a median monthly flow of 0.009 MGD (see attached). The same design flow of 0.009 MGD has been used for the renewal NPDES permit.

eDMR Registration

The facility's wastewater operator has continued to submit eDMRs to DEP following the sale of the property to the new owner.

Hauled-in Wastes

According to their application and past DEP Inspection reports, the facility does not receive hauled-in wastes. According to their application, they do not anticipate accepting hauled-in wastes.

Industrial or Commercial Contributors

None.

Variances

No variances were requested.

Sludge use and/or disposal

Sludge is hauled off-site.

Delaware River Basin Commission (DRBC)

The facility discharges to a waterway within the Delaware River watershed and is thus subject to DRBC requirements. A copy of the draft permit and Fact Sheet will therefore be sent to the DRBC for their review in accordance with State regulations and an interagency agreement. Any comments from DRBC will be considered.

The discharges is below DRBC's reviewable threshold and there are no DRBC dockets for the facility.

Unresolved Violations

There are no open violations for this client according to DEP's Compliance History Summary Report. As of the writing of this Fact Sheet, there are no unpaid Chapter 92a annual fees for this permit according to DEP's Chapter 92a/NOI Annual Fees Unpaid report. (The next annual fee, $500, is due April 1, 2026.)

Public Participation

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

Discharge, Receiving Waters and Water Supply Information			
Outfall No.	001	Design Flow (MGD)	0.009 (= 0.0139 cfs)
Latitude	40º 28' 52.97" (last permit) 40.481378	Longitude	-76º 0' 55.54" last permit -76.015428
Quad Name		Quad Code	
Wastewater Description:	Sewage Effluent		
Receiving Waters	Irish Creek	Stream Code	02153
NHD Com ID	25962038	RMI	3.9
Drainage Area	13.8 sq. mi.	Yield (cfs/mi^2)	0.0364
Q_{7-10} Flow (cfs)	0.502 (= 0.324 MGD)	Q_{7-10} Basis	USGS Stream Stats*
Elevation (ft)	315' (eMapPA)	Slope (ft/ft)	
Watershed No.	3-B	Chapter 93 Class.	Warm Water Fishes (WWF) & Migratory Fishes (MF)
Existing Use	N/A	Existing Use Qualifier	N/A
Exceptions to Use	N/A	Exceptions to Criteria	N/A
Assessment Status	Impaired for Aquatic Life		
Cause(s) of Impairment	Siltation and Habitat Alterations		
Source(s) of Impairment	possibly Agriculture and Habitat Modifications		
TMDL Status	Proposed, not finalized	Name	Irish Creek

Secondary Waters:
Irish Creek empties into Schuylkill River (WWF, MF) at RMI 89.86.

Background/Ambient Data — Data Source – no DEP WQNs on receiving stream

Nearest Downstream Public Water Supply Intake	Pottstown Boro Water Authority		
PWS Waters	Schuylkill River	Flow at Intake (cfs)	
PWS RMI	Approx.. 57	Distance from Outfall (mi)	Approx. 37 miles

*https://streamstats.usgs.gov/ss/.

The Low-Flow Yield (LFY) is calculated as Q7-10 / Drainage Area: 0.502 cfs / 13.8 sq.mi.=0.0364 cfs/mi^2

$Q_{stream} / Q_{discharge}$ = 0.502 cfs / [0.009 MGD * (1.547 cfs/MGD)] = 36:1

The 30-day (Q_{30-10}) flow and 1-day (Q_{1-10}) stream flow are calculated from the Q_{7-10} (DEP Technical Guidance Document No. 386-2000-003): Q_{30-10} = 1.36 * Q_{7-10} ; and Q_{1-10} = 0.64 * Q_{7-10}.
DEP models estimate the 30-day (Q_{30-10}) and acute (Q_{1-10}) stream flows at the discharge point as follows:
Q_{30-10} = 1.36 * 0.502 cfs = 0.68 cfs
Q_{1-10} = 0.64 * 0.502 cfs = 0.32 cfs

Downstream treated sewage dischargers (to include in modeling):
PA0085669, Centerport Boro STP, 1.35 RMI of Irish Creek, 1.14 miles downstream from Irish Creek MHP

The receiving stream is **not** a Class A Wild Trout stream or a Trout Natural Reproduction Water

Treatment Facility Summary

Treatment Facility Name: Irish Creek Village MHP

WQM Permit No.	Issuance Date
0685402	December 18, 1985

Waste Type	Degree of Treatment	Process Type	Disinfection	Avg Annual Flow (MGD)
Sewage	Secondary	Extended Aeration	Hypochlorite	0.009

Hydraulic Capacity (MGD)	Organic Capacity (lbs/day)	Load Status	Biosolids Treatment	Biosolids Use/Disposal
0.009			None	Hauled off-site

Description of treatment in the permit application:

"Flow is pumped into an Equalization tank from an influent pumping station. From the EQ tank flow moves forward to the Aeration tank. From the Aeration tank flow moves to a Clarifier. Effluent from the clarifier moves forward to the Chlorine Contact Tank." Chlorine tablets used for disinfection and Sodium Bisulfite tablets used for dechlorination.

From the most recent DEP Inspection report:

using Soda ash for alkalinity and calcium hypochlorite tablets for disinfection. Also using Sodium Sulfite.[sic]

EXISTING PERMIT LIMITS, OUTFALL 001: (Proofed)

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day)		Concentrations (mg/L)				Minimum Measurement Frequency	Required Sample Type
	Average Monthly	Weekly Average	Minimum	Average Monthly	Weekly Average	Instant. Maximum		
Flow (MGD)	Report	Report Daily Max	XXX	XXX	XXX	XXX	Continuous	Measured
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	1/day	Grab
Dissolved Oxygen	XXX	XXX	5.0 Inst Min	XXX	XXX	XXX	1/day	Grab
Total Residual Chlorine (TRC)	XXX	XXX	XXX	0.5	XXX	1.6	1/day	Grab
Carbonaceous Biochemical Oxygen Demand (CBOD5)	Report	Report	XXX	25.0	40.0	50.0	2/month	24-Hr Composite
Total Suspended Solids	Report	Report	XXX	30.0	45.0	60.0	2/month	24-Hr Composite
Fecal Coliform (No./100 ml) Oct 1 – Apr 30	XXX	XXX	XXX	2000 Geo Mean	XXX	10000	2/month	Grab
Fecal Coliform (No./100 ml) May 1 – Sep 30	XXX	XXX	XXX	200 Geo Mean	XXX	1000	2/month	Grab
Nitrate-Nitrite as N	XXX	XXX	XXX	Report	XXX	XXX	2/month	24-Hr Composite
Nitrate-Nitrite as N (Total Load, lbs) (lbs)	Report Total Mo	XXX	XXX	XXX	XXX	XXX	1/month	Calculation
Total Nitrogen	XXX	XXX	XXX	Report	XXX	XXX	1/month	Calculation
Total Nitrogen (Total Load, lbs) (lbs)	Report Total Mo	XXX	XXX	XXX	XXX	XXX	1/month	Calculation
Total Nitrogen (Total Load, lbs) (lbs)	XXX	Report Total Annual	XXX	XXX	XXX	XXX	1/year	Calculation
Ammonia-Nitrogen	Report	XXX	XXX	20.0	XXX	40.0	2/month	24-Hr Composite
Ammonia-Nitrogen (Total Load, lbs) (lbs)	Report Total Mo	XXX	XXX	XXX	XXX	XXX	1/month	Calculation
Total Kjeldahl Nitrogen	XXX	XXX	XXX	Report	XXX	XXX	2/month	8-Hr Composite
Total Kjeldahl Nitrogen (Total Load, lbs) (lbs)	Report Total Mo	XXX	XXX	XXX	XXX	XXX	1/month	Calculation
Total Phosphorus	Report	XXX	XXX	Report	XXX	XXX	2/month	24-Hr Composite

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day)		Concentrations (mg/L)				Minimum Measurement Frequency	Required Sample Type
	Average Monthly	Weekly Average	Minimum	Average Monthly	Weekly Average	Instant. Maximum		
Total Phosphorus (Total Load, lbs) (lbs)	Report Total Mo	XXX	XXX	XXX	XXX	XXX	1/month	Calculation
Total Phosphorus (Total Load, lbs) (lbs)	XXX	Report Total Annual	XXX	XXX	XXX	XXX	1/year	Calculation

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

at Outfall 001

Compliance History

DMR Data for Outfall 001 (from February 1, 2025 to January 31, 2026)

Parameter	JAN-26	DEC-25	NOV-25	OCT-25	SEP-25	AUG-25	JUL-25	JUN-25	MAY-25	APR-25	MAR-25	FEB-25
Flow (MGD) Average Monthly	0.0116	0.0095	0.013	0.011	0.004	0.005	0.011	0.014	0.012	0.011	0.008	0.01
Flow (MGD) Daily Maximum	0.026	0.0199	0.047	0.033	0.009	0.013	0.036	0.043	0.027	0.019	0.025	0.017
pH (S.U.) Instantaneous Minimum	7.0	7.0	7.0	7.0	7.0	7.1	6.8	7.1	7.0	7.1	7.0	7.0
pH (S.U.) Instantaneous Maximum	7.7	7.6	7.5	7.5	7.7	7.7	7.7	7.7	7.7	7.7	7.7	7.9
DO (mg/L) Instantaneous Minimum	7.0	7.0	6.6	5.2	5.7	5.6	5.4	5.8	5.3	6.0	6.4	6.6
TRC (mg/L) Average Monthly	0.15	0.16	0.15	0.13	0.16	< 0.12	0.1	< 0.1	< 0.11	< 0.05	< 0.06	< 0.07
TRC (mg/L) Instantaneous Maximum	0.4	0.37	0.6	0.3	0.34	0.27	0.21	0.22	0.42	0.14	0.2	0.17
CBOD5 (lbs/day) Average Monthly	1	0.2	< 0.2	0.7	0.2	0.04	0.2	0.8	1	0.3	1	0.3
CBOD5 (lbs/day) Weekly Average	1	0.2	0.3	0.7	0.1	0.07	0.3	1	1	0.6	1	0.5
CBOD5 (mg/L) Average Monthly	17.0	2.0	< 4.0	5.0	4.0	2.0	7.0	5.0	11.0	3.0	16.0	5.0
CBOD5 (mg/L) Weekly Average	17.0	3.0	6.0	5.0	4.0	2.0	8.0	6.0	15.0	3.0	20.0	7.0
TSS (lbs/day) Average Monthly	2	< 0.1	0.5	1	0.3	0.05	0.1	1	0.6	0.4	1	0.2
TSS (lbs/day) Weekly Average	2	0.2	1	1	0.08	0.07	0.2	2	0.6	0.5	0.9	0.4
TSS (mg/L) Average Monthly	19.0	< 3.0	9.0	9.0	5.0	3.0	3.0	8.0	6.0	4.0	15.0	4.0
TSS (mg/L) Weekly Average	19.0	4.0	17.0	9.0	3.0	4.0	5.0	10.0	8.0	5.0	14.0	6.0
Fecal Coliform (No./100 ml) Geometric Mean	< 27	2192	< 2	< 2	< 2	< 2	< 2	< 33	10921	< 2	< 200	< 2

Fecal Coliform (No./100 ml) Instantaneous Maximum	360	3100	< 2	3	< 2	< 2	< 2	540	17800	< 2	> 20000	< 2
Nitrate-Nitrite (mg/L) Average Monthly	19.8	12.2	10.31	30.2	0.54	< 0.46	7.77	2.25	1.03	38.1	0.53	1.06
Nitrate-Nitrite (lbs) Total Monthly	55	29	9	130	1	< 0.4	8	11	6	98	1	2
Total Nitrogen (mg/L) Average Monthly	32.9	< 14.82	< 12.73	< 32.39	20.94	< 25.11	16.26	11.91	14.87	< 38.6	27.58	16.57
Total Nitrogen (lbs) Total Monthly	92	< 36	< 13	< 147	30	< 16	17	54	47	< 99	66	29
Total Nitrogen (lbs) Total Annual		< 47.67										
Ammonia (lbs/day) Average Monthly	0.5	0.1	0.05	0.3	0.9	0.5	0.3	1	1	< 0.002	2	0.9
Ammonia (mg/L) Average Monthly	6.15	1.58	1.08	1.45	19.8	22.9	7.65	7.57	12.01	< 0.02	23.3	14.97
Ammonia (lbs) Total Monthly	16	3	2	11	28	15	8	31	34	< 0.05	56	26
TKN (mg/L) Average Monthly	13.1	< 2.62	< 2.42	< 2.19	20.4	24.7	8.5	9.67	13.84	< 0.5	27.1	15.51
TKN (lbs) Total Monthly	37	< 6	< 4	< 17	29	16	9	42	41	< 1	65	27
Total Phosphorus (lbs/day) Average Monthly	0.05	0.2	0.06	0.07	0.09	0.07	0.1	0.2	0.1	0.02	0.2	0.1
Total Phosphorus (mg/L) Average Monthly	0.66	2.62	2.04	0.7	2.15	3.06	3.22	1.11	1.43	0.25	2.64	1.72
Total Phosphorus (lbs) Total Monthly	2	6	2	2	3	2	3	5	4	0.7	6	3
Total Phosphorus (lbs) Total Annual		3.23										

Compliance History

Effluent Violations for Outfall 001, from January 1, 2024 to January 31, 2026:

Parameter	Date	SBC	DMR Value	Units	Limit Value	Units
Fecal Coliform	12/31/25	Geo Mean	2192	No./100 ml	2000	No./100 ml
Fecal Coliform	05/31/25	Geo Mean	10,921	No./100 ml	200	No./100 ml
Fecal Coliform	05/31/25	IMAX	17,800	No./100 ml	1000	No./100 ml
Fecal Coliform	03/31/25	IMAX	> 20,000	No./100 ml	10,000	No./100 ml
Ammonia	08/31/25	Avg Mo	22.9	mg/L	20.0	mg/L
Ammonia	03/31/25	Avg Mo	23.3	mg/L	20.0	mg/L
CBOD5	1/31/2024	Avg. Wkly	50	mg/L	40	mg/L
CBOD5	1/31/2024	Avg.Mo.	35	mg/L	25	mg/L

Notice of Violation (NOV) dated June 10, 2025 for not submitting annual fee of $500 which was due 4/1/2025.

NOV dated July 26, 2024 for operating without a valid NPDES permit and not submitting an application for a permit renewal.

NOV dated June 6, 2024 for annual fee of $500 not yet paid. Due date was 4/1/2024.

NOV dated December 28, 2023 for not paying Wastewater Operator Certification Service Fee of $65, due August 31, 2023.

NOV dated Nov 9, 2023 for not submitting renewal NPDES application on time. Permit expires 3/31/2024.

NOV dated June 2, 2023 for annual fee of $500 not yet paid. Due date was 4/1/2023.

Summary of DEP Inspections:

6/13/2024 – Violation: discharging without a permit. Previous permit expired March 31, 2024. Facility has not submitted a permit renewal application.

Effluent samples collected by DEP on June 24, 2024 (second visit): had small red worms within it.
Their effluent sample location is the CCT. They have been collecting 24-hour composites, time proportional. Should collect flow-proportional samples.

Sewage is collected in gravity flow collection system which is owned and maintained by permittee. Aerated EQ tank (diffusers) after the influent lift station. Two aeration tanks, four blowers used in rotation. Soda ash added as needed to boost alkalinity. Cone-shaped clarifier. Surface scum observed. Using calcium hypochlorite tablets for disinfection, hand fed because chlorine feeder in CCT tank was removed. After CCT tank, post-aeration tank, v-notch weir, ultrasonic flow meter (installed in March 2022), totalizer. Comminutor is not in operation. Sludge hauling manifests were available on site. Facility has alarms and a propane-fueled generator.

11/23/2020 – No violations noted. Please haul sludge as soon as possible and report on DMRs. Sludge hauling has not been reported on Supplemental DMRs since 2020.

Wet weather flows have had a negative impact on the STP. The facility operator attributed Fecal Coliform exceedances to exceeding CCT capabilities during high flow from wet weather events. They also have a dechlor tank, which was cleaned after the Fecal Coliform exceedances. The facility operator attributed TSS exceedance to a return sludge line blocked with leaves.

Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** 0.009
Latitude 40º 28' 52.97" **Longitude** -76º 0' 55.54"
Wastewater Description: Sewage Effluent

Permit limits can be Technology Based Effluent Limitations or Water Quality Based Effluent Limitations. Both are discussed in this Fact Sheet, in separate sections. Existing permit limits can also be carried forward such as to comply with anti-backsliding requirements and federal regulations.

Technology-Based Effluent Limitations (TBELs)

The following technology-based limitations apply, subject to water quality analysis and Best Professional Judgement (BPJ) where applicable:

Pollutant	Limit (mg/l)	SBC	Federal Regulation	State Regulation	DRBC*
$CBOD_5$	25	Average Monthly	133.102(a)(4)(i)	92a.47(a)(1)	18 CFR Part 410** ¶ 3.10.4.A.
Total Suspended Solids (TSS)	30	Average Monthly	133.102(b)(1)	92a.47(a)(1)	18 CFR Part 410** ¶ 3.10.4.D.1.
Total Suspended Solids (TSS)	45	Avg Weekly			18 CFR Part 410** ¶ 3.10.4.D.1.
pH	6.0 – 9.0 S.U.	Min – Max	133.102l	95.2(1)	
Fecal Coliform (5/1 – 9/30)	200 / 100 ml	Geo Mean	-	92a.47(a)(4)	18 CFR Part 410** ¶ 4.30.4
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 (TRC)	0.5	Average Monthly	-	92a.48(b)(2)	
Ammonia as N	20	Average Monthly			18 CFR Part 410** ¶ 4.30.5.D
Total Dissolved Solids (TDS)	1000***	Average			18 CFR Part 410** ¶ 3.10.4.D.2.
Total Phosphorus	2.0, but only when receiving water is impaired for phosphorus	Average Monthly		96.5(c)	

*Pa Code § 92a.12. Treatment requirements:

(b) When interstate or international agencies under an interstate compact or international agreement establish applicable effluent limitations or standards for dischargers of this Commonwealth to surface waters that are more stringent than those required by this title, the more stringent standards and limitations apply.

**Administrative Manual-Part III Water Quality Regulations 18 CFR Part 410

***Or a concentration established by the DRBC which is compatible with designated water uses and stream quality objectives and recognizes the need for reserve capacity to serve future dischargers (such as a limit that will not cause TDS in the stream to exceed the lesser of 500 mg/l or 133% of background).

The above TBELs for **$CBOD_5$, TSS**, **pH, Fecal Coliform, TRC, and Ammonia** are included as limits in the draft renewal permit and are the same limits as in the existing permit.

The existing permit also imposed weekly average concentration limits for $CBOD_5$ (40.0 mg/l) and Instantaneous Maximum concentration limits—all of which are TBELs-- that have been carried forward into the draft renewal permit. (Instantaneous Maximum concentration limits are recommended to be imposed by DEP's Technical Guidance for the Development and Specification of Effluent Limitations, document #386-0400-001.)

DEP's NPDES application for minor sewage facilities with a design flow less than 0.1 MGD does not require effluent sampling data for **TDS**. The existing permit did not require monitoring for TDS. It is therefore not known if the discharge's concentration of TDS is below 1000 mg/l as an average. The in-stream TDS concentration is also not known for the receiving water. Because no industrial wastewater is contributed to the treatment plant and given the size of this facility, no TDS limit has been added to the permit but the draft renewal permit includes a quarterly monitoring requirement for TDS.

Because the receiving water and downstream waterway have not been assessed as impaired for **Total Phosphorus**, the TBEL for Total Phosphorus is not included in the draft renewal permit. The existing permit also did not include a limit for Total Phosphorus.

Best Professional Judgment (BPJ) Limitations:

The existing permit limit for Dissolved Oxygen (DO), imposed on discharges in order to maintain the in-stream minimum DO as provided in 25 Pa. Code § 93.7 for receiving waters designated as 'WWF', has also been carried forward into the renewal permit. The same DO limit has been assigned to other sewage facilities in the region.

Water Quality-Based Effluent Limitations (WQBELs)

Total Maximum Daily Loads (TMDLs):

Irish Creek was assessed as impaired and added to the 303(d) list of impaired waters (which is provided to EPA as required by the Clean Water Act). There was a TMDL proposed for Irish Creek watershed to address siltation but it was not finalized, according to the DEP supervising biologist for this region and the EPA-approved TMDL website and the ATTAINS database.

The draft TMDL (see attached) included a Waste Load Allocation (WLA) for this facility of 2.25 lbs/day, calculated as follows: 30 mg/l (TBEL for TSS) x 0.009 MGD (permitted flow at the time of the drafted TMDL) x 8.34 conversion factor. The same TBEL for TSS and the same permitted flow is included in this draft renewal permit. Therefore, the draft renewal permit is not authorizing any increase in TSS loading to the receiving water.

The facility's DMRs from January 1, 2023 through January 31, 2026 indicate an average TSS concentration in their discharge of 9.43 mg/l and an average TSS loading of 0.64 lbs/day. None of the 37 months of reviewed DMRs reported a monthly average TSS load more than 2.25 lbs/day (see the attached).

WQBELs other than TMDLs:

DEP uses a model known as **WQM 7.0** to determine any WQBELs for **$CBOD_5$, Ammonia (NH3-N), and Dissolved Oxygen** (DO). DEP's 'Implementation Guidance for Section 93.7 Ammonia Criteria', document #386-2000-022, provides the methods and calculations contained in the WQM 7.0 model for conducting wasteload allocation and for determining recommended NPDES effluent limits for point source discharges. For more explanation of the WQM 7.0 model, see 'Technical Reference Guide WQM 7.0 for Windows, Wasteload Allocation Program for Dissolved Oxygen and Ammonia Nitrogen', document #386-2000-016. Because Centerport Sewage Treatment Plant is located approximately one mile downstream, it was included in the model simulation.

The source of the River Mile Indices (RMI's) and elevations that were used in the WM 7.0 model was DEP's eMapPA while the source of the Drainage Areas and stream design low-flows (Q7-10, the lowest consecutive 7 days of stream flow over a 10-year period) was the USGS PA Stream Stats online tool (see attached). Low Flow Yield (LFY) is calculated as stream low-flow Q7-10 divided by Drainage Area. When there are no available site-specific data, default values are used in the models, such as for stream temperature and pH and background concentrations.

The WQM 7.0 model indicated that the existing permit limits for **$CBOD_5$, DO, and Ammonia** (TBELs) are protective of the receiving stream's designated uses. More stringent WQBELs were not indicated. See the attached results and input values. The existing permit limits for these parameters are being carried forward into the draft renewal permit.

DEP's uses a TRC model (Excel spreadsheet) to determine any WQBELs for **TRC**: the model utilizes the equations and calculations provided in DEP's 'Implementation Guidance Total Residual Chlorine (TRC) Regulation' for TRC, document #386-2000-011.

The TRC model indicated that the existing permit limits for **TRC** (TBELs) are protective of the receiving stream's designated uses. More stringent WQBELs were not indicated. The model results and input values are attached. The existing permit limits for TRC are being carried forward into the draft renewal permit.

DEP's Toxics Management Spreadsheet was not used. There are no known toxic parameters in this discharge.

Anti-Backsliding

No limits in the draft renewal permit are less stringent than the existing permit. [40 CFR §122.44(l(1)]

Mass Loads

Monitoring for mass loading (lbs/day) for CBOD5, TSS, and Ammonia have been carried forward from the existing permit.

The existing permit and the draft renewal permit did not include mass load limits consistent with DEP's Technical Guidance for the Development and Specification of Effluent Limitations [document #386-0400-001] which does not *require* mass load limits for facilities of this size. DEP's SOP 'Establishing Effluent Limitations for Sewage Permits' also does not *require* that mass loading limits be imposed in NPDES permits for non-municipal facilities. However, mass loading limits control loading given that the NPDES permit does not *limit* discharge flow. It would therefore be recommended to add mass loading limits whenever there is an upgrade or expansion of this STP. Mass loading limits would also be added for parameters subject to an approved TMDL.

Sample Types and Monitoring Frequencies

Sample types and monitoring frequencies have been carried forward from the existing permit with the exception of the '8-hour composite' sample type for Total Kjeldahl Nitrogen which has been corrected to '24-hour composite'.

Flow Monitoring

The requirement to monitor the volume of effluent will remain in the draft permit in accordance with 40 CFR § 122.44(i)(1)(ii).

E. Coli Monitoring

Consistent with DEP's SOP 'Establishing Effluent Limitations for Individual Sewage Permits' and due to the regulatory change in the State Water Quality Standards, PA Code Chapter 93, E. Coli monitoring has been included. The statutory basis for this requirement is provided at PA Code § 92a.61. The sampling frequency of once per year is consistent with DEP's SOP 'Establishing Effluent Limitations for Individual Sewage Permits' for facilities of this size.

Total Nitrogen (TN) and Total Phosphorus (TP) Monitoring

The receiving water and downstream waters for this discharger have not been assessed as impaired for nutrients. Therefore, no limits for TN and TP have been imposed.

In an effort to understand nutrient loading on PA streams, sewage dischargers with design flows greater than 2000 gpd are being required to monitor for TN and TP, as a minimum, in new and reissued permits. The statutory basis for this requirement is provided at PA Code § 92a.61. The existing permit also required monitoring of TN and TP.

The Discharge Monitoring Reports (DMR) data from January 1, 2023, through January 31, 2026, indicate an average TN concentration in the effluent of <23.3 mg/l and an average TN load of 538 lbs/year. The DMR data from January 1, 2023, through January 31, 2026, indicate an average TP concentration in the effluent of 2.3 mg/l and an average TP load of 47 lbs/year.

Because there is no TMDL on the receiving water or downstream waters for TN or TP, the requirement to calculate and report Total Monthly Loads and Total Annual Loads for TN and TP has been eliminated from the existing permit. Reporting the mass load in lbs/day for Nitrate-Nitrite and Total Kjeldahl Nitrogen (components of TN), TN, and TP on the monthly DMR is sufficient at this time.

Antidegradation Requirements

The permit limits and conditions are intended to protect the designated and existing uses of the receiving stream. No High Quality or Exceptional Value waters are impacted by this discharge.

Class A Trout Fisheries

The receiving water (and downstream waters) are not considered Class A Trout Waters.

Trout Natural Reproduction Waters

The receiving water (and downstream waters) are not considered Trout Natural Reproduction Waters.

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 as needed and BPJ. Instantaneous Maximum (IMAX) limits are generally 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" (386-0400-001), SOPs and/or BPJ.

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

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day)		Concentrations (mg/L)				Minimum Measurement Frequency	Required Sample Type
	Average Monthly	Weekly Average	Instant. Minimum	Average Monthly	Weekly Average	Instant. Maximum		
Flow (MGD)	Report	Report Daily Max	XXX	XXX	XXX	XXX	Continuous	Measured
pH (S.U.)	XXX	XXX	6.0	XXX	XXX	9.0	1/day	Grab
Dissolved Oxygen	XXX	XXX	5.0	XXX	XXX	XXX	1/day	Grab
Total Residual Chlorine	XXX	XXX	XXX	0.5	XXX	1.6	1/day	Grab
Carbonaceous Biochemical Oxygen Demand (CBOD5)	Report	Report	XXX	25.0	40.0	50	2/month	24-Hr Composite
Total Suspended Solids	Report	Report	XXX	30.0	45.0	60	2/month	24-Hr Composite
Fecal Coliform (No./100 ml) Oct 1 - Apr 30	XXX	XXX	XXX	2000 Geo Mean	XXX	10,000	2/month	Grab
Fecal Coliform (No./100 ml) May 1 - Sep 30	XXX	XXX	XXX	200 Geo Mean	XXX	1000	2/month	Grab
E. Coli	XXX	XXX	XXX	XXX	XXX	Report	1/year	Grab
Total Dissolved Solids	XXX	XXX	XXX	Report Avg Qrtly	XXX	XXX	1/quarter	24-hour composite
Nitrate-Nitrite	Report	XXX	XXX	Report	XXX	XXX	2/month	24-Hr Composite
Total Nitrogen	Report	XXX	XXX	Report	XXX	XXX	1/month	Calculation
Ammonia	Report	XXX	XXX	20.0	XXX	40	2/month	24-Hr Composite
Total Kjeldahl Nitrogen	Report	XXX	XXX	Report	XXX	XXX	2/month	24-Hr Composite

Outfall 001 , Continued (from Permit Effective Date through Permit Expiration Date)

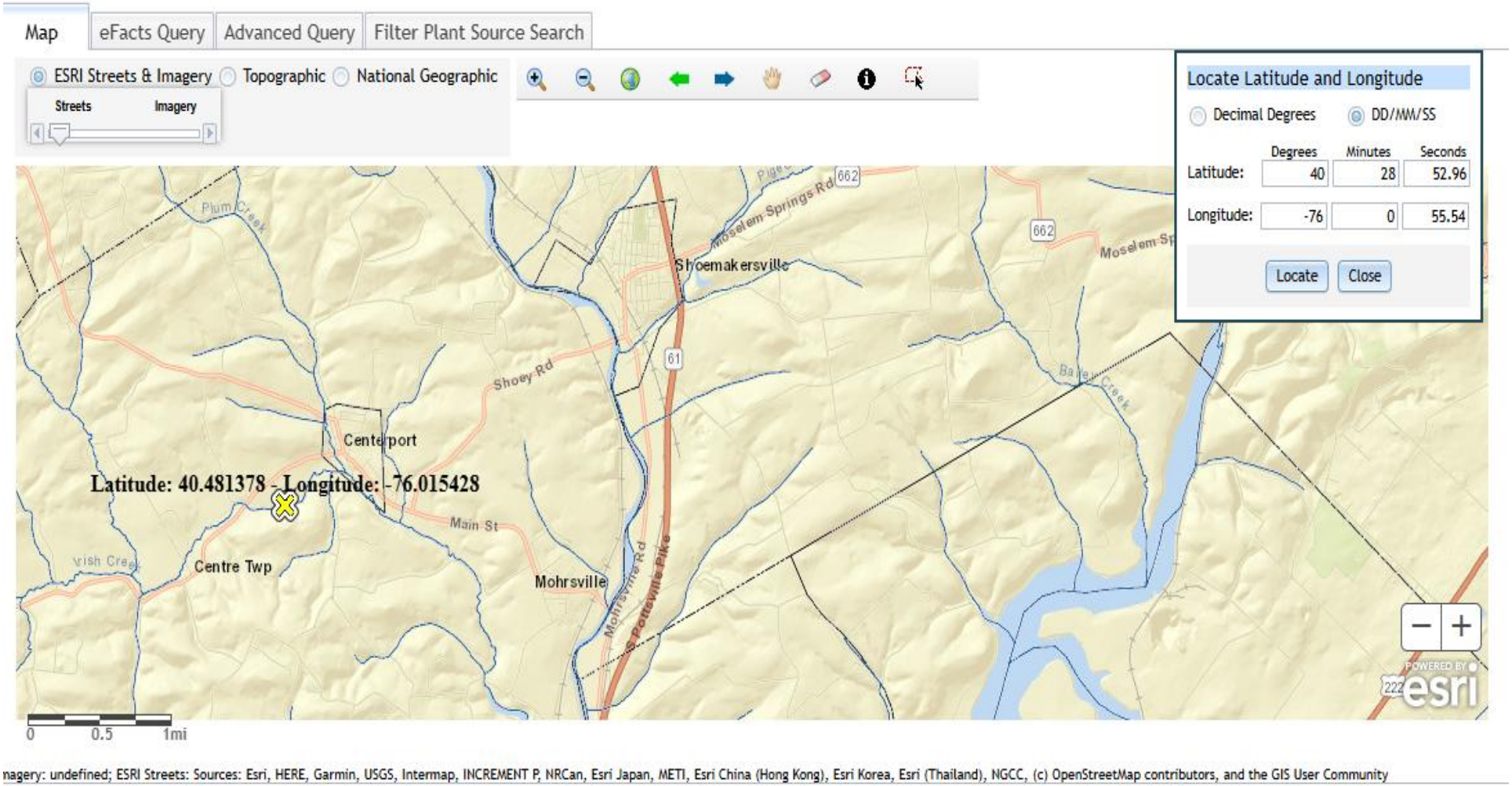
Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day)		Concentrations (mg/L)				Minimum Measurement Frequency	Required Sample Type
	Average Monthly	Weekly Average	Instant. Minimum	Average Monthly	Weekly Average	Instant. Maximum		
Total Phosphorus	Report	XXX	XXX	Report	XXX	XXX	2/month	24-Hr Composite

Compliance Sampling Location: at outfall 001

Other Comments:

Total Nitrogen is the sum of Total Kjeldahl-N (TKN) plus Nitrite-Nitrate as N (NO_2+NO_3-N), where TKN and NO_2+NO_3-N are measured in the same sample.

Tools and References Used to Develop Permit	
☒	WQM for Windows Model (see Attachment)
☐	Toxics Management Spreadsheet (see Attachment)
☒	TRC Model Spreadsheet (see Attachment)
☐	Temperature Model Spreadsheet (see Attachment)
☒	Water Quality Toxics Management Strategy, 361-0100-003, 4/06.
☒	Technical Guidance for the Development and Specification of Effluent Limitations, 386-0400-001, 10/97.
☐	Policy for Permitting Surface Water Diversions, 386-2000-019, 3/98.
☐	Policy for Conducting Technical Reviews of Minor NPDES Renewal Applications, 386-2000-018, 11/96.
☐	Technology-Based Control Requirements for Water Treatment Plant Wastes, 386-2183-001, 10/97.
☐	Technical Guidance for Development of NPDES Permit Requirements Steam Electric Industry, 386-2183-002, 12/97.
☐	Pennsylvania CSO Policy, 386-2000-002, 9/08.
☐	Water Quality Antidegradation Implementation Guidance, 391-0300-002, 11/03.
☐	Implementation Guidance Evaluation & Process Thermal Discharge (316(a)) Federal Water Pollution Act, 386-2000-008, 4/97.
☒	Determining Water Quality-Based Effluent Limits, 386-2000-004, 12/97.
☒	Implementation Guidance Design Conditions, 386-2000-007, 9/97.
☒	Technical Reference Guide (TRG) WQM 7.0 for Windows, Wasteload Allocation Program for Dissolved Oxygen and Ammonia Nitrogen, Version 1.0, 386-2000-016, 6/2004.
☐	Interim Method for the Sampling and Analysis of Osmotic Pressure on Streams, Brines, and Industrial Discharges, 386-2000-012, 10/1997.
☐	Implementation Guidance for Section 95.6 Management of Point Source Phosphorus Discharges to Lakes, Ponds, and Impoundments, 386-2000-009, 3/99.
☐	Technical Reference Guide (TRG) PENTOXSD for Windows, PA Single Discharge Wasteload Allocation Program for Toxics, Version 2.0, 386-2000-015, 5/2004.
☒	Implementation Guidance for Section 93.7 Ammonia Criteria, 386-2000-022, 11/97.
☐	Policy and Procedure for Evaluating Wastewater Discharges to Intermittent and Ephemeral Streams, Drainage Channels and Swales, and Storm Sewers, 386-2000-013, 4/2008.
☒	Implementation Guidance Total Residual Chlorine (TRC) Regulation, 386-2000-011, 11/1994.
☐	Implementation Guidance for Temperature Criteria, 386-2000-001, 4/09.
☐	Implementation Guidance for Section 95.9 Phosphorus Discharges to Free Flowing Streams, 386-2000-021, 10/97.
☐	Implementation Guidance for Application of Section 93.5(e) for Potable Water Supply Protection Total Dissolved Solids, Nitrite-Nitrate, Non-Priority Pollutant Phenolics and Fluorides, 386-2000-020, 10/97.
☐	Field Data Collection and Evaluation Protocol for Determining Stream and Point Source Discharge Design Hardness, 386-2000-005, 3/99.
☐	Implementation Guidance for the Determination and Use of Background/Ambient Water Quality in the Determination of Wasteload Allocations and NPDES Effluent Limitations for Toxic Substances, 386-2000-010, 3/1999.
☒	Design Stream Flows, 386-2000-003, 9/98.
☐	Field Data Collection and Evaluation Protocol for Deriving Daily and Hourly Discharge Coefficients of Variation (CV) and Other Discharge Characteristics, 386-2000-006, 10/98.
☐	Evaluations of Phosphorus Discharges to Lakes, Ponds and Impoundments, 386-3200-001, 6/97.
☐	Pennsylvania's Chesapeake Bay Tributary Strategy Implementation Plan for NPDES Permitting, 4/07.
☒	SOP: New and Reissuance Sewage Individual NPDES Permit Applications, Version 2.0, February 3, 2022
☒	SOP: Establishing Effluent Limitations in Individual Sewage NPDES Permits, Version 2.0, February 5, 2024


Map
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Filter Plant Source Search
ESRI Streets & Imagery
Topographic
National Geographic
Streets
Imagery
Locate Latitude and Longitude
Decimal Degrees
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Longitude:
-76
0
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Centerport
Latitude: 40.481378 - Longitude: -76.015428
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Shoey Rd
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Moselem Springs Rd
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Plum Creek
Bale Creek
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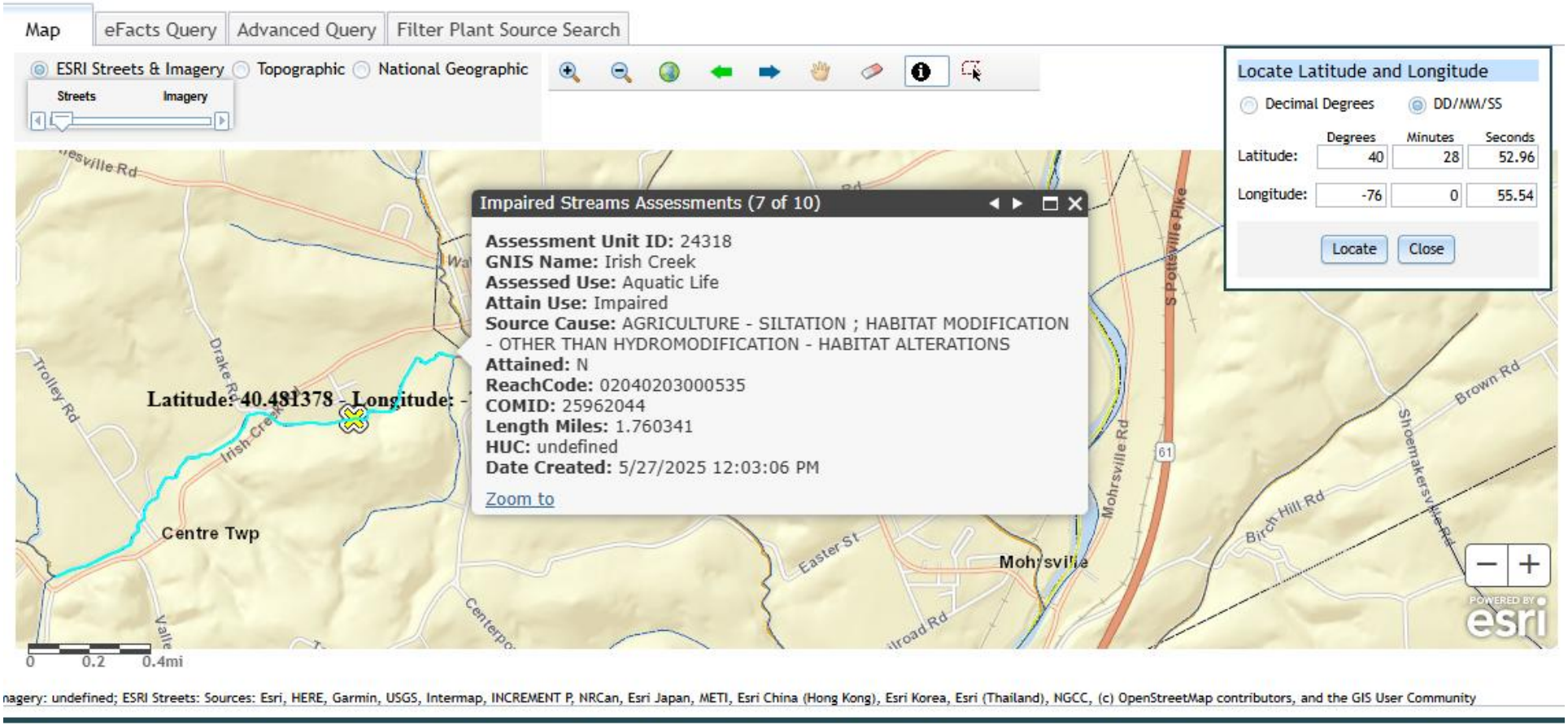
Map
eFacts Query
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Filter Plant Source Search
ESRI Streets & Imagery
Topographic
National Geographic
Streets
Imagery
Locate Latitude and Longitude
Decimal Degrees
DD/MM/SS
Degrees
Minutes
Seconds
Latitude:
40
28
52.96
Longitude:
-76
0
55.54
Locate
Close
Impaired Streams Assessments (7 of 10)
Assessment Unit ID: 24318
GNIS Name: Irish Creek
Assessed Use: Aquatic Life
Attain Use: Impaired
Source Cause: AGRICULTURE - SILTATION ; HABITAT MODIFICATION - OTHER THAN HYDROMODIFICATION - HABITAT ALTERATIONS
Attained: N
ReachCode: 02040203000535
COMID: 25962044
Length Miles: 1.760341
HUC: undefined
Date Created: 5/27/2025 12:03:06 PM
Zoom to
Latitude: 40.481378 - Longitude:
Centre Twp
Mohrsville
Trolley Rd
Drake Rd
Irish Creek
Mohrsville Rd
S Pottsville Pike
Brown Rd
Birch Hill Rd
Shoemakersville Rd
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61
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nagery: undefined; ESRI Streets: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community

PA0052400	1/1/2023	1/31/2023	Monthly	001	Final Effluent	Flow	MGD		0.0113		Monitor	Average Monthly	0.018		Monitor	Daily Maximum
PA0052400	2/1/2023	2/28/2023	Monthly	001	Final Effluent	Flow	MGD		0.001		Monitor	Average Monthly	0.014		Monitor	Daily Maximum
PA0052400	3/1/2023	3/31/2023	Monthly	001	Final Effluent	Flow	MGD		0.008		Monitor	Average Monthly	0.017		Monitor	Daily Maximum
PA0052400	4/1/2023	4/30/2023	Monthly	001	Final Effluent	Flow	MGD		0.007		Monitor	Average Monthly	0.017		Monitor	Daily Maximum
PA0052400	5/1/2023	5/31/2023	Monthly	001	Final Effluent	Flow	MGD		0.006		Monitor	Average Monthly	0.017		Monitor	Daily Maximum
PA0052400	6/1/2023	6/30/2023	Monthly	001	Final Effluent	Flow	MGD		0.009	*	Monitor	Average Monthly*	0.014	*	Monitor	Daily Maximum*
PA0052400	7/1/2023	7/31/2023	Monthly	001	Final Effluent	Flow	MGD		0.007		Monitor	Average Monthly	0.015		Monitor	Daily Maximum
PA0052400	8/1/2023	8/31/2023	Monthly	001	Final Effluent	Flow	MGD		0.005		Monitor	Average Monthly	0.013		Monitor	Daily Maximum
PA0052400	9/1/2023	9/30/2023	Monthly	001	Final Effluent	Flow	MGD		0.006		Monitor	Average Monthly	0.012		Monitor	Daily Maximum
PA0052400	10/1/2023	10/31/2023	Monthly	001	Final Effluent	Flow	MGD		0.004		Monitor	Average Monthly	0.011		Monitor	Daily Maximum
PA0052400	11/1/2023	11/30/2023	Monthly	001	Final Effluent	Flow	MGD		0.005		Monitor	Average Monthly	0.01		Monitor	Daily Maximum
PA0052400	12/1/2023	12/31/2023	Monthly	001	Final Effluent	Flow	MGD		0.009		Monitor	Average Monthly	0.017		Monitor	Daily Maximum
PA0052400	1/1/2024	1/31/2024	Monthly	001	Final Effluent	Flow	MGD		0.01		Monitor	Average Monthly	0.015		Monitor	Daily Maximum
PA0052400	2/1/2024	2/29/2024	Monthly	001	Final Effluent	Flow	MGD		0.009		Monitor	Average Monthly	0.015		Monitor	Daily Maximum
PA0052400	3/1/2024	3/31/2024	Monthly	001	Final Effluent	Flow	MGD		0.009	**	Monitor	Average Monthly**	0.019	**	Monitor	Daily Maximum **
PA0052400	4/1/2024	4/30/2024	Monthly	001	Final Effluent	Flow	MGD		0.005	***	Monitor	Average Monthly***	0.013	***	Monitor	Daily Maximum***
PA0052400	5/1/2024	5/31/2024	Monthly	001	Final Effluent	Flow	MGD		0.005		Monitor	Average Monthly	0.014		Monitor	Daily Maximum
PA0052400	6/1/2024	6/30/2024	Monthly	001	Final Effluent	Flow	MGD		0.003		Monitor	Average Monthly	0.006		Monitor	Daily Maximum
PA0052400	7/1/2024	7/31/2024	Monthly	001	Final Effluent	Flow	MGD		0.005		Monitor	Average Monthly	0.01		Monitor	Daily Maximum
PA0052400	8/1/2024	8/31/2024	Monthly	001	Final Effluent	Flow	MGD		0.008		Monitor	Average Monthly	0.026		Monitor	Daily Maximum
PA0052400	9/1/2024	9/30/2024	Monthly	001	Final Effluent	Flow	MGD		0.012		Monitor	Average Monthly	0.028		Monitor	Daily Maximum
PA0052400	10/1/2024	10/31/2024	Monthly	001	Final Effluent	Flow	MGD		0.011		Monitor	Average Monthly	0.025		Monitor	Daily Maximum
PA0052400	11/1/2024	11/30/2024	Monthly	001	Final Effluent	Flow	MGD		0.013		Monitor	Average Monthly	0.023		Monitor	Daily Maximum
PA0052400	12/1/2024	12/31/2024	Monthly	001	Final Effluent	Flow	MGD		0.016		Monitor	Average Monthly	0.042		Monitor	Daily Maximum
PA0052400	1/1/2025	1/31/2025	Monthly	001	Final Effluent	Flow	MGD		0.007		Monitor	Average Monthly	0.016		Monitor	Daily Maximum
PA0052400	2/1/2025	2/28/2025	Monthly	001	Final Effluent	Flow	MGD		0.01		Monitor	Average Monthly	0.017		Monitor	Daily Maximum
PA0052400	3/1/2025	3/31/2025	Monthly	001	Final Effluent	Flow	MGD		0.008		Monitor	Average Monthly	0.025		Monitor	Daily Maximum
PA0052400	4/1/2025	4/30/2025	Monthly	001	Final Effluent	Flow	MGD		0.011		Monitor	Average Monthly	0.019		Monitor	Daily Maximum
PA0052400	5/1/2025	5/31/2025	Monthly	001	Final Effluent	Flow	MGD		0.012		Monitor	Average Monthly	0.027		Monitor	Daily Maximum
PA0052400	6/1/2025	6/30/2025	Monthly	001	Final Effluent	Flow	MGD		0.014		Monitor	Average Monthly	0.043		Monitor	Daily Maximum
PA0052400	7/1/2025	7/31/2025	Monthly	001	Final Effluent	Flow	MGD		0.011		Monitor	Average Monthly	0.036		Monitor	Daily Maximum
PA0052400	8/1/2025	8/31/2025	Monthly	001	Final Effluent	Flow	MGD		0.005		Monitor	Average Monthly	0.013		Monitor	Daily Maximum
PA0052400	9/1/2025	9/30/2025	Monthly	001	Final Effluent	Flow	MGD		0.004		Monitor	Average Monthly	0.009		Monitor	Daily Maximum
PA0052400	10/1/2025	10/31/2025	Monthly	001	Final Effluent	Flow	MGD		0.011		Monitor	Average Monthly	0.033		Monitor	Daily Maximum
PA0052400	11/1/2025	11/30/2025	Monthly	001	Final Effluent	Flow	MGD		0.013		Monitor	Average Monthly	0.047		Monitor	Daily Maximum
PA0052400	12/1/2025	12/31/2025	Monthly	001	Final Effluent	Flow	MGD		0.0095		Monitor	Average Monthly	0.0199		Monitor	Daily Maximum
PA0052400	1/1/2026	1/31/2026	Monthly	001	Final Effluent	Flow	MGD		0.0116		Monitor	Average Monthly	0.026		Monitor	Daily Maximum
									0.008		Avg		0.020		Avg	
									0.009		Median		0.017		Median	
									0.016		Maximum		0.047		Maximum	

Adjustments made in above data:

*reported Avg Mo. as 0.09 MGD on DMR but Daily Effluent Supplemental DMR showed as 0.009 MGD Avg. Mo.

**reported Avg Mo. as 0.09 MGD and Daily Maximum as 0.19 MGD on DMR but Daily Effl Supplemental DMR showed as 0.009 MGD Avg. Mo. and 0.019 MGD Daily Maximum

***reported Avg Mo. as 0.05 MGD on DMR but Daily Effl Supplemental DMR showed as 0.005 MGD Avg. Mo.

PA0052400	1/1/2023	1/31/2023	Monthly	001	TSS	lbs/day	2	Monitor	Average Mo	4	Monitor	Weekly Av	mg/L		24	30	Average M	41	45	Weekly Av	2/month	24-Hr Composite
PA0052400	2/1/2023	2/28/2023	Monthly	001	TSS	lbs/day	0.4	Monitor	Average Mo	0.6	Monitor	Weekly Av	mg/L		6	30	Average M	7	45	Weekly Av	2/month	24-Hr Composite
PA0052400	3/1/2023	3/31/2023	Monthly	001	TSS	lbs/day	0.7	Monitor	Average Mo	1	Monitor	Weekly Av	mg/L		14	30	Average M	22	45	Weekly Av	2/month	24-Hr Composite
PA0052400	4/1/2023	4/30/2023	Monthly	001	TSS	lbs/day	1	Monitor	Average Mo	2	Monitor	Weekly Av	mg/L		14	30	Average M	23	45	Weekly Av	2/month	24-Hr Composite
PA0052400	5/1/2023	5/31/2023	Monthly	001	TSS	lbs/day	0.6	Monitor	Average Mo	0.7	Monitor	Weekly Av	mg/L		12	30	Average M	16	45	Weekly Av	2/month	24-Hr Composite
PA0052400	6/1/2023	6/30/2023	Monthly	001	TSS	lbs/day	1	Monitor	Average Mo	2	Monitor	Weekly Av	mg/L		16	30	Average M	21	45	Weekly Av	2/month	24-Hr Composite
PA0052400	7/1/2023	7/31/2023	Monthly	001	TSS	lbs/day	0.7	Monitor	Average Mo	0.6	Monitor	Weekly Av	mg/L		17	30	Average M	11	45	Weekly Av	2/month	24-Hr Composite
PA0052400	8/1/2023	8/31/2023	Monthly	001	TSS	lbs/day	0.2	Monitor	Average Mo	0.3	Monitor	Weekly Av	mg/L		7	30	Average M	12	45	Weekly Av	2/month	24-Hr Composite
PA0052400	9/1/2023	9/30/2023	Monthly	001	TSS	lbs/day	0.3	Monitor	Average Mo	0.6	Monitor	Weekly Av	mg/L		6	30	Average M	11	45	Weekly Av	2/month	24-Hr Composite
PA0052400	10/1/2023	10/31/2023	Monthly	001	TSS	lbs/day	0.2	Monitor	Average Mo	0.2	Monitor	Weekly Av	mg/L		9	30	Average M	10	45	Weekly Av	2/month	24-Hr Composite
PA0052400	11/1/2023	11/30/2023	Monthly	001	TSS	lbs/day	0.4	Monitor	Average Mo	0.6	Monitor	Weekly Av	mg/L		9	30	Average M	15	45	Weekly Av	2/month	24-Hr Composite
PA0052400	12/1/2023	12/31/2023	Monthly	001	TSS	lbs/day	0.8	Monitor	Average Mo	1	Monitor	Weekly Av	mg/L		8	30	Average M	11	45	Weekly Av	2/month	24-Hr Composite
PA0052400	1/1/2024	1/31/2024	Monthly	001	TSS	lbs/day	1	Monitor	Average Mo	2	Monitor	Weekly Av	mg/L		16	30	Average M	17	45	Weekly Av	2/month	24-Hr Composite
PA0052400	2/1/2024	2/29/2024	Monthly	001	TSS	lbs/day	1	Monitor	Average Mo	1	Monitor	Weekly Av	mg/L		17	30	Average M	22	45	Weekly Av	2/month	24-Hr Composite
PA0052400	3/1/2024	3/31/2024	Monthly	001	TSS	lbs/day	0.7	Monitor	Average Mo	0.8	Monitor	Weekly Av	mg/L		15	30	Average M	16	45	Weekly Av	2/month	24-Hr Composite
PA0052400	4/1/2024	4/30/2024	Monthly	001	TSS	lbs/day	0.3	Monitor	Average Mo	0.4	Monitor	Weekly Av	mg/L		12	30	Average M	15	45	Weekly Av	2/month	24-Hr Composite
PA0052400	5/1/2024	5/31/2024	Monthly	001	TSS	lbs/day	0.3	Monitor	Average Mo	0.3	Monitor	Weekly Av	mg/L		9	30	Average M	10	45	Weekly Av	2/month	24-Hr Composite
PA0052400	6/1/2024	6/30/2024	Monthly	001	TSS	lbs/da	< 0.04	Monitor	Average Mo	0.05	Monitor	Weekly Av	mg/L	<	2	30	Average M	3	45	Weekly Av	2/month	24-Hr Composite
PA0052400	7/1/2024	7/31/2024	Monthly	001	TSS	lbs/day	0.3	Monitor	Average Mo	0.5	Monitor	Weekly Av	mg/L		4	30	Average M	6	45	Weekly Av	2/month	24-Hr Composite
PA0052400	8/1/2024	8/31/2024	Monthly	001	TSS	lbs/day	0.4	Monitor	Average Mo	0.7	Monitor	Weekly Av	mg/L		6	30	Average M	10	45	Weekly Av	2/month	24-Hr Composite
PA0052400	9/1/2024	9/30/2024	Monthly	001	TSS	lbs/day	2	Monitor	Average Mo	1	Monitor	Weekly Av	mg/L		11	30	Average M	13	45	Weekly Av	2/month	24-Hr Composite
PA0052400	10/1/2024	10/31/2024	Monthly	001	TSS	lbs/day	0.2	Monitor	Average Mo	0.3	Monitor	Weekly Av	mg/L		5	30	Average M	6	45	Weekly Av	2/month	24-Hr Composite
PA0052400	11/1/2024	11/30/2024	Monthly	001	TSS	lbs/day	0.6	Monitor	Average Mo	0.6	Monitor	Weekly Av	mg/L		6	30	Average M	6	45	Weekly Av	1/month	24-Hr Composite
PA0052400	12/1/2024	12/31/2024	Monthly	001	TSS	lbs/day	1	Monitor	Average Mo	2	Monitor	Weekly Av	mg/L		8	30	Average M	14	45	Weekly Av	2/month	24-Hr Composite

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PA0052400	1/1/2025	1/31/2025	Monthly	001	TSS	lbs/day	0.4	Monitor	Average Mo	0.4	Monitor	Weekly Av	mg/L		8	30	Average M	8	45	Weekly Av	2/month	24-Hr Composite
PA0052400	2/1/2025	2/28/2025	Monthly	001	TSS	lbs/day	0.2	Monitor	Average Mo	0.4	Monitor	Weekly Av	mg/L		4	30	Average M	6	45	Weekly Av	2/month	24-Hr Composite
PA0052400	3/1/2025	3/31/2025	Monthly	001	TSS	lbs/day	1	Monitor	Average Mo	0.9	Monitor	Weekly Av	mg/L		15	30	Average M	14	45	Weekly Av	2/month	24-Hr Composite
PA0052400	4/1/2025	4/30/2025	Monthly	001	TSS	lbs/day	0.4	Monitor	Average Mo	0.5	Monitor	Weekly Av	mg/L		4	30	Average M	5	45	Weekly Av	2/month	24-Hr Composite
PA0052400	5/1/2025	5/31/2025	Monthly	001	TSS	lbs/day	0.6	Monitor	Average Mo	0.6	Monitor	Weekly Av	mg/L		6	30	Average M	8	45	Weekly Av	2/month	24-Hr Composite
PA0052400	6/1/2025	6/30/2025	Monthly	001	TSS	lbs/day	1	Monitor	Average Mo	2	Monitor	Weekly Av	mg/L		8	30	Average M	10	45	Weekly Av	2/month	24-Hr Composite
PA0052400	7/1/2025	7/31/2025	Monthly	001	TSS	lbs/day	0.1	Monitor	Average Mo	0.2	Monitor	Weekly Av	mg/L		3	30	Average M	5	45	Weekly Av	2/month	24-Hr Composite
PA0052400	8/1/2025	8/31/2025	Monthly	001	TSS	lbs/day	0.05	Monitor	Average Mo	0.07	Monitor	Weekly Av	mg/L		3	30	Average M	4	45	Weekly Av	2/month	24-Hr Composite
PA0052400	9/1/2025	9/30/2025	Monthly	001	TSS	lbs/day	0.3	Monitor	Average Mo	0.08	Monitor	Weekly Av	mg/L		5	30	Average M	3	45	Weekly Av	2/month	24-Hr Composite
PA0052400	10/1/2025	10/31/2025	Monthly	001	TSS	lbs/day	1	Monitor	Average Mo	1	Monitor	Weekly Av	mg/L		9	30	Average M	9	45	Weekly Av	2/month	24-Hr Composite
PA0052400	11/1/2025	11/30/2025	Monthly	001	TSS	lbs/day	0.5	Monitor	Average Mo	1	Monitor	Weekly Av	mg/L		9	30	Average M	17	45	Weekly Av	2/month	24-Hr Composite
PA0052400	12/1/2025	12/31/2025	Monthly	001	TSS	lbs/da	< 0.1	Monitor	Average Mo	0.2	Monitor	Weekly Av	mg/L	<	3	30	Average M	4	45	Weekly Av	2/month	24-Hr Composite
PA0052400	1/1/2026	1/31/2026	Monthly	001	TSS	lbs/day	2	Monitor	Average Mo	2	Monitor	Weekly Av	mg/L		19	30	Average M	19	45	Weekly Av	2/month	24-Hr Composite
							0.64	Avg							9.43	Avg						
							0.5	Median							8	Median						
							2	Maximum														
							1	90th percentile														

PA0052400	1/1/2023	1/31/2023	Monthly	001	Total Nitrogen (Total Load,	lbs		53	Monitor	Total Monthly
PA0052400	2/1/2023	2/28/2023	Monthly	001	Total Nitrogen (Total Load,	lbs		53	Monitor	Total Monthly
PA0052400	3/1/2023	3/31/2023	Monthly	001	Total Nitrogen (Total Load,	lbs		51	Monitor	Total Monthly
PA0052400	4/1/2023	4/30/2023	Monthly	001	Total Nitrogen (Total Load,	lbs		80	Monitor	Total Monthly
PA0052400	5/1/2023	5/31/2023	Monthly	001	Total Nitrogen (Total Load,	lbs		49	Monitor	Total Monthly
PA0052400	6/1/2023	6/30/2023	Monthly	001	Total Nitrogen (Total Load,	lbs		72	Monitor	Total Monthly
PA0052400	7/1/2023	7/31/2023	Monthly	001	Total Nitrogen (Total Load,	lbs		30	Monitor	Total Monthly
PA0052400	8/1/2023	8/31/2023	Monthly	001	Total Nitrogen (Total Load,	lbs		36	Monitor	Total Monthly
PA0052400	9/1/2023	9/30/2023	Monthly	001	Total Nitrogen (Total Load,	lbs		19	Monitor	Total Monthly
PA0052400	10/1/2023	10/31/2023	Monthly	001	Total Nitrogen (Total Load,	lbs		20	Monitor	Total Monthly
PA0052400	11/1/2023	11/30/2023	Monthly	001	Total Nitrogen (Total Load,	lbs		24	Monitor	Total Monthly
PA0052400	12/1/2023	12/31/2023	Monthly	001	Total Nitrogen (Total Load,	lbs	<	44	Monitor	Total Monthly
								531	lbs per CY 2023	
PA0052400	1/1/2024	1/31/2024	Monthly	001	Total Nitrogen (Total Load,	lbs		48	Monitor	Total Monthly
PA0052400	2/1/2024	2/29/2024	Monthly	001	Total Nitrogen (Total Load,	lbs	<	36	Monitor	Total Monthly
PA0052400	3/1/2024	3/31/2024	Monthly	001	Total Nitrogen (Total Load,	lbs		21	Monitor	Total Monthly
PA0052400	4/1/2024	4/30/2024	Monthly	001	Total Nitrogen (Total Load,	lbs	<	18	Monitor	Total Monthly
PA0052400	5/1/2024	5/31/2024	Monthly	001	Total Nitrogen (Total Load,	lbs	<	17	Monitor	Total Monthly
PA0052400	6/1/2024	6/30/2024	Monthly	001	Total Nitrogen (Total Load,	lbs	<	20	Monitor	Total Monthly
PA0052400	7/1/2024	7/31/2024	Monthly	001	Total Nitrogen (Total Load,	lbs	<	73	Monitor	Total Monthly
PA0052400	8/1/2024	8/31/2024	Monthly	001	Total Nitrogen (Total Load,	lbs	<	52	Monitor	Total Monthly
PA0052400	9/1/2024	9/30/2024	Monthly	001	Total Nitrogen (Total Load,	lbs	<	3	Monitor	Total Monthly
PA0052400	10/1/2024	10/31/2024	Monthly	001	Total Nitrogen (Total Load,	lbs	<	38	Monitor	Total Monthly
PA0052400	11/1/2024	11/30/2024	Monthly	001	Total Nitrogen (Total Load,	lbs	<	34	Monitor	Total Monthly
PA0052400	12/1/2024	12/31/2024	Monthly	001	Total Nitrogen (Total Load,	lbs	<	117	Monitor	Total Monthly
							<	477	lbs per CY 2024	
PA0052400	1/1/2025	1/31/2025	Monthly	001	Total Nitrogen (Total Load,	lbs	<	52	Monitor	Total Monthly
PA0052400	2/1/2025	2/28/2025	Monthly	001	Total Nitrogen (Total Load,	lbs		29	Monitor	Total Monthly
PA0052400	3/1/2025	3/31/2025	Monthly	001	Total Nitrogen (Total Load,	lbs		66	Monitor	Total Monthly
PA0052400	4/1/2025	4/30/2025	Monthly	001	Total Nitrogen (Total Load,	lbs	<	99	Monitor	Total Monthly
PA0052400	5/1/2025	5/31/2025	Monthly	001	Total Nitrogen (Total Load,	lbs		47	Monitor	Total Monthly
PA0052400	6/1/2025	6/30/2025	Monthly	001	Total Nitrogen (Total Load,	lbs		54	Monitor	Total Monthly
PA0052400	7/1/2025	7/31/2025	Monthly	001	Total Nitrogen (Total Load,	lbs		17	Monitor	Total Monthly
PA0052400	8/1/2025	8/31/2025	Monthly	001	Total Nitrogen (Total Load,	lbs	<	16	Monitor	Total Monthly
PA0052400	9/1/2025	9/30/2025	Monthly	001	Total Nitrogen (Total Load,	lbs		30	Monitor	Total Monthly
PA0052400	10/1/2025	10/31/2025	Monthly	001	Total Nitrogen (Total Load,	lbs	<	147	Monitor	Total Monthly
PA0052400	11/1/2025	11/30/2025	Monthly	001	Total Nitrogen (Total Load,	lbs	<	13	Monitor	Total Monthly
PA0052400	12/1/2025	12/31/2025	Monthly	001	Total Nitrogen (Total Load,	lbs	<	36	Monitor	Total Monthly
								606	lbs per CY 2025	

2023	531		531	
2024	477		477	
2025	606		606	
	531	Medain lbs/year	538	Average lbs/year

PA0052400	1/1/2023	1/31/2023	Monthly	001	Total Nitrogen	mg/L		24.66	Monitor a	Average Monthly			1/month	Calculation
PA0052400	2/1/2023	2/28/2023	Monthly	001	Total Nitrogen	mg/L		16	Monitor a	Average Monthly			1/month	Calculation
PA0052400	3/1/2023	3/31/2023	Monthly	001	Total Nitrogen	mg/L		33.21	Monitor a	Average Monthly			1/month	Calculation
PA0052400	4/1/2023	4/30/2023	Monthly	001	Total Nitrogen	mg/L		24.15	Monitor a	Average Monthly			1/month	Calculation
PA0052400	5/1/2023	5/31/2023	Monthly	001	Total Nitrogen	mg/L		28.66	Monitor a	Average Monthly			1/month	Calculation
PA0052400	6/1/2023	6/30/2023	Monthly	001	Total Nitrogen	mg/L		36.76	Monitor a	Average Monthly			1/month	Calculation
PA0052400	7/1/2023	7/31/2023	Monthly	001	Total Nitrogen	mg/L		24.37	Monitor a	Average Monthly			1/month	Calculation
PA0052400	8/1/2023	8/31/2023	Monthly	001	Total Nitrogen	mg/L		33.6	Monitor a	Average Monthly			1/month	Calculation
PA0052400	9/1/2023	9/30/2023	Monthly	001	Total Nitrogen	mg/L		15.27	Monitor a	Average Monthly			1/month	Calculation
PA0052400	10/1/2023	10/31/2023	Monthly	001	Total Nitrogen	mg/L		25.12	Monitor a	Average Monthly			1/month	Calculation
PA0052400	11/1/2023	11/30/2023	Monthly	001	Total Nitrogen	mg/L		13.81	Monitor a	Average Monthly			1/month	Calculation
PA0052400	12/1/2023	12/31/2023	Monthly	001	Total Nitrogen	mg/L	<	12.51	Monitor a	Average Monthly			1/month	Calculation
PA0052400	1/1/2024	1/31/2024	Monthly	001	Total Nitrogen	mg/L		16.23	Monitor a	Average Monthly			1/month	Calculation
PA0052400	2/1/2024	2/29/2024	Monthly	001	Total Nitrogen	mg/L	<	18.32	Monitor a	Average Monthly			1/month	Calculation
PA0052400	3/1/2024	3/31/2024	Monthly	001	Total Nitrogen	mg/L		15.23	Monitor a	Average Monthly			1/month	Calculation
PA0052400	4/1/2024	4/30/2024	Monthly	001	Total Nitrogen	mg/L	<	30.06	Monitor a	Average Monthly			1/month	Calculation
PA0052400	5/1/2024	5/31/2024	Monthly	001	Total Nitrogen	mg/L	<	19.33	Monitor a	Average Monthly			1/month	Calculation
PA0052400	6/1/2024	6/30/2024	Monthly	001	Total Nitrogen	mg/L	<	23.11	Monitor a	Average Monthly			1/month	Calculation
PA0052400	7/1/2024	7/31/2024	Monthly	001	Total Nitrogen	mg/L	<	36	Monitor a	Average Monthly			1/month	Calculation
PA0052400	8/1/2024	8/31/2024	Monthly	001	Total Nitrogen	mg/L	<	28.82	Monitor a	Average Monthly			1/month	Calculation
PA0052400	9/1/2024	9/30/2024	Monthly	001	Total Nitrogen	mg/L	<	22.53	Monitor a	Average Monthly			1/month	Calculation
PA0052400	10/1/2024	10/31/2024	Monthly	001	Total Nitrogen	mg/L	<	16.54	Monitor a	Average Monthly				
PA0052400	11/1/2024	11/30/2024	Monthly	001	Total Nitrogen	mg/L	<	12.5	Monitor a	Average Monthly				
PA0052400	12/1/2024	12/31/2024	Monthly	001	Total Nitrogen	mg/L	<	35.1	Monitor a	Average Monthly				
PA0052400	1/1/2025	1/31/2025	Monthly	001	Total Nitrogen	mg/L	<	32.9	Monitor a	Average Monthly				
PA0052400	2/1/2025	2/28/2025	Monthly	001	Total Nitrogen	mg/L		16.57	Monitor a	Average Monthly				
PA0052400	3/1/2025	3/31/2025	Monthly	001	Total Nitrogen	mg/L		27.58	Monitor a	Average Monthly				
PA0052400	4/1/2025	4/30/2025	Monthly	001	Total Nitrogen	mg/L	<	38.6	Monitor a	Average Monthly				
PA0052400	5/1/2025	5/31/2025	Monthly	001	Total Nitrogen	mg/L		14.87	Monitor a	Average Monthly				
PA0052400	6/1/2025	6/30/2025	Monthly	001	Total Nitrogen	mg/L		11.91	Monitor a	Average Monthly				
PA0052400	7/1/2025	7/31/2025	Monthly	001	Total Nitrogen	mg/L		16.26	Monitor a	Average Monthly				
PA0052400	8/1/2025	8/31/2025	Monthly	001	Total Nitrogen	mg/L	<	25.11	Monitor a	Average Monthly				
PA0052400	9/1/2025	9/30/2025	Monthly	001	Total Nitrogen	mg/L		20.94	Monitor a	Average Monthly				
PA0052400	10/1/2025	10/31/2025	Monthly	001	Total Nitrogen	mg/L	<	32.39	Monitor a	Average Monthly				
PA0052400	11/1/2025	11/30/2025	Monthly	001	Total Nitrogen	mg/L	<	12.73	Monitor a	Average Monthly				
PA0052400	12/1/2025	12/31/2025	Monthly	001	Total Nitrogen	mg/L	<	14.82	Monitor a	Average Monthly				
PA0052400	1/1/2026	1/31/2026	Monthly	001	Total Nitrogen	mg/L		32.9	Monitor a	Average Monthly				
								23.23	Avg					
								23.11	Median					

PA0052400	1/1/2023	1/31/2023	Monthly	001	Total Phosphor	mg/L		1.62	Monito	Average Monthly			2/month	24-Hr Composite
PA0052400	2/1/2023	2/28/2023	Monthly	001	Total Phosphor	mg/L		2.62	Monito	Average Monthly			2/month	24-Hr Composite
PA0052400	3/1/2023	3/31/2023	Monthly	001	Total Phosphor	mg/L		2.32	Monito	Average Monthly			2/month	24-Hr Composite
PA0052400	4/1/2023	4/30/2023	Monthly	001	Total Phosphor	mg/L		3.36	Monito	Average Monthly			2/month	24-Hr Composite
PA0052400	5/1/2023	5/31/2023	Monthly	001	Total Phosphor	mg/L		3.58	Monito	Average Monthly			2/month	24-Hr Composite
PA0052400	6/1/2023	6/30/2023	Monthly	001	Total Phosphor	mg/L		5.38	Monito	Average Monthly			2/month	24-Hr Composite
PA0052400	7/1/2023	7/31/2023	Monthly	001	Total Phosphor	mg/L		3.49	Monito	Average Monthly			2/month	24-Hr Composite
PA0052400	8/1/2023	8/31/2023	Monthly	001	Total Phosphor	mg/L		4.87	Monito	Average Monthly			2/month	24-Hr Composite
PA0052400	9/1/2023	9/30/2023	Monthly	001	Total Phosphor	mg/L		1.67	Monito	Average Monthly			2/month	24-Hr Composite
PA0052400	10/1/2023	10/31/2023	Monthly	001	Total Phosphor	mg/L		4.8	Monito	Average Monthly			2/month	24-Hr Composite
PA0052400	11/1/2023	11/30/2023	Monthly	001	Total Phosphor	mg/L		4.19	Monito	Average Monthly			2/month	24-Hr Composite
PA0052400	12/1/2023	12/31/2023	Monthly	001	Total Phosphor	mg/L		0.75	Monito	Average Monthly			2/month	24-Hr Composite
PA0052400	1/1/2024	1/31/2024	Monthly	001	Total Phosphor	mg/L		1	Monito	Average Monthly			2/month	24-Hr Composite
PA0052400	2/1/2024	2/29/2024	Monthly	001	Total Phosphor	mg/L		1.28	Monito	Average Monthly			2/month	24-Hr Composite
PA0052400	3/1/2024	3/31/2024	Monthly	001	Total Phosphor	mg/L		1.14	Monito	Average Monthly			2/month	24-Hr Composite
PA0052400	4/1/2024	4/30/2024	Monthly	001	Total Phosphor	mg/L		4.17	Monito	Average Monthly			2/month	24-Hr Composite
PA0052400	5/1/2024	5/31/2024	Monthly	001	Total Phosphor	mg/L		3.86	Monito	Average Monthly			2/month	24-Hr Composite
PA0052400	6/1/2024	6/30/2024	Monthly	001	Total Phosphor	mg/L		4.76	Monito	Average Monthly			2/month	24-Hr Composite
PA0052400	7/1/2024	7/31/2024	Monthly	001	Total Phosphor	mg/L		1.96	Monito	Average Monthly			2/month	24-Hr Composite
PA0052400	8/1/2024	8/31/2024	Monthly	001	Total Phosphor	mg/L		0.93	Monito	Average Monthly			2/month	24-Hr Composite
PA0052400	9/1/2024	9/30/2024	Monthly	001	Total Phosphor	mg/L		1.15	Monito	Average Monthly			2/month	24-Hr Composite
PA0052400	10/1/2024	10/31/2024	Monthly	001	Total Phosphor	mg/L		0.55	Monito	Average Monthly				
PA0052400	11/1/2024	11/30/2024	Monthly	001	Total Phosphor	mg/L		1.75	Monito	Average Monthly				
PA0052400	12/1/2024	12/31/2024	Monthly	001	Total Phosphor	mg/L		1.05	Monito	Average Monthly				
PA0052400	1/1/2025	1/31/2025	Monthly	001	Total Phosphor	mg/L		1.36	Monito	Average Monthly				
PA0052400	2/1/2025	2/28/2025	Monthly	001	Total Phosphor	mg/L		1.72	Monito	Average Monthly				
PA0052400	3/1/2025	3/31/2025	Monthly	001	Total Phosphor	mg/L		2.64	Monito	Average Monthly				
PA0052400	4/1/2025	4/30/2025	Monthly	001	Total Phosphor	mg/L		0.25	Monito	Average Monthly				
PA0052400	5/1/2025	5/31/2025	Monthly	001	Total Phosphor	mg/L		1.43	Monito	Average Monthly				
PA0052400	6/1/2025	6/30/2025	Monthly	001	Total Phosphor	mg/L		1.11	Monito	Average Monthly				
PA0052400	7/1/2025	7/31/2025	Monthly	001	Total Phosphor	mg/L		3.22	Monito	Average Monthly				
PA0052400	8/1/2025	8/31/2025	Monthly	001	Total Phosphor	mg/L		3.06	Monito	Average Monthly				
PA0052400	9/1/2025	9/30/2025	Monthly	001	Total Phosphor	mg/L		2.15	Monito	Average Monthly				
PA0052400	10/1/2025	10/31/2025	Monthly	001	Total Phosphor	mg/L		0.7	Monito	Average Monthly				
PA0052400	11/1/2025	11/30/2025	Monthly	001	Total Phosphor	mg/L		2.04	Monito	Average Monthly				
PA0052400	12/1/2025	12/31/2025	Monthly	001	Total Phosphor	mg/L		2.62	Monito	Average Monthly				
PA0052400	1/1/2026	1/31/2026	Monthly	001	Total Phosphor	mg/L		0.66	Monito	Average Monthly				
								2.30	Avg					
								1.96	Median					

PA0052400	1/1/2023	1/31/2023	Monthly	001	Final Effluent	Total Phosphoi	lbs	3	Monitor	Total Monthly		
PA0052400	2/1/2023	2/28/2023	Monthly	001	Final Effluent	Total Phosphoi	lbs	5	Monitor	Total Monthly		
PA0052400	3/1/2023	3/31/2023	Monthly	001	Final Effluent	Total Phosphoi	lbs	4	Monitor	Total Monthly		
PA0052400	4/1/2023	4/30/2023	Monthly	001	Final Effluent	Total Phosphoi	lbs	12	Monitor	Total Monthly		
PA0052400	5/1/2023	5/31/2023	Monthly	001	Final Effluent	Total Phosphoi	lbs	6	Monitor	Total Monthly		
PA0052400	6/1/2023	6/30/2023	Monthly	001	Final Effluent	Total Phosphoi	lbs	10	Monitor	Total Monthly		
PA0052400	7/1/2023	7/31/2023	Monthly	001	Final Effluent	Total Phosphoi	lbs	4	Monitor	Total Monthly		
PA0052400	8/1/2023	8/31/2023	Monthly	001	Final Effluent	Total Phosphoi	lbs	5	Monitor	Total Monthly		
PA0052400	9/1/2023	9/30/2023	Monthly	001	Final Effluent	Total Phosphoi	lbs	2	Monitor	Total Monthly		
PA0052400	10/1/2023	10/31/2023	Monthly	001	Final Effluent	Total Phosphoi	lbs	4	Monitor	Total Monthly		
PA0052400	11/1/2023	11/30/2023	Monthly	001	Final Effluent	Total Phosphoi	lbs	8	Monitor	Total Monthly		
PA0052400	12/1/2023	12/31/2023	Monthly	001	Final Effluent	Total Phosphoi	lbs	3	Monitor	Total Monthly		
								66	lbs for CY 2023			
PA0052400	1/1/2024	1/31/2024	Monthly	001	Final Effluent	Total Phosphoi	lbs	3	Monitor	Total Monthly		
PA0052400	2/1/2024	2/29/2024	Monthly	001	Final Effluent	Total Phosphoi	lbs	3	Monitor	Total Monthly		
PA0052400	3/1/2024	3/31/2024	Monthly	001	Final Effluent	Total Phosphoi	lbs	2	Monitor	Total Monthly		
PA0052400	4/1/2024	4/30/2024	Monthly	001	Final Effluent	Total Phosphoi	lbs	2	Monitor	Total Monthly		
PA0052400	5/1/2024	5/31/2024	Monthly	001	Final Effluent	Total Phosphoi	lbs	3	Monitor	Total Monthly		
PA0052400	6/1/2024	6/30/2024	Monthly	001	Final Effluent	Total Phosphoi	lbs	4	Monitor	Total Monthly		
PA0052400	7/1/2024	7/31/2024	Monthly	001	Final Effluent	Total Phosphoi	lbs	4	Monitor	Total Monthly		
PA0052400	9/1/2024	9/30/2024	Monthly	001	Final Effluent	Total Phosphoi	lbs	5	Monitor	Total Monthly		
PA0052400	10/1/2024	10/31/2024	Monthly	001	Final Effluent	Total Phosphoi	lbs	1	Monitor	Total Monthly		
PA0052400	11/1/2024	11/30/2024	Monthly	001	Final Effluent	Total Phosphoi	lbs	5	Monitor	Total Monthly		
PA0052400	12/1/2024	12/31/2024	Monthly	001	Final Effluent	Total Phosphoi	lbs	2	Monitor	Total Monthly		
								35	lbs for CY 2024			
PA0052400	1/1/2025	1/31/2025	Monthly	001	Final Effluent	Total Phosphoi	lbs	2	Monitor	Total Monthly		
PA0052400	2/1/2025	2/28/2025	Monthly	001	Final Effluent	Total Phosphoi	lbs	3	Monitor	Total Monthly		
PA0052400	3/1/2025	3/31/2025	Monthly	001	Final Effluent	Total Phosphoi	lbs	6	Monitor	Total Monthly		
PA0052400	4/1/2025	4/30/2025	Monthly	001	Final Effluent	Total Phosphoi	lbs	0.7	Monitor	Total Monthly		
PA0052400	5/1/2025	5/31/2025	Monthly	001	Final Effluent	Total Phosphoi	lbs	4	Monitor	Total Monthly		
PA0052400	6/1/2025	6/30/2025	Monthly	001	Final Effluent	Total Phosphoi	lbs	5	Monitor	Total Monthly		
PA0052400	7/1/2025	7/31/2025	Monthly	001	Final Effluent	Total Phosphoi	lbs	3	Monitor	Total Monthly		
PA0052400	8/1/2025	8/31/2025	Monthly	001	Final Effluent	Total Phosphoi	lbs	2	Monitor	Total Monthly		
PA0052400	9/1/2025	9/30/2025	Monthly	001	Final Effluent	Total Phosphoi	lbs	3	Monitor	Total Monthly		
PA0052400	10/1/2025	10/31/2025	Monthly	001	Final Effluent	Total Phosphoi	lbs	2	Monitor	Total Monthly	66	
PA0052400	11/1/2025	11/30/2025	Monthly	001	Final Effluent	Total Phosphoi	lbs	2	Monitor	Total Monthly	35	
PA0052400	12/1/2025	12/31/2025	Monthly	001	Final Effluent	Total Phosphoi	lbs	6	Monitor	Total Monthly	38.7	
								38.7	lbs for CY 2025		46.6	Average
											38.7	Median

Irish Creek Watershed TMDL

Berks County, Pennsylvania

Prepared by:

pennsylvania

DEPARTMENT OF ENVIRONMENTAL PROTECTION

August 2012

Table 8. TMDL Values for the Irish Creek Watershed

Pollutant	Loading Rate in Reference Mill Creek (lb/ac-yr)	Total Area in Irish Creek Watershed (ac)	Target TMDL Value (lb/yr)	Target TMDL Value (lb/day)
Sediment	470.9	16,076.6	7,571,042*	20,743

* takes into account rounding in previous calculations

The target TMDL value was then used as the basis for load allocations and reductions in the Irish Creek Watershed, using the following two equations:

1. TMDL = WLA + LA + MOS
2. LA = ALA + LNR

where:

TMDL = Total Maximum Daily Load
WLA = Waste Load Allocation (Point Sources)
LA = Load Allocation (Nonpoint Sources)
MOS = Margin of Safety
ALA = Adjusted Load Allocation
LNR = Loads Not Reduced

Waste Load Allocation

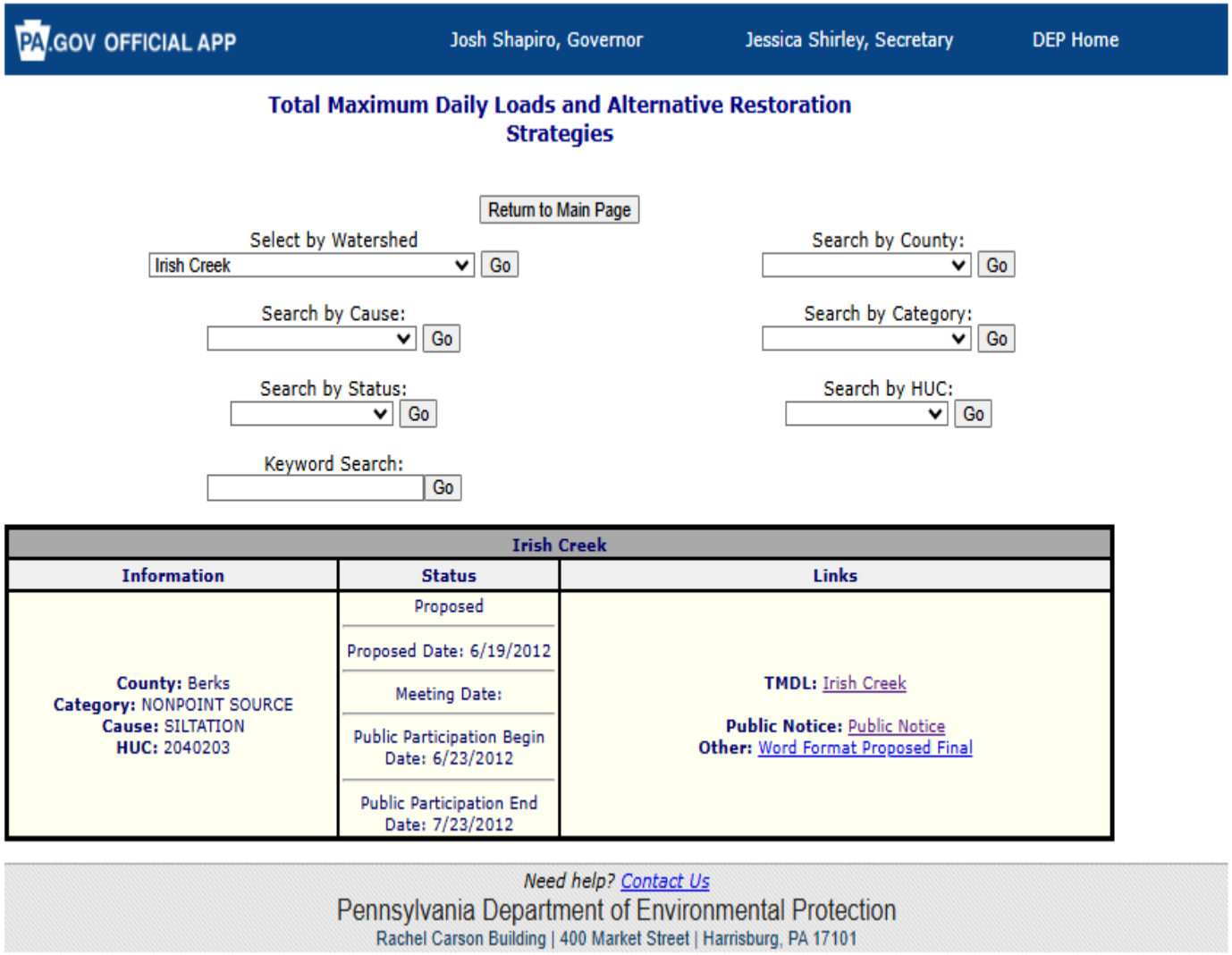
The waste load allocation (WLA) portion of the TMDL equation is the total loading of a pollutant that is assigned to point sources. There are six permitted discharges in the Irish Creek Watershed totaling 73,139.5 lbs/year of total suspended solids (TOS). There is also a bulk reserve allocation of 1.0% of the TMDL, 75,710.4, added to the WLA to account for the dynamic nature of permit activity. The names, NPDES permit numbers, and loading rates are listed below:

Table 9. Waste Load Allocations for the Irish Creek Watershed

Name	NPDES Permit #	WLA (lb/yr)	WLA(lb/day)
[redacted]			
Jordan Crossing	PA 0087581	1,461.17	4.00
Kingsgate STP	PA 0086525	1,095.88	3.00
Dunberville STP	PA 0086771	7,305.84	20.02
Hillcrest STP	PA 0246654	2,283.08	6.26
Centerport STP	PA 0085669	5,479.38	15.01
Centre Twp. (MS4)	PAG 133667	38,861.00	106.47
Bulk Reserve		75,710.4	207.43
Total		133,018	364.44

Additionally, there is one municipality designated as a small Municipal Separate Storm Sewer System (MS4) permittee. The urbanized area within Centre Township lies in the bottom of the watershed and comprises almost exactly 1% of the total watershed area – 163 of 16,077 acres (see

21



PA.GOV OFFICIAL APP | Josh Shapiro, Governor | Jessica Shirley, Secretary | DEP Home

Total Maximum Daily Loads and Alternative Restoration Strategies

Return to Main Page

Select by Watershed: Irish Creek — Go

Search by County: — Go

Search by Cause: — Go

Search by Category: — Go

Search by Status: — Go

Search by HUC: — Go

Keyword Search: — Go

Irish Creek		
Information	**Status**	**Links**
County: Berks **Category:** NONPOINT SOURCE **Cause:** SILTATION **HUC:** 2040203	Proposed Proposed Date: 6/19/2012 Meeting Date: Public Participation Begin Date: 6/23/2012 Public Participation End Date: 7/23/2012	**TMDL:** Irish Creek **Public Notice:** Public Notice **Other:** Word Format Proposed Final

Need help? Contact Us

Pennsylvania Department of Environmental Protection

Rachel Carson Building | 400 Market Street | Harrisburg, PA 17101

Expert Query | US EPA https://owapps.epa.gov/expertquery/attains/tmdl?organizationId=21PA&sourceType=Point%20source&state=PA

ATTAINS database: lists PA TMDLs but nothing for Irish Creek.

How's My Waterway - Waterbody Report https://mywaterway.epa.gov/waterbody-report/21PA/PA-SCR-26000172/2026

Irish Creek-26000172
Assessment Unit ID: PA-SCR-26000172

Waterbody Condition: Impaired (Issues Identified)

Existing Plans for Restoration: No

303(d) Listed: Yes

Year Reported: 2026

303(d) List Status: Organization Public Comment

Other Years Reported: 2016, 2018, 2020, 2022, 2024 (opens new browser tab)

Organization Name (ID): Pennsylvania (21PA)

What type of water is this?

Stream/creek/river (0.4927 Miles)

Where is this water located?

CENTRE TWP, 19533 (county: Berks)

Advanced Filtering (opens new browser tab)

Download Waterbody Data (2026)

The map shows the location and extent of the Assessment Unit for the 2024 reporting cycle. The Assessment Unit may have changed over time.

Assessment Information from 2026

State or Tribal Nation specific designated uses:

Information on Water Quality Standards — Expand All

Warm Water Fishes — Impaired

Probable sources contributing to impairment from 2026:

Click a column heading to sort... Clear Filters

Source	Parameter	Confirmed
Filter...	Filter...	Filter...
Agriculture	Siltation	Yes
Habitat Modification - Other Than Hydromodification	Habitat Alterations	Yes

Click a column heading to sort... Clear Filters

Assessment Documents

No documents are available

Plans to Restore Water Quality

What plans are in place to protect or restore water quality?

No plans specified for this waterbody.

Note the “No Documents are Available”.

Irish Creek-26000320
Assessment Unit ID: PA-SCR-26000320

Waterbody Condition: Impaired (Issues Identified)

Existing Plans for Restoration: No

303(d) Listed: Yes

Year Reported: 2026

303(d) List Status: Organization Public Comment

Other Years Reported: 2016, 2018, 2020, 2022, 2024 (opens new browser tab)

Organization Name (ID): Pennsylvania (21PA)

What type of water is this?

Stream/creek/river (0.036 Miles)

Where is this water located?

CENTRE TWP, 19533 (county: Berks)

Advanced Filtering (opens new browser tab)

Download Waterbody Data (2026)

The map shows the location and extent of the Assessment Unit for the 2024 reporting cycle. The Assessment Unit may have changed over time.

Assessment Information from 2026

State or Tribal Nation specific designated uses:

Information on Water Quality Standards — Expand All

Warm Water Fishes — Impaired

Probable sources contributing to impairment from 2026:

Click a column heading to sort... Clear Filters

Source	Parameter	Confirmed
Filter...	Filter...	Filter...
Agriculture	Siltation	Yes
Habitat Modification - Other Than Hydromodification	Habitat Alterations	Yes

Click a column heading to sort... Clear Filters

Assessment Documents

No documents are available

Plans to Restore Water Quality

What plans are in place to protect or restore water quality?

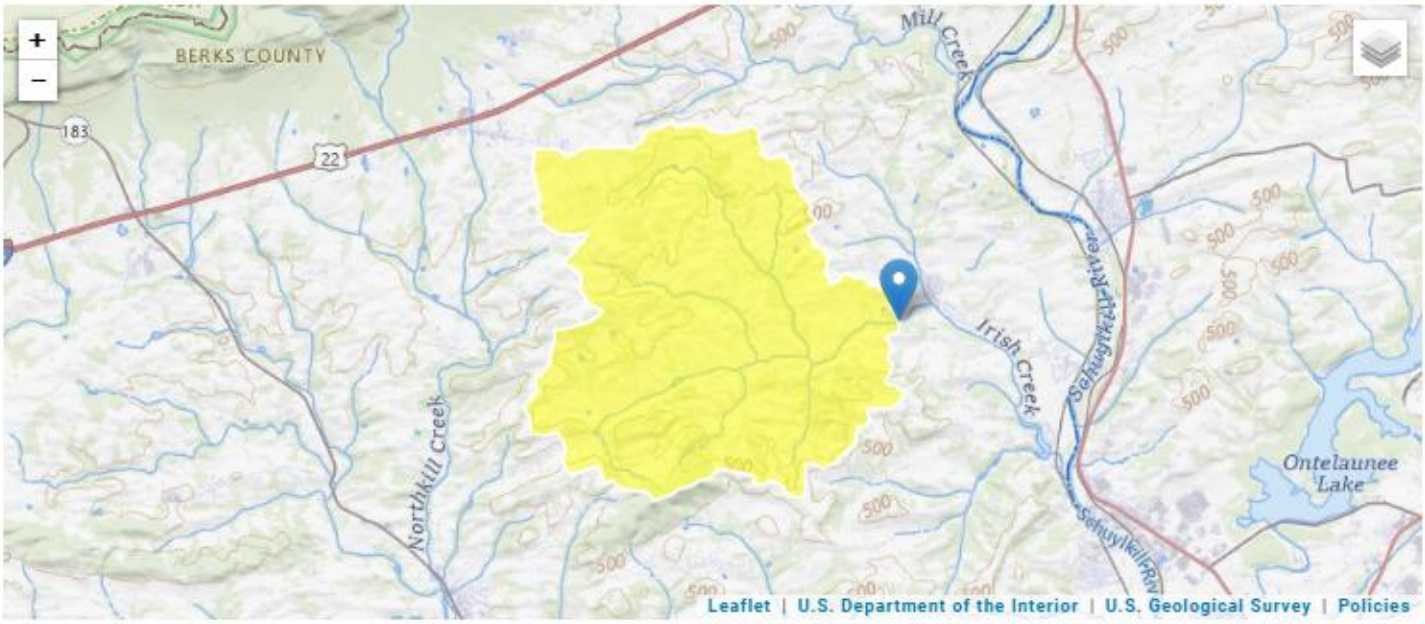
No plans specified for this waterbody.

Note the “No Documents are Available”.

Outfall 001……

StreamStats Report

Region ID: PA
Clicked Point (Latitude, Longitude): 40.48136, -76.01518
Time: 2026-03-12 08:26:18 -0400



StreamStats Update

Starting with version 4.30.0, the StreamStats application uses services that were redeveloped with open-source software components. Users may observe minor variations in computed results when compared to those from previous versions. These differences are expected and do not reflect errors in the underlying data or analytical methods. Users are advised to consider these potential variations when interpreting or comparing results generated across different versions of StreamStats. Please email streamstats@usgs.gov with any questions or concerns. A full list of changes can be found at https://www.usgs.gov/streamstats/news/streamstats-data-updates-open-source-code-release.

Low-Flow Statistics

Low-Flow Statistics Parameters [Low Flow Region 2]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
CARBON	Percent Carbonate	0.5	percent	0	99
DRNAREA	Drainage Area	13.8	square miles	4.93	1280
PRECIP	Mean Annual Precipitation	46.4	inches	35	50.4
ROCKDEP	Depth to Rock	3.3	feet	3.32	5.65
STRDEN	Stream Density	1.494	miles per square mile	0.51	3.1

Low-Flow Statistics Disclaimers [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 [Low Flow Region 2]

Statistic	Value	Unit
7 Day 2 Year Low Flow	1.54	ft^3/s
30 Day 2 Year Low Flow	2.31	ft^3/s
7 Day 10 Year Low Flow	0.502	ft^3/s
30 Day 10 Year Low Flow	0.799	ft^3/s
90 Day 10 Year Low Flow	1.47	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.

Application Version: 4.31.1
SSHydro Services Version: 1.1.1
SSDelineate Services Version: 1.0.1
NSS Services Version: 2.2.1
GageStats Services Version: 1.2.1
Pourpoint Services Version: 1.2.0
Batch Processor Version: 1.6.1

Downstream discharger:

StreamStats Output Report						
State/Region ID	PA					
Latitude	40.47992					
Longitude	-76.00039					
Time	3/12/2026	10:09:03 AM				
Basin Characteristics						
Parameter Code	Parameter Description	Value	Unit			
CARBON	Percentage of area of carbonate rock	1.39	percent			
DRNAREA	Area that drains to a point on a stream	18	square miles			
PRECIP	Mean Annual Precipitation	46.5	inches			
ROCKDEP	Depth to rock	3.3	feet			
STRDEN	Stream Density -- total length of streams	1.541	miles per square mile			
Low-Flow Statistics Para	100.0 Percent Low Flow Region 2					
Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit	
CARBON	Percent Carbonate	1.39	percent	0	99	
DRNAREA	Drainage Area	18	square mi	4.93	1280	
PRECIP	Mean Annual Precipitation	46.5	inches	35	50.4	
ROCKDEP	Depth to Rock	3.3	feet	3.32	5.65	
STRDEN	Stream Density	1.541	miles per s	0.51	3.1	

Low-Flow Statistics Flow	100.0 Percent Low Flow Region 2	
Statistic	Value	Unit
7 Day 2 Year Low Flow	2.05	ft^3/s
30 Day 2 Year Low Flow	3.05	ft^3/s
7 Day 10 Year Low Flow	0.678	ft^3/s
30 Day 10 Year Low Flow	1.07	ft^3/s
90 Day 10 Year Low Flow	1.95	ft^3/s

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USGS Product Names Disclaimer: Any use of trade, firm, or product names is for descriptive purposes only and does not imply endorsement by the U.S. Governm

Application Version: 4.31.1
SSHydro Services Version: 1.1.1
SSDelineate Services Version: 1.0.1
NSS Services Version: 2.2.1
GageStats Services Version: 1.2.1
Pourpoint Services Version: 1.2.0
Batch Processor Services Version: 1.6.1

Downstream……..

StreamStats Output Report					
State/Region ID	PA				
Latitude	40.46708				
Longitude	-75.98846				
Time	3/12/2026	9:59:00 AM			
Basin Characteristics					
Parameter Code	Parameter Description	Value	Unit		
CARBON	Percentage of area of carbonate rock	2.49	percent		
DRNAREA	Area that drains to a point on a stream	19.7	square miles		
PRECIP	Mean Annual Precipitation	46.5	inches		
ROCKDEP	Depth to rock	3.3	feet		
STRDEN	Stream Density -- total length of streams	1.548	miles per square mile		
Low-Flow Statistics Paramet	100.0 Percent Low Flow Region 2				
Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
CARBON	Percent Carbonate	2.49	percent	0	99
DRNAREA	Drainage Area	19.7	square miles	4.93	1280
PRECIP	Mean Annual Precipitation	46.5	inches	35	50.4
ROCKDEP	Depth to Rock	3.3	feet	3.32	5.65
STRDEN	Stream Density	1.548	miles per squ	0.51	3.1

Low-Flow Statistics Flow Re	100.0 Percent Low Flow Region 2	
Statistic	Value	Unit
7 Day 2 Year Low Flow	2.29	ft^3/s
30 Day 2 Year Low Flow	3.4	ft^3/s
7 Day 10 Year Low Flow	0.764	ft^3/s
30 Day 10 Year Low Flow	1.21	ft^3/s
90 Day 10 Year Low Flow	2.17	ft^3/s
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USGS Product Names Disclaimer: Any use of trade, firm, or product names is for descriptive purposes only and does not imply endors		
Application Version: 4.31.1		
SSHydro Services Version: 1.1.1		
SSDelineate Services Version: 1.0.1		
NSS Services Version: 2.2.1		
GageStats Services Version: 1.2.1		
Pourpoint Services Version: 1.2.0		
Batch Processor Services Version: 1.6.1		

At start of Dauberville Lake:

StreamStats Output Report					
State/Region ID	PA				
Latitude	40.46536				
Longitude	-75.9881				
Time	3/12/2026	11:53:49 AM			
Basin Characteristics					
Parameter Code	Parameter D	Value	Unit		
CARBON	Percentage	2.54	percent		
DRNAREA	Area that dr	20.3	square miles		
PRECIP	Mean Annua	46.5	inches		
ROCKDEP	Depth to roc	3.3	feet		
STRDEN	Stream Den	1.565	miles per square mile		
Low-Flow Statistics Paran	100.0 Percent Low Flow Region 2				
Parameter Code	Parameter N	Value	Units	Min Limit	Max Limit
CARBON	Percent Car	2.54	percent	0	99
DRNAREA	Drainage Ar	20.3	square mil	4.93	1280
PRECIP	Mean Annua	46.5	inches	35	50.4
ROCKDEP	Depth to Ro	3.3	feet	3.32	5.65
STRDEN	Stream Den	1.565	miles per s	0.51	3.1

Low-Flow Statistics Flow	100.0 Percent Low Flow Region 2	
Statistic	Value	Unit
7 Day 2 Year Low Flow	2.35	ft^3/s
30 Day 2 Year Low Flow	3.48	ft^3/s
7 Day 10 Year Low Flow	0.783	ft^3/s
30 Day 10 Year Low Flow	1.24	ft^3/s
90 Day 10 Year Low Flow	2.22	ft^3/s

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Application Version: 4.31.1
SSHydro Services Version: 1.1.1
SSDelineate Services Version: 1.0.1
NSS Services Version: 2.2.1
GageStats Services Version: 1.2.1
Pourpoint Services Version: 1.2.0
Batch Processor Services Version: 1.6.1

(Results were the same using stream temp of 20°C or 25°C)

Input Data WQM 7.0

General Data

General | Stream | Discharge and Parameters

Stream Code	RMI	Elevation (ft)	Drainage Area (sq mi)	LFY (cfsm)	Slope (ft/ft)	PWS With (mgd)	Apply FC
2153	3.900	315	13.8	0.0364	0	0	☑
2153	2.760	305	18	0.0377	0	0	☑
2153	1.350	295	19.7	0.0388	0	0	☑
2153	1.230	290	20.3	0.0386	0	0	☑

Add Record

Delete Record

Input Data WQM 7.0

Stream Data

General | Stream | Discharge and Parameters

Design Condition ○ Q7-10 ○ Q1-10 ○ Q30-10

RMI	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
3.900	0.50	0.00	0.000	0.00	0	0.00	0.00	25.00	7.00	0.000	0.00
2.760	0.68	0.00	0.000	0.00	0	0.00	0.00	25.00	7.00	0.000	0.00
1.350	0.76	0.00	0.000	0.00	0	0.00	0.00	25.00	7.00	0.000	0.00
1.230	0.78	0.00	0.000	0.00	0	0.00	0.00	25.00	7.00	0.000	0.00

Input Data WQM 7.0

Discharge and Parameter Data

General | Stream | Discharge and Parameters

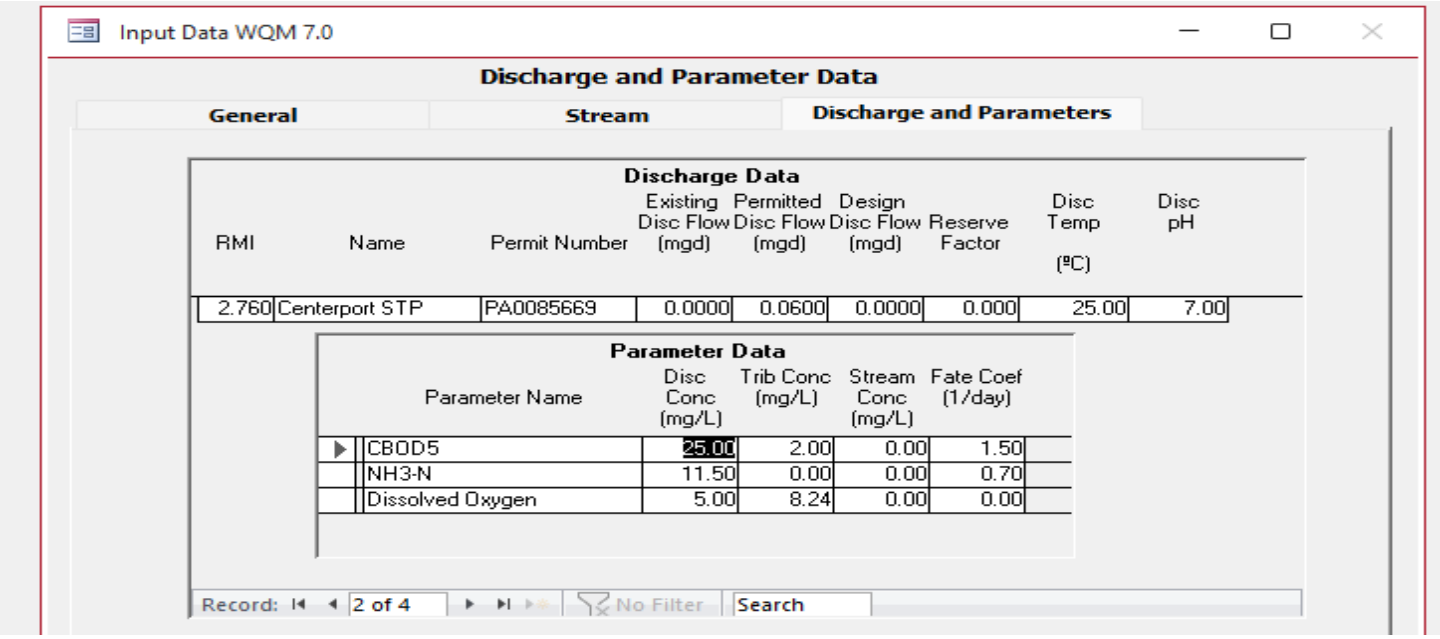
Discharge Data

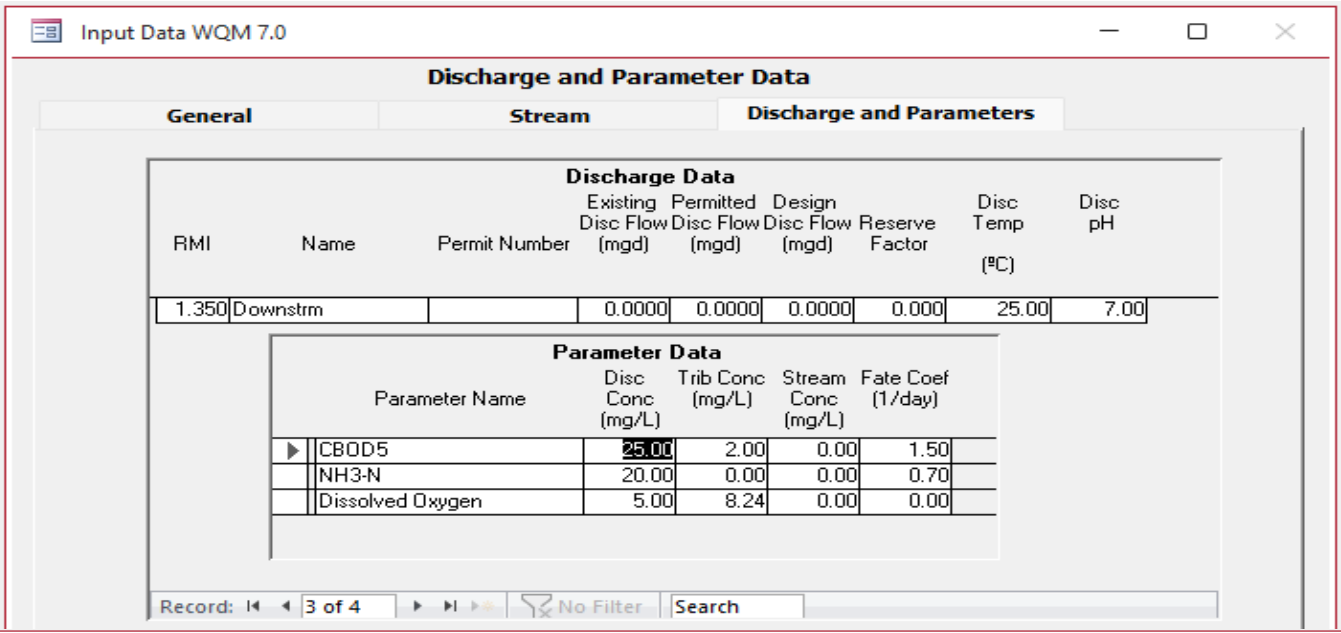
RMI	Name	Permit Number	Existing Disc Flow (mgd)	Permitted Disc Flow (mgd)	Design Disc Flow (mgd)	Reserve Factor	Disc Temp (°C)	Disc pH
3.900	Irish Creek MHP	pa0052400	0.0000	0.0090	0.0000	0.000	25.00	7.00

Parameter Data

Parameter Name	Disc Conc (mg/L)	Trib Conc (mg/L)	Stream Conc (mg/L)	Fate Coef (1/day)
CBOD5	25.00	2.00	0.00	1.50
NH3-N	20.00	0.00	0.00	0.70
Dissolved Oxygen	5.00	8.24	0.00	0.00

Record: 1 of 4 | No Filter | Search


Input Data WQM 7.0
Discharge and Parameter Data
General
Stream
Discharge and Parameters
Discharge Data
RMI
Name
Permit Number
Existing Disc Flow (mgd)
Permitted Disc Flow (mgd)
Design Disc Flow (mgd)
Reserve Factor
Disc Temp (ºC)
Disc pH
2.760
Centerport STP
PA0085669
0.0000
0.0600
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/day)
CBOD5
25.00
2.00
0.00
1.50
NH3-N
11.50
0.00
0.00
0.70
Dissolved Oxygen
5.00
8.24
0.00
0.00
Record: 2 of 4
No Filter
Search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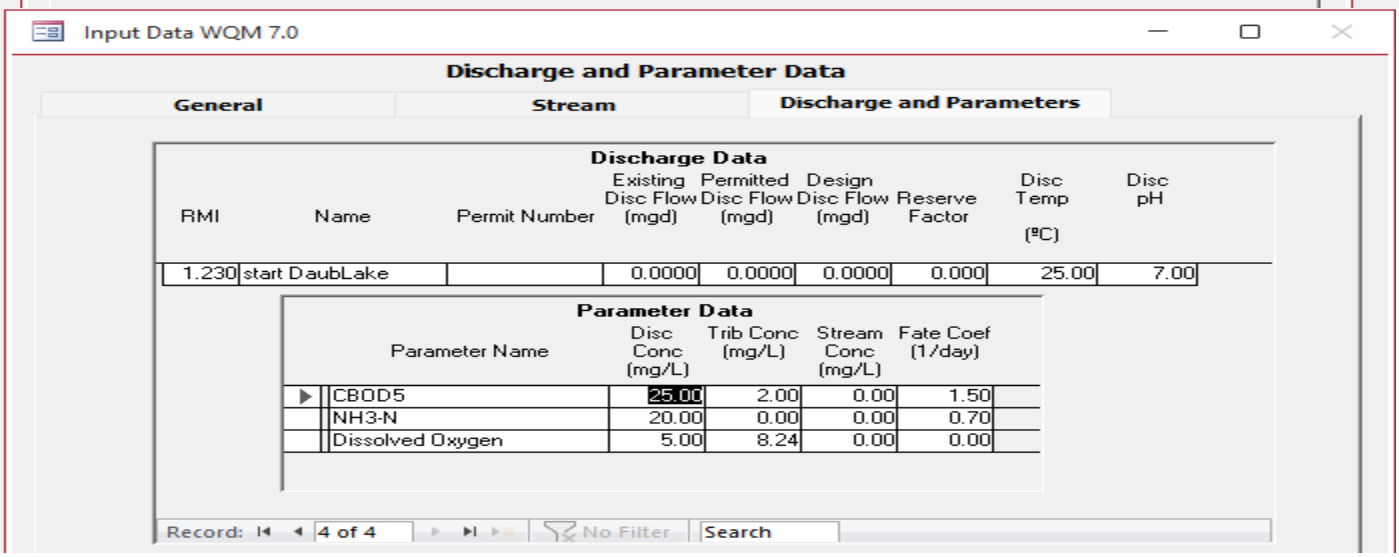
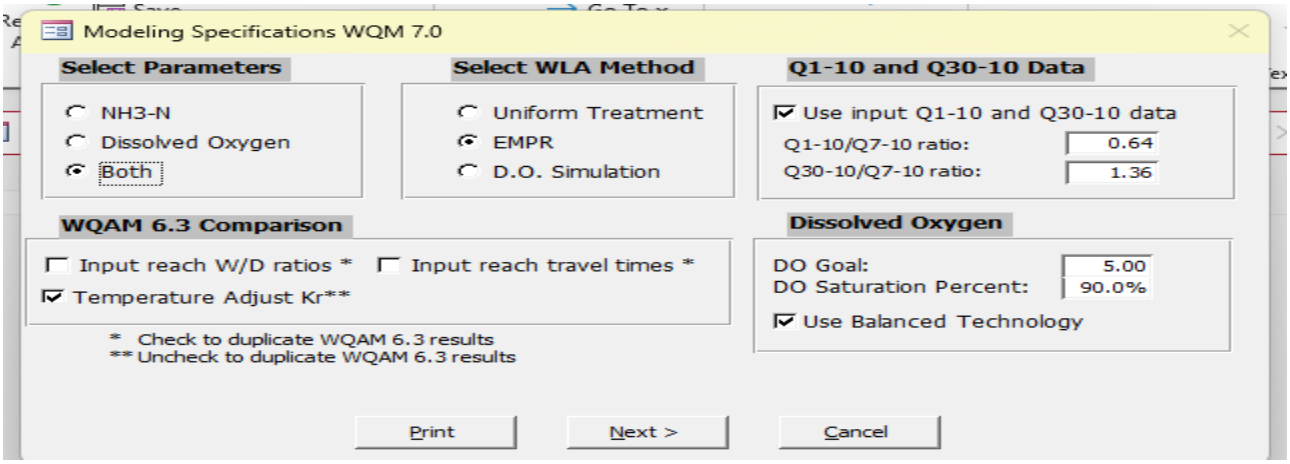
Discharge and Parameter Data
General
Stream
Discharge and Parameters
Discharge Data
RMI
Name
Permit Number
Existing Disc Flow (mgd)
Permitted Disc Flow (mgd)
Design Disc Flow (mgd)
Reserve Factor
Disc Temp (ºC)
Disc pH
1.350
Downstrm
0.0000
0.0000
0.0000
0.000
25.00
7.00
Parameter Data
Parameter Name
Disc Conc (mg/L)
Trib Conc (mg/L)
Stream Conc (mg/L)
Fate Coef (1/day)
CBOD5
25.00
2.00
0.00
1.50
NH3-N
20.00
0.00
0.00
0.70
Dissolved Oxygen
5.00
8.24
0.00
0.00
Record: 3 of 4
No Filter
Search


Input Data WQM 7.0
Discharge and Parameter Data
General
Stream
Discharge and Parameters
Discharge Data
RMI
Name
Permit Number
Existing Disc Flow (mgd)
Permitted Disc Flow (mgd)
Design Disc Flow (mgd)
Reserve Factor
Disc Temp (ºC)
Disc pH
1.230
start DaubLake
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/day)
CBOD5
25.00
2.00
0.00
1.50
NH3-N
20.00
0.00
0.00
0.70
Dissolved Oxygen
5.00
8.24
0.00
0.00
Record: 4 of 4
No Filter
Search



Analysis Results WQM 7.0

Hydrodynamics | NH3-N Allocations | D.O. Allocations | D.O. Simulation | Effluent Limitations

RMI	Total Discharge Flow (mgd)	Analysis Temperature (°C)	Analysis pH
3.900	0.009	25.000	7.000
Reach Width (ft)	**Reach Depth (ft)**	**Reach WD Ratio**	**Reach Velocity (fps)**
14.158	0.490	28.868	0.074
Reach C-BOD5 (mg/L)	**Reach Kc (1/days)**	**Reach NH3-N (mg/L)**	**Reach Kn (1/days)**
2.62	0.204	0.54	1.029
Reach DO (mg/L)	**Reach Kr (1/days)**	**Kr Equation**	**Reach DO Goal (mg/L)**
8.155	15.992	Owens	5

Reach Travel Time (days): 0.938

Subreach Results

TravTime (days)	CBOD5 (mg/L)	NH3-N (mg/L)	D.O. (mg/L)
0.094	2.56	0.49	7.54
0.188	2.50	0.45	7.54
0.281	2.44	0.40	7.54
0.375	2.38	0.37	7.54
0.469	2.32	0.33	7.54
0.563	2.27	0.30	7.54
0.656	2.22	0.27	7.54
0.750	2.16	0.25	7.54
0.844	2.11	0.23	7.54
0.938	2.06	0.21	7.54

Record: 1 of 3 | No Filter | Search

Analysis Results WQM 7.0

Hydrodynamics | NH3-N Allocations | D.O. Allocations | D.O. Simulation | Effluent Limitations

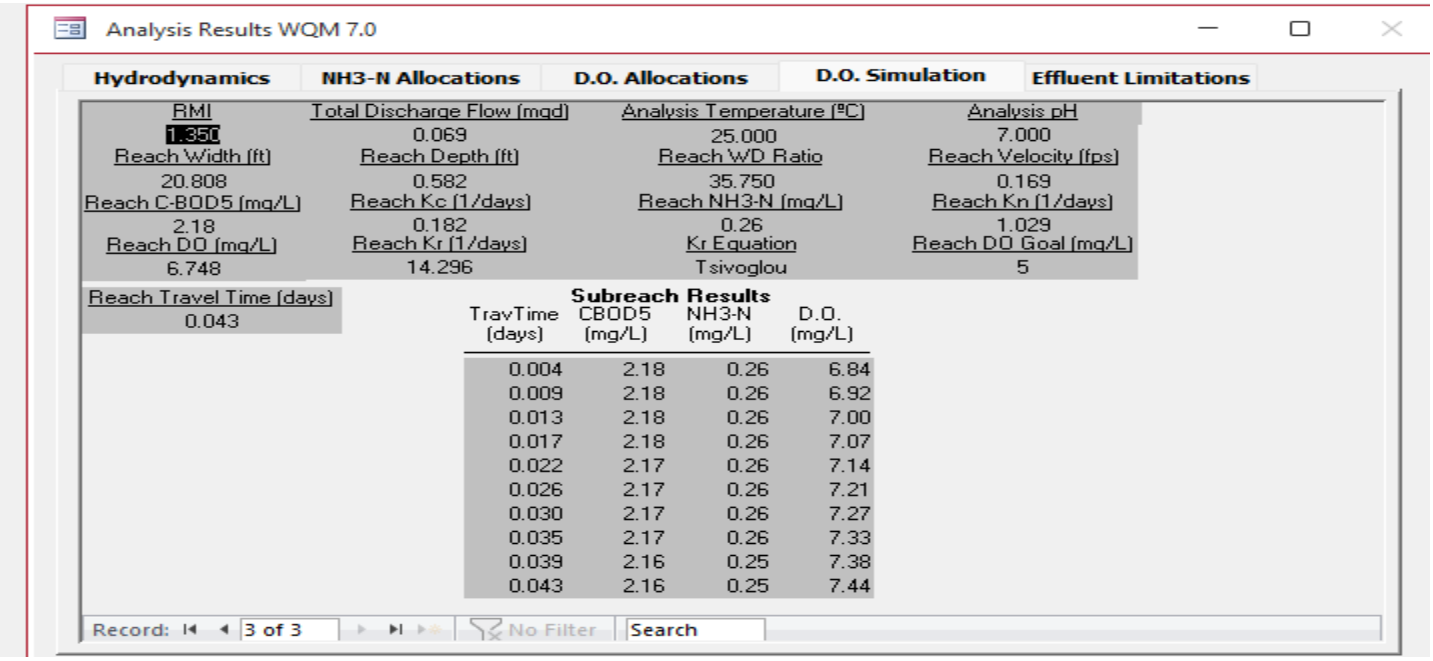
RMI	Total Discharge Flow (mgd)	Analysis Temperature (°C)	Analysis pH
2.760	0.069	25.000	7.000
Reach Width (ft)	**Reach Depth (ft)**	**Reach WD Ratio**	**Reach Velocity (fps)**
19.867	0.564	35.234	0.115
Reach C-BOD5 (mg/L)	**Reach Kc (1/days)**	**Reach NH3-N (mg/L)**	**Reach Kn (1/days)**
3.68	0.502	0.91	1.029
Reach DO (mg/L)	**Reach Kr (1/days)**	**Kr Equation**	**Reach DO Goal (mg/L)**
7.727	1.651	Tsivoglou	5

Reach Travel Time (days): 0.750

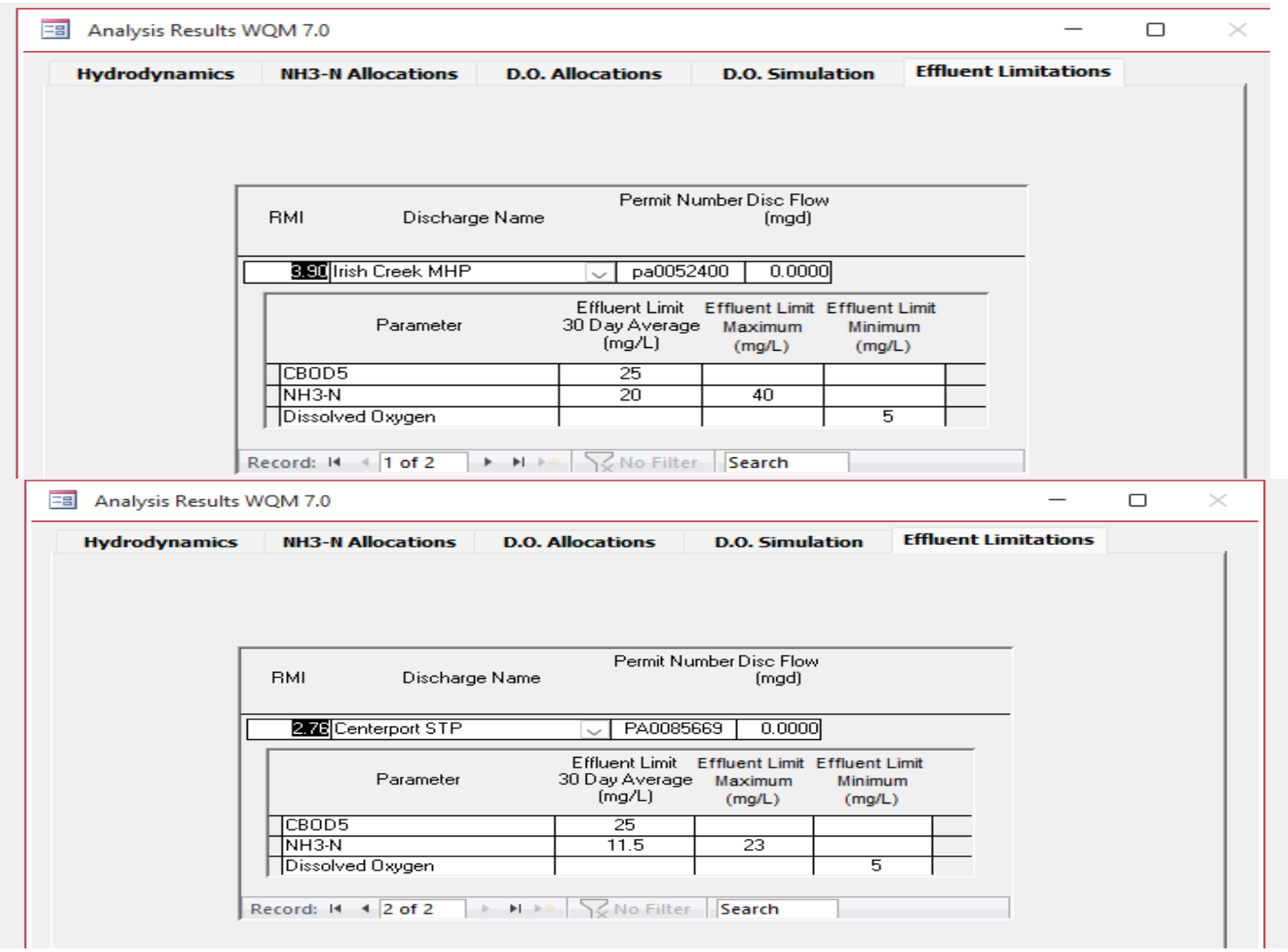
Subreach Results

TravTime (days)	CBOD5 (mg/L)	NH3-N (mg/L)	D.O. (mg/L)
0.075	3.51	0.84	7.27
0.150	3.35	0.78	6.90
0.225	3.20	0.72	6.61
0.300	3.05	0.67	6.37
0.375	2.91	0.62	6.19
0.450	2.77	0.57	6.06
0.525	2.64	0.53	5.97
0.600	2.52	0.49	5.90
0.675	2.40	0.46	5.87
0.750	2.29	0.42	5.86

Record: 2 of 3 | No Filter | Search



DO recovered



TRC EVALUATION

Input appropriate values in A3:A9 and D3:D9

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

Source	Reference	AFC Calculations	Reference	CFC Calculations
TRC	1.3.2.iii	WLA afc = 11.521	1.3.2.iii	WLA cfc = 11.224
PENTOXSD TRG	5.1a	LTAMULT afc = 0.373	5.1c	LTAMULT cfc = 0.581
PENTOXSD TRG	5.1b	LTA_afc= 4.293	5.1d	LTA_cfc = 6.525

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

WLA afc	**(.019/e(-k*AFC_tc)) + [(AFC_Yc*Qs*.019/Qd*e(-k*AFC_tc))...** **...+ Xd + (AFC_Yc*Qs*Xs/Qd)]*(1-FOS/100)**
LTAMULT afc	EXP((0.5*LN(cvh^2+1))-2.326*LN(cvh^2+1)^0.5)
LTA_afc	wla_afc*LTAMULT_afc
WLA_cfc	**(.011/e(-k*CFC_tc) + [(CFC_Yc*Qs*.011/Qd*e(-k*CFC_tc))...** **...+ Xd + (CFC_Yc*Qs*Xs/Qd)]*(1-FOS/100)**
LTAMULT_cfc	EXP((0.5*LN(cvd^2/no_samples+1))-2.326*LN(cvd^2/no_samples+1)^0.5)
LTA_cfc	wla_cfc*LTAMULT_cfc
AML MULT	EXP(2.326*LN((cvd^2/no_samples+1)^0.5)-0.5*LN(cvd^2/no_samples+1))
AVG MON LIMIT	MIN(BAT_BPJ,MIN(LTA_afc,LTA_cfc)*AML_MULT)
INST MAX LIMIT	**1.5*((av_mon_limit/AML_MULT)/LTAMULT_afc)**