

Application Type Renewal
Facility Type Municipal
Major / Minor Minor

**NPDES PERMIT FACT SHEET
INDIVIDUAL SEWAGE**

Application No. PA0082368
APS ID 33179
Authorization ID 1424377

Applicant and Facility Information

Applicant Name	<u>Abbottstown Paradise Joint Sewer Authority Adams County</u>	Facility Name	<u>Abbottstown Paradise STP</u>
Applicant Address	<u>PO Box 505 Abbottstown, PA 17301-0505</u>	Facility Address	<u>375 Route 194 N Abbottstown, PA 17301-9786</u>
Applicant Contact	<u>Amy Perry</u>	Facility Contact	<u>Ryan Swope</u>
Applicant Phone	<u>(717) 259-9120</u>	Facility Phone	<u>(717) 259-9120</u>
Client ID	<u>74547</u>	Site ID	<u>252262</u>
Ch 94 Load Status	<u>Not Overloaded</u>	Municipality	<u>Hamilton Township</u>
Connection Status	<u>No Limitations</u>	County	<u>Adams</u>
Date Application Received	<u>January 19, 2023</u>	EPA Waived?	<u>Yes</u>
Date Application Accepted	<u>January 25, 2023</u>	If No, Reason	<u></u>
Purpose of Application	<u>NPDES permit renewal.</u>		

Summary of Review

Abbottstown Paradise Joint Sewer Authority (APJSA/Permittee) applied to the Pennsylvania Department of Environmental Protection (DEP or Department) for reissuance of its National Pollutant Discharge Elimination System (NPDES) permit for Abbottstown-Paradise Joint Sewer WWTF. This permit renewal application was received on January 19, 2023. The permit was last reissued on July 19, 2018, authorizing discharge of treated sewage from the existing treatment plant located in Hamilton Township, Adams County into Beaver Creek in watershed 7-F. The permit expires on July 31, 2023.

The average annual design flow and hydraulic design capacity is 0.35 MGD and the organic loading capacity is 774 lbs. BOD₅/day. The treated effluent is discharged to Beaver Creek.

The WQM Part II permit No. 0101406 was issued on 11/1/2001, and WQG02010702 for Sewer Extension and Pump Station was issued on 12/17/2007.

Sludge use and disposal description and location(s): N/A because sludge is hauled by Young's Sanitary Septic service, Inc.

Changes from the previous permit: The E. Coli. monitoring and report requirements will add to the proposed permit.

Based on the review outlined in this fact sheet, it is recommended that the permit be drafted. A public notice of the draft permit will be published in the *Pennsylvania Bulletin* for public comments for 30 days.

Approve	Deny	Signatures	Date
X		<i>Hilaryle</i> Hilary H. Le / Environmental Engineering Specialist	May 19, 2023
X		<i>Maria D. Bebenek for</i> Daniel W. Martin, P.E. / Environmental Engineer Manager	May 26, 2023

Discharge, Receiving Waters and Water Supply Information			
Outfall No.	001	Design Flow (MGD)	0.35
Latitude	39° 53' 41.02"	Longitude	-76° 59' 2.28"
Quad Name	Abbottstown	Quad Code	1930
Wastewater Description: Sewage Effluent			
Receiving Waters	Beaver Creek (WWF)	Stream Code	08760
NHD Com ID	57472053	RMI	4.19 miles
Drainage Area	5.53 mi. ²	Yield (cfs/mi ²)	0.1
Q ₇₋₁₀ Flow (cfs)	0.56	Q ₇₋₁₀ Basis	USGS StreamStats
Elevation (ft)	472.88	Slope (ft/ft)	
Watershed No.	7-F	Chapter 93 Class.	WWF
Existing Use		Existing Use Qualifier	
Exceptions to Use		Exceptions to Criteria	
Assessment Status	Impaired		
Cause(s) of Impairment	Flow Regime Modification, Siltation		
Source(s) of Impairment	Flow Regulation/Modification		
TMDL Status	None proposed	Name	
Nearest Downstream Public Water Supply Intake	Wrightsville Boro Water System, York County		
PWS Waters	Susquehanna River	Flow at Intake (cfs)	
PWS RMI	28.51 miles	Distance from Outfall (mi)	Approximate 55.0 miles

Changes Since Last Permit Issuance: none

Drainage Area

The discharge is to Beaver Creek at RMI 4.19 miles. A drainage area upstream of the discharge is estimated to be 5.53 mi.², according to USGS PA StreamStats available at <https://streamstats.usgs.gov/ss/>.

Stream Flow

According to StreamStats, the point of first use has a Q₇₋₁₀ of 0.56 cfs and a drainage area of 5.53 mi.², which results in a Q₇₋₁₀ low flow yield of 0.1 cfs/mi.². This information is used to obtain a chronic or 30-day (Q₃₀₋₁₀), and an acute or 1-day (Q₁₋₁₀) exposure stream flow for the discharge point as follows (Guidance No. 391-2000-023):

$$\begin{aligned}
 Q_{7-10} &= 0.56 \text{ cfs} \\
 \text{Low Flow Yield} &= 0.56 \text{ cfs} / 5.53 \text{ mi.}^2 = 0.1 \text{ cfs/mi.}^2 \\
 Q_{30-10} &= 1.36 * 0.56 \text{ cfs} = 0.76 \text{ cfs} \\
 Q_{1-10} &= 0.64 * 0.56 \text{ cfs} = 0.36 \text{ cfs}
 \end{aligned}$$

The resulting Q₇₋₁₀ dilution ratio is: $Q_{\text{stream}} / Q_{\text{discharge}} = 0.56 \text{ cfs} / [0.35 \text{ MGD} * (1.547 \text{ cfs/MGD})] = 1.03:1$

Beaver Creek

25 Pa Code 93.9o classifies Beaver Creek as Warm Water & Migratory Fishes (WWF & MF) surface water. Based on the 2022 Integrated Report, Beaver Creek, assessment unit IDs 11751 & 18596, is impaired for aquatic life due to siltation and water/flow variability from hydro-structure flow regulation/modification. A TMDL currently does not exist for this stream segment, therefore, no TMDL has been taken into consideration during this review.

Public Water Supply

The nearest downstream public water supply intake is for Wrightsville Boro Water System in York County on Susquehanna River, approximately 55.0 miles downstream of this discharge. Considering distance and dilution, the discharge is not expected to impact the water supply.

Treatment Facility Summary				
Treatment Facility Name: Abbottstown-Paradise STP				
WQM Permit No.	Issuance Date			
WQG02010702	12/17/2007			
0101406	11/1/2001			
Waste Type	Degree of Treatment	Process Type	Disinfection	Avg Annual Flow (MGD)
Sewage	Secondary	Sequencing Batch Reactor	Ultraviolet	0.35
Hydraulic Capacity (MGD)	Organic Capacity (lbs/day)	Load Status	Biosolids Treatment	Biosolids Use/Disposal
0.35	774	Not Overloaded	Aerobic Digestion	Other WWTP

Changes Since Last Permit Issuance: none

Other Comments:

The renewal application indicated the WWTP receives flows from the following municipalities:

Municipalities served	Flow contribution (%)	Type of sewer system		Population
		Separate (%)	Combined (%)	
Abbottstown Borough	37	100		446
Paradise TWP	31	100		370
Hamilton TWP	20	100		239
Berwick TWP	14	100		171

Per DEP's recent visit to the WWTP on 8/30/2021, the treatment facility consists of the following units:

- One mechanical screen
- Two SBRs
- One Post EQ tank
- One UV
- Three digesters

Chemical used:

Aluminum Sulfate (Alum) is used in continuous drip to remove Phosphorus at 8-10 GPD rate.

Industrial/Commercial Users:

The permit application indicated there are three industrial/commercial contributors to the treatment plant, discharging sanitary sewage only. The contributors are:

Business name	Type of business	Average WW flow (GPD)
Abbottstown Industries	Tool and Die shop	Sanitary sewage only, 360 GPD
G & S Foods/Tastysnacks	Snack food manufacturer	Waste hauled off site

Biosolids:

APJSA land applies waste sludge. They also haul offsite to Springettsbury WWTP (PA0028808) in Springettsbury Township, York County. The hauler is Young's Sanitary Septic Service, Inc. The land application is regulated under PAG083588 permit, which was issued on 3/4/2019 such as Leatherman Farm/Adams County. The total sewage sludge /biosolids production within the facility for the previous year was 38.0 dry tons, and 19.0 dry tons under general permit PAG-08.

Compliance History	
Summary of DMRs:	A summary of past 12-month DMRs is presented on the page 5 & 6.
Summary of Inspections:	<p>8/30/2021: Mr. Bettinger, DEP's WQS, conducted a compliance evaluation inspection. There were violations identified during inspection for total Phosphorus effluent exceedances during the months of May, June & July 2021. The field test results were within the permit limits.</p> <p>11/1/2019: Mr. Bettinger, DEP's WQ Environmental Trainee, conducted a compliance evaluation inspection. There were no violations identified during inspection. Recommendations were to calibrate D.O. meter daily, repair chemical feed pumps, and carry less than (<) symbol through calculations. The field test results were within the permit limits.</p>
Other Comments:	There are no open violations against the permittee or applicant.

Other Comments:

Compliance History

DMR Data for Outfall 001 (from April 1, 2022 to March 31, 2023)

Parameter	MAR-23	FEB-23	JAN-23	DEC-22	NOV-22	OCT-22	SEP-22	AUG-22	JUL-22	JUN-22	MAY-22	APR-22
Flow (MGD) Average Monthly	0.1477	0.1280	0.1448	0.1555	0.1272	0.1274	0.1230	0.1225	0.1315	0.1208	0.1724	0.1598
Flow (MGD) Daily Maximum	0.3972	0.1716	0.2144	0.4681	0.2192	0.1825	0.1697	0.1971	0.1764	0.1485	0.5472	0.3244
pH (S.U.) Daily Minimum	7.16	7.13	7.22	7.33	6.85	6.96	7.10	7.24	7.18	6.99	7.09	7.04
pH (S.U.) Daily Maximum	8.01	8.03	8.28	8.14	7.99	7.83	8.16	8.20	7.98	8.06	7.54	8.51
DO (mg/L) Daily Minimum	10.31	9.30	9.51	8.61	7.01	7.18	6.48	6.33	6.88	7.14	6.99	7.20
CBOD5 (lbs/day) Average Monthly	2.94	2.81	2.84	2.25	2.29	2.70	2.59	3.49	2.85	3.17	2.93	12.23
CBOD5 (lbs/day) Weekly Average	3.89	3.31	3.34	3.12	3.18	4.04	3.21	5.59	3.49	5.82	4.06	38.42
CBOD5 (mg/L) Average Monthly	2.58	2.70	2.48	2.46	2.48	2.75	2.40	3.15	2.78	2.94	2.53	5.75
CBOD5 (mg/L) Weekly Average	2.90	2.80	2.60	2.70	2.70	3.10	2.40	3.40	3.30	4.70	2.80	14.20
BOD5 (lbs/day) Raw Sewage Influent Average Monthly	505.71	400.51	354.85	304.02	371.67	521.88	352.91	440.03	429.97	405.43	349.38	465.40
BOD5 (lbs/day) Raw Sewage Influent Daily Maximum	673.61	489.56	406.73	484.56	464.73	665.21	426.34	750.62	644.80	461.61	452.56	657.24
BOD5 (mg/L) Raw Sewage Influent Average Monthly	371.00	338.25	259.50	267.80	271.50	399.50	290.60	294.50	380.75	312.00	260.50	274.50
TSS (lbs/day) Average Monthly	2.11	3.28	2.59	3.32	2.35	4.22	2.64	5.62	2.89	3.25	3.24	4.50
TSS (lbs/day) Raw Sewage Influent Average Monthly	391.97	371.11	341.70	343.57	434.32	533.16	353.13	503.72	407.72	378.03	368.23	418.30
TSS (lbs/day) Raw Sewage Influent Daily Maximum	489.04	444.58	443.70	452.07	530.27	709.56	480.61	835.01	542.44	460.27	410.55	657.24
TSS (lbs/day) Weekly Average	3.48	7.10	3.71	6.58	3.29	8.84	4.01	9.12	4.65	8.62	5.17	13.53
TSS (mg/L) Average Monthly	1.80	3.00	2.25	3.20	2.75	4.25	2.40	5.00	2.75	3.40	3.00	4.50

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TSS (mg/L) Raw Sewage Influent Average Monthly	288.40	309.00	246.00	308.80	324.00	406.00	293.60	339.00	370.00	292.00	278.00	239.00
TSS (mg/L) Weekly Average	3.00	6.00	3.00	6.00	5.00	8.00	3.00	9.00	4.00	10.00	5.00	7.00
Fecal Coliform (No./100 ml) Geometric Mean	1.00	1.00	1.86	1.00	1.00	1.00	1.74	52.01	1.57	1.00	1.93	1.19
Fecal Coliform (No./100 ml) IMAX	1.00	1.00	6.00	1.00	1.00	1.00	16.00	2420	3.00	1.00	14.00	2.00
Nitrate-Nitrite (mg/L) Average Monthly	5.00	6.30	4.70	4.70	3.30	4.30	3.09	5.60	3.50	6.30	3.46	5.30
Nitrate-Nitrite (lbs) Total Monthly	138.73	208.80	148.12	107.85	131.35	173.84	91.49	165.18	126.17	234.14	137.47	430.21
Total Nitrogen (mg/L) Average Monthly	7.00	7.46	6.80	5.80	3.93	4.92	6.29	6.70	4.70	7.24	5.56	7.50
Total Nitrogen (lbs) Total Monthly	194.23	265.14	214.30	133.09	156.42	198.91	186.25	197.63	169.43	269.08	220.90	608.79
Total Nitrogen (lbs) Total Annual							2945.80					
Ammonia (lbs/day) Average Monthly	0.11	0.10	0.11	0.09	0.16	0.10	0.11	0.12	0.10	0.11	0.12	0.29
Ammonia (mg/L) Average Monthly	0.10	0.10	0.10	0.10	0.19	0.11	0.10	0.11	0.10	0.10	0.10	0.15
Ammonia (lbs) Total Monthly	3.55	2.91	3.54	2.84	4.85	3.24	3.23	70.33	3.19	3.16	3.57	8.71
Ammonia (lbs) Total Annual							201.18					
TKN (mg/L) Average Monthly	2.00	1.70	2.10	1.10	0.63	0.62	3.20	1.10	1.20	0.94	2.1	2.20
TKN (lbs) Total Monthly	55.49	56.34	66.18	25.24	25.08	25.07	94.75	32.45	43.26	34.94	83.43	178.58
Total Phosphorus (lbs/day) Average Monthly	0.73	0.74	0.77	0.70	0.75	0.92	1.72	2.27	1.14	2.08	1.68	1.96
Total Phosphorus (mg/L) Average Monthly	0.68	0.71	0.67	0.72	0.81	0.95	1.58	2.0	1.11	1.95	1.46	1.09
Total Phosphorus (lbs) Total Monthly	22.51	20.82	23.81	21.66	22.62	28.65	51.51	70.33	35.46	62.30	51.99	58.69
Total Phosphorus (lbs) Total Annual							608.29					
UV Dosage (mWsec/cm ²) Daily Minimum	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3

Development of Effluent Limitations

Outfall No. <u>001</u>	Design Flow (MGD) <u>0.35</u>
Latitude <u>39° 53' 41.12"</u>	Longitude <u>-76° 59' 2.67"</u>
Wastewater Description: <u>Sewage Effluent</u>	

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)

Comments: Total Residual Chlorine is not applied.

Water Quality-Based Limitations

Ammonia (NH₃-N):

NH₃N calculations are based on the Department's Implementation Guidance of Section 93.7 Ammonia Criteria, dated 11/4/97 (ID No. 391-2000-013). The following data is necessary to determine the in-stream NH₃-N criteria used in the attached WQM 7.0 computer model of the stream:

- * Discharge pH = 7.0 (Default)
- * Discharge Temperature = 20°C (Default)
- * Stream pH = 7.0 (Default)
- * Stream Temperature = 25°C (Default)
- * Background NH₃-N = 0 mg/L (Default)

Regarding NH₃-N limits, the attached computer printout of the WQM 7.0 stream model (version 1.1) indicates that a limit of 3.74 mg/L as a monthly average and 7.48 mg/L instantaneous maximum (IMAX) are necessary to protect the aquatic life from toxicity effects at the point of discharge. However, the existing limits of 1.5 mg/L monthly average & 3.0 mg/L IMAX are more stringent and will remain in the proposed permit. Per anti-backsliding policy, the existing winter average monthly limit of 4.5 mg/L & IMAX limit of 9.0 mg/L will remain in place. Recent DMRs and inspection reports show that the facility has been consistently achieving these limits. Mass limits are calculated as follows:

Summer average monthly mass limit: 1.5 mg/L x 0.35 MGD x 8.34 = 4.38 (4.0) lbs/day
 Winter average monthly mass limit: 4.5 mg/L x 0.35 MGD x 8.34 = 13.14 (13.0) lbs/day

Dissolved Oxygen (D.O.):

A minimum of 5.0 mg/L for D.O. is an existing effluent limit and will remain unchanged in the draft permit as recommended by DEP's SOP. 5.0 mg/L is taken directly from 25 Pa. Code § 93.7(a) (i.e., water quality criteria for WWF waters) and it is also determined to be appropriate per water quality modeling.

pH:

The effluent discharge pH should remain above 6.0 and below 9.0 standard units according to 25 Pa. Code § 95.2(1).

Carbonaceous Biochemical Oxygen Demand (CBOD₅):

The attached computer printout of the WQM 7.0 stream model (ver. 1.1) indicates that a monthly average limit of 21.45 mg/L, or secondary treatment, is adequate to protect the water quality of the stream. However, the existing permit 15.0 mg/L as AML, 22.0 mg/L as weekly average limit (AWL), & 30.0 mg/L as IMAX are more stringent and will remain in the proposed permit. Recent DMRs and inspection reports show that the facility has typically been achieving concentrations below this limit. Mass limits are calculated as follows:

Summer Average monthly mass limit: $15.0 \text{ mg/L} \times 0.35 \text{ MGD} \times 8.34 = 43.79 \text{ (43.0) lbs/day}$

Summer Average weekly mass limit: $22.0 \text{ mg/L} \times 0.35 \text{ MGD} \times 8.34 = 64.22 \text{ (60.0) lbs/day}$

These values are rounded down to 43.0 lbs/day and 60.0 lbs/day, respectively.

The winter average monthly, weekly average, and IMAX limits are 25.0 mg/L, 40.0 mg/L, and 50.0 mg/L, respectively. Average monthly and weekly average mass loadings are calculated to be 72.98 lbs/day and 116.76 lbs/day, which are rounded down to 70.0 lbs/day and 115.0 lbs/day, respectively. The minimum monitoring frequency will remain the same 1/week.

Total Suspended Solids (TSS):

The existing technology-based limits of 30.0 mg/L average monthly, 45.0 mg/L weekly average, and 60.0 mg/L IMAX will remain in the proposed permit based on the minimum level of effluent quality attainable by secondary treatment based on 25 Pa. Code § 92a.47. Recent DMRs and inspection reports show that the facility has been consistently achieving these limits. Mass limits are calculated as follows:

Average monthly mass limit: $30.0 \text{ mg/L} \times 0.35 \text{ MGD} \times 8.34 = 87.57 \text{ (85.0) lbs/day}$

Average weekly mass limit: $45.0 \text{ mg/L} \times 0.35 \text{ MGD} \times 8.34 = 131.36 \text{ (130.0) lbs/day}$

The average monthly and weekly average mass loadings will be rounded down to 85.0 lbs/day and 130.0 lbs/day, respectively.

Fecal Coliform:

The recent coliform guidance in 25 Pa. Code § 92a.47.(a)(4) requires a summer technology limit of 200/100 ml as a geometric mean and an instantaneous maximum not greater than 1,000/100ml and § 92a.47.(a)(5) requires a winter limit of 2,000/100ml as a geometric mean and an instantaneous maximum not greater than 10,000/100ml.

E. Coli:

As recommended by DEP's SOP No. BCW-PMT-033, version 1.9 revised March 22, 2021, a routine monitoring for E. Coli will be included in the proposed permit under 25 Pa. Code § 92a.61. This requirement applies to all sewage dischargers greater than 0.002 MGD in their new and reissued permits. A monitoring frequency of 1/quarter will be included in the permit to be consistent with the recommendation from this SOP.

UV:

The UV system daily monitor and report the UV light dosage (mWsec/cm²) will remain in the proposed permit.

Raw Sewage Influent Monitoring:

As a result of negotiation with EPA, influent monitoring of TSS and BOD₅ are required for any POTWs; therefore, influent sampling of BOD₅ and TSS will remain in the proposed permit. A 24-hr composite sample type will be required to be consistent with the proposed sampling frequency for TSS and BOD₅ in the effluent.

Toxics:

DEP utilizes a Toxics Management Spreadsheet (last modified on March 2021 ver. 1.3) to facilitate calculations necessary for completing a reasonable potential analysis and determining WQBELs for toxic pollutants. The effluent testing information renewal application (pages # 5 & 6) indicates that there are no toxic pollutants of concern.

Total Phosphorus:

The existing permit average monthly TP concentration of 2.0 mg/L, and 4.0 mg/l IMAX will remain in the proposed permit. Mass average monthly of 5.8 lbs/day is also in the proposed permit.

Chesapeake Bay Strategy:

Phase 2 WIP identifies Cassville WWTP as a non-significant Phase 4 facility. DEP's SOP mentioned that facilities with design flows $\geq 0.2 \text{ MGD}$ and $< 0.4 \text{ MGD}$ will include monitoring, at a minimum, for Total Nitrogen and Total Phosphorus, with a monitoring frequency specified in DEP's technical guidance. Therefore, 1/month TN species (such as Ammonia-

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Nitrogen, Nitrate-Nitrite as N, Total Kjeldahl Nitrogen, and Total Nitrogen) and TP monitoring requirements will remain in the proposed permit. The yearly calculation "report" for Ammonia—N, TN & TP will remain in the proposed permit.

Stormwater:

There is no known stormwater outfall associated with this facility.

Total Dissolved Solids (TDS):

TDS and its associated solids including Bromide, Chloride, and Sulfate have become statewide pollutants of concern. The requirement to monitor these pollutants must be considered under the criteria specified in 25 Pa. Code § 95.10 and the following January 23, 2014 DEP Central Office Directive:

For point source discharges and upon issuance or reissuance of an individual NPDES permit:

-Where the concentration of TDS in the discharge exceeds 1,000 mg/L, or the net TDS load from a discharge exceeds 20,000 lbs/day, and the discharge flow exceeds 0.1 MGD, Part A of the permit should include monitor and report for TDS, sulfate, chloride, and bromide. Discharges of 0.1 MGD or less should monitor and report for TDS, sulfate, chloride, and bromide if the concentration of TDS in the discharge exceeds 5,000 mg/L.

- Where the concentration of bromide in a discharge exceeds 1 mg/L and the discharge flow exceeds 0.1 MGD, Part A of the permit should include monitor and report for bromide. Discharges of 0.1 MGD or less should monitor and report for bromide if the concentration of bromide in the discharge exceeds 10 mg/L.

-Where the concentration of 1,4-dioxane (CAS 123-91-1) in a discharge exceeds 10 µg/L and the discharge flow exceeds 0.1 MGD, Part A of the permit should include monitor and report for 1,4-dioxane. Discharges of 0.1 MGD or less should monitor and report for 1,4-dioxane if the concentration of 1,4-dioxane in the discharge exceeds 100 µg/L.

The sample result shows that effluent contains a maximum TDS concentration of 630.0 mg/L and Bromide concentration of < 0.5 mg/l. Thus, the monitoring and reporting requirement are not necessary for this renewal.

WETT:

Minor facilities and facilities without a formal EPA approved pretreatment program are exempted from WETT.

Anti-Backsliding:

The proposed limits are at least as stringent as are in existing permit; therefore, anti-backsliding is not applicable.

Antidegradation (93.4):

The effluent limits for this discharge have been developed to ensure that existing in-stream water uses and the level of water quality necessary to protect the existing uses are maintained and protected. No High-Quality Waters are impacted by this discharge. No Exceptional Value Waters are impacted by this discharge.

Class A Wild Trout Fisheries:

No Class A Wild Trout Fisheries are impacted by this discharge.

303(d) Listed Streams:

The stream is listed as attaining its designated use(s).

WQM 7.0:

The following data were used in the attached computer model (WQM 7.0) of the stream:

- Discharge pH 7.0 (Default)
- Discharge Temperature 20°C (Default per 391-2000-013)
- Stream pH 7.0 (Default per 391-2000-013)
- Stream Temperature 25°C (Default per 391-2000-013)

The following two nodes were used in modeling:

- Node 1:** Outfall 001 at Beaver Creek (08760)
 Elevation: 472.88 ft (USGS National Map)
 Drainage Area: 5.53 mi.² (USGS StreamStats)
 River Mile Index: 4.19 (PA DEP eMapPA)
 Low Flow Yield: 0.10 cfs/mi.²
 Discharge Flow: 0.35 MGD
- Node 2:** At the confluence with UNT 08767 to Beaver Creek (08760)
 Elevation: 456.64 ft (USGS National Map)
 Drainage Area: 6.43 mi.² (USGS StreamStats)
 River Mile Index: 3.69 (PA DEP eMapPA)
 Low Flow Yield: 0.10 cfs/mi.²
 Discharge Flow: 0.00 MGD

The screenshot displays the USGS StreamStats web application. On the left is a navigation sidebar with options like 'SELECT A STATE / REGION' (Pennsylvania), 'IDENTIFY A STUDY AREA' (Basin Delineated), and 'BUILD A REPORT'. The main content area shows a map of a basin in Berwick Twp, PA, with a yellow shaded area. Below the map are two data sections:

Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
BSLOPD	Mean basin slope measured in degrees	5.2231	degrees
DRNAREA	Area that drains to a point on a stream	5.53	square miles
ROCKDEP	Depth to rock	4.6	feet
URBAN	Percentage of basin with urban development	4.4302	percent

Low-Flow Statistics

Low-Flow Statistics Parameters [Low Flow Region 1]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	5.53	square miles	4.78	1150
BSLOPD	Mean Basin Slope degrees	5.2231	degrees	1.7	6.4
ROCKDEP	Depth to Rock	4.6	feet	4.13	5.21
URBAN	Percent Urban	4.4302	percent	0	89

Low-Flow Statistics Flow Report [Low Flow Region 1]

PI: Prediction Interval-Lower, Plu: Prediction Interval-Upper, ASEp: Average Standard Error of Prediction, SE: Standard Error (other -- see report)

Statistic	Value	Unit	SE	ASEp
7 Day 2 Year Low Flow	1.2	ft ³ /s	46	46
30 Day 2 Year Low Flow	1.55	ft ³ /s	38	38
7 Day 10 Year Low Flow	0.56	ft ³ /s	51	51
30 Day 10 Year Low Flow	0.748	ft ³ /s	46	46
90 Day 10 Year Low Flow	1.13	ft ³ /s	41	41

The right side of the screenshot shows a map view with a 'Layers' panel containing 'Base Maps', 'Application Layers', 'National Layers', and 'PA Map Layers'.

USGS StreamStats

SELECT A STATE / REGION
Pennsylvania

IDENTIFY A STUDY AREA
Basin Delineated

SELECT SCENARIOS

BUILD A REPORT Report Built

Step 1: You can modify computed basin characteristics here, then select the types of reports you wish to generate. Then click the "Build Report" button.

Show Basin Characteristics

Select available reports to display:

- Basin Characteristics Report
- Scenario Flow Reports

Open Report

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> Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
BSLOPD	Mean basin slope measured in degrees	4.7723	degrees
DRNAREA	Area that drains to a point on a stream	6.43	square miles
ROCKDEP	Depth to rock	4.5	feet
URBAN	Percentage of basin with urban development	3.8878	percent

> Low-Flow Statistics

Low-Flow Statistics Parameters [Low Flow Region 1]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	6.43	square miles	4.78	1150
BSLOPD	Mean Basin Slope degrees	4.7723	degrees	1.7	6.4
ROCKDEP	Depth to Rock	4.5	feet	4.13	5.21
URBAN	Percent Urban	3.8878	percent	0	89

Low-Flow Statistics Flow Report [Low Flow Region 1]

PII: Prediction Interval-Lower, PIu: Prediction Interval-Upper, ASEp: Average Standard Error of Prediction, SE: Standard Error (other -- see report)

Statistic	Value	Unit	SE	ASEp
7 Day 2 Year Low Flow	1.12	ft ³ /s	46	46
30 Day 2 Year Low Flow	1.5	ft ³ /s	38	38
7 Day 10 Year Low Flow	0.499	ft ³ /s	51	51
30 Day 10 Year Low Flow	0.69	ft ³ /s	46	46
90 Day 10 Year Low Flow	1.1	ft ³ /s	41	41

Report About Help

Layers

- Base Maps
- Application Layers
- National Layers
- PA Map Layers

Analysis Results WQM 7.0

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

RMI	Discharge Name	Permit Number	Disc Flow (mgd)
4.19	Abbottstown STP	PA0082368	0.3500

Parameter	Effluent Limit 30 Day Average (mg/L)	Effluent Limit Maximum (mg/L)	Effluent Limit Minimum (mg/L)
CBOD5	21.45		
NH3-N	3.74	7.48	
Dissolved Oxygen			5

Record: 1 of 1 No Filter Search

Print < Back Next > Archive Cancel

rptEffLimits

WQM 7.0 Effluent Limits

SWP Basin		Stream Code		Stream Name			
07P	0760	BEAVER CREEK					
P04	Name	Permit Number	Disch. Flow (mgd)	Parameter	5-D Limit (mg/L)	5-D Max Limit (mg/L)	5-D Min Limit (mg/L)
4.100	Abbottstown STP	PA0082368	0.350	CSO/CB	21.45		
				NP5-N	3.74	7.48	
				Unfiltered Copper			5

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rpt_WLA

WQM 7.0 Wasteload Allocations

SWP Basin		Stream Code		Stream Name			
07P	0760	BEAVER CREEK					
NH3-N Acute Allocations							
P04	Discharge Name	Baseline Criteria (mg/L)	Baseline WLA (mg/L)	Multiple Criteria (mg/L)	Multiple WLA (mg/L)	Critical Reach	Percent Reduction
4.100	Abbottstown STP	14.23	23.33	14.23	23.33	0	0
NH3-N Chronic Allocations							
P04	Discharge Name	Baseline Criteria (mg/L)	Baseline WLA (mg/L)	Multiple Criteria (mg/L)	Multiple WLA (mg/L)	Critical Reach	Percent Reduction
4.100	Abbottstown STP	1.36	3.74	1.36	3.74	0	0
Dissolved Oxygen Allocations							
P04	Discharge Name	CSO/CB (mg/L)	NP5-N (mg/L)	Unfiltered Copper (mg/L)	Critical Reach	Percent Reduction	
4.100	Abbottstown STP	21.45	21.45	3.74	3.74	5	0

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rptDOSim

WQM 7.0 D.O. Simulation

SWP Basin		Stream Code		Stream Name	
07P	0760	BEAVER CREEK			
100	Total Discharge Flow (mgd)	Analysis Temperature (°C)	Analysis pH		
4.100	0.350	22.526	7.000		
Reach Width (ft)	Reach Depth (ft)	Reach W/C Ratio	Reach Velocity (ft/s)		
13.872	0.511	27.136	0.154		
Reach CSO/CB (mg/L)	Reach NP5-N (mg/L)	Reach NP5-N (mg/L)	Reach K1 (1/day)		
1.952	1.356	1.85	0.825		
Reach DO (mg/L)	Reach K2 (1/day)	K1 Equivalents	Reach DO Goal (mg/L)		
6.839	9.577	16.934	6		
Reach Travel Time (days)	Subreach Results				
0.198	Travel Time (days)	CSO/CB (mg/L)	NP5-N (mg/L)	DO (mg/L)	
	0.020	11.33	1.82	6.47	
	0.040	11.04	1.79	6.34	
	0.059	10.76	1.76	6.25	
	0.079	10.48	1.73	6.19	
	0.099	10.22	1.70	6.14	
	0.119	9.96	1.67	6.12	
	0.139	9.70	1.64	6.11	
	0.158	9.46	1.62	6.11	
	0.178	9.22	1.59	6.13	
	0.198	8.98	1.56	6.15	

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rptModelSpecs

WQM 7.0 Modeling Specifications

Parameters	Both	Use Inputted Q1-10 and Q30-10 Flows	<input checked="" type="checkbox"/>
WLA Method	EMPR	Use Inputted W/L Ratio	<input type="checkbox"/>
Q1-10/Q1-10 Ratio	0.84	Use Inputted Reach Travel Times	<input type="checkbox"/>
Q30-10/Q1-10 Ratio	1.36	Temperature Adjust K1	<input type="checkbox"/>
D.O. Saturation	90.00%	Use Balanced Technology	<input checked="" type="checkbox"/>
D.O. Goal	6		

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rptHydro

WQM 7.0 Hydrodynamic Outputs

SNP Basin	Stream Code	Stream Name											
07P	8780	BEAVER CREEK											
Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow		
(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)		
Q7-10 Flow	4.190	0.35	0.00	0.35	-5414	0.00815	311	13.87	2.714	0.15	0.198	2253	7.00
Q1-10 Flow	4.190	0.35	0.00	0.35	-5414	0.00815	NA	NA	NA	0.14	0.222	2198	7.00
Q30-10 Flow	4.190	0.75	0.00	0.75	-5414	0.00815	NA	NA	NA	0.17	0.180	2291	7.00

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rptGeneral

Input Data WQM 7.0

SNP Basin	Stream Code	Stream Name	RBM	Elevation (ft)	Drainage Area (acres)	Slope (ft/ft)	PWS Withdrawal (mgd)	Apply F.C.
07P	8780	BEAVER CREEK	4.190	472.85	5.53	0.00000	0.00	<input checked="" type="checkbox"/>

Stream Data

Design Cond.	LFY (cfs)	Inb Flow (cfs)	Stream Flow (cfs)	Rch Flow 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	0.350	0.00	0.00	0.000	0.000	0.0	0.00	0.00	25.00	7.00	0.00	0.00
Q1-10	0.00	0.00	0.00	0.000	0.000							
Q30-10	0.00	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
Abbottstown STP	PA0082368	0.0000	0.2500	0.2500	0.000	20.00	7.00

Parameter Data

Parameter Name	Disc Conc (mg/L)	Inb Conc (mg/L)	Stream Conc (mg/L)	Fate Coef (1/days)
CSOD5	25.00	2.00	0.00	1.50
Dissolved Oxygen	5.00	8.24	0.00	0.00
NH3-N	25.00	0.00	0.00	0.70

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rptGeneral

Input Data WQM 7.0

SNP Basin	Stream Code	Stream Name	RBM	Elevation (ft)	Drainage Area (acres)	Slope (ft/ft)	PWS Withdrawal (mgd)	Apply F.C.
07P	8780	BEAVER CREEK	3.690	496.64	6.43	0.00000	0.00	<input checked="" type="checkbox"/>

Stream Data

Design Cond.	LFY (cfs)	Inb Flow (cfs)	Stream Flow (cfs)	Rch Flow 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	0.350	0.00	0.00	0.000	0.000	0.0	0.00	0.00	25.00	7.00	0.00	0.00
Q1-10	0.00	0.00	0.00	0.000	0.000							
Q30-10	0.00	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
Abbottstown STP	PA0082368	0.0000	0.0000	0.0000	0.000	20.00	7.00

Parameter Data

Parameter Name	Disc Conc (mg/L)	Inb Conc (mg/L)	Stream Conc (mg/L)	Fate Coef (1/days)
CSOD5	25.00	2.00	0.00	1.50
Dissolved Oxygen	5.00	8.24	0.00	0.00
NH3-N	25.00	0.00	0.00	0.70

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Existing Effluent Limitations and Monitoring Requirements

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) ⁽¹⁾		Concentrations (mg/L)				Minimum ⁽²⁾ Measurement Frequency	Required Sample Type
	Average Monthly	Weekly Average	Daily 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	9.0 Daily Max	XXX	1/day	Grab
D.O.	XXX	XXX	5.0	XXX	XXX	XXX	1/day	Grab
UV Dosage (mWsec/cm ²)	XXX	XXX	Report	XXX	XXX	XXX	1/day	Recorded
CBOD ₅ May 1 - Oct 31	43.0	60.0	XXX	15.0	22.0	30	1/week	24-Hr Composite
CBOD ₅ Nov 1 - Apr 30	70.0	115	XXX	25.0	40.0	50	1/week	24-Hr Composite
BOD ₅ Raw Sewage Influent	Report	Report Daily Max	XXX	Report	XXX	XXX	1/week	24-Hr Composite
TSS	85	130	XXX	30.0	45.0	60	1/week	24-Hr Composite
TSS Raw Sewage Influent	Report	Report Daily Max	XXX	Report	XXX	XXX	1/week	24-Hr Composite
Fecal Coliform (No./100 ml) May 1 - Sep 30	XXX	XXX	XXX	200 Geo Mean	XXX	1000	1/week	Grab
Fecal Coliform (No./100 ml) Oct 1 - Apr 30	XXX	XXX	XXX	2000 Geo Mean	XXX	10000	1/week	Grab
Ammonia May 1 - Oct 31	4.0	XXX	XXX	1.5	XXX	3	1/week	24-Hr Composite
Ammonia Nov 1 - Apr 30	13.0	XXX	XXX	4.5	XXX	9	1/week	24-Hr Composite
Total Phosphorus	5.8	XXX	XXX	2.0	XXX	4	1/week	24-Hr Composite

Existing Effluent Limitations and Monitoring Requirements

Chesapeake Bay Requirements

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

Proposed Effluent Limitations and Monitoring Requirements
--

The limitations and monitoring requirements specified below are proposed for the draft permit, and reflect the most stringent limitations amongst technology, water quality and BPJ. Instantaneous Maximum (IMAX) limits are determined using multipliers of 2 (conventional pollutants) or 2.5 (toxic pollutants). Sample frequencies and types are derived from the "NPDES Permit Writer's Manual" (362-0400-001), SOPs and/or BPJ.

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

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) ⁽¹⁾		Concentrations (mg/L)				Minimum ⁽²⁾ Measurement Frequency	Required Sample Type
	Average Monthly	Weekly Average	Daily 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	9.0 Daily Max	XXX	1/day	Grab
D.O.	XXX	XXX	5.0	XXX	XXX	XXX	1/day	Grab
UV Dosage (mWsec/cm ²)	XXX	XXX	Report	XXX	XXX	XXX	1/day	Recorded
CBOD ₅ May 1 - Oct 31	43.0	60.0	XXX	15.0	22.0	30.0	1/week	24-Hr Composite
CBOD ₅ Nov 1 - Apr 30	70.0	115	XXX	25.0	40.0	50.0	1/week	24-Hr Composite
BOD ₅ Raw Sewage Influent	Report	Report Daily Max	XXX	Report	XXX	XXX	1/week	24-Hr Composite
TSS	85.0	130	XXX	30.0	45.0	60.0	1/week	24-Hr Composite
TSS Raw Sewage Influent	Report	Report Daily Max	XXX	Report	XXX	XXX	1/week	24-Hr Composite
Fecal Coliform (No./100 ml) May 1 - Sep 30	XXX	XXX	XXX	200 Geo Mean	XXX	1,000	1/week	Grab
Fecal Coliform (No./100 ml) Oct 1 - Apr 30	XXX	XXX	XXX	2,000 Geo Mean	XXX	10,000	1/week	Grab
E. Coli (No./100 ml)	XXX	XXX	XXX	XXX	XXX	Report	1/quarter	Grab
Ammonia May 1 - Oct 31	4.0	XXX	XXX	1.5	XXX	3.0	1/week	24-Hr Composite
Ammonia Nov 1 - Apr 30	13.0	XXX	XXX	4.5	XXX	9.0	1/week	24-Hr Composite
Total Phosphorus	5.8	XXX	XXX	2.0	XXX	4.0	1/week	24-Hr Composite

Compliance Sampling Location:

Proposed Effluent Limitations and Monitoring Requirements
--

The limitations and monitoring requirements specified below are proposed for the draft permit, and reflect the most stringent limitations amongst technology, water quality and BPJ. Instantaneous Maximum (IMAX) limits are determined using multipliers of 2 (conventional pollutants) or 2.5 (toxic pollutants). Sample frequencies and types are derived from the "NPDES Permit Writer's Manual" (362-0400-001), SOPs and/or BPJ.

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

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

Compliance Sampling Location:

Other Comments:

Tools and References Used to Develop Permit	
<input checked="" type="checkbox"/>	WQM for Windows Model (see Attachment [redacted])
<input type="checkbox"/>	Toxics Management Spreadsheet (see Attachment [redacted])
<input type="checkbox"/>	TRC Model Spreadsheet (see Attachment [redacted])
<input type="checkbox"/>	Temperature Model Spreadsheet (see Attachment [redacted])
<input type="checkbox"/>	Water Quality Toxics Management Strategy, 361-0100-003, 4/06.
<input checked="" type="checkbox"/>	Technical Guidance for the Development and Specification of Effluent Limitations, 362-0400-001, 10/97.
<input type="checkbox"/>	Policy for Permitting Surface Water Diversions, 362-2000-003, 3/98.
<input type="checkbox"/>	Policy for Conducting Technical Reviews of Minor NPDES Renewal Applications, 362-2000-008, 11/96.
<input type="checkbox"/>	Technology-Based Control Requirements for Water Treatment Plant Wastes, 362-2183-003, 10/97.
<input type="checkbox"/>	Technical Guidance for Development of NPDES Permit Requirements Steam Electric Industry, 362-2183-004, 12/97.
<input type="checkbox"/>	Pennsylvania CSO Policy, 385-2000-011, 9/08.
<input checked="" type="checkbox"/>	Water Quality Antidegradation Implementation Guidance, 391-0300-002, 11/03.
<input type="checkbox"/>	Implementation Guidance Evaluation & Process Thermal Discharge (316(a)) Federal Water Pollution Act, 391-2000-002, 4/97.
<input type="checkbox"/>	Determining Water Quality-Based Effluent Limits, 391-2000-003, 12/97.
<input type="checkbox"/>	Implementation Guidance Design Conditions, 391-2000-006, 9/97.
<input checked="" type="checkbox"/>	Technical Reference Guide (TRG) WQM 7.0 for Windows, Wasteload Allocation Program for Dissolved Oxygen and Ammonia Nitrogen, Version 1.0, 391-2000-007, 6/2004.
<input type="checkbox"/>	Interim Method for the Sampling and Analysis of Osmotic Pressure on Streams, Brines, and Industrial Discharges, 391-2000-008, 10/1997.
<input type="checkbox"/>	Implementation Guidance for Section 95.6 Management of Point Source Phosphorus Discharges to Lakes, Ponds, and Impoundments, 391-2000-010, 3/99.
<input type="checkbox"/>	Technical Reference Guide (TRG) PENTOXSD for Windows, PA Single Discharge Wasteload Allocation Program for Toxics, Version 2.0, 391-2000-011, 5/2004.
<input type="checkbox"/>	Implementation Guidance for Section 93.7 Ammonia Criteria, 391-2000-013, 11/97.
<input type="checkbox"/>	Policy and Procedure for Evaluating Wastewater Discharges to Intermittent and Ephemeral Streams, Drainage Channels and Swales, and Storm Sewers, 391-2000-014, 4/2008.
<input type="checkbox"/>	Implementation Guidance Total Residual Chlorine (TRC) Regulation, 391-2000-015, 11/1994.
<input type="checkbox"/>	Implementation Guidance for Temperature Criteria, 391-2000-017, 4/09.
<input checked="" type="checkbox"/>	Implementation Guidance for Section 95.9 Phosphorus Discharges to Free Flowing Streams, 391-2000-018, 10/97.
<input type="checkbox"/>	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, 391-2000-019, 10/97.
<input type="checkbox"/>	Field Data Collection and Evaluation Protocol for Determining Stream and Point Source Discharge Design Hardness, 391-2000-021, 3/99.
<input type="checkbox"/>	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, 391-2000-022, 3/1999.
<input type="checkbox"/>	Design Stream Flows, 391-2000-023, 9/98.
<input type="checkbox"/>	Field Data Collection and Evaluation Protocol for Deriving Daily and Hourly Discharge Coefficients of Variation (CV) and Other Discharge Characteristics, 391-2000-024, 10/98.
<input type="checkbox"/>	Evaluations of Phosphorus Discharges to Lakes, Ponds and Impoundments, 391-3200-013, 6/97.
<input checked="" type="checkbox"/>	Pennsylvania's Chesapeake Bay Tributary Strategy Implementation Plan for NPDES Permitting, 4/07.
<input checked="" type="checkbox"/>	SOP: SOP No. BCW-PMT-033
<input type="checkbox"/>	Other: [redacted]