pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Northcentral Regional Office
CLEAN WATER PROGRAM

NPDES PERMIT FACT SHEET
INDIVIDUAL SEWAGE

Application Type	**Renewal**	Application No.	**PA0208825**
Facility Type	**Municipal**	APS ID	**1008210**
Major / Minor	**Minor**	Authorization ID	**1299721**

Applicant and Facility Information

Applicant Name	**Austin Borough**	Facility Name	**Austin Borough Sewer System STP**
Applicant Address	PO Box 297	Facility Address	122 Costello Road
	Austin, PA 16720-0297		Austin, PA 16720-1905
Applicant Contact	Kurt Logue	Facility Contact	Kurt Logue
Applicant Phone	(814) 647-8613	Facility Phone	(814) 647-8613
Client ID	63394	Site ID	246192
Ch 94 Load Status	Not Overloaded	Municipality	Portage Township
Connection Status	No Limitations	County	Potter
Date Application Received	December 16, 2019	EPA Waived?	Yes
Date Application Accepted	December 27, 2019	If No, Reason	

Purpose of Application: Application for the renewal of the existing individual NPDES permit.

Summary of Review

Austin Borough has submitted an application for the renewal of the existing NPDES Permit PA0208825 for the Department's review. 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.

Approve	Deny	Signatures	Date
X		/s/ *Jonathan P. Peterman* Jonathan P. Peterman / Project Manager	March 24, 2020
		/s/ *Nicholas W. Hartranft* Nicholas W. Hartranft, P.E. / Environmental Engineer Manager	

Discharge, Receiving Waters and Water Supply Information			
Outfall No.	001	Design Flow (MGD)	0.08
Latitude	41º 37' 8.56"	Longitude	-78º 4' 50.22"
Quad Name	Wharton	Quad Code	0621
Wastewater Description:	Sewage Effluent		
Receiving Waters	Freeman Run (HQ-CWF)	Stream Code	24301
NHD Com ID	61424784	RMI	2.37
Drainage Area	25.11	Yield (cfs/mi^2)	0.0621
Q_{7-10} Flow (cfs)	1.56	Q_{7-10} Basis	Gage No. 3007800
Elevation (ft)	1290	Slope (ft/ft)	0.003
Watershed No.	8-A	Chapter 93 Class.	HQ-CWF
Existing Use	HQ-CWF	Existing Use Qualifier	N/A
Exceptions to Use	None.	Exceptions to Criteria	None.
Assessment Status	Attaining Use(s)		
Cause(s) of Impairment	N/A		
Source(s) of Impairment	N/A		
TMDL Status	N/A	Name	N/A
Nearest Downstream Public Water Supply Intake	PA American Water White Deer		
PWS Waters	West Branch Susquehanna River	Flow at Intake (cfs)	6670
PWS RMI	10.5	Distance from Outfall (mi)	140

Changes Since Last Permit Issuance: The updated Q_{7-10} data was obtained from the updated stream gage information obtained from *Stuckey, M.H., and Roland, M.A., 2011, Selected Streamflow Statistics for Streamgage Locations In and Near Pennsylvania*. A comparative stream analysis was previously conducted to determine a comparative stream gage (3007800) based on basin characteristics. The Q_{7-10} calculations, which are attached in Appendix A, indicate that the Q_{7-10} is 1.56 cfs.
Other Comments: None.

Treatment Facility Summary

Treatment Facility Name: Austin Borough Sewage Plant
Tributary Sewer System Information: The Austin Borough Wastewater Treatment Plant serves the flows from the Borough itself.

WQM Permit No.	Issuance Date
5374402	2/3/76
5394402	9/23/94

Waste Type	Degree of Treatment	Process Type	Disinfection	Avg Annual Flow (MGD)
Sewage	Secondary	Extended Aeration	Ultraviolet	0.08

Hydraulic Capacity (MGD)	Organic Capacity (lbs/day)	Load Status	Biosolids Treatment	Biosolids Use/Disposal
0.08	153	Not Overloaded	Aerobic Digestion	Landfill

Treatment System Components for Outfall 001:
- One (1) Influent screen.
- Six (6) Aerated Basins.
- Three (3) Blowers.
- Two (2) Clarifiers.
- Four (4) Skimmers.
- One (1) Clarifier.
- One (1) UV Disinfection System.
  - Four (4) Banks.
  - Two (2) Lamps Per Bank.
- One (1) Flow Meter.
- One (1) Outfall 001.

- Two (2) Aerobic Digesters.
- One (1) Drying Bed.

Changes Since Last Permit Issuance: None.
Other Comments: None.

TMDL Impairment

The Departments Geographical Information System indicates that Freeman Run is attaining its use and there are no associated TMDLs for this segment.

Chesapeake Bay Requirements

Since this facility's annual average flow is 0.08 MGD, the permittee will be required to monitor and report TN and TP throughout the permit term at a frequency no less than annually in accordance with the Phase II WIP Chesapeake Bay Strategy for Phase V facilities (0.002 MGD to 0.2 MGD). Therefore the proposed effluent limits were updated to contain the yearly monitoring requirements for nutrients.

Anti-Backsliding

In accordance with 40 CFR 122.44(l)(1) and (2), this permit does not contain effluent limitations, standards, or conditions that are less stringent than the previous permit.

Existing Effluent Limitations and Monitoring Requirements

Existing Limits – Outfall 001

Discharge Parameter	Limitations							
	Mass (lb/day)		Concentration (mg/L)				Monitoring Requirements	
	Monthly Average	Daily Maximum	Minimum	Average Monthly	Average Weekly	Instantaneous Maximum	Minimum Frequency	Sample Type
Flow (MGD)	Report	Report					Continuous	Meter
C-BOD_5	17	27		25	40	50	2/ Month	8-Hr. Comp.
BOD_5 Raw Sewage Influent	Report	Report		Report			2/ Month	8-Hr. Comp.
TSS	20	30		30	45	60	2/ Month	8-Hr. Comp.
TSS Raw Sewage Influent	Report	Report		Report			2/ Month	8-Hr. Comp.
UV Intensity (mW/cm^2)			Report				1/ Day	Metered
pH (Std. Units)			6.0			9.0	1/ Day	Grab
D.O.			4.0				1/ Day	Grab
NH_3-N (5/1–10/31)	5.3	8.0		8.0	12	16	2/ Month	8-Hr. Comp.
NH_3-N (11/1-4/30)	8.0	12		12	18	24		
Fecal Coliforms (5/1-9/30)	200 colonies/100 ml as a geometric mean					1,000	2/ Month	Grab
Fecal Coliforms (10/1-4/30)	2,000 colonies/100 ml as a geometric mean					10,000		
Total Nitrogen	Report Annual Average	Report Total Annual		Report Annual Average			1/ Year	8-Hr. Comp.
Total Phosphorous	Report Annual Average	Report Total Annual		Report Annual Average			1/ Year	8-Hr. Comp.

*The existing effluent limits for Outfall 001 were based on a design flow of 0.08 MGD.

Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** 0.08
Latitude 41º 37' 8.40" **Longitude** -78º 4' 50.40"
Wastewater Description: Sewage Effluent

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)

Water Quality-Based Limitations

To establish whether or not water-quality based effluent limitations (WQBELs) are required, the Department models in-stream conditions. In order to determine limitations for CBOD5, ammonia-N and dissolved oxygen, the Department utilizes the WQM 7.0 v1.0b model and in order to determine limitations for toxics, the Department utilizes the PENTOXSD v2.0d model.

WQM 7.0 for Windows, Version 1.0b, Wasteload Allocation Program for Dissolved Oxygen and Ammonia Nitrogen
Given that there have been no changes to the facility, the discharge, or the receiving stream, the previous modeling results will be utilized. The model previously was run using the Q7-10 stream flow, background water quality, average annual design flow, and other discharge characteristics. The existing water technology-based limits for $CBOD_5$ (25 mg/l) and water quality-based NH3-N (8.0 mg/l) were used as inputs for the modeling. The DO minimum daily average criterion from §93.7 (5.0 mg/L for CWF) was used for the in-stream objective for the model. The summary of the output is as follows:

Parameter	Effluent Limit		
	30 Day Average	Maximum	Minimum
CBOD5	25	N/A	N/A
Ammonia-N	8.0	16.0	N/A
Dissolved Oxygen	N/A	N/A	3

The model does not recommend water-quality based effluent limitations with regards to CBOD5 and dissolved oxygen. Refer to the Appendix for the WQM 7.0 inputs and results. Additionally, the model indicates that the effluent limits for ammonia-nitrogen as shown above are still protective of water quality. These limits will be implemented.

Comments: None.

Best Professional Judgment (BPJ) Limitations

See Dissolved Oxygen section below.

Comments: None.

Additional Considerations
None

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 the abovementioned technology, water quality, and BPJ. Instantaneous Maximum (IMAX) limits are determined using multipliers of 2 (conventional pollutants) or 2.5 (toxic pollutants). Sample frequencies and types are derived from the "NPDES Permit Writer's Manual" (362-0400-001) and/or BPJ.

Proposed Limits - Outfall 001, Effective Period: Permit Effective Date through Permit Expiration Date

Discharge Parameter	Limitations							
	Mass (lb/day)		Concentration (mg/L)				Monitoring Requirements	
	Monthly Average	Daily Maximum	Minimum	Average Monthly	Average Weekly	Instantaneous Maximum	Minimum Frequency	Sample Type
Flow (MGD)	Report	Report					Continuous	Meter
C-BOD_5	17	27		25	40	50	2/ Month	8-Hr. Comp.
BOD_5 Raw Sewage Influent	Report	Report		Report			2/ Month	8-Hr. Comp.
TSS	20	30		30	45	60	2/ Month	8-Hr. Comp.
TSS Raw Sewage Influent	Report	Report		Report			2/ Month	8-Hr. Comp.
UV Intensity (mW/cm^2)			Report				1/ Day	Metered
pH (Std. Units)			6.0			9.0	1/ Day	Grab
D.O.			4.0				1/ Day	Grab
NH_3-N (5/1–10/31)	5.3	8.0		8.0	12	16	2/ Month	8-Hr. Comp.
NH_3-N (11/1-4/30)	8.0	12		12	18	24		
Fecal Coliforms (5/1-9/30)	200 colonies/100 ml as a geometric mean					1,000	2/ Month	Grab
Fecal Coliforms (10/1-4/30)	2,000 colonies/100 ml as a geometric mean					10,000		
Total Nitrogen	Report Annual Average			Report Annual Average			1/ Year	8-Hr. Comp.
Total Phosphorous	Report Annual Average			Report Annual Average			1/ Year	8-Hr. Comp.

*The proposed effluent limits for Outfall 001 were based on a design flow of 0.08 MGD.

Effluent Limit Determination for Outfall 001

General Information
All of the limits proposed above are consistent with other permits issued for Phase V wastewater treatment plants in the region. The associated mass-based limits (lbs/day) for all parameters were based on the formula: design flow (average annual) (MGD) x concentration limit (mg/L) at design flow x conversion factor (8.34). All effluent limits were then rounded down in accordance with the rounding rules established in the *Technical Guidance for the Development and Specification of Effluent Limitations (362-0400-001)*, Chapter 5 - Specifying Effluent Limitations in NPDES Permits. The existing

monitoring frequencies and sample types for these parameters generally correspond with the *Technical Guidance for the Development and Specification of Effluent Limitations* (362-0400-001) Table 6-3 and will remain.

Flow
Reporting of the daily maximum flow is consistent with monitoring requirements for other treatment plants of this size.

Carbonaceous Biochemical Oxygen Demand ($CBOD_5$)
The results of the WQM 7.0 model show that the previously applied secondary treatment standards (25 PA Code §92a.47 (a) (1&2)) for $CBOD_5$ are protective of water quality.

Total Suspended Solids (TSS)
The previously applied technology based secondary treatment standards (25 PA Code §92a.47 (a) (1&2)) for TSS will remain as well.

pH
CFR Title 40 §133.102(c) and 25 PA Code §95.2(1) provide the basis of effluent limitations for pH. The existing limits will remain.

Fecal Coliforms
The existing fecal coliform limits with I-max limits were updated from the previous Chapter 92 code to correspond with what is specified in the updated 25 PA Code § 92a.47 (a)(4)&(5) and will remain.

Ammonia-Nitrogen (NH3-N)
The results of the WQM 7.0 model show that the previously applied water quality for Ammonia-Nitrogen are still protective of water quality and will remain.

Dissolved Oxygen (DO)
A minimum Dissolved Oxygen (DO) standard in Chapter 93 for cold water fishes of 4.0 mg/L will be established as a minimum BPJ limit. Discharges of concentrations less than this value have the potential to create localized areas of DO concentrations below criteria.

UV Intensity ($\mu W/cm^2$)
The existing permit has the permittee reporting UV Intensity units in $\mu W/cm^2$. The operator of the facility, Kurt Logue, previously confirmed in a phone conversation on 3/16/15 that the UV meter is reporting intensity. Therefore, monitoring UV intensity will remain.

Influent BOD_5 and TSS
The Department requires the reporting of raw sewage influent monitoring for BOD_5 and TSS in all POTW permits. This provides the Department with the ability to monitor the percent removal of each parameter as stipulated in section 2 of the Part A conditions and maintain records of the BOD_5 loading as required by 25 Pa. Code Chapter 94. The monitoring frequencies and sample types are identical to the effluent sampling.

Compliance History

Summary of Inspections -The last inspection of the facilities was conducted on 12/26/19 by the Department. The inspection report indicates that the facility was operating normally.

WMS Query Summary - A WMS Query was run at *Reports - Violations & Enforcements – Open Violations for Client Report* to determine whether there are any unresolved violations associated with the client that will affect issuance of the permit (per CSL Section 609). This query revealed no open violations.

eDMRs Summary - Upon review of the eDMR's, the facility has generally been in compliance with the existing effluent limits except for the fecal and ammonia violations listed below.

Attachments

Appendices

Compliance History

DMR Data for Outfall 001 (from February 1, 2019 to January 31, 2020)

Parameter	JAN-20	DEC-19	NOV-19	OCT-19	SEP-19	AUG-19	JUL-19	JUN-19	MAY-19	APR-19	MAR-19	FEB-19
Flow (MGD) Average Monthly	0.060	0.056	0.053	0.050	0.042	0.041	0.058	0.077	0.081	0.085	0.074	0.074
Flow (MGD) Daily Maximum	0.074	0.142	0.115	0.088	0.054	0.082	0.123	0.102	0.147	0.143	0.122	0.101
pH (S.U.) Minimum	6.7	6.3	6.7	6.7	6.8	6.4	6.5	6.6	6.6	6.8	6.6	6.5
pH (S.U.) Maximum	7.0	7.0	7.0	7.1	7.4	7.2	7.0	7.4	7.2	7.4	7.1	7.0
DO (mg/L) Minimum	4.5	5.0	4.3	4.3	5.8	6.0	6.4	5.8	6.1	5.3	5.6	6.8
CBOD5 (lbs/day) Average Monthly	2.0	< 1.0	0.5	< 0.8	< 0.5	< 2.0	< 2.0	< 0.6	< 2.0	3.0	4.0	3.0
CBOD5 (lbs/day) Weekly Average	2.0	< 2.0	0.7	< 1.0	< 0.6	2.0	< 3.0	0.7	< 2.0	4.0	5.0	4.0
CBOD5 (mg/L) Average Monthly	4.0	< 2.1	1.5	< 2.2	< 1.6	< 5.9	< 5.0	< 1.4	< 2.0	5.7	6.4	5.7
CBOD5 (mg/L) Weekly Average	5.0	< 2.2	2.1	< 2.8	< 1.8	7.6	< 11.0	< 1.7	2.3	6.8	6.7	9.5
BOD5 (lbs/day) Raw Sewage Influent Average Monthly	98	101	114	67	81	77	108	142	65	72.0	58.0	58.0
BOD5 (lbs/day) Raw Sewage Influent Daily Maximum	169	224	115	126	149	128	261	316	82	94.0	90.0	84
BOD5 (mg/L) Raw Sewage Influent Average Monthly	242	127	363	166	260	273	183	332	86.0	125.0	101.0	114.0
TSS (lbs/day) Average Monthly	3.0	4.0	1.0	2.0	2	3.0	5.0	1.0	< 3.0	9.0	10.0	3.0
TSS (lbs/day) Raw Sewage Influent Average Monthly	147	362	172	85	121	97	225	776	181	94.0	54.0	62.0

TSS (lbs/day) Raw Sewage Influent Daily Maximum	292	1036	193	164	208	147	672	1505	467	116.0	88.0	91.0
TSS (lbs/day) Weekly Average	4.0	10.0	1.0	2.0	2	6.0	9.0	2.0	6.0	11.0	11.0	4.0
TSS (mg/L) Average Monthly	6.8	3.7	4.0	4.5	5	11.4	11.4	3.0	< 4.0	16.1	17.4	6.1
TSS (mg/L) Raw Sewage Influent Average Monthly	375	331	550	207	400	350	338	1331	242	163.0	93.0	119.0
TSS (mg/L) Weekly Average	9.5	8.5	4.0	6.5	6	20.0	16.5	4.5	8.0	19.2	22.0	9.3
Fecal Coliform (No./100 ml) Geometric Mean	< 302	< 10.0	1.0	< 12.0	< 22	85.0	2259	< 10.0	< 7.0	< 10.0	< 27.0	< 8.0
Fecal Coliform (No./100 ml) Instantaneous Maximum	6131	< 10.0	0.712	< 20.0	< 50	100.0	24196	25.2	< 10.0	< 10.0	201	10.0
UV Intensity (mW/cm²) Minimum	4.9	4.0	3.8	3.9	3.3	3.0	3.9	5.8	6.1	5.9	5.1	5.1
Total Nitrogen (lbs/day) Annual Average		3.19										
Total Nitrogen (mg/L) Annual Average		6.08										
Total Nitrogen (lbs) Total Annual		2.14										
Ammonia (lbs/day) Average Monthly	0.6	2.0	5.0	0.52	3.0	5.0	6.0	5.0	4.0	6.0	< 4.0	4.0
Ammonia (lbs/day) Weekly Average	0.9	2.0	< 5.0	0.52	3.0	6.0	7.0	6.0	4.0	6.0	7.0	4.0
Ammonia (mg/L) Average Monthly	1.195	3.38	< 10.0	0.3	8.0	13.4	14.6	9.87	5.18	10.29	< 8.9	10.78
Ammonia (mg/L) Weekly Average	1.61	4.91	< 10.0	0.4	9.3	18.1	16.3	10.7	6.57	11.1	15.2	12.2
Total Phosphorus (lbs/day) Annual Average		0.443										
Total Phosphorus (mg/L) Annual Average		0.844										
Total Phosphorus (lbs) Total Annual		0.2										

Compliance History

Effluent Violations for Outfall 001, from: March 1, 2019 To: January 31, 2020

Parameter	Date	SBC	DMR Value	Units	Limit Value	Units
Fecal Coliform	07/31/19	Geo Mean	2259	No./100 ml	200	No./100 ml
Fecal Coliform	07/31/19	IMAX	24196	No./100 ml	1000	No./100 ml
Ammonia	07/31/19	Avg Mo	6.0	lbs/day	5.3	lbs/day
Ammonia	06/30/19	Avg Mo	9.87	mg/L	8.0	mg/L
Ammonia	08/31/19	Avg Mo	13.4	mg/L	8.0	mg/L
Ammonia	07/31/19	Avg Mo	14.6	mg/L	8.0	mg/L
Ammonia	08/31/19	Wkly Avg	18.1	mg/L	12	mg/L
Ammonia	07/31/19	Wkly Avg	16.3	mg/L	12	mg/L

Tools and References Used to Develop Permit	
☒	Q7-10 Analysis and Stream Data (see Appendix **A**)
☒	WQM 7.0 Model Input/Output (see Appendix **B**)
☐	Toxics Screening Analysis v2.4 (see Appendix)
☐	PENTOXSD v2.0d Model Input/Output (see Appendix)
☒	Facility Map and Schematic (see Appendix **C**)
☐	TRC Evaluation Spreadsheet (see Appendix)
☐	Lake Model Output (see Appendix)
☐	WETT Spreadsheet (see Appendix)
☒	Water Quality Toxics Management Strategy, 361-0100-003, 4/06.
☒	Technical Guidance for the Development and Specification of Effluent Limitations, 362-0400-001, 10/97.
☐	Policy for Permitting Surface Water Diversions, 362-2000-003, 3/98.
☐	Policy for Conducting Technical Reviews of Minor NPDES Renewal Applications, 362-2000-008, 11/96.
☐	Technology-Based Control Requirements for Water Treatment Plant Wastes, 362-2183-003, 10/97.
☐	Technical Guidance for Development of NPDES Permit Requirements Steam Electric Industry, 362-2183-004, 12/97.
☐	Pennsylvania CSO Policy, 385-2000-011, 9/08.
☐	Water Quality Antidegradation Implementation Guidance, 391-0300-002, 11/03.
☐	Implementation Guidance Evaluation & Process Thermal Discharge (316(a)) Federal Water Pollution Act, 391-2000-002, 4/97.
☒	Determining Water Quality-Based Effluent Limits, 391-2000-003, 12/97.
☐	Implementation Guidance Design Conditions, 391-2000-006, 9/97.
☒	Technical Reference Guide (TRG) WQM 7.0 for Windows, Wasteload Allocation Program for Dissolved Oxygen and Ammonia Nitrogen, Version 1.0, 391-2000-007, 6/2004.
☐	Interim Method for the Sampling and Analysis of Osmotic Pressure on Streams, Brines, and Industrial Discharges, 391-2000-008, 10/1997.
☐	Implementation Guidance for Section 95.6 Management of Point Source Phosphorus Discharges to Lakes, Ponds, and Impoundments, 391-2000-010, 3/99.
☐	Technical Reference Guide (TRG) PENTOXSD for Windows, PA Single Discharge Wasteload Allocation Program for Toxics, Version 2.0, 391-2000-011, 5/2004.
☒	Implementation Guidance for Section 93.7 Ammonia Criteria, 391-2000-013, 11/97.
☐	Policy and Procedure for Evaluating Wastewater Discharges to Intermittent and Ephemeral Streams, Drainage Channels and Swales, and Storm Sewers, 391-2000-014, 4/2008.
☒	Implementation Guidance Total Residual Chlorine (TRC) Regulation, 391-2000-015, 11/1994.
☐	Implementation Guidance for Temperature Criteria, 391-2000-017, 4/09.
☐	Implementation Guidance for Section 95.9 Phosphorus Discharges to Free Flowing Streams, 391-2000-018, 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, 391-2000-019, 10/97.
☐	Field Data Collection and Evaluation Protocol for Determining Stream and Point Source Discharge Design Hardness, 391-2000-021, 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, 391-2000-022, 3/1999.
☒	Design Stream Flows, 391-2000-023, 9/98.
☐	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.
☐	Evaluations of Phosphorus Discharges to Lakes, Ponds and Impoundments, 391-3200-013, 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 1.8 – 10/11/13
☒	SOP: Establishing Effluent Limitations for Individual Sewage Permits– Version 1.5 - 8/23/13
☐	Other: