pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Southcentral Regional Office
CLEAN WATER PROGRAM

NPDES PERMIT FACT SHEET
INDIVIDUAL SEWAGE

Application Type	**Renewal**	Application No.	**PA0082571**
Facility Type	**Non-Municipal**	APS ID	**20031**
Major / Minor	**Minor**	Authorization ID	**1289858**

Applicant and Facility Information

Applicant Name	**West Penn District Grace Brethren Men, Inc.**	Facility Name	**Camp Mantowagan**
Applicant Address	2671 Camp Lane, PO Box 95	Facility Address	2671 Camp Lane, PO Box 95
	Saxton, PA 16678-0095		Saxton, PA 16678
Applicant Contact	Richard Strappello	Facility Contact	Richard Strappello
Applicant Phone	(814) 658-3815	Facility Phone	(814) 658-3815
Client ID	43844	Site ID	452667
Ch 94 Load Status	Not Overloaded	Municipality	Todd Township
Connection Status		County	Huntingdon
Date Application Received	September 3, 2019	EPA Waived?	Yes
Date Application Accepted	September 27, 2019	If No, Reason	

Purpose of Application: NPDES Renewal.

Summary of Review

Camp Mantowagan facility owned and operated by West Penn District Grace Brethren Men, Inc. in Todd Township, Huntingdon County. The facility is a church bible camp which normally operates during the summer months which is the only time a discharge can be expected. Some weekend retreats are also possible during the year.

West Penn District Grace Brethren Men, Inc. has applied to the Pennsylvania Department of Environmental Protection (DEP) for reissuance of its NPDES permit. The permit was last reissued on February 20, 2015 and became effective on March 1, 2015. The permit expired on February 29, 2020.

The facility has a design flow capacity of 0.007 MGD, and discharges to an ephemeral swale that empties into Tatman Run (HQ-CWF, MF). The discharge to a HQ stream is justified, since the outfall pre-dates the HQ classification of the stream. In 1993, it was determined by the aquatic biologists that the point of first use is at the confluence of the swale with Tatman Run. The discharge is to an ephemeral swale; however, since a new or expanding discharge is not proposed, the *Policy and Procedure for Evaluating Wastewater Discharges to Intermittent and Ephemeral Streams, Drainage Channels and Swales, and Storm Sewers*, revised April 12, 2008, will not be considered.

Changes from the previous permit: Unit of Fecal Coliform changed from CFU/100 ml to No./100 ml.

Based on the review outline in this fact sheet, it is recommended that the permit be drafted and published in the Pennsylvania Bulletin for public comments for 30 days.

Approve	Deny	Signatures	Date
X		Hilary H. Le / Environmental Engineering Specialist	March 24, 2020
		Daniel W. Martin, P.E. / Environmental Engineer Manager	
		Maria D. Bebenek, P.E./Clean Water Program Manager	

Discharge, Receiving Waters and Water Supply Information			
Outfall No.	001	Design Flow (MGD)	0.007
Latitude	40º 15' 51.26"	Longitude	-78º 10' 55.20"
Quad Name	Entriken	Quad Code	
Wastewater Description:	Sewage Effluent		
Receiving Waters	Tatman Run (HQ-CWF, MF)	Stream Code	13653
NHD Com ID	65841673	RMI	4.5 miles
Drainage Area	0.41 mi.^{2}	Yield (cfs/mi^2)	See comments below
Q_{7-10} Flow (cfs)	See comments below	Q_{7-10} Basis	USGS StreamStats
Elevation (ft)		Slope (ft/ft)	
Watershed No.	11-D	Chapter 93 Class.	HQ-CWF, MF
Existing Use		Existing Use Qualifier	
Exceptions to Use		Exceptions to Criteria	
Assessment Status	Attaining Use(s)		
Cause(s) of Impairment			
Source(s) of Impairment			
TMDL Status		Name	
Nearest Downstream Public Water Supply Intake	U.S. Army Corps. Of Engineers – Raystown Lake		
PWS Waters	Raystown Branch Juniata River	Flow at Intake (cfs)	
PWS RMI	5.5 miles	Distance from Outfall (mi)	Approximate 27 miles

Changes Since Last Permit Issuance: none

Drainage Area

The discharge is to Tatman Run at RMI 4.5 miles. A drainage area upstream of the discharge is estimated to be 0.41 mi.^{2}, according to USGS PA StreamStats available at https://streamstats.usgs.gov/ss/.

Stream Flow

There is no gage station on Tatman Run to accurately determine Q_{7-10} flow. Therefore, Streamflow will be correlated with past streamflow records taken from the nearby USGS gage station on the Raystown Branch Juniata River, Huntingdon county. The Q_{7-10} is 139 cfs and the drainage area is 991 mi.^{2} (according to USGS PA StreamStats available at https://streamstats.usgs.gov/ss/) which results in a Q_{7-10} low flow yield of 0.14 cfs/mi.^{2}. This information is used to obtain a chronic or 30-day (Q_{30-10}), and an acute or 1-day (Q_{1-10}) exposure stream flow for the discharge point as follows (Guidance No. 391-2000-023):

Low Flow Yield = 139 cfs / 991 mi.^{2} ≈ 0.14 cfs/mi.^{2}

Q_{7-10} discharge = 0.14 cfs/mi.^{2} x D.A discharge = 0.14 cfs/mi.^{2} x 0.41 mi.^{2} = 0.06 cfs

Q_{30-10} = 1.36 * 0.06 cfs ≈ 0.08 cfs

Q_{1-10} = 0.64 * 0.06 cfs ≈ 0.04 cfs

Tatman Run

Under 25 Pa Code § 93.9n, the Tatman Run is designated as High Quality-Cold Water & Migratory Fishes during the permit cycle. Integrate Report 2018, Tatman Run, assessment unit ID 6983, is not impaired. 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 the U.S. Army Corps of Engineers on the Raystown Branch Juniata River, approximately 27 miles from the point of discharge. Given the nature and dilution, the discharge is not expected to significantly impact the water supply.

Treatment Facility Summary				
Treatment Facility Name: Camp Mantowagan				
WQM Permit No.	**Issuance Date**			
Waste Type	**Degree of Treatment**	**Process Type**	**Disinfection**	**Avg Annual Flow (MGD)**
Sewage	Secondary	Septic Tank Sand Filter	Hypochlorite	0.007
Hydraulic Capacity (MGD)	**Organic Capacity (lbs/day)**	**Load Status**	**Biosolids Treatment**	**Biosolids Use/Disposal**
0.007		Not Overloaded	Anaerobic Digestion	Combination of methods

Changes Since Last Permit Issuance: none

The facility is a 7,000 GPD system with the following treatment units:

Three (3), Septic Tanks
Two (2), Sand Bed Filters
One (1), Chlorine Contact Tank

Chlorine is used for disinfection.

Compliance History	
Summary of DMRs:	The DMRs reported from February 1, 2019 to January 31, 2020 is summarized in the Table below (Page # 4).
Summary of Inspections:	8/14/2018: Mr. Clark, DEP WQS, conducted compliance evaluation inspection. The field test results were within the permit limits. There were no violations noted during inspection. 7/13/2017: Mr. Clark, DEP WQS, conducted compliance evaluation inspection. Camp operations are seasonal, usually June through August. The field test results were within the permit limits. There were no violations noted during inspection. 7/11/2016: Mr. Clark, DEP WQS, conducted compliance evaluation inspection. There were some recommendations such as: submit a non-compliance discharge report and obtain a copy of valid operator certification. The field test results were within the permit limits. There were no violations noted during inspection.
Other Comments:	There are currently no open violations associated with the permittee or the facility.

Other Comments:

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	0.0005					0.0051	0.0047	0.0055	0.001			
Flow (MGD) Daily Maximum	0.001					0.007	0.007	0.007	0.0012			
pH (S.U.) Minimum	6.85					6.8	6.7	6.9	6.9			
pH (S.U.) Maximum	6.9					6.9	9.0	7.1	7.2			
DO (mg/L) Minimum	10.06					6.49	5.70	7.17	5.68			
TRC (mg/L) Average Monthly	0.43					0.30	0.38	0.42	0.29			
TRC (mg/L) Instantaneous Maximum	0.51					0.56	0.68	0.63	0.47			
CBOD5 (mg/L) Average Monthly	< 3.00					< 3.90	< 5.43	< 4.38	< 3.0			
TSS (mg/L) Average Monthly	2.00					2.0	3.9	6.30	< 1.6			
Fecal Coliform (CFU/100 ml) Geometric Mean	< 1.0					2.0	133.86	< 4.0	< 4.0			
Fecal Coliform (CFU/100 ml) Instantaneous Maximum	< 1.0					< 4.0	4479.6	< 4.0	4.0			
Nitrate-Nitrite (mg/L) Average Monthly	< 8.142					< 67.33	< 44.536	< 54.77	< 6.002			
Total Nitrogen (mg/L) Average Monthly	< 8.642					< 68.33	< 93.172	< 55.77	< 7.082			
Ammonia (mg/L) Average Monthly	< 0.1000					0.963	3.623	2.092	0.321			
TKN (mg/L) Average Monthly	< 0.5000					< 1.00	< 2.05	< 1.000	1.08			
Total Phosphorus (mg/L) Average Monthly	1.19					1.17	1.25	0.894	0.817			

Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** 0.007
Latitude 40º 15' 49.56" **Longitude** -78º 10' 54.19"
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

Carbonaceous Biochemical Oxygen Demand ($CBOD_5$):
The attached computer printout of the WQM 7.0 stream model indicates that a monthly average limit of 25 mg/L, or secondary treatment, is adequate to protect the water quality of the stream. However, the existing limits of 25 mg/L monthly average, and 50 mg/L instantaneous maximum (IMAX) will remain in the proposed permit as per guidance document 391-2000-014. Recent DMRs and inspection reports show that the facility has been consistently achieving these limits.

Total Suspended Solids (TSS):
The existing technology-based limits of 30 mg/L average monthly, and 60 mg/L instantaneous maximum 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.

Ammonia (NH_3-N):
NH_3N 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 NH_3-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	=	20ºC	(Default for CWF)
*	Background NH_3-N	=	0 mg/L	(Default)

The attached printout of the WQM 7.0 data indicates that at a discharge of 0.007 MGD, limits of 15.7 mg/L NH_3-N as a monthly average and 31.5 mg/L NH_3-N instantaneous maximum (IMAX) are necessary to protect the aquatic life from toxicity effects. The more stringent existing summer limits 9 mg/L for monthly average & 18.0 mg/L for IMAX will remain in the proposed permit.

Also, the NH_3-N winter effluent limit will be 25.0 for average monthly and 50.0 for IMAX will remain in the proposed permit. Past DMR data showed that the discharge consistently contains NH_3-N levels less than 6.0 mg/L. Additionally, the facility has consistently been achieving concentrations well below these limits.

Dissolved Oxygen (DO):
A minimum D.O. of 5.0 mg/L is required per 25 Pa. Code § 93.7. This is consistent with the previous permit and current Department criteria.

pH:
The effluent discharge pH should remain above 6 and below 9 standard units according to 25 Pa Code § 95.2(1).

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 1,000/100 ml and 25 Pa Code § 92a.47.(a)(5) requires a winter limit of 2,000/100 ml as a geometric mean and an instantaneous maximum not greater than 10,000/100 ml.

Total Residual Chlorine (TRC):
The attached TRC Excel Spreadsheet calculator, which uses the equations and calculations from the Department's May 1, 2003 Implementation Guidance for Total Residual Chlorine (ID No. 391-2000-015), the monthly average limit of 0.5 mg/L and an instantaneous maximum limit of 1.6 mg/L. The more stringent existing permit limits of 0.44 mg/L average monthly and 1.45 mg/L instantaneous maximum will remain in the proposed permit. Past DMRs reports showed that the facility has been consistently achieving these limits.

Chesapeake Bay Strategy:
The Department formulated a strategy to comply with the EPA and Chesapeake Bay Foundation requirements by reducing point source loadings of Total Nitrogen (TN) and Total Phosphorus (TP). Sewage discharges have been prioritized by Central Office based on their delivered TN loadings to the Bay. The highest priority (Phases I, II, and III) dischargers will receive annual loading caps based on their design flow on August 29, 2005 and concentrations of 6 mg/L TN and 0.8 mg/L TP. These limits may be achieved through a combination of treatment technology, credits, or offsets. Phase IV (0.2 -0.4 MGD) will be required to monitor and report TN and TP during permit renewal monthly and Phase V (below 0.2 MGD) will monitor during current permit renewal once a year. However, any facility in Phases IV and V that undergoes expansion is subjected to cap load right away. This plant is classified as a phase V, and will be required to monitor and report for Total Phosphorus, Nitrate-Nitrite as N, Total Kjeldahl Nitrogen, and Total Nitrogen. Two per month monitoring frequency for discharge will remain in the proposed permit.

Stormwater:
There is no stormwater outfall associated with this facility.

Toxic:
This is a minor sewage facility receiving domestic wastewater only and the current application does not require sampling of toxic pollutants (or heavy metals) for those facilities with design flows less than 0.1 MGD. Therefore, no reasonable potential analysis for toxic pollutants has been performed for this permit renewal.

Antidegradation (93.4):
The effluent limits for this discharge have been developed to ensure that the existing instream water used and the level of water quality necessary to protect the existing uses are maintained and protected. The basin is classified as a HQ-CWF. The discharge pre-dates the Chapter 93 designation of HQ-CWF and is not expected to impact the stream.

303d Listed Streams:
The discharge is not located on a 303d listed stream segment.

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

WQM 7.0

Node 1: Outfall 001 on Tatman Run (13653)

Elevation:	1298.3 ft (USGS National Map Viewer)
Drainage Area:	0.41 $mi.^2$ (USGS PA StreamStats)
River Mile Index:	4.5 (PA DEP eMapPA)
Low Flow Yield:	0.14 $cfs/mi.^2$
Discharge Flow:	0.007 MGD (NPDES Application)

Node 2: Just before confluence Trib. 13670 to Tatman Run

Elevation:	1232.26 ft (USGS National Map Viewer)
Drainage Area:	0.52 $mi.^2$ (USGS PA StreamStats)
River Mile Index:	3.9 (PA DEP eMapPA)
Low Flow Yield:	0.14 $cfs/mi.^2$
Discharge Flow:	0.000 MGD

WQM 7.0 data is attached.

2009 Camp Mantowagon water

RTC results

TRC EVALUATION			
Input appropriate values in A3:A9 and D3:D9			
0.06	= Q stream (cfs)	0.5	= CV Daily
0.007	= 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 = 1.786	1.3.2.iii	WLA cfc = 1.734
PENTOXSD TRG	5.1a	LTAMULT afc = 0.373	5.1c	LTAMULT cfc = 0.581
PENTOXSD TRG	5.1b	LTA_afc= 0.666	5.1d	LTA_cfc = 1.008

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)**

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	Daily Maximum	Minimum	Average Monthly	Maximum	Instant. Maximum		
Flow (MGD)	Report	Report	XXX	XXX	XXX	XXX	1/day	Estimate
pH (S.U.)	XXX	XXX	6.0	XXX	XXX	9.0	1/day	Grab
DO	XXX	XXX	5.0	XXX	XXX	XXX	1/day	Grab
TRC	XXX	XXX	XXX	0.44	XXX	1.45	1/day	Grab
$CBOD_5$	XXX	XXX	XXX	25	XXX	50	2/month	8-Hr Composite
TSS	XXX	XXX	XXX	30	XXX	60	2/month	8-Hr Composite
Fecal Coliform (No./100 ml) May 1 - Sep 30	XXX	XXX	XXX	200 Geo Mean	XXX	1,000	2/month	Grab
Fecal Coliform (No./100 ml) Oct 1 - Apr 30	XXX	XXX	XXX	2,000 Geo Mean	XXX	10,000	2/month	Grab
Ammonia May 1 - Oct 31	XXX	XXX	XXX	9	XXX	18	2/month	8-Hr Composite
Ammonia Nov 1 - Apr 30	XXX	XXX	XXX	25	XXX	50	2/month	8-Hr Composite
Nitrate-Nitrite	XXX	XXX	XXX	Report	XXX	XXX	2/month	8-Hr Composite
TKN	XXX	XXX	XXX	Report	XXX	XXX	2/month	8-Hr Composite
Total Phosphorus	XXX	XXX	XXX	Report	XXX	XXX	2/month	8-Hr Composite
Total Nitrogen	XXX	XXX	XXX	Report	XXX	XXX	2/month	Calculation

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	Daily Maximum	Minimum	Average Monthly	Maximum	Instant. Maximum		
Flow (MGD)	Report	Report	XXX	XXX	XXX	XXX	1/day	Estimate
pH (S.U.)	XXX	XXX	6.0	XXX	XXX	9.0	1/day	Grab
DO	XXX	XXX	5.0	XXX	XXX	XXX	1/day	Grab
TRC	XXX	XXX	XXX	0.44	XXX	1.45	1/day	Grab
$CBOD_5$	XXX	XXX	XXX	25.0	XXX	50.0	2/month	8-Hr Composite
TSS	XXX	XXX	XXX	30.0	XXX	60.0	2/month	8-Hr Composite
Fecal Coliform (No./100 ml) May 1 - Sep 30	XXX	XXX	XXX	200 Geo Mean	XXX	1,000	2/month	Grab
Fecal Coliform (No./100 ml) Oct 1 - Apr 30	XXX	XXX	XXX	2,000 Geo Mean	XXX	10,000	2/month	Grab
Ammonia May 1 - Oct 31	XXX	XXX	XXX	9.0	XXX	18.0	2/month	8-Hr Composite
Ammonia Nov 1 - Apr 30	XXX	XXX	XXX	25.0	XXX	50.0	2/month	8-Hr Composite
Nitrate-Nitrite	XXX	XXX	XXX	Report	XXX	XXX	2/month	8-Hr Composite
TKN	XXX	XXX	XXX	Report	XXX	XXX	2/month	8-Hr Composite
Total Phosphorus	XXX	XXX	XXX	Report	XXX	XXX	2/month	8-Hr Composite
Total Nitrogen	XXX	XXX	XXX	Report	XXX	XXX	2/month	Calculation

Compliance Sampling Location:

Other Comments:

Tools and References Used to Develop Permit	
☒	WQM for Windows Model (see Attachment)
☐	PENTOXSD for Windows Model (see Attachment)
☒	TRC Model Spreadsheet (see Attachment)
☐	Temperature Model Spreadsheet (see Attachment)
☐	Toxics Screening Analysis Spreadsheet (see Attachment)
☐	Water Quality Toxics Management Strategy, 361-0100-003, 4/06.
☒	Technical Guidance for the Development and Specification of Effluent Limitations, 362-0400-001, 10/97.
☐	Policy for Permitting Surface Water Diversions, 362-2000-003, 3/98.
☐	Policy for Conducting Technical Reviews of Minor NPDES Renewal Applications, 362-2000-008, 11/96.
☐	Technology-Based Control Requirements for Water Treatment Plant Wastes, 362-2183-003, 10/97.
☐	Technical Guidance for Development of NPDES Permit Requirements Steam Electric Industry, 362-2183-004, 12/97.
☐	Pennsylvania CSO Policy, 385-2000-011, 9/08.
☒	Water Quality Antidegradation Implementation Guidance, 391-0300-002, 11/03.
☐	Implementation Guidance Evaluation & Process Thermal Discharge (316(a)) Federal Water Pollution Act, 391-2000-002, 4/97.
☐	Determining Water Quality-Based Effluent Limits, 391-2000-003, 12/97.
☐	Implementation Guidance Design Conditions, 391-2000-006, 9/97.
☒	Technical Reference Guide (TRG) WQM 7.0 for Windows, Wasteload Allocation Program for Dissolved Oxygen and Ammonia Nitrogen, Version 1.0, 391-2000-007, 6/2004.
☐	Interim Method for the Sampling and Analysis of Osmotic Pressure on Streams, Brines, and Industrial Discharges, 391-2000-008, 10/1997.
☐	Implementation Guidance for Section 95.6 Management of Point Source Phosphorus Discharges to Lakes, Ponds, and Impoundments, 391-2000-010, 3/99.
☐	Technical Reference Guide (TRG) PENTOXSD for Windows, PA Single Discharge Wasteload Allocation Program for Toxics, Version 2.0, 391-2000-011, 5/2004.
☒	Implementation Guidance for Section 93.7 Ammonia Criteria, 391-2000-013, 11/97.
☐	Policy and Procedure for Evaluating Wastewater Discharges to Intermittent and Ephemeral Streams, Drainage Channels and Swales, and Storm Sewers, 391-2000-014, 4/2008.
☒	Implementation Guidance Total Residual Chlorine (TRC) Regulation, 391-2000-015, 11/1994.
☐	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:
☐	Other: