pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Southcentral Regional Office
CLEAN WATER PROGRAM

NPDES / WQM PERMIT FACT SHEET
INDIVIDUAL SEWAGE

Application Type	**Renewal & Transfer**	Application No.	**PA0086908 & WQM No. 0196406 T-1**
Facility Type	**Non-Municipal**	APS ID	**996475**
Major / Minor	**Minor**	Authorization ID	**1278852 & 1279578-WQM**

Applicant and Facility Information

Applicant Name	**Middle Creek Retreat & Event Center**	Facility Name	**Middle Creek Retreat & Event Center**
Applicant Address	3230 E. Imperial Highway #208	Facility Address	2047 Pumping Station Road
	Brea, CA 92821		Fairfield, PA 17320-9365
Applicant Contact	Alan Trider	Facility Contact	James Watson
Applicant Phone	(949) 306-2526	Facility Phone	(717) 642-8677
Client ID	350900	Site ID	518029
Ch 94 Load Status	Not Overloaded	Municipality	Freedom Township & Liberty Township
Connection Status	No Limitations	County	Adams
Date Application Received	June 13, 2019	EPA Waived?	Yes
Date Application Accepted	July 9, 2019	If No, Reason	

Purpose of Application: NPDES renewal & transfer permit.

Summary of Review

On June 13, 2019, Department of Environmental Protection (DEP) received a permit transfer application from Mr. Alan D. Trider, requesting the permit be amended to reflect a change in ownership from Middle Creek Bible Conference, Inc. (owned by Mr. James D. Watson, Authorized Agent/Operator) to Middle Creek Retreat and Event Center (owned by Mr. Alan D. Trider). The purchase/sale agreement was finalized in the middle of March 2019.

However, Middle Creek Bible Conference, Inc. had applied to DEP for reissuance of its National Pollutant Discharge Elimination System (NPDES) permit for Middle Creek Bible Conference Center located in Liberty & Freedom Townships, Adams County. The permit renewal application was received on February 1, 2019. The permit was last reissued on July 3, 2014, authorizing discharge of treated sewage to Middle Creek in watershed 13-D. The permit expired on July 31, 2019.

WQM Part II permit No. 0196406 was original issued on May 15, 1997. It will be transferred in conjunction with issuance of the final NPDES permit.

The 12 months DMRs data showed average monthly flow of 0.00187 MGD and maximum flow of 0.01 MGD, and indicated less than 0.04 MGD. Additionally, the previous permit renewal flow was 0.04 MGD. The renewal permit flow will remain 0.04 MGD instead of the design flow of 0.0745 MGD.

Changes in this renewal: Unit of Fecal Coliform will be 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	August 16, 2019
		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)	0.0745
Latitude	39º 45' 44.38"	Longitude	-77º 19' 13.31"
Quad Name	Fairfield	Quad Code	
Wastewater Description:	Sewage Effluent		
Receiving Waters	Middle Creek (CWF)	Stream Code	58687
NHD Com ID	134238400	RMI	4.00 mi.
Drainage Area	20 $mi.^2$	Yield (cfs/mi^2)	0.082 $cfs/mi.^2$
Q_{7-10} Flow (cfs)	1.63 cfs	Q_{7-10} Basis	USGS StreamStats
Elevation (ft)	525 ft	Slope (ft/ft)	
Watershed No.	13-D	Chapter 93 Class.	CWF
Existing Use		Existing Use Qualifier	
Exceptions to Use		Exceptions to Criteria	
Assessment Status	Impaired		
Cause(s) of Impairment	PATHOGENS		
Source(s) of Impairment	SOURCE UNKNOWN		
TMDL Status		Name	
Nearest Downstream Public Water Supply Intake	City of Frederick, MD		
PWS Waters	Monocacy River	Flow at Intake (cfs)	
PWS RMI		Distance from Outfall (mi)	Approximate 33 miles

Changes Since Last Permit Issuance: none

Treatment Facility Summary				
Treatment Facility Name: Middle Creek Retreat and Event Center				
WQM Permit No.	**Issuance Date**			
0196406	5/15/1997			
Waste Type	**Degree of Treatment**	**Process Type**	**Disinfection**	**Avg Annual Flow (MGD)**
Sewage	Secondary	Activated Sludge	Ultraviolet	0.0745
Hydraulic Capacity (MGD)	**Organic Capacity (lbs/day)**	**Load Status**	**Biosolids Treatment**	**Biosolids Use/Disposal**
0.0745		Not Overloaded	Anaerobic Digestion	Other WWTP

The WWTP train is as follows:

Bar Screen (1) ⇒ Aeration Lagoons (2) ⇒ Settling Tanks (2) ⇒ Ultraviolet Disinfection Unit (1) ⇒ Sludge Holding Tank (1) ⇒ Discharge (Outfall)

The system incorporates chemical addition in the form of Cutrine Plus, when needed (for algae control).

Compliance History	
Summary of DMRs:	See the Tables below. (Page 7)
Summary of Inspections:	The inspections during last permit term are as follows: February 26, 2018: Mr. Patrick Bowen, DEP WQS, conducted a routine partial inspection. There were no identified violations during inspection. March 15, 2018: Mr. Patrick Bowen, DEP WQS, conducted a routine partial inspection. Effluent flow was noted at the clarifier. The WQM Part II permit No. 0196406 requires quarterly testing of (3) monitoring wells. The 4th quarter sample for 2017 was collected on 12/6/17. The sample results indicated detectable ammonia nitrogen in monitoring wells: 1 (NH_3-N = 0.149 mg/L) and 2 (NH_3-N = 0.174 mg/L). There was violation noted during inspection with exceedance of instantaneous maximum limit for total suspended solids. April 25, 2018: Mr. Patrick Bowen, DEP WQS, conducted a follow up inspection. A grab sample was collected at the UV effluent, upstream of the effluent flume. There was a violation noted during inspection: a grab sample exceeded the permit instantaneous maximum limit for total suspended solids. June 18, 2018: Mr. Patrick Bowen, DEP WQS, conducted a follow up inspection to previous DEP inspection during which effluent grab samples were collected yielding effluent limit violations. There was no effluent flow. There was no violation identified during inspection.
Other Comments:	There were no open violations associated with this permittee or facility.

Water Quality-Based Limitations / Best Professional Judgement (BPJ) Limitations / Additional Considerations

Changes Since Last Permit Issuance: none

Drainage Area
The discharge is to Unnamed Tributary 58687 to Middle Creek at RMI 4.00 miles. A drainage area upstream of the discharge is estimated to be 20 mi.^{2}, according to USGS PA StreamStats available at https://streamstats.usgs.gov/ss/.

Stream Flow:
According to StreamStats, the discharge point into the stream has a Q_{7-10} of 1.63 cfs and a drainage area of 20 mi.^{2}, the resulting low flow yield is 0.082 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):

Q_{7-10} = 1.63 cfs
Low Flow Yield = 1.63 cfs / 20 mi.^{2} ≈ 0.082 cfs/mi.^{2}
Q_{30-10} = 1.36 * 1.63 cfs ≈ 2.22 cfs
Q_{1-10} = 0.64 * 1.63 cfs ≈ 1.04 cfs

The resulting Q_{7-10} dilution ratio is: Q_{stream} / $Q_{discharge}$ = 1.63 cfs / [0.0745 MGD * (1.55 cfs/MGD)] = 14:1.

Public Water Supply:
The previous protection report stated that the nearest downstream water supply intake is for the City of Frederick, MD – approximately 33 miles downstream of this discharge. eMapPA currently indicates that the PA-MD border is 4.00 river miles downstream of this discharge, with no public water supply withdrawals before that point. Considering distance and dilution, the discharge is not expected to impact the water supply.

Ammonia (NH_3-N):
NH_3-N calculations were first 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 computer model of the stream:

- Discharge pH = 8.6 (Recent DMR Data)
- Discharge Temperature = 25°C (Default)
- Stream pH = 7.7 (9/8/95 Field Measurement)
- Stream Temperature = 20°C (Default for CWF)
- Background NH_3-N = 0 (Default)

The model input data and results are attached. The printout of the WQM 7.0 output indicates that at a discharge of 0.040 MGD, limits (rounded according to the NPDES Technical Guidance 362-0400-001) of 25 mg/L NH_3-N as a monthly average and 50 mg/L NH_3-N instantaneous maximum are necessary to protect the aquatic life from toxicity effects. However, the model results will not be applied as the permit limits since the dilution provided by the stream is large (dilution ratio = 14:1). In addition, when the model is run with the full design flow of 0.0745 MGD, NH_3-N limits are still not necessary. As per 391-2000-013, since both the toxicity-based and D.O.-based ammonia effluent limitations are greater than 15 mg/L, no NH_3-N limitations are needed for this facility. This will remain in the proposed permit.

Carbonaceous Biochemical Oxygen Demand ($CBOD_5$):
The attached computer printout of the WQM 7.0 stream model indicates that a monthly average limit of 25.0 mg/l, or secondary treatment, is adequate to protect the water quality of the stream. Recent DMRs and inspection reports show that the facility has been consistently achieving concentrations well below this limit.

Total Suspended Solids (TSS):
The existing limits of 30.0 mg/L average monthly and 60.0 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 generally been achieving concentrations below these limits.

Dissolved Oxygen (D.O.):
A minimum D.O. of 5.0 mg/L is required per 25 Pa. Code § 93.7. This is recommended to remain the same as the existing permit.

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 1,000/100ml 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.

Total Residual Chlorine (TRC):
Since this facility utilizes an ultraviolet disinfection unit, a TRC limit is not necessary. A monitoring requirement for evaluating the effectiveness of the UV bulbs will be placed in the proposed permit.

Chesapeake Bay Strategy:
The discharge of TN and TP from this facility is consistent with and covered under the Chesapeake Bay TMDL aggregate WLA for non-significant wastewater discharges.

This facility falls in Phase 5 of the Pennsylvania's Chesapeake Bay Tributary Strategy Point Source Implementation Plan. At this time, the Department is not requiring a total maximum annual phosphorus or nitrogen loading cap.

The Supplement to Phase II Watershed Implementation Plan states the following:
"*For Phase 5 sewage facilities with individual permits (average annual design flow on August 29, 2005 > 0.002 MGD and < 0.2 MGD), DEP will issue individual permits with monitoring and reporting for TN and TP throughout the permit term at a frequency no less than annually, unless 1) the facility has already conducted at least two years of nutrient monitoring and 2) a summary of the monitoring results are included in the next permit's fact sheet. If, however, Phase 5 facilities choose to expand, the renewed or amended permits will contain Cap Loads based on the lesser of a) existing TN/TP concentrations at existing average annual flow or b) 7,306 lbs/yr TN and 974 lbs/yr TP.*"

A TN and TP "Monitor & Report" requirement will be necessary since the facility has not yet satisfied the data criteria of the Chesapeake Bay Strategy. However, TN and TP monitoring is already included in the existing permit and will remain in the renewal permit.

303d LISTED STREAMS:
This discharge is located on a stream segment which is tentatively impaired for pathogens due to an unknown source. The tentative impairment was created on September 6, 2012 and a TMDL has not yet been developed for it.

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

Best Professional Judgment (BPJ) Limitations

Total Phosphorus
As per the previous protection report, it has been decided that phosphorus limits would not be necessary. Due to the continued low discharge rates (dilution ratio = 14:1), phosphorus limits are still not needed. However, a requirement to monitor phosphorus per the Chesapeake Bay Strategy will remain in the proposed permit.

Additional Considerations

Flow Monitoring
The requirement to monitor the volume of effluent will remain in the proposed permit per 40 CFR § 122.44(i)(1)(ii).

Monitoring Frequency and Sample Type
The facility currently is required to collect daily effluent grab samples for DO, and pH; daily record UV Light Transmittance (%); bi-monthly effluent 8-hr composite samples of $CBOD_5$, and TSS; bi-monthly effluent grab samples of fecal coliform; annually effluent 8-hr composite samples of nitrate-nitrite as N, Total Kjeldahl nitrogen, and TP; and annually effluent calculation samples of TN. Based on the best professional judgement of the author, the existing monitoring frequencies are sufficient and necessary. Therefore, the existing monitoring frequencies will remain the same as those specified in the proposed permit.

Anti-Backsliding

Unless stated otherwise in this fact sheet, all permit requirements proposed in this fact sheet are at least as stringent as existing permit requirements in accordance with 40 CFR §122.44(l)(1).

WQM 7.0 Data:

MODEL INPUTS

There are no downstream facilities in PA (i.e., for at least four river miles). The closest upstream facility (Fairfield M.A. STP) is over three river miles away. Therefore, no significant interaction with other discharges is expected and only two nodes were used in the modeling effort.

D.O. Goal: 6.0 mg/L

Node 1: Outfall 001 on Middle Creek (58687)

Elevation:	485 ft (USGS National Map Viewer)
Drainage Area:	20 $mi.^2$ (USGS PA StreamStats)
River Mile Index:	4.00 (PA DEP eMapPA)
Low Flow Yield:	0.082 $cfs/mi.^2$
Discharge Flow:	0.040 MGD

Node 2: Just before confluence with UNT 58691

Elevation:	458 ft (USGS National Map Viewer)
Drainage Area:	21 $mi.^2$ (USGS PA StreamStats)
River Mile Index:	1.59 (PA DEP eMapPA)
Low Flow Yield:	0.082 $cfs/mi.^2$
Discharge Flow:	0.000 MGD

Attachment is WQM7.0 data.

WQM7.0 data.pdf

Compliance History

DMR / Inspection Data:

DMR Reports from December 2017 through November 2018, except May 2018											
	MGD	MGD	6.0 – 9.0	5.0 mg/L	30 mg/L	25 mg/L	200/2,000/100 mL	lbs/year	lbs/year	lbs/year	lbs/year
Date	Flow (Avg. Monthly)	Flow (Max Daily)	pH (Min/Max)	DO (Min)	TSS (Avg. Monthly)	$CBOD_5$ (Avg. Monthly)	Fecal (Avg. Monthly)	Nitrate-Nitrite as N (Annl. Avg.)	Total Nitorgen (Annl. Avg.)	Total Kjeldahl Nitrogen (Annl. Avg.)	Total Phosphorus (Annl. Avg.)
Dec-2017	0.0004	0.003	8.3/8.3	10	5	2.2	1				
Jan-2018	No flow	No flow									
Feb-2018	0.0017	0.002	8.4/8.4	10 +	5	2.5	1				
Mar-2018	0.0023	0.005	8.3/8.5	8.8	19	4.0	5.5				
Apr-2018	0.0016	0.007	8.2/8.6	9.8	8.5	3.0	1/1				
Jun-2018	0.002	0.006	8.2/8.3	10	6	2.2	1				
Jul-2018	0.002	0.008	8.2/8.3	10.2	5	3.9	3				
Aug-2018	0.001	0.005	8.3/8.4	10	6	3.1	5				
Sep-2018	0.0034	0.010	8.3/8.4	9.8	5	2.2	4.5				
Oct-2018	0.0013	0.005	8.3/8.8	9.7	21	3.5	1				
Nov-2018	0.003	0.009	8.3/8.5	10	6	7.5	3.7	1.3	2.5	1	2.0
Average	0.00187	0.01									

Inspection Reports						
Instantaneous Limits	MGD	6.0 - 9.0	5.0 mg/L	60.0 mg/L	50 mg/L	No./100 mL
Date	Flow	pH	DO (Min)	TSS	$CBOD_5$	Fecal
26-Feb-18	No Data	7.82	13.78	No Data	No Data	< 25
15-Mar-18	No Data	7.52	12.81	115	7.70	No Data
25-Apr-18	0.0002	7.93	10.35	79	4.2	No Data
18-Jun-18	No Data	8.84	12.83	5	3.50	No Data

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	Total Annual	Minimum	Annual Average	Maximum	Instant. Maximum		
Flow (MGD)	Report Wkly Avg	Report Daily Max	XXX	XXX	XXX	XXX	1/week	Measured
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
UV Transmittance (%)	XXX	XXX	Report	XXX	XXX	XXX	1/day	Recorded
$CBOD_5$	XXX	XXX	25.0	XXX	XXX	50.0	2/month	8-Hr Composite
TSS	XXX	XXX	30.0	XXX	XXX	60.0	2/month	8-Hr Composite
Fecal Coliform (No./100 ml) Oct 1 - Apr 30	XXX	XXX	XXX	2,000 Geo Mean	XXX	10,000	2/month	Grab
Fecal Coliform (No./100 ml) May 1 - Sep 30	XXX	XXX	XXX	200 Geo Mean	XXX	1,000	2/month	Grab
Nitrate-Nitrite (lbs/year)	XXX	Report	XXX	Report	XXX	XXX	1/year	8-Hr Composite
Total Nitrogen (lbs/year)	XXX	Report	XXX	Report	XXX	XXX	1/year	Calculation
Total Kjeldahl Nitrogen (lbs/year)	XXX	Report	XXX	Report	XXX	XXX	1/year	8-Hr Composite
Total Phosphorus (lbs/year)	XXX	Report	XXX	Report	XXX	XXX	1/year	8-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	Total Annual	Minimum	Annual Average	Maximum	Instant. Maximum		
Flow (MGD)	Report Wkly Avg	Report Daily Max	XXX	XXX	XXX	XXX	1/week	Measured
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
UV Light Transmittance (%)	XXX	XXX	Report	XXX	XXX	XXX	1/day	Recorded
$CBOD_5$	XXX	XXX	25.0	XXX	XXX	50.0	2/month	8-Hr Composite
TSS	XXX	XXX	30.0	XXX	XXX	60.0	2/month	8-Hr Composite
Fecal Coliform (No./100 ml) Oct 1 - Apr 30	XXX	XXX	XXX	2,000 Geo Mean	XXX	10,000	2/month	Grab
Fecal Coliform (No./100 ml) May 1 - Sep 30	XXX	XXX	XXX	200 Geo Mean	XXX	1,000	2/month	Grab
Nitrate-Nitrite (lbs/year)	XXX	Report	XXX	Report	XXX	XXX	1/year	8-Hr Composite
Total Nitrogen (lbs/year)	XXX	Report	XXX	Report	XXX	XXX	1/year	Calculation
Total Kjeldahl Nitrogen (lbs/year)	XXX	Report	XXX	Report	XXX	XXX	1/year	8-Hr Composite
Total Phosphorus (lbs/year)	XXX	Report	XXX	Report	XXX	XXX	1/year	8-Hr Composite

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: