Pennsylvania Department of Environmental Protection

Southcentral Regional Office
CLEAN WATER PROGRAM

Application Type	**Renewal**	Application No.	**PA0266931**
Facility Type	**Industrial**	APS ID	**990907**
Major / Minor	**Minor**	Authorization ID	**1490605**

NPDES PERMIT FACT SHEET INDIVIDUAL INDUSTRIAL WASTE (IW) AND IW STORMWATER

Applicant and Facility Information

Applicant Name	**Garden Spot Communities**	Facility Name	**Garden Spot Village Retirement Community**
Applicant Address	433 S Kinzer Avenue	Facility Address	433 South Kinzer Avenue
	New Holland, PA 17557		New Holland, PA 17557
Applicant Contact	Steve Muller	Facility Contact	Steve Muller
Applicant Phone	(717) 355-6066	Facility Phone	(717) 355-6052
Client ID	349105	Site ID	835859
SIC Code	8051	Municipality	Earl Township
SIC Description	Services - Skilled Nurse Care Facilities	County	Lancaster
Date Application Received	June 28, 2024	EPA Waived?	Yes
Date Application Accepted	July 12, 2024	If No, Reason	

Purpose of Application: NPDES Renewal.

Summary of Review

Garden Spot Communities has applied to the Pennsylvania Department of Environmental Protection (DEP) for reissuance of its National Pollutant Discharge Elimination System (NPDES) permit. The existing permit was issued on December 18, 2019, and became effective on January 1, 2020, authorizing discharge of treated industrial wastewater from the Garden Spot Village Retirement Community into UNT to Mill Creek. The existing permit expiration date was December 31, 2024, and the permit has been administratively extended since that time.

Per the previous fact sheet, Garden Spot Communities has been in operation since 1996. Garden Spot Communities consists of an east campus and a future west campus. There are three cooling towers in the Phase I area of the east campus, and one cooling tower in the Phase II area of the east campus, which provides HVAC to Garden Spot Communities. An additional cooling tower is proposed in the Phase III area of the future west campus project. The cooling tower bleed currently discharges to the sanitary sewer system. Garden Spot Communities has been exceeding its flow allocation to the sewer system since August 2016. The cooling tower bleed will be diverted from the sewer system to surface water outfalls. The bleed from the east campus cooling towers will discharge to Outfall 001, which is the outfall of the east campus “Basin B” stormwater management facility. It is located south of Linden Drive. The outfall currently discharges stormwater only during wet weather. This ephemeral drainage swale drains under several roads before it discharges to Mill Creek. The bleed from the west campus cooling tower will discharge to Outfall 002, which is the outfall of the west campus’s stormwater management facility. Outfall 002 is located west of the intersection of Kraybill Avenue and South Kinzer Avenue. The outfall currently discharges stormwater only during wet weather. This outfall joins an unnamed tributary to Mill Creek, which eventually discharges to Mill Creek in approximately 3/4 of a mile.

An amendment application was received on 12/19/2024. Garden Spot Communities is proposing to add two new cooling towers as a result of a new combined heat and power system. These two towers will tie into the existing IMP 102. Flow will be increased to the IMP by approximately 6,000 gpd during the peak season.

Approve	Deny	Signatures	Date
X		Benjamin R. Lockwood Benjamin R. Lockwood / Environmental Engineering Specialist	April 9, 2025
X		Maria D. Bebenek for Daniel W. Martin, P.E. / Environmental Engineer Manager	April 30, 2025

Summary of Review

Changes in this renewal: The existing permit includes limitations/monitoring for Flow, pH, and Temperature at Outfall 001. Per DEP's inspection and subsequent discussions, the cooling tower bleed lines IMP 101 and IMP 102 enter the stormwater basin at separate locations and are not tied together. Garden Spot Communities currently collects samples from each cooling tower bleed line; flow is summed and reported, temperature is a weighted average, and pH readings are alternated. To correct this sampling issue, the renewal permit will have separate reporting requirements for IMP 101 and IMP 102 in place of Outfall 001. The sample type for pH has been changed to metered, as there are in-line probes/meters at these cooling tower bleed pipes

Supplemental information for this facility is provided at the end of this fact sheet.

Public Participation

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

Discharge, Receiving Waters and Water Supply Information

Outfall No.	001	Design Flow (MGD)	.01684
Latitude	40º 6' 0.0972"	Longitude	76º 4' 3.144"
Quad Name		Quad Code	
Wastewater Description:	Noncontact Cooling Water (NCCW), Stormwater		
Receiving Waters	Unnamed Tributary to Mill Creek (CWF, MF)	Stream Code	07627
NHD Com ID	57462631	RMI	0.17
Drainage Area		Yield (cfs/mi^2)	
Q_{7-10} Flow (cfs)		Q_{7-10} Basis	
Elevation (ft)		Slope (ft/ft)	
Watershed No.	7-J	Chapter 93 Class.	CWF, MF
Existing Use	N/A	Existing Use Qualifier	N/A
Exceptions to Use	N/A	Exceptions to Criteria	N/A
Assessment Status	Impaired		
Cause(s) of Impairment	Nutrients, Siltation, Pathogens		
Source(s) of Impairment	Agriculture, Agriculture, Source Unknown		
TMDL Status	N/A	Name	N/A
Nearest Downstream Public Water Supply Intake	Peach Bottom Power Station		
PWS Waters	Susquehanna River	Flow at Intake (cfs)	
PWS RMI	3.6	Distance from Outfall (mi)	53

Changes Since Last Permit Issuance: None

Other Comments: None

Discharge, Receiving Waters and Water Supply Information

Outfall No.	002	Design Flow (MGD)	.00075
Latitude	40º 6' 51.0756"	Longitude	76º 4' 34.1364"
Quad Name		Quad Code	
Wastewater Description:	Noncontact Cooling Water (NCCW), Stormwater		
Receiving Waters	Unnamed Tributary to Mill Creek (WWF, MF)	Stream Code	
NHD Com ID	57462745	RMI	0.5800
Drainage Area		Yield (cfs/mi^2)	
Q_{7-10} Flow (cfs)		Q_{7-10} Basis	
Elevation (ft)		Slope (ft/ft)	
Watershed No.	7-J	Chapter 93 Class.	WWF, MF
Existing Use	N/A	Existing Use Qualifier	N/A
Exceptions to Use	N/A	Exceptions to Criteria	N/A
Assessment Status	Impaired		
Cause(s) of Impairment	Nutrients, Siltation, Pathogens		
Source(s) of Impairment	Agriculture, Agriculture, Source Unknown		
TMDL Status	N/A	Name	N/A
Nearest Downstream Public Water Supply Intake	Peach Bottom Power Station		
PWS Waters	Susquehanna River	Flow at Intake (cfs)	
PWS RMI	3.6	Distance from Outfall (mi)	53

Changes Since Last Permit Issuance: None

Other Comments: None

Existing Effluent Limitations and Monitoring Requirements

Outfall 001

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (2) Measurement Frequency	Required Sample Type
	Average Monthly	Average Weekly	Minimum	Average Monthly	Maximum	Instant. Maximum		
Flow (MGD)	Report	Report Daily Max	XXX	XXX	XXX	XXX	1/month	Metered
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	1/month	Grab
Temperature (ºF)	XXX	XXX	XXX	Report	XXX	XXX	1/month	I-S

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

at Outfall 001

Outfall 002

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (2) Measurement Frequency	Required Sample Type
	Average Monthly	Average Weekly	Minimum	Average Monthly	Maximum	Instant. Maximum		
Flow (MGD)	Report	Report Daily Max	XXX	XXX	XXX	XXX	1/month	Metered
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	1/month	Grab
Temperature (ºF)	XXX	XXX	XXX	Report	XXX	XXX	1/month	I-S

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

at Outfall 002

Compliance History	
Summary of DMRs:	A summary of the past year of DMR data is presented on the next page of the fact sheet.
Summary of Inspections:	4/15/2021: A routine inspection was conducted. The stormwater detention basin for Outfall 001 was inspected, it was dry, and Outfall 001 was dry. Additionally, both the basin and outfall for Outfall 002 were dry. No other issues were noted.

Other Comments: There are no open violations for this Applicant.

Compliance History

DMR Data for Outfall 001 (from February 1, 2024 to January 31, 2025)

Parameter	JAN-25	DEC-24	NOV-24	OCT-24	SEP-24	AUG-24	JUL-24	JUN-24	MAY-24	APR-24	MAR-24	FEB-24
Flow (MGD) Average Monthly		0.000418	0.000586	0.000971	0.002549	0.003104	0.004356	0.003775	0.004114	0.002261	0.000148	0.000234
Flow (MGD) Daily Maximum		0.000428	0.000549	0.001513	0.003258	0.003384	0.006365	0.003977	0.000993	0.006032	0.000202	0.000138
pH (S.U.) Instantaneous Minimum		8.9	9.1	9.2	9.3	9.3	9.3	9.3	9.1	8.9	8.7	8.6
pH (S.U.) Instantaneous Maximum		8.9	9.1	9.2	9.3	9.3	9.3	9.3	9.1	8.9	8.7	8.6
Temperature (ºF) Average Monthly		79	82	84	85	85	85	86	82	80	80	75

DMR Data for Outfall 002 (from February 1, 2024 to January 31, 2025)

Parameter	JAN-25	DEC-24	NOV-24	OCT-24	SEP-24	AUG-24	JUL-24	JUN-24	MAY-24	APR-24	MAR-24	FEB-24
Flow (MGD) Average Monthly			00	0.000078	0.000094	0.000197	0.000337	0.000268	0.000109			
Flow (MGD) Daily Maximum			0.000169	0.000130	0.000142	0.000068	0.000647	0.000468	0.00005			
pH (S.U.) Instantaneous Minimum			7.5	7.9	7.8	7.5	7.3	7.1	7.1			
pH (S.U.) Instantaneous Maximum			7.5	7.9	7.8	7.5	7.3	7.1	7.1			
Temperature (ºF) Average Monthly			52	60	66	68	68	67	64			

Compliance History

Effluent Violations for Outfall 001, from: March 1, 2024 To: January 31, 2025

Parameter	Date	SBC	DMR Value	Units	Limit Value	Units
pH	05/31/24	IMAX	9.1	S.U.	9.0	S.U.
pH	06/30/24	IMAX	9.3	S.U.	9.0	S.U.
pH	08/31/24	IMAX	9.3	S.U.	9.0	S.U.
pH	09/30/24	IMAX	9.3	S.U.	9.0	S.U.
pH	01/31/25	IMAX	9.1	S.U.	9.0	S.U.
pH	11/30/24	IMAX	9.1	S.U.	9.0	S.U.
pH	10/31/24	IMAX	9.2	S.U.	9.0	S.U.
pH	07/31/24	IMAX	9.3	S.U.	9.0	S.U.

Development of Effluent Limitations

Outfall No. IMP 101 **Design Flow (MGD)** .005495
Latitude 40º 6' 6.8472" **Longitude** 76º 4' 10.5564"
Wastewater Description: Noncontact Cooling Water (NCCW), Stormwater

pH

PA Code §§ 95.2(1) requires effluent pH limits of not less than 6.0 and not greater than 9.0 at all times in the effluent. The existing permit includes a limit for pH.

Stormwater

Garden Spot Village is classified under SIC Code 8051 for Skilled Nurse Care Facilities. The facility's stormwater discharge does not fall with the EPA definition of storm water associated with industrial activity per 40 CFR 122.26(b)(14); therefore, monitoring will not be required. Part C requirements for stormwater outfalls will be included in the permit.

Temperature

Approximately 16,840 gpd of non-contact cooling water (NCCW) will be discharged through Outfall 001. The NCCW will occasionally be mixed with stormwater before discharging. The NCCW will flow in a drainage swale for approximately 0.5 miles before it reaches Mill Creek. A monthly monitoring requirement for Temperature will be included in the permit to obtain data for future evaluation.

Chemical Additives

The following chemical additives will be used at Garden Spot Village:

Chemical Additive	Purpose	Maximum Usage (lb/day)	Usage Frequency
GCS-6301	Cooling Water Corrosion Inhibitor	260	Daily During Warm Weather
GCS-3907	Water Treatment Antimicrobial Solution	0.50	Daily During Warm Weather

These chemicals have been added to DEP's Approved List of Chemical Additives. The permit will include Part C conditions for chemical additive usage and reporting requirements.

Anti-Degradation

The effluent limits for this discharge have been developed to ensure that existing instream 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.

303(d) Listed Streams

The discharge is located on a stream segment that is designated on the 303(d) list as impaired. There is an aquatic life impairment due to nutrients and siltation from agriculture, and a recreational impairment due to pathogens from an unknown source. This discharge will have no impact on the impairments.

Class A Wild Trout Fisheries

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

Development of Effluent Limitations

Outfall No.	102	**Design Flow (MGD)**	0.011345
Latitude	40º 6' 11.5884"	**Longitude**	76º 4' 5.35"

Wastewater Description:

pH

PA Code §§ 95.2(1) requires effluent pH limits of not less than 6.0 and not greater than 9.0 at all times in the effluent. The existing permit includes a limit for pH.

Stormwater

Garden Spot Village is classified under SIC Code 8051 for Skilled Nurse Care Facilities. The facility's stormwater discharge does not fall with the EPA definition of storm water associated with industrial activity per 40 CFR 122.26(b)(14); therefore, monitoring will not be required. Part C requirements for stormwater outfalls will be included in the permit.

Temperature

Approximately 16,840 gpd of non-contact cooling water (NCCW) will be discharged through Outfall 001. The NCCW will occasionally be mixed with stormwater before discharging. The NCCW will flow in a drainage swale for approximately 0.5 miles before it reaches Mill Creek. A monthly monitoring requirement for Temperature will be included in the permit to obtain data for future evaluation.

Chemical Additives

The following chemical additives will be used at Garden Spot Village:

Chemical Additive	Purpose	Maximum Usage (lb/day)	Usage Frequency
GCS-6301	Cooling Water Corrosion Inhibitor	260	Daily During Warm Weather
GCS-3907	Water Treatment Antimicrobial Solution	0.50	Daily During Warm Weather

These chemicals have been added to DEP's Approved List of Chemical Additives. The permit will include Part C conditions for chemical additive usage and reporting requirements.

Anti-Degradation

The effluent limits for this discharge have been developed to ensure that existing instream 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.

303(d) Listed Streams

The discharge is located on a stream segment that is designated on the 303(d) list as impaired. There is an aquatic life impairment due to nutrients and siltation from agriculture, and a recreational impairment due to pathogens from an unknown source. This discharge will have no impact on the impairments.

Class A Wild Trout Fisheries

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

Development of Effluent Limitations

Outfall No.	002	**Design Flow (MGD)**	.00075
Latitude	40º 5' 51.08"	**Longitude**	76º 4' 34.14"

Wastewater Description: Noncontact Cooling Water (NCCW), Stormwater

pH

PA Code §§ 95.2(1) requires effluent pH limits of not less than 6.0 and not greater than 9.0 at all times in the effluent. The permit will include a limit for pH.

Stormwater

Garden Spot Village is classified under SIC Code 8051 for Skilled Nurse Care Facilities. The facility's stormwater discharge does not fall with the EPA definition of storm water associated with industrial activity per 40 CFR 122.26(b)(14); therefore, monitoring will not be required. Part C requirements for stormwater outfalls will be included in the permit.

Temperature

Approximately 750 gpd of non-contact cooling water (NCCW) will be discharged through Outfall 002. The NCCW will occasionally be mixed with stormwater before discharging. The NCCW will flow in a drainage swale for approximately 1.4 miles before it reaches Mill Creek. A monthly monitoring requirement for Temperature will be included in the permit to obtain data for future evaluation.

Chemical Additives

Garden Spot Village is proposing to use a Flow-Tech System, which uses a 140 kHz radio frequency to precipitate suspended solids, which will be discharged to the sanitary sewer system. No chemical additives are proposed which will discharge to this outfall.

Anti-Degradation

The effluent limits for this discharge have been developed to ensure that existing instream 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.

303(d) Listed Streams

The discharge is located on a stream segment that is designated on the 303(d) list as impaired. There is a recreational impairment due to pathogens from an unknown source, and an aquatic life impairment due to nutrients and siltation from grazing in riparian or shoreline zones.

Class A Wild Trout Fisheries

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

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" (386-0400-001), SOPs and/or BPJ.

Outfall 002, 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	Average Weekly	Minimum	Average Monthly	Maximum	Instant. Maximum		
Flow (MGD)	Report	Report Daily Max	XXX	XXX	XXX	XXX	1/month	Metered
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	1/month	Metered
Temperature (ºF)	XXX	XXX	XXX	Report	XXX	XXX	1/month	I-S

Compliance Sampling Location: Outfall 002

Other Comments: 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 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" (386-0400-001), SOPs and/or BPJ.

IMP 101, 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	Average Weekly	Minimum	Average Monthly	Maximum	Instant. Maximum		
Flow (MGD)	Report	Report Daily Max	XXX	XXX	XXX	XXX	1/month	Metered
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	1/month	Metered
Temperature (ºF)	XXX	XXX	XXX	Report	XXX	XXX	1/month	I-S

Compliance Sampling Location: IMP 101 Cooling Tower Bleed Line

Other Comments: 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 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" (386-0400-001), SOPs and/or BPJ.

IMP 102, 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	Average Weekly	Minimum	Average Monthly	Maximum	Instant. Maximum		
Flow (MGD)	Report	Report Daily Max	XXX	XXX	XXX	XXX	1/month	Metered
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	1/month	Metered
Temperature (ºF)	XXX	XXX	XXX	Report	XXX	XXX	1/month	I-S

Compliance Sampling Location: IMP 102 Cooling Tower Bleed Line

Other Comments: None

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