pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Southeast Regional Office
CLEAN WATER PROGRAM

Application Type	**Renewal**	Application No.	**PA0050521**
Facility Type	**Municipal**	APS ID	**999088**
Major / Minor	**Minor**	Authorization ID	**1283322**

NPDES PERMIT FACT SHEET
INDIVIDUAL SEWAGE

Applicant and Facility Information

Applicant Name	**Green Lane – Marlborough Joint Authority**	Facility Name	**Green Lane – Marlboro STP**
Applicant Address	P.O. Box 45	Facility Address	108 Gravel Pike
	Green Lane, PA 18054-0045		Green Lane, PA 18054
Applicant Contact	Oleg Zonis	Facility Contact	Michelle Steele
Applicant Phone	(215) 234-4180	Facility Phone	(215) 368-3375
Client ID	52132	Site ID	257224
Ch 94 Load Status	Not Overloaded	Municipality	Green Lane Borough
Connection Status		County	Montgomery
Date Application Received	July 19, 2019	EPA Waived?	Yes
Date Application Accepted	August 2, 2019	If No, Reason	

Purpose of Application: Permit Renewal.

Summary of Review

This Fact Sheet summarizes the evaluation of Green Lane – Marlborough Joint Authority application for a renewal of an NPDES permit to discharge 0.2 MGD of treated sewage from Green Lane – Marlboro STP to Perkiomen Creek. The creek is located in 3-E – Perkiomen Watershed. The facility serves the communities Borough of Green Lane (40%) and Marlboroough Township (60%).

This fact sheet is prepared per 40 CFR 124.56.

The permit includes the following changes from the previous permit:

1. New Ultraviolet Disinfection Reporting Requirement.
2. Average Quarterly (1,000 mg/l), Daily Maximum (2,000 mg/l) and Instantaneous Maximum (2,500 mg/l) limits were added in this draft permit for Total Dissolved Solids.
3. Dissolved Oxygen average monthly reporting requirement removal.

Act 14 Notifications

Green Lane Borough Council	-	May 14, 2019
Green Lane Brough Planning Commission	-	May 14, 2019
Marlborough Township Board of Supervisors	-	May 14, 2019
Marlborough Township Planning Commission	-	May 14, 2019
Montgomery County Health Department	-	May 14, 2019
Montgomery County Commissioners	-	May 14, 2019
Montgomery County Planning Commission	-	May 16, 2019

Approve	Deny	Signatures	Date
X		Juan J. Vicenty-Gonzalez / Environmental Engineering Specialist /S/	November 8, 2019
X		Pravin C. Patel, P.E. / Environmental Engineer Manager /S/	11/8/2019

Summary of Review

Proposed Part C Conditions:

I. Other Requirements
A. No Stormwater
B. Acquire Necessary Property Rights
C. Sludge Disposal Requirements
D. No Oil and Gas Drilling Wastewater
E. Chlorine Minimization
F. Responsible Operator
G. 10% Fecal Coliform Rule
H. O&M Plan

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)	0.2
Latitude	40º 20' 20.64"	Longitude	-75º 28' 23.72"
Quad Name	Perkiomenville	Quad Code	
Wastewater Description:	Sewage Effluent		
Receiving Waters	Perkiomen Creek (WWF, MF)	Stream Code	01017
NHD Com ID	25987448	RMI	20.0
Drainage Area	71.2 mi^2	Yield (cfs/mi^2)	0.126 cfsm
Q_{7-10} Flow (cfs)	17.8*	Q_{7-10} Basis	Previous WQPR*
Elevation (ft)	150	Slope (ft/ft)	0.0037
Watershed No.	3-E	Chapter 93 Class.	WWF, MF
Existing Use	**None**	Existing Use Qualifier	N/A
Exceptions to Use	None	Exceptions to Criteria	N/A
Assessment Status	Attaining Use(s)		
Cause(s) of Impairment			
Source(s) of Impairment			
TMDL Status		Name	
Nearest Downstream Public Water Supply Intake	Aqua PA		
PWS Waters	Perkiomen Creek – Wetherill Dam	Flow at Intake (cfs)	24.8 cfs (Streamstats)
PWS RMI	0.9	Distance from Outfall (mi)	~ 19

*Minimum release from Green Lane Reservoir.

Changes Since Last Permit Issuance: No Changes.

Treatment Facility Summary				
Treatment Facility Name: Green Lane Marlboro Joint Authority				
WQM Permit No.	**Issuance Date**			
4618401	June 18, 2018			
PAG080022	12/11/2015			
Waste Type	**Degree of Treatment**	**Process Type**	**Disinfection**	**Avg Annual Flow (MGD)**
Sewage	Secondary With Phosphorus Reduction	Activated Sludge	Ultraviolet	0.2
Hydraulic Capacity (MGD)	**Organic Capacity (lbs/day)**	**Load Status**	**Biosolids Treatment**	**Biosolids Use/Disposal**
0.709		Not Overloaded	Drying	

Changes Since Last Permit Issuance: Addition of Influent Splitter Box, Effluent Flow Meter, and Ultraviolet Disinfection.

The GLMJA's WWTP is a conventional activated sludge treatment process consisting of two separate treatment trains. The WWTP include an influent grinder, a manual bar screen, 2 aeration tanks, 2 settling tanks, 2 chlorine contact tanks with post aeration, UV disinfection, an aerobic sludge digester, 2 reed beds, and chemical feed (chlorination, dichlorination, and phosphorus removal).

The GLMJA will use Ultra-Violet disinfection and request the Total Residual Chlorine (TRC) permit limit remain in future NPDES Permits. Sodium Hypochlorite 12.5% and Sodium Bisulfate 38% would be utilized for back-up disinfection utilizing the existing chlorine contact tank. Soda Ash and/or Sodium bicarbonate are added as needed for supplemental alkalinity as required for nitrification.

SSO and Bypass reports were submitted in the permit application. GLMJA is working diligently to eliminate SSO's in the collection system and bypasses at the treatment plant. Major collection system work from 2014 – 2018 to eliminate SSO's is listed below:

- 19 Manhole inserts installed during wet weather investigations – 2014,
- 6 manhole holes were lined (MH1-, 49, 50, 51, 52, & 53) – 2014,
- 11 Lateral Inspections – 2014,
- Point repair – Replaced 28l.f. of 12" V.C.P. with 12" SDR 18 PVC – 2014 (Major Source of I&I was removed),
- Lined of 376.1 l.f. of 12" diameter sewer – 2015,
- Grouted leaking service lateral between MH 48 & MH 2,
- 16 Lateral Inspections – 2015,
- 12 Manhole inserts installed – 2015,
- 7 manholes (14-1, 123, 124, 135, 135, 139 & 37) frames and covers were replaced with bolt down watertight manholes – 2015,
- CIPP Lined 3,777 l.f. of 8" diameter sewer 2017,
- Wet Weather I/I Televised 2,2225.6 l.f. 8" diameter sewer – 2017,
- 25 Lateral Inspections – 2017,
- 8 manholes were lined (122, 123, 124, 125, 126, 127, 174-1 & 164) – 217, and
- Cleaned and televised 1,300 l.f. 8" diameter sewer – 2018.

The GLMJA in 2019 is taking the following corrective actions to eliminate SSO's and Bypasses in the collection system:

- The new influent splitter box and ultra-violet disinfection system will allow the WWTP to evenly split flows between the two (2) treatment trains: thereby, reducing bypasses at the WWTP, improving biological treatment and effluent disinfection,
- Wet weather televising in 2018 identified several leaking laterals along Geryville Pike. The GLMJA bid and awarded a contract in 2019 for lateral lining, and
- Replacing the Geryville Pike pump station influent pump.

The plant currently implements a CAP/CMP to reduce I/I. Below is the number of SSOs and Bypasses that took place during the permit term.

Year	SSOs	Bypass
2014	4	13
2015	1	1
2016	3	4
2017	3	None
2018	15	2
2019	4	None

No sewage sludge was liquid hauled off site for disposal during 2018. Waste sludge is aerobically digested and then pumped to the onsite reed beds typically, March through November.

SYNAGRO removed biosolids from the reed bed # 1 in 2017 and reed bed # 2 in 2019. The 16.9 dry tons of biosolids reported in this permit renewal application are from reed bed # 2, which were land applied in May 2019.

Sewage sludge generated is aerobically digested and pumped to the onsite reed beds or liquid hauled to Pottstown WWTP. No biosolids were liquid hauled in 2018.

Compliance History

DMR Data for Outfall 001 (from September 1, 2018 to August 31, 2019)

Parameter	AUG-19	JUL-19	JUN-19	MAY-19	APR-19	MAR-19	FEB-19	JAN-19	DEC-18	NOV-18	OCT-18	SEP-18
Flow (MGD) Average Monthly	0.142	0.163	0.222	0.293	0.221	0.350	0.312	0.314	0.315	0.406	0.199	0.293
Flow (MGD) Daily Maximum	0.267	0.414	0.481	0.770	0.529	0.867	0.345	0.642	0.767	0.718	0.344	0.799
pH (S.U.) Instantaneous Minimum	7.0	6.0	6.7	6.7	6.8	6.6	6.7	6.6	6.7	6.6	6.5	6.5
pH (S.U.) Instantaneous Maximum	7.2	7.0	7.0	7.1	7.1	7.0	7.0	7.7	7.0	7.1	6.9	7.0
DO (mg/L) Instantaneous Minimum	7.5	6.8	6.7	7.1	6.9	8.5	9.0	8.5	8.5	7.9	7.8	6.6
DO (mg/L) Average Monthly	8.1	8.4	9.7	9.1	9.5	10.3	12.9	10.6	10.1	9.2	8.5	8.1
TRC (mg/L) Average Monthly	FF	0.04	0.01	0.1	0.04	0.05	0.07	0.05	0.1	0.04	0.1	0.1
TRC (mg/L) Instantaneous Maximum	FF	0.07	0.8	0.1	0.08	0.1	0.27	0.11	0.12	0.09	0.1	0.1
CBOD5 (lbs/day) Average Monthly	< 3	6	14	12	11	10	27	8	< 8	10	< 3	< 7
CBOD5 (lbs/day) Weekly Average	6	9	31	22	19	14	82	15	15	13	5	9
CBOD5 (mg/L) Average Monthly	< 3	5	11	5	6	5	17	4	< 4	4	< 2	< 2
CBOD5 (mg/L) Raw Sewage Influent Average Monthly	99	74	116	45	88	50	74	75	132	51	80	62
CBOD5 (mg/L) Weekly Average	5	6	29	7	8	8	57	5	6	4.8	3	2
BOD5 (lbs/day) Raw Sewage Influent Average Monthly	88	115	155	108	116	103	205	136	191	294	90	212

BOD5 (mg/L) Raw Sewage Influent Average Monthly	89	90	88	59	62	51	76	77	90	105	123	67
TSS (lbs/day) Average Monthly	< 4	< 8	19	< 17	< 9	< 10	< 12	< 8	< 9	< 12	< 6	< 18
TSS (lbs/day) Weekly Average	< 5	11	37	40	16	14	19	< 12	< 10	22	< 9	25
TSS (mg/L) Average Monthly	< 4	< 6	13	< 7	< 5	< 5	< 6	< 4	< 4	< 4	< 4	< 6
TSS (mg/L) Raw Sewage Influent Average Monthly	129	115	115	84	89	64	59	98	105	74	< 4	98
TSS (mg/L) Weekly Average	< 4	12	25	14	8.4	6	10	6	5	4.8	4	13
Total Dissolved Solids (mg/L) Daily Maximum			358			452			520			560
Fecal Coliform (No./100 ml) Geometric Mean	< 1	10	18	< 11	23	61	48	40	148	> 1142	19	61
Fecal Coliform (No./100 ml) Instantaneous Maximum	3	208	132	35	148	223	212	300	7500	> 20000	75	3800
Total Nitrogen (lbs/day) Daily Maximum			25			25			23			25
Total Nitrogen (mg/L) Daily Maximum			18			10.9			14			9.1
Ammonia (lbs/day) Average Monthly	< 0.2	< 0.1	< 0.1	< 0.5	< 4.9	< 4	0.8	< 1	< 1	< 4	< 0.1	0.3
Ammonia (lbs/day) Weekly Average	0.2	< 0.2	< 0.2	1.4	11.8	9	1.5	5	2	7	< 0.2	< 0.4
Ammonia (mg/L) Average Monthly	< 0.2	< 0.1	< 0.1	< 0.2	< 2.6	2	0.33	< 1	< 1	< 1	< 0.1	< 0.1
Ammonia (mg/L) Weekly Average	0.2	< 0.1	< 0.1	0.5	6.6	4	0.4	4	1	3.4	< 0.1	< 0.1
Total Phosphorus (lbs/day) Average Monthly	1.1	1.0	0.9	0.9	0.5	0.8	0.7	0.6	0.6	0.8	0.5	1.1
Total Phosphorus (mg/L) Average Monthly	1.1	0.7	0.7	0.4	0.32	0.4	0.3	0.3	0.3	0.32	0.4	0.3

Compliance History

Effluent Violations for Outfall 001, from: October 1, 2018 To: August 31, 2019

Parameter	Date	SBC	DMR Value	Units	Limit Value	Units
CBOD5	02/28/19	Wkly Avg	82	lbs/day	66	lbs/day
CBOD5	02/28/19	Wkly Avg	57	mg/L	40	mg/L
Fecal Coliform	11/30/18	Geo Mean	> 1142	No./100 ml	200	No./100 ml
Fecal Coliform	12/31/18	IMAX	7500	No./100 ml	1000	No./100 ml
Fecal Coliform	11/30/18	IMAX	> 20000	No./100 ml	1000	No./100 ml
Fecal Coliform	12/31/18	IMAX	7500	No./100 ml	1000	No./100 ml

Inspections

Summary of Inspections: Green Lane – Marlboro Joint Authority STP was last inspected on August 19, 2019. The inspection was a routine permit modification of completed and proposed plant upgrades. No violations were identified during inspection.

Sewage Compliance Inspection Report 19A

INSP ID	INSP CATEGORY	INSPECTED DATE	INSP TYPE	INSPECTION RESULT DESC	INSPECTOR ID	INSPECTOR	CREATION DATE	UPDATE DATE	# OF VIOLATIONS
2515297	PF	07/11/2016	Routine/Partial Inspection	No Violations Noted	00065724	JARDEL, PAUL	08/31/2016		0
2856575	PF	03/21/2019	Administrative/File Review	No Violations Noted	00536584	SANSONI, NANCY	03/21/2019		0
2515490	PF	04/01/2016	Administrative/File Review	Violation(s) Noted	00424773	PILLER, STEPHEN	09/01/2016	09/01/2016	1
2547144	PF	10/13/2016	Compliance Evaluation	No Violations Noted	00065724	JARDEL, PAUL	12/27/2016		0

2474002	PF	02/22/2016	Routine/Partial Inspection	Violation(s) Noted	00065724	JARDEL, PAUL	04/13/2016	09/01/2016	1
2461943	PF	03/08/2016	Administrative/File Review	No Violations Noted	00536584	SANSONI, NANCY	03/08/2016		0
2571587	PF	02/22/2017	Sanitary Sewer Overflow-Sampling	Viol(s) Noted & Immediately Corrected	00065724	JARDEL, PAUL	03/15/2017	03/15/2017	1
2817641	PF	12/12/2018	Compliance Evaluation	No Violations Noted	00065724	JARDEL, PAUL	12/19/2018		0
2556888	PF	01/31/2017	Administrative/File Review	No Violations Noted	00536584	SANSONI, NANCY	01/31/2017		0
2593705	PF	05/04/2017	Routine/Partial Inspection	No Violations Noted	00065724	JARDEL, PAUL	05/16/2017		0
2921507	PF	08/19/2019	Routine/Partial Inspection	No Violations Noted	00065724	JARDEL, PAUL	08/19/2019		0
2887658	PF	04/22/2019	Routine/Partial Inspection	No Violations Noted	00065724	JARDEL, PAUL	06/03/2019		0
2748333	PF	06/25/2018	Routine/Partial Inspection	No Violations Noted	00065724	JARDEL, PAUL	07/03/2018		0
2685444	PF	12/07/2017	Compliance Evaluation	Violation(s) Noted	00065724	JARDEL, PAUL	01/23/2018	01/23/2018	1
2701781	PF	03/06/2018	Administrative/File Review	No Violations Noted	00536584	SANSONI, NANCY	03/06/2018		0
2827160	PF	12/26/2018	Incident-Response to Accident or Event	Violation(s) Noted	00065724	JARDEL, PAUL	01/15/2019	01/15/2019	1
2472237	PF	03/30/2016	Routine/Partial Inspection	No Violations Noted	00065724	JARDEL, PAUL	04/07/2016		0

Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** 0.2
Latitude 40º 20' 20.65" **Longitude** -75º 28' 23.73"
Wastewater Description: Sewage Effluent

Limits in the draft permit for $CBOD_5$, NH_3-N, TSS, TRC, DO, TP, Fecal Coliform and pH are unchanged from the current permit.

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)
Total Residual Chlorine	0.5	Average Monthly	-	92a.48(b)(2)

Comments: TRC will remain in this permit for backup disinfection at the current limits requiring monitoring only during the use of chlorine. Part C.I. Other Requirements will include language requiring the permittee to submit sampling results whenever TRC is used for emergency disinfection.

For fecal coliform, the 1,000 No./100 ml instantaneous maximum limit applies at all times from May 1st through September 31st, based on Chapter 92a.47(a)(4). The current permit requirement that the limit no be exceeded in greater than 10% of the samples is unchanged the remainder of the year.

Water Quality-Based Limitations

Parameter	Limit (mg/l)	SBC	Model
$CBOD_5$	25	Average Monthly	WQM 7
NH_3N	10	Average Monthly	WQM 7
Dissolved Oxygen	6.0	Instantaneous Minimum	WQM 7
Total Dissolved Solids	1,000	Average Monthly	DRBC
Total Phosphorus	2.0	Average Monthly	Existing. No TMDL yet.
Total Nitrogen	Report	Monthly Average	SOP


Attachment A. WQM 7.pdf

The previous permit required quarterly monitoring for Total Dissolved Solids (TDS) because the average effluent value sample submitted in the permit renewal application of 679.8 mg/l, this value is > 50% of the DRBC effluent standard of 1,000 mg/l. TDS average monthly limit of 1,000 mg/l is added in this draft permit because there were many effluent samples during the previous permit term well above 50% of the DRBC effluent standard of 1,000 mg/l. Below are the TDS sample results from the previous permit term.

Total Dissolved Solids - Reporting Quarterly Daily Maximum			
Monitoring Start Date	Monitoring End Date	Concentration Value	Concentration Units
04/01/2016	06/30/2016	565	mg/L
07/01/2016	09/30/2016	880	mg/L
10/01/2016	12/31/2016	794	mg/L
01/01/2017	03/31/2017	1170	mg/L
04/01/2017	06/30/2017	565	mg/L
07/01/2017	09/30/2017	818	mg/L
10/01/2017	12/31/2017	688	mg/L
01/01/2018	03/31/2018	854	mg/L
04/01/2018	06/30/2018	573	mg/L
07/01/2018	09/30/2018	560	mg/L
10/01/2018	12/31/2018	520	mg/L
01/01/2019	03/31/2019	452	mg/L
04/01/2019	06/30/2019	358	mg/L
07/01/2019	09/30/2019	570	mg/L

Per the SOP “Establishing Effluent Limitations for Individual Sewage Permits”, sampling for Total Nitrogen is carried over in this draft permit renewal.

Best Professional Judgment (BPJ) Limitations

Once per week raw sewage influent monitoring for CBOD5 and TSS, and twice per month influent monitoring for BOD5 will remain in this permit renewal as a requirement for municipal and non-municipal sewage facilities of design flows greater than 2,000 gpd. Raw sewage influent monitoring for CBOD5, BOD5, and TSS will remain in this permit renewal to make sure the treatment plant is meeting 85% removal efficiency. This is done per Standard Operating Procedure (SOP) for Clean Water Program, New and Reissuance Sewage Individual NPDES Permit Application, IV.E.8.

Ultraviolet (UV) disinfection intensity monitoring with units microwatts per square centimeter (uWs/cm^2) at a monitoring frequency of once per day is added in this permit renewal.

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	Minimum	Average Monthly	Weekly Average	Instant. Maximum		
Flow (MGD)	Report	Report Daily Max	XXX	XXX	XXX	XXX	Continuous	Recorded
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	1/day	Grab
DO	XXX	XXX	6.0 Inst Min	Report	XXX	XXX	1/day	Grab
TRC	XXX	XXX	XXX	0.5	XXX	1.0	1/day	Grab
CBOD5	42	66	XXX	25	40	50	1/week	24-Hr Composite
CBOD5 Raw Sewage Influent	XXX	XXX	XXX	Report	XXX	XXX	1/week	24-Hr Composite
BOD5 Raw Sewage Influent	Report	XXX	XXX	Report	XXX	XXX	2/month	24-Hr Composite
TSS	50	75	XXX	30	45	60	1/week	24-Hr Composite
TSS Raw Sewage Influent	XXX	XXX	XXX	Report	XXX	XXX	1/week	24-Hr Composite
Total Dissolved Solids	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/quarter	24-Hr Composite
Fecal Coliform (No./100 ml)	XXX	XXX	XXX	200 Geo Mean	XXX	1000	1/week	Grab
UV Intensity (mW/cm^2)	XXX	XXX	Report Inst Min	XXX	XXX	XXX	1/day	Metered
Total Nitrogen	XXX	Report Daily Max	XXX	XXX	Report Daily Max	XXX	1/quarter	24-Hr Composite
Ammonia	17	25	XXX	10	15	20	1/week	24-Hr Composite

Outfall 001, Continued (from 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	Minimum	Average Monthly	Weekly Average	Instant. Maximum		
Total Phosphorus	3.3	XXX	XXX	2.0	XXX	4	1/week	24-Hr Composite

Tools and References Used to Develop Permit	
☒	WQM for Windows Model (see Attachment **A**)
☐	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.
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