

### Southcentral Regional Office CLEAN WATER PROGRAM

Application Type
Renewal
NonFacility Type
Major / Minor
Minor

# NPDES PERMIT FACT SHEET INDIVIDUAL SEWAGE

Application No. **PA0031861**APS ID **275933** 

1208460

Authorization ID

Applicant Name	Zerbe	Sisters Nursing Center Inc.	Facility Name	Zerbe Health Care & Rehabilitation Center STP
Applicant Address	2499 Zerbe Road		Facility Address	2499 Zerbe Road
	Narvo	n, PA 17555	<u></u>	Narvon, PA 17555
Applicant Contact	Daniel Caffrey		Facility Contact	Brian Norris
Applicant Phone	(717)	445-4551	Facility Phone	(610) 633-8009
Client ID	5798		Site ID	3672
Ch 94 Load Status	Not O	verloaded	Municipality	Caernarvon Township
Connection Status			County	Lancaster
Date Application Recei	ved	November 21, 2017	EPA Waived?	Yes
Date Application Accepted		January 9, 2018	If No, Reason	

#### Summary of Review

Zerbe Sisters Nursing Center, Inc. has applied to the Pennsylvania Department of Environmental Protection (DEP) for reissuance of its National Pollutant Discharge Elimination System (NPDES) permit. The permit was issued on May 24, 2013 and became effective on June 1, 2013. The permit authorized discharge of treated sewage from the existing wastewater treatment plant (WWTP) located in Caernarvon Township, Lancaster County into Unnamed Tributary to Conestoga River. The permit was transferred to Zerbe Sisters Nursing Center, Inc. on June 28, 2016 and became effective on July 1, 2016. The existing permit expiration date was May 31, 2018, and the permit has been administratively extended since that time.

Changes in this renewal: A more stringent Total Residual Chlorine (TRC) limit has been added to the permit.

Supplemental information for this report is located in an attachment below.



Approve	Deny	Signatures	Date
		Benjamin R. Lockwood / Environmental Engineering Specialist	April 24, 2019
			·
		Daniel W. Martin, P.E. / Environmental Engineer Manager	
		Maria D. Bebenek, P.E. / Program Manager	

#### **Summary of Review**

#### **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 W	<b>Waters and Water Supply Informatio</b>	on			
Outfall No. 001		Design Flow (MGD)	.036		
Latitude 40° 10' 2	25.5"	Longitude	75° 56' 29.6"		
Quad Name Morga	antown	Quad Code	1738		
Wastewater Description	on: Sewage Effluent				
	Unnamed Tributary to West Branch Conestoga River (WWF)	Stream Code	07813		
	57461673	RMI			
			3.99		
	0.46 mi <sup>2</sup>	Yield (cfs/mi <sup>2</sup> )	0.0848		
` ' ' —	0.039	Q <sub>7-10</sub> Basis	USGS Stream Gage		
Elevation (ft)	718	Slope (ft/ft)			
Watershed No7	7-J	Chapter 93 Class.	WWF, MF		
Existing Use N	N/A	<b>Existing Use Qualifier</b>	N/A		
Exceptions to Use N	N/A	Exceptions to Criteria	N/A		
Assessment Status	Impaired				
Cause(s) of Impairmen	ent Pathogens, Nutrients, Nutrient	s, Organic Enrichment/Low	D.O.		
Source(s) of Impairme	ent Source Unknown, Agriculture,	Other, Other			
TMDL Status	Final	Name Conestoga H	leadwaters TMDL		
Nearest Downstream	Public Water Supply Intake La	ncaster City Water Bureau			
PWS Waters Cor	nestoga River	Flow at Intake (cfs)			
PWS RMI 23.0	.6	Distance from Outfall (mi) 40.97			

Changes Since Last Permit Issuance: A drainage area of 0.46 mi<sup>2</sup> and a  $Q_{7-10}$  flow of 0.039 cubic feet per second (cfs) were determined by establishing a correlation to the yield of USGS Gage Station #01576085 on the Little Conestoga Creek. The  $Q_{7-10}$  and drainage area at the gage are 0.5 cfs and 5.82 mi<sup>2</sup>, respectively. These values are taken from the USGS document "Selected Streamflow Statistics for Streamgage Locations in and near Pennsylvania". The  $Q_{7-10}$  runoff rate at the gage station was calculated as follows:

Yield =  $(0.5 \text{ cfs})/5.82 \text{ mi}^2 = 0.086 \text{ cfs/mi}^2$ 

The drainage area at the discharge point, taken from USGS PA StreamStats = 0.46 mi<sup>2</sup>

The  $Q_{7-10}$  at the discharge point = 0.46 mi<sup>2</sup> x 0.086 cfs/mi<sup>2</sup> = 0.039 cfs

	Treatment Facility Summary										
Waste Type	Degree of Treatment	Process Type	Disinfection	Avg Annual Flow (MGD)							
Sewage	Secondary	Sequencing Batch Reactor	Hypochlorite	0.036							
Hydraulic Capacity (MGD)	Organic Capacity (lbs/day)	Load Status	Biosolids Treatment	Biosolids Use/Disposal							
0.036	111	Not Overloaded	Holding Tank	Other WWTP							

Changes Since Last Permit Issuance: None

Other Comments: The treatment process is as follows:

One (1) Bar Screen / Comminutor – One (1) Equalization Tank – One (1) SBR Unit – One (1) Chlorine Contact Tank (with liquid feed) – One (1) Post Aeration Tank – Discharge to Outfall 001

	Compliance History
Summary of DMRs:	A summary of the past 12-month DMR effluent data is present on the next page of this fact sheet.
Summary of Inspections:	8/26/2014: A routine inspection was conducted by Andrew Hall, DEP Water Quality Specialist. Water in the chlorine contact tank and the effluent were clear. The outfall was inspected. No solids were present, and the water upstream and downstream was clear.  7/10/2015: A routine inspection was conducted by Andrew Hall. The chlorine contact tank had some bulking sludge present but held back by the baffle. A light surface scum was present. Some growth was present on the baffle. The outfall was inspected, and the effluent was clear with no solids present. The water upstream and downstream was clear. It was noted that the headwall had some deterioration.  2/28/2018: A follow up inspection was conducted by Kevin Buss, DEP Water Quality Specialist. Violations had been recorded during 1/18/2018 FUI inspection for low effluent D.O. and high effluent ammonia. The violations were due to a faulty actuator for the decanter. Samples were taken and were within permit limits.

Other Comments: There are currently open violations associated with this facility. There are violations from 12/06/2017 and 01/18/2018 regarding violations of effluent limits in Part A of the NPDES permit.

#### **Compliance History**

#### DMR Data for Outfall 001 (from March 1, 2018 to February 28, 2019)

Parameter	MAR-18	APR-18	MAY-18	JUN-18	JUL-18	AUG-18	SEP-18	OCT-18	NOV-18	DEC-18	JAN-19	FEB-19
Flow (MGD)												
Average Monthly	0.00989	0.00846	0.00964	0.00746	0.00698	0.00864	0.00941	0.00893	0.01019	0.01056	0.01289	0.01208
Flow (MGD)												
Daily Maximum	0.01380	0.01200	0.01530	0.01140	0.01050	0.01270	0.01400	0.01170	0.01470	0.01350	0.01890	0.02160
pH (S.U.)		0.70					<b>-</b> 40		- 10			<b>-</b> 40
Minimum	7.08	6.72	7.21	7.21	7.39	7.14	7.19	7.10	7.10	7.15	7.18	7.10
pH (S.U.)												
Instantaneous	7.49	8.33	8.11	8.02	8.25	7.92	7.78	7.80	7.73	7.69	7.91	7.55
Maximum	7.49	8.33	8.11	8.02	8.25	7.92	7.78	7.80	1.13	7.69	7.91	7.55
DO (mg/L) Minimum	7.5	6.7	6.8	7.4	7.6	7.0	6.0	7.1	7.0	7.0	7.0	7.4
TRC (mg/L)	7.5	0.7	0.0	7.4	7.0	7.0	0.0	7.1	7.0	7.0	7.0	7.4
Average Monthly	0.064	0.059	0.057	0.048	0.049	0.051	0.038	0.044	0.051	0.051	0.062	0.066
TRC (mg/L)	0.001	0.000	0.007	0.010	0.010	0.001	0.000	0.011	0.001	0.001	0.002	0.000
Instantaneous												
Maximum	0.12	0.10	0.12	0.10	0.11	0.13	0.08	0.09	0.10	0.13	0.20	0.12
CBOD5 (mg/L)												
Average Monthly	4.3	5.4	3	< 2.2	< 2.4	< 2	< 2.55	< 2.95	< 2.05	2.95	< 2.1	< 2.85
TSS (mg/L)												
Average Monthly	10.5	13	< 7	< 5	< 7	6	< 7	< 5	< 7.5	< 5	< 5	< 5
Fecal Coliform												
(CFU/100 ml)												
Geometric Mean	19.9	35.4	< 2	14.6	1	< 1	17.9	28.6	< 1	3.2	< 1	< 2.2
Fecal Coliform												
(CFU/100 ml)												
Instantaneous	4.4	050	4	50			0.4	400		_		_
Maximum Nitrate-Nitrite (lbs/day)	44	250	4	53	1	< 1	64	102	< 1	5	< 1	5
Daily Maximum										< 2.28		
Nitrate-Nitrite (mg/L)										< 2.20		
Daily Maximum										6.5		
Total Nitrogen										0.5		
(lbs/day)												
Daily Maximum										< 2.36		
Total Nitrogen (mg/L)												
Daily Maximum										8.7		
Ammonia (mg/L)												
Average Monthly	< 0.189	1.323	< 0.15	0.365	< 0.322	0.411	0.166	< 0.1	0.153	< 0.13	0.139	< 0.237

#### NPDES Permit Fact Sheet Zerbe Health Care & Rehab Center

#### NPDES Permit No. PA0031861

TKN (lbs/day)												
Daily Maximum										< 0.19		
TKN (mg/L)												
Daily Maximum										2.2		
Total Phosphorus (lbs)												
Total Monthly	1.029	0.438	0.395	0.599	1.564	0.861	0.829	1.295	1.532	1.039	0.351	0.403
Total Phosphorus												
(mg/L)												
Average Monthly	0.445	0.3	0.2	0.33	0.88	0.315	0.365	0.57	0.62	0.39	0.13	0.165
Total Phosphorus (lbs)												
Total Annual										10.95		

#### **Existing Effluent Limitations and Monitoring Requirements**

The table below summarizes effluent limits and monitoring requirements implemented in the existing NPDES permit.

		Monitoring Re	guirements					
Donometer	Mass Uni	ts (lbs/day)		Concentrat		Minimum	Required	
Parameter	Average Monthly	Daily Maximum	Minimum	Average Monthly	Maximum	Instant. Maximum	Measurement Frequency	Sample Type
Flow (MGD)	Report	Report	XXX	XXX	XXX	XXX	Continuous	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
TRC	XXX	XXX	XXX	0.13	XXX	0.42	1/day	Grab
CBOD5	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) 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	1000	2/month	Grab
Nitrate-Nitrite	XXX	Report	XXX	Report Daily Max	XXX	XXX	1/year	8-Hr Composite
Total Nitrogen	XXX	Report	XXX	Report Daily Max	XXX	XXX	1/year	8-Hr Composite
Ammonia May 1 - Oct 31	XXX	XXX	XXX	2.0	XXX	4.0	2/month	8-Hr Composite
Ammonia Nov 1 - Apr 30	XXX	XXX	XXX	6.0	XXX	12	2/month	8-Hr Composite
TKN	XXX	Report	XXX	Report Daily Max	XXX	XXX	1/year	8-Hr Composite
Total Phosphorus	Report Total Mo	XXX	XXX	2.0	XXX	4.0	2/month	8-Hr Composite
Total Phosphorus (lbs)	XXX	219.31 Total Annual	XXX	XXX	XXX	XXX	1/year	Calculation

Compliance Sampling Location: At discharge from treatment facility

Other Comments: None

Development of Effluent Limitations								
Outfall No.	001	Design Flow (MGD)	.036					
Latitude	40° 10' 25.5"	Longitude	75º 56' 29.6"					
Wastewater D	Description: Sewage Effluent							

#### **Technology-Based Limitations**

The facility is regulated by standards found in 40 CFR § 133.102 and 25 Pa. Code § 92a.47(a). These standards are shown below:

Pollutant	Limit (mg/l)	SBC	Federal Regulation	State Regulation
CBOD <sub>5</sub>	25	Average Monthly	133.102(a)(4)(i)	92a.47(a)(1)
CBOD5	40	Average Weekly	133.102(a)(4)(ii)	92a.47(a)(2)
Total Suspended	30	Average Monthly	133.102(b)(1)	92a.47(a)(1)
Solids	45	Average Weekly	133.102(b)(2)	92a.47(a)(2)
рН	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)

Comments: The abovementioned technology-based limitations (TBELs) apply, subject to water quality analysis and BPJ where applicable.

#### **Water Quality-Based Limitations**

Pursuant to 40 CFR § 122.44(d)(1)(i), more stringent requirements should be considered when pollutants are discharged at the levels which have the reasonable potential to cause or contribute to excursions above water quality standards.

WQM 7.0 ver. 1.0b is a water quality model designed to assist DEP in determining appropriate water quality based effluent limits (WQBELs) for carbonaceous biochemical oxygen demand (CBOD₅), ammonia (NH₃-N), and dissolved oxygen (D.O.). The model simulates two basic processes: In the NH₃-N module, the model simulates the mixing and degradation of NH₃-N in the stream and compares calculated instream NH₃-N concentrations to NH₃-N water quality criteria. In the D.O. module, the model simulates the mixing and consumption of D.O. in the stream due to the degradation of CBOD₅ and NH₃-N and compares calculated instream D.O. concentrations to D.O. water quality criteria. The model then determines the highest pollutant loadings that the stream can assimilate while still meeting water quality criteria under design conditions. DEP's Technical Guidance No. 391-2000-007 provides the technical methods contained in WQM 7.0 for determining wasteload allocations and for determining recommended NPDES effluent limits for point source discharges.

The model was utilized for this permit application. The model output indicated a CBOD<sub>5</sub> average monthly limit of 25 mg/l, an NH<sub>3</sub>-N average monthly limit of 3.11 mg/l, and a D.O. minimum limit of 5.0 mg/l were protective of water quality. This NH<sub>3</sub>-N limit is less stringent than the existing summer NH<sub>3</sub>-N average monthly limit of 2.0 mg/l; therefore the existing limit will remain in the permit. The CBOD<sub>5</sub> limit of 25 mg/l is the same as the existing limit, and will remain in the permit.

There are no industrial/commercial users contributing industrial wastewater to the system and Zerbe does not currently have an EPA-approved pretreatment program. Accordingly, evaluating reasonable potential of toxic pollutants is not necessary as effluent levels of toxic pollutants are expected to be insignificant.

#### NPDES Permit Fact Sheet Zerbe Health Care & Rehab Center

#### **Best Professional Judgement (BPJ) Limitations**

A minimum D.O. limit of 5.0 mg/L is a D.O. water quality criterion found in 25 Pa. Code § 93.7(a). This limit is included in the existing NPDES permit. This limit will continue to be included in the permit to ensure that the facility continues to achieve compliance with DEP water quality standards.

#### **Total Residual Chlorine**

The attached computer printout utilizes the equations and calculations as presented in the Department's May 1, 2003 Implementation Guidance for Total Residual Chlorine (TRC) (ID No. 391-2000-015) for developing chlorine limitations. The Guidance references Chapter 92, Section 92.2d (3) which establishes a standard BAT limit of 0.5 mg/l unless a facility-specific BAT has been developed. The attached printout indicates that a water quality limit of 0.11 mg/l would be needed to prevent toxicity concerns. It is recommended that a TRC limit of 0.11 mg/l monthly average and 0.36 mg/l instantaneous maximum be applied this permit cycle, which are slightly more stringent than the existing limit. Based on a review of past DMRs, this facility is capable of meeting this limit.

#### **Additional Considerations**

#### Chesapeake Bay Total Maximum Daily Load (TMDL)

DEP developed 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). This strategy can be located in the *Pennsylvania Chesapeake Watershed Implementation Plan* (WIP), dated January 11, 2011. Subsequently, an update to the WIP was published as the Phase 2 WIP. As part of the Phase 2 WIP, a *Phase 2 Watershed Implementation Plan Wastewater Supplement* (Phase 2 Supplement) was developed, providing an update on TMDL implementation for point sources and DEP's current implementation strategy for wastewater. The Phase 2 Supplement was most recently revised on September 6, 2017. Sewage discharges have been prioritized based on their design flow to the Bay. The highest priority (Phases 1, 2, and 3) dischargers will receive annual Cap Loads 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. For Phase 4 and 5 facilities, Cap Loads are not currently being implemented for renewed or amended permits for facilities that do not increase design flow.

This facility is considered a Phase 5 non-significant discharger with a design flow less than 0.2 MGD but greater than 0.002 MGD. According to DEP's latest-revised Phase 2 Supplement, issuance of permits with monitoring and reporting for TN and TP is recommended for any Phase 5 non-significant sewage facilities (i.e., facilities with average annual design flows on August 29, 2005 less than 0.2 MGD but greater than 0.002 MGD). Furthermore, DEP's SOP No. BPNPSM-PMT-033 states that in general, at a minimum, monitoring for TN and TP should be included in new and reissued permits for sewage discharges with design flows > 2,000 gpd. TN monitoring and a TP limit is already included in the existing permit and will remain in the permit.

#### Conestoga Headworks TMDL

A TMDL for the Conestoga Headworks was finalized on April 9, 2005. The TMDL allocated a total load of 219.31 lbs/year Total Phosphorus to this facility. This annual load and the corresponding monthly average concentration of 2.0 mg/l were included in the previous permit, and will remain in the permit.

#### Anti-Degradation (93.4)

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.

#### 303d Listed Streams

The discharge is located on a stream segment that is designated on the 303(d) list as impaired. The recreational impairment is due to pathogens from an unknown source. The aquatic life impairment is due to nutrients from agriculture, nutrients from other, and organic enrichment / low D.O. from other. The proposed effluent limits include a limit for fecal coliform, NH<sub>3</sub>-N, and TP, and a monitoring requirement for TN. This discharge is not expected to significantly contribute to these impairments.

#### NPDES Permit No. PA0031861

## NPDES Permit Fact Sheet Zerbe Health Care & Rehab Center

#### Class A Wild Trout Fisheries

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

#### Anti-Backsliding

Pursuant to 40 CFR § 122.44(I)(1), all proposed permit requirements addressed in this fact sheet are at least as stringent as the requirements implemented in the existing NPDES permit unless any exceptions addressed by DEP in this fact sheet.

#### **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.

			Effluent L	imitations			Monitoring Re	quirements
Parameter	Mass Units	(lbs/day) <sup>(1)</sup>		Concentrat	ions (mg/L)		Minimum (2)	Required
Parameter	Average Monthly	Daily Maximum	Minimum	Average Monthly	Maximum	Instant. Maximum	Measurement Frequency	Sample Type
Flow (MGD)	Report	Report	XXX	XXX	XXX	XXX	Continuous	Measured
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	1/day	Grab
DO	XXX	XXX	5.0 Inst Min	XXX	XXX	XXX	1/day	Grab
TRC	XXX	XXX	XXX	0.11	XXX	0.36	1/day	Grab
CBOD5	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) 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	XXX	Report	xxx	Report Daily Max	XXX	XXX	1/year	8-Hr Composite
Total Nitrogen	XXX	Report	XXX	Report Daily Max	XXX	XXX	1/year	8-Hr Composite
Ammonia Nov 1 - Apr 30	XXX	XXX	XXX	6.0	XXX	12	2/month	8-Hr Composite
Ammonia May 1 - Oct 31	XXX	XXX	XXX	2.0	XXX	4.0	2/month	8-Hr Composite
TKN	XXX	Report	XXX	Report Daily Max	XXX	XXX		8-Hr Composite
Total Phosphorus	Report Total Mo	XXX	XXX	2.0	XXX	4.0	1/year 2/month	8-Hr Composite

Permit

**Permit No. PA0031861** 

#### Outfall 001, Continued (from Permit Effective Date through Permit Expiration Date)

			Effluent L	imitations			Monitoring Requirements	
Parameter	Mass Units (lbs/day) (1)			Concentrat	Minimum <sup>(2)</sup>	Required		
	Average	Daily		Average		Instant.	Measurement	Sample
	Monthly	Maximum	Minimum	Monthly	Maximum	Maximum	Frequency	Type
		219.31						
Total Phosphorus (lbs)	XXX	Total Annual	XXX	XXX	XXX	XXX	1/year	Calculation

Compliance Sampling Location: Outfall 001

Other Comments: None

Tools and References Used to Develop Permit	
	T.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
	WQM for Windows Model (see Attachment )
	PENTOXSD for Windows Model (see Attachment )
<u> </u>	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.
$\boxtimes$	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.
$\boxtimes$	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.
$\boxtimes$	Determining Water Quality-Based Effluent Limits, 391-2000-003, 12/97.
	Implementation Guidance Design Conditions, 391-2000-006, 9/97.
$\boxtimes$	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: