pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Northeast Regional Office
CLEAN WATER PROGRAM

Application Type	**Renewal**	Application No.	**PA0063975**
Facility Type	**Municipal**	APS ID	**521702**
Major / Minor	**Minor**	Authorization ID	**1364846**

NPDES PERMIT FACT SHEET INDIVIDUAL SEWAGE

Applicant and Facility Information

Applicant Name	**Thompson Borough Susquehanna County**	Facility Name	**Thompson Borough Susquehanna County**
Applicant Address	Water Street PO Box 89	Facility Address	Water Street
	Thompson, PA 18465		Thompson, PA 18465
Applicant Contact	Andrew Gardner	Facility Contact	Andrew Gardner
Applicant Phone	(570) 727-1075	Facility Phone	(570) 727-1075
Client ID	61954	Site ID	256670
Ch 94 Load Status		Municipality	Thompson Borough
Connection Status		County	Susquehanna
Date Application Received	August 10, 2021	EPA Waived?	Yes
Date Application Accepted	August 10, 2021	If No, Reason	

Purpose of Application: RENEWAL OF EXISTING NPDES PERMIT.

Summary of Review

The applicant is requesting renewal of an NPDES permit to discharge treated sewage up to discharge rate of 0.030 MGD. The receiving stream is Starrucca Creek, a Cold Water Fishery, Migratory Fishery (CWF-MF) designated receiving stream in State Water Plan watershed 04E (Great Bend Susquehanna River). Its designated use is for aquatic life, water supply and recreation. Per the Department's current existing use list, the receiving stream does not have an existing use classification that is more protective than the designated use. The discharge is not expected to affect public water supplies.

The effluent limits remain the same as the previous Permit. The $CBOD_5$, TSS, Fecal Coliform, TRC, and pH limits are BPT-based. The Ammonia-Nitrogen limit is water quality-based. The facility utilizes ultraviolet disinfection as its primary method, with chlorine disinfection as an emergency backup. TRC limits will remain to allow for monitoring the emergency backup or other use of chlorine daily when applicable. The monitoring frequencies will remain as per Technical Guidance 362-0400-001 Table 6-3.

Reported sludge from other entities

Thompson Sludge use and disposal description and location: Other STPs

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*

Approve	Deny	Signatures	Date
X		Bernard Feist (signed) Bernard Feist, P.E. / Environmental Engineer	September 16, 2021
X		Amy M. Bellanca (signed) Amy M. Bellanca, P.E. / Environmental Engineer Manager	9-24-21

Summary of Review

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.

The following violations must be resolved for a renewed Permit

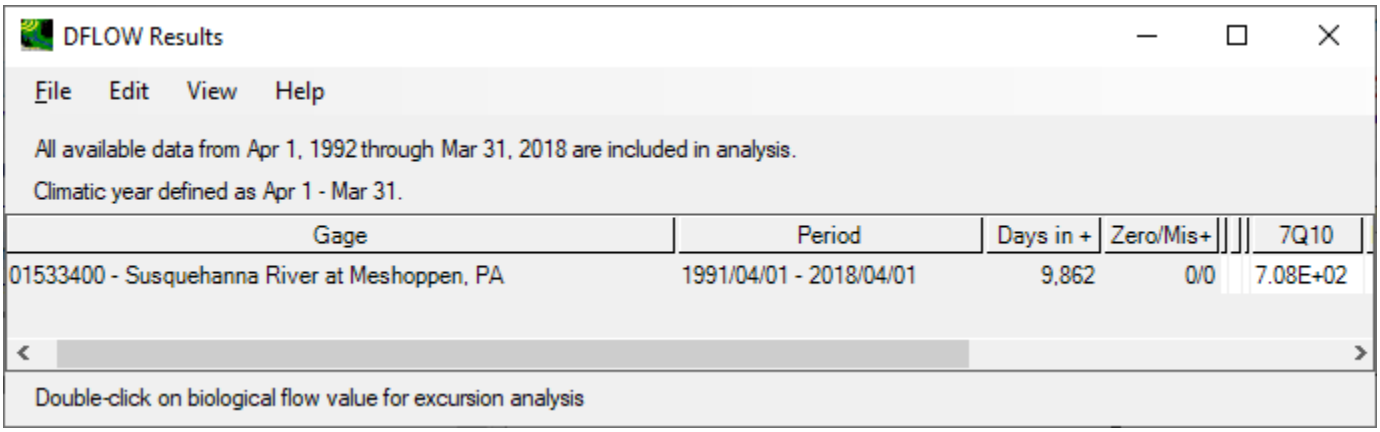
VIOLATION DATE	VIOLATION CODE	VIOLATION	PF INSPECTOR
03/17/2021	92A.47(C)	NPDES - Illegal discharge to waters of the Commonwealth from a sanitary sewer overflow (SSO)	LACZI,CHRIS
03/17/2021	91.33(A)	CSL - Failure to immediately report to DEP a pollution incident	LACZI,CHRIS
03/17/2021	302.1201	Operator Certification - Operator failed to comply with the Act or Chapter 302 regulations	LACZI,CHRIS
03/17/2021	302.1201	Operator Certification - Operator failed to comply with the Act or Chapter 302 regulations	LACZI,CHRIS

Discharge, Receiving Waters and Water Supply Information

Outfall No.	001	Design Flow (MGD)	.03
Latitude	41º 51' 51.00"	Longitude	-75º 30' 27.00"
Quad Name	Thompson	Quad Code	1 – 21.2
Wastewater Description:	Sewage Effluent		

Receiving Waters	Starrucca Creek	Stream Code	32177
NHD Com ID	43490643	RMI	14.5
Drainage Area	5.08	Yield (cfs/mi^2)	0.08
Q_{7-10} Flow (cfs)	0.4	Q_{7-10} Basis	DFlow Gage 01533400
Elevation (ft)	1542	Slope (ft/ft)	0.0179
Watershed No.	4E	Chapter 93 Class.	CWF
Existing Use	**na**	Existing Use Qualifier	
Exceptions to Use		Exceptions to Criteria	
Assessment Status	Attaining Use(s): aquatic life, water supply and recreation		

Nearest Downstream Public Water Supply Intake Pa/ New York State Border



DFLOW Results for 01533400 - Susquehanna River at Meshoppen, PA
STATION.--01533400 SUSQUEHANNA RIVER AT MESHOPPEN, PA
LOCATION.--Lat 4l`36'26", long 76`03'02", Wyoming County, Hydrologic Unit 02050106, on right bank 0.3 mi south of Meshoppen, 0.3 mi downstream from Meshoppen Creek, 2.3 mi upstream from bridge on State Highway 87, and 2.4 mi upstream from Mehoopany Creek.
DRAINAGE AREA.--8,720 square miles.
Low Flow yield = 708 cfs/ 8,720 square miles = 0.08

Outfall 001 RMI 14.5 NAD 1983 Latitude: 41.8636 (41 51 49)
NAD 1983 Longitude: -75.5067 (-75 30 25)
Drainage Area: 5.08 mi2 (1542 ft) ; Stream flow = 0.4 cfs

RMI 13.75 NAD 1983 Latitude: 41.8677 (41 52 04)
NAD 1983 Longitude: -75.4972 (-75 29 50)
Drainage Area: 7.93 mi2 (1471 ft)

Treatment Facility Summary
Treatment Facility Name: Thompson Borough WWTP Supplemental Information (1) The hydraulic design capacity of 0.030 million gallons per day for the treatment facility is used to prepare the annual Municipal Wasteload Management Report to help determine whether a "hydraulic overload" situation exists, as defined in Title 25 Pa. Code Chapter 94. (2) The effluent limitations for Outfall 001 were determined using an effluent discharge rate of 0.03 MGD. (3) The organic design capacity of 55 lbs BOD5 per day for the treatment facility is used to prepare the annual Municipal Wasteload Management Report to determine whether an “organic overload” condition exists, as defined in 25 Pa. Code Chapter 94.

Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** .03
Latitude 41º 51' 49.00" **Longitude** -75º 30' 29.00"
Wastewater Description: Sewage Effluent

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) and/or BPJ.

Technology-Based Limitations

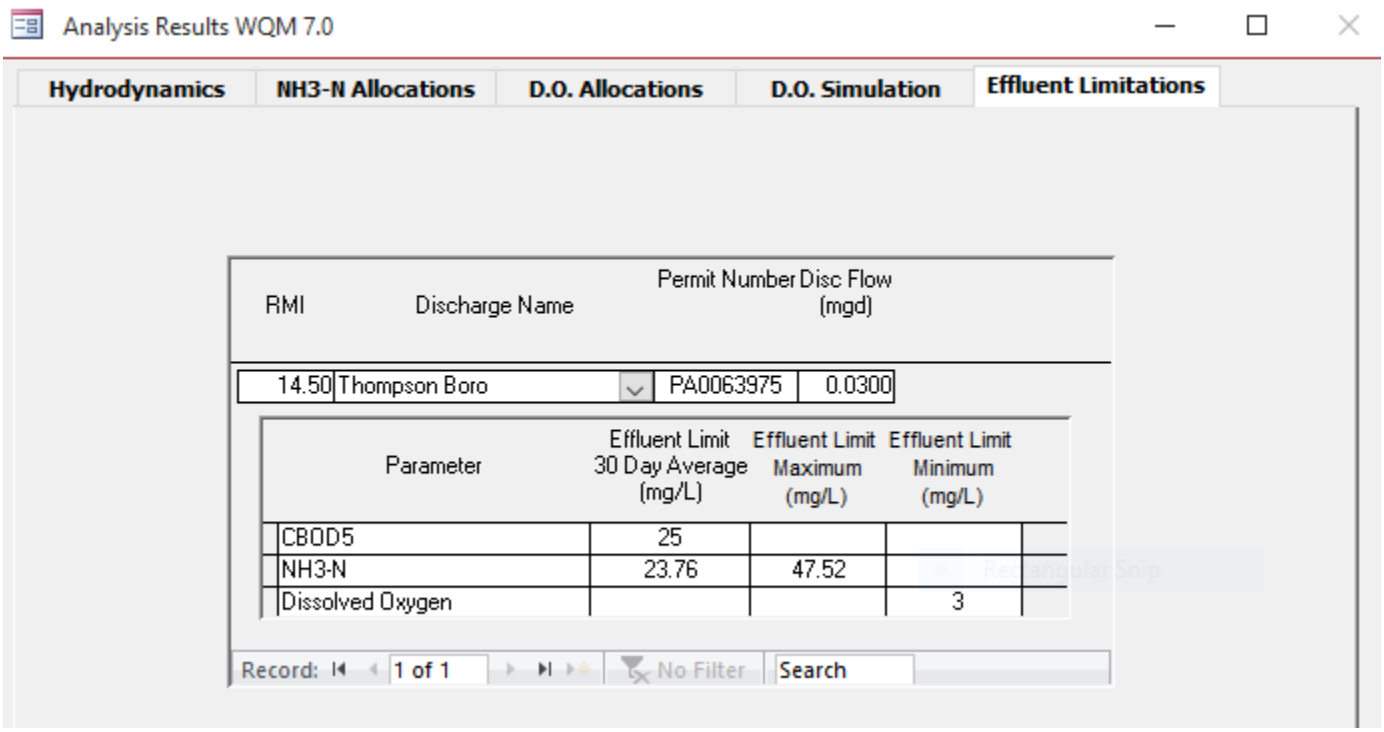
The following technology-based limitations apply, subject to water quality analysis and BPJ where applicable:

Parameter	Minimum	Average Monthly	Average Weekly	IMAX	Basis
Flow (MGD)	XXX	Report	Report Max Daily	XXX	§§ 92a.27, 92a.61
CBOD5 (mg/L)	XXX	25	40	50	§ 92a.47
TSS (mg/L)	XXX	30	45	60	§ 92a.47
TRC (mg/L)	XXX	0.5	XXX	1.6	§§ 92a.47-48
NH3-N (mg/L)	XXX	25	XXX	50	BPJ
D.O. (mg/L)	4	XXX	XXX	XXX	BPJ
pH (SU)	6	XXX	XXX	9	§ 92a.47, § 95.2
Total N (mg/L)	XXX	Report	XXX	XXX	§ 92a.61
Total P (mg/L)	XXX	Report	XXX	XXX	§ 92a.61
Fecal Coliform (No./100 ml) (May-Sept)	XXX	200 Geo Mean	XXX	1,000	§ 92a.47
Fecal Coliform (No./100 ml) (Oct-April)	XXX	2,000 Geo Mean	XXX	10,000	§ 92a.47
E. Coli (No./100 ml)*	XXX	XXX	XXX	Report	§ 92a.61

* 2021 update - Sewage discharges will include monitoring, at a minimum, for E. Coli, in new and reissued permits, with a monitoring frequency of 1/month for design flows >= 1 MGD, 1/quarter for design flows >= 0.05 and < 1 MGD, 1/year for design flows of 0.002 – 0.05 MGD.

Water Quality-Based Limitations

The following limitations were determined through water quality modeling (output files attached):



TRC EVALUATION			
Input appropriate values in A3:A9 and D3:D9			
0.4	= Q stream (cfs)	0.5	= CV Daily
0.03	= Q discharge (MGD)	0.5	= CV Hourly
4	= no. samples	1	= AFC_Partial Mix Factor
0.3	= Chlorine Demand of Stream	1	= CFC_Partial Mix Factor
0	= Chlorine Demand of Discharge	15	= AFC_Criteria Compliance Time (min)
1	= BAT/BPJ Value	720	= CFC_Criteria Compliance Time (min)
0	= % Factor of Safety (FOS)		=Decay Coefficient (K)

Source	Reference	AFC Calculations	Reference	CFC Calculations
TRC	1.3.2.iii	WLA afc = 2.768	1.3.2.iii	WLA cfc = 2.691
PENTOXSD TRG	5.1a	LTAMULT afc = 0.373	5.1c	LTAMULT cfc = 0.581
PENTOXSD TRG	5.1b	LTA_afc= 1.032	5.1d	LTA_cfc = 1.565

Source		Effluent Limit Calculations	
PENTOXSD TRG	5.1f	AML MULT = 1.720	
PENTOXSD TRG	5.1g	AVG MON LIMIT (mg/l) = 1.000	BAT/BPJ
		INST MAX LIMIT (mg/l) = 2.340	

The existing Permit limits remain unchanged. The limits for TRC and ammonia-nitrogen are water quality-based. The TRC Spreadsheet incorporates a DEP "facility-specific BAT" based on the NERO POTW BAT for this size of facility, the lack of any subsequent upgrading or expansion, and no known chlorine impact on the receiving stream.

Anti-Backsliding

Retain existing Limits

Compliance History

DMR Data for Outfall 001 (from August 1, 2020 to July 31, 2021)

Parameter	JUL-21	JUN-21	MAY-21	APR-21	MAR-21	FEB-21	JAN-21	DEC-20	NOV-20	OCT-20	SEP-20	AUG-20
Flow (MGD) Average Monthly	0.0232	0.0274	0.0265	0.0181	0.0224	0.0149	0.0158	0.0129	0.0129	0.0137	0.0133	0.0136
Flow (MGD) Daily Maximum	0.0299	0.0298	0.0299	0.0263	0.0277	0.0195	0.0245	0.0135	0.0141	0.0156	0.0154	0.0158
pH (S.U.) Minimum	7.46	7.36	7.58	7.56	7.56	7.56	7.42	7.14	7.11	6.98	7.39	7.48
pH (S.U.) Maximum	8.01	8.02	7.91	7.91	7.92	7.92	8.22	8.22	7.68	8.11	8.39	8.56
TRC (mg/L) Average Monthly	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
CBOD5 (lbs/day) Average Monthly	< 0.80	< 1.03	< 0.50	0.90	< 0.80	< 0.03	0.50	< 0.30	< 0.40	< 0.30	< 0.30	< 0.40
CBOD5 (lbs/day) Weekly Average	< 0.7	1.6	< 0.5	0.7	1.0	< 0.5	0.6	< 0.3	0.6	0.3	< 0.4	0.5
CBOD5 (mg/L) Average Monthly	< 4.0	< 5.0	< 3.0	5.0	< 4.0	< 3.0	5.0	< 3.0	< 4.0	< 3.0	< 3.0	< 4.0
CBOD5 (mg/L) Weekly Average	< 3.0	7.0	3.0	4.0	5.0	3.0	6.0	< 3.0	5.0	3.0	< 3.0	5.0
BOD5 (lbs/day) Raw Sewage Influent Average Monthly	31	64	93	25	63	34	20	22	52	24	16	41
BOD5 (mg/L) Raw Sewage Influent Average Monthly	138	274	420	144	328	309	192	200	478	213	156	372
TSS (lbs/day) Average Monthly	1.58	< 0.80	0.90	1.46	< 1.71	< 0.70	0.70	< 0.60	< 1.16	< 0.60	0.70	0.90
TSS (lbs/day) Raw Sewage Influent Average Monthly	58	17	14	9	15	12	7	16	44	11	8	39
TSS (lbs/day) Weekly Average	1.73	< 0.90	1.00	1.40	2.70	1.06	0.80	0.90	1.90	0.70	0.70	1.28
TSS (mg/L) Average Monthly	7.0	< 4.0	5.0	9.0	< 9.0	< 6.0	7.0	< 6.0	< 11.0	< 5.0	6.0	8.0
TSS (mg/L) Raw Sewage Influent Average Monthly	238	73	65	49	75	98	69	151	402	97	71	353
TSS (mg/L) Weekly Average	7.0	< 4.0	5.0	8.0	13.0	7.0	8.0	8.0	17.0	6.0	7.0	11.0
Fecal Coliform (CFU/100 ml) Geometric Mean	26	< 8	1	6	< 2	< 22	13	< 60	< 10	10	< 4	< 6
Fecal Coliform (CFU/100 ml) Instantaneous Maximum	166	72	1	31	< 4	116	44	890	< 10	12	4	8
Nitrate-Nitrite (lbs/day) Annual Average								12.75				
Nitrate-Nitrite (mg/L) Annual Average								4.18				
Total Nitrogen (lbs/day) Annual Average								0.71				
Total Nitrogen (mg/L) Annual Average								6.99				
Ammonia (lbs/day) Average Monthly	< 0.30	0.20	0.09							< 0.10	< 0.10	< 0.20
Ammonia (mg/L) Average Monthly	< 1.4	0.8	0.5							< 1.0	< 1.0	< 1.5

TKN (lbs/day) Annual Average								8.88				
TKN (mg/L) Annual Average								2.8				
Total Phosphorus (lbs/day) Annual Average								1.25				
Total Phosphorus (mg/L) Annual Average								0.75				