pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Northeast Regional Office
CLEAN WATER PROGRAM

NPDES PERMIT FACT SHEET
INDIVIDUAL SEWAGE

Application Type	**Renewal**	Application No.	**PA0030139**
Facility Type	**Non-Municipal**	APS ID	**523154**
Major / Minor	**Minor**	Authorization ID	**1085672**

Applicant and Facility Information

Applicant Name	**PA Department Of Corr**	Facility Name	**PA Department Of Corr Dallas Sci**
Applicant Address	1000 Folies Road Dallas Sci	Facility Address	Department Of Corrections Dallas Sci - 1000 Follies Road
	Dallas, PA 18612		Dallas, PA 18612
Applicant Contact	Dave Popek	Facility Contact	Robert Selert
Applicant Phone	(570) 675-2727	Facility Phone	(570) 675-1101
Client ID	43607	Site ID	516545
Ch 94 Load Status	Not Overloaded	Municipality	Jackson Township
Connection Status	No Limitations	County	Luzerne
Date Application Received	August 4, 2015	EPA Waived?	No
Date Application Accepted	August 19, 2015	If No, Reason	Significant CB Discharge

Purpose of Application: RENEWAL OF EXISTING NPDES PERMIT.

Summary of Review

The applicant is requesting the renewal of a NPDES Permit to discharge up to 0.5 MGD of treated sewage into East Fork Harveys Creek , a Cold Water Fishes (CWF) designated stream in State Watershed 05B (Toby-Wapwallopen Creeks). The stream at this location is designated for the following uses: aquatic life, water supply, CWF 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 for CBOD5, TSS, Fecal Coliform, and pH are technology based. The limits for DO, TRC and NH3-N are water quality based. No changes to site operations were proposed in the application submittal.

Section 7 of Pennsylvania’s Phase 3 Chesapeake Bay Watershed Implementation Plan describes Pennsylvania’s strategy for reducing nutrients to the Chesapeake Bay from wastewater facilities. The Phase 2 nutrient monitoring limits required by the Chesapeake Bay strategy will be continued. An update is that the minimum monitoring frequency for TN species and TP for renewing NPDES permits for Significant Sewage dischargers is increase to 2/week and 24hr composite monitoring is preferred.

Facilities with NPDES permits must use DEP’s eDMR system for reporting, except small flow treatment facilities. An Annual DMR must be submitted by the end of the Truing Period, November 28. As attachments to the Annual DMR a facility must submit a completed Annual Chesapeake Bay Spreadsheet, available through DEP’s Supplemental Reports website, which contains an Annual Nutrient Monitoring worksheet and an Annual Nutrient Budget worksheet. This Spreadsheet will be submitted once per Compliance Year only, and reflect all nutrient sample results (for the period October 1 – September 30), Credit transactions (including the Truing Period) and Offsets applied during the Compliance Year.

Appendix Q of the Chesapeake Bay TMDL segregates Pennsylvania’s point sources into four sectors – significant sewage

Approve	Deny	Signatures	Date
X		Bernard Feist, P.E. / Environmental Engineer /s/	July 16, 2019
X		Amy M. Bellanca, P.E. / Environmental Engineer Manager /s/	July 22, 2019

Summary of Review

dischargers, significant industrial waste (IW) dischargers, combined sewer overflows (CSOs) and non-significant dischargers (both sewage and IW facilities). All sectors contain a listing of individual facilities with NPDES permits that were believed to be discharging at the time the TMDL was published (2010). All sectors with the exception of the non-significant dischargers have individual wasteload allocations (WLAs) for TN and TP assigned to specific facilities. Non-significant dischargers have a bulk or aggregate allocation for TN and TP based on the facilities in that sector that were believed to be discharging at that time and their estimated nutrient loads.

The Chesapeake Bay TMDL specifies individual WLAs for 183 significant sewage treatment facilities. A sewage facility is considered significant if it has a design flow of at least 0.4 MGD. For rollout of its permitting strategy, DEP classified these facilities into three phases.

Table 7-1: Significant Chesapeake Bay Sewage NPDES Permits Issued

Phase 2 WIP Wastewater Supplement
Revised, November 9, 2018

NPDES Permit No.	Phase	Facility	Latest Permit Issuance Date	Permit Expiration Date	Cap Load Compliance Start Date	TN Cap Load (lbs/yr)	TN Offsets Included in Cap Load (lbs/yr)	TP Cap Load (lbs/yr)	TN Delivery Ratio	TP Delivery Ratio
PA0030139	3	Dallas State Correctional Institution	1/25/2011	1/31/2016	10/1/2009	9,741	-	1,218	0.871	0.436

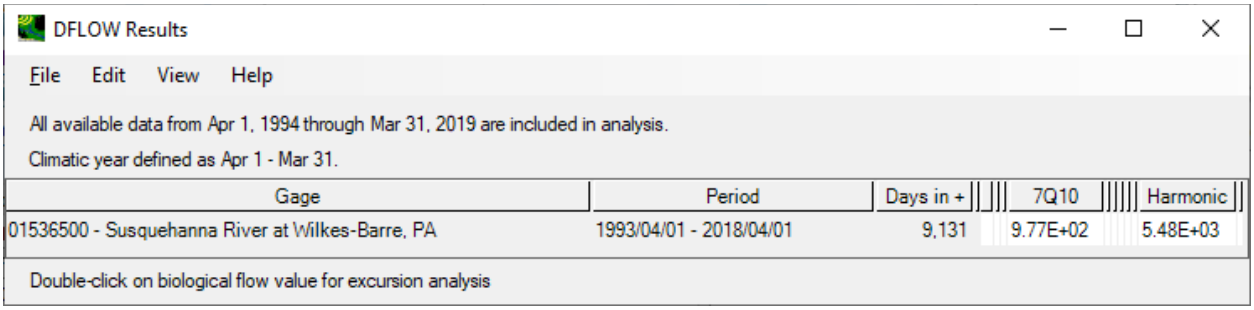
DEP will continue to use an adaptive management philosophy to guide decision-making for TMDL implementation. DEP may deviate from the guidelines stated herein where warranted to ensure that total aggregate loads remain at or below the WLAs prescribed by the TMDL. Where DEP deviates from these guidelines, it will be done in a systematic, centralized manner, and will be documented through the submission of status/milestone reports to EPA.

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)	.45
Latitude	41º 16' 42.74"	Longitude	-76º 0' 36.09"
Quad Name		Quad Code	
Wastewater Description:	Sewage Effluent		
Receiving Waters	East Fork Harveys Creek (CWF, MF)	Stream Code	28318
NHD Com ID	65633837	RMI	2.0
Drainage Area	3.14	Yield (cfs/mi^2)	0.1
Q_{7-10} Flow (cfs)	.314	Q_{7-10} Basis	DFlow USGS 01536500
Elevation (ft)		Slope (ft/ft)	
Watershed No.	5-B	Chapter 93 Class.	CWF, MF
Existing Use		Existing Use Qualifier	
Exceptions to Use		Exceptions to Criteria	
Assessment Status	Impaired		
Cause(s) of Impairment	Organic Enrichment/Low D.O., TURBIDITY		
Source(s) of Impairment	NATURAL SOURCES, Other		
TMDL Status		Name	
Nearest Downstream Public Water Supply Intake	Danville Municipal Water		
PWS Waters		Flow at Intake (cfs)	
PWS RMI		Distance from Outfall (mi)	➢ 50 Miles

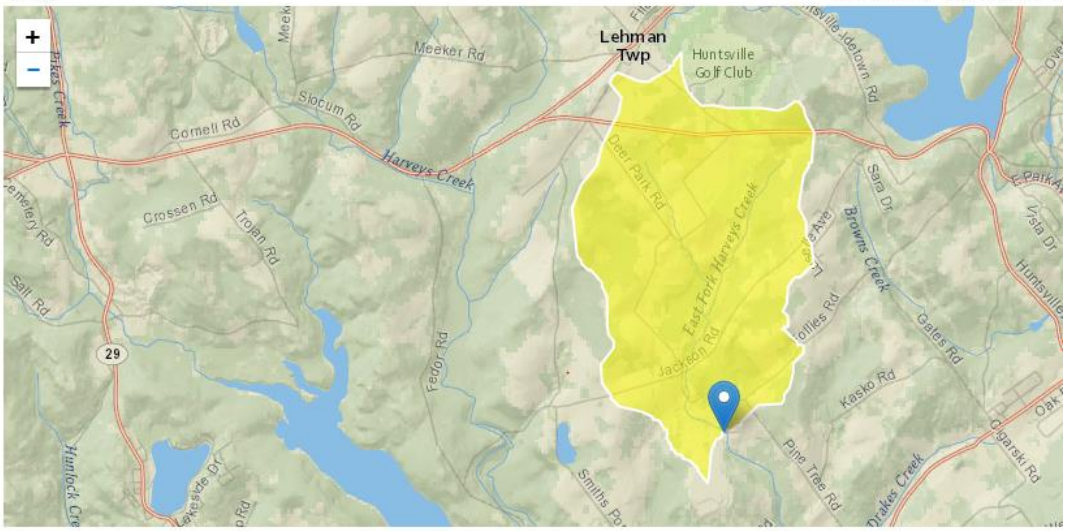


LFY = Q_{7-10} LowFlowYield (cfs/mi^2)= 977/ 9,960 = 0.1

USGS STATION.--01536500 SUSQUEHANNA RIVER AT WILKES-BARRE, PA
LOCATION.--Lat 41`15'03", long 75`52'52", Luzerne County, Hydrologic Unit 02050107, on left bank at downstream side of North Street bridge in Wilkes-Barre, and 1.8 mi upstream from Toby Creek.
DRAINAGE AREA.--9,960 square miles.
PERIOD OF RECORD.--April 1899 to current year. Gage-height records collected at same site since November 1890, contained in reports of U.S. Weather Bureau.
GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 510.86 ft above North American Vertical Datum of 1988.

Outfall 001 at RMI 2.0 @ 1076 elevation

Clicked Point (Latitude, Longitude): 41.27844, -76.00975
Time: 2019-07-12 15:38:18 -040



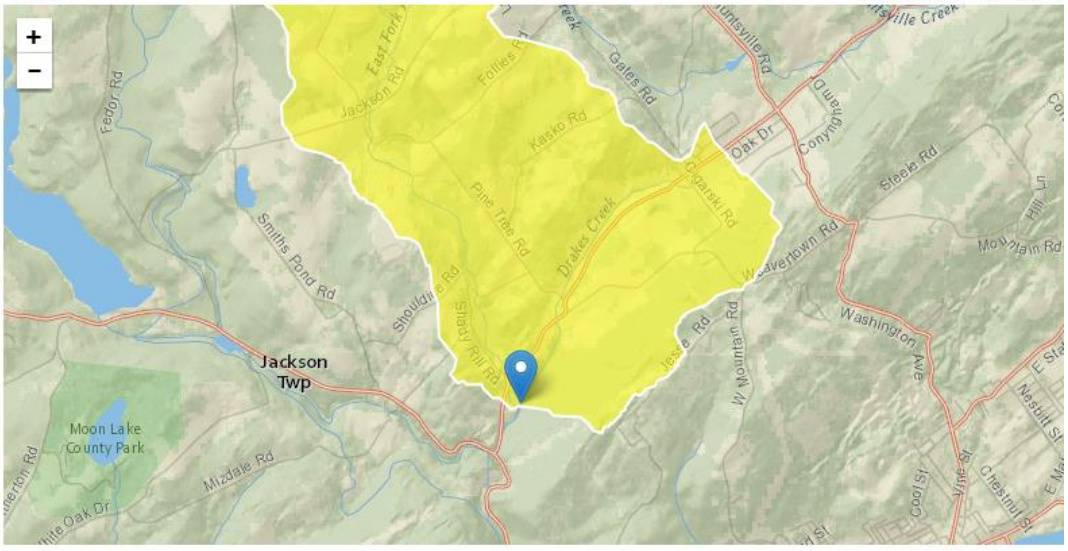
Low-Flow Statistics Parameters[Low Flow Region 2]

Parameter Code	Parameter Name	Value	Units
DRNAREA	Drainage Area	3.14	square miles

Stream $Q_{7\text{-}10}$ Flow (cfs) = 3.14 * 0.1 = .314 cfs

RMI 0.0 @ Elevation 865 ft

Clicked Point (Latitude, Longitude): 41.25655, -75.99539
Time: 2019-07-12 15:46:52



Low-Flow Statistics Parameters[Low Flow Region 2]

Parameter Code	Parameter Name	Value	Units
DRNAREA	Drainage Area	7.08	square miles

Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** .45
Latitude 41º 16' 42.64" **Longitude** -76º 0' 36.26"
Wastewater Description: Sewage Effluent

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)
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)

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 — PA SCI Dallas

0.314	= Q stream (cfs)	0.5	= CV Daily
0.45	= 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)
0.5	= 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 = 0.163	1.3.2.iii	WLA cfc = 0.151
PENTOXSD TRG	5.1a	LTAMULT afc = 0.373	5.1c	LTAMULT cfc = 0.581
PENTOXSD TRG	5.1b	LTA_afc= 0.061	5.1d	LTA_cfc = 0.088

Source		Effluent Limit Calculations	
PENTOXSD TRG	5.1f	AML MULT = 1.720	
PENTOXSD TRG	5.1g	AVG MON LIMIT (mg/l) = 0.104	AFC
		INST MAX LIMIT (mg/l) = 0.244	

WQM 7.0 Effluent Limits

SWP Basin	Stream Code	Stream Name
05B	28318	EAST FORK HARVEYS CREEK

RMI	Name	Permit Number	Disc Flow (mgd)	Parameter	Effl. Limit 30-day Ave. (mg/L)	Effl. Limit Maximum (mg/L)	Effl. Limit Minimum (mg/L)
2.000	PA Dallas SCI	pa 0030139	0.450	CBOD5	25		
				NH3-N	2.47	4.94	
				Dissolved Oxygen			5

PA Dallas WQM.pdf

Pentox Toxic Analysis

Parameter	Effluent Limit (µg/L)	Governing Criterion	Max. Daily Limit (µg/L)	Most Stringent WQBEL (µg/L)	Most Stringent WQBEL Criterion
COPPER	11.4	INPUT	17.786	13.02	AFC
LEAD	4.617	CFC	7.203	4.617	CFC
ZINC	76.5	INPUT	119.352	111.437	AFC

PA Dallas Pentox.pdf

Best Professional Judgment (BPJ) Limitations

Limits are recommended for Copper, Lead, and Zinc. Due to the small sampling set, quarterly Monitor & Report will be incorporated into this Permit Cycle for more robust data, analysis, and corrections.

PA Dallas Renewal Application.pdf

Compliance History

DMR Data for Outfall 001 (from June 1, 2018 to May 31, 2019)

Parameter	MAY-19	APR-19	MAR-19	FEB-19	JAN-19	DEC-18	NOV-18	OCT-18	SEP-18	AUG-18	JUL-18	JUN-18
Flow (MGD) Average Monthly	0.29	0.27	0.25	0.25	0.27	0.49	0.53	0.45	0.46	0.26	0.25	0.18
Flow (MGD) Daily Maximum	0.53	0.50	0.44	0.38	0.76	0.68	0.70	0.65	0.96	0.61	0.71	0.30
pH (S.U.) Minimum	6.8	6.5	6.2	6.3	6.2	6.2	6.4	6.5	6.7	6.2	6.2	6.2
pH (S.U.) Maximum	7.3	7.2	7.1	7.1	7.9	6.9	7.0	7.1	7.2	6.9	6.8	6.8
DO (mg/L) Minimum	5.0	5.1	3.8	5.9	4.6	4.7	6.2	6.0	5.3	6.0	7.4	6.7
TRC (mg/L) Average Monthly	0.04	0.052	0.056	0.0525	0.052	0.086	0.061	0.06	0.07	0.07	0.05	0.05
TRC (mg/L) Instantaneous Maximum	0.07	0.12	0.11	0.08	0.13	0.15	0.16	0.11	0.18	0.32	0.17	0.08
CBOD5 (lbs/day) Average Monthly	5.4	6.8	9.3	7.8	6.0	11.4	12.3	10.8	12.7	12.7	5.3	7.1
CBOD5 (mg/L) Average Monthly	2.4	3.78	4.33	4.0	< 3.0	< 3.0	3.0	3.0	3.0	4.8	3.25	5.0
TSS (lbs/day) Average Monthly	13.4	9.36	47.82	12.35	10.02	19.04	20.54	18.07	21.15	12.49	8.18	7.0
TSS (mg/L) Average Monthly	6.2	5.0	22.0	6.25	< 5.0	< 5.0	< 5.0	< 5.0	5.0	< 5.0	< 5.0	< 5.0
Fecal Coliform (CFU/100 ml) Geometric Mean	1.58	5.0	2	11	4	4	2	9	3	10	9	30
Fecal Coliform (CFU/100 ml) Instantaneous Maximum	9.8	13.5	6	29	43	10	8	72	9	24	96	334
Nitrate-Nitrite (mg/L) Average Monthly	0.51	0.36	0.568	0.2575	0.8	0.82	1.14	0.64	1.19	1.3	0.98	1.2
Nitrate-Nitrite (lbs) Total Monthly	35.75	20.89	39	13.36	49.94	90.35	133.47	72	135.53	91.94	47.72	51.2
Total Nitrogen (mg/L) Average Monthly	1.91	5.48	2.593	1.9325	2.70	2.34	3.12	1.87	2.33	2.42	1.86	2.3
Total Nitrogen (lbs) Effluent Net Total Monthly	132.52	276.52	188	103	168.32	259.11	368.80	211.1	268.58	182	91.86	97
Total Nitrogen (lbs) Total Monthly	132.52	276.52	188	103	168.32	259	368.80	211	268.58	182	91.86	97.1
Total Nitrogen (lbs) Effluent Net Total Annual									< 1878			
Total Nitrogen (lbs) Total Annual									< 1878			
Ammonia (lbs/day) Average Monthly	0.62	4.11	2.14	0.33	1.57	3.14	4.32	2.0	2.37	1.62	0.93	0.89
Ammonia (mg/L) Average Monthly	0.28	2.46	0.885	0.1725	0.778	0.84	1.07	0.56	0.56	0.623	0.57	0.64
Ammonia (lbs) Total Monthly	19.25	119.05	64.34	9.03	48.64	94.1	125.25	63.2	68.81	50.24	27.95	26.6
Ammonia (lbs) Total Annual									< 509			
TKN (mg/L) Average Monthly	1.4	5.13	2.025	1.675	1.91	1.52	1.97	1.23	1.14	1.12	1.02	1.31
TKN (lbs) Total Monthly	96.76	255.66	149.32	89.38	118.63	168.8	235.24	138.7	133.03	89.68	50.51	54.3
Total Phosphorus (mg/L) Average Monthly	2.76	2.7	1.558	1.0475	3.08	1.97	2.73	2.2	2.47	2.55	3.03	4.5

Total Phosphorus (lbs) Effluent Net Total Monthly	190.22	146.82	95	55	192.46	225.64	320.02	245	266.11	190	144.1	188
Total Phosphorus (lbs) Total Monthly	190.22	146.82	95.42	55.11	192.46	225.6	320.02	245	266.11	190.25	144.10	187.8
Total Phosphorus (lbs) Effluent Net Total Annual									1761			
Total Phosphorus (lbs) Total Annual									1761			