Southwest Regional Office
CLEAN WATER PROGRAM

Application Type	**Renewal**	Application No.	**PA0217824**
Facility Type	**Non-Municipal**	APS ID	**1114171**
Major / Minor	**Minor**	Authorization ID	**1485892**

NPDES PERMIT FACT SHEET INDIVIDUAL SEWAGE

Applicant and Facility Information

Applicant Name	**YMCA Of Greater Pittsburgh**	Facility Name	**Camp Kon O Kwee Spencer**
Applicant Address	126 Nagel Road	Facility Address	290 Narrows Road
	Fombell, PA 16123-1136		Fombell, PA 16123-2224
Applicant Contact	Michael McElhinney	Facility Contact	
Applicant Phone	(724) 758-6283	Facility Phone	
Client ID	4793	Site ID	242812
Ch 94 Load Status		Municipality	Marion Township
Connection Status		County	Beaver
Date Application Received	May 21, 2024	EPA Waived?	Yes
Date Application Accepted		If No, Reason	
Purpose of Application	Renewal		

Summary of Review

The permittee has applied to renew PA0217824. The last renewal was issued on 12/04/2019 and expired on 12/31/2024.

The facility discharges to the Connoquenessing Creek, which is a Warm-water fishery.

The facility consists of two grinder pumps, a debris basket, two aerated/aerobic lagoons, a chlorine injection manhole, two facultative/sedimentation lagoons, and two chlorine contact tanks.

Act 14 Notifications were provided on May 17 and 19 of 2024.

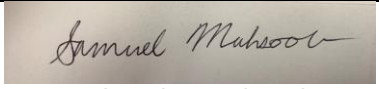
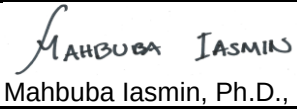
The client has no open violations by client ID.

In a 1985 letter from Peter A. Yeager, Regional Water Quality Manager, the DEP established a 2.0 mg/L effluent limit for all dischargers to the Connoquenessing Creek. In the last permit renewal, the limit was negotiated to an annual mass loading limit. The letter is included in Attachment 6.

Per the previous permit renewal:

"DEP is willing to approve a mass loading approach on an annual basis with the understanding a concentration limit of 2 mg/l is not changing and that the load will not be based on the plant's design flow of 0.03 mgd. An annual TP mass load effluent limitation of 42.62 lbs. is imposed in the permit and is based on historical flow records that establish a current existing average daily flow in mgd multiplied by a concentration limit of 2 mg/l, a conversion factor of 8.34, and 365 days/year.

The daily discharge load for TP (lbs./day) equals the flow (mgd) on the day of sampling, multiplied by that day's sample concentration of TP (mg/l), multiplied by 8.34. A monthly total mass load is computed by taking the sum of the actual daily

Approve	Return	Deny	Signatures	Date
x			 Sam Mahsoob, EIT / Environmental Engineering Trainee	7/8/2025
x			 Mahbuba Iasmin, Ph.D., P.E. / Environmental Engineer Manager	7/11/2025

Summary of Review

discharge loads for TP (lbs./day) divided by the number of samples per month, multiplied by the number of days in the month in which there was a discharge. The permit is conditioned to require the daily discharge flow the day of sampling be measured and recorded on the Daily Effluent Monitoring Report.

An example of how a monthly mass load is to be calculated is provided below:

Flow volume day sample #1 taken = 2,550 gallons
TP concentration for sample #1 = 1.7 mg/l
Daily discharge load = 0.00255 mgd x 1.7 mg/l x 8.34 = 0.036 lbs.

Flow volume day sample #2 taken = 3,650 gallons
TP concentration for sample #2 = 3.0 mg/l
Daily discharge load = 0.00365 mgd x 3.0 mg/l x 8.34 = 0.091 lbs.

The sum of the daily discharge loads = 0.036 lbs. + 0.091 lbs. = 0.127 lbs.
The sum of the daily discharge loads of 0.127 lbs. is divided by the number of samples taken for the month, therefore 0.127 lbs. ÷ 2 = 0.064 lbs.

The monthly total mass load would be computed by taking 0.064 lbs. multiplied by the number of days in June, therefore 0.064 lbs. x 30 = 1.91 lbs.

This approach allows flexibility for the camp to make adjustments as needed throughout the year to stay in compliance with the mass load effluent limit while still maintaining the actual 2 mg/l concentration limit as an average over the year, based on actual flow discharged. The Department did not permit the use of the design flow of 0.03 mgd to establish a mass flow effluent limit as this would allow the camp to take credit for flow that is not actually discharged. Because actual flows are much lower than the design flow of 0.03 mgd, the camp would have been able to discharge flows with concentrations greater than 2.0 mg/l while still meeting a mass loading based on the design flow."

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)	.005
Latitude	40º 48' 57"	Longitude	-80º 13' 26"
Quad Name	Zelienople	Quad Code	40080G2
Wastewater Description:	Sewage Effluent		

Receiving Waters	Connoquenessing Creek (WWF)	Stream Code	34025
NHD Com ID	126223595	RMI	12.6
Drainage Area	353	Yield (cfs/mi^2)	0.032
Q_{7-10} Flow (cfs)	11.3	Q_{7-10} Basis	USGS StreamStats
Elevation (ft)	859.71	Slope (ft/ft)	0.001
Watershed No.	20-C	Chapter 93 Class.	WWF
Existing Use		Existing Use Qualifier	
Exceptions to Use		Exceptions to Criteria	
Assessment Status	**Not Impaired**		
Cause(s) of Impairment			
Source(s) of Impairment			
TMDL Status	**None**	Name	

Background/Ambient Data		Data Source
pH (SU)		
Temperature (°F)		
Hardness (mg/L)		
Other:		

Nearest Downstream Public Water Supply Intake — PWS ID: 5040012, System Name: BEAVER FALLS MUNI AUTH

PWS Waters	Beaver River	Flow at Intake (cfs)	3180
PWS RMI	5.6	Distance from Outfall (mi)	19.42

Treatment Facility Summary

Treatment Facility Name: Camp Kon O Kwee Spencer

WQM Permit No.	Issuance Date
0400408	10/09/2000

Waste Type	Degree of Treatment	Process Type	Disinfection	Avg Annual Flow (MGD)
Sewage	Tertiary	Aerated Lagoon	Chlorination	.005

Hydraulic Capacity (MGD)	Organic Capacity (lbs/day)	Load Status	Biosolids Treatment	Biosolids Use/Disposal
.03	88	Not Overloaded	None	None

Compliance History

A compliance check will be provided for the final permit.

Compliance History

DMR Data for Outfall 001 (from June 1, 2024 to May 31, 2025)

Parameter	MAY-25	APR-25	MAR-25	FEB-25	JAN-25	DEC-24	NOV-24	OCT-24	SEP-24	AUG-24	JUL-24	JUN-24
Flow (MGD) Average Monthly	0.007	0.003	0.003	0.005	0.0018	0.002	0.001	0.001	0.003	0.007	0.007	0.005
pH (S.U.) Instantaneous Minimum	6.98	6.96	7.24	7.01	7.14	7.10	7.08	7.01	6.96	7.03	6.97	6.99
pH (S.U.) Instantaneous Maximum	7.45	8.00	7.95	7.85	8.50	7.99	7.37	7.76	7.91	7.43	7.28	7.23
DO (mg/L) Instantaneous Minimum	5.49	7.80	5.67	9.21	10.96	5.96	6.79	2.97	2.47	3.36	2.27	2.80
TRC (mg/L) Average Monthly	0.17	0.17	0.12	0.17	0.18	0.12	0.15	0.09	0.06	0.06	0.06	0.09
TRC (mg/L) Instantaneous Maximum	0.46	0.34	0.32	0.48	0.46	0.25	0.33	0.43	0.38	0.13	0.13	0.25
CBOD5 (mg/L) Average Monthly	< 3.0	3.3	6.0	< 3.0	5.4	< 5.50	< 3.0	5.4	< 3.0	3.0	3.0	5.5
CBOD5 (mg/L) Instantaneous Maximum	< 3.0	3.5	8.9	< 3.0	7.4	< 8.0	< 3.0	7.7	< 3.0	3.0	3.0	6.2
TSS (mg/L) Average Monthly	5.5	5.75	< 5.0	6.0	5.0	< 5.0	< 5.0	< 5.0	6.5	7.3	5.0	5.3
TSS (mg/L) Instantaneous Maximum	5.5	6.5	< 5.0	7.0	5.0	< 5.0	< 5.0	< 5.0	8.0	9.5	5.0	5.5
Fecal Coliform (No./100 ml) Geometric Mean	5.57	2	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	1	1
Fecal Coliform (No./100 ml) Instantaneous Maximum	31	4	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	1	1
Total Nitrogen (mg/L) Average Monthly	5.47	8.55	8.78	8.14	3.48	2.32	2.68	3.58	2.51	4.52	7.95	5.04

Total Nitrogen (mg/L) Instantaneous Maximum	5.593	10.6	9.84	8.57	3.79	3.51	2.78	3.84	2.97	5.08	8.26	5.34
Ammonia (mg/L) Average Monthly	2.40	3.59	2.64	2.06	0.94	0.70	0.85	1.21	1.695	1.42	6.00	3.27
Total Phosphorus (mg/L) Average Monthly	1.075	1.24	1.27	1.29	1.48	0.98	1.43	0.82	0.774	1.42	1.46	0.943
Total Phosphorus (mg/L) Instantaneous Maximum	1.31	1.53	1.36	1.37	1.61	1.77	1.50	1.62	1.07	2.54	1.49	1.03
Total Phosphorus (lbs) Effluent Net Total Monthly	2.10	1.08	0.63	1.28	1.44	0.023	0.105	0.20	0.57	2.79	1.86	0.585
Total Phosphorus (lbs) Effluent Net Total Annual						7.74						

DMR Data for Outfall 101 (from June 1, 2024 to May 31, 2025)

Parameter	MAY-25	APR-25	MAR-25	FEB-25	JAN-25	DEC-24	NOV-24	OCT-24	SEP-24	AUG-24	JUL-24	JUN-24
Flow (MGD) Groundwater Daily Maximum			0.009			0.007			0.02			0.013
CBOD5 (mg/L) Groundwater Daily Maximum			< 3.0			< 3.0			< 3.0			10.0
TSS (mg/L) Groundwater Daily Maximum			< 5.0			< 5.0			5.0			< 5.0
Fecal Coliform (No./100 ml) Groundwater Daily Maximum			< 1			< 1			< 1			< 1
Ammonia (mg/L) Groundwater Daily Maximum			< 0.30			< 0.30			< 0.30			< 0.30

Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** .005
Latitude 40º 48' 57.00" **Longitude** -80º 13' 26.00"
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
Flow	**Report**	**Max Daily**	**-**	**§§ 92a.27, 92a.61**
Flow	**Report**	**Max Daily**	**-**	**§§ 92a.27, 92a.61**
$CBOD_5$	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)
Total Nitrogen	Report	Average Monthly	-	92a.61(7)
Total Phosphorus	Report	Average Monthly	-	92a.61(8)
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)
E. Coli (No./100 ml)	-	Report		93a.61(11)(12)
Total Residual Chlorine	0.5	Average Monthly	-	92a.48(b)(2)
Total Residual Chlorine	1.6	IMAX	-	92a.47-48(3)(4)
Ammonia-Nitrogen	25	Average Monthly	-	BPJ (5)
Ammonia-Nitrogen	50	IMAX	-	BPJ (5)
Dissolved Oxygen	4.0	IMIN	-	BPJ (6)

Water Quality-Based Limitations

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

Parameter	Limit (mg/l)	SBC	Model
Ammonia-Nitrogen	25.0	Average Monthly	WQM 7.0
Ammonia-Nitrogen	50.0	IMAX	WQM 7.0
Dissolved Oxygen	4.0	Minimum	WQM 7.0
Total Residual Chlorine	0.5	Average Monthly	TRC
Total Residual Chlorine	1.6	IMAX	TRC

Comments: The WQM 7.0 and TRC models recommended the default limits be imposed for Ammonia-Nitrogen, Dissolved Oxygen, and Total Residual Chlorine.

Development of Effluent Limitations

Outfall No. 101 **Design Flow (MGD)** 0
Latitude 40º 48' 51.00" **Longitude** -80º 13' 37.00"
Wastewater Description: Groundwater beneath the sewage treatment plant's liner system to check for contamination due to leaks.

Pollutant	Limit (mg/l)	SBC
Flow (mgd)	Report	Daily Maximum
$CBOD_5$	Report	Daily Maximum
Total Suspended Solids	Report	Daily Maximum
Ammonia Nitrogen	Report	Daily Maximum
Fecal Coliform (No./100 ml)	Report	Daily Maximum

Comments: The above requirements are consistent with the previous NPDES permit. The previous permit however, required Fecal Coliform to be reported in CFU/100 ml and this renewal permit eliminates the effluent concentration be reported as a geometric mean because only 1 sample is required per quarter. Last five years' data does not suggest that additional sampling is required.

Additional Considerations

Anti-Backsliding

Section 402(o) of the Clean Water Act (CWA), enacted in the Water Quality Act of 1987, establishes anti-backsliding rules governing two situations. The first situation occurs when a permittee seeks to revise a Technology-Based effluent limitation based on BPJ to reflect a subsequently promulgated effluent guideline which is less stringent. The second situation addressed by Section 402(o) arises when a permittee seeks relaxation of an effluent limitation which is based upon a State treatment standard of water quality standard.

Previous limits can be used pursuant to EPA's anti-backsliding regulation. Reissued permits. (1) Except as provided in paragraph (l)(2) of this section when a permit is renewed or reissued. Interim effluent limitations, standards or conditions must be at least as stringent as the final effluent limitations, standards, or conditions in the previous permit (unless the circumstances on which the previous permit was based have materially and substantially changed since the time the permit was issued and would constitute cause for permit modification or revocation and reissuance under §122.62). (2) In the case of effluent limitations established on the basis of Section 402(a)(1)(B) of the CWA, a permit may not be renewed, reissued, or modified on the basis of effluent guidelines promulgated under section 304(b) subsequent to the original issuance of such permit, to contain effluent limitations which are less stringent than the comparable effluent limitations in the previous permit.

(40 CFR 122.44 (l)(2) Establishing limitations, standards, and other permit conditions., 40 CFR Ch. I (7-1-21 Edition))

No permits limits have been made less stringent in the renewal draft permit.

E. Coli

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.

(*Note 12 SOP-Establishing Effluent Limitations for Individual Sewage Permits Final November 9, 2012, Revised February 5, 2024, Version 2.0.* and *25 PA Code 92a.61(b).)*

Effluent Multipliers

Section 2.C of the Permit Writers Manual contains the procedure for converting average monthly effluent limitations to average weekly, maximum daily, and instantaneous maximum effluent limitations. The average monthly limit is multiplied according to the following chart:

Discharge Solution	Parameters	Average Weekly	Maximum Daily	Instantaneous Maximum Multiplier
Sewage	All	1.5		2.0
Industrial	All		2.0	2.5*

(Department Technical Guidance for the Development and Specification of Effluent Limitations and Other Permit Conditions in NPDES Permits, Updated June 28, 2023 (Document No. 362-0400-001))

Chlorine Disinfection

Disinfection at this facility is provided by tablet chlorination. Per the SOP for effluent limitations and the recommendations from the TRC_Calc Model (See Attachment 1), a monthly limit of 0.5 mg/L and an instantaneous maximum of 1.6 mg/L is established.

(*Section I.A, Note 3, SOP for Clean Water Program, Establishing Effluent Limitations for Individual Sewage Permits, Final November 9, 2012, Revised March 24, 2021, Version 1.9* and *25 PA Code 92a.61(b)*.)

Nutrient Monitoring

Nutrient monitoring is required by the SOP for Effluent Limitations for Individual Sewage Permits. Monitoring is included to establish the nutrient load from the wastewater treatment facility and the impacts that load may have on the quality of the receiving stream(s). The receiving stream is not listed as impaired for nutrients, therefore at the discretion of the application manager, a monitoring frequency less than the equivalent of conventional pollutants in Table 6-3 of the Permit Writer's Manual has been selected. Per a memorandum from Peter Yeager dated January 9, 1985, a maximum technology limit of 2.0 mg/L of phosphorous should be incorporated into all NPDES permits for the Connoquenessing Creek watershed. In the last permit renewal, the limit was negotiated to an annual mass loading limit of 42.62 lbs/year.

(*Section I.A, Note 7 & 8, SOP for Clean Water Program, Establishing Effluent Limitations for Individual Sewage Permits, Final November 9, 2012, Revised March 24, 2021, Version 1.9* and *25 PA Code 92a.61(b)*.)

Rounding Off

Section 5 C.2. of the Permit Writers Manual contains general guidelines for rounding conventional and toxic pollutants, with instructions to round down to the nearest decimal place indicated.

General Magnitude	Conventional Pollutants	Toxic Pollutants
<0.01	to nearest 0.001	to nearest 0.001
0.01 - 0.1	to nearest 0.01	to nearest 0.01
0.1 - 1.0	to nearest 0.1	to nearest 0.01
1.0 - 10.0	to nearest 0.5	to nearest 0.01
10.0 - 60.0	to nearest 1.0	to nearest 0.01
60.0 or greater	to nearest 5.0	to nearest 0.10

(Department Technical Guidance for the Development and Specification of Effluent Limitations and Other Permit Conditions in NPDES Permits, Updated June 28, 2023 (Document No. 362-0400-001))

Effluent Multipliers

Section 2.C of the Permit Writers Manual contains the procedure for converting average monthly effluent limitations to average weekly, maximum daily, and instantaneous maximum effluent limitations. The average monthly limit is multiplied according to the following chart:

Discharge Solution	Parameters	Average Weekly	Maximum Daily	Instantaneous Maximum Multiplier
Sewage	All	1.5		2.0
Industrial	All		2.0	2.5*

(Department Technical Guidance for the Development and Specification of Effluent Limitations and Other Permit Conditions in NPDES Permits, Updated June 28, 2023 (Document No. 362-0400-001))

Table 6-3 – Self-Monitoring Requirements for SEWAGE Discharges

Plant Design Flow (MGD)	Flow Monitoring	C-BOD_5 or BOD_5	Suspended Solids	pH	Fecal Coliform	Chlorine Residual	NH_3-N	Phosphorus	DO	Toxics
Single Residence (Individual Permit)	2/year by estimate	2/year*	2/year*	1/month*	2/year*	1/month*	2/year*	2/year*	2/year*	N/A
.0005 to .002	weekly, using average pump rate or weir (a)	1/month*	1/month*	daily*	1/month*	daily*	1/month*	1/month*	daily*	N/A
.002 to .01	**weekly, using average pump rate or weir (a)**	**2/month***	**2/month***	**daily***	**2/month***	**daily***	**2/month***	**2/month***	**daily***	**N/A**
0.01 to 0.1	weekly, using average pump rate or weir (a)	2/month*	2/month*	daily*	2/month*	daily*	2/month*	2/month*	Daily*	1/week*
0.1 to 1.0	meter	1/week**	1/week**	daily*	1/week*	daily*	1/week**	1/week**	daily*	1/week****
1.0 to 5.0	meter	2/week***	2/week***	daily*	2/week*	daily*	2/week***	2/week***	daily*	1/week****
5.0 to 25.0	meter	daily***	daily***	daily*	daily*	1/shift*	daily***	daily***	daily*	1/week****
over 25.0	meter	daily***	daily***	1/shift*	daily*	1/shift*	1/shift***	1/shift***	1/shift*	1/week****

* Grab sample-these should be most representative of the effluent and are to be taken at a time when the normal daily maximum flow would reach the sampling point.

** 8-hour composite sample.

*** 24-hour composite sample.

**** Same sample type as for Industrial Process Wastewater (See Table 6-4).

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 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	Average Weekly	Minimum	Average Monthly	Maximum	Instant. Maximum		
Flow (MGD)	Report	Report Daily Max	XXX	XXX	XXX	XXX	1/week	Measured
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	1/day	Grab
DO	XXX	XXX	4.0	XXX	XXX	XXX	1/day	Grab
TRC	XXX	XXX	XXX	0.5	XXX	1.6	1/day	Grab
CBOD5	XXX	XXX	XXX	25.0	XXX	50.0	2/month	Grab
TSS	XXX	XXX	XXX	30.0	XXX	60.0	2/month	Grab
Fecal Coliform (No./100 ml) Oct 1 - Apr 30	XXX	XXX	XXX	2000 Geo Mean	XXX	10000	2/month	Grab
Fecal Coliform (No./100 ml) May 1 - Sep 30	XXX	XXX	XXX	200 Geo Mean	XXX	1000	2/month	Grab
E. Coli (No./100 ml)	XXX	XXX	XXX	XXX	XXX	Report	1/year	Grab
Total Nitrogen	XXX	XXX	XXX	Report	XXX	Report	2/month	Grab
Ammonia-Nitrogen	XXX	XXX	XXX	25.0	XXX	50.0	2/month	Grab
Total Phosphorus	XXX	XXX	XXX	Report	XXX	Report	2/month	Grab
Total Phosphorus (lbs) Effluent Net	XXX	42.62 Total Annual	XXX	XXX	XXX	XXX	1/year	Calculation
Total Phosphorus (lbs) Effluent Net	Report Total Mo	XXX	XXX	XXX	XXX	XXX	1/month	Calculation

Compliance Sampling Location: Outfall 001

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 101, Effective Period: Permit Effective Date through Permit Expiration Date.

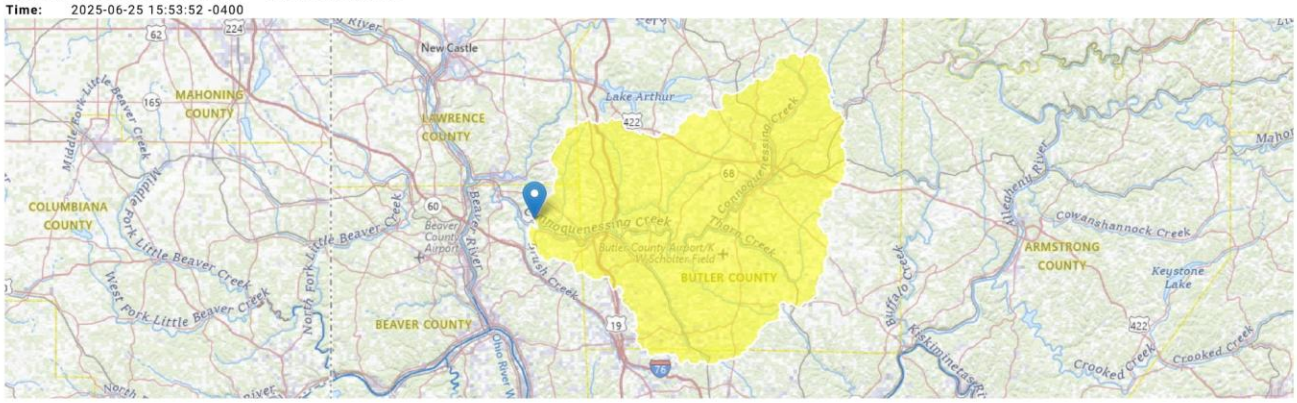
Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (2) Measurement Frequency	Required Sample Type
	Average Monthly	Average Weekly	Minimum	Daily Maximum	Maximum	Instant. Maximum		
Flow (MGD) Groundwater	XXX	Report Daily Max	XXX	XXX	XXX	XXX	1/quarter	Measured
CBOD5 Groundwater	XXX	XXX	XXX	Report	XXX	XXX	1/quarter	Grab
TSS Groundwater	XXX	XXX	XXX	Report	XXX	XXX	1/quarter	Grab
Fecal Coliform (No./100 ml) Groundwater	XXX	XXX	XXX	Report	XXX	XXX	1/quarter	Grab
Ammonia Groundwater	XXX	XXX	XXX	Report	XXX	XXX	1/quarter	Grab

Compliance Sampling Location: Outfall 101

Attachment 1
USGS StreamStats
Upstream

StreamStats Report - Upstream

Region ID: PA
Workspace ID: PA20250625195320784000
Clicked Point (Latitude, Longitude): 40.81608, -80.22418
Time: 2025-06-25 15:53:52 -0400



Collapse All

Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	353	square miles
ELEV	Mean Basin Elevation	1190	feet

Low-Flow Statistics

Low-Flow Statistics Parameters [Low Flow Region 4]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	353	square miles	2.26	1400

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
ELEV	Mean Basin Elevation	1190	feet	1050	2580

Low-Flow Statistics Flow Report [Low Flow Region 4]

PIL: Lower 90% Prediction Interval, PIU: Upper 90% Prediction Interval, ASEp: Average Standard Error of Prediction, SE: Standard Error, PC: Percent Correct, RMSE: Root Mean Squared Error, PseudoR^2: Pseudo R Squared (other -- see report)

Statistic	Value	Unit	SE	ASEp
7 Day 2 Year Low Flow	22.3	ft^3/s	43	43
30 Day 2 Year Low Flow	32.7	ft^3/s	38	38
7 Day 10 Year Low Flow	11.3	ft^3/s	66	66
30 Day 10 Year Low Flow	15.6	ft^3/s	54	54
90 Day 10 Year Low Flow	24	ft^3/s	41	41

Low-Flow Statistics Citations

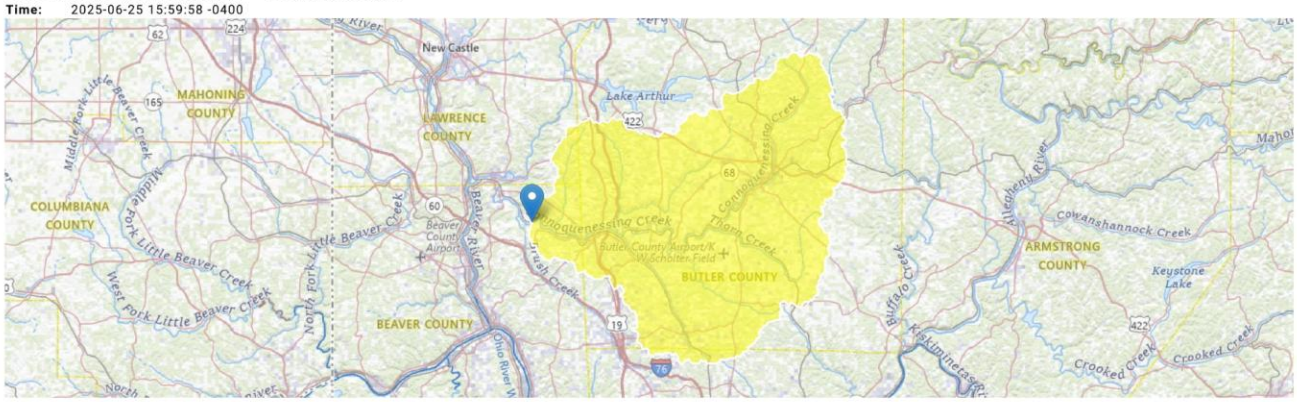
Stuckey, M.H.,2006, Low-flow, base-flow, and mean-flow regression equations for Pennsylvania streams: U.S. Geological Survey Scientific Investigations Report 2006-5130, 84 p. (http://pubs.usgs.gov/sir/2006/5130/)

Application Version: 4.29.1
StreamStats Services Version: 1.2.22
NSS Services Version: 2.2.1

Attachment 2
USGS StreamStats Downstream

StreamStats Report - Downstream

Region ID: PA
Workspace ID: PA20250625195930750000
Clicked Point (Latitude, Longitude): 40.81248, -80.22970
Time: 2025-06-25 15:59:58 -0400



Collapse All

Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	355	square miles
ELEV	Mean Basin Elevation	1190	feet

Low-Flow Statistics

Low-Flow Statistics Parameters [Low Flow Region 4]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	355	square miles	2.26	1400

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
ELEV	Mean Basin Elevation	1190	feet	1050	2580

Low-Flow Statistics Flow Report [Low Flow Region 4]

PIL: Lower 90% Prediction Interval, PIU: Upper 90% Prediction Interval, ASEp: Average Standard Error of Prediction, SE: Standard Error, PC: Percent Correct, RMSE: Root Mean Squared Error, PseudoR^2: Pseudo R Squared (other -- see report)

Statistic	Value	Unit	SE	ASEp
7 Day 2 Year Low Flow	22.4	ft^3/s	43	43
30 Day 2 Year Low Flow	32.9	ft^3/s	38	38
7 Day 10 Year Low Flow	11.4	ft^3/s	66	66
30 Day 10 Year Low Flow	15.7	ft^3/s	54	54
90 Day 10 Year Low Flow	24.1	ft^3/s	41	41

Low-Flow Statistics Citations

Stuckey, M.H.,2006, Low-flow, base-flow, and mean-flow regression equations for Pennsylvania streams: U.S. Geological Survey Scientific Investigations Report 2006-5130, 84 p. (http://pubs.usgs.gov/sir/2006/5130/)

Application Version: 4.29.1
StreamStats Services Version: 1.2.22
NSS Services Version: 2.2.1

Attachment 3
WQM 7.0 Model - Summer

Input Data WQM 7.0

SWP Basin	Stream Code	Stream Name	RMI	Elevation (ft)	Drainage Area (sq mi)	Slope (ft/ft)	PWS Withdrawal (mgd)	Apply FC
20C	34025	CONNOQUENESSING CREEK	**12.600**	859.71	353.00	0.00000	0.00	☑

Stream Data

Design Cond.	LFY (cfsm)	Trib Flow (cfs)	Stream Flow (cfs)	Rch Trav Time (days)	Rch Velocity (fps)	WD Ratio	Rch Width (ft)	Rch Depth (ft)	Tributary Temp (°C)	Tributary pH	Stream Temp (°C)	Stream pH
Q7-10	0.032	0.00	0.00	0.000	0.000	0.0	172.00	0.00	25.00	7.00	0.00	0.00
Q1-10		0.00	0.00	0.000	0.000							
Q30-10		0.00	0.00	0.000	0.000							

Discharge Data

Name	Permit Number	Existing Disc Flow (mgd)	Permitted Disc Flow (mgd)	Design Disc Flow (mgd)	Reserve Factor	Disc Temp (°C)	Disc pH
Outfall 001	PA0217824	0.0050	0.0050	0.0050	0.000	20.00	7.50

Parameter Data

Parameter Name	Disc Conc (mg/L)	Trib Conc (mg/L)	Stream Conc (mg/L)	Fate Coef (1/days)
CBOD5	25.00	2.00	0.00	1.50
Dissolved Oxygen	4.00	8.24	0.00	0.00
NH3-N	25.00	0.00	0.00	0.70

Input Data WQM 7.0

SWP Basin	Stream Code	Stream Name	RMI	Elevation (ft)	Drainage Area (sq mi)	Slope (ft/ft)	PWS Withdrawal (mgd)	Apply FC
20C	34025	CONNOQUENESSING CREEK	**12.220**	857.58	355.00	0.00000	0.00	☑

Stream Data

Design Cond.	LFY (cfsm)	Trib Flow (cfs)	Stream Flow (cfs)	Rch Trav Time (days)	Rch Velocity (fps)	WD Ratio	Rch Width (ft)	Rch Depth (ft)	Tributary Temp (°C)	Tributary pH	Stream Temp (°C)	Stream pH
Q7-10	0.032	0.00	0.00	0.000	0.000	0.0	190.00	0.00	25.00	7.00	0.00	0.00
Q1-10		0.00	0.00	0.000	0.000							
Q30-10		0.00	0.00	0.000	0.000							

Discharge Data

Name	Permit Number	Existing Disc Flow (mgd)	Permitted Disc Flow (mgd)	Design Disc Flow (mgd)	Reserve Factor	Disc Temp (°C)	Disc pH
		0.0000	0.0000	0.0000	0.000	25.00	7.00

Parameter Data

Parameter Name	Disc Conc (mg/L)	Trib Conc (mg/L)	Stream Conc (mg/L)	Fate Coef (1/days)
CBOD5	25.00	2.00	0.00	1.50
Dissolved Oxygen	3.00	8.24	0.00	0.00
NH3-N	25.00	0.00	0.00	0.70

WQM 7.0 Modeling Specifications

Parameters	Both	Use Inputted Q1-10 and Q30-10 Flows	☑
WLA Method	EMPR	Use Inputted W/D Ratio	☐
Q1-10/Q7-10 Ratio	0.64	Use Inputted Reach Travel Times	☐
Q30-10/Q7-10 Ratio	1.36	Temperature Adjust Kr	☑
D.O. Saturation	90.00%	Use Balanced Technology	☑
D.O. Goal	5.5		

WQM 7.0 Hydrodynamic Outputs

SWP Basin	Stream Code	Stream Name
20C	34025	CONNOQUENESSING CREEK

RMI	Stream Flow (cfs)	PWS With (cfs)	Net Stream Flow (cfs)	Disc Analysis Flow (cfs)	Reach Slope (ft/ft)	Depth (ft)	Width (ft)	W/D Ratio	Velocity (fps)	Reach Trav Time (days)	Analysis Temp (°C)	Analysis pH
Q7-10 Flow												
12.600	11.30	0.00	11.30	.0077	0.00106	.333	172	517.23	0.20	0.118	25.00	7.00
Q1-10 Flow												
12.600	7.23	0.00	7.23	.0077	0.00106	NA	NA	NA	0.15	0.151	24.99	7.00
Q30-10 Flow												
12.600	15.36	0.00	15.36	.0077	0.00106	NA	NA	NA	0.23	0.099	25.00	7.00

WQM 7.0 Wasteload Allocations

SWP Basin	Stream Code	Stream Name
20C	34025	CONNOQUENESSING CREEK

NH3-N Acute Allocations

RMI	Discharge Name	Baseline Criterion (mg/L)	Baseline WLA (mg/L)	Multiple Criterion (mg/L)	Multiple WLA (mg/L)	Critical Reach	Percent Reduction
12.600	Outfall 001	11.08	50	11.08	50	0	0

NH3-N Chronic Allocations

RMI	Discharge Name	Baseline Criterion (mg/L)	Baseline WLA (mg/L)	Multiple Criterion (mg/L)	Multiple WLA (mg/L)	Critical Reach	Percent Reduction
12.600	Outfall 001	1.37	25	1.37	25	0	0

Dissolved Oxygen Allocations

RMI	Discharge Name	CBOD5		NH3-N		Dissolved Oxygen		Critical Reach	Percent Reduction
		Baseline (mg/L)	Multiple (mg/L)	Baseline (mg/L)	Multiple (mg/L)	Baseline (mg/L)	Multiple (mg/L)		
12.60	Outfall 001	25	25	25	25	4	4	0	0

WQM 7.0 D.O.Simulation

SWP Basin	Stream Code	Stream Name
20C	34025	CONNOQUENESSING CREEK

RMI	Total Discharge Flow (mgd)	Analysis Temperature (°C)	Analysis pH
12.600	0.005	24.997	7.000
Reach Width (ft)	**Reach Depth (ft)**	**Reach WDRatio**	**Reach Velocity (fps)**
172.000	0.333	517.231	0.198
Reach CBOD5 (mg/L)	**Reach Kc (1/days)**	**Reach NH3-N (mg/L)**	**Reach Kn (1/days)**
2.02	0.011	0.02	1.028
Reach DO (mg/L)	**Reach Kr (1/days)**	**Kr Equation**	**Reach DO Goal (mg/L)**
8.240	1.612	Tsivoglou	5.5
Reach Travel Time (days)			
0.118			

Subreach Results

TravTime (days)	CBOD5 (mg/L)	NH3-N (mg/L)	D.O. (mg/L)
0.012	2.02	0.02	7.54
0.024	2.02	0.02	7.54
0.035	2.01	0.02	7.54
0.047	2.01	0.02	7.54
0.059	2.01	0.02	7.54
0.071	2.01	0.02	7.54
0.082	2.01	0.02	7.54
0.094	2.01	0.02	7.54
0.106	2.01	0.02	7.54
0.118	2.01	0.02	7.54

WQM 7.0 Effluent Limits

SWP Basin	Stream Code	Stream Name
20C	34025	CONNOQUENESSING 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)
12.600	Outfall 001	PA0217824	0.005	CBOD5	25		
				NH3-N	25	50	
				Dissolved Oxygen			4

Attachment 4
WQM 7.0 Model - Winter

Input Data WQM 7.0

SWP Basin	Stream Code	Stream Name	RMI	Elevation (ft)	Drainage Area (sq mi)	Slope (ft/ft)	PWS Withdrawal (mgd)	Apply FC
20C	34025	CONNOQUENESSING CREEK	**12.600**	859.71	353.00	0.00000	0.00	☑

Stream Data

Design Cond.	LFY (cfsm)	Trib Flow (cfs)	Stream Flow (cfs)	Rch Trav Time (days)	Rch Velocity (fps)	WD Ratio	Rch Width (ft)	Rch Depth (ft)	Tributary Temp (°C)	Tributary pH	Stream Temp (°C)	Stream pH
Q7-10	0.064	0.00	0.00	0.000	0.000	0.0	172.00	0.00	5.00	7.00	0.00	0.00
Q1-10		0.00	0.00	0.000	0.000							
Q30-10		0.00	0.00	0.000	0.000							

Discharge Data

Name	Permit Number	Existing Disc Flow (mgd)	Permitted Disc Flow (mgd)	Design Disc Flow (mgd)	Reserve Factor	Disc Temp (°C)	Disc pH
Outfall 001	PA0217824	0.0050	0.0050	0.0050	0.000	15.00	7.50

Parameter Data

Parameter Name	Disc Conc (mg/L)	Trib Conc (mg/L)	Stream Conc (mg/L)	Fate Coef (1/days)
CBOD5	25.00	2.00	0.00	1.50
Dissolved Oxygen	4.00	12.51	0.00	0.00
NH3-N	25.00	0.00	0.00	0.70

Input Data WQM 7.0

SWP Basin	Stream Code	Stream Name	RMI	Elevation (ft)	Drainage Area (sq mi)	Slope (ft/ft)	PWS Withdrawal (mgd)	Apply FC
20C	34025	CONNOQUENESSING CREEK	**12.220**	857.58	355.00	0.00000	0.00	☑

Stream Data

Design Cond.	LFY (cfsm)	Trib Flow (cfs)	Stream Flow (cfs)	Rch Trav Time (days)	Rch Velocity (fps)	WD Ratio	Rch Width (ft)	Rch Depth (ft)	Tributary Temp (°C)	Tributary pH	Stream Temp (°C)	Stream pH
Q7-10	0.064	0.00	0.00	0.000	0.000	0.0	190.00	0.00	5.00	7.00	0.00	0.00
Q1-10		0.00	0.00	0.000	0.000							
Q30-10		0.00	0.00	0.000	0.000							

Discharge Data

Name	Permit Number	Existing Disc Flow (mgd)	Permitted Disc Flow (mgd)	Design Disc Flow (mgd)	Reserve Factor	Disc Temp (°C)	Disc pH
		0.0000	0.0000	0.0000	0.000	25.00	7.00

Parameter Data

Parameter Name	Disc Conc (mg/L)	Trib Conc (mg/L)	Stream Conc (mg/L)	Fate Coef (1/days)
CBOD5	25.00	2.00	0.00	1.50
Dissolved Oxygen	3.00	8.24	0.00	0.00
NH3-N	25.00	0.00	0.00	0.70

WQM 7.0 Modeling Specifications

Parameters	Both	Use Inputted Q1-10 and Q30-10 Flows	☑
WLA Method	EMPR	Use Inputted W/D Ratio	☐
Q1-10/Q7-10 Ratio	0.64	Use Inputted Reach Travel Times	☐
Q30-10/Q7-10 Ratio	1.36	Temperature Adjust Kr	☑
D.O. Saturation	90.00%	Use Balanced Technology	☑
D.O. Goal	5.5		

WQM 7.0 Hydrodynamic Outputs

SWP Basin	Stream Code	Stream Name
20C	34025	CONNOQUENESSING CREEK

RMI	Stream Flow (cfs)	PWS With (cfs)	Net Stream Flow (cfs)	Disc Analysis Flow (cfs)	Reach Slope (ft/ft)	Depth (ft)	Width (ft)	W/D Ratio	Velocity (fps)	Reach Trav Time (days)	Analysis Temp (°C)	Analysis pH
Q7-10 Flow												
12.600	22.59	0.00	22.59	.0077	0.00106	.451	172	381.33	0.29	0.080	5.00	7.00
Q1-10 Flow												
12.600	14.46	0.00	14.46	.0077	0.00106	NA	NA	NA	0.23	0.102	5.01	7.00
Q30-10 Flow												
12.600	30.73	0.00	30.73	.0077	0.00106	NA	NA	NA	0.35	0.067	5.00	7.00

WQM 7.0 Wasteload Allocations

SWP Basin	Stream Code	Stream Name
20C	34025	CONNOQUENESSING CREEK

NH3-N Acute Allocations

RMI	Discharge Name	Baseline Criterion (mg/L)	Baseline WLA (mg/L)	Multiple Criterion (mg/L)	Multiple WLA (mg/L)	Critical Reach	Percent Reduction
12.600	Outfall 001	24.1	50	24.1	50	0	0

NH3-N Chronic Allocations

RMI	Discharge Name	Baseline Criterion (mg/L)	Baseline WLA (mg/L)	Multiple Criterion (mg/L)	Multiple WLA (mg/L)	Critical Reach	Percent Reduction
12.600	Outfall 001	4.36	25	4.36	25	0	0

Dissolved Oxygen Allocations

RMI	Discharge Name	CBOD5		NH3-N		Dissolved Oxygen		Critical Reach	Percent Reduction
		Baseline (mg/L)	Multiple (mg/L)	Baseline (mg/L)	Multiple (mg/L)	Baseline (mg/L)	Multiple (mg/L)		
12.60	Outfall 001	25	25	25	25	4	4	0	0

WQM 7.0 D.O.Simulation

SWP Basin	Stream Code	Stream Name
20C	34025	CONNOQUENESSING CREEK

RMI	Total Discharge Flow (mgd)	Analysis Temperature (°C)	Analysis pH
12.600	0.005	5.003	7.000
Reach Width (ft)	**Reach Depth (ft)**	**Reach WDRatio**	**Reach Velocity (fps)**
172.000	0.451	381.326	0.291
Reach CBOD5 (mg/L)	**Reach Kc (1/days)**	**Reach NH3-N (mg/L)**	**Reach Kn (1/days)**
2.01	0.006	0.01	0.221
Reach DO (mg/L)	**Reach Kr (1/days)**	**Kr Equation**	**Reach DO Goal (mg/L)**
12.507	1.479	Tsivoglou	5.5
Reach Travel Time (days)			
0.080			

Subreach Results

TravTime (days)	CBOD5 (mg/L)	NH3-N (mg/L)	D.O. (mg/L)
0.008	2.01	0.01	11.45
0.016	2.01	0.01	11.45
0.024	2.01	0.01	11.45
0.032	2.01	0.01	11.45
0.040	2.01	0.01	11.45
0.048	2.01	0.01	11.45
0.056	2.01	0.01	11.45
0.064	2.01	0.01	11.45
0.072	2.01	0.01	11.45
0.080	2.01	0.01	11.45

WQM 7.0 Effluent Limits

SWP Basin	Stream Code	Stream Name
20C	34025	CONNOQUENESSING 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)
12.600	Outfall 001	PA0217824	0.005	CBOD5	25		
				NH3-N	25	50	
				Dissolved Oxygen			4

Attachment 5
TRC Model

TRC_CALC

TRC EVALUATION

Input appropriate values in A3:A9 and D3:D9

11.3	= Q stream (cfs)	0.5	= CV Daily
0.005	= Q discharge (MGD)	0.5	= CV Hourly
30	= 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 = 466.044	1.3.2.iii	WLA cfc = 454.348
PENTOXSD TRG	5.1a	LTAMULT afc = 0.373	5.1c	LTAMULT cfc = 0.581
PENTOXSD TRG	5.1b	LTA_afc= 173.659	5.1d	LTA_cfc = 264.137

Source		Effluent Limit Calculations	
PENTOXSD TRG	5.1f	AML MULT = 1.231	
PENTOXSD TRG	5.1g	AVG MON LIMIT (mg/l) = 0.500	BAT/BPJ
		INST MAX LIMIT (mg/l) = 1.635	

WLA afc	(.019/e(-k*AFC_tc)) + [(AFC_Yc*Qs*.019/Qd*e(-k*AFC_tc))...
	...+ Xd + (AFC_Yc*Qs*Xs/Qd)]*(1-FOS/100)
LTAMULT afc	EXP((0.5*LN(cvh^2+1))-2.326*LN(cvh^2+1)^0.5)
LTA_afc	wla_afc*LTAMULT_afc
WLA_cfc	(.011/e(-k*CFC_tc) + [(CFC_Yc*Qs*.011/Qd*e(-k*CFC_tc))...
	...+ Xd + (CFC_Yc*Qs*Xs/Qd)]*(1-FOS/100)
LTAMULT_cfc	EXP((0.5*LN(cvd^2/no_samples+1))-2.326*LN(cvd^2/no_samples+1)^0.5)
LTA_cfc	wla_cfc*LTAMULT_cfc
AML MULT	EXP(2.326*LN((cvd^2/no_samples+1)^0.5)-0.5*LN(cvd^2/no_samples+1))
AVG MON LIMIT	MIN(BAT_BPJ,MIN(LTA_afc,LTA_cfc)*AML_MULT)
INST MAX LIMIT	1.5*((av_mon_limit/AML_MULT)/LTAMULT_afc)

Attachment 6 – 1985 Phosphorous Loading to Connoquenessing Creek Letter

Attachment

COMMONWEALTH OF PENNSYLVANIA
1012 Water Street
Meadville, PA 16335
NETWORK: 673-6950
January 9, 1985

STREAM FILE 9.20.1
Connoquenessing Creek

SUBJECT: Phosphorus Loading to Connoquenessing Creek Butler County

TO: Edward R. Brezina, Chief
Division of Water Quality
Bureau of Water Quality Management

FROM: Peter A. Yeager
Regional Water Quality Manager
Bureau of Water Quality Management

See paragraph 7
re: 2.0 mg/l effluent limit for all dischargers

Pursuant to our telephone conversation (including J.T. Ulanoski, K.A. Bartal, and R. B. Patel) on November 28, 1984, the following comments were prepared concerning phosphorus loading to the Connoquenessing Creek Watershed, Butler County:

1. Tables 1 and 2 (attached) summarize phosphorus loads from point sources in the watershd (excluding Slippery Rock Creek).

2. The Table 1 data were compiled using actual reported "P" concentrations and flows from 1983 - 84 (April-October) monthly discharge monitoring reports (DMRs). Critical period

3. The Table 2 data are considered "best guesstimates". Many of these treatment facilities do not as yet have NPDES permits, consequently, discharge monitoring information was inadequate or not available. Inspection reports and samples taken by our field staff (since 1980) did provide limited data for making the phosphorus loading calculations.

4. Based on our calculations, the six publicly owned treatment works (Table 1) account for approximately 91% (149 lbs/day) of the total point source phosphorus load (164 lbs) to Connoquenessing Creek. Of these six, the Butler Area Sanitary Authority is the largest contributor with an average phosphorus load of 132 lbs/day.

5. Five of the six municipal plants have tertiary treatment. Three of these are able to meet the .5 mg/l "P" limit established under the implementation plan. Saxonburg Borough comes close with .83 mg/l "P". The Butler Area Sewer Authority and Borough of Mars treatment plants have monthly average "P" concentrations of 2.14 mg/l and 2.72 mg/l, respectively.

6. The 26 non-municipal dischargers (Table 2) account for 9% of the total point source phosphorus load (15 lbs/day). Only two of these facilities have average "P" concentrations less than .5 mg/1. Eighteen facilities exceed the maximum technology based "P" limit of 2.0 mg/1 (monthly average).

7. In a telephone conversation with Jim Ulanoski on December 7, 1984, it was agreed that the maximum technology limit of 2.0 mg/1 phosphorus should be incorporated into all NPDES permits for this watershed. All existing tertiary treatment facilities, however, would be required to remain operational so that there would be no net increase in phosphorus from current levels. Those facilities which cannot meet the 2.0 mg/1 limit will be required to do so.

8. Very little information was available for estimating phosphorus loading from non-point sources. However, land use information supplied by the Butler County Conservation District (Table 3) suggests that agricultural activities are a major contributing factor and will need to be addressed in the future. By estimating yearly soil loss from agricultural areas in the watershed and by estimating the average phosphorus content of those soils, the daily average of phosphorus discharged to Connoquenessing Creek can be guesstimated at 380 lbs/day. However inaccurate this figure may be, we believe it does represent a substantial impact on the watershed - at least as significant as the point discharges. It should also be noted that all non-point sources (e.g. malfunctioning septic tanks, urban runoff, silvicultural activities, etc.) were not included in the estimate and actual "P" loading from non-point sources may be greater than 380 lbs/day.

RLH/llk

cc: Mr. Yeager
Mr. Hasse
Mr. Zimmerman
Ms. Pesek
Mr. Ulanoski - Thru: Mr. Clista
Mr. Patel - Thru: Mr. Bartal
Central Files
Regional Files

* Per Meadville Regional office, impose avg monthly limit of 2mg/l for Phosphorus for the period 4/1 - 10/31, the critical period, for discharges to Connoquenessing Ck. Also, use Inst. Max limit of 4mg/l