Pennsylvania Department of Environmental Protection

Southcentral Regional Office
CLEAN WATER PROGRAM

Application Type	**Renewal**	Application No.	**PA0026743**
Facility Type	**Municipal**	APS ID	**321149**
Major / Minor	**Major**	Authorization ID	**1060169**

NPDES PERMIT FACT SHEET
INDIVIDUAL SEWAGE

Applicant and Facility Information

Applicant Name	**City of Lancaster**	Facility Name	**City of Lancaster AWWTP**
Applicant Address	120 N Duke Street	Facility Address	1220 New Danville Pike
	Lancaster, PA 17602-2825		Lancaster, PA 17603-9603
Applicant Contact	Christine Volkay-Hilditch	Facility Contact	Christine Volkay-Hilditch
Applicant Phone	(717) 293-5531	Facility Phone	(717) 293-5531
Client ID	117554	Site ID	453237
Ch 94 Load Status	Not Overloaded	Municipality	Lancaster Township
Connection Status	No Limitations	County	Lancaster
Date Application Received	January 30, 2015	EPA Waived?	No
Date Application Accepted	February 4, 2015	If No, Reason	Major Facility, Pretreatment, Significant CB Discharge

Purpose of Application: NPDES Renewal.

Summary of Review

A draft NPDES permit was issued on December 3, 2024, and was published in the PA Bulletin on December 21, 2024. Comments were received from EPA on December 20, 2024, and from City of Lancaster on February 4, 2025. The comment letters are attached to the end of this fact sheet.

EPA Region III provided comments on December 20, 2024:

- We appreciate PADEP included some limitations and monitoring requirements on CSO Bypass 100 in Part A - Effluent Limitations, Monitoring, Recordkeeping and Reporting Requirements, I.B. After comparison to Outfall 001, there are pollutants of concern with limits and monitoring/reporting requirements that are not required for monitoring and reporting at CSO Bypass 100.
- As required by the CSO Control Policy, Section II.C.7, (Maximizing Treatment at the Existing POTW Treatment Plant), the Policy explains that "As part of its consideration of possible adverse effects resulting from the bypass, the permitting authority should also ensure that the bypass will not cause exceedances of [Water Quality Standards]." To ensure that the bypass does not cause such exceedances, EPA would generally expect that CSO Bypass 100 would have monitoring requirements or limitations for the same parameters as Outfall 001. PADEP may first need to evaluate CSO Bypass 100 discharges to determine whether additional WQBELs are required; therefore, EPA recommends that PADEP require monitoring for the same parameters at CSO Bypass 100 as Outfall 001. If any parameters are not to be monitored at Outfall 100, the rationale for that decision must be included in the fact sheet.

City of Lancaster provided comments on February 4, 2025. The comments are summarized below, and the full comment letter is attached to the end of this fact sheet:

Approve	Deny	Signatures	Date
X		Benjamin R. Lockwood Benjamin R. Lockwood / Environmental Engineering Specialist	May 15, 2025
X		Maria D. Bebenek for Daniel W. Martin, P.E. / Environmental Engineer Manager	May 21, 2025

Summary of Review

- **Outfall 100 – CSO Related Bypass Limits** – City of Lancaster states that they cannot comply with the limits proposed for Outfall 100 and still comply with the Nine Minimum Controls and the CSO Long Term Control Plan. City of Lancaster states that the facility cannot meet the proposed limit for Total Residual Chlorine and fecal coliform, nor can the combined discharge meet all applicable water quality standards as proposed in the NPDES Draft Part C.II. City of Lancaster requests removal of the Part C.II language highlighted in the comment letter, and removal of the Outfall 100 limits table in Part A.I.B.
- **Instantaneous Maximum Limits** – City of Lancaster requests removal of IMAX limits for $CBOD_5$, TSS, and ammonia-nitrogen, or footnote 3 be revised to eliminate the possibility of Consent Decree violations determined solely be DEP grab sampling.
- **$CBOD_5$ Weekly Average Limit –** City of Lancaster is concerned it will not be able to meet the more stringent weekly average $CBOD_5$ limit, particularly during periods of wet weather. City of Lancaster requests that the limit be modified accordingly.
- **Post Construction Compliance Monitoring –** The draft NPDES permit refers to the "PCCM" Plan, but does not define the acronym. City of Lancaster recommends that DEP define it as "Post Construction Compliance Monitoring Plan.

In response to EPA and City of Lancaster, the Outfall 100 parameters have been revised to include all of the parameters which are sampled for Outfall 001, and the limits have been changed to monitor only requirement. As EPA has recommended, this change will allow the facility to be in compliance with the CSO Control Policy Section II.C.7, and should address the City's concern that they will be unable to meet the proposed limits. The NPDES Part C language has not been modified. The language included is consistent with other facilities in Pennsylvania which utilize a CSO-related bypass at the treatment facility.

The IMAX limits for $CBOD_5$, TSS, and ammonia-nitrogen will remain in the permit. They are existing permit limits and cannot be removed due to anti-backsliding requirements. Additionally, the Consent Decree includes stipulated penalties for Instantaneous Permit Limit violations, and does not differentiate between the parameters.

The more stringent $CBOD_5$ limits that resulted from DEP's most recent Water Quality Based analysis will remain in the renewal. DEP has evaluated the most recent 5-year data of $CBOD_5$ sampling results, and there does not appear to be any indication that the average monthly or average weekly limits cannot be met. The data is shown below.

	Max Daily (mg/l)	Average Monthly limit	Max Weekly (mg/l)	Weekly Average Limit
Apr-20	4	25	7	40
May-20	3	12	4	18
Jun-20	4	12	5	18
Jul-20	4	12	5	18
Aug-20	5	12	7	18
Sep-20	3	12	3	18
Oct-20	3	12	3	18
Nov-20	2	25	3	40
Dec-20	3	25	3	40
Jan-21	3	25	3	40
Feb-21	3	25	3	40
Mar-21	4	25	5	40
Apr-21	3	25	3	40
May-21	3	12	4	18
Jun-21	2	12	3	18
Jul-21	3	12	4	18
Aug-21	2	12	3	18
Sep-21	4	12	8	18

Summary of Review

Oct-21	3	12	4	18
Nov-21	2	25	3	40
Dec-21	3	25	3	40
Jan-22	4	25	5	40
Feb-22	6	25	7	40
Mar-22	5	25	6	40
Apr-22	5	25	8	40
May-22	4	12	4	18
Jun-22	3	12	4	18
Jul-22	3	12	3	18
Aug-22	3	12	4	18
Sep-22	3	12	3	18
Oct-22	3	12	3	18
Nov-22	3	25	5	40
Dec-22	4	25	5	40
Jan-23	6	25	14	40
Feb-23	4	25	4	40
Mar-23	3	25	6	40
Apr-23	3	25	3	40
May-23	3	12	3	18
Jun-23	4	12	4	18
Jul-23	3	12	4	18
Aug-23	3	12	3	18
Sep-23	3	12	3	18
Oct-23	2	12	2	18
Nov-23	5	25	7	40
Dec-23	8	25	15	40
Jan-24	4	25	5	40
Feb-24	4	25	5	40
Mar-24	4	25	5	40
Apr-24	5	25	5	40
May-24	5	12	5	18
Jun-24	4	12	4	18
Jul-24	4	12	4	18
Aug-24	4	12	6	18
Sep-24	3	12	4	18
Oct-24	4	12	6	18
Nov-24	4	25	5	40
Dec-24	5	25	9	40
Jan-25	4	25	5	40
Feb-25	5	25	6	40
Mar-25	7	25	8	40

The PCCM acronym has been updated in Part C of the NPDES permit.

Summary of Review

The AWWTP receives 51% of its flow from the City of Lancaster (City and portions of Lancaster TWP, Manheim TWP, Manor TWP, East Hempfield TWP), 20% of its flow from LASA (portions of Manheim TWP), 3% of its flow from Upper Leacock Township Municipal Authority (portions of Upper Leacock TWP and West Earl TWP), 10% of its flow from Suburban Lancaster Sewer Authority (portions of West Lampeter TWP, Pequea TWP, and Lancaster TWP), 14% of its flow from East Lampeter Sewer Authority (portions of East Lampeter TWP), and 1.5% of its flow from Strasburg Borough Authority (portions of Strasburg Borough and Strasburg TWP). Of the City of Lancaster portion, 41% is separate, and 59% is combined.

The permitted outfalls are: Outfall 001 (AWWTP sewage effluent), Outfall 002, 003, 004, 005, 006, (combined sewer overflows), Outfall 100 (CSO related bypass) and Outfall 007, 008, 009 (stormwater). All outfalls discharge to the Conestoga River.

Sludge use and disposal description and location(s): Sludge is dewatered using a belt filter press, then is lime stabilized prior to beneficial reuse or disposal. Biosolids are land applied and used for site reclamation, and sewage sludge is disposed of at landfills.

Supplemental information is attached to the end of this fact sheet.

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)	32.08
Latitude	40º 1' 0.4"	Longitude	76º 18' 20.3"
Quad Name		Quad Code	
Wastewater Description:	Sewage Effluent		
Receiving Waters	Conestoga River (WWF)	Stream Code	7548
NHD Com ID	57465055	RMI	16.3
Drainage Area	331 mi^2	Yield (cfs/mi^2)	0.12
Q_{7-10} Flow (cfs)	39.72	Q_{7-10} Basis	USGS Gage #01576500
Elevation (ft)	227.3	Slope (ft/ft)	
Watershed No.	7-J	Chapter 93 Class.	WWF
Existing Use	N/A	Existing Use Qualifier	N/A
Exceptions to Use	N/A	Exceptions to Criteria	N/A
Assessment Status	Impaired		
Cause(s) of Impairment	Pathogens		
Source(s) of Impairment	Agriculture, Urban Runoff/Storm Sewers		
TMDL Status	N/A	Name	N/A
Nearest Downstream Public Water Supply Intake	Holtwood Power Plant		
PWS Waters	Susquehanna River	Flow at Intake (cfs)	
PWS RMI		Distance from Outfall (mi)	22

Changes Since Last Permit Issuance: A drainage area of 331 mi^2 and a Q_{7-10} flow of 39.72 cubic feet per second (cfs) were determined by establishing a correlation to the yield of USGS Gage Station #01576500 on the Conestoga River. The Q_{7-10} and drainage area at the gage are 38.6 cfs and 324 mi^2, 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 = (38.6 cfs)/ 324 mi^2 = 0.12 cfs/mi^2

The drainage area at the discharge point, taken from USGS PA StreamStats = 331 mi^2

The Q_{7-10} at the discharge point = 331 mi^2 x 0.12 cfs/mi^2 = 39.72 cfs

Other Comments: None

Discharge, Receiving Waters and Water Supply Information

Outfall No.	002, 003, 005	Design Flow (MGD)	0
Latitude	40º 1' 22" (002) 40º 1' 42" (003) 40º 2' 57" (005)	Longitude	76º 18' 20" (002) 76º 17' 52" (003) 76º 17' 15" (005)
Quad Name		Quad Code	
Wastewater Description:	Untreated Combined Sewer Overflow		
Receiving Waters	Conestoga River (WWF)	Stream Code	
NHD Com ID	57465061	RMI	
Drainage Area		Yield (cfs/mi^2)	
Q_{7-10} Flow (cfs)		Q_{7-10} Basis	
Elevation (ft)		Slope (ft/ft)	
Watershed No.	7-J	Chapter 93 Class.	WWF
Existing Use		Existing Use Qualifier	
Exceptions to Use		Exceptions to Criteria	
Assessment Status	Impaired		
Cause(s) of Impairment	Pathogens		
Source(s) of Impairment	Agriculture, Urban Runoff/Storm Sewers		
TMDL Status	N/A	Name	N/A
Nearest Downstream Public Water Supply Intake			
PWS Waters		Flow at Intake (cfs)	
PWS RMI		Distance from Outfall (mi)	

Changes Since Last Permit Issuance: None

Other Comments: None

Discharge, Receiving Waters and Water Supply Information

Outfall No.	004, 006	Design Flow (MGD)	0
Latitude	40º 1' 52" (004) 40º 1' 42" (006)	Longitude	76º 17' 15" (004) 76º 17' 17" (006)
Quad Name		Quad Code	
Wastewater Description:	Screened Combined Sewer Overflow		
Receiving Waters	Conestoga River (WWF)	Stream Code	
NHD Com ID	57465061	RMI	
Drainage Area		Yield (cfs/mi^2)	
Q_{7-10} Flow (cfs)		Q_{7-10} Basis	
Elevation (ft)		Slope (ft/ft)	
Watershed No.	7-J	Chapter 93 Class.	WWF
Existing Use		Existing Use Qualifier	
Exceptions to Use		Exceptions to Criteria	
Assessment Status	Impaired		
Cause(s) of Impairment	Pathogens		
Source(s) of Impairment	Agriculture, Urban Runoff/Storm Sewers		
TMDL Status	N/A	Name	N/A
Nearest Downstream Public Water Supply Intake			
PWS Waters		Flow at Intake (cfs)	
PWS RMI		Distance from Outfall (mi)	

Changes Since Last Permit Issuance: None

Other Comments: None

Discharge, Receiving Waters and Water Supply Information

Outfall No.	007, 008, 009	Design Flow (MGD)	Variable (stormwater)
Latitude	40º 01' 00" (007) 40º 01' 0.4" (008) 40º 01' 10" (009)	Longitude	76º 18' 20" (007) 76º 18' 20.3" (008) 76º 18' 21" (009)
Quad Name		Quad Code	
Wastewater Description:	Stormwater		
Receiving Waters	Conestoga River (WWF)	Stream Code	
NHD Com ID	57465055	RMI	
Drainage Area		Yield (cfs/mi^2)	
Q_{7-10} Flow (cfs)		Q_{7-10} Basis	
Elevation (ft)		Slope (ft/ft)	
Watershed No.	7-J	Chapter 93 Class.	WWF
Existing Use		Existing Use Qualifier	
Exceptions to Use		Exceptions to Criteria	
Assessment Status	Impaired		
Cause(s) of Impairment	Pathogens		
Source(s) of Impairment	Agriculture, Urban Runoff/Storm Sewers		
TMDL Status	N/A	Name	N/A
Nearest Downstream Public Water Supply Intake			
PWS Waters		Flow at Intake (cfs)	
PWS RMI		Distance from Outfall (mi)	

Changes Since Last Permit Issuance: None

Other Comments: None

Discharge, Receiving Waters and Water Supply Information

Outfall No.	100	Design Flow (MGD)	0
Latitude	40º 1' 0.4"	Longitude	76º 18' 18"
Quad Name		Quad Code	
Wastewater Description:	STP Combined Sewer Overflow Related Bypass with Preliminary Treatment, Primary Treatment and Disinfection		
Receiving Waters	Conestoga River (WWF)	Stream Code	
NHD Com ID	57465055	RMI	
Drainage Area		Yield (cfs/mi^2)	
Q_{7-10} Flow (cfs)		Q_{7-10} Basis	
Elevation (ft)		Slope (ft/ft)	
Watershed No.	7-J	Chapter 93 Class.	WWF
Existing Use		Existing Use Qualifier	
Exceptions to Use		Exceptions to Criteria	
Assessment Status	Impaired		
Cause(s) of Impairment	**Pathogens**		
Source(s) of Impairment	Agriculture, Urban Runoff/Storm Sewers		
TMDL Status		Name	
Nearest Downstream Public Water Supply Intake			
PWS Waters		Flow at Intake (cfs)	
PWS RMI		Distance from Outfall (mi)	

Changes Since Last Permit Issuance: None

Other Comments: None

Treatment Facility Summary				
Waste Type	**Degree of Treatment**	**Process Type**	**Disinfection**	**Avg Annual Flow (MGD)**
Sewage	Tertiary	A/O OASES Activated Sludge Process	Liquid Chlorine	32.08
Hydraulic Capacity (MGD)	**Organic Capacity (lbs/day)**	**Load Status**	**Biosolids Treatment**	**Biosolids Use/Disposal**
32.08	76756	Not Overloaded	Dewatering	Landfill

Changes Since Last Permit Issuance: A Water Quality Management (WQM) Permit (3683415 A-6) was issued on June 22, 2016. The City of Lancaster modified the existing treatment process by converting existing oxic stages to anoxic to provide for more denitrification. Additionally, oxygen transfer piping and return activated sludge (RAS) piping were extended to bypass the anoxic zone, the existing froth spray system was demolished, deteriorating equipment was replaced, structural repairs were made of the process tanks, and a new dissolved oxygen (DO) control system was installed. WQM Permit 3683415 A-7 was issued on February 20, 2024, for the installation of a new secondary clarifier at the North Plant, a flow diversion chamber, and a new sludge pump control building.

Other Comments: This treatment process consists of: A North treatment plant with screening and grit removal, 2 primary clarifiers, 4 activated sludge tanks using the A/O OASES activated sludge process, and 3 final clarifiers; a South treatment plant with screening and grit removal, 4 primary clarifiers, 3 activated sludge tanks using the A/O OASES activated sludge process, and 2 final clarifiers; then a combined 4 chlorine contact tanks, dechlorination, and Outfall 001 to the Conestoga River. Liquid chlorine is used for disinfection, sodium bisulfite is used for dechlorination, quick lime is used for lime stabilization, alum and poly aluminum chloride are used for sedimentation aid, and dry cationic polymer is used for sludge dewatering. The sewage sludge is dewatered via belt filter press, and lime stabilized prior to beneficial reuse or disposal.

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:	2/10/2016: A routine inspection was conducted. It was reported that the current projects at the facility were the upgrade of the North Pump Station, BNR upgrade, and the upgrade of the North & South secondary clarifiers. 6/1/2016: A Notice of Violation (NOV) was issued to the City of Lancaster. Lancaster failed to monitor the CSO-related bypass at Outfall 100 during 2014 and 2015; specifically, Lancaster failed to take two grab samples of the CSO-related bypass during months with two or more bypasses during for a number of months in 2014 and 2015. 2/28/2017: A routine partial inspection was conducted. The City of Lancaster reported high effluent TSS results to DEP the previous week, and DEP received a call that the effluent to the Conestoga River appeared turbid. The return activated sludge (RAS) was reduced on 2/23 and there was an attempt to feed chlorine to the RAS to control filamentous bacteria, but the chlorine ended up being fed to the effluent. The final clarifiers for the south train were observed; they were clear with some surface scum and pin floc but were producing a clear effluent. The north train clarifiers also had a clear effluent with pin floc. The 4 chlorine contact tanks were all online and had a clear appearance with a little scum. The final effluent appeared to have a slight yellow tint with white puffy foam. A grab sample was collected, and results were within permitted limits. The effluent appeared clear. 4/7/2018: A routine inspection was conducted. Lancaster City was in the process of a BNR upgrade; mixer and DO controls were being added, and the final clarifiers were being upgraded. Lancaster had received a significant amount of rain the day before, and one of the north train final clarifiers was losing solids over the weir. The South Internal Bypass was open the day before due to high flows. It was closed during the inspection. The effluent from the facility was turbid. 9/7/2018: A routine inspection was conducted. The CSO outfalls were inspected. Outfall 002 did not have a discharge, and the general area of the outfall had no visible solids in the receiving stream. The Outfall 003 weir was not observed. The outfall appeared clear with groundwater discharging. Solids were not visible at the outfall or in the receiving stream. Outfall 006 weir was observed. No flow or debris were present on or over the weir. The outfall was observed and no groundwater discharge was visible. No solids were visible at the outfall or in the receiving stream. The CSO notification sign had fallen off. Outfall 004 was observed and was not discharging upon inspection. Debris was not present at the outfall or in the receiving stream. The sign at the outfall needed to be cleaned and a call number sign was not posted. Outfall 005 had no solids or debris in the structure or receiving stream. Outfall 001 was observed, and had white foam due to the high velocity of the discharge, which began to dissipate in the receiving stream. Outfall 002 had water discharging from a pipe on the second floor of the old Streets Building. The source of water was the building's sprinkler system water bell, and the water was turned off. 11/14/2018: An incident inspection was conducted. This was done in response to a clarifier leak that occurred on 11/5/18 due to high rainfall. Two pinhole leaks became evident in the combined trough which receives effluent from Clarifier #3 and #4. It was estimated that approximately 250-500 gallons were released. On 11/6/18, grout was injected into the seam. 8/30/2019: A routine inspection was conducted. The CSO outfalls were inspected. Outfall 002 had no deposits in the debris pits, and there was no flow at the time of inspection. The overflow weir was free of debris upon inspection. A new CSO sign was present. A discharge of clear groundwater from the outfall was visible. Outfall 003 appeared clear with groundwater discharging. Solids were not visible at the outfall or in the receiving stream. Outfall 006 did not have flow or debris present on or over the weir. The outfall was observed and no groundwater discharge was visible. No solids were present at the outfall or in the receiving stream. Outfall 004 was not discharging upon inspection. Debris was not present at the outfall or in the receiving

	stream. No solids or debris were noted in the structure or receiving stream at Outfall 005. The current CSO sign is not visible from the stream's edge. 9/4/2019: A routine inspection was conducted. The chlorine contact tank appeared mostly clear. Field samples were taken, and were within permitted limits. The effluent appeared clear with fine suspended solids. 12/17/2019: An incident inspection was conducted. City of Lancaster reported a leak in the effluent line from primary Clarifier #6. The leak was reported as infiltrating the ground surface adjacent to the clarifier. Wastewater was visible flowing over the ground surface and infiltrating approximately 4 feet from the clarifier. The stormwater outfall near the facility's northeastern corner had evidence of flowing water. Flowing water at this location was also infiltrating the ground. No discharge was noted from the downstream section of the stormwater conveyance. At the time of inspection, Clarifier #6 was offline, and the remaining solids were being pumped to the sludge storage tank, and liquid was being directed to the South train influent. Sample results collected indicated the primary clarifier effluent was entering the stormwater conveyance and infiltrating into the ground. The leak ceased on 12/18/19, and the volume of the release was not accurately determined. 4/15/2020: An administrative inspection was conducted. On 4/13 City of Lancaster reported an overflow. The Maple Grove influent line maxed out during a heavy rain event. The overflow travelled down a 12 ft. embankment and entered a catch basin which discharges toThe overflow underwent disinfection for Outfall 100. The overflow was believed to last about 5-10 minutes, and had an estimated volume of 10,000-20,000 gallons. It was recommended that hydrated lime be applied to the impacted ground. The operator said there were no visible solids and he would apply the lime. 6/17/2020: An administrative inspection was conducted. All treatment units were operable, and there were no outstanding issues at the time. 7/7/2020: An incident inspection was conducted. A sanitary sewer overflow occurred the previous night from the south train's primary clarifiers. Surface runoff had caused a landslide leading from the primary clarifiers downhill to the Main Pump Station. The WWTP received approximately 2.36 inches of rain over 24 hours. The landslide occurred approximately 18 feet northeast of the south train's primary clarifiers, adjacent to the stairs leading to the Main Pump Station. The landslide was approximately 8 feet wide and extended about 20 feet down embankment. The operator stated that city personnel planned to flush and vac the sediment near the pump station and along the road. The primary clarifiers were observed. The stormwater drain on the northwestern corner of clarifiers had evidence of solids surrounding the catch basin and on top of the grate. Debris/solids were visible on the concrete surface surrounding the influent channel. The grassy area south of clarifiers had evidence of solids and debris. The scum pit east of the clarifiers had grit and debris surrounding the edge of the pit. The northwestern corner of the northern most primary clarifier had solids/debris on the concrete tank edge. 8/19/2021: A routine inspection was conducted. Outfall 002 had no flow, and the overflow weir was free of debris upon inspection. The stream water at the outfall appeared brown and turbid. The grit chambers upstream of the pump station were covered with litter and debris due to heavy rainfall the day prior. The screen house dumpster was filled. Outfall 003 had a meter display of 0.01 MGD. The wastewater flow was visible below the weir level. The outfall level was below the stream level. Outfall 006 had no flow or debris present on or over the weir. The outfall was not visible due to high water level. Outfall 004 was not viewed during the inspection due to high water level. Outfall 005 was partially visible due to high water. 8/16/2023: A routine inspection was conducted. The final clarifiers at the North and South WWTP appeared mostly clear with some algae accumulation on the effluent weirs and trough. The WWTP effluent appeared clear. Field test results were within permitted limits.

Other Comments: There are no open violations for this Applicant.

Compliance History

DMR Data for Outfall 001 (from October 1, 2023 to September 30, 2024)

Parameter	SEP-24	AUG-24	JUL-24	JUN-24	MAY-24	APR-24	MAR-24	FEB-24	JAN-24	DEC-23	NOV-23	OCT-23
Flow (MGD) Average Monthly	15.065	17.277	14.667	16.271	19.807	27.328	24.658	22.699	26.781	22.442	14.757	16.019
Flow (MGD) Daily Maximum	20.298	25.202	19.124	21.025	27.679	44.051	33.718	29.722	38.911	44.339	23.051	25.451
pH (S.U.) Minimum	6.7	6.8	6.7	6.8	6.7	6.8	6.9	7.0	6.6	6.6	6.6	6.4
pH (S.U.) Instantaneous Maximum	7.3	7.4	7.2	7.1	7.3	7.2	7.4	7.4	7.3	7.2	7.4	7.2
DO (mg/L) Minimum	6.9	6.7	6.6	6.9	7.0	7.7	8.0	7.6	8.0	7.1	6.9	6.80
TRC (mg/L) Average Monthly	< 0.02	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.04	< 0.03	< 0.04	< 0.04	< 0.03	< 0.03
TRC (mg/L) Instantaneous Maximum	0.06	0.12	0.08	0.12	0.12	0.29	0.27	0.16	0.37	0.32	0.08	0.12
CBOD5 (lbs/day) Average Monthly	409	531	454	568	779	945	782	< 733	< 931	1651	654	< 282
CBOD5 (lbs/day) Weekly Average	499	838	560	669	819	1563	982	885	< 1447	3531	956	< 341
CBOD5 (mg/L) Average Monthly	3	4	4	4	5	4	4	< 4	< 4	8	5	< 2
CBOD5 (mg/L) Weekly Average	4.0	6.0	4.0	4.0	5.0	5	4	5	< 5	15	7	< 2.0
BOD5 (lbs/day) Raw Sewage Influent Average Monthly	24463	25024	25116	26645	28405	27056	27161	29064	26700	24132	24072	25923
BOD5 (mg/L) Raw Sewage Influent Average Monthly	195	177	206	196	175	126	135	156	121	133	198	201
TSS (lbs/day) Average Monthly	575	< 951	< 724	< 621	< 1152	< 1371	< 1135	< 1251	3640	< 3325	< 1083	< 527

TSS (lbs/day) Raw Sewage Influent Average Monthly	25672	29739	30956	31298	45065	39615	48448	47741	41954	37045	42531	35955
TSS (lbs/day) Weekly Average	785	1314	860	< 853	< 1412	2398	< 1620	1735	10770	8686	2019	620
TSS (mg/L) Average Monthly	5	< 7	< 6	< 5	< 7	< 6	< 6	< 7	14	< 16	< 8	< 4
TSS (mg/L) Raw Sewage Influent Average Monthly	208	206	253	231	273	181	241	260	191	205	348	283
TSS (mg/L) Weekly Average	6.0	8	7	< 7	< 8	8	< 8	9	39	39	14	5
Fecal Coliform (CFU/100 ml) Geometric Mean	< 7	< 11	< 14	< 18	< 13	< 17	< 11	44	< 28	44	21	< 13
Nitrate-Nitrite (mg/L) Average Monthly	7.7	7.86	7.63	5.06	3.98	3.45	3.94	5.01	4.38	4.31	6.26	5.93
Nitrate-Nitrite (lbs) Total Monthly	29129	34274	28686	20468	20007	22602	24585	27131	29946	25750	22696	23611
Total Nitrogen (mg/L) Average Monthly	< 9.1	< 9.81	9.35	< 6.67	< 5.44	4.84	5.6	7	7.3	8.21	8.85	< 7.9
Total Nitrogen (lbs) Effluent Net Total Monthly	< 34519	< 42983	35197	< 26979	< 27339	32123	35112	37930	51862	51766	32653	< 31542
Total Nitrogen (lbs) Total Monthly	< 34519	< 42983	35197	< 26979	< 27339	32123	35112	37930	51862	51766	32653	< 31542
Ammonia (lbs/day) Average Monthly	44	< 64	60	< 21	< 30	< 43	< 47	68	< 48	< 51	114	45
Ammonia (mg/L) Average Monthly	0.333	< 0.43	0.487	< 0.149	< 0.182	< 0.202	< 0.233	0.366	< 0.216	< 0.252	0.865	0.353
Ammonia (lbs) Total Monthly	1317	< 1981	1862	< 622	< 920	< 1281	< 1444	1967	< 1486	< 1585	3415	1402
TKN (mg/L) Average Monthly	< 1.4	< 2	1.7	< 1.6	< 1.5	1.4	1.7	2	2.9	3.9	2.6	< 2
TKN (lbs) Total Monthly	< 5389	< 8709	6511	< 6511	< 7331	9521	10527	10799	21916	26015	9958	< 7931
Total Phosphorus (lbs/day) Average Monthly	57	< 123	109	145	40	111	118	121	183	190	72	58
Total Phosphorus (mg/L) Average Monthly	0.458	< 0.859	0.884	1.098	0.25	0.481	0.567	0.658	0.723	0.918	0.578	0.451

Total Phosphorus (lbs) Effluent Net Total Monthly	1720	< 3802	3365	4340	1249	3330	3648	3522	5677	5885	2170	1794
Total Phosphorus (lbs) Total Monthly	1720	< 3802	3365	4340	1249	3330	3648	3522	5677	5885	2170	1794

Existing Effluent Limitations and Monitoring Requirements

Outfall 001

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (3) Measurement Frequency	Required Sample Type
	Average Monthly	Weekly Average	Minimum	Average Monthly	Weekly Average	Instant. Maximum(2)		
Flow (MGD)	Report	Report Daily Max	XXX	XXX	XXX	XXX	Continuous	Measured
pH (S.U.)	XXX	XXX	6.0	XXX	XXX	9.0	1/shift	Grab
Dissolved Oxygen	XXX	XXX	5.0	XXX	XXX	XXX	1/shift	Grab
Total Residual Chlorine	XXX	XXX	XXX	0.13	XXX	0.42	1/shift	Grab
$CBOD_5$ May 1 - Oct 31	4,013	6,020	XXX	15	22.5	30	5/week	24-Hr Composite
$CBOD_5$ Nov 1 - Apr 30	6,689	10,702	XXX	25	40	50	5/week	24-Hr Composite
BOD_5 Raw Sewage Influent	Report	XXX	XXX	Report	XXX	XXX	5/week	24-Hr Composite
Total Suspended Solids Raw Sewage Influent	Report	XXX	XXX	Report	XXX	XXX	5/week	24-Hr Composite
Total Suspended Solids	8,026	12,040	XXX	30	45	60	5/week	24-Hr Composite

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (3) Measurement Frequency	Required Sample Type
	Average Monthly	Weekly Average	Minimum	Average Monthly	Weekly Average	Instant. Maximum(2)		
Fecal Coliform (CFU/100 ml) May 1 - Sep 30	XXX	XXX	XXX	200 Geo Mean	XXX	XXX	3/week	Grab
Fecal Coliform (CFU/100 ml) Oct 1 - Apr 30	XXX	XXX	XXX	2000 Geo Mean	XXX	XXX	3/week	Grab
Ammonia-Nitrogen May 1 - Oct 31	669	XXX	XXX	2.5	XXX	5.0	5/week	24-Hr Composite
Ammonia-Nitrogen Nov 1 - Apr 30	2,007	XXX	XXX	7.5	XXX	15	5/week	24-Hr Composite
Total Phosphorus	535	XXX	XXX	2.0	XXX	4.0	5/week	24-Hr Composite

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): at discharge from facility

Parameter (1)	Effluent Limitations					Monitoring Requirements	
	Mass Units (lbs)		Concentrations (mg/L)			Minimum (2) Measurement Frequency	Required Sample Type
	Monthly	Annual	Minimum	Monthly Average	Maximum		
Ammonia---N	Report	Report	XXX	Report	XXX	5/week	24-Hr Composite
Kjeldahl---N	Report	XXX	XXX	Report	XXX	1/week	24-Hr Composite
Nitrate-Nitrite as N	Report	XXX	XXX	Report	XXX	1/week	24-Hr Composite
Total Nitrogen	Report	Report	XXX	Report	XXX	1/month	Calculation
Total Phosphorus	Report	Report	XXX	Report	XXX	5/week	24-Hr Comp
Net Total Nitrogen	Report	620,348	XXX	XXX	XXX	1/month	Calculation
Net Total Phosphorus	Report	77,381	XXX	XXX	XXX	1/month	Calculation

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): at discharge from facility.

Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** 32.08
Latitude 40º 1' 0.4" **Longitude** 76º 18' 20.3"
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

$CBOD_5$ & NH_3-N.

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. 1.1b is a water quality model designed to assist DEP in determining appropriate water quality based effluent limits (WQBELs) for carbonaceous biochemical oxygen demand ($CBOD_5$), ammonia (NH_3-N) and dissolved oxygen (D.O.). 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 renewal. The model output indicated a $CBOD_5$ average monthly limit of 11.88 mg/l, an NH_3-N average monthly limit of 2.53 mg/l, and a D.O. minimum limit of 5.0 mg/l were protective of water quality. Discharge temperature and pH values were taken from the NPDES application. Stream temperature and pH data used in the modeling was acquired from the National Water Quality Monitoring Council website. Data was analyzed from the Water Quality Network Station ID 274 on the Conestoga River from December 2014 to March 2022 for pH and December 2014 to January 2022 for Temperature. DEP's Standard Operating Procedure (SOP) No. BCW-PMT-033 (Establishing Effluent Limitations for Individual Sewage Permits) recommends using the 90th percentile of long-term data for background and discharge characteristics when using WQM 7.0. A 90th percentile analysis was performed on the data, which resulted in a stream pH of 8.3 and a stream temperature of 23.89°C. The $CBOD_5$ limit is more stringent than the existing limit of 15 mg/l, therefore an average monthly limit of 12 mg/l will be added to the NPDES permit. The weekly average and instantaneous maximum (IMAX) limits for $CBOD_5$ will be revised based on a multiplier of 1.5 for the weekly limit, and 2.0 for the IMAX limit. The mass limits for $CBOD_5$ were revised using the formula: Conc x 8.34 x 32.08 MGD. The wintertime $CBOD_5$ limits will remain unchanged. Based on a review of the past year of DMR data, the facility will be capable of meeting the revised limits. The existing NH_3-N limit is more stringent and will remain in the permit.

Toxics

Effluent sample results for toxic pollutants reported on the renewal application were entered into DEP's Toxics Management Spreadsheet Version 1.3 to develop appropriate permit requirements for toxic pollutants of concern. The Toxics Management Spreadsheet combines the functions of PENTOXSD and DEP's Toxics Screening Analysis. Stream hardness inputs were taken from the renewal application. Based on effluent sample results reported on the application, and supplemental sampling provided on March 19, 2024, the Toxics Management Spreadsheet recommended monitoring for Total Aluminum, Total Copper, Chloroform, and Dibromochloromethane. The TMS recommended a limit for Free Cyanide, with an average monthly limit of 7.2 µg/l, a daily maximum limit of 11.2 µg/l, and an IMAX limit of 18 µg/l. Additional free cyanide sampling data was provided on July 12, 2024. Free cyanide was re-analyzed using this additional data; the TMS revised the recommendation to monitor and report for Free Cyanide. The updated TMS is provided at the end of the fact sheet. These monitoring requirements will be included in the permit. Per Table 6-3 of DEP's Guidance No. 362-0400-001, a monitoring frequency of 1/week will be used for the toxic parameters.

This data was analyzed based on the guidelines found in DEP's Water Quality Toxics Management Strategy (Document No. 361-0100-003) and DEP's SOP No. BPNPSM-PMT-033. The results are attached to this fact sheet. The Toxics Management Spreadsheet uses the following logic:

a. Establish average monthly and instantaneous maximum (IMAX) limits in the draft permit where the maximum reported concentration exceeds 50% of the WQBEL.
b. For non-conservative pollutants, establish monitoring requirements where the maximum reported concentration is between 25% - 50% of the WQBEL.
c. For conservative pollutants, establish monitoring requirements where the maximum reported concentration is between 10%-50% of the WQBEL.

Additional Considerations

Dissolved Oxygen

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 is the existing permit limit, and it is recommended that it remain in the permit to ensure that the facility continues to achieve compliance with water quality standards.

Total Phosphorus

Historically, a Total Phosphorus (TP) effluent limit of 2.0 mg/l was established in the permit when it was determined that the facility was expected to contribute 0.25% or more of the total point source phosphorus loading at the point of discharge. This determination was based on the Department's *Implementation Guidance for Section 95.9 Phosphorus Discharges to Free Flowing Streams* (Guidance No. 391-2000-018). DEP previously determined that the City of Lancaster met this criteria, and phosphorus limitations were required in the permit. The TP average monthly limit of 2.0 mg/l and IMAX limit of 4.0 mg/l will remain in the permit to protect the local watershed. From the previous fact sheet, the following logic was used: Total phosphorus loading from this discharge would be 8.34 x 10 mg/l x 32.08 MGD or 2,675 lbs/day. Using the equation that was documented in EPA's Chesapeake Bay Management Report, Total P @ Y = Total P x 0.99^{Y}, where Y = stream miles to PA-MD line, the actual loading to the critical part of the Susquehanna River would be 1,959 lbs/day at an estimated distance of 31 miles. This loading represents 1,959 lbs/day / 3,814 lbs/day or 51 percent of the total phosphorus loading of all discharges in the Lower Susquehanna River Basin. According to the above phosphorus guidance, phosphorus removal will be required if this percentage is > 0.25 percent.

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. A new update to the WIP was published as the Phase 3 WIP in August 2019. As part of the Phase 3 WIP, a *Phase 3 Watershed Implementation Plan Wastewater Supplement* (Phase 3 Supplement) was developed, and was most recently revised on July 29, 2022, and is the basis for the development of any Chesapeake Bay

related permit parameters. 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. For new Phase 4 and 5 sewage dischargers, in general DEP will issue new permits containing Cap Loads of "0" and new facilities will be expected to purchase credits and/or apply offsets to achieve compliance.

The City of Lancaster AWWTP is a Phase 1 significant discharger. The facility's waste load allocation (WLA) is tracked under an individual WLA as a significant discharger in the Phase 3 Supplement. The following Cap Loads specified in the current Phase 3 Supplement will be included in the draft permit:

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
PA0026743	1	Lancaster City	6/18/2012	7/31/2015	10/1/2007	620,348	1,300	77,381	0.663	0.609

The Cap Loads are unchanged from the existing permit. The Phase 3 Supplement states that "the minimum monitoring frequency for TN species and TP in new or renewed NPDES permits for significant sewage dischargers will be 2/week." Therefore, the monitoring frequencies for TKN and Nitrate-Nitrite will be increased to 2/week, and ammonia and Total Phosphorus will have a monitoring frequency of 5/week. DEP no longer offers any tools to calculate monthly loads for Net TN and Net TP, and it is no longer needed since offsets and credits are applied annually. Therefore, this reporting requirement is no longer needed and will be removed from the permit.

The existing NPDES permit included an allocation for 52 on-lot disposal systems (OLDs) which were permitted/installed prior to January 1, 2003 and were retired by connection to the collection system after January 1, 2003. Based on the Chesapeake Bay Strategy, the offset load was calculated at 25 lbs/year, for a total of 1,300 lbs TN/yr. In the existing permit, the 1,300 lbs/yr offset was included in the Net Total Nitrogen Cap Load. The Chesapeake Bay Strategy allocated a TN Cap Load of 619,048 lbs/yr; adjusted for the 1,300 lbs/yr TN offset, the Net Total Nitrogen Cap Load included in the permit was 620,348 lbs/yr. Since the renewal permit was issued, the City of Lancaster has been updating the list of offsets annually. Since 2010, 89 OLDs (2,175 lbs/yr) have been connected that were not included in the existing permit Cap Load, for a total TN offset of 3,525 lbs TN/yr. The Phase 3 Supplement states that from this point forward, permits will be issued with the wasteload allocations (WLAs) as Cap Loads and will identify offsets separately to facilitate nutrient trading activities and compliance with the TMDL. Consequently, the proposed effluent limits will contain a Net Total Nitrogen Cap Load of 619,048 lbs/yr, to reflect the Cap Load requirement of the WIP Supplement. The TN offset of 3,525 lbs/yr will be listed separately on the effluent page of Part A of the NPDES permit as a foot note. The approved offsets are only for compliance purposes and are not available for trading or selling.

Total Suspended Solids

40 CFR 133.102b(1) and 25 PA § 92a.47(a)(1) define a minimum level of effluent quality attainable by secondary treatment for TSS, with a monthly average not to exceed 30 mg/l, and a weekly average not to exceed 45 mg/l. This is consistent with the existing permit requirements, and these limits and associated mass limits will remain in the renewal.

Fecal Coliform

PA Code § 92a.47.(a)(4) requires a monthly average limit of 200/100 mL as a geometric mean and an instantaneous maximum limit not greater than 1,000/100 mL from May through September for fecal coliform. PA Code § 92a.47.(a)(5) requires a monthly average limit of 2,000/100 mL as a geometric mean and an instantaneous maximum limit not greater than 10,000/100 mL from October through April for fecal coliform. These IMAX limits will be added to the permit.

Total Residual Chlorine

The 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 printout indicates that a water quality limit of 0.12 mg/l would be needed to prevent toxicity concerns. This is slightly more stringent than the existing average monthly limit of 0.13 mg/l. The renewal permit will contain an average monthly TRC limit of 0.12 mg/l, and an IMAX limit of 0.41 mg/l. A review of the past year of DMR data indicates the facility will be capable of meeting this limit.

E. Coli

PA Code § 92a.61 requires IMAX reporting of E. Coli. Per DEP's SOP No. BCW-PMT-033, sewage dischargers with a design flow of >=1 MGD will include E. Coli monitoring with a frequency of 1/month. This parameter has been added to the renewal permit.

Stormwater

The application listed outfalls 007, 008, 009 as stormwater outfalls receiving stormwater runoff from the AWWTP site. To comply with the stormwater requirements of 40CFR 122.26(b)(14)(ix), part C of the permit will require the permittee to comply with the standard requirements applicable to stormwater outfalls with BMP conditions.

Combined Sewer Overflows

There are are six (6) permitted CSO outfalls in the collection system for the AWWTP: Outfall 002, 003, 004, 005, 006, and 100. CSO Outfall 100 is a CSO-related bypass. The City of Lancaster is currently undertaking measures required by the Consent Decree Case 5:17-cv-05684-JLS dated February 22, 2018. The obligations in the Consent Decree have the objective of causing Lancaster to achieve and maintain full compliance with the terms and conditions of its NPDES Permits, the Clean Water Act, the Clean Streams Law, and to meet the objectives of EPA's April 1994 "Combined Sewer Overflow (CSO) Control Policy." The Consent Decree contains a number of requirements to amend and implement the Long Term Control Plan and Nine Minimum Controls. Part C language has been included in the NPDES Permit to require the implementation of the LTCP, as well as requiring the submittal of a revised LTCP. The NPDES Permit will require that the City of Lancaster submit an application for a major permit amendment within 30 days of LTCP approval.

Industrial Users

The City of Lancaster AWWTP receives wastewater from a number of industrial users throughout its service area. The industrial users and a brief description are as follows:

Industrial Users	Discharge Rate (GPD)					Significant Industrial User?
	Process	NCCW	Sanitary	Other	*Total*	
Armstrong World Industries	450	7,414	17,471	20	25,355	Yes
Dart Container	60,000	-	-	10,000	70,000	Yes
Flex-Cell Inc	10 Evaporated	-	-	-	10 Evaporated	Yes
Lancaster General Hospital	35,638	-	106,914	15,543	193,733	Yes
RR Donnelley & Sons LMD West	10,325	-	9,500	14,230	34,055	Yes
Sauder Foods	30,000	-	500	2,000	32,500	Yes
MAC-IT	330	-	255	-	585	Yes
RR Donnelleys & Son LMD East	6,500	-	15,000	66,550	88,050	Yes
Lancaster Metals Science	17,551	-	285	100	17,936	Yes
Lancaster Oil Company	20,000	-	-	-	20,000	Yes
Kunzler & Company	60,000	51,000	4,700	4,300	120,000	Yes
Lancaster Metal Manufacturing	889	3,938	2,000	-	6,827	Yes
McNeil Pharmaceuticals	39,000	1,000	2,000	2,000	44,000	Yes
K & L Plating	4,850	50	50	50	5,000	Yes
Dental EZ	6,720	-	1,755	-	8,475	Yes
Image First Uniform Rental Service	130,000	500	500	6,000	137,000	Yes

The AWWTP is implementing an approved pretreatment program which is expected to address any negative impact from these industrial users.

Pretreatment Requirements

The design annual average flow of the treatment plant is 32.08 MGD and the facility receives flow from many significant industrial users as presented in the previous section. EPA requires development and implementation of pretreatment program for this facility. The City of Lancaster currently maintains and operates EPA-approved pretreatment program for the AWWTP. Consequently, the Department will continue to include permit conditions that dictate the operation and implementation of a pretreatment program in Part C.III of the permit.

PFAS-Related Compounds

DEP's NPDES renewal application for Major Sewage Facilities now requires effluent testing for PFAS related compounds as part of Pollutant Group 1: Perfluorooctanoic acid (PFOA), Perfluorooctanesulfonic acid (PFOS), Perfluorobutanesulfonic acid (PFBS), and Hexafluoropropylene oxide dimer acid (HFPO-DA). Per DEP's SOP BCW-PMT-033, If sampling that is completed as part of the permit renewal application reveals a detection for any of these compounds, a quarterly monitoring requirement for all compounds will be established in the permit. If sampling that is completed as part of the permit renewal application demonstrates non-detect values at or below the Target QLs for these compounds in a minimum of 3 samples, an annual monitoring requirement for all compounds will be established in the permit. As the PFAS compounds were not sampled as part of this application, quarterly monitoring requirements will be established for all compounds in this renewal permit. Monitoring for PFOA, PFOS, HFPO-DA, and PFBS may be discontinued if the results in 4 consecutive monitoring periods indicate non-detect results at or below the Target QLs o 4.0 ng/l for PFOA, 3.7 ng/l for PFOS, 3.5 ng/l for PFBS, and 6.4 ng/l for HFPO-DA. The NPDES permit will include this monitoring language as a footnote in Part A of the permit.

Sampling Frequency & Sample Type

The monitoring requirements were established based on the BPJ and/or Table 6-3 of DEP's technical guidance No. 362-0400-001.

Flow Monitoring

Flow monitoring is recommended by DEP's technical guidance and is also required by 25 PA Code §§ 92a.27 and 92a.61.

Influent BOD_5 and TSS Monitoring

As a result of negotiation with US EPA, influent monitoring of TSS and BOD_5 are required for any publicly owned treatment works (POTWs); therefore, influent sampling of BOD_5 and TSS will be included in the permit. A 24-hr composite sample type will be required to be consistent with the proposed sampling frequency for effluent TSS and $CBOD_5$.

Mass Loading Limitation

All mass loading effluent limitations recommended in the draft permit are concentration-based, calculated using a formula: design flow (MGD) x concentration limit (mg/l) x conversion factor of 8.34.

Anti-Degradation

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.

303(d) Listed Streams

The discharge is located on a stream segment that is designated on the 303(d) list as impaired. There is an impairment for pathogens due to agriculture and urban runoff/storm sewers.

Class A Wild Trout Fisheries

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

Whole Effluent Toxicity (WET)

For Outfall 001, ☒ **Acute** ☒ **Chronic** WET Testing was completed:

☒ For the permit renewal application (4 tests).
☐ Quarterly throughout the permit term.
☐ Quarterly throughout the permit term and a TIE/TRE was conducted.
☐ Other:

The dilution series used for the tests was: 100%, 78%, 56%, 28%, and 14%. The Target Instream Waste Concentration (TIWC) to be used for analysis of the results is: 56.

Summary of Four Most Recent Test Results

(NOTE – Enter results into one table, depending on which data analysis method was used).

NOEC/LC50 Data Analysis

Test Date	*Ceriodaphnia* Results (% Effluent)			*Pimephales* Results (% Effluent)			Pass? *
	NOEC Survival	NOEC Reproduction	LC50	NOEC Survival	NOEC Growth	LC50	
4/21/2014	100	56	100	100	100	100	Yes
7/14/2014	100	56	100	78	78	100	Yes
9/15/2014	100	100	100	100	100	100	Yes
12/8/2014	100	100	100	100	100	100	Yes

***** *A "passing" result is that which is greater than or equal to the TIWC value.*

Is there reasonable potential for an excursion above water quality standards based on the results of these tests? (*NOTE – In general, reasonable potential is determined anytime there is at least one test failure in the previous four tests).*

☐ **YES** ☒ **NO**

Comments: None

Evaluation of Test Type, IWC and Dilution Series for Renewed Permit

Acute Partial Mix Factor (PMFa): **0.261** Chronic Partial Mix Factor (PMFc): **1**

1. Determine IWC – Acute (IWCa):

$(Q_d \times 1.547) / ((Q_{7\text{-}10} \times PMFa) + (Q_d \times 1.547))$

[(32.08 MGD x 1.547) / ((39.72 cfs x 0.261) + (32.08 MGD x 1.547))] x 100 = **82.7%**

Is IWCa < 1%? ☐ **YES** ☒ **NO (YES - Acute Tests Required OR NO - Chronic Tests Required)**

Type of Test for Permit Renewal: **Chronic**

2a. Determine Target IWCa (If Acute Tests Required)

TIWCa = 82.7 / 0.3 = N/A

2b. Determine Target IWCc (If Chronic Tests Required)

$(Q_d \times 1.547) / (Q_{7\text{-}10} \times PMFc) + (Q_d \times 1.547)$

[(32.08 MGD x 1.547) / ((39.72 cfs x 1) + (32.08 MGD x 1.547))] x 100 = **55.5%**

3. Determine Dilution Series

(NOTE – check Attachment C of WET SOP for dilution series based on TIWCa or TIWCc, whichever applies).

Dilution Series = 100%, 78%, 56%, 28%, and 14%.

WET Limits

Has reasonable potential been determined? ☐ YES ☒ NO

Will WET limits be established in the permit? ☐ YES ☒ NO

If WET limits will be established, identify the species and the limit values for the permit (TU).

N/A

If WET limits will not be established, but reasonable potential was determined, indicate the rationale for not establishing WET limits:

N/A

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	Weekly Average	Minimum	Average Monthly	Daily Maximum	Instant. Maximum		
Flow (MGD)	Report	Report Daily Max	XXX	XXX	XXX	XXX	Continuous	Measured
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	1/shift	Grab
DO	XXX	XXX	5.0 Inst Min	XXX	XXX	XXX	1/shift	Grab
TRC	XXX	XXX	XXX	0.12	XXX	0.41	1/shift	Grab
CBOD5 Nov 1 - Apr 30	6689	10702	XXX	25	40 Wkly Avg	50	5/week	24-Hr Composite
CBOD5 May 1 - Oct 31	3211	4816	XXX	12	18 Wkly Avg	24	5/week	24-Hr Composite
BOD5 Raw Sewage Influent	Report	XXX	XXX	Report	XXX	XXX	5/week	24-Hr Composite
TSS	8026	12040	XXX	30	45 Wkly Avg	60	5/week	24-Hr Composite
TSS Raw Sewage Influent	Report	XXX	XXX	Report	XXX	XXX	5/week	24-Hr Composite
Fecal Coliform (No./100 ml) Oct 1 - Apr 30	XXX	XXX	XXX	2000 Geo Mean	XXX	10,000	3/week	Grab
Fecal Coliform (No./100 ml) May 1 - Sep 30	XXX	XXX	XXX	200 Geo Mean	XXX	1,000	3/week	Grab
E. Coli (No./100 ml)	XXX	XXX	XXX	XXX	XXX	Report	1/month	Grab
Ammonia Nov 1 - Apr 30	2007	XXX	XXX	7.5	XXX	15	5/week	24-Hr Composite

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

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (2) Measurement Frequency	Required Sample Type
	Average Monthly	Weekly Average	Minimum	Average Monthly	Daily Maximum	Instant. Maximum		
Ammonia May 1 - Oct 31	669	XXX	XXX	2.5	XXX	5.0	5/week	24-Hr Composite
Total Phosphorus	535	XXX	XXX	2.0	XXX	4.0	5/week	24-Hr Composite
Free Cyanide	XXX	XXX	XXX	XXX	Report	XXX	1/week	24-Hr Composite
Total Aluminum	XXX	XXX	XXX	XXX	Report	XXX	1/week	24-Hr Composite
Total Copper	XXX	XXX	XXX	XXX	Report	XXX	1/week	24-Hr Composite
Chloroform	XXX	XXX	XXX	XXX	Report	XXX	1/week	24-Hr Composite
Dibromochloromethane	XXX	XXX	XXX	XXX	Report	XXX	1/week	24-Hr Composite
PFOA (ng/L)	XXX	XXX	XXX	XXX	Report	XXX	1/quarter	Grab
PFOS (ng/L)	XXX	XXX	XXX	XXX	Report	XXX	1/quarter	Grab
PFBS (ng/L)	XXX	XXX	XXX	XXX	Report	XXX	1/quarter	Grab
HFPO-DA (ng/L)	XXX	XXX	XXX	XXX	Report	XXX	1/quarter	Grab

Compliance Sampling Location: At discharge from facility

Other Comments: None

Outfall 100 Effective Period: Permit Effective Date through Permit Expiration Date.

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (2) Measurement Frequency	Required Sample Type
	Average Monthly	Weekly Average	Minimum	Average Monthly	Daily Maximum	Instant. Maximum		
Flow (MGD)	Report	Report Daily Max	XXX	XXX	XXX	XXX	Daily when Discharging	Metered
pH (S.U.)	XXX	XXX	Report	XXX	XXX	Report	Daily when Discharging	Grab
DO	XXX	XXX	Report	XXX	XXX	XXX	Daily when Discharging	Grab
Total Residual Chlorine (TRC)	XXX	XXX	XXX	Report	XXX	Report	Daily when Discharging	Grab
Carbonaceous Biochemical Oxygen Demand (CBOD5)	XXX	XXX	XXX	Report	Report	XXX	Daily when Discharging	Grab
Total Suspended Solids	XXX	XXX	XXX	Report	Report	XXX	Daily when Discharging	Grab
Fecal Coliform (No./100 ml) Oct 1 - Apr 30	XXX	XXX	XXX	Report	XXX	Report	Daily when Discharging	Grab
Fecal Coliform (No./100 ml) May 1 - Sep 30	XXX	XXX	XXX	Report	XXX	Report	Daily when Discharging	Grab
E. Coli (No./100 ml)	XXX	XXX	XXX	XXX	XXX	Report	Daily when Discharging	Grab
Ammonia-Nitrogen	XXX	XXX	XXX	Report	XXX	XXX	Daily when Discharging	Grab
Free Cyanide	XXX	XXX	XXX	XXX	Report	XXX	Daily when Discharging	Grab
Total Aluminum	XXX	XXX	XXX	XXX	Report	XXX	Daily when Discharging	Grab
Total Copper	XXX	XXX	XXX	XXX	Report	XXX	Daily when Discharging	Grab
Chloroform	XXX	XXX	XXX	XXX	Report	XXX	Daily when Discharging	Grab
Dibromochloromethane	XXX	XXX	XXX	XXX	Report	XXX	Daily when Discharging	Grab
PFOA (ng/L)	XXX	XXX	XXX	XXX	Report	XXX	Daily when Discharging	Grab
PFOS (ng/L)	XXX	XXX	XXX	XXX	Report	XXX	Daily when Discharging	Grab

Outfall 100 Effective Period: Permit Effective Date through Permit Expiration Date.

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (2) Measurement Frequency	Required Sample Type
	Average Monthly	Weekly Average	Minimum	Average Monthly	Daily Maximum	Instant. Maximum		
PFBS (ng/L)	XXX	XXX	XXX	XXX	Report	XXX	Daily when Discharging	Grab
HFPO-DA (ng/L)	XXX	XXX	XXX	XXX	Report	XXX	Daily when Discharging	Grab
Total Phosphorus	XXX	XXX	XXX	Report	XXX	Report	Daily when Discharging	Grab
Kjeldahl---N	XXX	XXX	XXX	Report	XXX	XXX	Daily when Discharging	Grab
Nitrate-Nitrite as N	XXX	XXX	XXX	Report	XXX	XXX	Daily when Discharging	Grab
Total Nitrogen	XXX	XXX	XXX	Report	XXX	XXX	Daily when Discharging	Grab

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s):

All parameters shall be sampled after primary clarification, with the exception of Fecal Coliforms and E. Coli, which shall be sampled after disinfection and mixing with Outfall 001.

Proposed Effluent Limitations and Monitoring Requirements

The limitations and monitoring requirements specified below are proposed for the draft permit, to comply with Pennsylvania's Chesapeake Bay Tributary Strategy.

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
	Monthly	Annual	Monthly	Monthly Average	Maximum	Instant. Maximum		
Ammonia---N	Report	Report	XXX	Report	XXX	XXX	5/week	24-Hr Composite
Kjeldahl---N	Report	XXX	XXX	Report	XXX	XXX	2/week	24-Hr Composite
Nitrate-Nitrite as N	Report	XXX	XXX	Report	XXX	XXX	2/week	24-Hr Composite
Total Nitrogen	Report	Report	XXX	Report	XXX	XXX	1/month	Calculation
Total Phosphorus	Report	Report	XXX	Report	XXX	XXX	5/week	24-Hr Comp
Net Total Nitrogen	XXX	619,048	XXX	XXX	XXX	XXX	1/month	Calculation
Net Total Phosphorus	XXX	77,381	XXX	XXX	XXX	XXX	1/month	Calculation

Compliance Sampling Location: At discharge from facility

Other Comments: On-lot disposal system offsets for TN are 3,525 lbs/year based on 141 EDUs. Any additional offsets claimed during the permit term must be reported as outlined in Part C of this permit.

Tools and References Used to Develop Permit	
☒	WQM for Windows Model (see Attachment)
☒	Toxics Management Spreadsheet (see Attachment)
☒	TRC Model Spreadsheet (see Attachment)
☐	Temperature Model Spreadsheet (see Attachment)
☒	Water Quality Toxics Management Strategy, 361-0100-003, 4/06.
☒	Technical Guidance for the Development and Specification of Effluent Limitations, 386-0400-001, 10/97.
☐	Policy for Permitting Surface Water Diversions, 386-2000-019, 3/98.
☐	Policy for Conducting Technical Reviews of Minor NPDES Renewal Applications, 386-2000-018, 11/96.
☐	Technology-Based Control Requirements for Water Treatment Plant Wastes, 386-2183-001, 10/97.
☐	Technical Guidance for Development of NPDES Permit Requirements Steam Electric Industry, 386-2183-002, 12/97.
☐	Pennsylvania CSO Policy, 386-2000-002, 9/08.
☐	Water Quality Antidegradation Implementation Guidance, 391-0300-002, 11/03.
☐	Implementation Guidance Evaluation & Process Thermal Discharge (316(a)) Federal Water Pollution Act, 386-2000-008, 4/97.
☒	Determining Water Quality-Based Effluent Limits, 386-2000-004, 12/97.
☐	Implementation Guidance Design Conditions, 386-2000-007, 9/97.
☒	Technical Reference Guide (TRG) WQM 7.0 for Windows, Wasteload Allocation Program for Dissolved Oxygen and Ammonia Nitrogen, Version 1.0, 386-2000-016, 6/2004.
☐	Interim Method for the Sampling and Analysis of Osmotic Pressure on Streams, Brines, and Industrial Discharges, 386-2000-012, 10/1997.
☐	Implementation Guidance for Section 95.6 Management of Point Source Phosphorus Discharges to Lakes, Ponds, and Impoundments, 386-2000-009, 3/99.
☒	Technical Reference Guide (TRG) PENTOXSD for Windows, PA Single Discharge Wasteload Allocation Program for Toxics, Version 2.0, 386-2000-015, 5/2004.
☐	Implementation Guidance for Section 93.7 Ammonia Criteria, 386-2000-022, 11/97.
☐	Policy and Procedure for Evaluating Wastewater Discharges to Intermittent and Ephemeral Streams, Drainage Channels and Swales, and Storm Sewers, 386-2000-013, 4/2008.
☐	Implementation Guidance Total Residual Chlorine (TRC) Regulation, 386-2000-011, 11/1994.
☐	Implementation Guidance for Temperature Criteria, 386-2000-001, 4/09.
☐	Implementation Guidance for Section 95.9 Phosphorus Discharges to Free Flowing Streams, 386-2000-021, 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, 386-2000-020, 10/97.
☐	Field Data Collection and Evaluation Protocol for Determining Stream and Point Source Discharge Design Hardness, 386-2000-005, 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, 386-2000-010, 3/1999.
☐	Design Stream Flows, 386-2000-003, 9/98.
☐	Field Data Collection and Evaluation Protocol for Deriving Daily and Hourly Discharge Coefficients of Variation (CV) and Other Discharge Characteristics, 386-2000-006, 10/98.
☐	Evaluations of Phosphorus Discharges to Lakes, Ponds and Impoundments, 386-3200-001, 6/97.
☐	Pennsylvania's Chesapeake Bay Tributary Strategy Implementation Plan for NPDES Permitting, 4/07.
☒	SOP: BCW-PMT-002, BCW-PMT-031, BCW-PMT-033, BCW-PMT-037
☐	Other:

Lockwood, Benjamin

From: Fulton, Jennifer <Fulton.Jennifer@epa.gov>
Sent: Friday, December 20, 2024 9:16 AM
To: Lockwood, Benjamin
Cc: Martin, Daniel; Bebenek, Maria; Furjanic, Sean; Schumack, Maria; Moncavage, Carissa (she/her/hers); Crane, Rebecca (she/her/hers); Hales, Dana
Subject: [External] PA0026743 City of Lancaster Advanced Wastewater Treatment Plant

Follow Up Flag: Follow up
Flag Status: Flagged

Hello Benjamin,

According to our Memorandum of Agreement, the Environmental Protection Agency (EPA) Region III has received the redraft National Pollutant Discharge Elimination System (NPDES) permit reissuance for:

The City of Lancaster - Advanced Wastewater Treatment Plant
NPDES Number: PA0026743
EPA Received: December 5, 2024
30-day response due date: January 4, 2025

This is a major permit that discharges to the Conestoga River and Mill Creek. EPA has chosen to perform a limited review of the redraft permit based on the CSO requirements. EPA has completed its review and offers the following comment.

Regarding Part A - Effluent Limitations, Monitoring, Recordkeeping and Reporting Requirements Outfall 100:

We appreciate PADEP included some limitations and monitoring requirements on CSO Bypass 100 in Part A - Effluent Limitations, Monitoring, Recordkeeping and Reporting Requirements, I.B. After comparison to Outfall 001, there are pollutants of concern with limits and monitoring/reporting requirements that are not required for monitoring and reporting at CSO Bypass 100.

As required by the CSO Control Policy, Section II.C.7, (Maximizing Treatment at the Existing POTW Treatment Plant), the Policy explains that "As part of its consideration of possible adverse effects resulting from the bypass, the permitting authority should also ensure that the bypass will not cause exceedances of [Water Quality Standards]." To ensure that the bypass does not cause such exceedances, EPA would generally expect that CSO Bypass 100 would have monitoring requirements or limitations for the same parameters as Outfall 001. PADEP may first need to evaluate CSO Bypass 100 discharges to determine whether additional WQBELs are required; therefore, EPA recommends that PADEP require monitoring for the same parameters at CSO Bypass 100 as Outfall 001. If any parameters are not to be monitored at Outfall 100, the rationale for that decision must be included in the fact sheet.

Please address the above and provide us with any changes to the draft permit and/or fact sheet, if necessary. Should you have any questions, please feel free to reach out to Rebecca Crane, copied on this email or at 215-814-2389.

Thank you,

Jen Fulton

Jennifer Fulton (she/her)
Chief, Clean Water Branch
US EPA Mid-Atlantic Region
Phone 304-234-0248
Email fulton.jennifer@epa.gov

CITY OF LANCASTER

February 3, 2025

Mr. Benjamin R. Lockwood
Environmental Engineering Specialist
Clean Water Program
Pennsylvania Department of Environmental Protection
Southcentral Regional Office
909 Elmerton Avenue
Harrisburg, PA 17110-8200

RE: City of Lancaster Comments on Draft NPDES Permit
Application No. PA 0026743; Authorization ID No. 1060169

Dear Mr. Lockwood:

The City of Lancaster appreciates the opportunity to provide comments on the Draft NPDES Permit No. PA0026743 (the Draft Permit) provided by the Pennsylvania Department of Environmental Protection (PADEP) on December 3, 2024. As described in more detail below, the City requests some additional revisions before the Draft Permit is finalized.

Outfall 100 – CSO Related Bypass Limits

The City constructed its CSO Related Bypass to facilitate treatment of additional flow volumes during periods of wet weather. As PADEP was informed before its construction in 2005, the City proposed a new flow regime "to maximize flow to the AWWTP [Advanced Wastewater Treatment Plant] using the CSO bypass."[1] The City explained further:

> If the CSO bypass is granted, more flow will be brought into the AWWTP during wet weather events from the North Pump Station and Main Pump Station. This will reduce CSOs at the Clay Street and Engleside Diversion Chambers. Presently, the AWWTP is maximized during wet weather events to the best of the AWWTP's operational capability at any given time. Operational conditions within the unit processes at the AWWTP vary from day to day, so the total AWWTP capacity is maximized until any given unit process is compromised. The ideal scenario for incorporating the CSO bypass would be fore the

[1] Correspondence to J. Miller, PADEP (June 15, 2005), attached, at p. 1.

> allowance of a CSO-related bypass of the South Train secondary portion of the POTW treatment plant for flows in excess of 7 MGD. Higher instantaneous peak and peak hourly flows that contain the CSO first flush would still be processed, but pinpointing an exact value is difficult. Peak hourly capacity of the south final clarifiers varies from 10 – 15 MGD.
>
> During wet weather events flow is currently transferred from the South Train to the North Train due to the limitations of the South final clarifiers. The CSO bypass at the South Train will eliminate the need to transfer flow to the North Train during wet weather events, which will reduce the hydraulic load on the North Train from the South Train and will enable more flow to be received from the North Pump Station....[2]

PADEP granted the City the authority to discharge from the CSO Bypass through Outfall 100, subject to appropriate conditions included in the City's NPDES Permit:

> A CSO-related bypass (Outfall 100) of the secondary treatment portion of the POTW treatment plant's South train is authorized when the flow rate to the POTW treatment plant's South train as a result of a precipitation even exceeds 7.0 MGD average daily flow. Bypasses that occur when the flow at the time of the bypass is under the specified flow rate are not authorized under this condition and are subject to the bypass provision at 40 CFR 122.41(m). In the event of a CSO-related bypass authorized under this condition, the permittee shall minimize the discharge of pollutants to the environment and attempt to capture the "first flush." At a minimum, CSO-related bypass flows must receive primary clarification, solids, and floatables removal, and disinfection. The permittee shall report any substantial changes in the volume or character of pollutants being introduced into the POTW. Authorization of CSO-related bypasses under this provision may be modified or terminated when there is a substantial change in the volume or character of pollutants being introduced to the POTW. The permittee shall provide notice to the Department of bypasses authorized under this provision by a submission of a monthly discharge report provided by the Department.[3]

Construction of the CSO Bypass was completed by February 10, 2009, and notice was provided to PADEP.[4] Similar permit provisions were continued in the subsequent renewal NPDES permit.[5] (NPDES Permit No. PA 0026743 (Aug. 1, 2010)) The City has continued to operate the CSO Bypass in accordance with the applicable permit conditions, and no change in the volume or character of pollutants being introduced to the POTW has occurred that would require a change in the applicable bypass provisions.

---

[2] *Id.* at pp. 1-2.
[3] NPDES Permit No. PA 0026743 (Nov. 1, 2005), Part III.B.1.d.(2), p. 19 of 24.
[4] Correspondence to J. Embeck (Mar. 6, 2009), attached.
[5] NPDES Permit No. PA 0026743 (Aug. 1, 2010), Part V.B.1.d., p. 24.

The CSO Bypass remains critical to the City's ability to comply with Nine Minimum Control No. 4, and the City has demonstrated full compliance with regulatory requirements related to bypasses contained in 40 CFR 122.41(m).[6]

PADEP, however, has proposed some additional requirements for the CSO Bypass:

> A CSO-related bypass (Outfall 100) of the secondary treatment portion of the POTW treatment plant is authorized only when (1) the permittee is implementing the Nine Minimum Controls and a Long Term Control Plan and the bypass is part of the operational plan for implementing Nine Minimum Controls and the Long Term Control Plan (2) it is in accordance with the provision *[sic]* of 40 CFR 122.41(m) and (3) the average daily flow to the POTW treatment plant's South train, as a result of precipitation or snow-melt events, exceeds 7.0 MGD. Bypasses that occur when the flow at the time of the bypass is less than the above specified flow rate are not authorized under this condition and are subject to the bypass provision at 40 CFR 122.41(m).
>
> In the event of a CSO-related bypass authorized under this condition, the permittee shall minimize the discharge of pollutants to the receiving water. At a minimum, the CSO-related bypass flows must receive primary clarifications, solids and floatables removal, and disinfection. ***The bypass may not cause the effluent from the POTW to either exceed the effluent limits contained in its permit or to cause or contribute to a violation of water quality standards.*** The permittee shall report any substantial changes in the volume or character of pollutants being introduced into the POTW or that may be present in the CSO-related bypass. Authorization of CSO-related bypasses under this provision may be modified or terminated when there is a substantial change in the volume or character of pollutants being introduced to the POTW or in the bypassed flow. The permittee shall provide notice to the permitting authority of bypasses authorized under this condition within 24 hours of occurrence of the bypass.[7]

In addition, a separate limits table has been provided for Outfall 100, which includes monthly average and instantaneous maximum limits for total residual chlorine (TRC) and fecal coliform, as well as monitoring requirements for flow, CBOD5, total suspended solids, *E. coli*, and ammonia-nitrogen.[8] Samples are required to be taken after primary clarification for most parameters; fecal coliform and *E. coli* are measured after mixing with Outfall 001.[9] The City understands that this table has been inserted in response to the following comment received from EPA Region III:

> As discussed during our June 11, 2024 call, Outfall 100 is a CSO-related bypass and the submitted draft permit has it categorized as a CSO Outfall. In the CSO Policy, a CSO-related bypass can be authorized in a permit if it is part of the LTCP development and it meets a minimum

---

[6] City of Lancaster Amended CSO Long Term Control Plan, October 2010 Update, attached, at pp. 1-2, 3-1.
[7] Draft Permit, Part C.II., p. 27 (emphasis added).
[8] Draft Permit, Part A.I.B., p. 4.
[9] *Id.*

> level of treatment, including primary clarification and solids and floatables removal and disposal, and disinfection where necessary to meet water quality standards (WQS)/protect designated uses (including removal of disinfection chemical residuals where necessary). Any discharge from a CSO-related bypass is subject to applicable WQS as well as any site-specific TBELs the permitting authority requires. If the discharge from Outfall 100 is commingled prior to the sample location of the primary sewage effluent outfall, Outfall 001, separate specific Outfall 100 limitations and monitoring requirements may not be required. However, separate limitations and monitoring requirements are required if the bypass discharge is commingled after the sampling point at Outfall 001. Revisions to the permit and fact sheet are necessary to address this discrepancy including, requirements in Part C.II, Combined Sewer Outfalls and Part A, Limitations. EPA would like clarification on the determined sampling location and manner in which Outfall 100 will need to be permitted.[10]

PADEP summarized the changes made to the Draft Permit in response to Region III's comment, as follows:

> The CSO-related bypass language has been reincorporated into Part C.II. Pg.26 of the NPDES permit. As the sampling location for Outfall 001 is prior to commingling with Outfall 100, effluent limitations and monitoring requirements have been incorporated into Part A of the NPDES permit. The effluent requirements in Part A for Outfall 100 reflect the existing NPDES monitoring requirements in Part C.V.B.1.i(2) to monitor for CBOD5, TSS, NH3, and Fecal Coliforms. Additionally, a TRC limit has been added to the Outfall 100 effluent limitations to ensure protection of the receiving water quality and the attainment of water quality standards. These parameters will have a requirement daily when discharging. All parameters shall be sampled after primary clarification, except for Fecal Coliforms and E. Coli, which shall be sampled after disinfection and mixing with Outfall 001.[11]

The City, however, cannot comply with the limits proposed for Outfall 100 and still comply with the Nine Minimum Controls and the CSO Long Term Control Plan, as updated (the LTCP). Primary treated wastewater cannot meet the proposed limit for total residual chlorine and fecal coliform mandated by the proposed permit. Nor can the combined discharge meet all applicable water quality standards, as proposed in Draft Permit Part C.II. As with other CSO discharges, compliance with water quality standards simply should require continued implementation of the LTCP rather than numeric limits for fecal coliform or *E. coli*. The LTCP includes consideration of separate disinfection capabilities at Outfall 100 itself, but that project has not yet been approved as part the LTCP process. As a result, the City cannot comply with the fecal coliform limit proposed for Outfall 100.

Because the City is currently implementing, but has not yet completed its LTCP, requiring compliance with numeric effluent limits at Outfall 100 will compromise the City's ability to maximize flows to the treatment plant, and will force the City to eliminate Outfall 100, contrary to PADEP's original intent in

---

[10]Fact Sheet, Draft Permit, p. 1.
[11] *Id.* at p. 2.

authorizing the CSO Bypass. The City therefore requests removal of the Part C.II language highlighted above, as well as the removal of the Outfall 100 limits table in Part A.I.B.

Instantaneous Maximum Limits

The Draft Permit includes instantaneous limits at Outfall 001 for a number of parameters, including CBOD5, total suspended solids, and ammonia-nitrogen.[12] Footnote (3) indicates that certain of those limits "are for compliance use by DEP only."[13] The City, however, understands that PADEP determines compliance with such limits during state sampling events by comparison with a value equal to twice the limitation contained in the permit. PADEP takes grab samples during inspections and compares the results to the instantaneous limits. The instantaneous limits are two-times the average limit. The secondary treatment regulations, 40 CFR, Part 133, do not require an instantaneous limit be placed in the NPDES permit for these parameters. As such, a finding of noncompliance can result not only in permit violations, but also CSO Consent Decree violations. The City should not be subject to such violations, and the associated risk of incurring fines and penalties, based on such samples. Therefore, the City requests removal of the instantaneous maximum limitations for CBOD5, total suspended solids, and ammonia-nitrogen, which are not reported on DMRs in accordance with Foodnote (3). Alternatively, the City requests that Foonote (3) be revised to eliminate the possibility of Consent Decree violations determined solely by PADEP grab sampling.

CBOD5 Weekly Average Limit

The Draft Permit proposes a more stringent weekly average limit of 18 mg/L from May 1 to October 31.[14] This is a reduction from 22.5 mg/L in the current NPDES permit. The Fact Sheet indicates that the CBOD5 limit has been made more stringent as a result of a new water quality-based analysis indicating that the City's discharge has the reasonable potential to cause or contribute to excursions above water quality standards, based on newly-available modeling.[15] The City is concerned that it will not be able to meet the more stringent weekly average CBOD5 limit, particularly during periods of wet weather. The City requests that the limit be modified accordingly.

Post Construction Compliance Monitoring

The Draft Permit refers to the "PCCM Plan" in the provisions governing CSOs, but does not define the acronym.[16] The City recommends that PADEP define it as the Post Construction Compliance Monitoring (PCCM) Plan.

Conclusion

The City appreciates PADEP's consideration of the above comments on the Draft Permit, and requests a meeting to discuss the issues of concern after you have had a chance to review. The City requests that the Draft Permit not be finalized until we have had a chance to discuss the concerns raised above.

---

[12] Draft Permit, Part A.I.A., pp. 2-3.
[13] Draft Permit, Part A.I.A., p. 5.
[14] Draft Permit, Part A.I.A., p. 2.
[15] Fact Sheet for Draft Permit, p. 18.
[16] Draft Permit, Part C.III.C.3-4, p. 29.

Please contact Christine Volkay-Hilditch at chiditch@cityoflancasterpa.gov or Bryan Harner at bharner@cityoflancasterpa.gov if you have questions or need further information and to schedule a meeting at your earliest convenience.

Thank you for your attention.

Sincerely,

Steven A. Campbell
Director of Public Works
Attachments

cc: Barry Handwerger, Esq.
Fredric Andes, Esq., Barnes & Thornburg LLP
Bryan Harner
Christine Volkay-Hilditch, P.E., BCEE

PO BOX 1599 120 N. DUKE STREET, LANCASTER, PENNSYLVANIA 17608-1599
717-291-4739 (OFFICE) 717- 291-4772 (FAX)

www.cityoflancasterpa.gov