pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Northeast Regional Office
CLEAN WATER PROGRAM

Application Type	**Renewal**	Application No.	**PA0044997**
Facility Type	**Municipal**	APS ID	**342333**
Major / Minor	**Minor**	Authorization ID	**1421927**

NPDES PERMIT FACT SHEET
INDIVIDUAL SEWAGE

Applicant and Facility Information

Applicant Name	**Mount Pocono Municipal Authority** **Monroe County**	Facility Name	**Mt Pocono Municipal Authority WWTP**
Applicant Address	1361 Pocono Boulevard Mount Pocono, PA 18344-1045	Facility Address	1478 Pocono Boulevard Mount Pocono, PA 18344-1679
Applicant Contact	Jonathan Klotz	Facility Contact	Daniel Fisher
Applicant Phone	(570) 839-7993	Facility Phone	(570) 839-7993
Client ID	117290	Site ID	250294
Ch 94 Load Status	Not Overloaded	Municipality	Mount Pocono Borough
Connection Status	Self Imposed Connection Prohibition	County	Monroe
Date Application Received	December 22, 2022	EPA Waived?	Yes
Date Application Accepted	February 16, 2023	If No, Reason	-

Purpose of Application: RENEWAL OF EXISTING NPDES PERMIT.

Summary of Review

This is a **0.400/0.500 MGD (tiered limits)** POTW NPDES Permit Renewal Application with the facility having special conditions/requirements for discharging up to 0.500 MGD to Forest Run (HQ-CWF; Impaired by metals, thermal modifications, organic enrichment).

- **Flows**:
  - The (0.500 MGD) higher tiered permit limits flows only allowable if stream recovers per Part C special conditions and concurrent non-DEP Consent Decree requirements).
  - The Annual Average Daily Flows were 0.21 MGD (2019), 0.196 MGD (2020) and 0.276 MGD (2021). The highest monthly average flow was 0.379 MGD in March 2021. The service area is 85% Mount Pocono Borough and 15% Coolbaugh Township. The 2023 Chapter 94 Report indicated 0.234 MGD ADF.
- **April 18, 2012 US District Court Consent Decree CA No.: 3:10-CV-02520**: Nothing in the NPDES/WQM permits supersedes or modifies any requirement of the (non-DEP) Consent Decree (as amended). Please note the Department cannot grant any relief from this (non-DEP) Consent Decree and is not responsible for its enforcement. Nor is the Department responsible for determining whether the Forest Hills Run Monitoring Stations have met the Consent Decree Item 10-identified Phase IV target bioassessment benthic macroinvertebrate scores to allow for 0.500 MGD tiered discharge. The Consent Decree was incorporated-by-reference into the previous NPDES Permit, and retained herein.
- **WQM Renewal Application Permit No. 4515401-A1**: The facility has a separate land spray irrigation system under WQM permit No. 4515401 (with existing DMR reporting requirements). Seasonal spray irrigation began in 2021. WQM Permit Renewal Application under concurrent technical review.
  - **This NPDES permit incorporates additional WQM Permit-required DMR and Supplemental reporting requirements relating to spray irrigation to allow use of (combined) EDMR reporting to simplify reporting requirements.**
  - The Spray Irrigation System at the MPMA WWTP consists of five areas (Spray Areas E1, F1, H1, J1 and J2) totaling approximately 80 acres.

Approve	Deny	Signatures	Date
X		James D. Berger (signed) James D. Berger, P.E. / Environmental Engineer	August 26, 2024
X		Amy M. Bellanca (signed) Amy M. Bellanca, P.E. / Environmental Engineer Manager	9-6-24

Summary of Review

- Two pre-spray effluent storage tanks are on-site – one (1) 1.0 million gallon storage tank is at the WWTP site and one 0.5 million gallon tank is near the spray area adjacent to the irrigation pumping system. The spray irrigation area has 764 individual spray heads and is computer controlled to spray tertiary treated effluent from the effluent storage tanks onto the spray fields. Spray rates are controlled by permitted effluent limits, field soil moisture probes, and weather conditions (spray is halted if rainfall reaches 0.5 inches for the day). The combined disposal capacity of all five spray areas varies throughout the spray season from 272,000 gpd during late fall to 599,000 gpd during the summer months.
- The system is deactivated and winterized from November 16 through March 14 of each year, and during this time, effluent is removed via stream discharge per the NPDES permit requirements.

Background:

- **Tiered Flows**: Different permit limits apply for 0.400 (Tier 1) and 0.500 MGD (Tier 2) discharge flows, with the NPDES Permit specifying requirements for 0.500 MGD flows (Tier 2). MPMA technical consultant (ARRO) report indicated stream will not meet Consent/Permit specified goals for Tier 2 discharges, but ARRO did not make an evaluation in accordance with the applicable macroinvertebrate bioassessment methodology.
  - **From Previous Renewal Fact Sheet**: "A special condition in the permit states the 30-day average discharge flow to Forest Hills Run shall not exceed 0.400 million gallons per day (MGD) unless and until the permittee has demonstrated by biological assessment that Forest Hills Run's macroinvertebrate community and aquatic life use significantly improve. If Forest Hills Run improves, then the Department will advise the permittee in writing that the 30 day average discharge flow to Forest Hills Run may exceed 0.400 MGD but shall not exceed 0.500 MGD and shall be subject to the effluent limitations in Part A I.C.2 and A I.D.2 of the permit. In addition, a Consent Decree signed on February 28, 2012, requires the Authority to land apply treated effluent using a spray irrigation system on suitable spray days. On unsuitable spray days and when the wastewater flow exceeds the spray field capacity, the treated effluent will be stream discharged".
  - **Existing NPDES Permit Conditions include**:
    - The hydraulic design capacity of 0.400 million gallons per day for the treatment facility is used to prepare the annual Municipal Wasteload Management Report to help determine whether a "hydraulic overload" situation exists, as defined in Title 25 Pa. Code Chapter 94.
    - The effluent limitations for Outfall 001 were determined using effluent discharge rates of 0.400 MGD and 0.500 MGD. **If the assessment demonstrates that Monitoring Station 2 and Monitoring Station 3 attain a bioassessment benthic macroinvertebrate score greater than 83% of Monitoring Station 1, based on RBP, and Monitoring Station 2 and Monitoring Station 3 attain aquatic life use, based on IBI, then the Department will advise the permittee in writing that the 30 day average discharge flow to Forest Hills Run may exceed 0.400 MGD but shall not exceed 0.500 MGD and shall be subject to the effluent limitations in Part A I.C.2 and A I.D.2.**
    - Existing NPDES Permit Condition C.I LIMITATION ON DISCHARGE FLOW:

      The 30-day average discharge flow to Forest Hills Run shall not exceed 0.400 million gallons per day (MGD) unless and until the permittee has demonstrated to the Department, based upon submission of a biological assessment, that Monitoring Station 2 and Monitoring Station 3 as described below, **attain a bioassessment benthic macroinvertebrate score greater than 83% of Monitoring Station 1**, based on Rapid Bioassessment Protocols for Use in Streams and Rivers: Benthic Macroinvertebrates and Fish, Plafkin, et al., (EPA/444/4-89-001), as updated and amended (RBP), and **Monitoring Station 2 and Monitoring Station 3 attain aquatic life use**, based on A Benthic Index of Biotic Integrity for Wadeable Freestone Riffle-Run Streams in Pennsylvania, PADEP (April 2009), as updated and amended (IBI).

      If the assessment demonstrates that Monitoring Station 2 and Monitoring Station 3 attain a bioassessment benthic macroinvertebrate score greater than 83% of Monitoring Station 1, based on RBP, and Monitoring Station 2 and Monitoring Station 3 attain aquatic life use, based on IBI, **then the Department will advise the permittee in writing that the 30 day average discharge flow to Forest Hills Run may exceed 0.400 MGD but shall not exceed 0.500 MGD and shall be subject to the effluent limitations in Part A I.C.2 and A I.D.2**.

      Monitoring Station 1 shall be located upstream from the discharge from the facility to Forest Hills Run, Monitoring Station 2 shall be located downstream from the discharge from the facility to Forest

Summary of Review

Hills Run, and Monitoring Station 3 shall be located further downstream from the discharge from the facility to Forest Hills Run. The Monitoring Station locations must be approved by the Department prior to conducting the biological assessment.

- **Part C.V.E**: If there is a conflict between the above special conditions and the attached Consent Decree, the conditions of the Consent Decree shall govern. **NOTE**:
  - The Department was not a signature party for the "Brodhead Watershed Association and Citizens for Pennsylvania's Future v. Mount Pocono Municipal Authority" (CA No.: 3:10-CV-02520), and therefore cannot grant any relief from its requirements.
  - Consent Order Item 4 states: "Notwithstanding the terms of National Pollutant Discharge Elimination System (NPDES) Permit Number PA0044997 (the Permit), or any subsequent NPDES permit or renewal or revision issued to the Defendant authorizing Defendant to discharge wastewater from the Facility to Forest Hills Run, Defendant's 30 day average discharge flow of wastewater from the Facility to Forest Hills Run shall not exceed 0.40 million gallons per day (MGD) unless and until Monitoring Station 2 and Monitoring Station 3 attain a bioassessment benthic macroinvertebrate score **great than 83%** of Monitoring Station 1, based on RBP, and Monitoring Station 2 and Monitoring Station 3 **attain aquatic life use, based on IBI**, in which case the Defendant's 30-day average discharge flow of wastewater from the Facility to Forest Hill Run may exceed 0.40 MGD but shall not exceed 0.50 MGD".

- **Previous Metals Issues**: The previous Permit included a TRE Condition (Copper, Lead, and Zinc). No WQBELs in the previous permit, only reporting of monthly average values. Stream impairments include metals (particularly zinc). The 12/21/2018 DEP Letter approved a 11/13/2018 TRE Phase I Work Plan. Assorted TRE Status Report updates found in On-Base (up to TRE Status Update No. 8). No Phase I or II TRE Report found in available DEP files. 3/17/2024 MPMA E-mail contained several years of collected pH & metals data at assorted locations (manholes, well, influent, effluent, etc.).
- **DRBC Docket**: 12/7/2022 DRBC Docket No. D-1991-027 CP-3 addressed both NPDES discharge and spray irrigation land discharge under WQM permit.

Sludge use and disposal description and location(s): 113.7 dry tons hauled to Greater Hazleton Joint Sewer Authority.

Special Conditions: Changes bolded.

- **Part A Surface Water Internal Monitoring Point (IMP/Outfall) Nos. 101 and 102 and 104**: Added for stream temperature measurement reporting due to thermal limits. See Part C.I.H for related additional stream monitoring reporting requirements.
  - **Part A.I.E (101)**: WQM permitted stream monitoring upon upstream of Outfall No. 001.
  - **Part A.I.F (102)**: WQM permitted stream monitoring point downstream of Outfall No. 001.
  - **Part A.I.H (104)**: WQM permitted stream monitoring point further downstream of Outfall No. 001.
- **Part A (IMP/Outfall No. 103 Spray Irrigation Volumes)**: Added to report flow volumes going to spray irrigation system as authorized facility discharge.
- **Part A Tiered Limits**: Tiered Limits (0.400 and 0.500 MGD discharge) with Part C conditions. Footnotes to clarify spray irrigation reporting requirements and need to pair CBOD5/TSS influent and effluent sampling. See Effluent limits Section for basis of new final requirements.
  - **Tiered Limit Time Frames**:
    - Permit Effective Date to End of Interim Period: 0.400 MGD Tier 1 limits until Final WQBELs Effective Date (see Part C.II and C.IV Schedules of Compliance below).
    - End of Interim Period to Start of Final Period: 0.400 MGD Tier 1 final limits to start of 0.500 MGD Tier 2 (or expiration date).
    - Start of Final Period: Start of 0.500 MGD Tier 2 Final Limits (if all requirements are met).
  - **Part A.I.A (Tier 1 Final Limits and Final WQBELs)**: Final Tier 1 (0.400 MGD) limits effective in 33 months and until expiration or Tier 2 (0.500 MGD) start-up under Part C conditions. 48-month Schedules of Compliance in Part C.II (Ammonia-N and Thermal Limits) and Part C.IV (WQBELs for Toxic Pollutants) for copper and zinc due to Reasonable Potential Analysis and thermal modeling.

Summary of Review

- **Part A.I.B (Tier 1 Interim Limits and Interim WQBELs/monitoring requirements)**: Interim (existing) Tier 1 (0.400 MGD) limits for 33 months per Part C.II Schedule of Compliance (existing Tier 1 limits and monitoring requirements).
- **Part A.I.C (Tier 2 Final Limits)**: Final Tier 2 (0.500 MGD) limits (see Part C conditions for Tier 2 start-up). WMS limitations prevent coding of interim Tier 2 limits at this time, with impaired stream conditions precluding Tier 2 discharges per MPMA technical consultant. Ongoing stream impairment is not likely to be resolved prior to implementation of more stringent WQBELs (i.e. interim Tier 2 limits would be superseded by final Tier 1 limits). Previous Tier 2 limits not protective.
- **Part A.I.D (WQBELs & monitoring requirements not subject to change)**: See Effluent Limits Section for changes.
- **Part A.I.E (Stream Monitoring Point No. 002 a.k.a. Monitoring Station 2 Delta Temperature)**: The facility has installed the previously-required (WQM Permit No. 4515401 and previous NPDES Permit) stream monitoring points (1, 2, and 3) for macroinvertebrates and temperature monitoring. It has begun reporting temperature data (15 minute increments) without calculation of the NPDES Permit thermal reporting period mean/median temperatures or identification of any increase in the heavily-effluent dominated stream temperature by more than 2 °F in one hour (existing Part C.I.I Maximum Temperature Change limit). Therefore:
  - This condition requires the permit to directly report any exceedances lasting for more than 1 hour during the thermal monitoring period (by subtracting Monitor Point 1 temperature from Monitor Point 2 temperature). See Part C.I.I for additional guidance.
  - The ambient Monitoring Point 1, 2, and 3) mean/medium temperature (during the NPDES Permit-specified thermal reporting periods) shall be separately reported via the Surface Water Monitoring Report forms (with sometimes two forms required per month). See Part C.I.H for additional guidance.

- Part C.I.A, B, C: Existing standard conditions (Stormwater prohibition; Property rights; Residuals management)
- **Part C.I.D: New** Chlorine minimization condition. UV disinfection is the approved method of disinfection, but they appear to be using chlorine as supplemental disinfection with consistent low-level of TRC in effluent. 1991 WQM permit approved UV disinfection and included removal of chlorine contact tank.
- **Part C.I.E: New** dry stream condition due to heavily effluent-dominated stream.
- **Part C.I.F: New** Responsible Operator notification requirement due to EDMR reporting issues. Condition specifies that the Responsible Operator verify accuracy and completeness of submitted information.
- Part C.I.G: Existing changes in stream/effluent condition
- Part C.I.H: **Updated** Limitation on Discharge Flow condition (requirements for 0.500 MGD tier discharges to Forest Hills Run).
  - Updated cross-references to Part A and installation of stream monitoring stations.
  - Clarifies temperature monitoring & reporting requirements (mean or median temperature for NPDES permit Part A thermal monitoring periods)
  - Updated to state: “Upon Department written authorization, the Chapter 94 Reporting may use 0.500 MGD as the hydraulic design capacity” to clarify Part A.I Additional Requirements Chapter 94 reporting requirements.
  - Stream Monitoring Data (including ambient temperature) shall be reported via DEP Surface Water Monitoring Report Form with the monthly DMR reporting via EDMR.
  - Updated to state the Chapter 94 Annual Municipal Wasteload Report shall include a table identifying calendar months and monthly average volumes of flows directed to spray irrigation, and shall identify any maintenance work on the spray irrigation system/fields.
  - Updated to require post-construction certification (with latitude, longitude, elevation, as-built engineering detail, and copy of any DEP approval of location) for stream monitoring stations 1, 2, and 3 (and any other surface monitoring point), within thirty (30) days of Permit Effective Date.
- Part C.I.I: Existing Maximum Temperature Change condition (2 °F in one hour)
- Part C.I.J: Existing Continuous Discharge condition (no SBR batch discharges allowed)
- Part C.I.K: **Updated** Condition incorporating non-DEP Consent Decree by reference. Updated to include “as amended” in event the Authority and other (non-DEP) Consent Decree parties update the legal document.
- Part C.I.L: Existing SBR Storm Mode reporting requirement.
- **Part C.I.M: New Land Discharge/Spray Irrigation Flows condition** requiring any spray irrigation flow to be fully WWTP-treated and meeting Part A discharge requirements except for temperature and TRC when directed to the Spray Irrigation System (tanks or direct usage), with NPDES Permit Part A monitoring & reporting requirements due

Summary of Review

to discharge in impaired HQ watershed (and simplify reporting requirements). This will simplify reporting requirements.

- **Part C.II: New 33-month Schedule of Compliance (Ammonia-N and Thermal Limits – Tier 1 and Tier 2) conditions.** Schedule includes initial work plan/stream data gathering compliance milestones to give extra time to gather in-stream pH, temperature data, and stream flow data in case site-specific data can justify less stringent final permit limits. The facility has three (3) existing WQM permitted stream monitoring points for temperature and macroinvertebrates.
- **Part C.III: New** Standard Solids management conditions. The standard conditions were apparently accidentally omitted in the previous NPDES permit renewal. The DEP Operators Webpage includes a spreadsheet incorporating the condition-referenced EPA methodology for the Sewage Sludge Management Inventory.
- **Part C.IV: New** WQBELs for Toxic Pollutants conditions (Copper, Lead, and Zinc) with 33-month schedule of compliance. Previous NPDES permit had (limited) TRE investigatory conditions and monitoring, but no Copper, Lead, or Zinc limits. They will have opportunity to update their TRE as needed to address the new Part A.I.A (Final Tier 1) and Part A.I.C (Final Tier 2) limits.

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)	0.400 (Tier 1) 0.500 (Tier 2)
Latitude	41º 6' 54.91"	Longitude	-75º 21' 5.48"
Quad Name	Mt. Pocono	Quad Code	1043 (4.22.2)
Wastewater Description:	Sewage Effluent		
Receiving Waters	Forest Hills Run (HQ-CWF)	Stream Code	4953
NHD Com ID	26158240	RMI	4.9 (per DRBC Docket)
Drainage Area	1.14 square miles	Yield (cfs/mi^2)	0.0373
Q_{7-10} Flow (cfs)	0.04258	Q_{7-10} Basis	LFY method using Forest Hill Run confluence with receiving stream.
Elevation (ft)	~1480 Feet per Topo Map	Slope (ft/ft)	-
Watershed No.	1-E	Chapter 93 Class.	HQ-CWF
Existing Use	-	Existing Use Qualifier	-
Exceptions to Use	-	Exceptions to Criteria	-
Assessment Status	Impaired		
Cause(s) of Impairment	METALS, **ORGANIC ENRICHMENT, THERMAL MODIFICATIONS**, THERMAL MODIFICATIONS		
Source(s) of Impairment	HIGHWAY/ROAD/BRIDGE RUNOFF (NON-CONSTRUCTION RELATED), **MUNICIPAL POINT SOURCE DISCHARGES, MUNICIPAL POINT SOURCE DISCHARGES**, URBAN RUNOFF/STORM SEWERS		
TMDL Status	-	Name	-
Background/Ambient Data		Data Source	
pH (SU)	See table below	See below	
Nearest Downstream Public Water Supply Intake		Brodhead Creek Regional Water Authority	
PWS Waters	Brodhead Creek	Flow at Intake (cfs)	-
PWS RMI	-	Distance from Outfall (mi)	~14 miles (per previous FS)

Changes Since Last Permit Issuance:

- WWTP Thermal Chiller: The facility has constructed/operated a STP "chiller" unit to reduce thermal impacts on the receiving stream. However, there were thermal limit exceedances in 2022 and 2023.
- Spray Irrigation: The facility began use of its spray irrigation system (no point discharge to Forest Hill Run; contributing to the stream's groundwater recharge). The facility's spray irrigation started up in April 2021 per WQM Permit renewal application. There were months with zero discharge to stream in 2022 and 2023.
- 2023 ARRO Consulting Inc. "Mount Pocono Flow Increase Justification" Application document indicated ongoing stream impairment and stream not expected to meet Tier 2 requirements. See below.
- 2022 DEP stream sampling data shows:
  - Elevated zinc levels in the stream (upstream and downstream of discharge).
  - Increase in downstream Total Organic Carbon concentration (organic enrichment) below effluent discharge indicates continued contribution to any stream organic enrichment issue.
- Downstream: There is a downstream dam removal project scheduled, but it would not affect stream conditions at Outfall No. 001.

Other Comments:

- **<u>This discharge point is at the headwaters of Forest Hill Run</u>**. Forest Hill Run flows into Paradise Creek (HQ-CWF; Trout Reproduction stream; Stream Code #4933) which flows into Brodhead Creek and into the Delaware River. The WWTP Outfall is located near the headwaters, i.e. limited dilution capacity. The headwaters are shown to start in Mount Pocono Borough (i.e. urban stormwater and historic legacy pollution contributions).
    - Fairview Lake Dam No. 45-074 is upstream on Trib to Forest Hill Run per E-maps.
    - Route 611 (Pocono Boulevard) bridge is ~0.7 miles <u>downstream</u> of outfall location. Grange Road is ~0.26 miles downstream of the Outfall.
    - There is a pond approximately 1.65 miles downstream from the outfall, at the Mount Airy Casino Resort complex. No dam shown on E-maps.
    - **Forest Hill Run is heavily effluent-dominated at 0.400 MGD discharge (14.5:1) and 0.500 MGD discharge (18.1:1)**
    - **There are site-specific permitted stream monitoring points for temperature and biological assessment (macroinvertebrates)**.
- **<u>Q7-10 Low Flow and Low Flow Yield (0.0373 CFS/square mile LFY; 0.04258 CFS Q7-10 low flow)</u>**: USGS PA Streamstats was used as best scientifically-supported information (using available USGS gage data and empirical equations that take site-specific factors into account), with the Low Flow Yield (LFY) method based on a downstream point on the same stream. **Previous NPDES Permitting was based on an assumed higher LFY (factor 9.38 times greater), which impacts water quality modeling and applicable WQBELs. Continued stream impairment supports the conclusion that the old water quality modeling assumptions were not adequately conservative or protective.**
    - The previous 2018 NPDES Permit Renewal Fact Sheet used a substantially different LFY (0.35 CFS/square mile) based on USGS Gage Sta. # **01440450**; Q7-10 = 5.50 cfs; D.A. = 15.6 sq. mi. LFY (Low Flow Yield) = 5.50 cfs / 15.6 sq. mi. = 0.35 cfs/sq. mi. Q7-10 at point of discharge: Q7-10 = LFY x D.A. = 0.35 cfs/sq. mi. x 1.12 sq. mi.= 0.395 cfs.
        - The gage was not found on the USGS website for presently monitored gates.
        - The gage was not found in the USGS Open-File Report 2011-1070 (Select Streamflow Statistics for Streamgate Locations in or near Pennsylvania).
        - The gage was not found in the USGS Scientific Investigations Report 2006-5244 (Select Streamflow Statistics and Regression Equations for Predicting Statistics at Stream Locations in Monroe County, Pennsylvania)
    - The 2012 Water Pollution Control Report indicated that this gage and gage flow data came from the old Pennsylvania Bulletin No. 12 (based on long-superseded USGS data and empirical calculations which are no longer used to determine flows in PA). Thermal limits were derived in that WPC Report, based on the old gage data.
    - 12/7/2022 DRBC Docket No. D-1991-027 CP-3 Section B.2 included the DRBC-estimated Q7-10 low flow was less than 0.1 CFS, and that the receiving stream was classified as “intermittent stream” by the DRBC.

- **<u>2/16/2023 ARRO “Mount Pocono Flow Increase Justification” Information</u>**:
    - **“But both monitoring locations have remained well below the minimum score of 63 and the mandated 83 percent score of Station 1”.**
    - The ARRO report indicated its belief that “stormwater runoff from State Route 611 has a major impact on the scores from Station 2 and Station 2 has multiple influences well outside of the control of the MPMA, which contribute to the downstream decreased scores”.
    - **“… it is apparent that there is no way for Forest Hills Run to ever consistently achieve the conditions stipulated by the NPDES permit for Mount Pocono Municipal Authoritys’ increase discharge of 500,000 gpd”.**

<u>Background/Ambient Data</u> <u>Data Source</u>

		Upstream Sample ID: 2517314; Sequence Number: 406; Monitoring Point ID: 174317; Date Collected: 10/11/2022 Downstream Sample ID: 2517313; Sequence Number: 405 Monitoring Point ID: 174318; Date Collected: 10/11/2022
pH (SU)	7.0	7.08 downstream.
Temperature (°C)	11	See above. 11.2 downstream
Hardness (mg/L)	80	See above. 70 downstream
TSS (mg/l)	<20	See above. <20 downstream
TDS (mg/l)	284	See above. 236 downstream
Specific Conductivity (umhos/cm)	460	See above. 362.4 downstream.
Total Organic Carbon (mg/l)	0.89	**See above. 1.12 downstream**
Ammonia-N (mg/l)	<0.2	See above. <0.2 downstream
Nitrate-N (mg/l)	<0.04	See above. <0.04 downstream
Nitrite-N (mg/l)	0.70	See above. 0.52 downstream
Nitrate-Nitrite-N (mg/l)	0.70	See above. 0.50 downstream
Total Phosphorus (mg/l)	<0.1	See above. <0.1 downstream
Copper, Total (ug/l)	1.130*	See above. 1.000 downstream
Copper, Dissolved (ug/l)	1.170*	See above. 0.915 downstream
Lead (ug/l)	<1.00	See above. <1.00 downstream
Zinc, Total (ug/l)	**28***	**See above. 31.2 downstream.**
Zinc, Dissolved (ug/l)	**39.20***	**See above, 21.60 downstream**
Aluminum (ug/l)	36.30	See above. <15.0 downstream
Manganese (ug/l)	11.0	See above. 10.0 downstream
Total Iron (ug/l)	<100	See above. <100 downstream

*The Total and Dissolved samples have a ±error range that apparently resulted in the Dissolved Metal concentration being reported as greater than the Total Metal concentration per the DEP Biologist.

The EDMR Reporting now includes Stream Monitoring Station temperature data in 15-minute increments. However, there is too much missing information to evaluate the meaning of the supplied data:

- Stream Monitoring Stations: The WQM and NPDES permits required the construction and operation of three (3) Stream Monitoring Stations for temperature monitoring and macroinvertebrate studies, with locations to be approved by the Department. Per the 2023 ARRO Consulting Inc. “Mount Pocono Flow Increase Justification”, the Authority was monitoring six (6) locations (Stream Monitoring Stations 1, 2, 3; WWTP effluent; and two stormwater run-on channel locations) for temperature and other parameters. However, the monitoring points’ latitude, longitude, and elevations were not provided. Design details were not provided to show the as-built in-situ temperature sensor in relation to stream width and depth, with inspection reports indicating station damage due to high flow events. The ARRO document did not show the location of the monitoring points in relation to Outfall No. 001 and local topography (including Route 611 and Grange Road with their stormwater controls) but see separate figures below. The ARRO document did not correlate WWTP discharge dates/flows and/or precipitation data to differences between the stream temperatures and other parameters at Stream Monitoring Station 1 (upstream of Outfall No. 001) and Stream Monitoring Station 2 (downstream of Outfall No. 001) and/or between the other 4 monitoring points.
- Ambient Stream Temperatures: The “Mount Pocono Flow Increase Justification” did not calculate the mean/median ambient stream temperatures during the Chapter 93.7 Temperature critical use periods for the monitored locations (to allow updating of previous DEP thermal modeling with ambient stream data) and did not determine if there were times when the Outfall discharge raised the stream temperature by ≥2 °F for a duration of ≥1 hour (existing NPDES Part C permit limit). There was no proposal to relocate Monitoring Station 2 and/or modify stormwater controls to reduce any presumed impact of Route 611 drainage impacts on Station 2 monitoring data. **NOTE**: Consistent with Implementation Guidance Design Conditions, DEP ID: 386-2000-007, the design ambient temperature is the median temperature (50 percent value), derived from site-specific historical

data, for each monthly or semi-monthly period (Chapter 93.7 Temperature critical use periods). Because temperature distributions are approximately normal, the mean temperature is nearly equal to the median temperature and also has an exceedance probability of about 50 percent. In some cases, however, use of the mean to determine the ambient temperature may not be appropriate. If site-specific ambient data are not normally distributed, due to excessive solar heating or other factors, the median should be used. See DEP Policy No. 386-2000-001 (Implementation Guidance for Temperature Criteria) and Policy No. 386-2000-008 (Implementation Guidance Evaluation & Process Thermal Discharge (316a) Federal Water Pollution Act for related information. See also above WQM permit renewal discussion.

- Maximum Rise in Stream Temperature: The raw temperature data did not flag any exceedance of the ≥2 °F stream temperature for a duration of ≥1 hour per Part A.I.E due to Outfall No. 001 discharge, but it is unclear if that was due to lack of comparison (with upstream monitoring point temperatures) or lack of exceedances.

Below is a MPMA figure showing the location of the Stream Sampling Stations for Macroinvertebrates (2023 ARRO Report):

BENTHIC MACROINVERTEBRATES OF FOREST HILLS RUN, APRIL 21, 2022

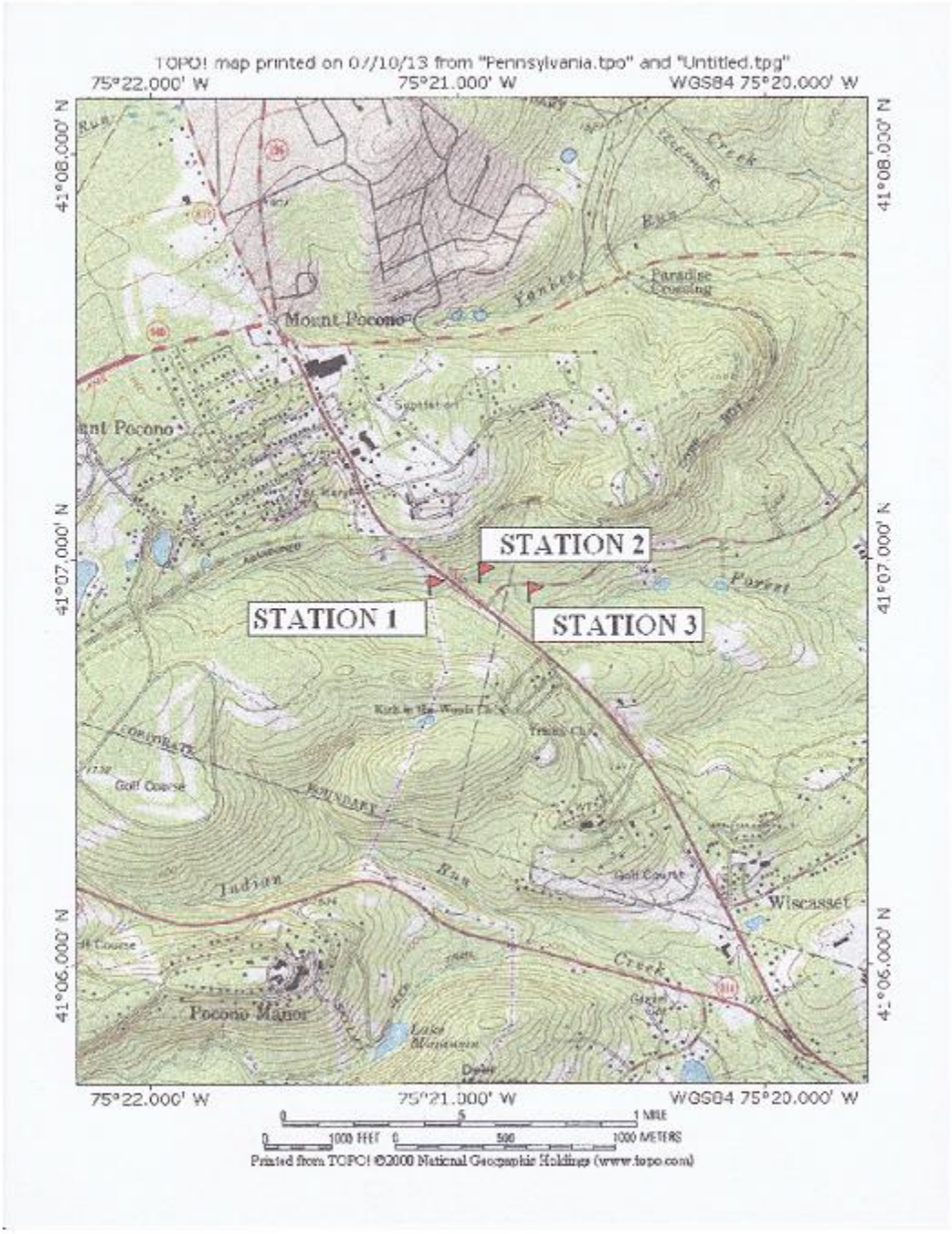


Figure 1. Stations sampled for macroinvertebrates on Forest Hills Run, April 21, 2022.

Below is a figure that was provided by MPMA along with their raw stream sampling data that shows the relative position of RO1 and RO2 (June 10, 2022 MPMA E-mail): RO1 was indicated to mean "Runoff Stream 1" on MPMA data tables, and is located at Outfall No. 001. RO2 was indicated to mean "Runoff Stream 2" (downstream of the Route 611 bridge over Forest Hill Run). Per the 2023 ARRO Report:

- Stream 1 Run Off is located approximately 20 feet downstream from the MPMA WWTP's discharge location and upstream of Station 2 and it is where significant runoff from Route 611's stormwater system enters Forest Hills Run.
- Stream 2 Run Off is located downstream of Station 2 and upstream of Station 3 and it is where run off from Grange Road and the area east of State Route 611 enters Forest Hills Run.

Treatment Facility Summary

Treatment Facility Name: Mt Pocono Municipal Authority WWTP

WQM Permit No.	Issuance Date	Scope
4515401-A1	TBD	Renewal of Land Spraying Discharge WQM Permit.
4515401	December 14, 2016	Treatment plant upgrades include: a rotating screen to remove non-degradable solids; modifications to the comminutor vault; the addition of an influent equalization tank and pump station; new dissolved oxygen probes to refine control of the blowers and a new computer operating system for the existing Sequencing Batch Reactor (SBR) system; a new decant equalization tank and pump station; a new utility water tank; a new transfer pump station and two spray storage tanks; a new spray irrigation pump station and spray irrigation system; the addition of an effluent cooling system; installation of a new flow measuring flume; repairs to the existing outfall structure in Forest Hills Run; **and installation of three (3) temperature monitoring stations in Forest Hills Run**. The spray irrigation system will consist of five (5) areas totaling approximately 80 acres. The combined disposal capacity of all five areas will vary over the spray season from 272,000 gpd during late fall to 599,000 gpd during the summer months. The system will be deactivated and winterized from November 16th through March 14th each year. Special Condition A.3: In accordance with Condition 4. of the attached Consent Decree filed April 18, 2012, the Authority is authorized to discharge up to 0.40 MGD (30 day average) of treated wastewater effluent to Forest Hills Run, unless and until Monitoring Station 2 and Monitoring Station 3 attain a bioassessment benthic macroinvertebrate score greater than 83% of Monitoring Station 1, based on RBP, and Monitoring Station 2 and Monitoring Station 3 attain aquatic life use, based on IBI, in which case the Authority's 30 day average discharge flow of wastewater from the treatment facility to Forest Hills Run may exceed 0.40 MGD but shall not exceed 0.50 MGD. The five (5) spray areas, when completed, will provide a peak seasonal spray capacity of at least 0.50 MGD. **The 30 day average wastewater flow associated with the Part II Permit Application for Spray Irrigation System and Wastewater Treatment Plant Improvements approval is up to 0.400 MGD, unless the Department advises Mount Pocono Municipal Authority (MPMA) in writing in accordance with Part C I. of the terms and conditions of NPDES Permit No. PA0044997 that the 30 day average wastewater flow is approved up to 0.500 MGD.** Special Condition C: If within 365 days of final completion of Phase III of the Project or any time thereafter Monitoring Station 2 and Monitoring Station 3 do not attain a bioassessment benthic macroinvertebrate score greater than 83% of Monitoring Station 1, based on RBP, or Monitoring Station 2 and Monitoring Station 3 do not attain aquatic life use, based on IBI, the Authority will, within 30 months, **install equipment sufficient to cool the discharge from the Facility to Forest Hills Run to the degree necessary for the Authority to comply with the temperature limits in the Permit, or with any more stringent temperature limits in any**

		subsequent NPDES permit or renewal or revision issued to the Authority authorizing the Authority to discharge wastewater from the Facility to Forest Hills Run. **Special Condition D**: **If there is a conflict between the above special conditions and the attached Consent Decree, the conditions of the Consent Decree shall govern**.
4503404	8/5/2003	Installation of Grit System
4590414	4/10/1991	0.400 MGD STP modifications including: comminutor with bypass bar screen; lime, ferric chloride, and polymer chemical feed systems; two basin SBR system; two decant equalization basins (converted existing tanks); two sand filters; **UV disinfection system**, post-aeration (modified tank); sludge thickening tank; aerated sludge holding tank (converted existing tank); and existing sludge dewatering centrifuge. **Mod 1 indicated chlorine contact tank to be abandoned.**

Waste Type	Degree of Treatment	Process Type	Disinfection	Avg Annual Flow (MGD)
Sewage	Secondary	Sequencing Batch Reactor	**UV disinfection**	0.400 (Tier 1) 0.500 (Tier 2)

Hydraulic Capacity (MGD)	Organic Capacity (lbs/day)	Load Status	Biosolids Treatment	Biosolids Use/Disposal
0.400* 0.500**	1068 1397**	Not Overloaded	Aerobic Digestion	Other WWTP

*Tier 1 discharge: Part A Additional Requirements Supplemental Information Item 1 specifies the Hydraulic Design Capacity of 0.400 MGD and Organic Design Capacity of 1068 lb BOD5/day shall be used for Chapter 94 Reporting purposes.
*Tier 2 discharge:
**WQM Permit No. 4515401 for 0.500 MGD discharge (if NPDES/WQM permit conditions allow for stream discharge).

Changes Since Last Permit Issuance: WWTP upgrades installed. Spray Irrigation Area start-up in April 2022 (with no NPDES discharge during months of May through October 2022, and reduced discharge during other months).

Other Comments:

- **Tiered Flows**: The facility is limited to 0.400 MGD flows (Tier 1) until stream recovery to levels set forth in the NPDES Permit and incorporated-by-reference (non-DEP) Consent Decree.
- **Spray Irrigation (between March 15 and November 15, when conditions are suitable)**: Tertiary treated wastewater is spray irrigated during the period of March 15 through November 15 annually (weather allowing) under the WQM Permit No. 4515401. The entire spray irrigation system (all phases) have been constructed. Operation began in 2022.
- **As-built WWTP**:
    - **Treatment Process**: Bar screening (1 rotating fine bar screen, 2 manual bar screens), comminution, grit removal, chemical injection vault, two (2) SBRs, two (2) decant equalization tanks, two (2) rapid sand filters, **UV disinfection**, Utility water tank (used also for post-aeration), transfer pump station with two discharge destinations:
        - Cooling building with Chiller units, effluent flow meter and Outfall.
        - Onsite 0.5 MGD Spray Irrigation System including: two (2) storage tanks, spray irrigation pump station, and five (5) spray irrigation area/zones
        - 2023 Chapter 94 Report indicated wastewater chemicals in usage (not identified in NPDES Permit Renewal Application):
            - Soda ash has been replaced with Magnesium Hydroxide for alkalinity.

- Currently using liquid aluminum sulfate for phosphorus control (with ability to add ferric chloride)
- Polymer added for settlement to SBRs
- No mention of chlorine usage.
- UV disinfection system was replaced in 2010.

  - **Solids Management**: one (1) sludge thickener, one (1) aerated digester/sludge holding tank
  - **Unpermitted Chlorine Disinfection**: The NPDES Permit Application and DRBC Docket did not include chlorine disinfection to supplement the UV disinfection System. The EDMR-reported effluent chlorine concentrations might indicate an ongoing UV disinfection system O&M problem.
- **9/16/2015 DRBC Docket No. D-1991-027 CP-2 description**:
  - The existing WWTP facilities consist of a chemical feed system (magnesium hydroxide and alum), a bar screen and comminutor, a grit removal system, two (2) SBRs, two (2) decant equalization tanks, two (2) sand filters, a **UV disinfection unit**, and a utility water tank that provides post-aeration through cascade over a weir.
  - The proposed WWTP improvements consist of: the addition of a rotating fine screen to the headworks upstream of the existing chemical feed system; the addition of new influent equalization tank; upgrading and expanding the treatment capacity of the SBRs from 0.40 mgd to 0.50 mgd; replacing the existing decant equalization tanks with new, larger tanks; installing a new operating system; replacing the existing utility water tank with a new aerated tank; constructing a new spray irrigation system; and constructing a new cooling system.

2023 Chapter 94 Report: The 2023 MPMA Annual Municipal Wasteload Report was examined for informational purposes.

- Form Items 1, 2, 3, and 9: No existing or predicted hydraulic or organic overloading. There had been one month of organic overload in 2019. DEP Spreadsheet did not include precipitation data.
  - 2023 ADF: 0.234 MGD (0.400 MGD hydraulic Design Capacity Tier 1)
  - 2023 Organic Load: 545 lbs BOD5/day annual, high of 916 lbs BOD5/day (1,068 lbs BOD5/day organic design capacity Tier 1)
  - Existing EDUs: 2,242 EDUs (2.5 persons/EDU)
  - Projected EDUs: 40 in 2024, zero for through 2028. Report noted “one large proposed warehouse development along State Route 940 with 40 EDUs of anticipated flow”.
  - Load/EDU: 0.243 lbs BOD5/day
  - Load/Capita: 0.097 lbs BOD5/day
  - Future Design Capacities: Facility has tiered NPDES Permit/WQM permit limits but is operating at Tier 1 (0.400 MGD; 1068 lbs BOD5/day) until stream recovers per WQM/NPDES Permit conditions (when Tier 2 0.500 MGD; 1,397 lbs BOD5/day capacities would apply).
  - Self-imposed Moratorium: The narrative indicates an April 2006 Authority resolution for a self-imposed moratorium. Narrative indicates that the hydraulic loading projections does not take into accounts property owners who want to connect but cannot due to the self-imposed moratorium. The sewage demand exceeds the capacity per the Part II permitted capacities. The Report noted that poor soil testing results prevented on-lot disposal. **NOTE**: They appear to have some available capacity under Tier 1. Stream has not recovered to allow for Tier 2 loadings.
  - NPDES Permit Renewal Application: 85% Mount Pocono Borough and 15% Coolbaugh Township contributions estimated. Estimated 3,696 residents total, which equates to 0.3696 MGD (at DWFM 100 GPCD default) and 629 lbs BOD5/day (at DWFM default 0.17 lbs/capita).
- Form Item 4: No constructed sewer extensions in 2023. No future project identified (except 40 EDU project above). Two new residences connected and 6 EDUs disconnected in 2023.
- Form Item 5: They indicated a phased manhole inspection approach. They indicated that 1/3rd of collection was televised and cleaned, followed by a review for future I&I repairs.
- Form Item 6: No capacity-related bypassing, SSOs or surcharging per Report or NPDES Permit renewal application.
- Form Item 7: Missing required comparison of max pumping rates with present max flows and projected 2-year flows. Only two pump station identified, but there appears to be additional pump or lift stations.
  - Pumping Station 1 (Holly Forest Road): Two submersible pumps, 130 GPM each.
  - Pumping Station 2 (Route 940 East): Two suction lift centrifugal pumping sets, 480 GPM each

  - Lift Station 1: No information. (Report only noted the Industrial Park was the third lift station.)
  - Pine Hill Lift Station 2: Some maintenance done in 2023. No pump information.
  - Pocono Mountain Industrial Park Lift Station: Owned by the industrial park. No pump information.
- Form Item 8: No industrial wastewater in system. Attachment D (Section IX – Non-Residential Wastes of the Procedures Manual of the MPMA) referenced in event of an industry requiring pretreatment. An IPP is currently in draft final form but was implemented in 2021 per Report. The Pocono Mountain Industrial Park has only generated domestic wastewater per Report. One industry was noted to be hauling their IW offsite for disposal. NPDES renewal application also indicated no IW discharges or hauled-in wastewater. **NOTE**: NPDES Permit Part A.III.C.2 (Planned Changes to Waste Stream), B.I.C.4 (Additional Annual Report requirements) and Part B.I.D (General Pretreatment) requirements also apply.
- Form Item 10: The existing NPDES permit lacks the standard solids management conditions requiring a sewage sludge management inventory (meeting specified EPA methodology). The conditions are being added to the new NPDES permit.
  - 1,281,230 gallons (116.65 dry tons) of sludge hauled in 2023 (apparent typo). NPDES Permit application estimated 113.73 dry tons sent to Greater Hazleton in 2022.
  - Average influent BOD5: 289 mg/l
  - Average effluent CBOD5: 8.2 mg/l **NOTE**: They achieved the minimum 85% reduction on an annual basis.
  - Average Solids Concentration of liquid sludge: 2.18%
- Form Item 11: Only one (1) calibration report. Unclear whether it was an influent or effluent flow meter.

Compliance History

DMR Data for Outfall 001 (from June 1, 2023 to May 31, 2024)

Parameter	MAY-24	APR-24	MAR-24	FEB-24	JAN-24	DEC-23	NOV-23	OCT-23	SEP-23	AUG-23	JUL-23	JUN-23
Flow (MGD) Average Monthly		0.055	0.1973	0.2825	0.3996	**0.4069**	0.2708		0.0293		0.0291	
Flow (MGD) Daily Maximum		0.878	0.8901	0.3986	1.1497	1.6105	0.3976		0.8375		0.5227	
pH (S.U.) Instantaneous Minimum		7.0	6.7	7.0	7.0	7.0	7.0		7.0		7.0	
pH (S.U.) Instantaneous Maximum		7.3	7.7	7.4	8.0	7.5	7.9		8.0		7.7	
DO (mg/L) Daily Minimum		8.5	8.3	11.2	12.0	7.8	9.0		8.0		7.5	
TRC (mg/L) Average Monthly		0.03	0.02	0.02	0.02	0.02	0.02		0.03		0.02	
TRC (mg/L) Instantaneous Maximum		0.04	0.05	0.05	0.04	0.07	0.05		0.06		0.03	
Temperature (Day 1 thru 15) (ºF) Daily Maximum							48.6		65.9			
Temperature (Day 16 thru End of Month) (ºF) Daily Maximum							59.2		GG			
Temperature (ºF) Daily Maximum		51.7	53.2	40.4	48.3	59.0					71.9	
CBOD5 (lbs/day) Average Monthly		3.29	19.20	7.42	11.28	38.01	2.48		0.18		1.25	
CBOD5 (lbs/day) Weekly Average		3.29	24.5	7.78	25.99	54.6	2.48		0.18		1.41	
CBOD5 (mg/L) Average Monthly		7.2	11.7	3.2	3.4	11.2	< 2		2.6		5.2	
CBOD5 (mg/L) Weekly Average		7.2	26.0	3.3	7.8	16.2	< 2		2.6		5.8	

BOD5 (lbs/day) Raw Sewage Influent Average Monthly	807	105	800	614	837	916	503	584	478	474	508	533
BOD5 (mg/L) Raw Sewage Influent Average Monthly	352	230	259	280	251	301	287	260	257	294	272	294
TSS (lbs/day) Average Monthly		< 2.29	15	13.55	24.28	46	6.19		< 1.22		< 1.21	
TSS (lbs/day) Raw Sewage Influent Average Monthly	477	85	535	429	469	339	218	242	287	343	288	303
TSS (lbs/day) Weekly Average		< 2.29	30	18.85	69.98	102	6.19		< 1.22		< 1.21	
TSS (mg/L) Average Monthly		< 5	9.3	5.8	7.3	13.5	5		< 5.0		< 5.0	
TSS (mg/L) Raw Sewage Influent Average Monthly	193	188	180	198	141	94	120	109	162	210	155	168
TSS (mg/L) Weekly Average		< 5	18	8	21.0	19.5	5		< 5.0		< 5.0	
Fecal Coliform (No./100 ml) Geometric Mean		2	1.26	< 1.0	1.99	3.18	1		2419.6		< 1.0	
Fecal Coliform (No./100 ml) Instantaneous Maximum		2	2	< 1.0	124	136	1		2419.6		< 1.0	
Nitrate-Nitrite (lbs/day) Average Monthly		0.73	3.9	9.13	13.28	12.5	6.87		0.86		0.91	
Nitrate-Nitrite (mg/L) Average Monthly		1.8	2.4	3.9	4.0	3.7	5.6		3.5		3.8	
Total Nitrogen (lbs/day) Average Monthly		3.01	12.6	14.82	22.78	29.7	9.19		1.27		2.29	
Total Nitrogen (mg/L) Average Monthly		3.01	7.7	6.3	6.8	8.7	7.4		5.2		9.4	
Ammonia (lbs/day) Average Monthly		1	4.6	0.74	4.57	10.8	0.60		0.18		0.40	
Ammonia (mg/L) Average Monthly		3.3	2.8	0.3	1.4	3.2	0.5		0.73		1.6	

TKN (lbs/day) Average Monthly		< 2.29	8.7	5.66	9.52	17.1	2.32		0.42		1.38	
TKN (mg/L) Average Monthly		< 5	5.3	2.4	2.9	5.1	1.9		1.7		5.7	
Total Phosphorus (lbs/day) Average Monthly		0.39	0.77	0.23	0.81	1.8	0.20		0.03		0.02	
Total Phosphorus (mg/L) Average Monthly		0.9	0.5	0.1	0.2	0.5	0.2		0.11		0.1	
Total Copper (lbs/day) Average Monthly		0.0047	0.0156	0.0212	0.0190	0.0129	0.0050		0.009		0.0008	
Total Copper (mg/L) Average Monthly		0.0103	0.0095	0.009	0.0057	0.0038	0.0040		3.5		0.0033	
Total Lead (lbs/day) Average Monthly		0.0002	0.0016	0.0024	0.0011	0.0013	0.0005		0.0001		0.0002	
Total Lead (mg/L) Average Monthly		0.0004	0.0010	0.001	0.0003	0.0004	0.52		0.0005		0.0007	
Total Zinc (lbs/day) Average Monthly		0.0359	0.1463	0.3605	0.1916	0.2851	0.1235		0.0214		0.0257	
Total Zinc (mg/L) Average Monthly		0.0785	0.0889	0.1530	0.0575	0.084	0.0997		0.0876		0.1060	

Compliance History

Effluent Violations for Outfall 001, from: July 1, 2023 To: May 31, 2024

Parameter	Date	SBC	DMR Value	Units	Limit Value	Units
Temperature	12/31/23	Daily Max	59.0	ºF	43.3	ºF
Temperature	11/30/23	Daily Max	59.2	ºF	49.0	ºF
Temperature	03/31/24	Daily Max	53.2	ºF	46.7	ºF
Temperature	01/31/24	Daily Max	48.3	ºF	41.6	ºF
Temperature	11/30/23	Daily Max	48.6	ºF	47.2	ºF
Temperature	09/30/23	Daily Max	65.9	ºF	63.2	ºF
CBOD5	12/31/23	Avg Mo	38.01	lbs/day	33	lbs/day
CBOD5	12/31/23	Wkly Avg	54.6	lbs/day	50	lbs/day
CBOD5	12/31/23	Avg Mo	11.2	mg/L	10	mg/L
CBOD5	03/31/24	Avg Mo	11.7	mg/L	10	mg/L
CBOD5	12/31/23	Wkly Avg	16.2	mg/L	15	mg/L
CBOD5	03/31/24	Wkly Avg	26.0	mg/L	15	mg/L
Fecal Coliform	09/30/23	Geo Mean	2419.6	No./100 ml	200	No./100 ml
Fecal Coliform	09/30/23	IMAX	2419.6	No./100 ml	1000	No./100 ml

DMR Data for Outfall 001 (from February 1, 2023 to January 31, 2024)

Parameter	JAN-24	DEC-23	NOV-23	OCT-23	SEP-23	AUG-23	JUL-23	JUN-23	MAY-23	APR-23	MAR-23

Flow (MGD) Average Monthly	**0.3996**	**0.4069**	**0.2708**		**0.0293**		**0.0291**		**0.0443**	**0.0040**	**0.1634**
Flow (MGD) Daily Maximum	**1.1497**	**1.6105**	0.3976		0.8375		0.5227		**1.3184**	**0.1209**	**0.5277**
pH (S.U.) Instantaneous Minimum	7.0	7.0	7.0		7.0		7.0		7.0	7.2	7.0
pH (S.U.) Instantaneous Maximum	8.0	7.5	7.9		8.0		7.7		8.0	7.2	7.5
DO (mg/L) Daily Minimum	12.0	7.8	9.0		8.0		7.5		8.0	9.7	8.4
TRC (mg/L) Average Monthly	**0.02**	**0.02**	**0.02**		**0.03**		**0.02**		**0.02**	**0.06**	**0.03**
TRC (mg/L) Instantaneous Maximum	**0.04**	**0.07**	**0.05**		**0.06**		**0.03**		**0.05**	**0.06**	**0.06**
Temperature (Day 1 thru 15) (ºF) Daily Maximum			48.6		65.9				54.4		
Temperature (Day 16 thru End of Month) (ºF) Daily Maximum			59.2		**GG**				54.4		
Temperature (ºF) Daily Maximum	48.3	59.0					71.9			57.3	53.3
CBOD5 (lbs/day) Average Monthly	**11.28**	**38.01**	2.48		0.18		1.25		**12.11**	**E**	6.27
CBOD5 (lbs/day) Weekly Average	25.99	54.6	2.48		0.18		1.41		12.11	**E**	9.27
CBOD5 (mg/L) Average Monthly	3.4	11.2	< 2		2.6		5.2		**32.8**	**E**	4.6
CBOD5 (mg/L) Weekly Average	7.8	16.2	< 2		2.6		5.8		32.8	**E**	6.8
BOD5 (lbs/day) Raw Sewage Influent Average Monthly	837	916	503	584	478	474	508	533	745	648	358
BOD5 (mg/L) Raw Sewage Influent Average Monthly	251	301	287	260	257	294	272	294	356	446	263

TSS (lbs/day) Average Monthly	**24.28**	**46**	6.19		< 1.22		< 1.21		3.33	**E**	7.09
TSS (lbs/day) Raw Sewage Influent Average Monthly	469	339	218	242	287	343	288	303	344	502	208
TSS (lbs/day) Weekly Average	69.98	102	6.19		< 1.22		< 1.21		3.33	**E**	8.18
TSS (mg/L) Average Monthly	7.3	13.5	5		< 5.0		< 5.0		9.03	**E**	5.2
TSS (mg/L) Raw Sewage Influent Average Monthly	141	94	120	109	162	210	155	168	141	353	153
TSS (mg/L) Weekly Average	21.0	19.5	5		< 5.0		< 5.0		9.03	**E**	6.0
Fecal Coliform (No./100 ml) Geometric Mean	1.99	3.18	1		**2419.6**		< 1.0		**2419.8**	**E**	1.0
Fecal Coliform (No./100 ml) Instantaneous Maximum	124	136	1		**2419.6**		< 1.0		**2419.8**	**E**	1.0
Nitrate-Nitrite (lbs/day) Average Monthly	**13.28**	12.5	6.87		0.86		0.91		0.44	**E**	6.40
Nitrate-Nitrite (mg/L) Average Monthly	4.0	3.7	5.6		3.5		3.8		1.2	**E**	4.7
Total Nitrogen (lbs/day) Average Monthly	22.78	29.7	9.19		1.27		2.29		3.33	**E**	8.50
Total Nitrogen (mg/L) Average Monthly	6.8	8.7	7.4		5.2		9.4		9.03	**E**	6.2
Ammonia (lbs/day) Average Monthly	**4.57**	**10.8**	0.60		0.18		0.40		2.26	**E**	0.22
Ammonia (mg/L) Average Monthly	1.4	3.2	0.5		0.73		1.6		6.12	**E**	0.2
TKN (lbs/day) Average Monthly	9.52	17.1	2.32		0.42		1.38		2.88	**E**	2.1
TKN (mg/L) Average Monthly	2.9	5.1	1.9		1.7		5.7		7.8	**E**	1.5
Total Phosphorus (lbs/day) Average Monthly	0.81	**1.8**	0.20		0.03		0.02		0.41	**E**	0.17

Total Phosphorus (mg/L) Average Monthly	0.2	0.5	0.2		0.11		0.1		1.1	**E**	0.1
Total Copper (lbs/day) Average Monthly	0.0190	0.0129	0.0050		0.009		0.0008		0.0026	**E**	0.0086
Total Copper (mg/L) Average Monthly	0.0057	0.0038	0.0040		**3.5**		0.0033		0.0070	**E**	0.0063
Total Lead (lbs/day) Average Monthly	0.0011	0.0013	0.0005		0.0001		0.0002		0.0001	**E**	0.0014
Total Lead (mg/L) Average Monthly	0.0003	0.0004	**0.52**		0.0005		0.0007		0.0004	**E**	0.0010
Total Zinc (lbs/day) Average Monthly	0.1916	0.2851	0.1235		0.0214		0.0257		0.0154	**E**	0.0980
Total Zinc (mg/L) Average Monthly	0.0575	0.084	0.0997		0.0876		0.1060		0.0416	**E**	0.0719

DMR Data for Outfall 001 (from December 1, 2021 to November 30, 2022)

Parameter	NOV-22	OCT-22	SEP-22	AUG-22	JUL-22	JUN-22	MAY-22	APR-22	MAR-22	FEB-22	JAN-22	DEC-21
Flow (MGD) Average Monthly	0.3186							0.0497	0.1595	0.3231	0.2243	0.2016
Flow (MGD) Daily Maximum	0.3895							0.7788	0.3424	0.9472	0.3102	0.3736
pH (S.U.) Instantaneous Minimum	7.3							7.2	7.3	7.2	7.0	7.1
pH (S.U.) Instantaneous Maximum	7.8							7.6	7.9	8.0	7.8	7.9
DO (mg/L) Daily Minimum	8.4							8.7	10.5	10.2	10.0	9.7
TRC (mg/L) Average Monthly	**0.03**							**0.02**	**0.02**	**0.02**	**0.02**	**0.03**
TRC (mg/L) Instantaneous Maximum	**0.09**							**0.06**	**0.03**	**0.04**	**0.04**	**0.04**
Temperature (ºF) Daily Maximum								55.8	44.5	47.2	55.6	56.5
CBOD5 (lbs/day) Average Monthly	6.20							2.69	3.79	**13.41**	**6.78**	6.05

CBOD5 (lbs/day) Weekly Average	7.25							2.69	5.59	16.44	7.86	7.4
CBOD5 (mg/L) Average Monthly	2.33							6.5	2.85	4.98	3.63	3.6
CBOD5 (mg/L) Weekly Average	2.7							6.5	4.20	6.1	4.2	4.4
BOD5 (lbs/day) Raw Sewage Influent Average Monthly	353	382	363	382	309	398	363	24	362	330	399	479
BOD5 (mg/L) Raw Sewage Influent Average Monthly	227	211	188	256	210	253	269	57.2	272	240	317	285
TSS (lbs/day) Average Monthly	**13.28**							3.73	8.65	**22**	9.82	9.42
TSS (lbs/day) Raw Sewage Influent Average Monthly	176	266	277	206	210	228	210	8	164	186	217	146
TSS (lbs/day) Weekly Average	13.42							3.73	10.64	30	11.23	13.45
TSS (mg/L) Average Monthly	5							9	6.5	8	5.25	5.6
TSS (mg/L) Raw Sewage Influent Average Monthly	115	152	131	138	140	144	153	19	124	135	174	87
TSS (mg/L) Weekly Average	5							9	8	11	6.00	8.0
Fecal Coliform (No./100 ml) Geometric Mean	< 1.0							1	< 1	1.41	< 1.0	< 1.0
Fecal Coliform (No./100 ml) Instantaneous Maximum	< 1.0							1	< 1	4	< 1.0	< 1.0
Nitrate-Nitrite (lbs/day) Average Monthly	13.82							1.04	5.69	13	10.48	8.44
Nitrate-Nitrite (mg/L) Average Monthly	5.2							2.5	4.28	4.9	5.6	5.02
Total Nitrogen (lbs/day) Average Monthly	23.08							2.07	7.81	17.5	12.68	11.10

Total Nitrogen (mg/L) Average Monthly	8.69							5	5.88	6.5	6.78	6.6
Ammonia (lbs/day) Average Monthly	0.33							0.47	0.23	0.43	0.26	0.29
Ammonia (mg/L) Average Monthly	0.12							1.13	0.17	0.16	0.14	0.17
TKN (lbs/day) Average Monthly	4.69							1.04	2.13	4.38	2.20	2.66
TKN (mg/L) Average Monthly	1.77							2.5	1.60	1.63	1.18	1.58
Total Phosphorus (lbs/day) Average Monthly	0.26							0.09	0.12	0.28	0.19	0.24
Total Phosphorus (mg/L) Average Monthly	0.10							0.21	0.09	0.1	0.10	0.14
Total Copper (lbs/day) Average Monthly	0.0112							0.0027	0.01643	0.0458	0.0161	0.0128
Total Copper (mg/L) Average Monthly	0.0042							0.0066	0.01235	0.017	0.0086	0.0076
Total Lead (lbs/day) Average Monthly	0.0027							0.0002	0.00133	0.0027	< 0.0019	0.0017
Total Lead (mg/L) Average Monthly	0.0010							0.0004	0.0010	0.001	< 0.0010	0.0010
Total Zinc (lbs/day) Average Monthly	0.1666							0.0182	0.13859	0.3503	0.2021	0.1917
Total Zinc (mg/L) Average Monthly	0.0627							0.0440	0.1042	0.130	0.1080	0.1140

Compliance History

Effluent Violations for Outfall 001, from: January 1, 2022 To: May 31, 2024

Parameter	Date	SBC	DMR Value	Units	Limit Value	Units

Temperature	03/31/24	Daily Max	53.2	ºF	46.7	ºF
Temperature	01/31/24	Daily Max	48.3	ºF	41.6	ºF
Temperature	12/31/23	Daily Max	59.0	ºF	43.3	ºF
Temperature	11/30/23	Daily Max	59.2	ºF	49.0	ºF
Temperature	11/30/23	Daily Max	48.6	ºF	47.2	ºF
Temperature	09/30/23	Daily Max	65.9	ºF	63.2	ºF
Temperature	03/31/23	Daily Max	53.3	ºF	46.7	ºF
Temperature	02/28/23	Daily Max	42.5	ºF	42.2	ºF
Temperature	01/31/23	Daily Max	49.1	ºF	41.6	ºF
Temperature	12/31/22	Daily Max	55.9	ºF	43.3	ºF
Temperature	11/30/22	Daily Max	58.3	ºF	49.0	ºF
Temperature	11/30/22	Daily Max	56.8	ºF	47.2	ºF
Temperature	02/28/22	Daily Max	47.2	ºF	42.2	ºF
Temperature	01/31/22	Daily Max	55.6	ºF	41.6	ºF
CBOD5	12/31/23	Avg Mo	38.01	lbs/day	33	lbs/day
CBOD5	12/31/23	Wkly Avg	54.6	lbs/day	50	lbs/day
CBOD5	03/31/24	Avg Mo	11.7	mg/L	10	mg/L
CBOD5	12/31/23	Avg Mo	11.2	mg/L	10	mg/L
CBOD5	05/31/23	Avg Mo	32.8	mg/L	10	mg/L
CBOD5	03/31/24	Wkly Avg	26.0	mg/L	15	mg/L
CBOD5	12/31/23	Wkly Avg	16.2	mg/L	15	mg/L
CBOD5	05/31/23	Wkly Avg	32.8	mg/L	15	mg/L

Fecal Coliform	09/30/23	Geo Mean	2419.6	No./100 ml	200	No./100 ml
Fecal Coliform	05/31/23	Geo Mean	2419.8	No./100 ml	200	No./100 ml
Fecal Coliform	09/30/23	IMAX	2419.6	No./100 ml	1000	No./100 ml
Fecal Coliform	05/31/23	IMAX	2419.8	No./100 ml	1000	No./100 ml
Ammonia	05/31/23	Avg Mo	6.12	mg/L	2.7	mg/L
Total Phosphorus	05/31/23	Avg Mo	1.1	mg/L	1.0	mg/L

Summary of Inspections:

SITE NAME	INSP PROGRAM	INSP ID	INSPECTED DATE	INSP TYPE	INSPECTION RESULT DESC	INSPECTOR ID	# OF VIOLATIONS
MT POCONO MUNI AUTH WWTP	WPCNP	3071033	02/06/2024	Administrative/File Review	Violation(s) Noted	00615077	1
MT POCONO MUNI AUTH WWTP	WPCNP	2882291	01/24/2024	Administrative/File Review	Violation(s) Noted	00615077	1
MT POCONO MUNI AUTH WWTP	WPCNP	3285354	01/23/2024	Compliance Evaluation	No Violations Noted	00615077	0
MT POCONO MUNI AUTH WWTP	WPCNP	3392352	01/19/2024	Routine/Partial Inspection	No Violations Noted	00615077	0
MT POCONO MUNI AUTH WWTP	WPCNP	3077715	07/12/2022	Complaint Inspection	No Violations Noted	00615077	0
MT POCONO MUNI AUTH WWTP	WPCNP	3343696	04/05/2022	Administrative/File Review	Viol(s) Noted & Immediately Corrected	00615077	1
MT POCONO MUNI AUTH WWTP	WPCNP	3119322	12/14/2021	Administrative/File Review	Viol(s) Noted & Immediately Corrected	00615077	1
MT POCONO MUNI AUTH WWTP	WPCNP	3077764	11/18/2021	Administrative/File Review	Violation(s) Noted	00615077	1
MT POCONO MUNI AUTH WWTP	WPCNP	3719547	04/12/2021	Routine/Partial Inspection	Violation(s) Noted	00723172	2

MT POCONO MUNI AUTH WWTP	WPCNP	3676155	01/05/2021	Administrative/File Review	Violation(s) Noted	00723172	1
MT POCONO MUNI AUTH WWTP	WPCNP	2794670	12/09/2020	Routine/Partial Inspection	Violation(s) Noted	00615077	1
MT POCONO MUNI AUTH WWTP	WPCNP	3069812	09/03/2020	Administrative/File Review	Violation(s) Noted	00615077	1
MT POCONO MUNI AUTH WWTP	WPCNP	2966388	08/22/2020	Administrative/File Review	Violation(s) Noted	00615077	1
MT POCONO MUNI AUTH WWTP	WPCNP	2759056	08/17/2020	Complaint Inspection	No Violations Noted	00615077	0
MT POCONO MUNI AUTH WWTP	WPCNP	3678307	08/09/2020	Administrative/File Review	Violation(s) Noted	00723172	1
MT POCONO MUNI AUTH WWTP	WPCNP	2694113	06/03/2020	Compliance Evaluation	Violation(s) Noted	00615077	1
MT POCONO MUNI AUTH WWTP	WPCNP	3015575	05/28/2020	Administrative/File Review	No Violations Noted	00615077	0
MT POCONO MUNI AUTH WWTP	WPCNP	3294715	03/31/2020	Administrative/File Review	Viol(s) Noted & Immediately Corrected	00615077	1
MT POCONO MUNI AUTH WWTP	WPCNP	3178497	02/05/2020	Administrative/File Review	Violation(s) Noted	00615077	1
MT POCONO MUNI AUTH WWTP	WPCNP	2989095	01/22/2020	Administrative/File Review	Violation(s) Noted	00615077	1
MT POCONO MUNI AUTH WWTP	WPCNP	3041295	12/03/2019	Administrative/File Review	Violation(s) Noted	00615077	1
MT POCONO MUNI AUTH WWTP	WPCNP	3677696	05/16/2019	Administrative/File Review	Violation(s) Noted	00723172	1
MT POCONO MUNI AUTH WWTP	WPCNP	2994962	05/01/2019	Administrative/File Review	Violation(s) Noted	00615077	1
MT POCONO MUNI AUTH WWTP	WPCNP	2724271	10/04/2018	Complaint Inspection	Violation(s) Noted	00615077	1
MT POCONO MUNI AUTH WWTP	WPCNP	3129221	08/14/2018	Administrative/File Review	Violation(s) Noted	00615077	1
MT POCONO MUNI AUTH WWTP	WPCNP	2765196	07/25/2018	Administrative/File Review	No Violations Noted	00615077	0
MT POCONO MUNI AUTH WWTP	WPCNP	2876487	07/16/2018	Administrative/File Review	No Violations Noted	00615077	0

MT POCONO MUNI AUTH WWTP	WPCNP	3041592	04/25/2018	Administrative/File Review	No Violations Noted	00615077	0
MT POCONO MUNI AUTH WWTP	WPCNP	2754082	02/08/2018	Complaint Inspection	No Violations Noted	00615077	0

Other Comments:

- 12/3/2019 Notice of Violation (NOV) for batch discharges (contrary to existing NPDES permit Part C.III permit condition).
- 2/6/2024 Inspection Report noted some issues with failure to report all required information on the DMRs and Supplemental Report forms. Corrected DMRs and forms were requested. Report also noted that Stream monitoring point Nos. 2 and 3 temperature monitoring points were damaged due to high flow events, with MPMA was obtaining temperature information using Hoboware dataloggers. **NOTE**: See EDMR data above (generated in March 2024). Possible incorrect unit reporting for copper as well, or significant spiking occurred. Report noted that three (3) stream temperatures were being submitted on DMRs.
- Facility started spray irrigation prior to addressing several WQM permit requirements.
  - They started-up spray irrigation prior to submittal of construction certification to the Department.
  - Special Condition A.12 required the construction certification (including as-built drawings) upon completion of construction.
  - Special Condition B.5 required both sampling and LPG Report be submitted prior to the operation of the spray irrigation system. Biannual (April and October) monitoring required thereafter
- NPDES Permit EDMR Issues:
  - The NPDES Permit Supplemental Inventory Table included the “Land Application Systems (3800-FM-BPNPSM0449)” along with standard language requiring submittal of table-listed forms. The form was included with the other Supplemental Forms. They appear not to have submitted it for the months (via NPDES EDMR) when they were doing spray irrigation. They indicated Central Office directed them to not submit the land application report via EDMR (under the NPDES permit number), but NPDES Permit language governs.
  - The treatment system is permitted for UV disinfection (1991 WQM permit with chlorine contact tank removed; NPDES application only references UV disinfection) but is routinely reporting chlorine in effluent. The WQM permits did not authorize supplemental chlorine disinfection and it is not listed in the NPDES Permit Renewal Application. This indicates apparent UV disinfection system O&M issues.
  - The reported mass concentration spiking (CBOD5, TSS, etc.) is inconsistent with existing concentration limits, would indicate either sampling issues or intermittent solids washouts. The new permit will include recalculated mass loading and flow-proportional 24-hour composite sampling to eliminate biasing.
- Open Violations: 2 open violations per 7/25/2024 WMS Query (open violations by client number):

FACILITY	INSP PROGRAM	INSP ID	VIOLATION ID	VIOLATION DATE	VIOLATION CODE	VIOLATION
MT POCONO MUN AUTH	WPC NPDES	3719547	8177279	02/06/2024	92A.44	NPDES - Violation of effluent limits in Part A of permit
MT POCONO MUN AUTH	WPC NPDES	3719547	8177280	02/06/2024	92A.46	NPDES - Violation of Part C permit condition(s)

Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** 0.400 (Tier 1) 0.500 (Tier 2)
Latitude 41º 6' 55.00" **Longitude** -75º 21' 6.00"
Wastewater Description: Sewage Effluent

Tier 1 (≤0.400 MGD) Permit Limits and Monitoring: Changes Bolded

Parameter	Limit (mg/l unless otherwise specified)	SBC	Model/Basis
Flow	**0.400** Report	Monthly Average Daily Max	Existing Tier 1 permit limit incorporated until Part C conditions are met for Tier 2 discharge.
CBOD5	**6.1** Lbs/d **9.2** Lbs/d 10**.0** 15**.0** 20**.0**	Monthly Average Weekly Average Monthly Average Weekly Average IMAX	Existing WQBEL (Chapter 92a.47) supported by water quality modeling. **Significant digit added. Mass limits recalculated.** Application data: 12.9 mg/l max and 4.33 mg/l average (50 samples). Average monthly mass load spiking to **38.01 lbs/d** per EDMR.
TSS	**18.5** Lbs/d **27.8** Lbs/d 30**.0** 45**.0** 60**.0**	Monthly Average Weekly Average Monthly Average Weekly Average IMAX	Existing Technology limit (Chapter 92a.47) **Significant digit added. Mass limits recalculated.** Application data: 31 mg/l max and 4.33 mg/l average (50 samples). Average monthly mass load spiking to **24.28 lbs/d** per EDMR.
pH	6.0 – 9.0 SU	Inst. Min - IMAX	Existing Technology limit (Chapter 92a.47)
Dissolved Oxygen (DO)	7.0	**Inst.** Minimum	Existing WQBEL updated to Instantaneous Minimum per DRBC Docket and grab sampling EDMR reporting. Application data: 7.1 mg/l (minimum of 315 samples)
Fecal Coliform (5/1 – 9/30)	200/100 ml 1,000/100 ml	Geo Mean IMAX	Existing Technology limit (Chapter 92a.47) Application data: 2419.6/100 ml max and 53.28/100 ml average (48 samples)
Fecal Coliform (10/1 – 4/30)	2,000/100 ml 10,000 ml/100 ml	Geo Mean IMAX	See above
Total Residual Chlorine **(Interim)**	0.10 0.33	Monthly Average IMAX	**New WQBEL required per TRC Spreadsheet water quality modeling. See chlorine minimization condition.** Application data: 0.2 mg/l max and 0.02 mg/l average (315 samples)
Total Residual Chlorine **(Final)**	**0.02** **0.06**	Monthly Average IMAX	**See above**
UV Intensity	**Report (µw/cm²)**	**Inst. Minimum**	**Standard monitoring requirement for UV disinfection systems.**

Ammonia-Nitrogen (May 1 - Oct 31) **Interim – Tier 1**	**1.6** Lbs/d **3.3 Lbs/d** 2.7 **5.4** 5.4	Monthly Average **Daily Max** Monthly Average **Daily Max** IMAX	**Existing WQBEL no longer supported by water quality modeling. Mass limits recalculated.** Application data: 2.99 mg/l max and 0.49 mg/l average (50 samples). Average monthly mass load spiking to **10.8 lbs/d** per EDMR.
Ammonia-Nitrogen (Nov 1 - Apr 30) **Interim – Tier 1**	**5.0** Lbs/d **10.0** Lb/d 8.1 **16.2** 16.2	Monthly Average **Daily Max** Monthly Average **Daily Max** IMAX	See above
Ammonia-Nitrogen **(May 1 - Oct 31)** **Final – Tier 1**	**0.9 Lbs/d** **1.9 Lbs/d** **1.54** **3.08** **3.08**	**Monthly Average** **Daily Max** **Monthly Average** **Daily Max** **IMAX**	**New Tier 1 (0.40 MGD) WQBEL per water quality modeling.** Application data: 2.99 mg/l max and 0.49 mg/l average (50 samples).
Ammonia-Nitrogen **(Nov 1 - Apr 30)** **Final – Tier 1**	**2.8 Lbs/d** **5.7 Lbs/d** **4.62** **9.24** **9.24**	**Monthly Average** **Daily Max** **Monthly Average** **Daily Max** **IMAX**	See above
Total Phosphorus	**0.6** Lbs/d **1.2 Lbs/d** 1.0 **2.0** 2.0	Monthly Average **Daily Max** Monthly Average **Daily Max** IMAX	**Existing WQBEL. Mass limits recalculated.** Application data: 1.0 mg/l max and 0.21 mg/l average (50 samples). Average monthly mass load spiking to **1.8 lbs/d** per EDMR.
Total Nitrogen (Nitrate-N + Nitrite-N + TKN measured in same sample)	Report Lbs/d **Report Lbs/d** Report **Report**	Monthly Average **Daily Max** Monthly Average **Daily Max**	**Existing monitoring requirement.** Application data: 8.4 mg/l max and 5.84 mg/l average (50 samples)
Nitrate-Nitrite as N **Tier 1**	**8.5** Lbs/d **17.0 Lbs/d** 13.8 **27.6** 27.6	Monthly Average **Daily Max** Monthly Average **Daily Max** IMAX	Existing WQBEL. **Mass limits recalculated.** Application data: 7.1 mg/l max and 1.68 mg/l average (50 samples). Average monthly mass load spiking to **13.28 lbs/d** per EDMR.
Total Kjehldahl Nitrogen (TKN)	Report Lbs/d **Report Lbs/d** Report **Report**	Monthly Average **Daily Max** Monthly Average **Daily Max**	See above Application data: 4.87 mg/l max and 4.33 mg/l average (50 samples)
CBOD5 Minimum Reduction	**85%**	**Minimum Monthly Average**	**DRBC Docket requirement. Existing Part A.I Additional Requirements narrative limit also.**
TSS Minimum Reduction	**85%**	**Minimum Monthly Average**	**Existing Part A.I Additional Requirements narrative limit. Reporting now required.**
Copper, Total **Interim**	Report Lbs/day **Report Lbs/day** Report **Report**	Monthly Average **Daily Max** Monthly Average **Daily Max**	**New WQBELs per Reasonable Potential Analysis.** Application data: **0.017 mg/l max and 0.10 mg/l average** (18 samples). EDMR data included either wrong units or spiking. Toxconc LTA of ~13.7 ug/l

Copper, Total **Final**	**0.039 Lbs/day** **0.064 Lbs/day** **11.7 ug/l** **19.3 ug/l** **29.3 ug/l**	**Monthly Average** **Daily Max** **Monthly Average** **Daily Max** **IMAX**	See above
Lead, Total **Interim**	Report Lbs/day **Report Lbs/day** Report **Report**	Monthly Average **Daily Max** Monthly Average **Daily Max**	**New WQBELs per Reasonable Potential Analysis** Application data: 0.001 mg/l max and 0.001 mg/l average (18 samples). EDMR data included either wrong units or spiking. TOXCONC LTA of 4.95 ug/l
Lead, Total **Final**	**0.14 Lbs/day** **0.17 Lbs/day** **4.33 ug/l** **5.06 ug/l** **10.8 ug/l**	**Monthly Average** **Daily Max** **Monthly Average** **Daily Max** **IMAX**	See above.
Zinc, Total **Interim**	Report Lbs/day **Report Lbs/day** Report **Report**	Monthly Average **Daily Max** Monthly Average **Daily Max**	**New WQBELs per Reasonable Potential Analysis** Application data: **0.13 mg/l max (130 ug/l)** and 0.08 mg/l average (80 ug/l) (50 samples). TOXCONC LTA of ~123 ug/l.
Zinc, Total **Final**	**0.47 Lbs/day** **0.47 Lbs/day** **141.0 ug/l** **141.0 ug/l** **141.0 ug/l**	**Monthly Average** **Daily Max** **Monthly Average** **Daily Max** **IMAX**	See above
Temperature (ºF) Jan 1 - 31	41.6 (interim) **39.8 (Final)**	Daily Max	Existing WQBELs interim, **with Final WQBELs from updated modeling below**. Application data: 72.3 °F max and 44.18 °F average (163 measurements).
Temperature (ºF) Feb 1 - 28	42.2 (interim) **40.2 (Final)**	Daily Max	See above
Temperature (ºF) Mar 1 - 31	46.7 (interim) **42.7 (Final)**	Daily Max	See above
Temperature (ºF) Apr 1 - 15	63 (interim) **50.4 (Final)**	Daily Max	See above
Temperature (ºF) Apr 16 - 30	63 (interim) **54.3 (Final)**	Daily Max	See above
Temperature (ºF) May 1 - 15	64 (interim) **55.5 (Final)**	Daily Max	See above
Temperature (ºF) May 16 - 31	69 (interim) **60.6 (Final)**	Daily Max	See above
Temperature (ºF) Jun 1 - 15	72.3 (interim) **61.3 (Final)**	Daily Max	See above

Temperature (ºF) Jun 16 - 30	75 (interim) **65.0 (Final)**	Daily Max	See above
Temperature (ºF) Jul 1 - 31	77.3 (interim) **67.2 (Final)**	Daily Max	See above
Temperature (ºF) Aug 1 - 31	75 (interim) **67.0 (Final)**	Daily Max	See above
Temperature (ºF) Sep 1 - 15	70.7 (interim) **64.7 (Final)**	Daily Max	See above
Temperature (ºF) Sep 16 - 30	63.2 (interim) **60.3 (Final)**	Daily Max	See above
Temperature (ºF) Oct 1 - 15	55.8 (interim) **54.2 (Final)**	Daily Max	See above
Temperature (ºF) Oct 16 - 31	51.2 (interim) **50.1 (Final)**	Daily Max	See above
Temperature (ºF) Nov 1 - 15	49 (interim) **48.1 (Final)**	Daily Max	See above
Temperature (ºF) Nov 16 - 30	47.2 (interim) **46.3 (Final)**	Daily Max	See above
Temperature (ºF) Dec 1 - 31	43.3 (interim) **42.0 (Final)**	Daily Max	See above
CBOD5 Influent Monitoring	Report Lbs/day Report Lbs/day Report Report	Monthly Average Daily Max Monthly Average Daily Max	**DRBC Docket required CBOD5 influent monitoring.** Replacing previous existing BOD5 monitoring requirement
TSS Influent Monitoring	Report Lbs/day Report Lbs/day Report Report	Monthly Average Daily Max Monthly Average Daily Max	Existing M&R requirement
Total Dissolved Solids (TDS)	**Report Lbs/day** **Report Lbs/day** **Report** **Report**	**Quarterly Average** **Daily Max** **Quarterly Average** **Daily Max**	**Monitoring to gather data (Chapter 92a.61). DRBC docket did not identify limit for flows up to 0.40 MGD.**

<u>Tier 2 (0.500 MGD) Permit Limits and Monitoring</u>: Changes Bolded. **Final Limits (only) due to application indicating Tier 2 Part C requirements cannot be met, interim limits are omitted except for informational purposes.**

Parameter	Limit (mg/l unless otherwise specified)	SBC	Model/Basis
Flow	**0.500** Report	Monthly Average Daily Max	<u>Existing</u> Tier 2 permit limit incorporated in event Part C conditions (incorporating by reference a non-DEP Consent Decree requirements for >0.40 MGD monthly average flow) are met.
CBOD5	**7.7** Lbs/d **11.6** Lbs/d 10**.0** 15**.0** 20**.0**	Monthly Average Weekly Average Monthly Average Weekly Average IMAX	Existing WQBELs supported by water quality modeling. **Mass load limits recalculated. Significant digit added.**
TSS	**23.2** Lbs/d **34.8** Lbs/d	Monthly Average Weekly Average	Existing TBEL. **Mass load limits recalculated. Significant digit added.**

	30**.0** 45**.0** 60**.0**	Monthly Average Weekly Average IMAX	
pH	6.0 – 9.0 SU	Inst. Min - IMAX	Existing Technology limit (Chapter 92a.47)
Dissolved Oxygen (DO)	7.0	**Inst.** Minimum	Existing WQBEL updated to Instantaneous Minimum per DRBC Docket and grab sampling reporting. Application data: 7.1 mg/l (minimum of 315 samples)
Fecal Coliform (5/1 – 9/30)	200/100 ml 1,000/100 ml	Geo Mean IMAX	Existing Technology limit (Chapter 92a.47) Application data: 2419.6/100 ml max and 53.28/100 ml average (48 samples)
Fecal Coliform (10/1 – 4/30)	2,000/100 ml 10,000 ml/100 ml	Geo Mean IMAX	See above
Total Residual Chlorine **(Final)**	**0.02** **0.05**	Monthly Average IMAX	Updated WQBEL required per TRC Spreadsheet. **See chlorine minimization condition. Old limits were 0.08 mg/l monthly average, and 0.27 mg/l IMAX.** Application data: 0.2 mg/l max and 0.02 mg/l average (315 samples)
Ammonia-Nitrogen **(May 1 - Oct 31)** **Final – Tier 2**	**1.1 Lbs/d** **2.3 Lbs/d** **1.5** **3.0** **3.0**	**Monthly Average** **Daily Max** **Monthly Average** **Daily Max** **IMAX**	**New Tier 2 (0.500 MGD) WQBEL per water quality modeling.** Application data: 2.99 mg/l max and 0.49 mg/l average (50 samples).
Ammonia-Nitrogen **(Nov 1 - Apr 30)** **Final – Tier 2**	**3.4 Lbs/d** **6.9 Lbs/d** **4.5** **9.0** **9.0**	**Monthly Average** **Daily Max** **Monthly Average** **Daily Max** **IMAX**	See above
Total Phosphorus	**0.7** Lbs/d **1.5 Lbs/d** 1.0 **2.0** 2.0	Monthly Average **Daily Max** Monthly Average **Daily Max** IMAX	Existing WQBEL. **Recalculated mass load limit.** Application data: 1.0 mg/l max and 0.21 mg/l average (50 samples)
Total Nitrogen (Nitrate-N + Nitrite-N + TKN measured in same sample)	Report Lbs/d **Report Lbs/d** Report **Report**	Monthly Average **Daily Max** Monthly Average **Daily Max**	**Existing monitoring requirement.** Application data: 8.4 mg/l max and 5.84 mg/l average (50 samples)
Nitrate-Nitrite as N **Tier 2**	**10.6** Lbs/d **21.3 Lbs/d** 13.8 **27.6** 27.6	Monthly Average **Daily Max** Monthly Average **Daily Max** IMAX	Existing WQBEL. **Recalculated mass load limit** Application data: 7.1 mg/l max and 1.68 mg/l average (50 samples). Average monthly mass load spiking to **13.28 lbs/d** per EDMR..
Total Kjehldahl Nitrogen (TKN)	Report Lbs/d **Report Lbs/d** Report **Report**	Monthly Average **Daily Max** Monthly Average **Daily Max**	See above Application data: 4.87 mg/l max and 4.33 mg/l average (50 samples)
CBOD5 Minimum Reduction	**85%**	**Minimum Monthly Average**	**DRBC Docket requirement. Existing Part A.I Additional Requirements narrative limit also.**

TSS Minimum Reduction	**85%**	**Minimum Monthly Average**	**Existing Part A.I Additional Requirements narrative limit. Reporting now required.**
Copper, Total **Interim**	Report Lbs/day **Report Lbs/day** Report ug/l **Report ug/l**	Monthly Average **Daily Max** Monthly Average **Daily Max**	**New WQBELs per Reasonable Potential Analysis.** Application data: **0.017 mg/l max and 0.10 mg/l average** (18 samples). EDMR data included either wrong units or spiking. TOXCONC calculated LTA of ~13.7 ug/l.
Copper, Total **Final**	**0.048 Lbs/day** **0.08 Lbs/day** **11.6 ug/l** **19.1 ug/l** **29.1 ug/l**	**Monthly Average** **Daily Max** **Monthly Average** **Daily Max** **IMAX**	**See above.**
Lead, Total **Interim**	Report Lbs/day **Report Lbs/day** Report **Report**	Monthly Average **Daily Max** Monthly Average **Daily Max**	**New WQBELs per Reasonable Potential Analysis** Application data: 0.001 mg/l max and 0.001 mg/l average (18 samples). TOXCONC calculated LTA of 4.95 ug/l.
Lead, Total **Final**	**0.18 Lbs/day** **0.21 Lbs/day** **4.3 ug/l** **5.02 ug/l** **10.8 ug/l**	**Monthly Average** **Daily Max** **Monthly Average** **Daily Max** **IMAX**	See above.
Zinc, Total **Interim**	Report Lbs/day **Report Lbs/day** Report **Report**	Monthly Average **Daily Max** Monthly Average **Daily Max**	**New WQBELs per Reasonable Potential Analysis** Application data: **0.13 mg/l max (130 ug/l)** and 0.08 mg/l average (80 ug/l) (50 samples). TOXCONC calculated LTA of ~123 ug/l.
Zinc, Total **Final**	**0.59 Lbs/day** **0.59 Lbs/day** **141.0 ug/l** **141.0 ug/l** **141.0 ug/l**	**Monthly Average** **Daily Max** **Monthly Average** **Daily Max** **IMAX**	See above
Temperature (ºF) Jan 1 - 31	41.2 (old) **39.8 (Final)**	Daily Max	New WQBELs. Previous Tier 2 values supplied to allow for comparison. Application data: 72.3 °F max and 44.18 °F average (163 measurements).
Temperature (ºF) Feb 1 - 28	41.8 (old) **40.2 (Final)**	Daily Max	See above
Temperature (ºF) Mar 1 - 31	45.8 (old) **42.6 (Final)**	Daily Max	See above
Temperature (ºF) Apr 1 - 15	63 (old) **49.9 (Final)**	Daily Max	See above
Temperature (ºF) Apr 16 - 30	63 (old) **53.8 (Final)**	Daily Max	See above
Temperature (ºF) May 1 - 15	64 (old) **55.2 (Final)**	Daily Max	See above
Temperature (ºF) May 16 - 31	69 (old) **60.0 (Final)**	Daily Max	See above
Temperature (ºF) Jun 1 - 15	69.8 (old) **61.1 (Final)**	Daily Max	See above

Temperature (ºF) Jun 16 - 30	75 (old) **65.6 (Final)**	Daily Max	See above
Temperature (ºF) Jul 1 - 31	75 (old) **67.0 (Final)**	Daily Max	See above
Temperature (ºF) Aug 1 - 31	73.2 (old) **66.8 (Final)**	Daily Max	See above
Temperature (ºF) Sep 1 - 15	69.3 (old) **64.6 (Final)**	Daily Max	See above
Temperature (ºF) Sep 16 - 30	62.6 (old) **60.3 (Final)**	Daily Max	See above
Temperature (ºF) Oct 1 - 15	55.4 (old) **54.2 (Final)**	Daily Max	See above
Temperature (ºF) Oct 16 - 31	51 (old) **50.1 (Final)**	Daily Max	See above
Temperature (ºF) Nov 1 - 15	48.8 (old) **48.0 (Final)**	Daily Max	See above
Temperature (ºF) Nov 16 - 30	47 (old) **46.3 (Final)**	Daily Max	See above
Temperature (ºF) Dec 1 - 31	43 (old) **41.9 (Final)**	Daily Max	See above
CBOD5 Influent Monitoring	Report Lbs/day Report Lbs/day Report Report	Monthly Average Daily Max Monthly Average Daily Max	**DRBC Docket required CBOD5 influent monitoring.** Previously existing BOD5 monitoring requirement
TSS Influent Monitoring	Report Lbs/day Report Lbs/day Report Report	Monthly Average Daily Max Monthly Average Daily Max	Existing M&R requirement
Total Dissolved Solids (TDS)	**Report Lbs/day** **Report Lbs/day** **1000.0** **2000.0** **2000.0**	**Quarterly Average** **Daily Max** **Quarterly Average** **Daily Max** **IMAX**	**New DRBC Docket Limit with standard multipliers.**

Outfall/IMP No. 002 Part A.I.E: Stream Temperature Change: New reporting requirement

Parameter	Limit (mg/l unless otherwise specified)	SBC	Model/Basis
Temperature, Delta (Discharge - Intake) (deg F) (ºF)*	**2 °F in one hour**	**Daily Max**	Existing Part C limit now requiring monitoring and reporting.

* For purpose of this limit (Part C), the “Discharge” is Stream Monitor Point 002 (downstream of Outfall No. 001) temperature. The “Intake” is Stream Monitoring Point 001 (Upstream of Outfall No. 001) temperature. These stream temperature monitoring points were required by NPDES permit conditions.

Comments:

- **Limits/Monitoring updated**:
  - Thermal limits minimum monitoring frequencies changed to “daily when discharging” (applicable only to stream discharge). To clarify Thermal Limits requirements/terminology:

- "Daily Discharge" (Part A.II) means the discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. For pollutants with limitations expressed in units of mass, the "daily discharge" is calculated as the total mass of the pollutant discharged over the day. For pollutants with limitations expressed in other units of measurement, the "daily discharge" is calculated as the average measurement of the pollutant over the day. (25 Pa. Code § 92a.2, 40 CFR 122.2)
- "Daily Maximum Discharge Limitation" (Part A.II) means the highest allowable "daily discharge."
- "I-S" means "in-situ"
- Part C.I.I: The discharge may not change the temperature of the receiving stream by more than 2°F in any one-hour period in current permit. Chapter 96.6 requirement.
- The MPMA-installed "Chiller" Equipment Reduces Temperature a certain amount (not to a specific degree target), therefore is dependent on the influent/baseline temperature per MPMA. Existing permit specifies a degree limit regardless of baseline temperature

- WWTP effluent, being directed to the Spray Irrigation System, must be fully treated and meeting Part A limits except for thermal limits and TRC).
- Mass loading limits: The previous mass loading limits are inconsistent with the existing concentration limits. The mass loading limits were recalculated and updated to be consistent.
- DO is now Instantaneous Minimum (standard for grab sample)
- 24-hour composite sampling required (to eliminate possible biasing with 8-hour composite sampling that likely contributed to reported high mass loading rates inconsistent with concentration limits). All composite sampling must be flow-proportional.
- Significant digits included to clarify point of compliance
- New daily max limit set equal to existing IMAX limit (as any duration of exceedance is an exceedance of the IMAX limit)
- Additional daily max reporting (no additional sampling required)

Comments:

Effluent Total Hardness: MPMA supplied 45 effluent sample results (ranging from 76.9 mg/l to 245 mg/l). The arithmetic average was 123.8 mg/l (with the number of samples enough to assume a normal distribution). TOXCONC statistical methodology (designed to determine permit limits) is not applicable to Total Hardness results (see DEP Technical Guidance for correct calculation methodology).

Antidegradation: There is no increased, additional or new discharges proposed. Therefore, no additional stream degradation issues are expected if permit limits and conditions are met**.** New WQBELs are expected to reduce existing impact on receiving stream.

TOXCONC Output: The lead results are skewed due to missing ND concentration (reported as '"0" on table with too few detections to allow for accurate statistical analysis). Therefore, original daily max concentration retained in Reasonable Potential, triggering monitoring only. **ASSUMING DEP TQLs**

		Reviewer/Permit Engineer:	James Berger
Facility:	Mount Pocono Municipal Authority WWTP		
NPDES #:	PA0044997		
Outfall No:	001		
n (Samples/Month):	4		
Parameter	**Distribution Applied**	**Coefficient of Variation (daily)**	**Avg. Monthly**
Copper (µg/L)	Delta-Lognormal	0.6079073	13.7633924
Lead (µg/L)	Delta-Lognormal	8.4373105	4.9522703
Zinc (µg/L)	Lognormal	0.3333964	123.0644495

At Tier 1 (0.400 MGD Flow):

☑ ***Recommended WQBELs & Monitoring Requirements***

No. Samples/Month: 4

	Mass Limits		*Concentration Limits*						
Pollutants	AML (lbs/day)	MDL (lbs/day)	AML	MDL	IMAX	Units	Governing WQBEL	WQBEL Basis	Comments
Total Copper	0.039	0.065	11.7	19.3	29.3	µg/L	11.7	CFC	Discharge Conc ≥ 50% WQBEL (RP)
Total Lead	0.014	0.017	4.33	5.06	10.8	µg/L	4.33	CFC	Discharge Conc ≥ 50% WQBEL (RP)
Total Zinc	0.47	0.47	141	141	141	µg/L	141	AFC	Discharge Conc ≥ 50% WQBEL (RP)

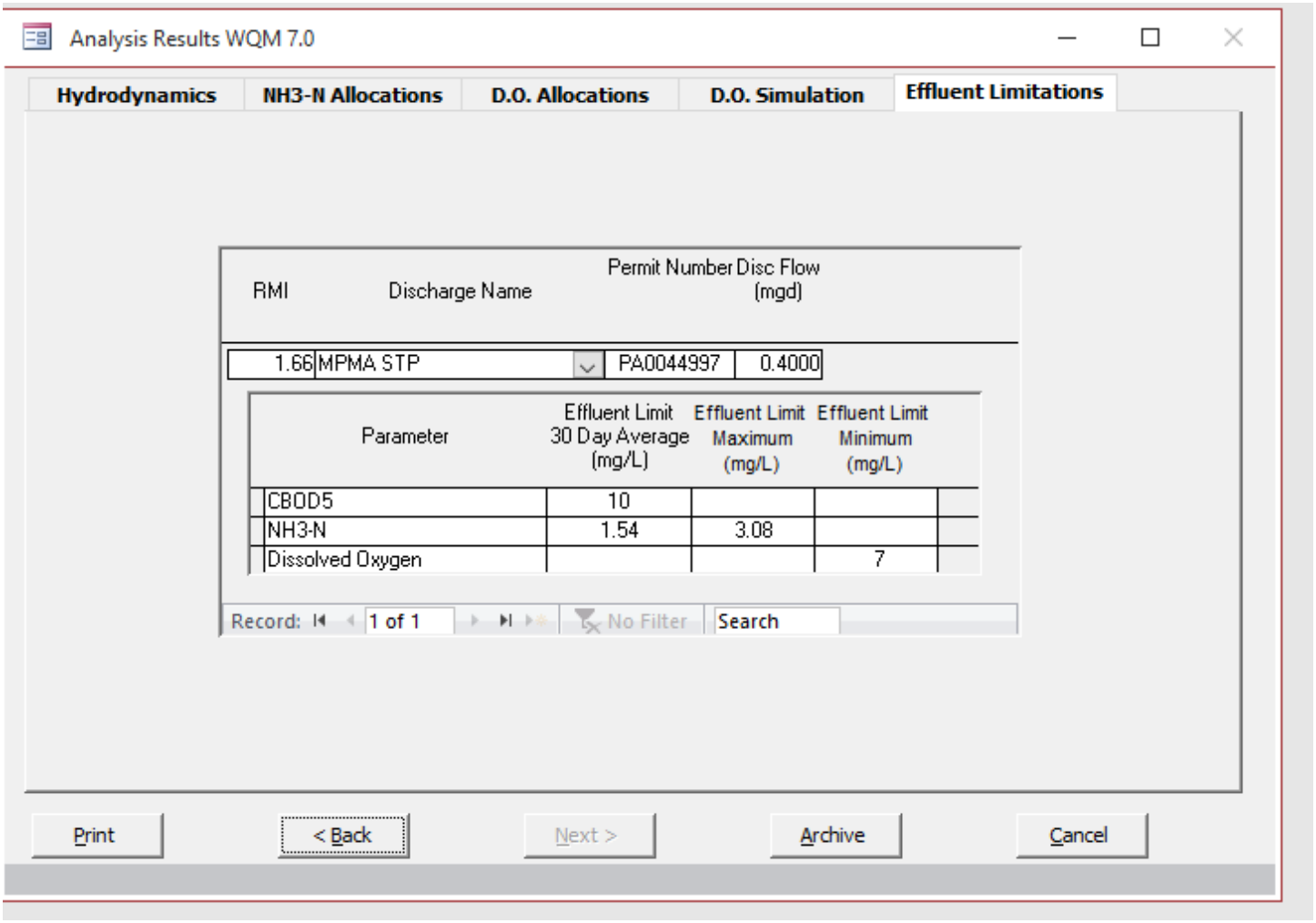
At Tier 2 (0.500 MGD Flow):

☑ ***Recommended WQBELs & Monitoring Requirements***

No. Samples/Month: 4

	Mass Limits		*Concentration Limits*						
Pollutants	AML (lbs/day)	MDL (lbs/day)	AML	MDL	IMAX	Units	Governing WQBEL	WQBEL Basis	Comments
Total Copper	0.048	0.08	11.6	19.2	29.1	µg/L	11.6	CFC	Discharge Conc ≥ 50% WQBEL (RP)
Total Lead	0.018	0.021	4.3	5.02	10.8	µg/L	4.3	CFC	Discharge Conc ≥ 50% WQBEL (RP)
Total Zinc	0.59	0.59	141	141	141	µg/L	141	AFC	Discharge Conc ≥ 50% WQBEL (RP)

WQM Model 7.0 Output (Tier 1):



WQM Model 7.0 Output (Tier 2):

Analysis Results WQM 7.0

Hydrodynamics | NH3-N Allocations | D.O. Allocations | D.O. Simulation | Effluent Limitations

RMI	Discharge Name	Permit Number	Disc Flow (mgd)
1.66	MPMA STP	PA0044997	0.5000

Parameter	Effluent Limit 30 Day Average (mg/L)	Effluent Limit Maximum (mg/L)	Effluent Limit Minimum (mg/L)
CBOD5	10		
NH3-N	1.5	3	
Dissolved Oxygen			7

Record: 1 of 1 | No Filter | Search

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MPMAWQMModel7A.pdf

<u>At Tier 1 (and not in constant usage)</u>:

TRC EVALUATION					
Input appropriate values in A3:A9 and D3:D9		MPMA WWTP			
0.04258	= Q stream (cfs)	0.5	= CV Daily		
0.4	= Q discharge (MGD)	0.5	= CV Hourly		
4	= no. samples	1	= AFC_Partial Mix Factor		
0.3	= Chlorine Demand of Stream	1	= CFC_Partial Mix Factor		
0	= Chlorine Demand of Discharge	15	= AFC_Criteria Compliance Time (min)		
0.5	= BAT/BPJ Value	720	= CFC_Criteria Compliance Time (min)		
0	= % Factor of Safety (FOS)		=Decay Coefficient (K)		
Source	Reference	AFC Calculations		Reference	CFC Calculations
TRC	1.3.2.iii	WLA afc = 0.041		1.3.2.iii	WLA cfc = 0.032
PENTOXSD TRG	5.1a	LTAMULT afc = 0.373		5.1c	LTAMULT cfc = 0.581
PENTOXSD TRG	5.1b	LTA_afc= 0.015		5.1d	LTA_cfc = 0.019
Source		Effluent Limit Calculations			
PENTOXSD TRG	5.1f	AML MULT = 1.720			
PENTOXSD TRG	5.1g	AVG MON LIMIT (mg/l) = 0.026		AFC	
		INST MAX LIMIT (mg/l) = 0.061			

At Tier 2 (and not in constant usage):

	A	B	C	D	E	F	G
1	TRC EVALUATION						
2	Input appropriate values in A3:A9 and D3:D9			MPMA WWTP			
3	0.04258	= Q stream (cfs)		0.5	= CV Daily		
4	0.5	= Q discharge (MGD)		0.5	= CV Hourly		
5	4	= no. samples		1	= AFC_Partial Mix Factor		
6	0.3	= Chlorine Demand of Stream		1	= CFC_Partial Mix Factor		
7	0	= Chlorine Demand of Discharge		15	= AFC_Criteria Compliance Time (min)		
8	0.5	= BAT/BPJ Value		720	= CFC_Criteria Compliance Time (min)		
9	0	= % Factor of Safety (FOS)			=Decay Coefficient (K)		
10	Source	Reference	AFC Calculations		Reference	CFC Calculations	
11	TRC	1.3.2.iii	WLA afc = 0.037		1.3.2.iii	WLA cfc = 0.028	
12	PENTOXSD TRG	5.1a	LTAMULT afc = 0.373		5.1c	LTAMULT cfc = 0.581	
13	PENTOXSD TRG	5.1b	LTA_afc= 0.014		5.1d	LTA_cfc = 0.016	
14							
15	Source		Effluent Limit Calculations				
16	PENTOXSD TRG	5.1f	AML MULT = 1.720				
17	PENTOXSD TRG	5.1g	AVG MON LIMIT (mg/l) = 0.023		AFC		
18			INST MAX LIMIT (mg/l) = 0.055				
19							
20							
21							

Thermal Limits (0.400 MGD Tier 1) Output: Incorporating previous thermal modeling ambient temperature (2002-2004) in the absence of statistically-determined mean and median temperatures (incorporating updated ambient stream data from the NPDES Permit-required Stream Monitoring Station No. 001 (upstream of Outfall No. 001)).

Facility: **Mount Pocono Municipal Authority WWTP**
Permit Number: PA0044997
Stream: Forest Hills Run

	CWF Ambient Stream Temperature (°F) (Default)	Ambient Stream Temperature (°F) (Site-specific data)	Target Maximum Stream Temp.[1] (°F)	CWF Daily WLA[2] (Million BTUs/day)	CWF Daily WLA[3] (°F)	at Discharge Flow (MGD)	PMF
Jan 1-31	34	38.6	39.6	N/A -- Case 2	39.8	0.4	1.00
Feb 1-29	35	39	40	N/A -- Case 2	40.2	0.4	1.00
Mar 1-31	39	41.2	42.2	N/A -- Case 2	42.7	0.4	1.00
Apr 1-15	46	44.2	48	N/A -- Case 2	50.4	0.4	1.00
Apr 16-30	52	48.4	52	N/A -- Case 2	54.3	0.4	1.00
May 1-15	55	49.6	54	N/A -- Case 2	55.5	0.4	1.00
May 16-31	59	50.7	58	N/A -- Case 2	60.6	0.4	1.00
Jun 1-15	63	53.6	60	N/A -- Case 2	61.3	0.4	1.00
Jun 16-30	67	54.6	64	N/A -- Case 2	65.9	0.4	1.00
Jul 1-31	71	55.6	66	N/A -- Case 2	67.2	0.4	1.00
Aug 1-15	70	55.9	66	N/A -- Case 2	67.0	0.4	1.00
Aug 16-31	70	55.9	66	N/A -- Case 2	67.0	0.4	1.00
Sep 1-15	66	54.5	64	N/A -- Case 2	64.7	0.4	1.00
Sep 16-30	60	55.4	60	N/A -- Case 2	60.3	0.4	1.00
Oct 1-15	55	51.7	54	N/A -- Case 2	54.2	0.4	1.00
Oct 16-31	51	48.4	50	N/A -- Case 2	50.1	0.4	1.00
Nov 1-15	46	47	48	N/A -- Case 2	48.1	0.4	1.00
Nov 16-30	40	45.2	46.2	N/A -- Case 2	46.3	0.4	1.00
Dec 1-31	35	40.8	41.8	N/A -- Case 2	42.0	0.4	1.00

[1] This is the maximum of the CWF WQ criterion or the ambient temperature. The ambient temperature may be either the design (median) temperature for CWF, or the ambient stream temperature based on site-specific data entered by the user. A minimum of 1°F above ambient stream temperature is allocated.
[2] The WLA expressed in Million BTUs/day is valid for Case 1 scenarios, and disabled for Case 2 scenarios.
[3] The WLA expressed in °F is valid only if the limit is tied to a daily discharge flow limit (may be used for Case 1 or Case 2). WLAs greater than 110°F are displayed as 110°F.

Thermal Limits (Tier 2) Output: Incorporating previous thermal modeling ambient temperature (2002-2004) in the absence of statistically-determined mean and median temperatures (incorporating updated ambient stream data from the NPDES Permit-required Stream Monitoring Station No. 001 (upstream of Outfall No. 001)).

Facility:	**Mount Pocono Municipal Authority WWTP**							
Permit Number:	PA0044997							
Stream:	Forest Hills Run							
	CWF Ambient Stream Temperature (°F) (Default)	Ambient Stream Temperature (°F) (Site-specific data)	Target Maximum Stream Temp.[1] (°F)	**CWF** Daily WLA[2] (Million BTUs/day)		**CWF** Daily WLA[3] (°F)	at Discharge Flow (MGD)	**PMF**
Jan 1-31	34	38.6	39.6	N/A -- Case 2		39.8	0.5	1.00
Feb 1-29	35	39	40	N/A -- Case 2		40.2	0.5	1.00
Mar 1-31	39	41.2	42.2	N/A -- Case 2		42.6	0.5	1.00
Apr 1-15	46	44.2	48	N/A -- Case 2		49.9	0.5	1.00
Apr 16-30	52	48.4	52	N/A -- Case 2		53.8	0.5	1.00
May 1-15	55	49.6	54	N/A -- Case 2		55.2	0.5	1.00
May 16-31	59	50.7	58	N/A -- Case 2		60.0	0.5	1.00
Jun 1-15	63	53.6	60	N/A -- Case 2		61.1	0.5	1.00
Jun 16-30	67	54.6	64	N/A -- Case 2		65.6	0.5	1.00
Jul 1-31	71	55.6	66	N/A -- Case 2		67.0	0.5	1.00
Aug 1-15	70	55.9	66	N/A -- Case 2		66.8	0.5	1.00
Aug 16-31	70	55.9	66	N/A -- Case 2		66.8	0.5	1.00
Sep 1-15	66	54.5	64	N/A -- Case 2		64.6	0.5	1.00
Sep 16-30	60	55.4	60	N/A -- Case 2		60.3	0.5	1.00
Oct 1-15	55	51.7	54	N/A -- Case 2		54.2	0.5	1.00
Oct 16-31	51	48.4	50	N/A -- Case 2		50.1	0.5	1.00
Nov 1-15	46	47	48	N/A -- Case 2		48.1	0.5	1.00
Nov 16-30	40	45.2	46.2	N/A -- Case 2		46.3	0.5	1.00
Dec 1-31	35	40.8	41.8	N/A -- Case 2		41.9	0.5	1.00

[1] This is the maximum of the CWF WQ criterion or the ambient temperature. The ambient temperature may be either the design (median) temperature for CWF, or the ambient stream temperature based on site-specific data entered by the user. A minimum of 1°F above ambient stream temperature is allocated.

[2] The WLA expressed in Million BTUs/day is valid for Case 1 scenarios, and disabled for Case 2 scenarios.

[3] The WLA expressed in °F is valid only if the limit is tied to a daily discharge flow limit (may be used for Case 1 or Case 2). WLAs greater than 110°F are displayed as 110°F.

Communications Log (NPDES Permit Renewal): See also separate concurrent WQM Permit Renewal Application IRR for Communications Log regarding the Land Spray System:

- **12/22/2022**: On-Base Submittal: 80084 received for NPDES Permit Renewal Application.
- **1/5/2023**: DEP (Berger) Incompleteness E-mail sent to MPMA.
- **1/18/2023**: MPMA E-mail partial response to DEP Incompleteness letter. Additional information regarding TRE studies and sampling and case for 0.500 MGD discharge forthcoming.
- **2/6/2023**: MPMA E-mail indicating it was working on supplemental response to Incompleteness E-mail
- **2/16/2023**: MPMA E-mail (with attached ARRO "Mount Pocono Flow Increase Justification") indicating MPMP wants to be able to discharge 0.500 MGD per permit conditions incorporating Consent Decree. MPMA offered to meet regarding the increase request, and asked for dates. **NOTE**: The Consent Decree is a non-DEP document incorporated by reference into the existing NPDES Permit.
- **2/16/2023**: DEP (Berger) E-mail offering a 3/2/2023 TEAMS conference call if desired by MPMA. Otherwise, the Department would be addressing any questions under the technical review process.
- **2/17/2023**: Application deemed complete, with any (Copper, Lead, and Zinc) TRE-related issues to be addressed in Technical Review. In the absence of any other information, it was assumed the TRE was implemented and application data reflects post-TRE effluent concentrations.
- **2/23/2023**: MPMA offered agenda E-mail received.
- **3/2/2023**: Conference call with MPMA:
    - Participants:
        - DEP: Amy Bellanca, James Berger, JR Holtsmaster, Tim Daley
        - MPMA: Jonathan Klotz
        - MPMA Consultant (ARRO): Doug Kopp and Alex Morrison
    - Introduction:
        - MPMA noted that no one there (MPMA) had been involved in the previous permitting and Consent Decree.
        - MPMA noted it has been sending in stream data to the Department in addition to the NPDES Permit Renewal Application-related submittals. MPMA explained they had been monitoring six stream locations including Station 1 Run-off (downstream of IW Outfall) where there is a Route 611 drainage way to stream, and Station 2 Run-off (further downstream) that also receives Route 611 drainage.
        - MPMA believes that their facility is not causing stream degradation based on their interpretation of their sampling data. They believe the problem is coming from other sources (specifically mentioning Route 611 salt-containing runoff). They believe that the data that they previously provided the Department shows this.
        - MPMA later noted that they did not have their own consultant previously evaluating the stream. A different party's consultant had been evaluating the stream. MPMA has now hired their own Aquatic Biologist.
        - MPMA is looking for input on going forward to allow for a 0.50 MGD discharge per existing NPDES Permit conditions (tiered flows).
        - DEP Biologists noted that the permit condition/Consent Decree goals involved two different method/goals (RBP and IBI) that have different metrics for their target goals. Later, the DEP Biologists noted that:
            - The MPMA submittals (and previously submitted Stream Reports) had not included calculations of the IBI and RBP scores to show whether the Consent Decree target values have been met.
            - The 83% Consent Decree target is not a simple comparison of upstream and downstream stations.
            - MPMA should have its own Aquatic Biologist calculate the RBP and IBI numbers going forward, and possibly back-calculate the RBP and IBI scores using the available historical data for each year as well.
    - Going Forward:

- The Department was not a party to the 2012 Consent Decree. The NPDES Permit conditions (relating to Consent Decree requirements) were a "pass through" requirement (like the Chapter 92a.12 requirement for passing through more stringent DRBC Docket interstate requirements).
  - If the parties (MPMA, Brodhead Watershed Association, Penn Futures aka Citizens for Pennsylvania Future a.k.a. Penn Futures) agreed that the Consent Decree targets had been met in writing, then the existing NPDES Permit conditions allow for going to the higher 0.500 MGD tier (monthly average flows).
  - If the Consent Decree is modified: Consent Decree Paragraph 23 allows for modification of the Consent Decree by the parties of the Consent Decree by written Court Order. The Paragraph 23 condition included "consultation" with PADEP. The Department would be willing to meet with all parties as part of the discussions.
    - If the parties agree and modify the Consent Decree (changing requirements), it would not be subject to antibacksliding prohibition. The NPDES Permit could then be amended since it is a "pass-through" requirement. If they thought an agreement could be reached in the next few months, the Draft NPDES Permit would reflect any new agreement.
    - MPMA can contact the (original MPMA) Attorney who worked on the Consent Decree and the other parties if it needs clarification on Consent Order requirements or intent.
    - The Department cannot act as a technical consultant per regulation. MPMA's Aquatic Biologist needs to provide his/her own review/conclusions regarding the receiving stream quality, etc.
    - The DRBC Docket would also have to be updated if the Consent Decree changed.

- Thermal Limits: MPMA's consultant indicated the facility has had IMAX problems (with Cooling System Process Changes) in meeting the existing NPDES Permit thermal limits.
  - They are calculating the daily max thermal effluent limits based on 15-minute measurements.
  - They are running into problems when ambient air temperatures and receiving stream temperatures are both above the existing thermal limits. They have limits on how much they can cool down the ambient temperatures.
  - The Department indicated it would relook at the thermal limits in the NPDES Permit renewal. Antibacksliding would pertain, but the Department would internally discuss the situation with the Water Quality Section.
- NPDES Permit Renewal Application:
  - The Department is still waiting for table of Copper, Lead, and Zinc sample data for use in the technical review.
  - MPMA did not anticipate any changes in the Consent Decree in the next few months, so no point in delaying work on the Draft NPDES permit.

3/17/2023: MPMA E-mail with Copper, Lead, Zinc, and Total Hardness effluent data from TRE over last several years.
7/25/2024: DEP (Berger) E-mail asking for TRE sampling lab QL and any TRE Phase I or II report.