pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Northeast Regional Office
CLEAN WATER PROGRAM

Application Type	**Renewal**	Application No.	**PA0023558**
Facility Type	**Municipal**	APS ID	**548745**
Major / Minor	**Major**	Authorization ID	**1157776**

NPDES PERMIT FACT SHEET
INDIVIDUAL SEWAGE

Applicant and Facility Information

Applicant Name	**Ashland Borough Columbia and Schuylkill County**	Facility Name	**Ashland Borough WWTP**
Applicant Address	401 S 18th Street Ashland, PA 17921-1748	Facility Address	400 Oak Street Ashland, PA 17921
Applicant Contact	Ray Jones	Facility Contact	Randy Fetterolf
Applicant Phone	(570) 875-2411	Facility Phone	(570) 875-1881
Client ID	59755	Site ID	257450
Ch 94 Load Status	Not Overloaded	Municipality	Ashland Borough
Connection Status	No Limitations	County	Schuylkill
Date Application Received	October 31, 2016	EPA Waived?	No
Date Application Accepted	December 12, 2016	If No, Reason	Major Facility with CSOs, Significant CB Discharge, TMDL stream

Purpose of Application: RENEWAL OF EXISTING NPDES PERMIT.

Summary of Review

This is a 1.3 MGD POTW (with CSOs) that discharges to Mahanoy Creek (WWF; Stream Code No. 17556; **impaired for recreational usage due to Pathogens of unknown origin**; impaired for aquatic life by AMD impacts subject to the Mahanoy Creek TMDL (AMD); subject to the Chesapeake Bay watershed TMDL (nutrients)).

Background:

- **Administrative Clarifications**:
  - Borough appears to extend into Columbia County per E-maps and is so described in E-facts. Facility receives no flows from Columbia County per application.
  - E-facts Site name is Ashland Municipal Authority, but the WWTP is under direct Borough operational control. The Ashland Municipal Authority reservoir is located on Little Mahanoy Creek, which flows into Mahanoy Creek downstream from the facility.
  - The Ashland Borough Wastewater Treatment Plant (WWTP) and Ashland Borough collection/conveyance system is defined as a Publicly Owned Treatment Works (POTW).
- **Flow Data**: From original and updated application:
  - Average daily flows were 0.72 MGD (2015), 0.70 MGD (2014) and 0.68 MGD (2013), with 1.817 MGD peak instantaneous flow in June 2015.
  - Site flows of 0.786 MGD AADF (2017), 1.039 MGD AADF (2018) and 1.027 MGD (AADF). 2019 highest peak instantaneous flow of 1.847 MGD. Highest monthly average flow of 1.315 MGD (May).
  - 2020 Chapter 94 Report indicated 0.833 MGD annual average flows, and highest monthly average flow of 1.022 MGD (not counting CSO discharges) in February 2019 However, hydraulic graph indicated ~1.6 MGD circa November 2019.
  - Maximum monthly average organic loading of 659 lbs BOD5/day.
- **CSS-related**:

Approve	Deny	Signatures	Date
X		James D. Berger (signed) James D. Berger, P.E. / Environmental Engineer	June 11, 2021
X		Amy M. Bellanca (signed) Amy M. Bellanca, P.E. / Environmental Engineer Manager	6-24-21

Summary of Review

- **2020 Chapter 94 Report (including CSO-related information but no separate Annual CSO Status Report)**:
  - No repairs or upgrades to the collection system or WWTP in 2020.
  - Collection system description:
    - Approximately 1.3 mile of interceptor sewers convey the combined sewage to the treatment plant. The collection system was constructed pre-1900; therefore, locations, type, and sizes of sewers are minimally known. The populated areas of the Borough are served by the public sewer system".
    - "Most of the collection system existed before construction of the WWTP and is in satisfactory condition".
  - 56 rain-induced CSOs reported.
  - The Report identified only seven permitted CSO outfalls (Nos. 002, 003, 006 – 010). The Report indicated the Borough "will continue to perform routine inspection and maintenance at all CSO's. Per their NPDES Permit, the WWTP will report cause, frequency, duration and quantity of each discharge along with daily precipitation on the monthly DMR's that are submitted to PADEP". NOTE: The Report did not include such information.
  - CSO Supplemental Reports Monthly Inspection Reports were submitted. CSO flows from CSO Outfall No. 002 were noted as estimated due to confined space, and whether there was discharge that month. No other CSO-related information provided in the Report.
- **Application Information**:
  - The NPDES Permit Application indicated the facility has an 80% CSS section and a 20% separated sewer area. Population estimated at 2,817. The separate sewer systems are at the farthest locations from the WWTP. The 2016 CSO LTCP Update indicated the Borough has established "three key CSO regulators" (002, 006, 010) which are inspected monthly. The LTCP also indicated 15 miles of sewer line which equates to 12 miles CSS at 80% CSS.
  - The Application Attachment 5 indicated that the collection system was constructed pre-1900, with locations, types, and sizes of sewers minimally known with 1.3-mile interceptor. The application identified nine (9) CSO outfalls (CSO Outfalls Nos. 002 – 010). Application indicated Outfalls Nos. 003 and 004 and 005 may be inactive (i.e. no discharges) but not permanently blocked off. The LTCP indicated portions of collection system dates to the 1850s. Approximately 15 miles per LTCP estimate.
  - The CSOs are along the Interceptor, with CSO Outfall No. 002 (Coal Mine drainage Tunnel Discharge) being the discharge for CSS flows not being diverted into the 1.3 MGD WWTP by the Type 1 Brown and Brown regulator (10-feet wide, 16-inch high dam wall diverting flow to 14-inch diameter pipeline to regulator No. 002 and WWTP wet well). Other regulators are Type II. The 2016 CSO LTCP Update indicated CSO Outfall Nos. 004 was closed off in 2013, and CSO Outfall No. 005 in 2012. No commitment to permanent abandonment.
  - The 2001 NMC Implementation Report indicated that discharge lines for CSO regulators 004, 005, and 008 are buried beneath stream sediment. **An additional "key regulator" (007) was identified therein.**
- **Application CSO Data (2018 - 2020)**: See attached Tables.
- **Future Ashland Borough LTCP Update Commitments**:
  - **Ashland-proposed CSO Schedule**:
    - 12/4/2020 Ashland (Entech) E-mail regarding the CSO Schedule of Compliance and CSO LTCP issues: "Therefore, upon evaluation of all alternatives, including the preliminary engineering evaluation and the potential of selling of system, we would like to present to PADEP our findings and schedule to move forward towards ultimate compliance at that time. This evaluation is estimated to take approximately 12 months and we request from the Department to allow Ashland Borough this time to evaluate all their options in moving forward". **NOTE**: This would equate to a commitment for completion of the WWTP evaluation and submittal of a tentative CSO Schedule of Compliance by December 31, 2021.
    - Previous Commitment: "Ashland Borough is currently evaluating the Combined Sewer Overflow Long Term Control Plan. As part of this effort, an extensive evaluation must occur for the Wastewater Treatment Plant and the sanitary sewer collection system to determine hydraulic and treatment capacities. Ashland Borough is looking for financial assistance to

Summary of Review

complete this evaluation (primarily from PennVEST) and may potentially enter into a Consent Order and Agreement with the Department. Due to the complexity of this situation, Ashland requests until **December 31, 2020** to provide a final decision to the Department. At that time, Ashland will reach out to the Department with a schedule to address the Long Term Control Plan, High Flow Management Plans, and any action items in regards to system wide treatment and hydraulic capacities".

- **85% BOD/CBOD and TSS Minimum Monthly Average Reduction Requirements**: "Ashland will evaluate this in the Wastewater Treatment Plant evaluation as part of the Long Term Control Plan and may request relief from DEP per Chapter 92a.47 (g, h) requirements". **NOTE**: The 2012 NPDES Permit Part A Additional Requirements Section did not include the 85% minimum monthly average reduction requirement.
- **HFMP**: "A High Flow Management Plan will be developed as part of the Long Term Control Plan".
- **PPC Plan Update**: The PPC Plan will be updated, along with the Long Term Control Plan, after a complete Wastewater Treatment Plant evaluation is complete.
- **CSO Outfall No. 002 "Tunnel" and WWTP Unit Capacities**: "Capacity of the tunnel (directing influent flows to either WWTP or CSO Outfall No. 002 discharge) and the wastewater treatment units will be evaluated during the Wastewater Treatment Plant evaluation as part of the Long Term Control Plan".
- **Potential WWTP Upgrades**: "Any potential upgrades within the next 5 years will be evaluated during the Wastewater Treatment Plant evaluation as part of the Long Term Control Plan".

o **10/31/2016 CSO LTCP Update:**

- **LTCP Demonstration Goal**: Ashland has tentatively chosen the meet the LTCP Demonstration Goal.
  - Due to ongoing pathogen stream impairment, the presumptive LTCP goals would only apply if Ashland demonstrates that meeting those numeric standards is adequately protective of the Chapter 93 Water Quality Standards (**now including E Coli**) in the future CSO LTCP.
  - The Borough sampled the stream in June 2016 during period of no CSO discharge and during September 2016 for a period of stream/CSO discharges in September 2016. They concluded in-stream fecal coliforms increase (from 80/100 to 38,000/100 ml Fecal Coliforms) during wet weather CSO discharges, but BOD5, pH, TDS, and TSS are lower due to rainwater dilution (no E Coli or AMD metals or nutrient (TP/TN) evaluation). CSO Outfall No. 002 sampling indicated a 600,000/100 ml Fecal Coliforms discharge and CSO Outfall No. 006 had a 600/100 ml Fecal Coliforms discharge.
- **Focused Small System CSO LTCP Request**: The Borough has requested the Focused CSO LTCP option due to small population. The Department cannot grant this request at this time:
  - The Borough has not revised the LTCP Update to adequately address previous CSO LTCP Update feedback (see FS Communications Log). Therefore, the Department could not verify compliance with the minimum requirements for a focused CSO LTCP:
    - Continued Implementation of NMCs
    - Consideration of Sensitive Areas
    - Public Participation in CSO plan
    - Post-NMC implementation compliance monitoring plan
  - The newly effective E Coli Chapter 93 Water Quality Standards and revised NPDES Permit Part C CSO Special Conditions will require further CSO LTCP updating.

- **Stream Sampling Data (no DEP review or approval of sampling plan)**: The 2016 CSO LTCP Update included limited stream/CSO discharge information (BOD5, Fecal Coliform, pH, TDS, and TSS at CSO Outfalls 002, 006 and downstream of CSO Outfall 002). The Department did not approve any proposed in-stream water quality or CSO Outfall discharge sampling plan.
  - o See attached CSO information tables for summarized sampling data.
  - o There was no upstream sampling point to allow direct comparison of upstream to downstream conditions.
  - o E-Coli, AMD metals, Chesapeake Bay Nutrients were not sampled for.
    - **Pathogens (Fecal Coliforms and E Coli)**: Showing that CSO discharges are not contributing to an existing pathogen stream impairment will require a detailed stream evaluation and monitoring program (both upstream and downstream of CSOs).
    - **AMD Metals**: The Borough noted the Mahanoy Creek Watershed TMDL (AMD) did not establish POTW Waste Load Allocations (WLAs) for either WWTP or collection system.

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- AMD-impacted I&I source(s) in the collection system and/or customer usage of AMD-impacted source waters have resulted in high AMD metals loadings in WWTP discharge. E-maps show an Orphan AMD discharges (Bast Mine Oakland Tunnel) along Oakland Street and a "drain pool area and storage" AMD Orphan Discharge in the Borough.

- **Nutrients**: The 12/17/2019 Chesapeake Bay Phase 3 Watershed Implementation Plan Wastewater Supplement Section II (page 17) states: "DEP intends to continue addressing CSOs through its CSO Policy (DEP ID No. 385-2000-011), including the Nine Minimum Controls (NMCs), Long-Term Control Plans (LTCPs) and Post-Construction Monitoring. DEP does not intend to impose monitoring or Cap Loads in NPDES permits for CSOs". However, monitoring requirements apply due to limited statewide CSO Nutrient WLAs. The CSO Sector (all PA facilities) statewide aggregate WLA are:
  - 212,920 lbs/yr TN
  - 34,709 lbs/yr TP

- **Compliance with NMCs**: The existing/proposed CSO LTCP Update had assorted commitment and issues:
  - **Proper O&M NMC**:
    - Inspection of CSO Regulators 002, 006, and 010 monthly minimum. Other regulators inspected as needed. Diverted flow at each discharge is visually monitored during each inspection for discoloration and debris in the receiving stream (with removal of accumulated debris and observation of overflows). Plant staff inspects regulators within 24 hours after significant storm events to assure flow channels are clear of debris and monitor overflows. Monitoring and Recordkeeping (DEP forms plus Borough LTCP forms). The 2003 LTCP committed the Borough to weekly inspections of the outfalls of the three key CSO Outfalls to determine if an overflow event is occurring. The 2001 NMC Implementation Report included 007 as a key regulator.
    - See Compliance Section for CSO-related reporting issues.
  - **Maximum Use of Collection System for Storage NMC**:
    - Key regulators 002, 006, and 010 are used to anticipate when there is a potential for diversions from the remaining regulators.
      - The 2001 NMC Implementation Report identified 007 as a key regulator also.
      - No historic documentation was provided to verify current regulators and diversion controls maximize storage. Borough Sewer Use Ordinance Number 357 provides for restriction of connection roof drains and downspouts to the sanitary system. Borough has adopted BOCA code which further emphasizes restriction of additional flow sources to the sewer system.
    - The CSO LTCP does not contain historic or updated engineering information verifying that all CSO controls are designed, built, or set to maximize in-line flow storage prior to draining the WWTP.
  - **Review and Modification of Pretreatment Requirements NMC**: Borough periodically reviews its records and periodically conducts onsite inspections of commercial/industrial establishments. The CSO LTCP indicates one industrial user who discharges a 6,700-gallon water quench tank for hot parts, every six months. The customer checks the weather forecast (delaying discharge in event of impending precipitation) and with Borough prior to discharge. **NOTE**: The application failed to address the LTCP-identified IU, indicating no IU.
  - **Maximization of Flow to WWTP for Treatment NMC**:
    - CSO Outfalls Nos. 004 and 005 have been closed off, and "will be considered for permanent abandonment". The application indicated CSO Outfall No. 003 has also been blocked off. The LTCP notes that the WWTP has been receiving flows within its rated hydraulic capacity.
    - The CSO LTCP does not contain historic or updated engineering information verifying that all CSO controls (including weir settings/dam heights) are designed, built, or set to maximize flow to the WWTP. WWTP has maximum peak flow rate of 2.10 MGD per LTCP (based on original permitting and 1980 rerate) and 1.3 MGD Hydraulic Capacity (1980 rerate). Existing NPDES Permit Part I.E only authorizes CSO discharge "necessitated by storm water entering the sewer system and exceeding the capacity of the sewers and/or treatment plant and are permitted to discharge only for such reason". Existing NPDES Permit Part C.V.A.1 only authorizes CSO discharges "when flows in combined sewer systems exceed the design capacity of the conveyance or treatment facilities of the system".
  - **Elimination of Dry Weather Overflows NMC**:
    - The CSO LTCP indicates they have been eliminated via the constructed CSO structures, inspections, and sewer system maintenance activities. Weekly inspections of key CSO Outfalls determine if an overflow event is occurring. Unidentified inspection aids are said to help to

Summary of Review

document overflow events and determine if such an event occurred between inspections of the regulators.
- CSO LTCP Figures do not show the "unidentified inspection aid" meant to detect dry weather discharges. The 2001 NMC Implementation Report and 2003 LTCP indicated the inspection aid consisted of placement of pieces of paper with the date placed inside some CSO discharge lines. During inspection, the WWTP staff observe the location of the paper to determine if any overflows have occurred since the previous inspection. The inspection aid must be identified and shown to be adequate.
- The 2003 LTCP committed the Borough to conduct an inspection of the regulator or other critical areas of the system to determine the cause of the overflow and required solution.

- **Control of Solids and Floatable Materials in CSOs NMC**:
  - Street cleaning schedule for major roads (1/month) from May through October. Other streets are cleaned on a rotating frequency of 3/year. In the spring, streets are cleaned daily for a week or two to clean up winter debris. The approximately 550 catch basins are cleaned as necessary, with certain catch basins (known to collect an excessive amount of debris) cleaned more frequently. The WWTP periodically performs a general inspection of the stream in the vicinity of the CSO discharge pipes to the receiving stream. Regulators are inspected and cleaned per other NMCs. **NOTE**: The 2001 NMC Implementation Report committed to cleaning major roads once per week.
  - CSO LTCP Figures do not show bar screen or other solids/floatable controls for the regulator/outfalls.
- **Pollution Prevention Programs to Reduce Contaminants in CSOs NMC**: Street cleaning practices and cooperation with the local industries. Catch basins are marked "drains to river" to prevent public from discharging objectionable materials.
- **Public Notification NMC& Public Participation**:
  - Borough webpage discusses CSOs and LTCP on its website. Signs at CSO outfall locations. Due to the existing AMD-impacts, "there are no apparent public recreation activities". Any CSO-related issues are listed on the Borough's monthly public borough council meeting (including discussion of any issues or public comments). The Borough committed to a 30-day public comment period on its Draft LTCP Update (including advertisement in a local publication and on Borough website). Copies of the Draft LTCP Update will be placed for review in the Ashland Borough Municipal Office.
  - New Part C.III requirements pertain.
- **Monitoring to Effectively Characterize CSO Impacts NMC & Implementation/Monitoring Plan**:
  - Visual inspections per the LTCP Inspection & monitoring/recordkeeping. One sampling event was done for this 2016 LTCP Update (discussed above). The LTCP noted the CSO discharges to an AMD-impaired stream with no known sensitive areas due to existing stream impairment. Borough CSO LTCP inspection & monitoring plan (see above) with DEP Annual CSO Status Report & NPDES Permit monitoring/reporting requirements.
  - PCCM: No Post-Construction Compliance Monitoring (PCCM) Plan was included (other than current inspection and reporting). No stream water quality monitoring plan was provided to demonstrate that the CSO discharges are not impacting applicable water quality standards now or in the future.
    - Flows and Loadings to Stream: The Borough's "key regulator" methodology to measure/estimate CSO cause, frequency, duration, and discharge quantity has not been explained and/or shown to be supported by actual flow data (Flow Meter Study or other) and/or historic/new Engineering Analysis. Nor has any engineering analysis of present regulator weir settings or CSO Outfall Tunnel dam height been provided to show that NMC requirements are currently being met, with potential changes to weir/dams possibly rendering old methodologies inaccurate).
    - Loadings on Stream: There is no monitoring program or proposed methodology to show that CSO discharges will not contribute to water quality standard impairments. As noted above, the 2016 LTCP included limited sample results did not address E Coli (new Chapter 93 WQS), AMD metals (Aluminum, Dissolved Iron, Total Iron, and Manganese), or nutrients (Total Nitrogen and Total Phosphorus). The existing stream impairment means zero assimilative capacity for Total Iron and Manganese, limited assimilative capacity for Aluminum, and possibly little to no assimilative capacity for Dissolved Iron.
    - 2016 CSO LTCP Update Sampling: One round of sampling was done for S at uniden

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Part C Special Conditions: Changes bolded.

- Part C.I: **Updated** (Chesapeake Bay Nutrient Requirements)
- **Part C.II: New Schedule of Compliance (Ammonia-N, DO, and TRC): New limits will be effective at the end of the 4-year Schedule of Compliance. The milestones are concurrent with Part C.III (CSO) Schedule of Compliance and Part C.V (WQBELs for Toxics) Schedule of Compliance due to potential need for concurrent substantial plant upgrading.**
- Part C.III: **Updated** CSO Conditions with CSO Schedule of Compliance:
  - **Due to the incomplete nature of the 2016 LTCP Update (see communications log for related letters and conference call/meetings) and limited available data, the Department is including provisions for Ashland Borough to propose and choose its final LTCP Goal in the Part C.III.C.2 and Part C.III.C.3 CSO Schedule of Compliance.**
    - **Ashland Borough has tentatively chosen the LTCP Demonstration Goal (which would require the Borough to demonstrate that the CSO discharges are not preventing attainment of the applicable Water Quality Standards (Chapter 93 and TMDL). No PCCM Plan or numeric goals were proposed to make the required annual demonstration.**
    - **The CSO LTCP Presumption Goals would only apply if Ashland can make an adequate regulatory and technical case that they apply due to site-specific circumstances.**
  - **The CSO Schedule of Compliance includes previous Ashland commitments (due 12/31/2021) plus additional minimum requirements for an adequate CSO LTCP (including NMCs). The Department has tentatively proposed final compliance by December 31, 2041 in the absence of any Ashland-proposed realistic CSO Schedule of Compliance (to address the Ashland-proposed sewer separation option for coming into compliance).**
- **Part C.IV: New Standard Solids Management conditions (with special sludge drying bed inventory language)**
- **Part C.V**: **New WQBELs for Toxics Condition (4,6-Dinitro-o-cresol; 3,4-Benzofluoranthene; Bis (2-Ethylhexyl) Phthalate) with 4-year Schedule of Compliance. Language for metals retained to provide Borough guidance if it wants to voluntarily address monitored metals or AMD metals.**
- Part C.VI: **Updated** Standard Whole Effluent Test (WET) Conditions **with updated dilution series**.
- **Part C.VII: New WQBELs below Quantitation Limits (3,4-Benzofluoranthene)**
- Part C.VIII: **Updated** Requirements Applicable to Stormwater Outfalls Conditions
- Part C.IX.A, B and C: Stormwater Prohibition (with existing limitation to separated sewer system), Necessary Property Rights, Residuals Management
- **Part C.IX.D: New Chlorine Minimization condition**
- **Part C.IX.E: New High Flow Management Plant condition providing guidance on minimum requirements.**
- Part C.IX.F: Existing changes in stream/discharge condition

Sludge use and disposal description and location(s): Liquid sludges disposed at Greater Hazleton Joint Sewer Authority. Solid sludges (from sand drying beds) are landfilled. 4.7 tons of dry sludge (2019) produced.

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.	001 002 – 010 011	Design Flow (MGD)	1.3 (001) Zero (CSOs) Zero (Stormwater Outfall)
Latitude	40º 46' 47.29" (001) 40º 46' 47.29" (002) 40º 46' 47.98" (003) 40º 46' 47.17" (004) 40º 46' 47.92" (005) 40º 46' 51.76" (006) 40º 46' 57.61" (007) 40º 47' 1.29" (008) 40º 47' 1.29" (009) 40º 47' 1.51" (010) 40º 46' 47.29" (011)	Longitude	-76º 20' 17.47" (001) -76º 20' 17.47 (002) -76º 20' 14.33" (003) -76º 20' 10.40" (004) -76º 20' 15.99" (005) -76º 20' 3.54" (006) -76º 19' 59.53" (007) -76º 19' 59.67" (008) -76º 19' 59.67" (009) -76º 19' 59.56" (010) -76º 20' 17.47 (011)
Quad Name	Ashland	Quad Code	1235
Wastewater Description:	Treated Sewage Effluent: 001 Combined Sewer Overflows: 002, 003, 004, 005, 006, 007, 008, 009, 010 Stormwater associated with industrial activities: 011		

Receiving Waters	Mahanoy Creek (WWF, MF)	Stream Code	17556
NHD Com ID	54962253	RMI	-
Drainage Area	42.5	Yield (cfs/mi^2)	0.2517
Q_{7-10} Flow (cfs)	10.7	Q_{7-10} Basis	USGS PA Streamstats
Elevation (ft)	~880 Feet	Slope (ft/ft)	-
Watershed No.	6-B	Chapter 93 Class.	WWF, MF
Existing Use	-	Existing Use Qualifier	-
Exceptions to Use	-	Exceptions to Criteria	-
Assessment Status	Impaired		
Cause(s) of Impairment	METALS; Pathogens of unknown origins		
Source(s) of Impairment	ACID MINE DRAINAGE		
TMDL Status	Final	Name	Mahanoy Creek

Background/Ambient Data		Data Source
pH (SU)	6.47	Sampling point about 1.07 miles upstream (Sample ID: 1965673, Collector ID: 0279, Sequence Number: 787; sampled on 7/7/2015)
Temperature (°C)	14.33	See above.
Hardness (mg/L)	360	See above. Application indicated higher Total Hardness of 500 mg/l from “SM 2340-B”, but DEP sampling considered more accurate and conservative.
Total Aluminum (ug/l)	1,030	See above. Zero assimilative capacity.
Total Iron (ug/l)	12,900	See above. Zero assimilative capacity. Dissolved Iron concentration likely high as well.
Total Manganese (ug/l)	3,868	See above. Zero assimilative capacity.
Total Copper (ug/l)	17.6	See above
Total Lead (ug/l)	1.350	See above
Total Zinc (ug/l)	82.600	See above
Total Cadmium (ug/l)	<0.2	See above

Nearest Downstream Public Water Supply Intake:	United Water Pennsylvania (from previous IRR)		
PWS Waters	Susquehanna River	Flow at Intake (cfs)	-
PWS RMI	-	Distance from Outfall (mi)	~76

Changes Since Last Permit Issuance: **Stream is impaired by pathogens of unknown origin**.

Other Comments:

- **Chesapeake Bay**: This is a significant Phase 3 Chesapeake Bay facility with existing mass caps. Previous NPDES Permit Renewal IRR indicated facility would purchase nutrient credits if necessary. 2019 EDMR data indicated no credits were required.
- **Ambient Conditions**:
  - There are AMD discharges immediately upstream of WWTP Outfall. See above stream sampling data. Stream is also impaired by pathogens of unknown origin.
  - Stream color has been impacted by AMD discharges.
- **Point of First Use by Aquatic Life**: Point of First Use by aquatic life remains downstream of Outfall No. 001 per DEP Biologist feedback and above sampling data. The USGS Report Scientific Investigations Report 2004-5291 "Effects of Abandoned Coal-Mine Drainage on Streamflow and Water Quality in the Mahanoy Creek Basin, Schuylkill, Columbia, and Northumberland Counties, Pennsylvania, 2001" (Charles A. Cravotta III) noted the presence of fish upstream at Girardville, i.e. fish are present.
- **Ashland Municipal Authority Reservoir**: The DEP Safe Drinking Water Program indicated that this reservoir does not take in water from Mahanoy Creek, but from the Little Mahanoy Creek. Therefore, it is not impacted by the facility discharge to Mahanoy Creek.
- **Q7-10 Low Flow**: From USGS PAStreamstats: 42.5 square mile drainage area with 10.7 CFS Q7-10 low flow, LFY of 0.2517. This is reasonable due to the presence of multiple Orphan AMD discharges upstream in immediate area. Previous NPDES Permitting assumed a lower 5.8 CFS.
- **Mahanoy Creek TMDL (Acid Mine Drainage)**: No Waste Load Allocations in existing TMDL. Previous NPDES Permit Renewal IRR indicated Outfall No. 001 is located upstream of TMDL Point MC2 and below MC1. However, facility influent data and effluent data indicates need for AMD metal permit limits to protect the waters of the Commonwealth. TMDL Water Quality Criteria:
  - **Total Aluminum**: 0.750 mg/l
  - **Total Iron**: 1.50 mg/l
  - **Dissolved Iron**: 0.3 mg/l
  - **Total Manganese**: 1.5 mg/l
- **Proposed CSO LTCP WQBEL**: The facility is proposing to meet the CSO LTCP "Demonstration Goal" as an enforceable narrative Technology-Based Effluent Limit. The burden of showing compliance with the Goal falls on the permittee.
- **CSO Outfall Coordinates & Status**: All CSOs discharge to Mahanoy Creek. There are discrepancies between the provided CSO outfall coordinates and application topo maps showing CSO outfall discharge positions. It is unclear if the coordinates are for CSO regulators or the outfalls. All CSO outfalls are upstream of the WWTP outfall, along the 1.3 mile CSO interceptor per the topographic map (with the CSO Outfalls proceeding west to east, from CSO Outfall No. 002 to CSO Outfall No. 010). There is an Orphan AMD discharge close to the WWTP outfall location per E-maps. Locational information from previous NPDES Permit:

Outfall	Name and Location	Latitude	Longitude	Description
002	WWTP	40º 46' 48"	-76º 20' 18"	Tunnel Sewer with dam/weir directing backflow to CSO Regulator No. 002 and Treatment Plant.
003	West Hoffman Street	40º 46' 49"	-76º 20' 14"	Type II regulator (may be inactive)
004	East Hoffman Street	40º 46' 43"	-76º 2' 12"	Type II regulator (may be inactive)
005	Second Street	40º 46' 50"	-76º 20' 18"	Type II regulator (may be inactive)
006	First Street	40º 46' 53"	-76º 20' 50"	Type II regulator
007	Walnut Street	40º 46' 58"	-76º 20' 02"	Type II regulator
008	East Middle Street	40º 47' 00"	-76º 20' 00"	Type II regulator
009	Route 54	40º 47' 01"	-76º 20' 02"	Type II regulator
010	Oakland Avenue	40º 47' 03"	-76º 20' 03"	Type II regulator

Treatment Facility Summary

Treatment Facility Name: Ashland Borough WWTP

WQM Permit No.	Issuance Date	Scope
5409402	9/9/2009	1.3 MGD Fluidized bed for reduction of nitrate levels. Constructed and then not used.
668S016	11/24/1980 IRR Report	Rerating of existing STP to 1.3 MGD hydraulic capacity, 1,400 lbs BOD5/day organic design capacity, and 1,400 lbs TSS/day. Peak design flow of 2.1 MGD. Plant was indicated to have been constructed circa 1971.
668S016	6/21/1968	Original STP permit (0.7 MGD hydraulic capacity, 1,190 BOD5 lbs/day organic design capacity, and 1,400 lbs TSS/day). Peak design flow at 2.1 MGD.

Waste Type	Degree of Treatment	Process Type	Disinfection	Avg Annual Flow (MGD)
Sewage	Secondary	Extended Aeration	Gas Chlorine	1.3

Hydraulic Capacity (MGD)	Organic Capacity (lbs/day)	Load Status	Biosolids Treatment	Biosolids Use/Disposal
1.3	1400	Not Overloaded	Sludge drying beds (if liquid sludge is not transported offsite for disposal)	Disposal

Changes Since Last Permit Issuance: None known.

Other Comments:

WWTP description:

- Activated Sludge Wastewater Treatment Process consisting of:
  - "Headworks" (grit removal/mechanical bar screen/comminutor/pumping station),
  - Two (2) extended aeration tanks
  - Two (2) final clarifiers
  - One (1) chlorine contact tank
  - One Aerated Sludge Holding Tank discharging to either two Sand Drying Beds or trucks for liquid sludge disposal offsite.
  - The Fluidized Bed Reactor (nutrient treatment system) was installed, but it is no longer operational per the application..
- There is no CSS in-plant treatment bypassing per application.
- The sludge handling system consists of one aerated sludge holding tank and two sand drying beds. Liquid Sludges can be directly hauled to offsite disposal facility. Solids can be landfilled.
- Facility indicates no known industrial customers discharging to the POTW. However, one IU waste stream was identified.
- Collection System Pump Station (25th Street): One (1) pump station exists in the system and conveys sewage from 13 homes, no CSS flows. This pump station is rated for 0.073 MGD, which utilizes two (2) 5 HP pumps. Estimated present flows are 7,180 gpd. Approximately 700 feet of force main convey this sewage to a manhole located at the intersection of 23rd and Spruce Street.
- 3/10/2020 Inspection Report indicated needed O&M:
  - As per previous inspection, major corrosion is visually evident on the various components of clarifier #1. Permittee was working on getting an estimate from Blooming Glen contractors for the repair/replacement according to previous inspection. No estimate has been obtained yet.

- Grit screw is no longer used because of frequent repairs needed. Grit chamber gets vacuumed out by Kline Services yearly or as needed. Kline Services pumped and cleaned the grit chamber in August and December 2019.
- As per previous inspection reports, corrosion visually evident in various areas of the plant including headworks, aeration tank support beams and hand rails, sludge holding tanks, sludge return pumps and piping, chlorine contact tank hand rails.

Facility might not meet 85% reduction of BOD5 and TSS: No Chapter 92a.47 attainable reduction calculations in application. Permittee indicated belief that they meet the 85% reduction requirements, but will re-evaluate as part of the CSO LTCP (due December 31, 2021). From application information:

Constituent	Influent (mg/l)	Effluent LTA (mg/l)	% Reduction
BOD5	34.7	5 CBOD5 (6 BOD5 at 1:1.2 effluent ratio)	~83%
TSS	42	22.8	~46%

Compliance History

DMR Data for Outfall 001 (from April 1, 2020 to March 31, 2021)

Parameter	MAR-21	FEB-21	JAN-21	DEC-20	NOV-20	OCT-20	SEP-20	AUG-20	JUL-20	JUN-20	MAY-20	APR-20
Flow (MGD) Average Monthly	0.959	0.791	0.8	0.8798	0.719	0.6728	0.611	0.782	0.773	0.969	0.923	0.943
Flow (MGD) Daily Maximum	1.768	1.74	1.509	1.741	1.694	1.71	1.188	1.642	1.399	1.67	1.51	1.708
pH (S.U.) Minimum	6.88	6.98	6.92	6.91	6.91	6.96	7.14	7.12	7.17	7.2	7.14	7.1
pH (S.U.) Maximum	7.16	7.27	7.27	7.22	7.27	7.37	7.43	7.4	7.34	7.34	7.38	7.29
TRC (mg/L) Average Monthly	0.83	0.81	0.76	0.74	0.78	0.78	0.79	0.75	0.899	0.77	0.79	0.81
TRC (mg/L) Instantaneous Maximum	1.02	1.0	0.97	0.98	1.0	0.99	0.98	0.96	1.11	0.8	1.07	1.09
CBOD5 (lbs/day) Average Monthly	47	37	42	53	38	41	54	87	87	90	96	52
CBOD5 (lbs/day) Weekly Average	58	47	50	81	53	101	74	110	107	115	170	87
CBOD5 (mg/L) Average Monthly	6	6	7	8	6	6	11	15	15	12	15	7
CBOD5 (mg/L) Weekly Average	7	7	8	10	6	7	15	17	18	14	27	13
TSS (lbs/day) Average Monthly	94	91	84	82	38	80	51	44	55	88	72	74
TSS (lbs/day) Weekly Average	176	136	129	121	53	238	67	53	85	113	113	112
TSS (mg/L) Average Monthly	13	15	15	13	12	10	10	8	9	10	11	10
TSS (mg/L) Weekly Average	26	22	21	20	16	18	13	9	12	11	16	13
Fecal Coliform (CFU/100 ml) Geometric Mean	14	< 10	18	3	< 1	5	2	2	2	2	< 1	2
Fecal Coliform (CFU/100 ml) Instantaneous Maximum	40	< 10	200	510	10	370	20	270	70	30	10	30

Nitrate-Nitrite (mg/L) Average Monthly	1.59	0.85	1.17	1.31	2.1	2.41	1.87	1.25	0.91	1.73	1.23	1.22
Nitrate-Nitrite (lbs) Total Monthly	386	146	211	282	420	455	265	222	184	419	252	289
Total Nitrogen (mg/L) Average Monthly	7.48	9.21	9.08	7.29	9.49	10.35	9.66	7.49	8.99	8.6	8.71	7.62
Total Nitrogen (lbs) Effluent Net Total Monthly	1871	1549	1597	1445	1908	2176	1383	1342	1720	2145	1727	1761
Total Nitrogen (lbs) Total Monthly	1871	1549	1597	1445	1908	2176	1383	1342	1720	2145	1727	1761
Total Nitrogen (lbs) Effluent Net Total Annual							20358					
Total Nitrogen (lbs) Total Annual							20358					
Ammonia (mg/L) Average Monthly	3.73	6.06	4.97	4.5	4.25	4.95	4.94	4.51	4.96	3.86	2.03	4.07
Ammonia (lbs) Total Monthly	956	1013	860	856	847	1064	702	823	948	1001	408	935
Ammonia (lbs) Total Annual							9763					
TKN (mg/L) Average Monthly	5.89	8.35	7.91	6.02	7.39	7.94	7.7	6.24	8.18	6.87	7.48	6.39
TKN (lbs) Total Monthly	1485	1403	1386	1171	1490	1721	1106	1120	1564	1726	1474	1472
Total Phosphorus (mg/L) Average Monthly	0.36	0.21	0.37	0.5	0.49	0.59	0.7	0.58	0.73	0.76	0.64	0.49
Total Phosphorus (lbs) Effluent Net Total Monthly	89	35	65	97	94	101	101	104	141	187	126	113
Total Phosphorus (lbs) Total Monthly	89	35	65	97	94	101	101	104	141	187	126	113
Total Phosphorus (lbs) Effluent Net Total Annual							1498					
Total Phosphorus (lbs) Total Annual							1498					
Total Aluminum (mg/L) Average	**< 0.1**			**< 0.1**			**0.07**			**0.06**		
Total Iron (mg/L) Average	**0.82**			**1.47**			**1.42**			**1.0**		

Total Manganese (mg/L) Average Monthly	**0.73**			**0.63**			**0.649**			**0.926**		

DMR Data for Outfall 011 (from April 1, 2020 to March 31, 2021)

Parameter	MAR-21	FEB-21	JAN-21	DEC-20	NOV-20	OCT-20	SEP-20	AUG-20	JUL-20	JUN-20	MAY-20	APR-20
TSS (mg/L) Daily Maximum				E								
TKN (mg/L) Daily Maximum				E								
Total Iron (mg/L) Daily Maximum				0.95								

DMR Data for Outfall 001 (from February 1, 2019 to January 31, 2020)

Parameter	JAN-20	DEC-19	NOV-19	OCT-19	SEP-19	AUG-19	JUL-19	JUN-19	MAY-19	APR-19	MAR-19	FEB-19
Flow (MGD) Average Monthly	0.778	0.795	0.831	0.882	0.653	0.799	0.952	1.071	1.315	1.032	1.085	1.139
Flow (MGD) Daily Maximum	1.624	1.127	1.587	1.648	1.468	1.289	1.595	1.714	1.847	1.68	1.677	1.613
pH (S.U.) Minimum	6.54	6.49	6.43	6.46	6.43	6.35	6.39	6.79	6.54	6.68	6.59	6.59
pH (S.U.) Maximum	6.79	6.79	6.82	6.87	6.88	6.82	6.79	7.05	7.08	7.02	6.97	7.2
TRC (mg/L) Average Monthly	0.9	0.84	0.75	0.85	0.8	0.84	0.87	0.8	0.82	0.86	0.88	0.86
TRC (mg/L) Instantaneous Maximum	1.12	1.13	1.08	1.14	1.15	1.13	1.15	1.18	1.17	1.25	1.23	1.22
CBOD5 (lbs/day) Average Monthly	64	51	37	70	52	107	141	141	91	60	82	135
CBOD5 (lbs/day) Weekly Average	106	63	42	97	68	196	256	222	173	68	94	203
CBOD5 (mg/L) Average Monthly	12	8	6	10	10	16	17	15	9	8	10	14
CBOD5 (mg/L) Weekly Average	20	10	8	20	12	26	23	19	15	10	11	19
TSS (lbs/day) Average Monthly	61	84	61	76	54	54	82	95	77	46	98	141
TSS (lbs/day) Weekly Average	74	111	108	124	60	81	106	121	91	63	114	209
TSS (mg/L) Average Monthly	11	14	10	11	11	8	10	10	8	6	12	14
TSS (mg/L) Weekly Average	14	18	18	24	13	13	12	12	10	8	15	19
Fecal Coliform (CFU/100 ml) Geometric Mean	2	< 1	< 3	3	2	1	4	2	2	4	2	2
Fecal Coliform (CFU/100 ml) Instantaneous Maximum	10	< 1	160	580	40	10	230	110	100	110	10	150
Nitrate-Nitrite (mg/L) Average Monthly	0.68	0.93	1.58	2.1	2.1	1.53	1.79	1.39	3.05	1.04	0.87	1.49

Nitrate-Nitrite (lbs) Total Monthly	119	179	287	543	320	316	445	393	1086	260	224	382
Total Nitrogen (mg/L) Average Monthly	8.86	7.68	8.04	8.45	8.63	6.97	7.44	7.1	7.4	7.63	7.45	7.26
Total Nitrogen (lbs) Effluent Net Total Monthly	1482	1466	1408	2122	1325	1429	1861	2033	2419	1654	1825	1963
Total Nitrogen (lbs) Total Monthly	1482	1466	1408	2122	1325	1429	1861	2033	2419	1654	1825	1963
Total Nitrogen (lbs) Effluent Net Total Annual					21704							
Total Nitrogen (lbs) Total Annual					21704							
Ammonia (mg/L) Average Monthly	5.11	4.37	4.11	4.12	4.01	3.45	2.87	2.78	1.99	3.9	3.95	3.86
Ammonia (lbs) Total Monthly	848	829	702	1068	615	697	722	812	583	799	951	1051
Ammonia (lbs) Total Annual					8750							
TKN (mg/L) Average Monthly	8.17	6.75	6.45	6.35	6.53	5.45	5.65	5.72	4.35	6.59	6.57	7.02
TKN (lbs) Total Monthly	47	1287	1121	1579	1006	1113	1416	1640	1333	1394	1601	1901
Total Phosphorus (mg/L) Average Monthly	0.69	0.6	0.58	0.66	0.59	0.58	0.59	0.62	0.48	0.53	0.6	0.66
Total Phosphorus (lbs) Effluent Net Total Monthly	112	115	102	164	91	117	143	179	151	114	145	181
Total Phosphorus (lbs) Total Monthly	112	115	102	164	91	117	143	179	151	114	145	181
Total Phosphorus (lbs) Effluent Net Total Annual					1673							
Total Phosphorus (lbs) Total Annual					1673							
Total Aluminum (mg/L) Average		**0.07**			**0.07**			**0.07**			**0.1**	
Total Iron (mg/L) Average		**1.22**			**1.22**			**0.97**			**1.12**	
Total Manganese (mg/L) Average Monthly		**0.743**			**0.552**			**0.674**			**0.582**	

DMR Data for Outfall 011 (from February 1, 2019 to January 31, 2020)

Parameter	JAN-20	DEC-19	NOV-19	OCT-19	SEP-19	AUG-19	JUL-19	JUN-19	MAY-19	APR-19	MAR-19	FEB-19
TSS (mg/L) Daily Maximum		28										
TKN (mg/L) Daily Maximum		< 0.50										
Total Iron (mg/L) Daily Maximum		0.49										

Compliance History

Inspection History:

FACILITY NAME	INSP PROGRAM	INSPECTED DATE	INSP TYPE	INSPECTION RESULT DESC	INSPECTOR ID	# OF VIOLATIONS
ASHLAND BOROUGH WWTP	WPCNP	08/19/2015	Compliance Evaluation	No Violations Noted	00531359	0
ASHLAND BOROUGH WWTP	WPCNP	02/01/2016	Compliance Evaluation	Violation(s) Noted	00531359	1
ASHLAND BOROUGH WWTP	WPCNP	06/01/2016	Administrative/File Review	No Violations Noted	00531359	0
ASHLAND BOROUGH WWTP	WPCNP	06/01/2016	Compliance Evaluation	Violation(s) Noted	00531359	1
ASHLAND BOROUGH WWTP	WPCNP	03/29/2017	Combined Sewer Overflow-Non-Sampling	Violation(s) Noted	00613405	1
ASHLAND BOROUGH WWTP	WPCNP	04/19/2018	Compliance Evaluation	No Violations Noted	00531359	0
ASHLAND BOROUGH WWTP	WPCNP	10/09/2018	Compliance Evaluation	Violation(s) Noted	00613405	1

ASHLAND BOROUGH WWTP	WPCNP	06/25/2019	Compliance Evaluation	Violation(s) Noted	00613405	1
ASHLAND BOROUGH WWTP	WPCNP	03/10/2020	Follow-up Inspection	No Violations Noted	00613405	0
ASHLAND BOROUGH WWTP	WPCNP	05/28/2020	Combined Sewer Overflow-Non-Sampling	Violation(s) Noted	00531359	2

- 6/4/2019 Inspection indicated no violations identified. Corrosion problems noted throughout plant (headworks, Clarifier 1, etc.). Grit removal screw not being used due to frequent malfunction (CSS collection system). Influent sampling is 8-hour composite sampling (time-based) at location after Chlorine Contact Tank recirculation. No I&I work being done in collection system. Liquid sludge hauled to Greater Hazleton. Sludge drying beds material hauled to Commonwealth Environmental Systems Landfill.

Compliance History:

- **CSO Supplemental forms are missing required information.**
- **2018 – 2020 Annual CSO Status Reports missing required summarization and information.**
- **NPDES Permit Part A.2 requires flow-proportional composite sampling. Inspection Reports only time-based sampling is being done. Time-based sampling will not be representative in a CSS System subject to wet weather surges.**
- **The last approved LTCP did not authorize any relief from the Chapter 92a.47 85% minimum monthly average reduction requirement. Monitoring & Reporting will be required in this NPDES Permit term.**

Compliance Check: No open violations per 5/7/2020 WMS query Open Violations by Client Number:

Permit: pa0023558
Client ID: 59755
Client: All

Open Violations: 0

No data was found using the criteria entered. Please revise your choices and try again.

Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** 1.3
Latitude 40º 46' 48.00" **Longitude** -76º 20' 19.00"
Wastewater Description: Effluent

Permit Limits and Monitoring: Changes bolded

Parameter	Limit (mg/l unless otherwise specified)	SBC	Model/Basis
CBOD5	271 Lbs/d 434 Lb/d 25**.0** 40**.0** 50**.0**	Monthly Average Weekly Average Monthly Average Weekly Average IMAX	Existing limit supported by water quality modeling (Chapter 92a.47). Application data: 50.3 mg/l max, 24.25 mg/l max average monthly value, and 11.3 mg/l LTA (208 samples)
TSS	325 Lbs/d 488 Lb/d 30**.0** 45**.0** 60**.0**	Monthly Average Weekly Average Monthly Average Weekly Average IMAX	Existing Technology limit (Chapter 92a.47) Application data: 29.0 mg/l max, 13.88 max average monthly value, and 10.3 mg/l average (208 samples)
pH	6.0 – 9.0 SU	**IMIN** - IMAX	Existing Technology limit (Chapter 92a.47a and Chapter 95.5). Application data: 6.4 – 7.5 SU (730 samples).
Dissolved Oxygen (DO) (Effective in 5th year with interim monitoring)	**4.0**	**IMIN**	**New limit based on water quality modeling for discharge to WWF stream. Fish species exist in stream. Compliance appears achievable unless plant loadings change due to CSO-related issues.** Application data: 7.2 mg/l DO minimum (3 samples)
Fecal Coliform (5/1 – 9/30)	200/100 ml 1,000/100 ml	Geo Mean IMAX	Existing Technology limit (Chapter 92a.47). **Units updated from CFU/100 ml**. Application data: 2,000/100 ml max, 206.7/100 ml max average monthly value and 25.0/100 ml LTA (208 sampes).
Fecal Coliform (10/1 – 4/30)	2,000/100 ml 10,000 ml/100 ml	Geo Mean IMAX	See above
E Coli	**Report #/100 ml**	**IMAX**	**New standard monitoring requirement plus discharge to pathogen impaired stream & CSO-related requirements** Application Data: None available
Total Residual Chlorine **(Interim – four years)**	1.0**0** 2.0**0**	Average Monthly IMAX	Existing Facility-specific TBEL based on old Regional POTW limit (Chapter 92a.47-48). **Application data: 1.46 mg/l max, 0.94 mg/l max average monthly value and 0.83 mg/l LTA (730 samples).**
Total Residual Chlorine (Final – 5th year)	**0.50** **1.63**	**Average Monthly** **IMAX**	**New WQBEL required by TRC Spreadsheet water quality modeling.**

Ammonia-Nitrogen (Summer) Effective in 5th year with interim summer and permanent winter monitoring)	**Report Lbs Report Lbs Report Lb/d 11.30 22.60 22.60**	**Total Annual Total Monthly Monthly Average Monthly Average Daily Max IMAX**	**Facility discharges to an AMD-impaired stream and subject to Chesapeake Bay net annual mass cap for Total Nitrogen. Application data: 11.2 mg/l max, 6.94 mg/l max average monthly value and 3.7 mg/l LTA (3 samples).**
Ammonia-Nitrogen (Winter) Effective in 5th year with interim summer and permanent winter monitoring)	**Report Lbs Report Lbs Report Lb/d Report Report**	**Total Annual Total Monthly Monthly Average Monthly Average Daily Max**	**See above.**
Total Phosphorus	Report Lbs Report Lbs Report Report	Total Annual Total Monthly Monthly Average Monthly Average	Existing Chesapeake Bay annual mass cap and monitoring requirement for Phase 3 facility per DEP Phase 2 Watershed Implementation Plan Supplement. Application data: 1.10 mg/l max, 0.70 max average monthly value, and 0.51 mg/l LTA (208 samples)
Total Nitrogen (Nitrate-Nitrite-N + TKN measured in same sample)	Report Lbs Report Lbs Report Report	Total Annual Total Monthly Monthly Average Monthly Average	See above. Application data: TN: 19.6 mg/l max, 10.62 max average monthly value, and 7.4 mg/l LTA (208 samples). TKN: 15.5 mg/l max, 9.43 max average monthly value, and 5.9 mg/l LTA (208 samples) Nitrate-Nitrite as N: 16.3 mg/l max, 3.05 max average monthly value, and 1.56 mg/l LTA (208 samples)
Net Total Nitrogen	23,744 Lbs/year Report	Total Annual Total Monthly	See above
Net Total Phosphorus	3,166 Lbs/year Report	Total Annual Total Monthly	See above.
TDS, Bromides, Chlorides, Sulfates, and Bromide	-	-	Not required per Reasonable Potential Analysis. Application data: TDS: 358 mg/l max and 352.7 mg/l average (3 samples) Bromides: 0.2 mg/l max and 0.2 mg/l average (3 samples) Chlorides: 104 mg/l max and 71.6 mg/l average (3 samples) Sulfates: 67.8 mg/l max and 65.2 mg/l average (3 samples). Bromide: 0.2 mg/l max and 0.2 mg/l LTA (3 samples)
Total Aluminum (effective immediately)	**8.13 Lbs/d 8.13 Lb/d 0.750**	**Monthly Average Daily Max Monthly Average Daily Max**	**New WQBEL due to Mahanoy Creek TMDL (AMD) having no facility WLAs, zero stream assimilative capacity, and undefined CSO discharge loadings. AFC-**

	0.750 **0.750**	**IMAX**	**based limit. WQS-based limits are effective immediately. Facility appears in current compliance.** Application data: 173 ug/l max and 168.3 ug/l average (3 samples). Ten Week Sampling: 120.5120643 LTAMEC and 0.2476081 COV.
Total Manganese (effective immediately)	**10.8 Lbs/d** **14.4 Lbs/d** **1.000** **1.326** **2.500**	**Monthly Average** **Daily Max** **Monthly Average** **Daily Max** **IMAX**	**New WQBEL due to Mahanoy Creek TMDL (AMD) having no facility WLAs, zero stream assimilative capacity, and undefined CSO discharge loadings. The facility appears to be in current compliance.** **Application data: 861 ug/l max and 853.6 ug/l average (3 samples).** Ten Week Sampling: 772.3092144 LTAMEC and 0.2740735 COV.
Total Iron (effective immediately)	**16.3 Lbs/d** **19.7 Lbs/d** **1.500** **1.819** **3.500**	**Monthly Average** **Daily Max** **Monthly Average** **Daily Max** **IMAX**	**New WQBEL due to Mahanoy Creek TMDL (AMD) having no facility WLAs, zero stream assimilative capacity, and undefined CSO discharge loadings. The facility appears to be in current compliance.** Application data: 1650 ug/l max and 1050 ug/l average (3 samples). Ten Week Sampling: **1550.6343787 LTAMEC and 0.1782141 COV.**
Dissolved Iron (effective immediately)	**3.25 Lbs/d** **6.5 Lb/d** **0.300** **0.600** **0.750**	**Monthly Average** **Daily Max** **Monthly Average** **Daily Max** **IMAX**	**New WQBEL due to Mahanoy Creek TMDL (AMD) having no facility WLAs, zero stream assimilative capacity, and undefined CSO discharge loadings. The facility may not be in compliance.** **Application data: 851 ug/l max and 426 ug/l average (3 samples).** Ten Week Sampling: 146.9360544 ug/l LTAMEC and 0.3636108 COV.
Total Cadmium	**Report Lbs/d** **Report Lbs/d** **Report** **Report**	**Monthly average** **Daily Max** **Monthly average** **Daily Max**	**Monitoring upon request:** No permit limits or monitoring required per water quality modeling. **Spiking apparent from application information that might tie-in to IU discharge (Ashland Metal Foundry). In the absence of an IPP, sampling during future IU discharges is recommended.** **Application data: 0.800 ug/l max and 0.327 ug/l average (3 samples) at 0.08 ug/l MDL.** Ten Week Sampling: <0.2 ug/l all samples. Being all ND, TOXCONC could not calculate LTAMEC. DEP Target QL of 0.2 ug/l.

Total Copper	**Report Lbs/d** **Report Lbs/d** **Report** **Report**	**Monthly average** **Daily Max** **Monthly average** **Daily Max**	**Monitoring requirement per Reasonable Potential Analysis.** **Application data: 62 ug/l max and 34.3 ug/l average (3 samples)** Ten Week Sampling: 30.0828090 ug/l LTAMEC and 0.0.4549838 COV.
Total Zinc	**Report Lbs/d** **Report Lbs/d** **Report ug/l** **Report ug/l**	**Monthly average** **Daily Max** **Monthly average** **Daily Max**	**Monitoring required per Reasonable Potential Analysis.** **Application data: 181 ug/l max and 179 ug/l average (3 samples)**
4,6-Dinitro-o-cresol (Effective in 5th year with interim monitoring)	**0.14 Lbs/d** **0.21 Lbs/d** **12.6 ug/l** **19.7 ug/l** **31.6 ug/l**	**Monthly Average** **Daily Max** **Monthly Average** **Daily Max** **IMAX**	**New WQBELs required per Reasonable Potential Analysis.** Application data: Pollutant table not completed. **Ten Week Sampling: ND at <250 ug/l. Being all ND, TOXCONC could not calculate LTAMEC. EPA Sufficiently Sensitive Rule applies due to insensitive ND. DEP Target QL of 10 ug/l.**
3,4-Benzofluoranthene (Effective in 5th year with interim monitoring)	**0.0003 Lbs/d** **0.0005 Lbs/d** **0.030 ug/l** **0.047 ug/l** **0.76 ug/l**	**Monthly Average** **Daily Max** **Monthly Average** **Daily Max** **IMAX**	**New WQBELs required per Reasonable Potential Analysis.** Application data: Pollutant table not completed. **Ten Week Sampling: ND at <50 ug/l. Being all ND, TOXCONC could not calculate LTAMEC. EPA Sufficiently Sensitive Rule applies due to insensitive ND. DEP Target QL of 2.5 ug/l. Special Permit Condition for WQBELs below Quantitation Limits.**
Bis (2-Ethylhexyl) Phthalate (Effective in 5th year with interim monitoring)	**0.11 Lbs/d** **0.17 Lbs/d** **9.7 ug/l** **15.7 ug/l** **24.3 ug/l**	**Monthly Average** **Daily Max** **Monthly Average** **Daily Max** **IMAX**	**WQBELs required per Reasonable Potential Analysis.** **Application data: 10.8 ug/l max and 6.3 ug/l average (3 samples)** **Ten Week Sampling: 84.5227040 ug/l LTAMEC and 0.5651587 COV. EPA Sufficiently Sensitive Rule applies due to insensitive ND.**
BOD5 Minimum Reduction	**Report (%)**	**Minimum Monthly Average**	**New Reporting requirement. Previous NPDES permit did not include the standard Part A.I Additional Requirements permit language 85% requirement. The LTCP Update submittals did not contain information justifying relaxation of the request per Chapter 92a.47. Data will be collected in this permit cycle and addressed via CSO LTCP Update. See CSO Schedule of Compliance.**
TSS Minimum Reduction	**Report (%)**	**Minimum Monthly Average**	**See above.**

Comments:

- **Internal Monitoring Point/Outfall No. 101**: New Outfall created for Raw Sewage Influent (BOD5 and TSS) reporting at headworks influent. The Department accepts a 1 BOD5 to 1.2 CBOD5 effluent ratio in the absence of better data.
- **Reasonable Potential Analysis**: See Toxics Management Spreadsheet and TOXCONC Spreadsheet Output. In addition:
    - **IU Sources**:
        - Only one (1) identified IU (for ~5,000 gallon semi-annual quench tank discharge) per CSO LTCP.
        - The Borough has Orphan AMD discharges, so likely AMD-impacted groundwater/surface water I&I source of AMD metals. It is unclear if AMD-impacted water sources are used for non-potable water sources by local businesses. NOTE: The CSO LTCP lacks data on CSO discharge metal concentrations/loadings/flows. CSO discharges are addressed under the CSO Outfalls Nos. 002 through 010 effluent section.
    - **Water Quality Modeling Assumptions**:
        - **Discharge Quality**:
            - Total Hardness: 146 mg/l used for modeling as Pollutant Table LTA.
            - Concentrations: See TMS.
                - Standard defaults and Application data (Pollutant Group Table) values used except as superseded by TOXCONC Long Term Average Monthly Effluent Concentrations (LTAMEC) and Coefficient of Variability (COV) values based upon 10-week sampling program data.
                - Effluent data is of limited value. Lab sheets indicate 8/30/2016 and 8/31/2016 and 9/1/2016 composite sampling dates only. Not weekly sampling to ensure representativeness. Tables omitted addressing several constituents.
        - **Stream Quality**:
            - Stream Flow: USGS PA Streamstats estimated. Q7-10 low flow shows Orphan AMD discharge contributions during low flow periods.
            - Stream Sampling Data: See Stream Section for sampling data. The stream has zero assimilative capacity for AMD metals at present.
            - Stream Hardness: 360 mg/l assumed per DEP sample result in E-maps and likely due to Orphan AMD discharge contributions. The application sample data (500 mg/l) is not conservative in comparison. The permittee will have opportunity to refine site-specific data input assumptions via NPDES Permit Part C.V options.
            - Stream pH: Assumed at 7.0 SU default for stream and discharge because stream sample at 6.43 SU. The permittee has opportunity to refine site-specific data input assumptions via NPDES Permit Part C.V options.
            - Stream Temperature: 25 ºC as a Warm Water Fishery.
    - **AMD Metals**: Due to significant AMD metals concentrations in the site effluent to the AMD-impaired stream (zero assimiliative capacity), WQS-based permit limits are being incorporated into the permit. The NPDES Permit Part C.V has retained metals-related guidance in event the Borough voluntarily wants to conduct a TRE for metals.
    - **Other Metals:**
        - **Cadmium**: Monitoring upon request. The application information indicates apparent spiking. The only known IU source discharges a quench tank semi-annually. In the absence of a Borough Industrial Pretreatment Program (IPP), monitoring would be upon request. NPDES Permit Part B.I.D (General Pretreatment) requirements would apply in event of potential pass-through or interferences.
        - **Copper and Zinc**: Monitoring is being required in this permit term. The NPDES Permit Part C.V has retained metals-related guidance in event the Borough voluntarily wants to conduct a TRE for metals.
    - **Organics**: **4,6-Dinitro-o-cresol; 3,4-Benzofluoranthene; and Bis (2-Ethylhexyl) Phthalate:**
        - Permit limits are required based on the provided data (including insensitive ND levels).
        - Interim monitoring will allow for gathering of new data to determine if relief from permit limits and/or monitoring requirements is allowable.

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

No. Samples/Month: 4

Pollutants	*Mass Limits* AML (lbs/day)	MDL (lbs/day)	*Concentration Limits* AML	MDL	IMAX	Units	Governing WQBEL	WQBEL Basis	Comments
Total Aluminum	Report	Report	Report	Report	Report	µg/L	750	AFC	Discharge Conc > 10% WQBEL (no RP)
Total Copper	Report	Report	Report	Report	Report	µg/L	68.3	CFC	Discharge Conc > 10% WQBEL (no RP)
Total Iron	16.3	19.7	1,500	1,819	3,750	µg/L	1,500	CFC	Discharge Conc ≥ 50% WQBEL (RP)
Total Manganese	10.8	14.4	1,000	1,326	2,500	µg/L	1,000	THH	Discharge Conc ≥ 50% WQBEL (RP)
Total Zinc	Report	Report	Report	Report	Report	µg/L	874	AFC	Discharge Conc > 10% WQBEL (no RP)
4,6-Dinitro-o-Cresol	0.14	0.21	12.6	19.7	31.6	µg/L	12.6	THH	Discharge Conc ≥ 50% WQBEL (RP)
3,4-Benzofluoranthene	0.0003	0.0005	0.03	0.047	0.076	µg/L	0.03	CRL	Discharge Conc ≥ 50% WQBEL (RP)
Bis(2-Ethylhexyl)Phthalate	0.11	0.17	9.7	15.7	24.3	µg/L	9.7	CRL	Discharge Conc ≥ 50% WQBEL (RP)

TRC EVALUATION

Input appropriate values in A3:A9 and D3:D9 — Ashland Borough WWTP

10.7	= Q stream (cfs)	0.5	= CV Daily
1.3	= Q discharge (MGD)	0.5	= CV Hourly
30	= no. samples	0.631	= AFC_Partial Mix Factor
0.3	= Chlorine Demand of Stream	1	= CFC_Partial Mix Factor
0	= Chlorine Demand of Discharge	15	= AFC_Criteria Compliance Time (min)
1	= BAT/BPJ Value	720	= CFC_Criteria Compliance Time (min)
0	= % Factor of Safety (FOS)		=Decay Coefficient (K)

Source	Reference	AFC Calculations	Reference	CFC Calculations
TRC	1.3.2.iii	WLA afc = 1.090	1.3.2.iii	WLA cfc = 1.666
PENTOXSD TRG	5.1a	LTAMULT afc = 0.373	5.1c	LTAMULT cfc = 0.581
PENTOXSD TRG	5.1b	LTA_afc= 0.406	5.1d	LTA_cfc = 0.968

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

WQM 7.0 Effluent Limits

SWP Basin	Stream Code	Stream Name
06B	17556	MAHANOY CREEK

RMI	Name	Permit Number	Disc Flow (mgd)	Parameter	Effl. Limit 30-day Ave. (mg/L)	Effl. Limit Maximum (mg/L)	Effl. Limit Minimum (mg/L)
1.950	Ashland Bor STP	PA0023558	1.300	CBOD5	25		
				NH3-N	11.3	22.6	
				Dissolved Oxygen			4

Development of Effluent Limitations

Outfall No. 011 **Design Flow (MGD)** 0
Latitude 40º 46' 48.00" **Longitude** -76º 20' 19.00"
Wastewater Description: Stormwater associated with industrial activities

Permit Limits and/or Monitoring: Changes bolded

Parameter	Limit (mg/l unless otherwise specified)	SBC	Model/Basis
TSS	**100.0**	**IMAX**	Existing monitoring requirement. Permit limits based on General Permit PAG-03 statewide BPJ benchmark limits. EDMR data: 28 mg/l (see EDMR data)
pH	**6.0 – 9.0 SU**	**IMIN** - IMAX	New monitoring/limit requirement for TMDL AMD stream. Limit based on Chapter 95.2. EDMR data: None available.
Oil & Grease	**30.0**	**IMAX**	**New permit limit and monitoring requirement to address potential for releases. Chapter 95.2-based limit. Application data: None available**
Total Iron	Report	**IMAX**	Existing monitoring requirement, relevant to stormwater discharge to TMDL stream.
Total Kjehldahl Nitrogen (TKN)	Report	**IMAX**	Existing monitoring requirement retained.

Comments: Outfall at same coordinates as Outfall No. 001.

Whole Effluent Toxicity (WET)

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

X For the permit renewal application (4 tests).

The dilution series used for the tests was: 100%, 63%, 26%, 13%, and 7%. The Target Instream Waste Concentration (TIWC) to be used for analysis of the results is: 26%. The WET test assumed a 1.3 MGD discharge to a 5.68 CFS receiving stream. **NOTE: Three of the WET Tests took place in October 2016, not quarterly. The DEP Biologist reviewed the four WET tests and determined they passed. Facility has combined stormwater/sewers (CSS) with dilution effects during wet weather and apparent AMD I&I given raw influent data (i.e. variability issues).**

Summary of Four Most Recent Test Results

NOEC/LC50 Data Analysis

Test Date	*Ceriodaphnia* Results (% Effluent)			*Pimephales* Results (% Effluent)			Pass? *
	NOEC Survival	NOEC Reproduction	LC50	NOEC Survival	NOEC Growth	LC50	
7/25/2016	100	100	>100	100	100	>100	Pass
10/3/2016	100	100	>100	100	100	>100	Pass
10/17/2016	100	100	>100	63	63	>100	Pass
10/24/2016	100	100	>100	100	100	>100	Pass

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

TST Data Analysis

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

X **NO**

Comments:

- **Due to lack of quarterly WET Tests (3 tests in single month) and CSS influent dilution (with evidence of high AMD metal raw influent concentrations), a Part C Condition for quarterly testing during the first year of the new permit term is recommended.**
- **USGS PA Streamstats estimated a substantially higher Q7-10 low flow (10.8 CFS) than previously used (5.68 CFS), but is consistent with assorted upstream Orphan AMD discharges adding to stream flow during low flow conditions.**

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

Acute Partial Mix Factor (PMFa): **0.628** Chronic Partial Mix Factor (PMFc): **1**

1. Determine IWC – Acute (IWCa):

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

[(1.3 MGD x 1.547) / ((10.8 cfs x 0.628) + (1.3 MGD x 1.547))] x 100 = **IWCa% = 22.86%**

Is IWCa < 1%? X **NO**

If the discharge is to the tidal portion of the Delaware River, indicate how the type of test was determined: **NA**

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

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

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

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

[(1.3 MGD x 1.547) / ((10.8 cfs x 1) + (1.3 MGD x 1.547))] x 100 = **TIWCc% = 15.69% (~16%)**

3. Determine Dilution Series

Dilution Series = 100%, 58%, 16%, 8%, and 4%.

WET Limits

Has reasonable potential been determined? **X** NO

Will WET limits be established in the permit? **X** NO

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

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

Summarized CSO Information:

Table 1 (CSO Description and 2018 CSO Event Data)

CSO	Outfall Location	Description	Comment	2018 Annual CSO Status Report Reported Flows**
002*	Near WWTP (East of WWTP itself) – 200 feet east of WWTP.	Type I Brown and Brown regulator Type C Float operated mechanism per 2001 NMC Report Exhibit C. The final diversion regulator is located in the coal mine drainage tunnel and immediately before the final connection to the WWTP is a diversion wall/dam. The wall is ~16-inches in height and spans the entire width of the coal mine drainage tunnel (9 feet, 9 inches in width). The flow goes to the WWTP via a 14-inch diameter line that leads to Regulator No. 002 and then to the WWTP wet well. **Due to control of WWTP influent, it is considered part of the WWTP.** **CSO Overflow Regulator Maintenance Forms identified "Tunnel sewer" ultimate flow at 1.5123 MGD.** 2001 NMC Implementation Report indicated Outfall connected to MH-1. Originally named "Tunnel sewer regulator" per 2000 NPDES Permit application.	**Concrete dam with flush weir plate in 10 Foot by 7-foot Tunnel sewer with 14-inch CIP pipe to "Tunnel Sewer" Regulator which appears to direct flow via 14-inch pipe to MH-1 (i.e. Tunnel continues to Creek for CSO discharge). This design would allow for floatables and solids to be discharged directly to stream. No tide gate.** **Flooding issues prevented determination of discharge rates in 2018.**	170K (2 events) 155K (3 events) **Missing March** 170K (3 events) 280K (3 events) 140K (2 events) **Unknown due to July flooding** **Unknown due to August flooding** 490K (3 events) 250K (3 events) 520K (6 events) 560K (4 events) **Total: >2,735K for 9 months of data**
003	West Hoffman Blvd (PA 61 at Bridge, downstream side)	Type II regulator (low diversion berm with a manually operated slice gate) – 12-inch outfall located under bridge. 2001 NMC Implementation Report indicated Outfall connected to MH-3. **CSO Overflow Regulator Maintenance Forms identified ultimate flow at 0.0084 MGD.**	Tide gate present	**No data**
004	East Hoffman Blvd Upstream of PA 61 bridge)	Type II regulator (low diversion berm with a manually operated slice gate) – 15-inch outfall located 160 feet east of bridge. 2001 NMC Implementation Report indicated Outfall connected to MH-4. **CSO Overflow Regulator Maintenance Forms identified ultimate flow at 0.0284 MGD.**	"Temporarily out of service" and Closed off in 2013. Blocked per renewal application.	**No data**

		2016 LTCP Update indicated this outfall can be permanently removed.		
005	Second Street (South of)	Type II regulator (low diversion berm with a manually operated slice gate) – 20-inch outfall located off south end of street. 2001 NMC Implementation Report indicated Outfall connected to MH-6. **CSO Overflow Regulator Maintenance Forms identified ultimate flow at 0.0213 MGD.** **2016 LTCP Update indicated this outfall can be permanently removed.**	Temporarily out of service" and Closed off in 2012. Tide gate sealed closed. **A more permanent blockage appears required.**	**No data.**
006*	First Street (South of)	Type II regulator (low diversion berm with a manually operated slice gate) – 36-inch outfall located south end of First Street 2001 NMC Implementation Report indicated Outfall connected to MH-8. **CSO Overflow Regulator Maintenance Forms identified ultimate flow at 0.1286 MGD.**	**Flooding issues prevented determination of discharge rates in 2018.**	14 K (2 events) 14.4K (3 events) **Missing March** 17K (3 events) 24K (3 events) 9K (1 event) **Unknown due to July flooding** **Unknown due to August flooding** 35K (4 events) 16K (2 events) 39K (6 events) 43K (4 events) **Total**: **211.4K based on 9 months of data.**
007	Walnut Street (East of Front and Walnut Street)	Type II regulator (low diversion berm with a manually operated slice gate) – **No 2001 NMC regulator Exhibit C description. Associated with Mahanoy Creek Interceptor sewer. Appears to have 15-inch pipe to Creek.** 2001 NMC Implementation Report indicated Outfall connected to MH-11. **CSO Overflow Regulator Maintenance Forms identified ultimate flow at 0.0136 MGD.** Originally named "West Middle Street" per 2000 NPDES Permit application.	**Flooding issues prevented determination of discharge rates in 2018.**	5K (2 events) 3.5K (2 events) **Missing March** 6K (3 events) 8K (4 events) 3K (1 event) **Unknown due to August flooding** **Unknown due to July flooding** 14.5K (4 events) 8K (2 events) 19K (6 events) 22K (4 events) **Total: 89K based on 9 months of data**
008	East Middle Street (along left bank)	Type II regulator (low diversion berm with a manually operated slice gate) – 15-inch outfall from MH. **Discharge line buried under stream sediment.** 2001 NMC Implementation Report indicated Outfall connected to MH-13.	Had been considered for closure in 2001, due to lack of observed discharges. **Flooding issues prevented determination of**	2.8 K (2 events) 1.9K (2 events) **Missing March** 3.2K (3 events) 4.3K (4 events) 2K (1 event) **Unknown due to July flooding** **Unknown due to August flooding**

		CSO Overflow Regulator Maintenance Forms identified ultimate flow at 0.0588 MGD.	**discharge rates in 2018.**	8K (4 events) 5K (2 events) 10K (4 events) 13K 4 events) **Total: 50.2K based on 9 months data**
009	Route 54 (at Centre Street bridge)	Type II regulator (low diversion berm with a manually operated slice gate) – 18-inch outfall through northwest wing wall of bridge. 2001 NMC Implementation Report indicated Outfall connected to MH-31. **CSO Overflow Regulator Maintenance Forms identified ultimate flow at 0.0084 MGD.** Originally named “Centre Street” per 2000 NPDES Permit application.	**Flooding issues prevented determination of discharge rates in 2018.**	2.5K (2 events) 1.5K (2 events) **Missing March** 2K (2 events) 3.3K (4 events) 1.5K (1 event) **Unknown due to July flooding** **Unknown due to August flooding** 4.3K (4 events) 3K (2 events) 5.5K (4 events) 8K (3 events) **Total: 31.6K based on 9 months of data**
010*	Oakland Avenue (Upstream of Centre Street bridge)	Type II regulator (low diversion berm with a manually operated slice gate) – 12-inch emptying into Little Mine Run culvert box at Chestnut and Oakland Avenue. 2001 NMC Implementation Report indicated Outfall connected to MH-29. **CSO Overflow Regulator Maintenance Forms identified ultimate flow at 0.0304 MGD.** Originally named “Little Mine Run” per 2000 NPDES Permit application.	**Flooding issues prevented determination of discharge rates in 2018.**	5K (2 events) 2.7K (2 events) **Missing March** 2.8K (3 events) 6.2K (4 events) 2.5K (1 event) **Unknown due to July flooding** **Unknown due to August flooding** 9.2K (4 events) 5K (2 events) 9.5K (4 events) 13K (4 events) **Total: 55.9K based on 9 months of data**

*Borough-identified as key CSO regulators that are inspected monthly and used to “anticipate when there is a potential for diversions from the remaining regulators” (based on information from the Borough, no apparent engineering analysis). Other regulators are inspected as needed. Diverted flow at each discharge is visually monitored during each inspection for discoloration and debris in the receiving stream. Regulators are inspected after “significant storm events” to assure flow channels are clear of debris and monitor overflows from each discharge point.

**Only CSO “Detailed Outfall Reports” provided without explanation of method of estimating CSO flow volumes and identifying CSO discharges (other than vague LTCP reference to key regulators). CSO Reports did not report precipitation each day. CSO events were estimated by counting discharges with at least one day of separation from previous or later CSO discharges. It is also unclear how the discharges volumes and duration were estimated or how they verified no discharge days. Comment section was left blank except when flooding meant CSO discharges could not be estimated. All CSO discharges were attributed to hydraulic overload.

Number of Storm Events: 29
Number of CSO Events: 29
Average Discharge Duration per Event: 9.0 Hours
Avergae Volume per CSO Event: 12689.7 Gallons
Minimum Amount of Rain: 0.53 Inches

Table 2 (2019 CSO Data from Application*)

CSO	#Storm Events	# CSO Events	Average Discharge Duration Per Event (Hours)	Average Volume per CSO Event (gallons/year)	Calculated Total Volume (gallons/year)	Minimum Amount of Rain triggering CSO discharge (inches)
002	35	35	10.5	105,428.6	3,690,001	0.44
005	-	-	-	-	-	-
006	29	29	9.0	12,689.7	368,001.3	0.53
007	29	29	3.3	3,293.1	95,499.9	0.53
008	18	18	3.3	3,277.8	59,000.4	0.73
009	13	13	2.1	2,076.9	26,999,7	0.85
010	13	13	2.7	2,730.8	35,500.4	0.85

*2016 NPDES Application submittal indicated 59 CSO events, with an average duration of 6 hours, and average 48,747 gallons/event with a triggering 0.56-inch rainfall, presumably for 2015. The accuracy of the Borough's methodology to identify CSO discharges, CSO discharge volumes and duration is unclear.

Table 3 (2016 CSO LTCP Update Sampling Data)*:

Pollutant	Mahanoy Creek presumably below CSO Outfall No. 002** (Dry Weather)	Mahanoy Creek below CSO Outfall No. 002** (wet weather)	CSO Outfall No. 002	CSO Outfall No. 006
BOD5 (5 mg/l QL)	ND	ND	ND	ND
Fecal Coliform (#/100 ml)	80	38,000	600,000	600
pH (SU)	6.63	7.60	7.30	6.67
TDS (mg/l)	657	520	114	205
TSS (mg/l)	42.0	29.8	28.8	ND (unspecified QL)

*LTCP conclusions is that fecal coliforms increase during wet weather CSO events but BOD5, pH, TDS, and TSS decrease due to dilution in Mahanoy Creek.
**Location uncertain.

Communication Log: Includes pre-NPDES Renewal Application CSO LTCP-related communications for context.

- **2/28/1997**: CSO Strategy – Final Status Report referenced in 2016 CSO LTCP update.
- **1/2003**: LTCP Update cited in 2016 CSO LTCP update
- **1/7/2007**: DEP Letter on revised PA CSO Policy
- **4/23/2012**: Previous NPDES Permit with CSO-related requirements.
- **10/30/2013**: Draft CSO LTCP Update submitted per NPDES Permit condition.
- **8/19/2015**: CSO Inspection of Ashland Borough.
- **2/3/2016**: DEP Deficiency Letter regarding 10/20/2012 LTCP Update submittal.
- **3/21/2016**: Ashland Borough (Entech) Letter regarding proposed LTCP "Draft of Scope"
- **3/24/2016**: DEP Letter regarding Ashland Borough LTCP Draft of Scope letter
- **3/31/2016**: Ashland Borough (Entech) Letter (received 4/4/2016) indicating its plan to address all 3/24/2016 DEP letter items in the 2016 CSO LTCP Update.
- **4/29/2016**: DEP (Berger) E-mail granting extension for Borough Response on the LTCP Update to 5/12/2016.
- **5/12/2016**: Meeting with Borough and Borough Engineer (Entech). Highlights:
    - Attendees:
        - Ashland: Ray Jones
        - Ashland's Consultant (ENTECH): Dave Cuff and Mike Sassman
        - DEP: Amy Bellanca, Pat Musinski, Scott Confer, and James Berger
    - Ray Jones is Ashland Borough manager. The WWTP certified operator goes to him when he needs something.
    - The Borough did not bring responses to previous DEP LTCP letters. The Borough wants to address requirements in future LTCP Update.
    - The Borough will send in a letter request for a small systems "focused" LTCP. The Borough will identify which demonstration or presumptive goal is chosen.
    - The Department noted the Borough should review the DEP/EPA CSO requirements, including NPDES Permit CSO conditions-referenced guidance. The Borough should also look at the EPA Small System LTCP-EZ Planning tool.
    - The Borough agreed to submit the LTCP update no later than with the NPDES permit renewal application.
    - The Department noted the need for the Borough to provide and summarize the NPDES Permit-required Annual CSO Status Report information. The Annual CSO Status Reports (submitted with the annual Chapter 94 Reports) did not contain required information.
    - The Borough and Borough Engineer indicated they had not yet seen the 2015 CSO Inspection Report.
    - LTCP requirements will largely revolve around the Borough-chosen LTCP Goal (presumptive or demonstration). The LTCP Goal is part of the minimum Water Quality Based Effluent Limits (along with no dry stream discharge, etc.). They have to determine if they are in compliance or not in the LTCP Update. Their evaluation will help the Department determine monitoring requirements and requirements to compe into compliance. The eventual EPA goal is zero CSO discharges. Future Annual CSO Status Report information (CSO Outfall discharge frequency, volume, duration, intensity) will give a qualitative way to define current conditions and any progress in meeting the Borough-chosen LTCP Goal.
    - The Department noted the NPDES Permit Renewal Application form and requirements have substantially changed, with the need to meet DEP Target Quantitation limits.
    - The LTCP is a long-term process that will include re-evaluation and updates in conjunction with future NPDES Permit renewal applications.
    - The current status of the stream (orange-colored, not supporting life) does not eliminate NPDES permit requirements or LTCP requirements, as the EPA/DEP presumes that impaired streams can and will recover over time.
- **6/3/2016**: DEP Letter approving request for small system "focused" LTCP contingent on meeting the minimum requirements.
- **10/31/2016**: NPDES Permit renewal application and LTCP Update submitted. **NOTE**: Review placed on hold at time due to general EPA objections to NPDES CSO permit language received in regard to other NPDES Permit with CSOs.
- **4/20/2020**: DEP Technical Deficiency Letter on NPDES Permit Renewal Application (including 2016 CSO LTCP Update)
- **5/13/2020**: Ashland (Don Cuff, Entech) E-mail request to delay for indefinite delay in addressing CSO LTCP-related technical deficiencies (citing EPA and DEP working to resolve EPA concerns about Part C CSO condition language).

- **5/20/2020**: DEP (Berger) E-mail response to 5/13/2020 E-mail, indicating no delay can be granted. The LTCP will be acted upon in the NPDES permit action.
- **6/11/2020**: Ashland (Entech) E-mail asking for an extension of time to allow for ten weeks of sampling for the revised NPDES permit application.
- **6/12/2020**: DEP (Berger) E-mail granting requested extension to 9/30/2020 and giving guidance on sampling data submittal requirements.
- **8/18/2020**: Ashland consultant (Entech) asked for a conference call on the application that day. DEP participants included Amy Bellanca and James Berger. Ashland was represented by Entech (Ed Pietrowski and Mary Peters).
    - They can address NPDES permit application deficiencies except for the HFMP (they are not sure of the real as-built hydraulic capacity of the treatment plant given age & limited maintenance, with potential need to increase capacities due to CSO-related requirements). They have done the additional sampling.
    - Their concerns are about CSO LTCP issues:
        - CSOs and Hydraulic Capacities: The existing permit does not allow for CSO discharges below the hydraulic capacities, so if there are any existing lower hydraulic capacities, then the LTCP will have to identify them (at plant or collection system CSO locations). The Department indicated the files identified the 1.3 MGD hydraulic design capacity (3 consecutive monthly averages) and 2.1 MGD peak wet weather flow capacity at the Treatment Plant.
            - They are unsure what are the actual as-built plant capacities. They were unsure how well maintained the plant is. They have to look at the in-place influent pumps for example.
            - They are unsure how much flow can be pushed through the 12-inch pipe from the CSO Outfall No. 002 tunnel to the WWTP.
            - Ed asked if we have the 2.1 MGD source document readily available for him to get a copy. Indicated I would have to track down the source and see. **NOTE: 2.1 MGD peak flow rate value identified in March 20, 2001 CSO Implementation of Nine Minimum Technology-Based Controls Section 5.1 (page 10).** 9/9/2009 WQM Permit No. 5409402 Module 1 (prepared by Alfred Benesch & Co.) claimed 3.0 MGD peak instantaneous/hourly flow capacity but that permit was for the nitrate fluidized bed unit, without breakdown of plant unit capacities.
        - CSO LTCP Goals: They previously proposed the LTCP demonstration goal rather than the 85% Presumptive LTPC goals that are easier to meet. They have to demonstrate that they meet the demonstration goal requirements. They can propose the easier 85% LTCP Presumptive goal in the revised LTCP.
        - CSO LTCP Schedule: They lack information on actual CSO discharge flows, etc. They might have to do CSO flow monitoring, hydraulic analyses (plant and CSO Outfall No. 002 tunnel), possible need to rerate the plant to meet LTCP goals, etc. CSO Outfall No. 002 tunnel is huge, and likely has capacity for greater storage, but would require evaluation. They do not know if there are any available options to redirect stormwater away from the CSS. They expressed some concern about potential fines for not having met all LTCP requirements.
            - The Department noted that the LTCP can propose a realistic schedule to do what is required in steps (CSO flow study, stream water quality monitoring, etc.) over a period of years.
            - A Consent Order & Agreement (CO&A) could be developed to allow for schedule to exceed the 5-year NPDES permit term.
                - Amy would talk to Pat Musinski (DEP Monitoring & Compliance) about this option, and potential for minimizing any fines given proactive actions. The LTCP schedule could be in the CO&A. CO&As can make getting PENNVEST funding easier and give some legal protections to the permittee. The permittee would have to keep any CO&A schedule. There is a backlog of CACPs, so this CO&A might take some time to develop. Entech will talk to its client about this option.
                - EPA is involved with another site in Schuylkill County (Shenandoah) in terms of CSO requirements. EPA will likely comment the future Ashland Draft NPDES Permit and LTCP. DEP might be easier to work with.
            - Planning would be involved in any plant rerating, and the Borough's Act 537 Plan was noted to be old, probably needing updating. They should talk to Scott Novatnak (Planning) about Planning requirements/options.
            - Borough is poor (trouble paying even for LTCP preparation and maintenance per Entech).
                - They have not made any PENNVEST or RUS contacts yet. The Department noted that there is a (<$200,000) small projects PENNVEST option that they could talk to Rebecca Kennedy (PENNVEST) about.

- State Representatives can also be contacted to see if additional help is available.

- Revised LTCP: Should include the discussed schedule, address all NMC requirements upfront, ensure meeting current reporting requirements, etc. It would give the Department something to work with, and allow for progress to be made.
- Separate Site CSO public Notification Requirements and DEP contact: The issue came up at a different site per Entech. They asked for clarification. They indicated the CSO discharge came during a very heavy local rain event at a permitted CSO outfall. In the absence of the site-specific permit:
  - The existing NPDES Permits have special notification language for dry weather CSOs and/or SSOs. The DEP Inspector should be contacted in either case. Dry weather events can be caused by fire-fighting flows, etc. outside of municipality control.
  - There are standard CSO reporting form requirements and annual CSO Status Report requirements for permitted CSOs.
  - There are public notice requirements for LTCP updates and signs at CSO discharge locations.

8/21/2020: DEP (Berger) E-mail with copies of excerpts from previous facility permitting per Ashland (Entech) request.
9/29/2020: Ashland (Entech) E-mail asking for extension.
9/29/2020: DEP (Bellanca) E-mail granting requested extension to 10/16/2020.
9/30/2020: DEP (Berger) E-mail clarifying that any submittal should note if the voluntary CO&A option would be pursued, with extra application copy needed in that event.
10/16/2020: Ashland (Entech) E-mailed Partial Response to DEP Technical Deficiency Letter received. Did not include LTCP update. NPDES Form Signature/Certification Section was blank on the electronic copy. Responses included the following:

- "Based on sampling information provided, the facility does meets the 85% reduction requirement. Ashland will evaluate this in the Wastewater Treatment Plant evaluation as part of the Long Term Control Plan and may request relief from DEP per Chapter 92a.47 (g, h) requirements".
- "A High Flow Management Plan will be developed as part of the Long Term Control Plan".
- "There is no in-plant treatment plant bypassing".
- "The PPC Plan will be updated, along with the Long Term Control Plan, after a complete Wastewater Treatment Plant evaluation is complete".
- "Capacity of the tunnel and the wastewater treatment units will be evaluated during the Wastewater Treatment Plant evaluation as part of the Long Term Control Plan". NOTE: CSO Outfall No. 002 Tunnel being referenced.
- "Any potential upgrades within the next 5 years will be evaluated during the Wastewater Treatment Plant evaluation as part of the Long Term Control Plan".
- "The customer list has been reviewed and there are no industrial users".
- "Ashland Borough is currently evaluating the Combined Sewer Overflow Long Term Control Plan. As part of this effort, an extensive evaluation must occur for the Wastewater Treatment Plant and the sanitary sewer collection system to determine hydraulic and treatment capacities. Ashland Borough is looking for financial assistance to complete this evaluation (primarily from PennVEST) and may potentially enter into a Consent Order and Agreement with the Department. Due to the complexity of this situation, Ashland requests until December 31, 2020 to provide a final decision to the Department. At that time, Ashland will reach out to the Department with a schedule to address the Long Term Control Plan, High Flow Management Plans, and any action items in regards to system wide treatment and hydraulic capacities".

10/30/2020: DEP (Berger) E-mail granting extension to 12/31/2020 for submittal of three (3) copies of the revised Ashland Borough NPDES Renewal Application No. PA0023558 LTCP Update that addresses all issues set forth in the (attached) April 20, 2020 DEP Technical Deficiency Letter Part II (pages 8 – 22) , and a realistic CSO schedule of compliance for coming into compliance with all existing regulatory/permit requirements (including Post Construction Compliance Monitoring) and the Borough-chosen LTCP Goal (demonstrative or presumptive).
12/4/2020: Ashland (Entech) E-mail regarding the CSO Schedule of Compliance.

- "At the November Borough meeting, Ashland Borough made a motion to investigate short term financing for the first phase of addressing DEP's Long Term Control Plan requirements for the combined sewer system, as well as, investigating the feasibility of separating the sewer system. At the same time, the Borough will investigate if selling their system should be considered. They will evaluate their existing sanitary sewer system assets and meet with potential system buyers".
- "Therefore, upon evaluation of all alternatives, including the preliminary engineering evaluation and the potential of selling of system, we would like to present to PADEP our findings and schedule to move forward towards ultimate compliance at that time. This evaluation is estimated to take approximately 12 months and we request from the Department to allow Ashland Borough this time to evaluate all their options in moving forward".