

Application Type Renewal
Facility Type Municipal
Major / Minor Minor

**NPDES PERMIT FACT SHEET
INDIVIDUAL SEWAGE**

Application No. PA0024627
APS ID 1015516
Authorization ID 1312555

Applicant and Facility Information

| | | | |
|---------------------------|--|------------------|---|
| Applicant Name | <u>McClure Borough Municipal Authority</u> | Facility Name | <u>McClure Municipal Authority Sewer System STP</u> |
| Applicant Address | <u>PO Box 138</u> <u>McClure, PA 17841-0138</u> | Facility Address | <u>Ulsh Gap Road</u> <u>McClure, PA 17841</u> |
| Applicant Contact | <u>Robert Erb</u> | Facility Contact | <u>Robert Erb</u> |
| Applicant Phone | <u>(570) 658-4755</u> | Facility Phone | <u>(570) 658-4755</u> |
| Client ID | <u>51624</u> | Site ID | <u>246696</u> |
| Ch 94 Load Status | <u>Not Overloaded</u> | Municipality | <u>McClure Borough</u> |
| Connection Status | <u>No Limitations</u> | County | <u>Snyder</u> |
| Date Application Received | <u>April 24, 2020</u> | EPA Waived? | <u>Yes</u> |
| Date Application Accepted | <u>April 30, 2020</u> | If No, Reason | <u></u> |
| Purpose of Application | <u>Renewal of existing NPDES permit</u> | | |

Summary of Review

The above applicant has submitted an NPDES renewal application for their existing 0.225 MGD discharge to the South Branch of Middle Creek from the above sewage treatment plant (STP) that serves McClure Borough. There are no significant industrial users within the system. The treatment plant consists of a comminutor, manual bar screen, equalization tank, aeration units (2), clarifiers (2), chlorinator, chlorine contact tank, final contact tank, and a sludge holding tank.

Based on the following review, it is recommended a draft permit be developed and sent out along with a PA Bulletin notice to provide the public with the required 30 day comment period.

Unless otherwise noted, the Department's Standard Operating Procedure (SOP) for reissuance of NPDES permits was followed along with the SOP for establishing effluent limitations for sewage dischargers.

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.

| Approve | Deny | Signatures | Date |
|---------|------|--|-------------------|
| X | | <i>Chad A. Fabian</i> Chad A. Fabian / Project Manager | November 10, 2020 |
| X | | <i>Nicholas W. Hartranft, P.E.</i> Nicholas W. Hartranft, P.E. / Environmental Engineer Manager | November 17, 2020 |

| Discharge, Receiving Waters and Water Supply Information | | | |
|--|---------------------------|--|-------------------|
| Outfall No. | 001 | Design Flow (MGD) | 0.225 |
| Latitude | 40° 42' 40.00" | Longitude | 77° 19' 5.70" |
| Quad Name | McClure | Quad Code | 1327 |
| Wastewater Description: Sewage from McClure Borough | | | |
| Receiving Waters | South Branch Middle Creek | Stream Code | 17958 |
| NHD Com ID | 54971537 | RMI | 5.97 |
| Drainage Area | 4.67 | Yield (cfs/mi ²) | 0.236 |
| Q ₇₋₁₀ Flow (cfs) | 1.41 | Q ₇₋₁₀ Basis | USGS Stream Stats |
| Elevation (ft) | 675 | Slope (ft/ft) | n/a |
| Watershed No. | 6-A | Chapter 93 Class. | TSF |
| Existing Use | TSF | Existing Use Qualifier | n/a |
| Exceptions to Use | None | Exceptions to Criteria | None |
| Assessment Status | Impaired | | |
| Cause(s) of Impairment | Siltation | | |
| Source(s) of Impairment | Agriculture | | |
| TMDL Status | Pending | Name | |
| Nearest Downstream Public Water Supply Intake | | Approximately 75 miles downstream on Susquehanna River | |

Changes Since Last Permit Issuance: None

| Compliance History | |
|--------------------------------|---|
| Summary of DMRs: | The facility utilizes the Department's eDMR system. There have been no effluent violations since a TSS exceedance in January of 2019 that was caused by a large rain event. |
| Summary of Inspections: | An in-person inspection was performed by the Department on 11/1/19. No violations were noted during the inspection other than the TSS exceedance mentioned above. The plant was operating as intended and no impact to the receiving stream was observed. |

Compliance History

DMR Data for Outfall 001 (from September 1, 2019 to August 31, 2020)

| Parameter | AUG-20 | JUL-20 | JUN-20 | MAY-20 | APR-20 | MAR-20 | FEB-20 | JAN-20 | DEC-19 | NOV-19 | OCT-19 | SEP-19 |
|---|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Flow (MGD) Average Monthly | 0.175 | 0.130 | 0.167 | 0.243 | 0.30 | 0.265 | 0.260 | 0.229 | 0.229 | 0.183 | 0.185 | 0.137 |
| Flow (MGD) Daily Maximum | 0.416 | 0.160 | 0.235 | 0.406 | 0.437 | 0.401 | 0.384 | 0.409 | 0.402 | 0.403 | 0.365 | 0.191 |
| pH (S.U.) Minimum | 6.9 | 7.0 | 7.0 | 7.0 | 7.0 | 6.9 | 6.9 | 7.0 | 7.1 | 7.0 | 7.0 | 6.9 |
| pH (S.U.) Maximum | 7.2 | 7.2 | 7.3 | 7.3 | 7.3 | 7.2 | 7.3 | 7.2 | 7.4 | 7.5 | 7.4 | 7.4 |
| DO (mg/L) Minimum | 7.0 | 6.8 | 8.1 | 9.0 | 9.3 | 9.0 | 9.0 | 8.6 | 8.6 | 8.4 | 7.2 | 7.2 |
| TRC (mg/L) Average Monthly | 0.2 | 0.2 | 0.3 | 0.4 | 0.4 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.4 |
| TRC (mg/L) Instantaneous Maximum | 0.40 | 0.50 | 0.40 | 0.50 | 0.50 | 0.40 | 0.50 | 0.50 | 0.40 | 0.50 | 0.40 | 0.50 |
| CBOD5 (lbs/day) Average Monthly | < 4.0 | < 4.0 | < 6.0 | < 6.0 | < 9.0 | < 8.0 | 15.0 | < 8.0 | < 5.0 | < 4.0 | < 6.0 | < 3.0 |
| CBOD5 (lbs/day) Weekly Average | < 7.0 | 6.0 | 10.0 | < 7.0 | 12.0 | 20.0 | 28.0 | 12.0 | < 6.0 | < 5.0 | 9.0 | < 4.0 |
| CBOD5 (mg/L) Average Monthly | < 3.0 | < 3.0 | < 4.0 | < 3.0 | < 4.0 | < 4.0 | 6.0 | 5.0 | < 3.0 | < 3.0 | < 3.0 | < 3.0 |
| CBOD5 (mg/L) Weekly Average | 3.0 | 5.0 | 6.0 | < 3.0 | 5.0 | 7.0 | 11.0 | 6.0 | 4.0 | < 3.0 | 5.00 | < 3.0 |
| BOD5 (lbs/day) Influent Average Monthly | 83.0 | 111 | 96.0 | 104 | 124 | 267.0 | 147 | 120 | 144 | 161.0 | 162.0 | 94.0 |
| BOD5 (lbs/day) Influent Daily Maximum | 105.0 | 165 | 129.0 | 166 | 194 | 596.0 | 224 | 158 | 189 | 319.0 | 278.0 | 120.0 |
| BOD5 (mg/L) Influent Average Monthly | 65.0 | 98.0 | 62.0 | 106 | 53.0 | 125.0 | 62.0 | 72 | 90.0 | 90.0 | 94.0 | 88.0 |
| TSS (lbs/day) Average Monthly | < 10.0 | 4.0 | 7.0 | < 6.0 | 18.0 | 21.0 | 30.0 | 13.0 | 6.0 | 10.0 | < 5.0 | < 7.0 |
| TSS (lbs/day) Influent Average Monthly | 92.0 | 89 | 79.0 | 96.0 | 99 | 108 | 107 | 96.0 | 92 | 132.0 | 110.0 | 96.0 |

**NPDES Permit Fact Sheet
McClure Municipal Authority Sewer System STP**

NPDES Permit No. PA0024627

| | | | | | | | | | | | | |
|--|-------|-------|--------|-------|-------|--------|-------|-------|-------|-------|-------|--------|
| TSS (lbs/day) Influent Daily Maximum | 107.0 | 96.0 | 96.0 | 130.0 | 258 | 188 | 210 | 111 | 119 | 172.0 | 225.0 | 122.0 |
| TSS (lbs/day) Weekly Average | 23.0 | 6.0 | 9.0 | 11.0 | 31.0 | 40.0 | 58.0 | 19.0 | 7.0 | 15.0 | 8.0 | 11.0 |
| TSS (mg/L) Average Monthly | < 9.0 | 4.0 | 5.0 | < 3.0 | 7.0 | 10.0 | 13.0 | 7.0 | 4.0 | 7.0 | < 5.0 | < 6.0 |
| TSS (mg/L) Influent Average Monthly | 74.0 | 79 | 55.0 | 83.0 | 39 | 47.0 | 44 | 58.0 | 58.0 | 80.0 | 66.0 | 90.0 |
| TSS (mg/L) Weekly Average | 20.0 | 6.0 | 8.0 | 5.0 | 12.0 | 17.0 | 22.0 | 10.0 | 5.0 | 9.0 | 8.00 | 11.0 |
| Fecal Coliform (CFU/100 ml) Geometric Mean | 16 | 38 | 69.0 | 3.0 | 18.0 | 126 | 19.0 | 114 | 3.0 | 115 | 14.0 | 75.0 |
| Total Nitrogen (lbs/day) Total Monthly | 505 | 386 | 447 | 370 | 294 | 381 | 347 | 389 | 314 | 302 | 298.0 | 253.0 |
| Total Nitrogen (mg/L) Average Monthly | 8.475 | 10.98 | 8.509 | 4.888 | 3.877 | 5.189 | 5.925 | 7.763 | 6.947 | 6.394 | 9.28 | 7.172 |
| Ammonia (lbs/day) Average Monthly | < 0.4 | < 0.1 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.1 | < 0.2 | < 0.1 |
| Ammonia (lbs/day) Weekly Average | < 1.0 | < 0.1 | < 0.2 | < 0.2 | < 0.3 | < 0.3 | < 0.3 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | 0.2 |
| Ammonia (mg/L) Average Monthly | < 0.1 | < 0.1 | < 0.1 | < 0.1 | 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 |
| Ammonia (mg/L) Weekly Average | < 1.0 | < 0.1 | < 0.1 | < 0.1 | 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | 0.1 | < 0.1 | < 0.1 |
| Total Phosphorus (lbs/day) Total Monthly | 61.0 | 76 | 64 | 46.0 | 42.0 | 59.0 | 56.0 | 51 | 35 | 44.0 | 58.0 | 82.0 |
| Total Phosphorus (mg/L) Average Monthly | 1.03 | 2.15 | 1.22 | 0.61 | 0.555 | 0.805 | 0.965 | 1.01 | 0.775 | 0.94 | 1.82 | 2.32 |
| Total Copper (lbs/day) Daily Maximum | | | 0.04 | | | 0.02 | | | < 0.1 | | | < 0.01 |
| Total Copper (mg/L) Daily Maximum | | | 0.0169 | | | 0.0107 | | | < 0.1 | | | < 0.01 |

Development of Effluent Limitations

| | |
|---|--|
| Outfall No. <u>001</u> | Design Flow (MGD) <u>.225</u> |
| Latitude <u>40° 42' 40.00"</u> | Longitude <u>-77° 19' 5.70"</u> |
| Wastewater Description: <u>Sewage Effluent</u> | |

Technology-Based Limitations

The following technology-based limitations apply, subject to water quality analysis and BPJ where applicable:

| Pollutant | Limit (mg/l) | SBC | Federal Regulation | State Regulation |
|------------------------------|-----------------|-----------------|--------------------|------------------|
| CBOD ₅ | 25 | Average Monthly | 133.102(a)(4)(i) | 92a.47(a)(1) |
| | 40 | Average Weekly | 133.102(a)(4)(ii) | 92a.47(a)(2) |
| Total Suspended Solids | 30 | Average Monthly | 133.102(b)(1) | 92a.47(a)(1) |
| | 45 | Average Weekly | 133.102(b)(2) | 92a.47(a)(2) |
| pH | 6.0 – 9.0 S.U. | Min – Max | 133.102(c) | 95.2(1) |
| Fecal Coliform (5/1 – 9/30) | 200 / 100 ml | Geo Mean | - | 92a.47(a)(4) |
| Fecal Coliform (5/1 – 9/30) | 1,000 / 100 ml | IMAX | - | 92a.47(a)(4) |
| Fecal Coliform (10/1 – 4/30) | 2,000 / 100 ml | Geo Mean | - | 92a.47(a)(5) |
| Fecal Coliform (10/1 – 4/30) | 10,000 / 100 ml | IMAX | - | 92a.47(a)(5) |
| Total Residual Chlorine | 0.5 | Average Monthly | - | 92a.48(b)(2) |

Water Quality-Based Limitations (WQBEL)

A "Reasonable Potential Analysis" (RPA) was performed (see attached). The RPA does not result in a candidate for PENTOXSD modeling. The previous reasonable potential analysis recommended monitoring for total copper. Since the highest copper value reported does not result in the need for an RPA, copper monitoring will be removed from this draft permit.

The Department's WQM7.0 model allows the Department to evaluate point source discharges of dissolved oxygen (DO), carbonaceous BOD (CBOD₅), and ammonia-nitrogen (NH₃-N) into free-flowing streams and rivers. To accomplish this, the model simulates two basic processes: the mixing and degradation of NH₃-N in the stream and the mixing and consumption of DO in the stream due to the degradation of CBOD₅ and NH₃-N. Previous WQM7.0 modeling showed that the existing limitations are protective of the water quality standards. In accordance with the Department's SOP for reissuance of NPDES permits, remodeling is not required since no changes to the nature of the discharge or receiving stream have occurred.

The previous chlorine demand spreadsheet showed that the existing total residual chlorine (TRC) limitations are protective of water quality standards.

Emerging Pollutants

As a consequence of actions associated with Triennial Review 13, the Environmental Quality Board has directed the Department to collect additional data related to sulfate, chloride, and 1,4-dioxane. Additionally, in an August 2013 letter from Jon Capacasa of the Region III Water Protection Program to DEP, EPA has expressed concern related to bromide and the importance of monitoring all point sources for bromide when it may be present. Based on these concerns and under the authority of § 92a.61, DEP has determined it should implement increased monitoring in NPDES permits for these parameters: TDS, sulfate, chloride, bromide, and 1,4-dioxane.

A Department directive recommends the following thresholds for establishing monitoring requirements and effluent limitations:

- Where the concentration of TDS in the discharge exceeds 1,000 mg/L, or the net TDS load from a discharge exceeds 20,000 lbs/day, and the discharge flow exceeds 0.1 MGD, Part A of the permit should include monitor and report for TDS, sulfate, chloride, and bromide.
- Where the concentration of bromide in a discharge exceeds 1 mg/L and the discharge flow exceeds 0.1 MGD, Part A of the permit should include monitor and report for bromide.
- Where the concentration of 1,4-dioxane (CAS 123-91-1) in a discharge exceeds 10 µg/L and the discharge flow exceeds 0.1 MGD, Part A of the permit should include monitor and report for 1,4-dioxane.

The maximum concentration of TDS reported in the application is 116 mg/l. This does not meet the threshold for TDS identified above. Bromide was sampled and report at <0.2 mg/l. Additionally, since there are no significant industrial users identified, it is reasonable to assume that 1,4 dioxane are also below the threshold. Therefore, no monitoring or effluent limitations for the aforementioned parameters will be required.

Additional testing for all of the above parameters will be required during the next permit renewal process.

Chesapeake Bay Requirements

Pennsylvania's Chesapeake Bay Watershed Implementation Plan (WIP), Phase 2 classifies the discharge as a Phase 4 Non-significant Discharger. Per the April 6, 2015 revisions to the respective WIP, the monitoring frequencies for the total nitrogen and total phosphorus will be 1/month. Additionally, the Chesapeake Bay language at Part C.I of the permit will be revised to reflect the revised WIP.

Anti-Backsliding

There is no proposal to relax any effluent limitation within this draft permit.

Existing and Proposed Effluent Limitations and Monitoring Requirements

The limitations and monitoring requirements specified below are proposed for the draft permit, and reflect the most stringent limitations amongst technology, water quality and BPJ. Instantaneous Maximum (IMAX) limits are determined using multipliers of 2 (conventional pollutants) or 2.5 (toxic pollutants). Sample frequencies and types are derived from the "NPDES Permit Writer's Manual" (362-0400-001), SOPs and/or BPJ.

Outfall 001, Effective Period: Permit Effective Date through Permit Expiration Date.

| Parameter | Effluent Limitations | | | | | | Monitoring Requirements | |
|---|-------------------------------------|------------------|-----------------------|------------------|----------------|------------------|--|----------------------|
| | Mass Units (lbs/day) ⁽¹⁾ | | Concentrations (mg/L) | | | | Minimum ⁽²⁾ Measurement Frequency | Required Sample Type |
| | Average Monthly | Weekly Average | Minimum | Average Monthly | Weekly Average | Instant. Maximum | | |
| Flow (MGD) | Report | Report Daily Max | XXX | XXX | XXX | XXX | Continuous | Metered |
| pH (S.U.) | XXX | XXX | 6.0 Inst Min | XXX | XXX | 9.0 | 1/day | Grab |
| DO | XXX | XXX | Report Daily Min | XXX | XXX | XXX | 1/day | Grab |
| TRC | XXX | XXX | XXX | 0.4 | XXX | 1.34 | 1/day | Grab |
| CBOD5 | 47 | 75 | XXX | 25 | 40 | 50 | 1/week | 8-Hr Composite |
| TSS | 56 | 84 | XXX | 30 | 45 | 60 | 1/week | 8-Hr Composite |
| Fecal Coliform (No./100 ml) Oct 1 - Apr 30 | XXX | XXX | XXX | 2000 Geo Mean | XXX | 10000 | 1/week | Grab |
| Fecal Coliform (No./100 ml) May 1 - Sep 30 | XXX | XXX | XXX | 200 Geo Mean | XXX | 1000 | 1/week | Grab |
| Total Nitrogen | Report Total Mo | XXX | XXX | Report | XXX | XXX | 1/month | 8-Hr Composite |
| Ammonia Nov 1 - May 31 | 23 | 34 | XXX | 12 | 18 | 24 | 1/week | 8-Hr Composite |
| Ammonia Jun 1 - Oct 31 | 8 | 11 | XXX | 4 | 6 | 8 | 1/week | 8-Hr Composite |
| Total Phosphorus | Report Total Mo | XXX | XXX | Report | XXX | XXX | 1/month | 8-Hr Composite |

Compliance Sampling Location: 001

Other Comments: All of the proposed above effluent limitations and monitoring frequencies are the same as the existing permit. The only change is the elimination of copper monitoring as described above in the WQBEL portion of the fact sheet.