U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION 8 NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM STATEMENT OF BASIS

PERMITTEE:	University of Montana
FACILITY NAME AND ADDRESS:	Flathead Lake Biological Station Wastewater Treatment Facility 32125 Bio Station Ln. Polson, MT 59860
PERMIT NUMBER:	MT-0023388
RESPONSIBLE OFFICIAL:	Jim Elser, Facility Director 406-872-4510 jim.elser@flbs.umt.edu
FACILITY CONTACT:	Jim Elser, Facility Director 406-872-4510 jim.elser@flbs.umt.edu
PERMIT TYPE:	Minor, Permit Renewal, POTW
FACILITY LOCATION:	32125 Bio Station Lane Polson, Montana 59860 47.876713, -114.031529

1 INTRODUCTION

This statement of basis (SoB) is for the issuance of a National Pollutant Discharge Elimination System (NPDES) permit (the Permit) to the University of Montana for the Flathead Lake Biological Station Wastewater Treatment Facility (Facility). The Permit establishes discharge limitations for any discharge of wastewater from the Facility through Outfall 001 to Flathead Lake. The SoB explains the nature of the discharges, EPA's decisions for limiting the pollutants in the wastewater, and the regulatory and technical basis for these decisions.

The Facility is located on the Flathead Indian Reservation. EPA Region 8 is the permitting authority for facilities located in Indian country, as defined in 18 U.S.C. § 1151, located within Region 8 states and implements federal environmental laws in Indian country consistent with the EPA Policy for the Administration of Environmental Programs on Indian Reservations and the federal government's general trust responsibility to federally recognized Indian tribes.

2 MAJOR CHANGES FROM PREVIOUS PERMIT

Major changes from the previous permit include the following:

- Changes in some monitoring frequencies and sampling types (section 7.1)
- Addition of percent removal for BOD_5 and TSS (section 7.1)
- Removal of chlorine limits (section 7.1)
- Additon of temperature and ammonia monitoring in the discharge and ambient monitoring of temperature and pH (section 7.1)
- Addition of asset management plan requirements (section 10.2)

3 BACKGROUND INFORMATION

The Flathead Lake Biological Station (FLBS) is an ecological research and education center located on Flathead Lake that is owned and operated by the University of Montana. FLBS is one of the oldest active biological stations in the US and has collected data on Flathead Lake ecology and water quality for over 100 years. This permit renewal is for the discharge from the onsite wastewater treatment facility (WWTF) that treats domestic wastewater from the approximate 30 faculty and staff who work at the FLBS, plus the approximate 70 attendees at conferences and education courses held at the Facility during the spring and summer. Additionally, non-hazardous wastes that are not prepared with any toxic materials are treated by the onsite WWTF. The Facility is located adjacent to Yellow Bay/Flathead Lake State Park on Flathead Lake, approximately ¼ mile west of Montana Hwy 35, in Section 4, Township 24N, Range 19W. It is entirely within the boundaries of the Flathead Indian Reservation. Outfall 001 is a submerged outfall located approximately 200 feet from the shore at a 50-foot depth, at 47.876944, -114.035556 (Figure 1).

Figure 1. Facility Location

3.1 Service Area Description

The Facility treats domestic wastewater and non-hazardous lab waste from the FLBS and does not include any commercial service areas. Per the director, the Facility also receives domestic waste from the adjacent Yellow Bay State Park, which represents 10-15% of the Facility's flows in the summer, but does not contribute to flows in the winter. FLBS's onsite laboratory sends all hazardous waste to the University of Montana campus in Missoula for processing.

3.2 Treatment Process

The previous wastewater treatment system was replaced with a StreamGO Water Solutions Inc. Membrane Bioreactor (MBR) in May of 2025 (Figures 2-4). An MBR is a wastewater treatment process where wastewater is treated by microorganisms in a bioreactor, which consume organic matter and nutrients. In the main treatment stream, the campus collection system conveys raw wastewater to the lift station wet well. The lift station pumps raw wastewater to the primary settling tank. Raw wastewater then flows via gravity to the equalization tank. Pumps in the equalization tank pump the raw wastewater through in-line strainers/screens, and through the MBR membranes. Air is blown into the membrane cassettes to provide oxygen for the microbes and to keep the membranes clean by preventing solids from accumulating on them. From there the raw wastewater passes through the in-line ultraviolet disinfection units. Treated wastewater then flows via gravity to the treated wet well and is then pumped and discharged into Flathead Lake daily via an underwater pipe that is approximately 200 feet from the shore and 50 feet below the surface.

In the side treatment stream, waste from the membrane cassettes flows via gravity to the sludge holding tank. Decant from the sludge holding tank flows via gravity back to primary settling tank. Sludge is removed from the sludge holding tank by a septic pump truck and disposed of off-site. The sludge from the Facility is pumped either every month or every three months, depending on the season.

Per the application, the design flow rate is 0.033 million gallons per day (mgd) or 33,000 gallons per day (gpd), and the average discharge flow rate is 0.003 mgd (3,000 gpd). During the summer season, the discharge flow rate is closer to 0.01 mgd (10,000 gpd).

Figure 2. New Treatment Process Flow Diagram

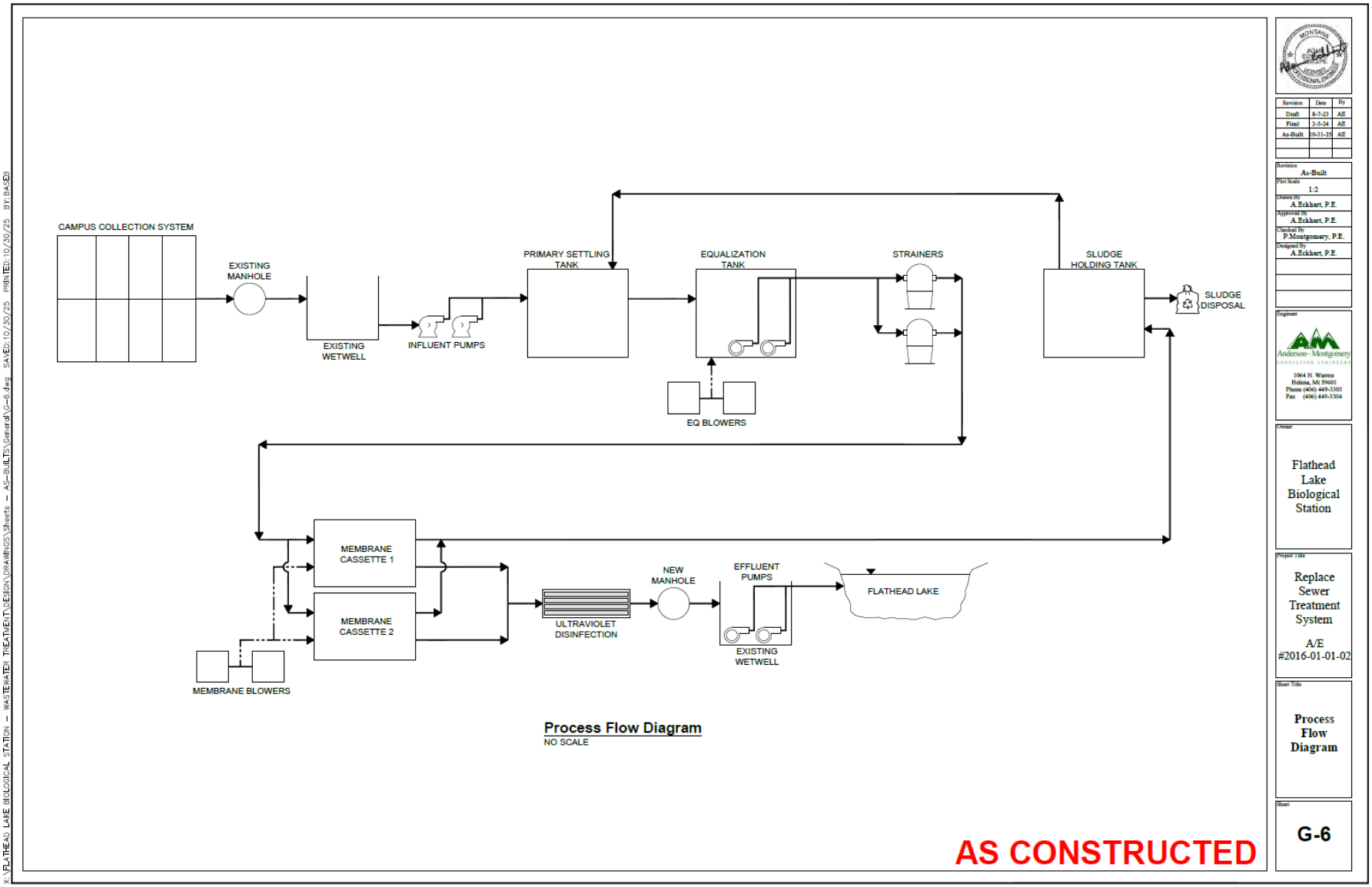


Figure 3. Site Plan

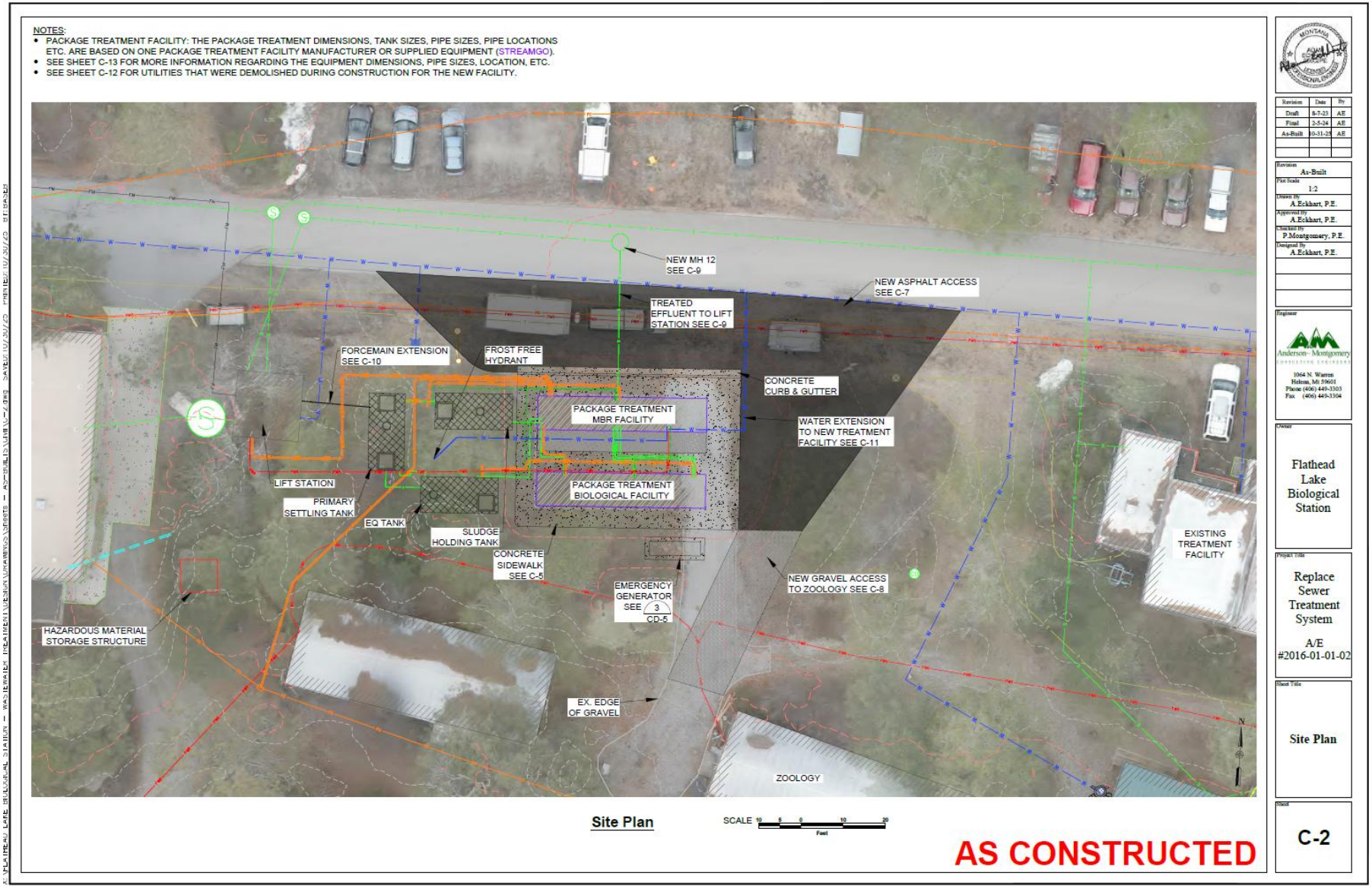
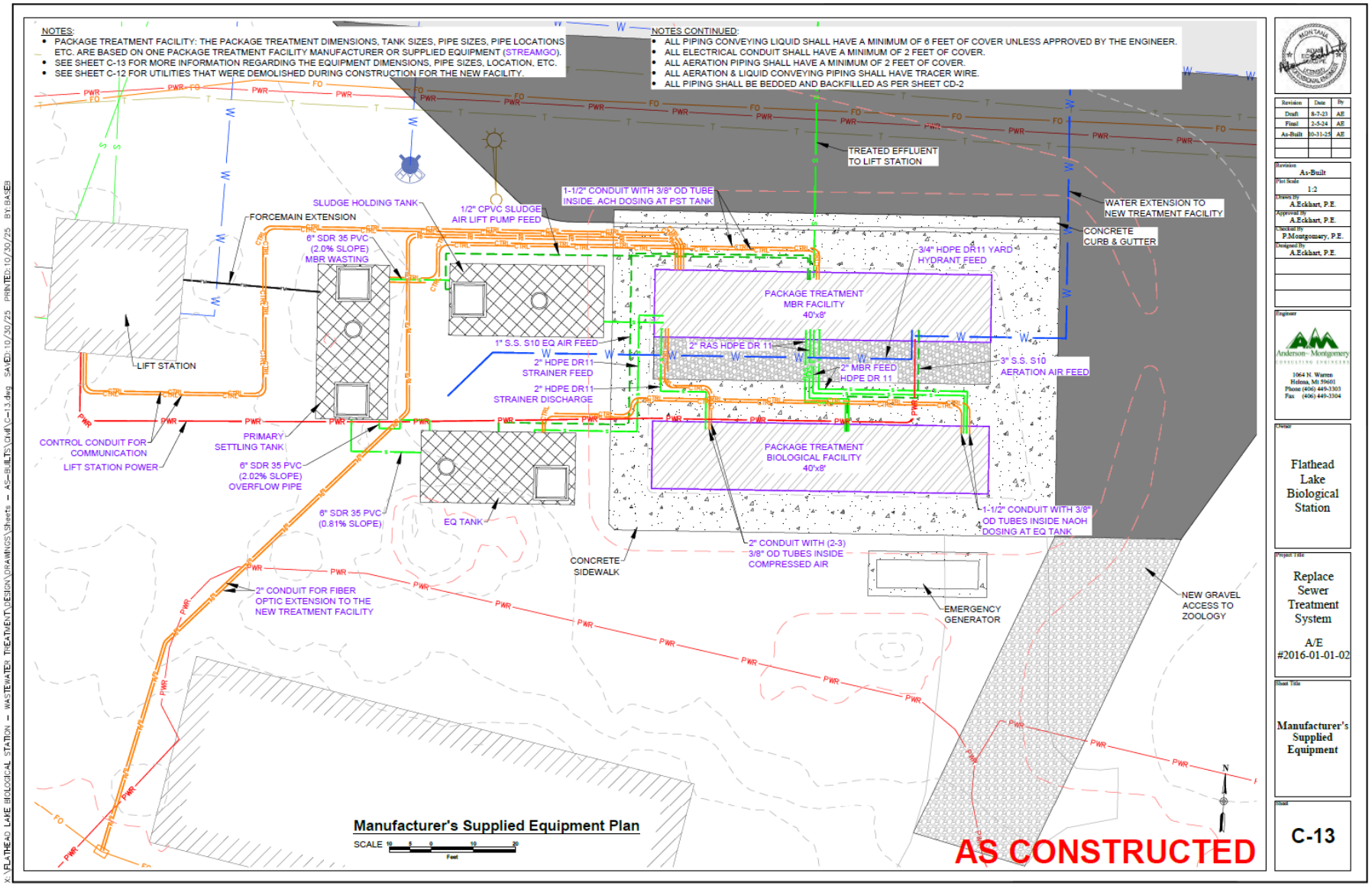


Figure 4. Wastewater Treatment Equipment Layout



3.3 Chemicals Used

No chemicals are added with the new StreamGO treatment process.

4 PERMIT HISTORY

According to EPA records maintained for the Facility, this renewal is at least the 5th issuance of this NPDES permit. The previous permit for the Facility became effective on October 1, 2018, and was set to expire on September 30, 2023. The Facility submitted a permit renewal application prior to the permit's expiration, which EPA received on June 22, 2023, and thus the previous permit was administratively continued.

4.1 Discharge Monitoring Report (DMR) Data

During the years 2020-2025, the Facility had one exceedance of the chlorine limit in April 2025. However, the new treatment facility, which came online in May of 2025, uses UV disinfection rather than chlorine, and therefore chlorine will no longer be a parameter to be monitored with this permit renewal. In addition, the annual load limit for total nitrogen was exceeded in 2024, and the annual load limit for total phosphorus was exceeded in 2020, 2024, and 2025. Some data discrepancies were found to be present in the dataset from 2020-2025. It was determined that some of the discrepancies were due to an incorrect equation provided in the previous permit to calculate monthly loading of total nitrogen and total phosphorus. Per the Facility, the 2025 exceedances occurred because the new plant was not operating correctly when the peak flow season occurred (June, July, August). Since that time, the plant has been operating effectively with much lower nutrient effluent concentrations that appear to be meeting the 15% reduction goal (see section 6.2), and they do not foresee any issues during the coming summer peak flow season.

The data in Table 1 is collected from discharge monitoring report (DMR) data submitted to the EPA from January 2020 through December 2025.

Table 1. Summary of the DMR Data (January 2020 through December 2025) for Outfall 001 from EPA Integrated Compliance Information System (ICIS) database (date accessed 3/2/2026)

Parameter	Permit Limit(s)	Reported Average	Reported Range	Number of Data Points	Number of Exceedances
30-Day Avg Discharge Volume, million gallons per day (mgd)	N/A	0.0041	0.001-0.016	72	N/A
5-Day Biochemical Oxygen Demand (BOD_5), 30-Day average, mg/L	30	0.75	0.1-5.1	72	0
5-Day Biochemical Oxygen Demand (BOD_5), 7-Day average, mg/L	45	0.75	0.1-5.1	72	0
Total Suspended Solids (TSS), 30-Day Average, mg/L	30	0.27	0.0-2.5	72	0

Parameter	Permit Limit(s)	Reported Average	Reported Range	Number of Data Points	Number of Exceedances
Total Suspended Solids (TSS), 7-Day Average, mg/L	45	0.27	0.0-2.5	72	0
30-Day Avg *E. coli*, no./100 mL	32	1.16	0.0-22.0	72	0
Daily Max *E. coli*, no./100 mL	50	1.16	0.0-22.0	72	0
Chlorine, total residual, Daily Max, mg/L0	0.019	0.0003	0-0.025	72	1
Nitrate+Nitrite as N, 30-Day average, mg/L	N/A	11.0	1.25-22.2	72	N/A
Nitrate+Nitrite as N, Daily Max, mg/L	N/A	13.8	2.46-25.1	72	N/A
Total Kjeldahl Nitrogen as N, 30-Day average, mg/L	N/A	1.58	0.02-21.7	72	N/A
Total Kjeldahl Nitrogen as N, Daily Max, mg/L	N/A	3.07	0.02-26.8	72	N/A
Total Nitrogen as N, 30-Day average, mg/L	N/A	12.6	1.9-23.0	72	N/A
Total Nitrogen as N, Daily Max, mg/L	N/A	15.9	4.7-27.0	72	N/A
Total Nitrogen as N, lbs/yr	154	150.8	88.9-329.6	6	1
Total Phosphorus as P, 30-Day average, mg/L	N/A	0.27	0.01-4.8	71	N/A
Total Phosphorus as P, Daily Max, mg/L	N/A	0.43	0.01-5.6	71	N/A
Total Phosphorus as P, lbs/yr	2	3.28	0.52-10.5	6	3
Oil & Grease	10	0	0-0	72	0
pH, standard units	6.5-8.5	7.0 a/	6.5-8.3	144	0

a/ Median value of pH

4.2 Other Facility History

The Facility was inspected by the EPA and the Confederated Salish and Kootenai Tribes (CSKT) on June 11, 2025. The EPA inspection report is part of the administrative record for the Permit. Some of the EPA's findings are listed below:

- Failure to accurately report collected sample results on monitoring reports
- Failure to collect required weekly Total Kjeldahl Nitrogen samples
- Failure to submit DMRs by the required due dates

The Facility addressed the findings in the inspection report within a few weeks of receiving the inspection report.

5 DESCRIPTION OF RECEIVING WATER

Outfall 001 discharges to Flathead Lake via an underground pipe that is approximately 200 feet from the shore and 50 feet below the surface (Figure 5).

Figure 5. Facility Receiving Water

6 PERMIT LIMITATIONS

6.1 Technology Based Effluent Limitations (TBELs)

The Secondary Treatment regulations at 40 C.F.R. §133.102 establish the minimum level of treatment for Publicly Owned Treatment Works (POTWs). To be considered a POTW, the treatment works must be owned by a state or municipality (as defined by section 502(4) of the CWA). This definition includes any devices and systems used in the storage, treatment, recycling and reclamation of municipal sewage or industrial wastes of a liquid nature. FLBS's wastewater treatment facility is run by the University of Montana and owned by the state of Montana, and in effect it meets the definition of a POTW. The Facility utilizes the same technology as many POTWs

and therefore based on professional judgment (PJ), the secondary treatment standards of 40 C.F.R. Part 133 will be applied.

The secondary treatment standards (40 CFR Part 133) have been developed by EPA and represent the level of effluent quality attainable through the application of secondary or equivalent treatment. The regulation applies to all POTWs. The pH requirement in the secondary treatment standards is between 6.0 and 9.0 standard units at all times; however, as discussed in section 6.2.2 of the SoB, the water quality-based effluent limitation of pH is more restrictive and will therefore be implemented in the Permit. The TBELs for the Facility are listed in Table 2.

Table 2. Secondary Treatment Standards

Parameter	30-day average (mg/L)	7-day average (mg/L)	30-day average percent removal (%)
BOD_5	30	45	85
TSS	30	45	85
pH	Maintained within the limits of 6.0 to 9.0		

The EPA Region 8 has also developed technology-based guidance for oil and grease for POTWs and other equivalent treatment facilities. It states, "If a visible sheen or floating oil is detected in the discharge, a grab sample shall be taken immediately, analyzed, and recorded in accordance with the requirements of 40 CFR Part 136. The concentration of oil and grease shall not exceed 10 mg/L in any sample." The visual narrative "sheen or floating oil" requirement was developed in alignment with 40 CFR § 401.16 which lists "oil and grease" as a conventional pollutant (as related to technology-based limitations in line with 40 CFR § 125.3(h)(1)) pursuant to section 304(a)(4) of the Clean Water Act (see section 6.2.5). This consideration for oil and grease will be included in the Permit.

6.2 Water Quality Based Effluent Limitations (WQBELs)

The Facility discharges to Flathead Lake. The receiving water is within the Flathead Indian Reservation and thus the Tribes' water quality standards (WQS) apply. EPA has reviewed the applicable Tribal water quality standards for consideration of the development of WQBELs and evaluated whether any total maximum daily loads (TMDLs) apply.

The CSKT Surface Water Quality Standards and Antidegradation Policy (Water Quality Standards) were updated in 2023 and approved by the EPA, effective April 2024. The portion of Flathead Lake that is within the Flathead Indian Reservation is classified as an A-1 waterbody according to the Section 1.3.6 of the CSKT Water Quality Standards. Waters classified as A-1 must be maintained suitable for drinking, culinary, and food processing purposes after conventional treatment for removal of naturally present impurities. Water quality is to be suitable for bathing, swimming and recreation; wildlife (birds, mammals, amphibians and reptiles); the growth and propagation of salmonid fishes and associated aquatic life; and agricultural and industrial water supply purposes. The CSKT have adopted designated uses, numeric and narrative water quality criteria, and antidegradation requirements as part of their WQS.

The southern half of Flathead Lake and a portion of the lower basin are within the CSKT Reservation boundary. The CSKT have received treatment as a state for purposes of CWA § 303(c), and the EPA has approved water quality standards for the entire Reservation, including Flathead Lake. As a result, the southern half of the lake is subject to the Tribe's water quality standards, and the northern half of the lake is subject to the State of Montana's water quality standards. The northern half of Flathead Lake was listed on the State of Montana's 303(d) list in 1996 and 2000 as impaired for Total Nitrogen and Total Phosphorus resulting in a non-supported aquatic life use. In 2002, in collaboration with the CSKT and EPA, Montana Department of Environmental Quality (DEQ) developed, and the EPA approved, a Nutrient Management Plan and TMDL for Flathead Lake. In addition, pursuant to CWA § 518(d), the State, EPA and the Tribe signed a "Memorandum of Understanding between the U.S. Environmental Protection Agency, the Confederated Salish and Kootenai Tribes and the State of Montana, Relating to Total Maximum Daily Wasteload Allocation (TMDL) for Flathead Lake" that established a collaborative approach to the management of Flathead Lake water quality. The TMDL, which remains in effect, establishes a 15% reduction in the nitrogen and phosphorus loads discharged in 2000 and implements the State's and the Tribe's narrative water quality standards.

Because of the variability in flows and concentrations of total nitrogen (TN) and total phosphorus (TP), the limits set in previous permit iterations were in pounds per year. Since the 2012 permit cycle and subsequent permits, limits for TP and TN were specified at 2.0 lbs/yr and 154 lbs/year, respectively. Until the TMDL sets individual point source reduction targets or the Tribes set numeric criteria, these limits will remain in the renewed permit. If the TMDL and allocations are refined in a Phase II TMDL, the Permit may be reopened and TN and TP limits would be adjusted accordingly.

Based on the proximity of the discharge to the State of Montana, EPA has also reviewed Montana's water quality standards to determine if the discharge has the reasonable potential to cause or contribute to a violation of those downstream standards. Consideration of downstream Montana water quality standards for purposes of protection of the downstream waters does not grant or infer any rights to the State.

The following pollutants were identified as pollutants of concern and were further analyzed to determine whether they would need to be limited in the Permit.

6.2.1 BOD_5 and TSS

The Tribes do not have any numeric WQS *directly* related to BOD_5 and TSS, but several of their narrative and numeric criteria address suspended sediments, turbidity, emulsions and sludge, etc. Implementation of the BOD_5 and TSS secondary treatment standards, considering the Facility's low BOD_5 and TSS discharge values (averaging 0.75 and 0.27 mg/L, respectively – see Table 1), will protect the Tribes' numeric criterion for turbidity (see CSKT WQS, Section 1.3.7(3)(d)), as well as their narrative criteria which states Tribal waters must be free from substances that may or will *settle to form objectionable sludge deposits or emulsions beneath the surface of the water or upon adjoining shorelines* (CSKT WQS, Section 1.3.13(1)(a)).

6.2.2 pH

The Tribal WQS for A-1 classified waters for pH is that induced variation of pH within the range of 6.5 to 8.5 must be less than 0.5 pH unit. Natural pH outside this range must be maintained without change, and natural pH above 7.0 must be maintained above 7.0. Therefore, the Facility will be required to discharge within the stated range (i.e., 6.5 to 8.5) at all times. This permit limit is more protective than the associated National Secondary Standards (see section 6.1) and the CSKT general Human Health WQS of 5.0 to 9.0.

6.2.3 *E. coli*

Pathogens such as *E. coli* are present in domestic sewage. Consumption of these pathogens can cause severe illness, especially in young children, the elderly, and those with compromised immune systems. For these reasons, *E. coli* is a pollutant of concern in domestic wastewater discharges.

The relevant CSKT WQS for *E. coli* for waters that are A-1 classified is that the geometric mean number of *E. coli* may not exceed 32 colony forming units (cfu)/100 mL. These standards apply year-round and per Section 1.3.14 of the CSKT WQS are based on a minimum of five samples (although less than five samples can be used to determine compliance). The Facility uses UV disinfection to help reduce bacteria in the discharge and has reported no exceedances. The EPA Region 8 does not allow for any type of mixing zone for bacteria – the relevant water quality standard is applied at the end of pipe. Based on the range of *E. coli* values that were reported in the DMRs and the known presence of *E. coli* in domestic sewage, the EPA has determined that there is reasonable potential to cause or contribute to an exceedance of the *E. coli* standard, and that effluent limitations are appropriate.

The previous permit contained a 30-day average limit of 32 #/100 mL and a daily maximum limit of 50 #/100 mL. Although the limit of 50 #/100 mL was dropped from CSKT's most recent WQS (July 2023), it will remain in the permit so that there is no backsliding. When establishing permit limits, 40 CFR 122.45(d)(2) requires that for continuous discharges all permit effluent limitations, standards, and prohibitions, including those necessary to achieve water quality standards, shall unless impracticable be stated as average weekly and average monthly discharge limitations for POTWs. However, the EPA notes that many acute WQS are often based on toxicity calculations that are measured in exposure over hours rather than days. Thus, it is impracticable to implement limits based on acute criteria over an average weekly period, and these limits based on acute criteria are generally implemented as daily maximum or instantaneous maximum limits. Therefore, the existing limits will be retained in the reissued permit.

Due to the various testing methods for bacteria approved in 40 CFR Part 136, and the variability in lab testing methods, the EPA Region 8 implements bacteria permit limits as a generic number per volume analyzed (i.e., "Number/100 mL" or "#/100 mL"), rather than as a specific method (i.e., colony forming units [cfu] per 100 mL or most probable number [mpn] per 100 mL).

6.2.4 Temperature

The Tribes' temperature water quality criteria allow a slight increase or decrease in naturally occurring water temperatures. Specifically, section 1.3.6(3)(e) A-1 of the Tribes' Water Quality Standards states:

> Where naturally occurring water temperatures are in the range of 32°F (0°C) to 66°F (18.89°C), a 1°F (.56°C) maximum temperature increase is allowed. Where naturally occurring water temperatures are in the range of 66°F (18.89°C) to 66.5°F (19.17°C), a 0.5°F (.278°C) maximum temperature increase is allowed. Where naturally occurring water temperatures are 66.5°F (19.17°C), a 0.5°F (.278°C) maximum temperature increase is allowed. Where naturally occurring water temperatures are 55°F (12.78°C), a 2°F (1.11°C) maximum decrease is allowed. Where naturally occurring water temperatures are within the range of 32°F (0°C) to 55°F (12.78°C), a 2°F (1.11°C) maximum decrease is allowed.

The Facility is a mechanical plant that discharges daily to Flathead Lake. During the previous permit term, there were no temperature effluent limitations, and temperature was not monitored. Temperature has been monitored in Flathead Lake since 1977 at the Midlake Deep site at approximate latitude 47.856878, longitude -114.113874. The EPA reviewed temperature data from 2019 through 2022 (from approximate permit renewal through date of available data), and the average lake temperature was 9.5 degrees Celsius (49.0 degrees Fahrenheit). The maximum daily flow of the discharge over the previous two years was 9,000 gallons per day. Flathead Lake is one of the largest freshwater lakes in the United States by volume, containing over 6.1 trillion gallons of water. Because of the immense amount of dilution in Flathead Lake, the EPA made a qualitative determination that there is no reasonable potential for the effluent to cause or contribute to an exceedance of this water quality standard, and temperature effluent limits will not be required. However, the EPA will implement new temperature monitoring requirements in the effluent.

6.2.5 Oil and Grease

The CSKT WQS include a narrative criterion, which states Tribal waters must be free from substances that may or will create floating debris, scum, a visible oil film (or be present in concentrations at or above 10 mg/L) or globules of grease or other floating materials (CSKT WQS, Section 1.3.13(1)(b)). The EPA Region 8 has developed a protocol for limiting oil and grease (see section 6.1) that closely aligns with the CSKT WQS. The EPA's protocol incorporates frequent visual observations of the discharge looking for a visible sheen or floating oil, and when observed, a sample must be immediately taken and analyzed for oil and grease with an effluent limitation of 10 mg/L. The previous permit incorporated a 10 mg/L limit as well as a narrative limit.

This Permit renewal will contain a narrative prohibition against a visible oil film or sheen, as well as floating debris, scum, or other floating materials. This narrative prohibition (or a similar iteration) is commonly used in many NPDES permits throughout the country and Region 8 to protect against pollutants that would cause or contribute to exceedances of narrative criteria such as the one discussed above.

6.2.6 Nitrate

Nitrate (NO_3) is a compound of nitrogen and oxygen naturally found in air, soil, water, and some food. Nitrate is an acute contaminant, meaning that health effects can occur immediately (i.e. within hours or days) of short-term exposure. Too much nitrate in the body makes it harder for red blood cells to carry oxygen, which can be very dangerous for infants and some adults.

Nitrates are a pollutant of concern in domestic wastewater discharges. In the previous permit term, Nitrite + Nitrate was monitored though did not have limits. The CSKT's numeric WQS for nitrates for Human Health for Consumption of Water + Organism is 10 mg/L, though the drinking water use is designated for after conventional treatment. Since the new WWTF came online in May 2025, Nitrite + Nitrate has consistently trended downward, with an average of 4.7 mg/L for the 30-day average from May through December 2025. Because of the downward trend in values and dilution in Flathead Lake, the EPA has determined there is no reasonable potential to cause or contribute to an excursion above the CSKT's water quality standards. However, monitoring of nitrate will continue to be required (see 7.1.6).

6.2.7 Ammonia

CSKT's ammonia WQS are pH and temperature dependent. As pH and temperature in the receiving water increase, the toxicity of ammonia to aquatic life increases. At high pH values, ammonia is much more likely to be present in its toxic (un-ionized) form, while higher temperatures are generally more stressful for many types of aquatic life.

Ammonia is a pollutant of concern in domestic wastewater discharges such as this one. In the previous permit term, the Facility did not have ammonia limits, nor was there monitoring for ammonia. The CSKT adopted the 2013 ammonia criteria in 2024, and thus the ammonia criteria must be calculated before a reasonable potential analysis can be done. The new criteria specify a chronic ammonia criteria as well as an acute ammonia criteria, which is based on the presence or absence of trout (*Oncorhynchus*) species. Temperature and pH data (as well as many other physical, biological, and chemical characteristics) have been collected by the Permittee in Flathead Lake since 1977 and reported in the Flathead Lake Public Data portal, which can be used to calculate the new ammonia criteria.

While the CSKT's WQS do not specify the 'critical conditions' to use when calculating ammonia criteria, the EPA has typically used the 80th percentile of pH and temperature data to implement ammonia criteria on the Flathead Indian Reservation. Furthermore, for the acute value, the EPA used the '*Oncorhynchus* spp. Present' values, since the lake is listed as an A-1 water body, which includes the "*growth and propagation of salmonid fishes*."

To calculate the criteria, data for pH and temperature was obtained from the Flathead Lake Public Data portal. The EPA reviewed temperature and pH data from 2019 through 2022 (from approximate permit renewal through date of available data). This data was narrowed down to depths of 50 feet (15.2 meters) or shallower to coincide with the depth of the discharge point, and the Midlake Deep site was chosen as it best represented the Facility's location. This resulted in over 1,000 samples for pH and temperature. Once the data was narrowed down, the 80th percentile was taken of pH (8.2) and temperature (15.4 degrees C). These were subsequently used

to calculate the relevant acute and chronic criteria (EPA's 2013 ammonia criteria), which resulted in 4.0 mg/L for acute, and 0.79 mg/L for chronic (See Table 3).

Table 3. Reasonable Potential Analysis for Ammonia

Chronic Criteria	Acute Criteria	Value Reported	Reasonable Potential?
0.79 mg/L	4.0 mg/L	0.062 mg/L	No

Because ammonia was not monitored during the last permit cycle, the EPA could only perform a limited reasonable potential analysis. The EPA requested that the Facility take a sample of ammonia from the new treatment plant. Per an email from the Facility on December 31, 2025, the ammonia sample taken from the effluent was 0.062 mg/L. Based on the advanced technology of the recently upgraded wastewater treatment plant (May 2025), the large amount of dilution in the receiving water (Flathead Lake), and the fact that the single available sample had a very low concentration of ammonia, the EPA has determined there is no reasonable potential to cause or contribute to an excursion above the CSKT's water quality standards. However, monitoring of ammonia will be required to have a more robust data set for future reasonable potential analysis (see section 7.1).

6.2.8 Metals

Metals are present in small quantities in domestic sewage, but the primary source of metals in a municipal wastewater system are industrial sources. The Flathead Lake Biological Station is a small facility that receives domestic waste from the adjacent state park during the summer months and does not receive waste from industrial users. Per the Facility, there are trace metals (iron, molybdenum, magnesium, manganese) at low concentrations in the growth media that they use. These low-concentration media are disposed of down the sink. Any solutions of these or other metals or other substances that are at concentrations above drinking water standards are sent to the campus in Missoula for processing as hazardous waste. For these reasons, the EPA does not consider metals to be a pollutant of concern at the Facility.

6.2.9 Whole Effluent Toxicity (WET)

The CSKT's WQS include a narrative criterion, which states Tribal waters must be free from substances that may or will *create concentrations or combinations of materials that are toxic or harmful to human, animal or plant life* (CSKT WQS, Section 1.3.13(1)(d)). Many toxic pollutants have cumulative effects on aquatic organisms that cannot be detected by individual chemical testing. However, laboratory tests can measure toxicity directly by exposing living organisms to the wastewater and measuring their responses. Because these tests measure the aggregate toxicity of the whole effluent, this approach is called whole effluent toxicity (WET) testing. Some WET tests measure acute toxicity and other WET tests measure chronic toxicity.

Discharge data from the Facility indicates that the effluent is chemically consistent, and the Facility uses no chemicals at any point during the treatment process. The Facility treats domestic wastewater from a small biological station without any known industrial users. According to the

Facility, no wastes at high enough concentrations to be toxic or above the drinking water standard are disposed of onsite. All such materials are sent to Missoula for disposal as hazardous waste. For these reasons, the EPA believes the chemical-specific effluent limitations are sufficient to attain and maintain any applicable water quality criteria and prevent toxicity in the receiving water. Therefore, WET effluent limitations and monitoring will not be required. The Permit contains a reopener provision if the need for WET effluent limitations or monitoring is determined at a future date.

6.2.10 Other CSKT Criteria

The CSKT's WQS include several additional numeric or narrative criteria applicable to A-1 water bodies that are related to: odors, colors, and other conditions (CSKT WQS, Section 1.3.13(1)(c)), color (CSKT WQS, Section 1.3.6(3)(g)), toxic or deleterious substances (CSKT WQS, Section 1.3.6(3)(h) and Tribal Numeric Chart for Priority Pollutants), and total dissolved gas pressures (CSKT WQS, Section 1.3.13(5)). Due to the source of the water, the type of facility, its treatment processes and discharge type, and the existing effluent limitations in the Permit (including the narrative prohibition against floating solids and visible foam), the EPA finds that there is no reasonable potential to cause or contribute to an exceedance of any of these narrative or numeric WQS, and therefore they will not be addressed further in the Permit.

The CSKT's WQS also include a narrative criterion which states Tribal waters must be free from substances that may or will *create conditions that produce undesirable aquatic life* (CSKT WQS, Section 1.3.13(1)(e)). Undesirable aquatic life typically refers to algal blooms, which tend to happen during summer months in Montana. Per the Facility, no algal blooms have been observed nor have any been reported to them. During the development of the Permit, the EPA met with the Permittee and conducted a field visit to the Facility. The EPA is working with the Tribes to continue developing a translator for this narrative criterion, but at this time, no translator has been developed. Therefore, nutrient limits will not be included in the Permit at this time. The EPA will continue to require nutrient monitoring to continue characterizing the effluent concentrations (see section 7.1.9).

The CSKT will be provided a copy of the draft Permit and draft SoB for review during the Clean Water Act Section 401 certification process. If the CSKT do not agree the draft Permit conditions assure compliance with applicable numeric or narrative criteria, the Tribes may provide additional Permit conditions in their 401 certification.

6.3 Final Effluent Limitations

Applicable TBELs and WQBELs were compared, and the most stringent of the two was selected for the following effluent limits (Table 4).

Table 4. Final Effluent Limitations for Outfall 001

Effluent Characteristic	30-Day Average Effluent Limitations a/	7-Day Average Effluent Limitations a/	Daily Maximum Effluent Limitations a/	Annual Load	Limit Basis b/
Flow, mgd	report only	N/A	report only	N/A	N/A
Five-Day Biochemical Oxygen Demand (BOD_5), mg/L	30	45	N/A	N/A	TBEL
Five-Day Biochemical Oxygen Demand (BOD_5) percent removal, % c/	≥85	N/A	N/A	N/A	TBEL
Total Suspended Solids (TSS), mg/L	30	45	N/A	N/A	TBEL
Total Suspended Solids (TSS) percent removal, % c/	≥85	N/A	N/A	N/A	TBEL
Escherichia coli (*E. coli*), number/100 mL d/	32	N/A	50	N/A	WQBEL/PP
Nitrate-Nitrite (as N), mg/L	report only	N/A	report only	N/A	N/A
Total Ammonia Nitrogen (as N), mg/L	report only	N/A	report only	N/A	N/A
Total Nitrogen, mg/L	report only	N/A	report only	N/A	N/A
Total Nitrogen, lbs/month	report only	N/A	report only	N/A	N/A
Total Nitrogen, lbs/yr	N/A	N/A	N/A	154	PP
Total Phosphorus, mg/L	report only	N/A	report only	N/A	N/A
Total Phosphorus, lbs/month	report only	N/A	report only	N/A	N/A
Total Phosphorus, lbs/yr	N/A	N/A	N/A	2.0	PP
Temperature, °C	report only	N/A	report only	N/A	N/A
BOD_5, influent, mg/L e/	use for % removal calculation	N/A	N/A	N/A	N/A
TSS, influent, mg/L e/	use for % removal calculation	N/A	N/A	N/A	N/A
pH	Must remain in the range of 6.5 to 8.5 at all times			N/A	WQBEL
Oil and grease, narrative limit	The concentration of Oil and Grease in any single sample shall not exceed 10 mg/L, nor should the discharge contain a visible oil film or sheen, nor should there be any discharge of floating debris, scum, or other floating materials.			N/A	TBEL/WQBEL

Effluent Characteristic	30-Day Average Effluent Limitations a/	7-Day Average Effluent Limitations a/	Daily Maximum Effluent Limitations a/	Annual Load	Limit Basis b/

a/ See section 1 of the Permit for definition of terms.

b/ WQBEL = Limitation based on water quality-based effluent limit; TBEL = Limitation based on technology based effluent limit; PP = Limitation based on previous permit.

c/ The arithmetic mean of the concentration for effluent samples collected in a 30-day consecutive period shall not exceed 15 percent of the arithmetic mean of the concentration for influent samples collected during the same period (i.e., a minimum 85 percent removal). To calculate percent removal, use the following equation (replacing X with either BOD_5 or TSS):
Percent Removal = $(X_{30\text{-day average, influent}} - X_{30\text{-day average, effluent}})/(X_{30\text{-day average, influent}}) * 100\ \%$

d/ The 30-day average limit for *E. coli* is calculated as a geometric mean.

e/ These are ***influent*** samples collected at Outfall 001-I (Influent Monitoring location, see Table 6) that are used to calculate the percent removal for Outfall 001 (see footnote c).

6.4 Antidegradation

CSKT's WQS include antidegradation provisions (CSKT WQS, Section 1.4). All surface waters within the Flathead Indian Reservation are subject to Tier 1 (existing use) protection, and the EPA typically assumes that all Tribal surface waters are subject to Tier 2 (high quality water) protection as well, unless otherwise noted by the Tribes. Tier 3 (outstanding tribal resource) protection is reserved for waters of exceptional quality, or waters of ecological, recreational, or cultural significance. The EPA believes this receiving water is not subject to Tier 3 protection.

This permit renewal does not authorize a new or expanded discharge – discharges from the Facility are existing and do not show any increasing trends in either flow or pollutant loading. Furthermore, no degradation of existing effluent quality is proposed. No exceedances of numeric or narrative criteria will be authorized by the Permit. Therefore, the EPA believes renewal of the Permit satisfies CSKT's antidegradation requirements for both Tier 1 and Tier 2 protection. The CSKT will have an opportunity to review the Permit during the Clean Water Act Section 401 certification process and may provide feedback on the EPA's antidegradation determination at that time.

6.5 Anti-Backsliding

Federal regulations at 40 CFR § 122.44(l)(1) require that when a permit is renewed or reissued, interim effluent limitations, standards or conditions must be at least as stringent as the final effluent limitations, standards, or conditions in the previous permit unless the circumstances on which the previous permit were based have materially and substantially changed since the time the Permit was issued and would constitute cause for permit modification or revocation and reissuance under 40 CFR § 122.62.

This permit renewal complies with anti-backsliding regulatory requirements. All effluent limitations, standards, and conditions in the Permit are either equal to or more stringent than those in the previous permit.

7 MONITORING REQUIREMENTS

7.1 Self-Monitoring Requirements

Monitoring must be conducted according to test procedures approved under 40 CFR Part 136, as required in 40 CFR § 122.41(j), unless another method is required under 40 CFR subchapters N or O.

As discussed in section 3.2, the Facility discharges treated effluent daily throughout the year. Monitoring requirements are discussed below and listed in Tables 5 and 6.

7.1.1 Flow Monitoring

The previous permit required the Facility to monitor effluent flow on a weekly frequency using an instantaneous measurement. For the renewal, the EPA will require the Facility to continue monitoring effluent flow on a weekly frequency using an instantaneous/grab measurement. Flow measurements of effluent volume shall be made in such a manner that the Permittee can affirmatively demonstrate that representative values are being obtained. The units of the reported rates will be changed from million gallons per day (mgd) to gallons per day (gpd) due to the low flow rates and Permittee preference. The average flow rate (in gpd) during the reporting period and the maximum flow rate observed (in gpd) shall be reported. Per the Facility, the Permittee uses a ProComm Electromagnetic Flow Meter Converter to measure flow and record daily flow volumes. Weekly flow measurements are appropriate for a small wastewater treatment facility that has relatively constant flow rates that do not fluctuate greatly over short periods of time.

7.1.2 BOD_5 and TSS

The previous permit required the Facility to monitor effluent BOD_5 and TSS on a monthly frequency using a grab sample. With this permit renewal, the EPA will require the Facility to continue monitoring BOD_5 and TSS on a monthly frequency, though a composite sample will be required. Per 40 CFR 122.21(g)(7)(i), composite samples are typically required for parameters such as BOD_5 and TSS in a mechanical wastewater treatment plant because they better provide a representative measure of pollutant discharge over a period of time, as wastewater characteristics and flow rates can fluctuate throughout the day. In addition, per the Permittee, an automatic sampler has been installed at the Facility.

Note that the Facility will also be required to collect influent BOD_5 and TSS and calculate the percent removal of each on a monthly frequency. Monthly influent sampling for both BOD_5 and TSS shall occur at or near the same time as the effluent sampling in order to accurately assess treatment plant performance and compliance with regulations. Influent samples shall be taken at any accessible influent structure or location that contains representative flow from the entire service area and is situated prior to any treatment, such as the bar screen or wet well at the lift station/headworks.

7.1.3 pH

The previous permit required the Facility to monitor effluent pH on a monthly frequency using a grab sample. This monthly frequency and grab sample type will be retained in the Permit. This frequency is appropriate because it allows for the characterization of the effluent quality and to detect events of noncompliance. Note that per 40 CFR Part 136, pH samples must be analyzed within 15 minutes of collection and are not amenable to compositing. Therefore, grab samples are appropriate for pH. For this reason, most facilities use an *in situ* meter, such as a pH meter, to measure it directly in the field.

7.1.4 *E. Coli*

The Facility was previously required to sample for *E. coli* on a monthly frequency using a grab sample, and this requirement will be retained with this permit renewal. This frequency is appropriate for a facility that reports DMRs on a monthly basis because it allows for regular characterization of the effluent and detection of events of noncompliance. This is in line with the monthly sampling frequency for other parameters. Grab samples are appropriate for *E. coli*, due to the short holding time requirements which are not amenable to extended periods of composite sampling.

7.1.5 Oil and Grease

The Facility was previously required to monitor for oil and grease on a monthly basis. For this permit renewal, the Facility will be required to monitor effluent oil and grease on a weekly frequency using a visual inspection, followed by an immediate grab sample if any oil and grease are observed. A weekly visual inspection also aligns with the inspection requirements in section 6.2 of the permit. If sampling is required, a grab sample is appropriate because oil and grease are not amenable to compositing in the field due to their tendency to separate from the liquid, leading to an uneven distribution in a composite sample.

7.1.6 Nitrate

Standard water quality tests typically measure nitrate and nitrite together; because nitrite is usually low and rapidly converts to nitrate, it is generally assumed that almost all of the nitrate + nitrite is in the nitrate form.

The previous permit required the Facility to monitor for nitrate + nitrite on a weekly basis using a grab sample, which will be retained in the permit. Weekly grab samples for nitrates are in alignment with the requirements of the previous permit and are appropriate for this Facility in order to capture any variability in the quality of the effluent discharge and ensure the integrity of the high quality of the receiving water.

7.1.7 Ammonia

The previous permit did not require the Facility to monitor the effluent for ammonia. For this permit renewal, the Facility will be required to monitor the effluent for ammonia on a monthly frequency using a composite sample. Monthly sampling is appropriate for tracking long-term trends and assessing the overall efficiency of the Facility's ammonia removal processes over time.

The permit will require reporting of 30-day average concentrations and daily maximum concentrations to evaluate compliance with the CSKT's WQS. Composite samples are appropriate for certain pollutants such as ammonia because they provide a more representative measure of the discharge of pollutants over a given period.

7.1.8 Temperature

The previous permit did not require the Facility to monitor the effluent for temperature. For this permit renewal, the Facility will be required to monitor temperature in the effluent on a weekly basis using an instantaneous sample. Weekly monitoring is appropriate to capture any variability in the effluent. The Permit will require reporting of 30-day average values and daily maximum values to evaluate compliance with the CSKT's WQS. Note that temperature samples must be analyzed within 15 minutes of collection and are not amenable to compositing. For this reason, most facilities use an *in situ* meter, such as a calibrated thermometer, to measure it directly in the field.

7.1.9 Nutrients

The previous permit required the Facility to monitor the effluent for nutrients (including total nitrogen and total phosphorus) on a weekly frequency using a grab sample. This requirement will be retained in the permit renewal. Weekly grab samples for nutrients are in alignment with the requirements of the previous permit and are appropriate for this Facility due to past exceedances of annual loading limits and because the effluent is discharged to a high-quality receiving water.

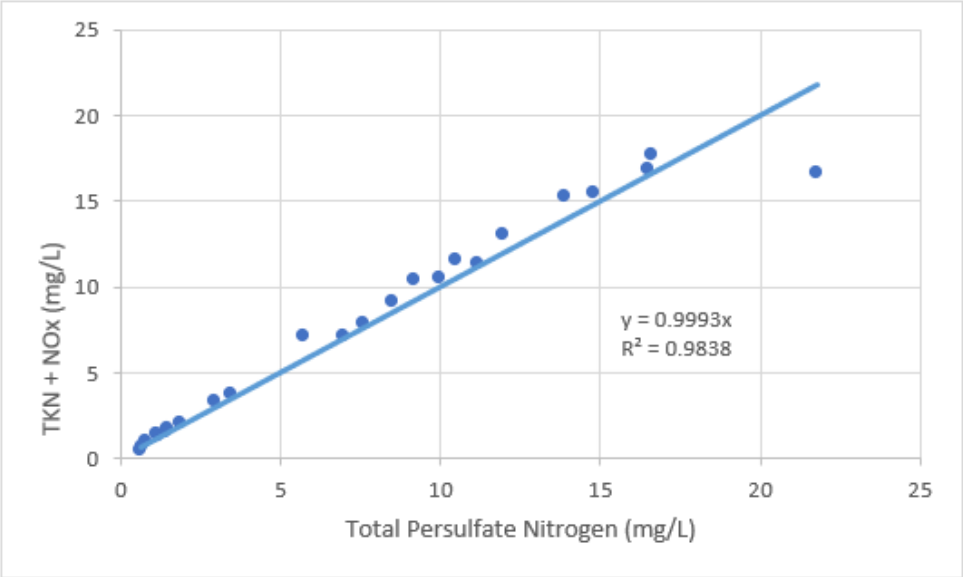
The Facility will be required to report concentrations and loading on a monthly frequency, as well as an annual loading. The loading values will be calculated. Pounds of total nitrogen and phosphorus discharged per month can be calculated by multiplying the average monthly flow (in units of gpd) times the average monthly concentrations (in units of mg/L) times a unit conversion factor of 2.54×10^{-4}.

The conversion factor used to determine pounds per month is derived from (1 mg/L)*(3.78541 L/gal)*(1 gal/day)*(30.4375 days/month)/(1000 mg/g)/(453.592 g/lb) = 0.000254 lb/month.

The permittee previously reported total nitrogen as the summation of results from a Nitrate+Nitrite sample and a Total Kjeldahl Nitrogen (TKN) sample. There is currently no 40 CFR part 136 method for total nitrogen. Per 40 CFR 122.44(i)(1)(iv)(B), for pollutants for which there are not approved methods, the permit must specify the test procedure for that pollutant. For this permit renewal, the permittee requested a change in the permit's test procedure, and the permit will specify that Total Nitrogen shall be measured using an alkaline persulfate digestion (e.g. USGS I-4650-03 method or the Hach method 10071).

The permittee has collected data using both methods since June of 2025, and per the EPA's request, the Facility provided the raw data. A graph comparing the two methods indicates the results are generally equivalent (Figure 6).

Figure 6. Comparison of Total Nitrogen Methods



7.1.10 Chlorine

The previous permit required total residual chlorine to be monitored on a weekly basis using a grab sample. For this permit renewal, chlorine will no longer be required to be monitored because the Facility was upgraded to a system that uses UV rather than chlorine for disinfection.

7.1.11 Ambient Monitoring

The previous permit did not require ambient monitoring for pH and temperature. This permit renewal will require ambient monitoring at Outfall 001R (receiving water) for pH and temperature on a quarterly basis using a grab sample. As the FLBS already monitors for many chemical, biological, and physical parameters, the monitoring point for Outfall 001R will be located at the existing long-term monitoring location (Midlake Deep), at latitude 47.856878, longitude -114.113874 (Figure 7). Monitoring at this location will assist in determining baseline water quality data without being impacted by the discharge of the Facility.

Figure 7. Monitoring Point 001

Table 5. Monitoring requirements for Outfall 001

Effluent Characteristic	Monitoring Frequency	Sample Type a/	Data Value Reported on DMR b/
Flow, gpd c/	Weekly	Grab	Daily Max. 30-Day Avg.
BOD_5, mg/L d/	Weekly	Composite	7-day Avg. 30-Day Avg. 30-Day Avg. % removal
TSS, mg/L d/	Weekly	Composite	7-day Avg. 30-Day Avg. 30-Day Avg. % removal

Effluent Characteristic	**Monitoring Frequency**	**Sample Type a/**	**Data Value Reported on DMR b/**
Escherichia coli (*E. coli*), number/100 mL	Monthly	Grab	Daily Max. 30-Day Avg.
O&G, visual	Weekly	Visual	Narrative
O&G, mg/L	Immediately if visible sheen detected e/	Grab	Daily Max.
pH, units f/	Monthly	Grab	Minimum Maximum
Temperature, °C f/	Weekly	Grab	Daily Max. 30-Day Avg.
Total Ammonia Nitrogen (as N), mg/L g/	Monthly	Composite	Daily Max. 30-Day Avg.
Nitrate-Nitrite (as N), mg/L	Monthly	Grab	Daily Max. 30-Day Avg.
Total Nitrogen, mg/L h/	Monthly	Grab	Daily Max. 30-Day Avg.
Total Phosphorus, mg/L	Monthly	Grab	Daily Max. 30-Day Avg.
Total Nitrogen, lbs/month, i/	Monthly	Calculated	Monthly Total
Total Phosphorus, lbs/month, i/	Monthly	Calculated	Monthly Total
Total Nitrogen, lbs/yr, i/	Annually	Calculated	Annual Total
Total Phosphorus, lbs/yr, i/	Annually	Calculated	Annual Total

a/ See section 1 of the Permit for definition of terms.

b/ Refer to the Permit for requirements regarding how to report data on the DMR.

c/ Flow measurements of effluent volume shall be made in such a manner that the Permittee can affirmatively demonstrate that representative values are being obtained. The average flow rate in gallons per day (gpd) during the reporting period and the maximum flow rate observed, in gpd, shall be reported.

d/ Samples shall be collected for these characteristics at Outfall 001 and the influent monitoring location on the same day.

e/ If a visible sheen or floating oil is observed in the discharge, a grab sample shall be taken immediately, analyzed and recorded in accordance with the requirements of 40 CFR Part 136.

f/ This sample must be analyzed within 15 minutes of collection per 40 CFR Part 136.

g/ Receiving water temperature and pH at Outfall 001R must be taken on the same day and as close in time as feasible with the effluent ammonia sample at Outfall 001.

h/ For the purposes of the Permit, the term "Total Nitrogen" is defined as the measurement of Total Nitrogen using an alkaline persulfate digestion.

i/ Pounds of total nitrogen and phosphorus discharged per month will be calculated by multiplying the average monthly flow (in units of gpd) times the average monthly concentrations (in units of mg/L) times a unit conversion factor of 2.54×10^{-4}. The amount discharged per year will be the sum of the pounds discharged each month.

Table 6. Monitoring requirements for Outfall 001-I (Influent)

Effluent Characteristic	Monitoring Frequency	Sample Type a/	Data Value Reported on DMR b/
BOD_5, mg/L c/	Monthly	Grab	30-Day Avg. (use for % removal calculation at Outfall 001)
TSS, mg/L c/	Monthly	Grab	30-Day Avg. (use for % removal calculation at Outfall 001)

a/ See section 1 of the Permit for definition of terms.
b/ Refer to the Permit for requirements regarding how to report data on the DMR.
c/ These are influent samples and shall be taken at or near the same time as the effluent sampling, and shall be taken at a location representative of the total service area influent flow prior to treatment that enters the wastewater treatment facility, such as the bar screen or wet well at the lift station/headworks.

Table 7. Ambient Monitoring and Reporting Requirements for Outfall 001-R (Receiving Water)

Receiving Water Characteristic	Monitoring Frequency	Sample Type a/	Data Reported on DMR b/
pH, standard units	Quarterly	Grab c/,d/	Average Value
Temperature, °C	Quarterly	Grab c/,d/	Average Value

a/ See section 1 of the Permit for definition of terms.
b/ Refer to the Permit for requirements regarding how to report data on the DMR.
c/ This sample must be analyzed within 15 minutes of collection per 40 CFR Part 136.
d/ Receiving water temperature and pH at Outfall 001R must be taken on the same day and as close in time as feasible with the effluent ammonia sample at Outfall 001.

8 SPECIAL CONDITIONS

N/A

9 REPORTING REQUIREMENTS

Reporting requirements are based on requirements in 40 CFR §§ 122.44, 122.48, and Parts 3 and 127. A discharger monitoring report (DMR) frequency of quarterly was chosen, because the Facility typically discharges on a daily basis.

10 COMPLIANCE RESPONSIBILITIES AND GENERAL REQUIREMENTS

10.1 Inspection Requirements

On a weekly basis, unless otherwise modified in writing by EPA, the Permittee shall inspect its treatment facility. The Permittee shall document the inspection, as required by the Permit. Inspections are required to regularly identify and resolve any issues that might interfere with proper operation and maintenance per 40 CFR § 122.41(e).

10.2 Operation and Maintenance

40 CFR § 122.41(e) requires permittees to properly operate and maintain at all times, all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. In addition to an operation and maintenance plan, regular facility inspections, an asset management plan (AMP), and consideration of staff and funding resources are important aspects of proper operation and maintenance. Asset management planning provides a framework for setting and operating quality assurance procedures and helps to ensure the permittee has sufficient financial and technical resources to continually maintain a targeted level of service. Consideration of staff and funding provide the permittee with the necessary resources to operate and maintain a well-functioning facility.

An AMP can be used to forecast relevant needs and costs associated with long-term compliance concerns, particularly in communities that could be impacted by emerging or increased flooding risk, risk of wildfires, or drought risk. While flooding and wildfires can lead to damage to critical infrastructure, droughts could reduce flows in receiving waters resulting in more stringent permit limits in the future. Long-term construction, additional operation and maintenance, and funding plans for upgrading or relocating critical infrastructure may be necessary to mitigate these concerns. Facilities may also consider optimizing their energy efficiency, which can yield substantial economic benefits and help cut down on associated emissions.

Operation and maintenance requirements have been established in sections 6.3.3 and 6.3.4 of the Permit to help ensure compliance with the provisions of 40 CFR § 122.41(e).

10.3 Industrial Waste Management

The Facility is a POTW as defined in 40 CFR § 403.3(q). The Permit contains requirements for the Permittee to protect the POTW from pollutants which would inhibit, interfere with, or otherwise be incompatible with operation of the treatment works including interference with the use or disposal of municipal sludge. Pass through and interference are defined in 40 CFR §§ 403.3(p), (k), respectively.

Since the Facility's collection system is limited to collecting wastewater from only the Flathead Lake Biological Station's faculty and visitors, and the Yellow Bay State Park, which includes no industrial sources of pollutants, an Industrial Waste Survey (IWS) is not required as part of the Permit.

11 ENDANGERED SPECIES CONSIDERATIONS

The Endangered Species Act of 1973 requires all Federal Agencies to ensure, in consultation with the U.S. Fish and Wildlife Service (FWS), that any Federal action carried out by the Agency is not likely to jeopardize the continued existence of any endangered species or threatened species (together, "listed" species), or result in the adverse modification or destruction of habitat of such species that is designated by the FWS as critical ("critical habitat"). See 16 U.S.C. § 1536(a)(2), 50 CFR Part 402. When a Federal agency's action "may affect" a protected species, that agency is required to consult with the FWS (formal or informal) (50 CFR § 402.14(a)).

The U.S. Fish and Wildlife Information for Planning and Conservation (IPaC) website (https://ecos.fws.gov/ipac/) was accessed on May 8, 2026 to determine federally-listed Endangered, Threatened, Proposed and Candidate Species for the area near the Facility. The IPaC Trust Resource Report findings are provided below. The designated area utilized was identified in the IPaC search and covers four square miles, which includes the entire Facility area acreage, Yellow Bay State Park, Yellow Bay, and the immediate outfall area of Flathead Lake and its shoreline.

Table 8. IPaC Federally listed Threatened and Endangered Species

Species	Scientific Name	Species Status	Designated Critical Habitat
Canada Lynx	*Lynx canadensis*	Threatened	"There is final critical habitat for this species (published in the Federal Register on September 12, 2014). Your location does not overlap the critical habitat."
Grizzly Bear	*Ursus arctos horribilis*	Threatened	"There is proposed critical habitat for this species (published in the Federal Register on November 5, 1976." This location is outside of any critical habitat for this species.
North American Wolverine	*Gulo gulo luscus*	Threatened	"No critical habitat has been designated for this species."
Bull Trout	*Salvelinus confluentus*	Threatened	"There is final critical habitat for this species (published in the Federal Register on October 18, 2010). Your location overlaps the critical habitat."
Monarch Butterfly	*Danaus plexippus*	Proposed Threatened	"There is proposed critical habitat for this species (published in the Federal Register on December 12, 2024). Your location does not overlap the critical habitat."
Suckley's Cuckoo Bumble Bee	*Bombus suckleyi*	Proposed Endangered	"No critical habitat has been designated for this species."

11.1 Biological Evaluation

Based on the IPaC information generated, the Facility location is outside of the critical habitat for all species listed in Table 8 with the exception of bull trout, as bull trout is the only aquatic species. The Facility's treated water discharges directly into Flathead Lake. Because of the immense dilution

ratio, the pollutants in the discharge are not expected to impact any of the listed species. See further discussion below for each individual species.

Canada lynx, *Lynx canadensis* – This species inhabits subalpine forests of the western United States, specifically locations that receive deep snow and have high populations of snowshoe hares, which are their principal prey. The 'action area' for the proposed action (renewal of an NPDES discharge permit) is comprised mainly of lower elevation forested areas, agricultural areas (orchards), and Flathead Lake, and is likely not primary habitat for this species. Regardless of whether Canada lynx are found in this area, reissuance of the Permit will not authorize new ground disturbance or substantial changes in pollutant loadings, the treated wastewater is discharged to the subsurface of Flathead Lake and therefore would have little to no impact on terrestrial habitat, and permit limits are protective of all water quality standards. Therefore, the EPA finds that this proposed permit action will have *no effect* on this species.

Grizzly bear, *Ursus arctos horribilis* – This species can be found throughout the Northern Continental Divide Ecosystem of north-central Montana, although they typically avoid areas with high human population. The 'action area' for the proposed action (renewal of an NPDES discharge permit) is comprised mainly of lower elevation forested areas, agricultural areas (orchards), and is likely not primary habitat for this species. Regardless of whether grizzly bear are found in this area, reissuance of the Permit will not authorize new ground disturbance or substantial changes in pollutant loadings, the treated wastewater is discharged to the subsurface of Flathead Lake and therefore would have little to no impact on terrestrial habitat, and permit limits are protective of all water quality standards. Therefore, the EPA finds that this proposed permit action will have *no effect* on this species.

North American Wolverine, *Gulo gulo luscus* – This species can be found in cold, higher elevation alpine and boreal forests throughout the Northern Continental Divide Ecosystem of north-central Montana, and they typically avoid areas with high human population. The 'action area' for the proposed action (renewal of an NPDES discharge permit) is comprised mainly of lower elevation forested areas, agricultural areas (orchards), and is likely not primary habitat for this species. Regardless of whether wolverine are found in this area, reissuance of the Permit will not authorize new ground disturbance or pollutant loadings, the treated wastewater is discharged to the subsurface of Flathead Lake and therefore would have little to no impact on terrestrial habitat, and permit limits are protective of all water quality standards. Therefore, the EPA finds that this proposed permit action will have *no effect* on this species.

Bull Trout, *Salvelinus confluentus* – This native species is listed as threatened, and based on IPaC information, the action area for this permit overlaps critical habitat for this species. Bull trout have specific habitat requirements that affect their distribution. They need cold water to survive and low sediment levels in their spawning streams. They also require stable stream channels, clean spawning and rearing gravel, complex and diverse cover, and unblocked migratory corridors allowing them to go upstream for spawning. Bull trout in the Flathead Basin are largely adfluvial, living out most of their adult lives in a lake environment. Bull trout return to Flathead Lake to mature after spawning, where they achieve trophy sizes of up to 25 pounds. Because they are known to be present in Flathead Lake, an effect of the discharge on this species and its designated critical habitat is possible.

A new wastewater treatment facility was constructed adjacent to the existing Facility and came online May of 2025. The new Facility uses UV disinfection rather than chlorine, which is more protective of the Flathead Lake's water quality because it is a physical process that will not leave a chemical residue. The permit reissuance will not authorize new ground disturbance or substantial changes in pollutant loadings, and permit limits are protective of all water quality standards, including aquatic life. For these reasons, the EPA finds that this proposed permit action *may affect, but is not likely to adversely affect* this species and its designated critical habitat.

Monarch butterfly, *Danaus plexippus* – This species is currently listed as proposed threatened. No critical habitat has been designated for this species. Monarch butterflies are typically present in Montana in the summer months. This species prefers native prairie habitat and has specific obligate host plants (milkweed) that it needs for reproduction, and relies on floral resources for feeding. The 'action area' for the proposed action (renewal of an NPDES discharge permit) is comprised mainly of lower elevation forested areas, agricultural areas (orchards), and is likely not primary habitat for this species. The Montana Heritage Program Predicted Suitable Habitat Model shows that this portion of Lake County (on a broad scale) is categorized as "low to moderate suitability." Low suitability means that the landscape may contain suitable habitat but it is often less continuous, scattered, or patchy. Moderate suitability means that suitable habitat is found in the general area, and may be fairly continuous. Regardless of whether monarch butterflies are found in this area, reissuance of the Permit will not authorize new ground disturbance or pollutant loadings. Therefore, the EPA finds that this proposed permit action will have *no effect* on this species.

Suckley's Cuckoo Bumble Bee, *Bombus suckleyi* – This species is currently listed as proposed endangered. No critical habitat has been designated for this species. This species prefers native meadows and forages on a wide range of flowers, and is present year-round. The 'action area' for the proposed action (renewal of an NPDES discharge permit) is comprised mainly of lower elevation forested areas, agricultural areas (orchards), and is likely not primary habitat for this species. The Montana Heritage Program Predicted Suitable Habitat Model shows that this portion of Lake County (on a broad scale) is categorized as "moderate suitability." Moderate suitability means that suitable habitat is found in the general area, and may be fairly continuous. Regardless of whether Suckley's Cuckoo Bumble Bee are found in this area, reissuance of the Permit will not authorize new ground disturbance or substantial changes in flows or pollutant loadings. Therefore, the EPA finds that this proposed permit action will have *no effect* on this species.

Before going to public notice, a copy of the draft Permit and this Statement of Basis was sent to the FWS requesting concurrence with EPA's finding that reissuance of this NPDES Permit "may affect, but is not likely to adversely affect" some of the species listed as threatened or endangered in the action area by the FWS under the Endangered Species Act and their critical habitat.

12 NATIONAL HISTORIC PRESERVATION ACT REQUIREMENTS

Section 106 of the National Historic Preservation Act of 1966 (NHPA), 16 U.S.C. § 470(f) requires that federal agencies consider the effects of federal undertakings on historic properties. The implementing regulations of the NHPA can be found at 36 CFR Part 800. An "undertaking," as defined at 36 CFR § 800.16(y), includes projects requiring a federal permit. Therefore, the issuance of this permit constitutes an undertaking. The first step in this analysis is to consider whether the undertaking is a type of activity that has the potential to cause effects on historic properties. See 36

CFR § 800.3(a). Permit renewals where there is no new construction are generally not the type of action with the potential to cause effects on historic properties.

A new wastewater treatment Facility adjacent to the prior Facility was completed and went online in May of 2025. In April 2023, prior to construction, the engineering firm notified the State Historic Preservation Office (SHPO). According to the SHPO's records, there have been no previously recorded sites within the designated search locales, and there was a low likelihood that cultural properties would have been impacted by construction of the new Facility; they therefore did not recommend a cultural resource inventory. Per an email from the Facility on February 12, 2026, the FLBS communicated extensively with the CSKT Natural Resources Department and their Water Quality Team throughout the planning process and have a letter of support the CSKT provided for the project.

The National Register of Historic Places website https://www.nps.gov/subjects/nationalregister/database-research.htm was accessed on 2/19/2026. A few resources were depicted around Flathead Lake; however, the closest resource listed is approximately 13 miles from the FLBS, and therefore it does not appear there would have been any adverse impacts to historic places within the area of potential effects.

13 401 CERTIFICATION CONDITIONS

The Confederated Salish and Kootenai Tribes are the Clean Water Act (CWA) Section 401 certifying authority for the Permit, and a CWA Section 401 certification will be requested prior to Permit finalization.

14 MISCELLANEOUS

The effective date of the Permit and the Permit expiration date will be determined upon issuance of the Permit. The intention is to issue the Permit for a period not to exceed 5 years.

Permit drafted by Kenley Stone, U.S. EPA, 406-457-5035 (March 2026)

ADDENDUM

AGENCY CONSULTATIONS

On [Month Day, Year], the FWS [concurred/disagreed] with EPA's preliminary conclusion that the Permit reissuance is not likely to adversely affect listed species.

On [Month Day, Year], the Tribes' Tribal Historic Preservation Office [agreed with/disagreed with/did not comment on] EPA's preliminary determination that the Permit reissuance will not impact any historic properties.

On [Month Day, Year], EPA sent a sent a CWA Section 401 certification request to the CSKT. The CSKT [certified without Section 401 requirements/certified with the following Section 401 certification requirements/waived Section 401 certification]. Any review or appeal of these conditions must be made through Tribal procedures pursuant to 40 CFR § 124.55(e).

- [List any 401 certification requirements.]

NEIGHBORING JURISDICTION

The EPA conducted a neighboring jurisdiction analysis of water resources located downstream from the Facility and outside the external boundaries of the Flathead Reservation, in accordance with 40 CFR § 121.13. On [Month Day, Year], the EPA permit signatory made a [positive/negative] "may affect" determination for the authorized discharges from the Facility in the neighboring jurisdiction of Montana. The EPA documented the factors considered in this determination in the administrative record for this Permit.

PUBLIC NOTICE AND RESPONSE TO COMMENTS

The Permit and statement of basis were public noticed on EPA's website on [Month Day, Year. The comment(s) received and the response(s) are provided below/No comments were received.

Comment:

The commenter noted that …

Response:

The following language was added to the final Permit./No changes were made to the final Permit: