

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

PERMITTEE: Consolidated Charlo – Lake County
Water & Sewer District

FACILITY NAME AND ADDRESS: Charlo Wastewater Treatment Facility
P.O. Box 62
Charlo, MT 59824

PERMIT NUMBER: MT-0022551

RESPONSIBLE OFFICIAL: Jamie Bauer, Secretary
(406) 644-8776
charlowatersewer@outlook.com

FACILITY CONTACT: Drew Dumont
(406) 644-8776
charlowatersewer@outlook.com

PERMIT TYPE: Minor POTW, Permit Renewal, Indian
country

FACILITY LOCATION: 57201 MT Hwy 212
Charlo, MT 59824
47.4305° N, 114.1748° W

1 INTRODUCTION

This statement of basis (SoB) is for the issuance of a National Pollutant Discharge Elimination System (NPDES) permit (the Permit) to the Consolidated Charlo – Lake County Water & Sewer District (Permittee) for the Charlo Wastewater Treatment Facility (Facility). The Permit establishes discharge limitations for any discharge of wastewater from the Facility through outfall 001 to an unnamed tributary to Dublin Gulch. The SoB explains the nature of the discharges, the 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 Reservation. The 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:

- Fecal coliform effluent limitations have been removed (see section 6.2.4).
- *E. coli* effluent limitations and monitoring requirements have been modified (see section 6.2.3).
- Percent removal effluent limitations for Total Suspended Solids (TSS) and 5-day Biochemical Oxygen Demand (BOD₅) have been added, along with an influent monitoring location necessary to support these effluent limitations (see section 6.1).
- Receiving stream monitoring requirements for pH and temperature have been added (see section 7.1).
- Temperature monitoring requirements have been added (see section 6.2.5).
- Ammonia monitoring requirements have been modified (see section 7.1.8).
- Monitoring frequencies have been changed to align with an intermittent discharge regime (see section 7.1).
- Discharge start date and duration of discharge reporting requirements are being added (see section 7.1.2).
- Requirements for implementing an Asset Management Plan (AMP) have been added (see section 10.2).
- Requirements for implementing an Industrial Waste Survey have been added (see section 10.3).

3 BACKGROUND INFORMATION

The community of Charlo's publicly owned treatment works wastewater lagoon (Facility) is located in northwestern Montana within the external boundaries of the Flathead Reservation, which is home to the Confederated Salish and Kootenai Tribes (CSKT). The Facility is owned and operated by the Consolidated Charlo – Lake County Water & Sewer District. The Facility is located approximately a half mile south of Charlo on Highway 212 at coordinates 47.4305° N, 114.1748° W. The Facility has one

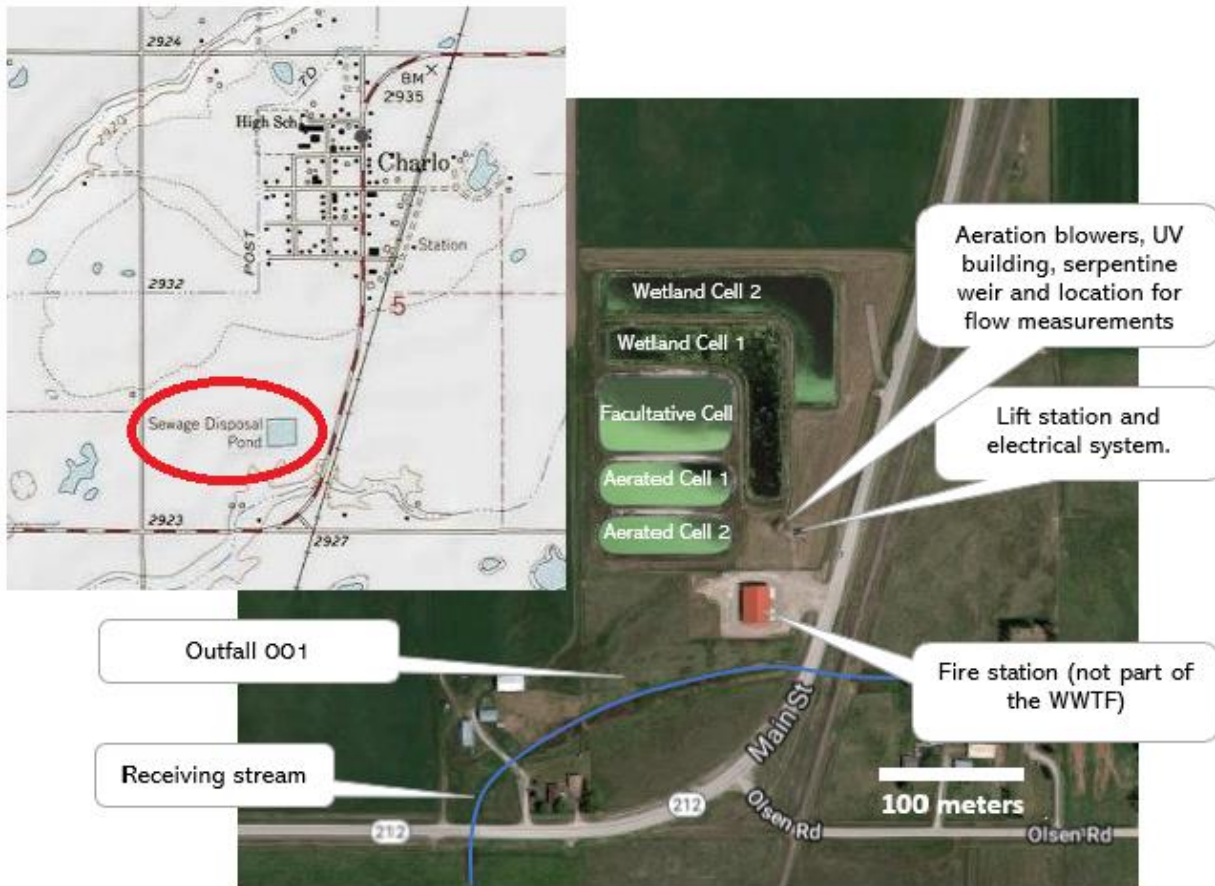
outfall (Outfall 001) into an unnamed tributary of Dublin Gulch at coordinates 47.4293° N, 114.1767° W.

The following background information was obtained from the Charlo application for renewal of the Permit.

3.1 Service Area Description

The Permit covers discharges of treated municipal sewage from the Facility, which serves approximately 350 residents in the unincorporated community of Charlo according to the permit application. The 2020 U.S. Census lists the population of the Charlo Census Designated Place at 385. The service area does not have any combined sewers. According to Facility personnel, there are 154 collection system (i.e., sanitary sewer) hookups in the community, although not all may be active. The service area is almost entirely residential, with one K-12 school, and a few small commercial dischargers such as a grocery store, a coffee shop, a bar & grill, and a gas station. According to the permit application, the Facility has a design flow rate of 0.086 million gallons per day (mgd). This design volume was based on an estimate of growth potential that has not occurred, and the Facility estimates their influent flow is closer to 0.01 mgd. The Facility is an intermittent discharger, and it discharges one or two times per year, usually in late winter/early spring and then again as needed. The Facility has reported nine discharges over the past six years (Table 1). When discharging, they typically discharge at a rate of 20,000 gallons per day for about 20 to 25 days (for a total release of approximately 400,000 to 500,000 gallons). Since they operate a constructed wetland area (Figure 1), their discharge goal is to get the water levels down to a certain level – not too low where the cattails dry out and die, but low enough such that they obtain storage for another six to twelve months. The Permittee also stated that the groundwater table is high in Charlo and they may have some infiltration and inflow (I&I) issues during wetter parts of the year; additionally, some houses may pump groundwater out of their basements into the collection system during the wetter parts of the year.

Figure 1. Charlo Wastewater Treatment Facility Location



3.2 Treatment Process

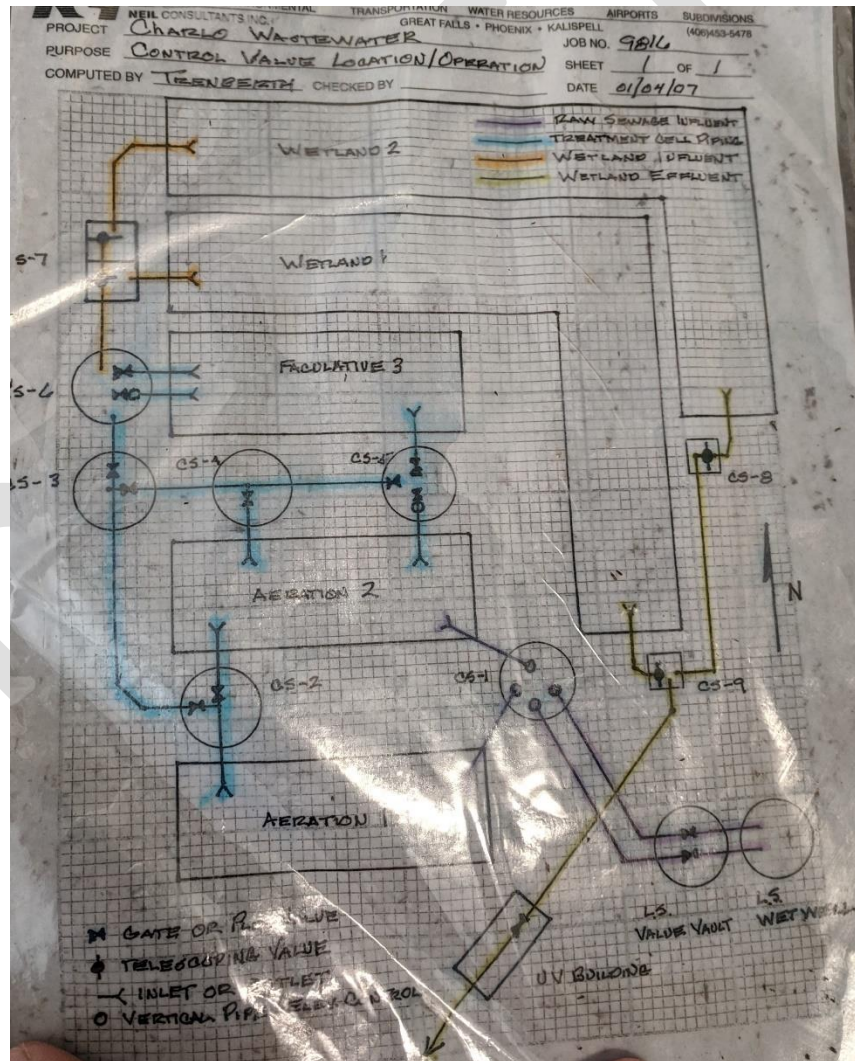
There has been a sewage pond in this location since at least the 1950s, but in 2005 the Facility upgraded to a five-cell treatment system (Figure 1). The first two are geosynthetic-lined aerated cells, the third is a geosynthetic-lined facultative cell, and the last two are wetland cells. Wastewater from the community of Charlo travels to the Facility via a single collection line. This line connects to a lift station at the Facility where a splitter can direct flow to either of the aerated cells. This is the only lift station in the collection system. The Facility does not have a headworks. The two aerated cells and the facultative cell have a combined two million gallon capacity. Under normal operating procedures, wastewater flows in series through aeration pond 1 (cell 1), aeration pond 2 (cell 2), the facultative pond (cell 3), and then in parallel to the wetland cells 1 and 2 (Figure 2). The Facility does not discharge continuously, but can gravity discharge from either (or both) wetland cell into the aerator building where the discharge passes through a small serpentine weir and where it is treated by ultraviolet light (UV) to provide disinfection. The UV system consists of three banks of two bulbs each. Flow is measured in the serpentine weir in the aerator building prior to discharge. The flow is gravity fed and is controlled by an adjustable gate valve that the Permittee sets to 20,000 gallons per day/14 gallons per minute (even though it can discharge at much higher rates if needed). It then discharges via an underground pipe that runs approximately 200 meters southwest to a discharge point near the unnamed tributary. The discharge overland flows approximately fifty feet down a short hill into the unnamed tributary. When discharging, the discharge runs for 24 hours per day until Facility personnel determine the wetland cells are low enough – then they shut the gate valve

and UV system off. The design flow for the Facility is 0.086 million gallons per day (mgd), although it currently receives much less than this volume.

The Facility is planning a renovation in the next couple of years. The plan is to put in an emergency bypass line that would allow them to bypass the lift station and pump directly from the wet well into lagoon cell 1 using a gas/diesel pump while the electrical system is down for repairs, remove sewage sludge and replace the geosynthetic liners in cells 1 through 3 (which are about 20 years old and are in need of replacement), install a solar aerator in cell 3 (which is currently not aerated), install influent and effluent magnetic flow meters, and otherwise improve the Facility.

The Facility does not accept hauled septage or other waste of any kind. There are no locations in the collection system that accept hauled septage either. The Facility has not removed sludge since the lagoons were built in 2005.

Figure 2. Charlo Wastewater Treatment Facility Schematic



3.3 Chemicals Used

The Facility is not regularly using chemicals in the treatment process. However, occasionally the Facility adds a "bacteria booster" type chemical to lagoon cell 3 (the facultative lagoon) to help

control odor problems. At the time of the June 2025 EPA inspection, they had MARC 78 Bacterial Booster™ onsite. The active ingredient in this compound is potassium permanganate at 1-5% by volume. Potassium permanganate is a strong oxidizer that can readily oxidize hydrogen sulfide, which is often the source of unpleasant odors. Typically, they use this in the warmer times of year when odors get significantly more noticeable. According to the Permittee, they typically use a 2.5 gallon container in early summer (June or July), and another 2.5 gallon container in early fall (October). They simply add it in near the inlet and allow it to mix by inflow and wind action.

They use an ultraviolet (UV) light disinfection system prior to discharge and no chemicals for disinfection.

4 PERMIT HISTORY

According to the EPA records maintained for the Facility, this renewal is the 5th issuance of this NPDES permit. The original issue date was April 1, 2000. The previous permit for the Facility became effective on June 1, 2019 and was set to expire on May 31, 2024. The Facility did not submit a permit renewal application prior to the permit's expiration date, and thus the previous permit expired. The EPA received a complete application renewal for the Facility on November 27, 2024. The permit remains in expired status until this renewal permit is issued.

The Facility's eligibility for coverage under the EPA Region 8 Lagoon General Permit (LGP) was considered, but due to the CSKT ammonia requirements (see Section 6.2.7), the EPA determined that an individual NPDES permit is necessary.

4.1 Discharge Monitoring Report (DMR) Data

A review of the Facility's DMR data showed that while the Facility has not reported any exceedances of their permit limits, they have missed reporting certain parameters in several cases. After discussion, the Facility provided seven lab reports associated with DMR data that contained data that was not always submitted in the appropriate DMR. One of these lab reports contained data that was an unreported exceedance. The EPA has summarized all available data in the table below (Table 1) – this includes both data reported on the DMR, as well as data provided by the Facility during discussions about this permit renewal. The Facility appears to have had one exceedance for both *E. coli* and fecal coliform on 2/27/2023.

Table 1. Summary of the 2019-2025 DMR Data for Outfall 001 from the EPA Integrated Compliance Information System (ICIS) database (date accessed 4/28/25), plus lab reports provided by the Permittee

Parameter	Permit Limit(s)	Reported Average	Reported Range	Number of Data Points	Number of Exceedances
Discharge Volume, million gallons per day (mgd)	N/A	<u>a</u> /	<u>a</u> /	9	N/A
5-Day Biochemical Oxygen Demand (BOD ₅), 30-Day Average, mg/L	30	12	2 – 26	9	0

Parameter	Permit Limit(s)	Reported Average	Reported Range	Number of Data Points	Number of Exceedances
5-Day Biochemical Oxygen Demand (BOD ₅), 7-Day Average, mg/L	45	16	2 – 39	9	0
Total Suspended Solids (TSS), 30-Day Average, mg/L	30	10	1 – 22	9	0
Total Suspended Solids (TSS), 7-Day Average, mg/L	45	10	1 – 22	9	0
<i>E. coli</i> , no./100 mL	252/126 <u>b/</u>	2.9 <u>a/</u>	<1 – 816	7	1 <u>c/</u>
Fecal coliform, no./100 mL	400/200 <u>b/</u>	2.1 <u>a/</u>	<1 – 205	7	1 <u>c/</u>
Oil and Grease (mg/L)	10	N/A	N/A	9	0
pH, standard units (s.u.)	6.5 – 8.5	7.5 <u>d/</u>	7.0 – 7.9	9	0
Dissolved Oxygen, mg/L	N/A	0.6	0.01 – 5.4	9	N/A
Total Ammonia, mg/L	N/A	2.7	0.21 – 8.77	8	N/A
Total Nitrogen, mg/L	N/A	6.9	5.9 – 7.9	3	N/A
Total Phosphorus, mg/L	N/A	3.49	3.46 – 3.51	2	N/A

a/ Reported geometric mean.

b/ The first number is the 30-day average limit; the second number is the daily maximum limit. Note these were erroneously switched in the previous permit – typically, daily maximum limits are higher than 30-day average limits.

c/ This data was not reported on their DMR but was an exceedance.

d/ Reported median.

4.2 Other Facility History

The Facility was inspected by the EPA on June 11, 2025, and an inspection report was issued on August 25, 2025. The EPA inspection report is a part of the administrative record for the Permit. Some of the EPA's findings are listed below:

- Facility inspections were not being completed and/or documented
- Lagoon cells had unmaintained vegetation
- Issues with either incorrectly reporting – or not reporting at all – some of the required parameters in their DMR
- Submitting DMR reports late
- Submitting the NPDES permit application late

The Facility is engaged in ongoing discussions with the EPA to address the most recent inspection findings.

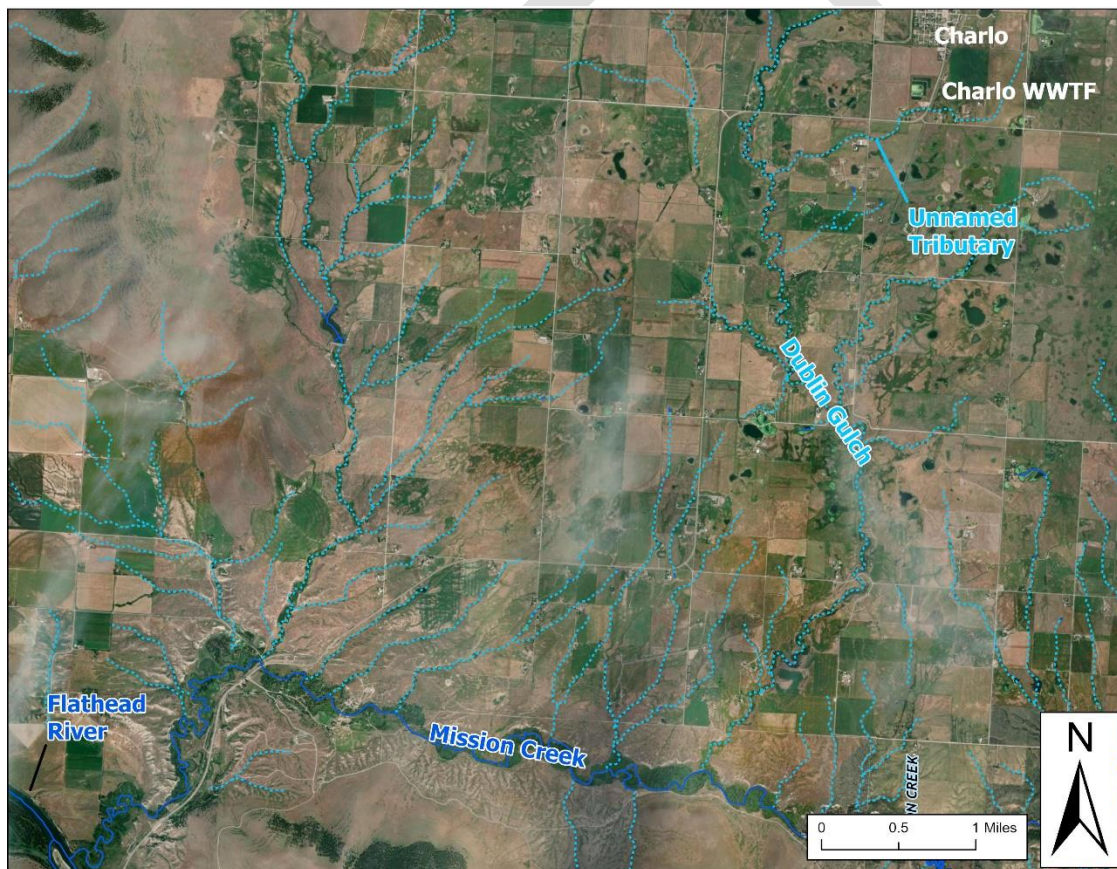
5 DESCRIPTION OF RECEIVING WATER

The facility discharges to an unnamed tributary to Dublin Gulch. This unnamed tributary flows for approximately one mile before reaching Dublin Gulch. Dublin Gulch flows approximately six miles to Mission Creek, which then flows approximately eight more miles into the Flathead River (Figure 3).

The Flathead River flows another approximately 24 miles before reaching the boundary of the Flathead Reservation.

According to the previous statement of basis, there was an internal memo dated 3/13/2000 in which the CSKT staff hydrologist determined the unnamed tributary to Dublin Gulch (i.e., the receiving water) to be an intermittent water body, and stated that the water is either used for irrigation, ponds in a pasture downstream, runs dry, or continues downstream to Dublin Gulch depending on the flows and the time of year. Facility personnel stated that the receiving stream often has a trickle of water in it year-round but then gets noticeably higher flows when the irrigation water is turned on about mid-May to mid-August. When EPA staff conducted the inspection on June 11, 2025 (i.e., during the irrigation season), the flow in the unnamed tributary was relatively low – just a few inches deep in a channel approximately one to two feet across. The EPA inspectors estimated it was flowing approximately 0.5 cubic feet per second. When EPA permitting staff conducted a site visit on October 18, 2022 (i.e., outside the irrigation system), the receiving stream was completely dry.

Figure 3. Facility Receiving Water



6 PERMIT LIMITATIONS

6.1 Technology Based Effluent Limitations (TBELs)

The secondary treatment standards (40 CFR Part 133) have been developed by the EPA and represent the level of effluent quality attainable through the application of secondary or equivalent

treatment. The regulation applies to all publicly owned treatment works (POTWs). The potential TBELs applicable to the Facility are listed in Table 2.

Table 2. Secondary treatment standards applicable to POTWs

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*		

*There are some exceptions to the pH requirement.

40 CFR § 133.102 provides the basic national secondary treatment standards (STS) that apply as a minimum level of effluent quality applicable to POTWs across the country. 40 CFR § 133.105 provides less stringent standards that may be applied to certain types of facilities such as lagoons if they cannot consistently achieve the STS. The Facility's discharge data (section 4.1) shows that the Facility has achieved its concentration-based permit limits for BOD₅ and TSS based on STS for all of its samples. Therefore, the pH range, and concentration-based BOD₅ and TSS TBELs that apply to the Facility are based on the STS shown in Table 2.

The previous permit did not include the percent removal requirements for BOD₅ and TSS required by 40 CFR § 133.102(a)(3) and (b)(3). The rationale was that the long hydraulic residence time in the lagoon made it impractical to compare influent samples directly with effluent samples. The regulations at 40 CFR § 133.103(c) provide for certain adjustments to the above regulations specific to waste stabilization ponds; however, the Facility does not meet the criteria listed in the regulations, and thus BOD₅ and TSS percent removal requirements are being added in the Permit. The percent removal requirements for both BOD₅ and TSS will be based on the STS values in Table 2. The Facility provided several influent BOD₅ and TSS samples to the EPA. The median value for influent BOD₅ was 284 mg/L and the median value for influent TSS was 198 mg/L. Compared to the effluent values shown in Table 1, the Facility should be easily able to meet the 85 percent removal requirements.

In addition to meeting the regulatory requirements, adding percent removal requirements ensures significant biological treatment occurs, encourages the Facility to address any infiltration and inflow problems, and provides data to better support future decision making and overall lagoon function. This addition will require that an additional sampling location be added to collect influent BOD₅ and TSS data at a representative influent point to the Facility (e.g., prior to any treatment) so that the percent removal can be calculated. A bar screen or wet well at the lift station is often an ideal location for collecting these influent samples.

The EPA Region 8 has also developed technology-based and water quality-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 (CWA; see section 6.2.2). This consideration for oil and grease will be included in the Permit.

6.2 Water Quality Based Effluent Limitations (WQBELs)

The Facility discharges to an unnamed tributary to Dublin Gulch. The receiving water is within the Flathead Reservation and thus the CSKT water quality standards (WQS) apply. Pursuant to the CWA section 518(e), the CSKT has been authorized for treatment in the same manner as state (TAS), and has adopted EPA-approved WQS. The EPA has reviewed these WQS for consideration of the development of WQBELs and evaluated whether any total maximum daily loads (TMDLs) apply.

According to Section 1.3.7 of the CSKT WQS, the receiving water is classified as a B-1 stream ("Flathead River and its tributaries downstream of the highway bridge at Polson..."). Waters classified as B-1 must be "maintained suitable for drinking and culinary and food processing purposes after conventional treatment; 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.

Although the CSKT have adopted EPA-approved WQS, they have not listed water bodies as impaired, nor developed a 303(d) list to require Total Maximum Daily Loads (TMDLs) for impaired water bodies. Thus, there are no TMDLs to consider for the Permit at this time. The Permit contains a reopener provision that would allow the Permit to be reopened to include any applicable Waste Load Allocation developed and approved by the CSKT and the EPA.

When establishing permit limits, 40 CFR 122.45(d)(1) 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. While the Facility is not a continuous discharger and is thus not subject to that requirement, 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.

6.2.1 BOD₅ and TSS

The CSKT do not have any numeric WQS *directly* related to BOD₅, but several of their narrative and numeric criteria address suspended sediments, turbidity, emulsions and sludge, etc.

Implementation of the BOD₅ and TSS secondary treatment standards, along with the Facility's low BOD₅ and TSS discharge values (averaging 12 and 10 mg/L, respectively – see Table 1) will protect the CSKT numeric criterion for turbidity (see 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 B-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.* This standard is difficult to implement without detailed knowledge of the receiving water flows and pH at any given time. Although the Facility's effluent pH ranged from 7.0 to 7.9 in this permit cycle (i.e., well within the range above), due to the lack of dilution in the receiving stream and the inherent variability of pH in a biological system such as a wastewater lagoon, the EPA is making a qualitative determination that the Facility does have reasonable potential to cause or contribute to an exceedance of the CSKT WQS for pH. The EPA will simplify implementation of permit limits by requiring the Facility to discharge within the stated range (i.e., 6.5 to 8.5 s.u.) at all times. This permit limit is more protective than the relevant Secondary Treatment Standards of 6.0 to 9.0 s.u. (see section 6.1), and the CSKT general Human Health WQS of 5.0 to 9.0 s.u.

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* is that the geometric mean number of *E. coli* may not exceed 126 colony forming units (cfu)/100 mL, and ten percent of the total samples may not exceed 252 cfu/100 mL during any 30 day period. 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 light to help reduce bacteria in the discharge and has not reported any exceedances, although most of the required reporting was missing from the DMR data (and one value that was unreported exceeded the permit limits – see Table 1). 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 these factors, the EPA has determined that there is reasonable potential to exceed the *E. coli* standard, and that effluent limitations are appropriate.

As discussed above, the CSKT WQS states that “ten percent of the total samples may not exceed 252 cfu/100 mL during any 30 day period.” The EPA has determined that the “10% may not exceed” criteria is best implemented in the Permit as a daily maximum. The Facility is only required to sample for bacteria approximately three times during each discharge event (see section 7.1.5 – maybe slightly less or slightly more depending on the duration of the discharge), and the facility does not have more than one discharge event per month. For all practical purposes a daily maximum and ‘10% may not exceed’ criteria are equivalent because any one sample that exceeds the daily maximum limit would also exceed the 10 percent threshold from the WQS unless the Facility collects more than 10 samples. Since the Facility does not discharge more than once per month, the 10% threshold and daily maximum are essentially the same. Implementing this criterion as a daily maximum limit is more protective, as it allows for no exceedances of this value while still meeting the Tribal WQS of not exceeding 10 percent of the time. Expression of this criterion as a daily maximum also provides consistency with how the EPA has issued other NPDES permits with considerations for similar criteria.

The previous permit contained a 30-day average limit of 252 #/100 mL and a daily maximum limit of 126 #/100 mL. The 126 #/100 mL criteria applies as an average value during a 30-day period, but was implemented as daily maximum limit in the previous permit. Furthermore, the 252 #/100 mL criteria applies as a 10% may not exceed value, but was implemented as an average in the previous permit. The justification for implementing these this way is unclear and is believed to be a technical error; this issuance switches the two values around to create a more protective limit structure. Additionally, the previous permit only applied *E. coli* limits from May through September. The *E. coli* WQS apply year-round, and this footnote restricting the limit to seasonally was a technical error and will be removed in this issuance.

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 Fecal coliform

Pathogens such as fecal coliform are present in domestic sewage. Fecal coliform have been used as pollutants of concern in domestic wastewater, but scientific advancements in microbiological, statistical, and epidemiological methods have demonstrated that culturable enterococci and *E. coli* are better indicators of fecal contamination than fecal coliforms (EPA, 2012 RWQC¹). The CSKT WQS previously contained numeric criteria for both fecal coliform and *E. coli*, but in 2023 they revised their WQS to removal fecal coliform and rely solely on *E. coli*. This revision was approved by the EPA on April 9, 2024, because it is consistent with the EPA's currently recommended recreational water quality criteria issued pursuant to CWA Section 304(a).

Because of this change to the CSKT WQS, the Permit will remove the fecal coliform effluent limits. This does trigger anti-backsliding considerations and is further discussed in section 6.5.

6.2.5 Temperature

The CSKT temperature water quality criteria allow a slight increase or decrease in naturally occurring water temperatures, depending on specified natural temperature ranges. For example, at ambient temperatures observed in other nearby streams most of the year (since we do not have temperature data for the receiving stream), a 1°F maximum increase in stream temperature and a 2°F maximum decrease in stream temperature are allowed (CSKT WQS, Section 1.3.7(3)(e)). In this case, the Facility has not collected temperature data. But it is a large wastewater lagoon with a residence time of at least several months, indicating a relatively stable temperature, and it is an intermittent discharger (averaging about one three week long discharge every 9 months). Furthermore, the receiving stream is dry outside of the summer irrigation season, so the "naturally occurring" temperatures of the receiving waters cannot be determined much of the year. Based on these considerations, the EPA has determined that temperature effluent limitations are not required at this time due to a qualitative determination of lack of reasonable potential to exceed CSKT temperature criteria. However, the EPA will implement temperature monitoring

¹ US EPA, 2012. Recreational Water Quality Criteria, Office of Water 820-F-12-058

requirements to better inform future permitting decisions – see section 7.1 for more information.

6.2.6 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 aligns closely with the CSKT WQS. The protocol uses a dual approach: frequent visual observations of the discharge, looking for a visible sheen or floating oil, and when either of those is observed, a sample must be immediately taken and analyzed for oil and grease with an effluent limitation of 10 mg/L. This same approach was taken in the previous permit and will be retained.

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

6.2.7 Ammonia

The CSKT recently adopted new ammonia criteria based on the EPA's 2013 recommended aquatic life ambient water quality criteria for ammonia. These are generally more stringent than the previous criteria, as they are based on a wider range of species (some of which may be more sensitive to ammonia) including salmonids and mussels. These ammonia criteria 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. The Facility only reported two ammonia measurements over the permit term, although they had an additional six measurements on lab reports that were provided to the EPA during discussions about this permit renewal. These values range from 0.21 to 8.8 mg/L but cannot be compared to a calculated stream WQS due to lack of data in the receiving stream. Based on these factors, the EPA has determined that the collection of additional data in-stream (pH and temperature) is necessary to determine reasonable potential at a future date.

To provide additional sampling data and collection of ambient pH and temperature, the Permit will require the Facility to sample the receiving stream for both pH and temperature (further discussed in section 7.1). This dataset can then be used to establish ammonia criteria, and implement ammonia effluent limitations if necessary in the next permit.

In the meantime, the EPA encourages the Facility to limit their discharges to times when there is high ammonia removal in the lagoon. This would tend to be in the summer and early fall (i.e., July through October) timeframe. Showing that well-timed discharges can meet any ammonia criteria

could potentially reduce or remove the need to implement ammonia limits – and/or avoid upgrades for additional ammonia removal – in the future.

6.2.8 Dissolved Oxygen (DO)

The relevant CSKT criteria for DO is that it must not be reduced below the applicable values from the *Freshwater Aquatic Life Standards for Dissolved Oxygen* chart (CSKT WQS, page 65). For streams classified as B-1, the chart ranges in value from 4.0 mg/L to 9.5 mg/L, depending on the criteria and the type and presence/absence of early life stages of fish. Assuming early life stages of fish are present (which would be verified with CSKT prior to implementing any future limits), the relevant WQS are 6.5 mg/L as a 7-day mean, and 5.0 mg/L as a 1-day minimum (implemented as an instantaneous minimum per the table footnote).

It is unknown whether the receiving water is meeting the values listed in the chart. However, the receiving stream is dry for portions of the year, so it is likely that the Facility's DO has a large influence on the receiving stream's ambient DO conditions. While the Facility's reported effluent DO averages 0.6 mg/L, the Facility has consistently reduced BOD₅ to well below the required technology-based effluent limitations (Table 1) prior to discharge, indicating discharges of oxygen-demanding organic material are not excessive. The discharge also runs down a swale prior to entering the receiving stream, giving it time to re-oxygenate. Given these factors and the intermittent discharge and uncertainty about any potential adverse effect of the discharge on the receiving water, DO monitoring will be continued in the effluent and added to the receiving stream without requiring an effluent limitation. This is discussed further below in section 7.1. If the additional data shows the Facility's discharge is found to have reasonable potential to cause or contribute to an exceedance of the applicable WQS in the receiving stream, numeric DO effluent limitations will be added in the next permit cycle.

6.2.9 Total Residual Chlorine (TRC)

TRC can be toxic to aquatic life. The Tribe has established WQS for TRC. However, the Facility does not use chlorine or any chlorine product for disinfection, nor at any point in their treatment process. The Facility uses UV light to disinfect. Based on this fact, the EPA finds there is no reasonable potential for this Facility to cause or contribute to an exceedance of the relevant WQS, and no limits or monitoring for TRC will be required.

6.2.10 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 Facility is a minor POTW, and the unincorporated community of Charlo is small with limited industrial users (see section 3.1). The Facility was not aware of any other industrial users in Charlo besides those mentioned in section 3.1. For these reasons, the EPA does not consider metals to be a pollutant of concern at the Facility.

The EPA is requiring the Facility to complete an Industrial Waste Survey (IWS) (see section 10.3) within one year of the Permit effective date. The IWS will ensure the Facility knows the sources and types of pollutants that may be introduced to the system, and will allow the EPA to reassess this conclusion in the future.

6.2.11 Whole Effluent Toxicity (WET)

The CSKT 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 in the treatment process (with the exception of small amounts of potassium permanganate, discussed below). The Facility is a POTW that treats domestic wastewater from a small community without any known industrial users. For these reasons, the EPA has determined that 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.

6.2.12 Potassium Permanganate (KMnO₄)

Potassium permanganate is an inorganic compound that is widely used in industry as it is a strong oxidizing agent. It is particularly effective at oxidizing and precipitating hydrogen sulfide, which is a major source of unpleasant odors in wastewater lagoons under anaerobic conditions.

The Facility occasionally adds potassium permanganate (marketed as a “bacteria booster”) – typically in the summer and fall when odors are becoming an issue (see section 3.3). They usually dose it by adding a 2.5-gallon container of the bacteria booster to lagoon cell 3 (which has an approximately 800,000 gallon volume) in early summer (June/July) and another 2.5-gallon container to lagoon cell 3 in the fall (usually in October). The 2.5-gallon container is 1-5% potassium permanganate by volume. The dilution provided by the Facility is many orders of magnitude by the time the bacteria booster mixes and diffuses through lagoon cell 3 and the wetland cells prior to discharge.

The CSKT do have a WQS of 50 µg/L for manganese based on both drinking water and fish consumption designated uses. Based on the frequency of usage, the Facility’s frequency of discharge, the concentrations of potassium permanganate used, the large amount of dilution that occurs moving through the facultative and wetland cells, and the receiving stream itself, the EPA has made a qualitative determination that there is no reasonable potential to cause or contribute to an exceedance of this WQS, and no limits or monitoring for manganese will be required.

6.2.13 Other CSKT Criteria

The CSKT WQS include several additional numeric or narrative criteria applicable to B-1 streams that are related to: odors, colors, and other conditions (CSKT WQS, Section 1.3.13(1)(c)), color (CSKT WQS, Section 1.3.7(3)(g)), toxic or deleterious substances (CSKT WQS, Section 1.3.7(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 not reasonable potential to cause or contribute to an exceedance of any of these narrative or numeric WQS, and so they will not be addressed further in the Permit.

The CSKT 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. During the development of the Permit, the EPA met with CSKT Environmental Protection staff and conducted a joint field visit to the Facility. Based on the EPA's site visit, feedback received from the CSKT the intermittent duration of discharges from the Facility, and the limited number of summer nutrient sampling results available from the prior permit term (only one total nitrogen sample was collected, and no total phosphorus samples), nutrient limits will not be included in the Permit at this time. The EPA will continue to require nutrient monitoring to better characterize the effluent concentrations (see section 7.1.10). Additionally, the EPA plans to coordinate with the CSKT to prioritize collection of ambient data in the receiving stream and Dublin Gulch. If this additional data shows that the discharge has reasonable potential to cause or contribute to an exceedance of the narrative criteria in the receiving stream or other downstream waters, nutrient controls will be included in the next permit cycle.

The CSKT will be provided a copy of the draft Permit and draft SoB for review during the CWA Section 401 certification process. If the CSKT have concerns whether the draft Permit conditions assure compliance with all applicable numeric or narrative criteria, they 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 3).

Table 3. Final Effluent Limitations for Outfall 001

Effluent Characteristic	30-Day Average Effluent Limitations <u>a/</u>	7-Day Average Effluent Limitations <u>a/</u>	Daily Maximum Effluent Limitations <u>a/</u>	Limit Basis <u>b/</u>
Flow, gallons per day (gpd) <u>c/</u>	report only	N/A	report only	N/A
Five-Day Biochemical Oxygen Demand (BOD ₅), mg/L	30	45	N/A	TBEL
Five-Day Biochemical Oxygen Demand (BOD ₅) percent removal, % <u>d/</u>	≥85	N/A	N/A	TBEL
Total Suspended Solids (TSS), mg/L	30	45	N/A	TBEL

Effluent Characteristic	30-Day Average Effluent Limitations <u>a/</u>	7-Day Average Effluent Limitations <u>a/</u>	Daily Maximum Effluent Limitations <u>a/</u>	Limit Basis <u>b/</u>
Total Suspended Solids (TSS) percent removal, % <u>d/</u>	≥85	N/A	N/A	TBEL
<i>Escherichia coli</i> (<i>E. coli</i>), number/100 mL <u>e/</u>	126	N/A	252	WQBEL
Dissolved Oxygen (DO), mg/L	N/A	report only	report only <u>f/</u>	N/A
Total Ammonia Nitrogen (as N), mg/L	report only	N/A	report only	N/A
Total Kjeldahl Nitrogen (TKN), mg/L	report only	N/A	report only	N/A
Nitrate+Nitrite (as N), mg/L	report only	N/A	report only	N/A
Total Nitrogen, mg/L	report only	N/A	report only	N/A
Total Phosphorus, mg/L	report only	N/A	report only	N/A
Temperature, °C	report only	N/A	report only	N/A
BOD ₅ , influent, mg/L <u>g/</u>	use for % removal calculation	N/A	N/A	N/A
TSS, influent, mg/L <u>g/</u>	use for % removal calculation	N/A	N/A	N/A
pH, standard units	Must remain in the range of 6.5 to 8.5 <i>at all times</i>			WQBEL
Oil and Grease (O&G)	The concentration of oil and grease in any single sample shall not exceed 10 mg/L; nor shall the discharge contain a visible oil film or sheen; nor shall there be any discharge of floating debris, scum, or other floating materials.			TBEL/WQBEL

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

c/ The Facility will also be required to report the start date and duration (in days) of each discharge – see Table 4.

d/ 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 BOD₅ or TSS):

$$\text{Percent Removal} = (X_{30\text{-day average, influent}} - X_{30\text{-day average, effluent}}) / (X_{30\text{-day average, influent}}) * 100 \%$$

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

f/ Report minimum value.

g/ These are *influent* samples that are used to calculate the percent removal for Outfall 001 (see footnote b).

6.4 Antidegradation

CSKT WQS include antidegradation provisions (CSKT WQS, Section 1.4). All surface waters within the Flathead 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 CSKT. 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 stream 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. Additionally, the discharge is intermittent in nature, discharging for up to three weeks once or twice per year, and does not represent long-term loading to the receiving stream. 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 antidegradation requirements for both Tier 1 and Tier 2 protection. The CSKT will review the Permit during the CWA 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. With the exception of *E. coli* and fecal coliform, all effluent limitations, standards, and conditions in the Permit are either equal to or more stringent than those in the previous permit. The changes to the *E. coli* and fecal coliform WQBELs are discussed further below.

CWA section 402(o)(1) allows relaxation of WQBELs and effluent limitations based on state or Tribal standards if the relaxation is consistent with the provisions of CWA section 303(d)(4) or if one of the exceptions in CWA section 402(o)(2) is met. These two provisions constitute independent exceptions to the prohibition against relaxation of effluent limitations, and if either is met, relaxation is permissible. CWA Section 303(d)(4) has two parts that apply to both attainment and non-attainment waters. The receiving water in this case is an attainment water, and the relevant section simply states that relaxation of a limitation is allowed where the action is consistent with the state's WQS and antidegradation policy.

The effluent limits for *E. coli* have been changed, but simply represents the correction of a technical error in the previous permit – the “mean” value was erroneously placed in the “daily maximum” column, while the “not to exceed” value was erroneously placed in the “30-day average” column, contradicting the Tribes' WQS (see section 6.2.3). So in this case, the WQS is being met (i.e., limits based on the relevant WQS are being implemented at end of pipe), and the switch of these limits

will have no impact on instream concentrations or antidegradation requirements, because the 126 #/100 mL value was effectively driving the treatment and chronic loading, and will continue to do so. The EPA also notes that the Facility samples infrequently, making little meaningful difference between a daily maximum limit and a 30-day average limit. For these reasons, correction of these limits satisfies any anti-backsliding concerns and is therefore consistent with CWA Section 303(d)(4)(B).

The effluent limits for fecal coliform have been removed, based on a change to the CSKT WQS (see section 6.2.4). The EPA approved a revision to the CSKT WQS in 2024 to remove fecal coliform and rely solely on *E. coli*. This revision is consistent with the EPA's currently recommended recreational water quality criteria issued pursuant to CWA Section 304(a). In this case, the WQS is being met (i.e., there is no WQS for fecal coliform), and the removal of these limits will have no impact on antidegradation requirements. Additionally, the Facility is still treating for *E. coli* using UV disinfection (which is the same treatment process as for fecal coliform), so there should be no change to in-stream concentrations of any coliform bacteria. For these reasons, removal of this limit satisfies any anti-backsliding concerns and is therefore consistent with CWA Section 303(d)(4)(B).

7 MONITORING REQUIREMENTS

7.1 Monitoring Justifications

In this section, the EPA lays out the basis for assigning monitoring frequencies and types to the various pollutants in the Permit. The monitoring frequency should be sufficient to characterize the effluent quality and to detect events of noncompliance, considering the need for data and, as appropriate, the potential cost to the Permittee. All monitoring requirements are further discussed below and listed in either Table 4 (effluent monitoring), Table 5 (influent monitoring), or Table 6 (receiving water monitoring).

In general, the previous permit required weekly or monthly monitoring. The Facility only discharges on an intermittent basis – typically 1-2 times per year. When it does discharge, it largely empties one or both of the wetland cells. Lagoon cells can stratify and contain significantly different water quality across different depths. Since draining a lagoon can typically access water that has differing water chemistry, this permit reissuance will alter the monitoring approach to better capture this approach. The Permit will require multiple samples taken per discharge (usually at least three, but more the longer the discharge lasts) – at a minimum, once at the beginning of the discharge, once in the middle, and once near the end. This allows the Facility to report a representative sample of their discharge, as is required by 40 CFR § 122.41(j)(1).

Many of the reporting requirements and TBELs or WQBELS are predicated on a monthly or weekly reporting basis. The Facility discharges on an intermittent basis, with duration lasting anywhere from approximately 20 to 30 days. This period could overlap the end of one month and the beginning of another. However, for purposes of reporting, the EPA has determined that the “monthly” TBELs and WQBELS would apply – as determined in section 6 – to a single discharge event, and that the Facility should report its discharge as a “monthly” duration regardless of when it ends as long as it lasts 30 days or less. For example, if the Facility were to begin discharging April 15, and discharge through May 10, they would treat the entire discharge event as one event, and report all samples taken (i.e., calculated averages and/or maximums) as required on the April DMR. In the

unlikely and unprecedented event that the Facility should discharge longer than 30 days, the Facility should reach out to the EPA for further guidance on how to report.

7.1.1 Flow monitoring

The previous permit required the Facility to monitor the effluent flow on a daily frequency using an instantaneous/grab sample. For the renewal, the EPA will require a daily frequency (when discharging) using a grab sample (which is equivalent to an instantaneous measurement – see section 1 of the Permit for definitions). The Permit will require reporting of both 30-day average flows and daily maximum flows. The Permittee requested that the units of measurement be changed from million gallons per day (mgd) to gallons per day (gpd) and this request has been implemented in the Permit. The Facility discharges such low quantities that reporting in mgd requires some math and several decimal places, which increases the likelihood of transcription errors in the reporting. Lagoons that gravity discharge typically have relatively steady flow rates with long retention times, and do not fluctuate greatly over short periods of time. Thus, a grab flow measurement is appropriate.

7.1.2 Date Discharge Began and Duration of Discharge

Because the Facility discharges at a steady flow rate for an undetermined amount of time (i.e., until they determine that they have lowered it to an acceptable level in their wetland cells), the EPA will require them to report both the start date of their discharge, and the duration of discharge, for each discharge event. Using their average discharge flow rate, this will allow the EPA to also calculate the total volume discharged (in gallons) for each event. These numbers will be useful for the EPA to help determine reasonable potential calculations and get an idea of the magnitude of influence their discharge has on the receiving water depending on the time of year. These two values will be added to the DMR. The Facility is already collecting this data so this should not represent an additional sampling burden.

7.1.3 BOD₅ and TSS

The previous permit required the Facility to monitor the effluent for BOD₅ and TSS on a monthly frequency using a grab sample. Since the Facility discharges intermittently, the Permit will require the effluent to be sampled for BOD₅ and TSS at least three times per discharge event using a grab sample. Note that the Facility will also have to collect influent BOD₅ and TSS one time per discharge event, and calculate the BOD₅ and TSS percent removal as well. The Permit will require reporting of 30-day average concentrations, 7-day average concentrations, and 30-day average percent removals to align with effluent limitations. While effluent BOD₅ and TSS usually require composite samples, exceptions are made for waste stabilization ponds (lagoons) with a retention time greater than 24 hours. The Facility's retention time is approximately 200 days, and when it discharges it tends to discharge much of its volume. Thus, a multiple-sample frequency during discharge and grab sample method will be adequate to characterize the effluent, and is appropriate for the Facility.

Influent samples shall be taken at a location prior to entering the lagoons such as the bar screen or wet well of the lift station. Influent samples shall be taken as a grab sample. The influent sampling location is referred to as 001-l.

The BOD₅ and TSS percent removal calculation should compare all influent and effluent samples taken during that discharge event. This may result in an unequal number of influent and effluent samples (e.g., three effluent samples may be collected but only one influent sample – in this situation, the average of the three effluent samples would be used with the single influent sample to determine the overall percent removal using the formula provided).

7.1.4 pH

The previous permit required the Facility to monitor the effluent for pH on a weekly frequency using a grab sample. Since the Facility discharges intermittently, the Permit will require the effluent to be sampled for pH at least three times per discharge event using a grab sample. The grab sample type is retained since that is the preferred sampling method for pH due to short holding times. The Permit will require reporting of maximum and minimum values to align with effluent limitations. The Facility's retention time is approximately 200 days, and when it discharges it tends to discharge much of its volume. Thus, a multiple-sample frequency during discharge and grab sample method will be adequate to characterize the effluent, and is appropriate for the Facility.

The Permit will also require the Facility to collect a grab sample for pH in the receiving stream upstream of the Facility's discharge on a quarterly basis at monitoring point RW01. This monitoring point will be at or near the highway 212 crossing, directly south of the Facility and upstream of outfall 001. This will help establish a baseline of data to calculate the appropriate ammonia criteria (see section 6.2.7). If the receiving stream is too low to get a sample at the time of required sampling, NODI code F (Insufficient Flow for Sampling) can be reported in the DMR.

Note that pH 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 pH meter, to measure it directly in the field.

7.1.5 *E. coli*

The previous permit required the Facility to monitor the effluent for *E. coli* on a monthly frequency using a grab sample, but only between the months of May and September. Since the Facility discharges intermittently, the Permit will require the lagoon to be sampled for *E. coli* at least three times per discharge using a grab sample. However, this requirement will apply year-round – the CSKT WQS protect recreation uses year-round. The grab sample type is retained because *E. coli* samples have a short hold time and are not amenable to compositing. The Permit will require reporting of 30-day average concentrations, and daily maximum concentrations to align with effluent limitations. The Facility's retention time is approximately 200 days, and when it discharges it tends to discharge much of its volume. Thus, a multiple-sample frequency during discharge and grab sample method will be adequate to characterize the effluent, and is appropriate for the Facility.

7.1.6 Oil and Grease

The previous permit required the Facility to monitor the effluent for oil and grease on a monthly frequency using a visual inspection, followed by an immediate grab sample if any oil and grease were observed. This sampling type is being retained in the Permit. A visual inspection is part of

basic operation and maintenance of a Facility such as this (see sections 6.2 and 6.3 of the Permit), and a grab sample is required because oil and grease is not amenable to compositing unless composited in the lab. However, since the Facility discharges intermittently, the Permit will require a daily visual observation for oil and grease while discharging. If a visible sheen or floating oil is observed in the discharge, a grab sample shall be taken immediately. The Facility's retention time is approximately 200 days, and when it discharges it tends to discharge much of its volume. Thus, a multiple-sample frequency during discharge and grab sample method will be adequate to characterize the effluent, and is appropriate for the Facility.

7.1.7 Dissolved Oxygen (DO)

The previous permit required the Facility to monitor the effluent for dissolved oxygen on a weekly frequency using a grab sample. Since the Facility discharges intermittently, the Permit will require the effluent to be sampled for dissolved oxygen at least three times per discharge event using a grab sample. The grab sample type is retained since that is the preferred sampling method for DO due to short holding times. The Permit will require reporting of 7-day average concentrations and minimum concentrations to evaluate compliance with the CSKT WQS. The Facility's retention time is approximately 200 days, and when it discharges it tends to discharge much of its volume. Thus, a multiple-sample frequency during discharge and grab sample method will be adequate to characterize the effluent, and is appropriate for the Facility.

The Permit will also require the Facility to collect a grab sample for dissolved oxygen in the receiving stream upstream of the Facility's discharge on a quarterly basis at monitoring point RW01. This monitoring point will be at or near the highway 212 crossing, directly south of the Facility and upstream of outfall 001. This will help establish a baseline of data to determine reasonable potential for dissolved oxygen (see section 6.2.8). If the receiving stream is too low to get a sample at the time of required sampling, NODI code F (Insufficient Flow for Sampling) can be reported in the DMR.

Note that dissolved oxygen 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 to measure it directly in the field.

7.1.8 Ammonia

The previous permit required the Facility to monitor the effluent for ammonia on a monthly frequency using a grab sample. However, sampling was only required during the months of May through September (similar to the months that nutrients were required sampling). Since ammonia is toxic to aquatic life, and the ammonia WQS applies year-round, this footnote will be removed – i.e., ammonia monitoring (and limits if added at a future date) apply year-round. Since the Facility discharges intermittently, the Permit will require the effluent to be sampled for ammonia at least three times per discharge event using a grab sample. The Permit will require reporting of 30-day average concentrations and daily maximum concentrations to evaluate compliance with the CSKT WQS. The Facility's retention time is approximately 200 days, and when it discharges it tends to discharge much of its volume. Thus, a multiple-sample frequency during discharge and grab sample method will be adequate to characterize the effluent, and is appropriate for the Facility.

7.1.9 Temperature

The previous permit did not require temperature monitoring. To ensure that there is enough data to translate the CSKT ammonia WQS in the receiving stream (which requires temperature and pH but also must consider effluent dominant situations), the Permit will require temperature monitoring when discharging. Since the Facility discharges intermittently, the Permit will require the effluent to be sampled for temperature at least three times per discharge event using a grab sample. The grab sample type is retained since that is the preferred sampling method for temperature due to short holding times. The Permit will require reporting of 30-day average values and daily maximum values to evaluate compliance with the CSKT WQS. The Facility's retention time is approximately 200 days, and when it discharges it tends to discharge much of its volume. Thus, a multiple-sample frequency during discharge and grab sample method will be adequate to characterize the effluent, and is appropriate for the Facility.

The Permit will also require the Facility to collect a grab sample for temperature in the receiving stream upstream of the Facility's discharge on a quarterly basis at monitoring point RW01. This monitoring point will be at or near the highway 212 crossing, directly south of the Facility and upstream of outfall 001. This will help establish a baseline of data to calculate the appropriate ammonia criteria (see section 6.2.7). If the receiving stream is too low to get a sample at the time of required sampling, NODI code F (Insufficient Flow for Sampling) can be reported in the DMR.

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.

7.1.10 Nutrients

The previous permit required the Facility to monitor the effluent for nutrients (including total nitrogen and total phosphorus) on a monthly frequency using a grab sample. Since the Facility discharges intermittently, the Permit will require the effluent to be sampled for nutrients at least three times per discharge using a grab sample. The Permit will require reporting of an average value to evaluate compliance with the CSKT WQS. As in the last permit, this monitoring requirement will be limited to discharges occurring in the summer months of May through September. The Facility's retention time is approximately 200 days, and when it discharges it tends to discharge much of its volume. Thus, a multiple-sample frequency during discharge and grab sample method will be adequate to characterize the effluent, and is appropriate for the Facility.

The total nitrogen sample must be calculated by collecting both a Nitrate+Nitrite sample and a Total Kjeldahl Nitrogen (TKN) sample, and summing the two measurements. This data will be used to provide future evaluation of the need for WQBELs and to assure attainment of narrative criteria from the Tribe's WQS. As the CSKT further develop their nutrient implementation strategy, the monitoring time period may be adjusted.

7.2 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.

Table 4. Monitoring and Reporting Requirements for Outfall 001

Effluent Characteristic	Monitoring Frequency	Sample Type <u>a/</u>	Data Value Reported on DMR <u>b/</u>
Flow, gallons per day <u>c/</u>	Daily	Grab	Daily Max. 30-Day Avg.
Date Discharge Began (MM/DD/YYYY)	1x per discharge	Record (Manual)	Value
Duration of Discharge (# of days)	1x per discharge	Calculated	Value
BOD ₅ , mg/L	3x per discharge <u>d/</u>	Grab	7-Day Avg. 30-Day Avg. 30-Day Avg. % removal
TSS, mg/L	3x per discharge <u>d/</u>	Grab	7-Day Avg. 30-Day Avg. 30-Day Avg. % removal
<i>Escherichia coli</i> (<i>E. coli</i>), number/100 mL	3x per discharge <u>d/</u>	Grab	Daily Max. 30-Day Avg.
O&G, visual	Daily during discharge	Visual	Narrative
O&G, mg/L	Immediately if visible sheen or floating oil observed	Grab	Maximum
Dissolved Oxygen (DO), mg/L <u>e/</u>	3x per discharge <u>d/</u>	Grab	Minimum 7-Day Avg.
pH, standard units <u>e/</u>	3x per discharge <u>d/</u>	Grab	Minimum Maximum
Temperature, °C <u>e/</u>	3x per discharge <u>d/</u>	Grab	Daily Max. 30-Day Avg.
Total Ammonia Nitrogen (as N), mg/L	3x per discharge <u>d/</u>	Grab	Daily Max. 30-Day Avg.
Total Kjeldahl Nitrogen (TKN), mg/L <u>f/</u>	3x per discharge <u>d/</u>	Grab	Average Value
Nitrate+Nitrite (as N), mg/L <u>f/</u>	3x per discharge <u>d/</u>	Grab	Average Value
Total Nitrogen, mg/L <u>g/</u>	3x per discharge <u>d/</u>	Calculated	Average Value
Total Phosphorus, mg/L <u>f/</u>	3x per discharge <u>d/</u>	Grab	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/ 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 and the maximum flow rate observed, in gallons per day (gpd), shall be reported.
- d/ A minimum of three (3) samples or measurements shall be taken during any discharge of wastewater unless the discharge lasts two days or less (one sample is sufficient for discharges lasting two days or less). For discharges longer than two days, it is required that a sample be taken at the beginning, middle, and end of the discharge to ensure that the sampling is representative of the entire discharge volume. If the discharge lasts longer than three weeks (i.e. more than 21 days), another sample per week will be added to the total sampling regime. All of the samples collected during the discharge are to be used in determining the 7-day and 30-day averages (including geometric means). If only one sample is collected during the period, it shall be considered the average (or geometric mean) for that period.
- e/ This sample must be analyzed within 15 minutes of collection per 40 CFR Part 136.
- f/ Sampling is only required during discharges occurring in the months of May – September.
- g/ For the purposes of the Permit, the term “Total Nitrogen” is defined as the calculated sum of analytical results from “Total Kjeldahl Nitrogen (TKN)” plus “Nitrate+Nitrite.”

Table 5. Monitoring and Reporting Requirements for Outfall 001-I (Influent)

Effluent Characteristic	Monitoring Frequency	Sample Type <u>a/</u>	Data Value Reported on DMR <u>b/</u>
BOD ₅ , mg/L <u>c/</u>	1x per discharge	Grab	30-Day Avg. (also use for % removal calculation at Outfall 001)
TSS, mg/L <u>c/</u>	1x per discharge	Grab	30-Day Avg. (also 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 should be taken at a location representative of the influent flow entering the wastewater treatment facility, such as the bar screen or wet well at the lift station.

Table 6. Monitoring and Reporting Requirements for RW01 (Receiving Water)

Receiving Water Characteristic	Monitoring Frequency	Sample Type <u>a/</u>	Data Reported on DMR <u>b/</u>
Dissolved Oxygen (DO), mg/L	Quarterly	Grab <u>c/</u>	Average Value
pH, standard units	Quarterly	Grab <u>c/</u>	Average Value
Temperature, °C	Quarterly	Grab <u>c/</u>	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.

8 SPECIAL CONDITIONS

There are no special conditions in the Permit.

9 REPORTING REQUIREMENTS

Reporting requirements are based on requirements in 40 CFR §§ 122.44, 122.48, and Parts 3 and 127. A discharge monitoring report (DMR) frequency of quarterly was chosen, because the Permit is requiring quarterly receiving stream sampling. Additionally, the Facility typically discharges once or twice per year and quarterly reporting should fit in well with that discharge frequency.

10 COMPLIANCE RESPONSIBILITIES AND GENERAL REQUIREMENTS

10.1 Inspection Requirements

On a weekly basis, unless otherwise modified in writing by the EPA, the Permittee shall inspect its treatment facility. The Permittee shall document the inspection, as required by the Permit (see section 6.2 of 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). The EPA typically requires a weekly inspection for wastewater lagoons.

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 a 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) and (k), respectively.

The Facility is required to conduct an Industrial Waste Survey (IWS), as described in the Permit, within one year of the Permit effective date. An IWS is required to ensure the POTW can quickly identify and troubleshoot issues arising from pollutants entering the Facility from the collection system.

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 September 12, 2025 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 (Table 7). The designated area utilized was identified in the IPaC search and covers the entire Facility site acreage, plus the unnamed tributary and Dublin Gulch several miles downstream of the Facility, for a total of approximately 1,500 acres and several miles downstream. The action area does not include Mission Creek (which is approximately seven miles downstream) due to the low discharge rate and the intermittent nature of the discharge and receiving stream (see section 5).

Table 7. IPaC Federally listed Threatened and Endangered Species

Species	Scientific Name	Species Status	Designated Critical Habitat
Canada Lynx	<i>Lynx canadensis</i>	Threatened	This location is outside of any critical habitat for this species.
Grizzly Bear	<i>Ursus arctos horribilis</i>	Threatened	This location is outside of any critical habitat for this species.
North American Wolverine	<i>Gulo gulo luscus</i>	Threatened	No critical habitat has been designated for this species.
Monarch Butterfly	<i>Danaus plexippus</i>	Proposed Threatened	This location is outside of any critical habitat for this species.
Suckley’s Cuckoo Bumble Bee	<i>Bombus suckleyi</i>	Proposed Endangered	No critical habitat has been designated for this species.

11.1 Biological Evaluation

The action in question is the renewal of an NPDES discharge permit to the community of Charlo, MT. Based on the IPaC information generated, the action area is outside of all critical habitat for any of

the species listed in Table 7. The species listed are terrestrial species. The Facility's treated water discharges into an unnamed tributary to Dublin Gulch. If these species are present, they may use these waters for a short period of time during the year. However, the pollutants in the discharge are not expected to impact the 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 a stream channel through lower elevation pasture, rural homesteads, and agricultural fields, and is likely not primary habitat for this species. This conclusion is supported by the Montana Natural Heritage Program's Predicted Suitable Habitat Model², which shows that this portion of Lake County is categorized as "unsuitable" habitat for Canada lynx. Regardless of whether Canada lynx are found in this area, reissuance of the Permit will not authorize new ground disturbance or substantial changes in flows or pollutant loadings, and permit limits are protective of all water quality standards. Therefore, the EPA finds that this proposed permitting 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 a stream channel through lower elevation pasture, rural homesteads, and agricultural fields, and is likely not primary habitat for this species. This conclusion is supported by the Montana Natural Heritage Program's Predicted Suitable Habitat Model, which shows that this portion of Lake County is categorized as "unsuitable" habitat for grizzly bear. Regardless of whether grizzly bear are found in this area, reissuance of the Permit will not authorize new ground disturbance or substantial changes in flows or pollutant loadings, 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 a stream channel through lower elevation pasture, rural homesteads, and agricultural fields, and is likely not primary habitat for this species. This conclusion is supported by the Montana Natural Heritage Program's Predicted Suitable Habitat Model, which shows that this portion of Lake County is categorized as "unsuitable" habitat for the wolverine. Regardless of whether wolverine are found in this area, reissuance of the Permit will not authorize new ground disturbance or substantial changes in flows or pollutant loadings, 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.

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

² Montana Natural Heritage Program, 2023. Predicted suitable habitat models. Montana Natural Heritage Program, Helena, MT., <https://mtnhp.mt.gov/resources/Models/Species/>

host plants (primarily milkweed) that it needs for reproduction, and relies on floral resources for feeding. The Montana Heritage Program Predicted Suitable Habitat Model shows that this portion of Lake County (on a broad scale) is categorized as “low suitability.” Low suitability means that the landscape may contain suitable habitat but it is often less continuous, scattered, or patchy.

The ‘action area’ for the proposed action (renewal of an NPDES discharge permit) is comprised mainly of a stream channel through lower elevation pasture, rural homesteads, and agricultural fields. The bottom of the receiving stream is wet and moist year-round, making it likely unsuitable habitat for floral resources or nesting habitat. Although the Facility may discharge in the summer months, during those months the receiving stream is already flowing with irrigation water, and any impacts associated with the Facility’s short-term discharge during those months would be minimal. Additionally, the Facility’s discharge rate (approximately 14 gallons per minute or 0.03 cubic feet per second) is relatively low. Regardless of whether monarch butterflies are found in this area, reissuance of the Permit will not authorize new ground disturbance or substantial changes in flows or pollutant loadings, and permit limits are protective of all water quality standards. Based on all of these factors, 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 a wide range of flowers, and is present year-round. However, 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.

The ‘action area’ for the proposed action (renewal of an NPDES discharge permit) is comprised mainly of a stream channel through lower elevation pasture, rural homesteads, and agricultural fields. The bottom of the receiving stream is wet and moist year-round, making it likely unsuitable habitat for floral resources or nesting habitat. Additionally, the Facility’s discharge rate (approximately 14 gallons per minute or 0.03 cubic feet per second) is relatively low. Regardless of whether this species is found in this area, reissuance of the Permit will not authorize new ground disturbance or substantial changes in flows or pollutant loadings, and permit limits are protective of all water quality standards. Based on all of these factors, the EPA finds that this proposed permit action will have *no effect* on this species.

Based on a technical assistance discussion with the FWS on September 12, 2025, the IPaC information, the *Memorandum of Agreement Between EPA, FWS, and NMFS Regarding Enhanced Coordination Under the Clean Water Act and Endangered Species Act*, and information from the Montana Natural Heritage Program’s website, the EPA determined the permitting action will have *no effect* on the species listed above nor their critical habitat. The “no effect” determinations above do not require further consultation with the FWS. During public notice of the Permit, FWS will be notified as an interested party.

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 first step in this analysis is to consider whether the undertaking has the potential to affect 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.

13 401 CERTIFICATION CONDITIONS

The Confederated Salish and Kootenai Tribes are the 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 Erik Makus, U.S. EPA, (406) 457-5017 (August 2025)

ADDENDUM

AGENCY CONSULTATIONS

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

On [Month Day, Year], the EPA 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 Indian 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 the 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: