

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

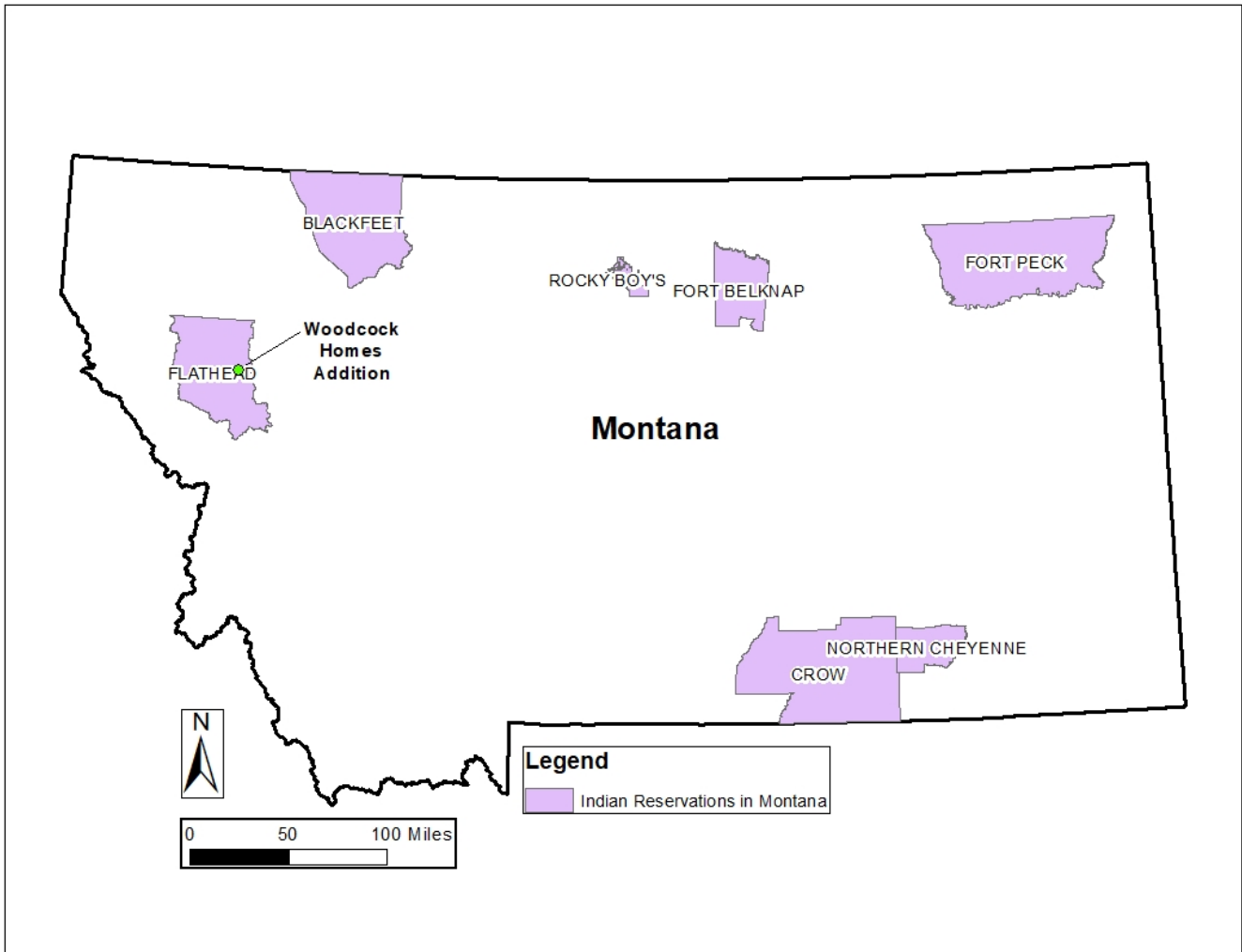
PERMITTEE:	Salish and Kootenai Housing Authority
FACILITY NAME AND ADDRESS:	Woodcock Home Addition Wastewater Treatment Facility Grizzly Drive Ronan, MT 59864
PERMIT NUMBER:	MT-0030554
RESPONSIBLE OFFICIAL/FACILITY CONTACT:	Raquel Davis Community Systems Program Manager Salish & Kootenai Housing Authority PO Box 38 Pablo, MT 59855 Phone: (406) 675-4491 ext. 1508
PERMIT TYPE:	Minor Publicly Owned Treatment Works (POTW), Indian Country, Renewal
TYPE OF TREATMENT:	Facultative Lagoon
FACILITY LOCATION:	This facility is located approximately 2.5 miles southeast of the City of Ronan, off of Timberlane Road at 47.5145° N, 114.0535° W, within the Flathead Indian Reservation, Montana
DISCHARGE LOCATION(S):	Outfall 001: 47.5148° N, 114.0537° W, discharges to a swale draining to Middle Crow Creek

## 1. INTRODUCTION

This statement of basis (SoB) is for the issuance of NPDES permit #MT-0030554 (Permit) to the Salish and Kootenai Housing Authority (SKHA), for the Woodcock Home Addition Wastewater Treatment Facility (Facility). The Permit establishes discharge limitations for any discharge of water from the wastewater lagoon via Outfall 001. The SoB explains the nature of the discharges, and the United States Environmental Protection Agency's (EPA's) decisions for limiting the pollutants in the wastewater, as well as the regulatory and technical basis for these decisions.

The Facility is located on the Flathead Indian Reservation in Montana (Figure 1), which is home to the Confederated Salish & Kootenai Tribes (CSKT). The EPA Region 8 is the permitting authority for facilities located in Indian country within Region 8, as defined in 18 U.S.C. § 1151, and supports implementation of federal environmental laws consistent with the federal trust responsibility, the government-to-government relationship, and the EPA's 1984 Indian Policy.

**Figure 1. Facility Location Map**



## 2. BACKGROUND INFORMATION

### 2.1. Facility Description

The Facility is a lagoon wastewater system that serves approximately 35 homes in the Woodcock Home Addition housing development (Figure 2). The Facility does not knowingly receive any wastewater from commercial or industrial activities. The system is gravity fed and does not contain any lift stations. The Facility consists of a two-cell aerated lagoon system that operates in series, followed by ultraviolet (UV) disinfection. Cell 1 (the southern lagoon) has an aerator/mixer that both aerates and circulates the wastewater within the cell and is typically used in the few months prior to discharge. Cell 2 has two aerators that operate continuously. Cell 1 is approximately 0.75 acres and Cell 2 is approximately 0.5 acres. According to SKHA personnel, both cells are approximately 15 feet deep.

The Facility discharges for approximately two weeks at a time, twice per year (typically April and November). During discharge events, UV disinfection takes place in a mobile UV trailer. According to the renewal application submitted by SKHA, the design flow (daily average over the course of a year) is 0.01 million gallons per day (mgd). During active discharge the Facility discharges continuously using a pump rated for 90 gallons per minute (equivalent to 0.13 mgd). The pump moves wastewater from Cell 2 to the mobile UV trailer, which then gravity discharges into an outlet structure on a swale, where the discharged wastewater flows approximately 250 meters northwest to Middle Crow Creek. The point at which the water discharges from the outlet structure to the swale is the location of Outfall 001.

Figure 2. Facility Detail Map



## 2.2. Treatment Process

Wastewater flows through the collection system to the inlet manhole, where it enters Cell 1, and then flows to Cell 2. Both cells use aerobic digestion to treat the wastewater. During discharge, the wastewater is pumped from Cell 2 to a mobile UV trailer, where it undergoes disinfection, and is then discharged to the outlet structure. The current treatment process does not add any chemicals to the wastewater.

Sludge removal occurs infrequently (the last sludge removal was approximately 10 years ago). SKHA personnel visually monitor sludge levels twice a year during discharge events.

## 2.3. Future Changes to the Facility

The Facility is planning to add a submerged attached growth reactor (SAGR) post-lagoon cold-water nitrification treatment system to the treatment process. Design of the SAGR system is scheduled to be completed in 2020 and construction of the new system is scheduled to be completed in late 2020 or early 2021. The SAGR system will provide supplemental treatment to the current lagoon system to address the Facility's inability to meet ammonia limits. The 2013 Permit gave the Facility a five year compliance schedule to meet the ammonia limits. The Facility did not meet that timeline, but has made progress towards the goal by developing plans to upgrade treatment and so this renewal Permit extends their compliance schedule for ammonia to August of 2021 to allow for construction of the facility upgrades (see section 3.1 of the SoB).

## 3. WATER QUALITY CONSIDERATIONS

### 3.1. asdf

### 3.2. Description of Receiving Water

The receiving water is a swale draining to Middle Crow Creek approximately 250 meters to the northwest. Middle Crow Creek flows into the Flathead River downstream of Flathead Lake and is in hydrologic unit code (HUC) 17010212 (Lower Flathead).

There are no continuous flow gaging stations on Middle Crow Creek so the flow regime is unknown. However, according to SKHA personnel, Middle Crow Creek in the vicinity of the Facility is an intermittent stream. The City of Ronan Water Treatment Plant withdraws water from Middle Crow Creek upstream of the Facility, so the stream experiences significant drawdowns throughout the year. The CSKT measured flows in Middle Crow Creek downstream of the Facility and found zero flow both times (July and August of 2018). Based on this information, the 7Q10 and 1Q10 for Middle Crow Creek at the Facility are assumed to be zero, and there is no available dilution.

#### 4. PERMIT HISTORY

According to EPA records maintained for this Facility, this renewal Permit is the 4<sup>th</sup> permit issuance since the original permit issued in 2001. The previous permit for the Facility was effective on January 1, 2013.

##### 4.1. Discharge Monitoring Report (DMR) Data

Since the Facility has a controlled discharge and is not continuously discharging, it only reports when discharging, which has typically been twice per year (once in the spring and once in the fall). As summarized in Table 1, the Facility did not submit DMR data in the 2<sup>nd</sup> half of 2015, the first half of 2016, and the 2<sup>nd</sup> half of 2017. According to SKHA personnel, there have been some years where they don't need to discharge twice per year, so some of the missing DMR submittals may have been periods of no discharge.

The Facility did not always report both a 30-day average and a 7-day average (as required in their Permit). However, when they did report both, they reported the same value. According to SKHA personnel, since they only currently take one measurement during a discharge, they only have one value to report and there was some confusion as to which category it should be reported in. Based on this, the table below combines all reported data into one dataset, so the values in Table 1 represent both the 7-day average and the 30-day average that was reported in the DMRs. The DMR data indicates that exceedances (highlighted in red and bolded in Table 1) occurred with BOD<sub>5</sub> (twice), *Escherichia coli* (*E. coli*) (twice), and TSS (once). All exceedances were violations of both 7-day averages and 30-day averages.

**Table 1. Summary of the Facility's DMR Data (2013-2019) from EPA Integrated Compliance Information System (ICIS) database (data pulled September 2019)**

Time	Flow (MGD)	pH	BOD <sub>5</sub> (mg/L)	<i>E. coli</i> (Number /100 mL)	Ammonia nitrogen (mg N/L) <u>a/</u>	oil & grease (visual)	TSS (mg/L)	floating solids, waste or visible foam (visual)
2013 1st half	0.13	7.9	19	42	279 <u>b/</u>	No	8	No
2013 2nd half	0.13	7.7	<b>55</b>	<b>345</b>	20.9	No	5	No
2014 1st half	0.13	7.6	20	53	28.8	No	8	No
2014 2nd half	0.13	7.2	11	70	1.12	No	4	No
2015 1st half	0.13	7.5	17	11	31.4	No	15	No
2015 2nd half	NS	NS	NS	NS	NS	NS	NS	NS
2016 1st half	NS	NS	NS	NS	NS	NS	NS	NS
2016 2nd half	0.13	7.2	12	17.3	3.31	No	2	No
2017 1st half	0.13	6.9	13	1	0.84	No	4	No
2017 2nd half	NS	NS	NS	NS	NS	NS	NS	NS
2018 1st half	0.13	7.2	<b>48</b>	66	25.2	No	<b>58</b>	No
2018 2nd half	0.13	6.9	17	66	30.6	No	10	No
2019 1st half	0.13	7.1	24	<b>770</b>	30.3	No	5	No

a/ The ammonia levels meet the compliance schedule limits but not the final effluent limits of the previous permit.

b/ This value appears to be an outlier or missing a decimal place but is shown as reported in NetDMR.

NS: No DMR data was submitted.

#### 4.2. Inspection History

The Facility was inspected in July of 2019 by EPA and CSKT personnel. Findings included some incorrectly reported data, high *E. coli* levels in the spring of 2019, and duckweed coating the ponds.

### 5. MAJOR CHANGES FROM PREVIOUS PERMIT

This SoB is for a permit renewal. Major changes to this Permit renewal include:

- Reporting requirements for DMRs have been changed from quarterly to semiannually. The Facility only discharges twice per year.
- The compliance schedule for ammonia has been extended for approximately 18 months to August 31, 2021.
- The methodology for applying *E. coli* effluent limits has been changed to better protect CSKT water quality standards.
- Permit effluent limits and monitoring requirements for fecal coliform have been added to protect CSKT water quality standards.
- The pH effluent limits have been narrowed from 6.5 – 9.0 to 6.5 - 8.5 to protect CSKT water quality standards.
- Monitoring of begin and end dates and times for discharge have been added.
- Monitoring of temperature has been added to the Permit (no effluent limits).
- Monitoring of nitrate has been added to the Permit (no effluent limits) to determine if reasonable potential exists for nitrate water quality standards to be exceeded in the receiving stream.
- Monitoring of total nitrogen (TN) and total phosphorus (TP) have been added to the Permit (no effluent limits).
- The frequency of sampling during a discharge event has been increased from one (1) sample to at least three (3) samples.

### 6. PROPOSED PERMIT LIMITATIONS

#### 6.1. Technology Based Effluent Limitations

The EPA has developed secondary treatment standards based on an evaluation of performance data for Publicly Owned Treatment Works (POTWs) practicing a combination of physical and biological treatment to remove biodegradable organics and suspended solids. These “technology-based” standards apply to all POTWs and represent the minimum level of effluent quality attainable by secondary treatment in terms of BOD<sub>5</sub>, TSS, and pH (Table 2). This regulation also includes an alternate set of standards that can apply to certain facilities employing waste stabilization ponds (i.e. lagoons), and can be found in 40 C.F.R. Part 133. These standards will be referenced in establishing effluent limits. The CSKT have not developed additional technology based effluent limitations that apply to discharges from the Facility.

**Table 2. Secondary treatment standards**

<b>Parameter</b>	<b>30-day average (mg/L)</b>	<b>7-day average (mg/L)</b>	<b>30-day average percent removal (%)</b>
BOD <sub>5</sub>	30	45	85%
TSS	30	45	85%
pH	Maintained within the limits of 6.0 to 9.0		

The percent removal requirements for BOD<sub>5</sub> and TSS required by 40 C.F.R. Part 133.102(a)(3) are not included in this Permit. Compliance with percent removal requirements is based on influent and effluent data measured at approximately the same time. It has been the experience of the EPA Region 8 that there are practical problems that prevent the determination of the actual percent removals of BOD<sub>5</sub> and TSS in small municipal wastewater lagoon systems such as this one. The detention times in lagoon systems usually range from several weeks to several months (for this particular lagoon the detention time is approximately 180 days). The lag time between when the influent enters the lagoon and when the wastewater leaves the lagoon system makes it difficult to make a valid comparison between influent and effluent concentrations. Based on professional judgment, percent removal requirements will not be required in this Permit.

**6.2. Water Quality Based Effluent Limitations**

The CSKT have been approved by the EPA for treatment as a state (TAS) to implement and manage a water quality standards (WQS) regulatory program. The CSKT adopted - and the EPA approved - tribal water quality standards.<sup>1</sup>

The Facility discharges to Middle Crow Creek. According to the Tribal WQS, the Flathead River and its tributaries (including Middle Crow Creek downstream of the City of Ronan water intake) are classified as use class B-1. Waters classified 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 WQS include a mixing zone implementation procedure which prohibits mixing zones or dilution allowances where the receiving water is intermittent and dilution flows are not available during critical low flow conditions. Because Middle Crow Creek is intermittent, the discharge limits will be based on achieving applicable water quality standards at the point of discharge (end of pipe).

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<sup>1</sup> Confederated Salish and Kootenai Tribes of the Flathead Reservation. *Surface Water Quality Standards and Antidegradation Policy*, CSKT Natural Resources Department, Environmental Protection Division, Water Quality Program, published and submitted to EPA October 2018, approved by EPA April 2019.

CSKT water quality standards are designed to protect both aquatic life and human health (based on consumption of organisms and water). When both apply the EPA considers the more stringent of the two for final effluent limits. CSKT water quality standards included in the Permit will be identified in section 6.3 and 6.4.

#### 6.2.1. Total Maximum Daily Loads (TMDLs)

Although the CSKT have adopted water quality standards that have been approved by EPA, they have not listed water bodies as impaired and developed a 303(d) list to require TMDLs. When EPA approved the State of Montana's 1996 list of impaired streams and lakes which included water bodies within tribal reservation boundaries, the EPA specifically stated that the approval did not extend to waters in Indian country. Thus, there are no TMDLs to consider for this Permit at this time. This Permit contains a re-opener provision that would allow the Permit to be reopened to include any applicable Waste Load Allocation developed and approved by the CSKT and/or the EPA.

### 6.3. Justifications and Reasonable Potential Determinations for Final Effluent Limitations

**Ammonia:** Ammonia effluent limits are based on CSKT water quality standards for streams with salmonids and fish early life stages present. The CSKT ammonia standard calculation requires information on pH and temperature in the receiving water. The 2013 Permit used an analysis on the receiving water performed in 2005 that had limited access to receiving water pH and temperature (the analysis used 21 datapoints on North Crow Creek – none from the actual receiving stream). Since then more data has become available on Middle Crow Creek and other nearby streams. For these reasons, the ammonia criteria calculation was updated in this Permit.

Because there are so few water quality samples available for Middle Crow Creek, data from North Crow Creek, Middle Crow Creek, and South Crow Creek (upstream of the reservoir) were combined in this analysis. All three streams share similar hydrologic characteristics, beginning in the Tribal Wilderness area in the Mission Mountains and flowing into the Flathead valley just a few miles from each other. This data pull resulted in 171 pH measurements and 382 temperature measurements for analysis. To determine the appropriate criteria, the 75<sup>th</sup> percentile of the data was used for chronic calculations and the 95<sup>th</sup> percentile was used for acute calculations (Table 3). The chronic ammonia criteria are slightly higher than the final effluent limits in the previous permit (2.43 mg/L vs. 2.10 mg/L) but are based on a significantly more robust dataset. As mentioned above, the previous permit used a dataset from North Crow Creek only, whereas this analysis was performed with data from North Crow Creek, Middle Crow Creek (the receiving stream) and South Crow Creek. Anti-backsliding requirements are discussed in Section 6.7. The stream pH and temperature dataset used in the analysis is part of the administrative record.



**Table 3. Calculated Ammonia Standards from the CSKT WQS**

Condition	Applicable Period	Ambient Condition		Water Quality Standard (mg N/L)
		pH	Temperature (°C)	
Acute	Annual	8.3 <u>a/</u>	N/A	3.15
Chronic	Winter <u>b/</u>	8.0 <u>c/</u>	3.0 <u>c/</u>	2.43
Chronic	Summer <u>b/</u>	8.0 <u>c/</u>	9.4 <u>c/</u>	2.43

N/A- Not Applicable

a/ Based on the 95<sup>th</sup> percentile of the annual data.

b/ Winter is November 1 through March 31 and summer is April 1 through October 31. However, since the water quality standards are the same for both seasons in this demonstration, there will only be one year-round chronic value in the Permit.

c/ Based on the 75<sup>th</sup> percentile of the seasonal data.

A review of the discharge data from the Facility indicates that their discharges have reasonable potential (RP) to cause or contribute to an excursion above CSKT water quality standards listed in Table 3. Therefore, end of pipe ammonia limits will be included in this Permit. All reasonable potential calculations were performed in an excel spreadsheet and are part of the administrative record.

In the previous permit, the chronic ammonia limits were broken up into summer and winter limits. In the new analysis, the pH values were the same in both seasons, and the temperatures did not exceed 14 °C (which is the threshold for temperature effects in the CSKT WQS), so there was no difference in the calculation of the two values (Table 3). Therefore, in this Permit there will be one year-round limit for chronic ammonia.

**BOD<sub>5</sub>:** The BOD<sub>5</sub> effluent limits for the Facility are based on recognized technology based effluent limits for POTWs (Table 2). The Facility’s DMR data for BOD<sub>5</sub> indicates that the average effluent BOD<sub>5</sub> level of 23.6 mg/L is below the 7-day average limit of 45 mg/L and 30-day average limit of 30 mg/L.

***E. coli*:** The CSKT water quality standards for B-1 streams apply year-round, and state that the geometric mean number of *E. coli* may not exceed 126 colony forming units (cfu) per 100 milliliters, and 10% of the total samples may not exceed 252 cfu per 100 milliliters during any 30-day period. A review of the discharge data from the Facility indicates that their discharges have the reasonable potential (RP) to cause or contribute to an excursion above CSKT water quality standards for *E. coli*. Therefore, a 30-day average effluent limit of 126 #/100 mL and a daily max of 252 #/100 mL are included in the Permit. An analysis of the Facility’s DMR data for *E. coli* indicates that the average effluent value of 144 #/100 mL exceeds the 30-day compliance limit of 126 #/100 mL.

The previous permit included the 252 #/100 mL requirement as a 7-day average. Since the standard states that 10% of samples may not exceed the 252 cfu/100 mL value, the relative frequency of this exceedance falls somewhere in between a 7-day average and daily max. To fully protect the standard, the value must be implemented as the more conservative of the two (a daily max). This change aligns with effluent limits for other permitted facilities on the Flathead Reservation.

**Fecal coliform:** The CSKT water quality standards for B-1 streams apply year-round, and state that the geometric mean number of organisms in the fecal coliform group must not exceed 200 per 100 milliliters, and 10 percent of the total samples during any 30-day period are not to exceed 400 fecal coliforms per 100 milliliters. The Facility was not required to monitor for fecal coliform in the previous permit and so there are no data to do a quantitative analysis of reasonable potential; however, in the absence of data, it is assumed that since the Facility has RP for *E. coli*, it will also have RP for fecal coliform. Therefore, a 30-day average effluent limit of 200 #/100 mL and a daily max of 400 #/100 mL are included in the Permit. The “10%” rule from above is implemented as a daily max rather than a 7-day average for the same reason as the *E. coli* standard.

**Oil and Grease:** This requirement will remain the same in the renewal Permit. In the previous reporting period, observations did not detect a visual sheen in the discharge, and the Facility was not required to collect and analyze samples for oil and grease.

**pH:** The CSKT water quality standards of 6.5 to 8.5 for B-1 streams will be applied to this Permit limit (the previous permit used EPA’s National Recommended Freshwater Aquatic Life Criteria of 6.5 to 9.0). An analysis of the Facility’s DMR data for pH show the minimum pH value of 6.9 and maximum pH value of 7.9 are within the updated limits, but that there is reasonable potential for the Facility to cause an exceedance of the water quality standards.

**TSS:** The TSS effluent limits for the Facility are based on recognized technology based effluent limits for POTWs (Table 2). The Facility’s DMR data for TSS indicates that the average effluent TSS level of 12.1 mg/L is below the 7-day average limit of 45 mg/L and 30-day average limit of 30 mg/L.

#### 6.4. Final Effluent Limitations

Applicable technology based and water quality based effluent limits were compared and the most stringent of the two was selected for the following interim limits and final effluent limits (Tables 4 and 5).

**Table 4. Interim Effluent Limitations at Outfall 001 (Effective immediately and through August 31, 2021)**

Characteristic	30-Day Average <u>a/</u>	7-Day Average <u>a/</u>	Daily Maximum <u>a/</u>	Limit Basis
Biochemical Oxygen Demand (BOD <sub>5</sub> ), mg/L	30	45	-	TBEL
Total Suspended Solids (TSS), mg/L	30	45	-	TBEL
<i>Escherichia coli</i> ( <i>E. coli</i> ), Number/100 mL <u>b/</u>	126	-	252	CSKT WQS
Fecal coliform, Number/100 mL <u>b/</u>	200	-	400	CSKT WQS
There shall be no discharge of floating solids or visible foam in other than trace amounts, nor shall there be a discharge which causes a visible sheen in the receiving waters.	-			Narrative WQBEL
Oil and Grease (O&G), mg/L	-	-	10	EPA R8 Protocol
The pH of the discharge shall not be less than 6.5 or greater than 8.5 at any time.				CSKT WQS (AL)

TBEL: Technology Based Effluent Limits; CSKT WQS: CSKT Water Quality Standards, WQBEL: Water Quality Based Effluent Limit, HH: Human-health based water quality standard, AL: aquatic-life based water quality standard

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

b/ The geometric mean shall be reported for *E. coli* and fecal coliform. See Definitions (section 1 of the Permit) for more information.

**Table 5. Final Effluent Limitations at Outfall 001 (Effective as of September 1, 2021)**

Characteristic	30-Day Average <u>a/</u>	7-Day Average <u>a/</u>	Daily Maximum <u>a/</u>	Limit Basis
Biochemical Oxygen Demand (BOD <sub>5</sub> ), mg/L	30	45	-	TBEL
Total Suspended Solids (TSS), mg/L	30	45	-	TBEL
<i>Escherichia coli</i> ( <i>E. coli</i> ), Number/100 mL <u>b/</u>	126	-	252	CSKT WQS
Fecal coliform, Number/100 mL <u>b/</u>	200	-	400	CSKT WQS
There shall be no discharge of floating solids or visible foam in other than trace amounts, nor shall there be a discharge which causes a visible sheen in the receiving waters.				Narrative WQBEL
Oil and Grease (O&G), mg/L	-	-	10	EPA R8 Protocol
Total Ammonia Nitrogen (as N), mg/L	2.43	-	3.15	CSKT WQS (AL)
The pH of the discharge shall not be less than 6.5 or greater than 8.5 at any time.				CSKT WQS (AL)

TBEL: Technology Based Effluent Limits; CSKT WQS: CSKT Water Quality Standards, WQBEL: Water Quality Based Effluent Limit, HH: Human-health based water quality standard, AL: aquatic-life based water quality standard

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

b/ The geometric mean shall be reported for *E. coli* and fecal coliform. See Definitions (section 1 of the Permit) for more information.

### 6.5. Compliance Schedule

The Permittee did not meet the compliance schedule from the previous permit. However, they have made progress towards this goal by providing a status report, funding an engineering report for a Submerged Attached Growth Reactor (SAGR) system, and acquiring funding for construction of the project. The Facility has noted that they are on schedule to begin construction in 2020. Considering that the Permittee is not able to meet the ammonia criteria using the current treatment system, the interim compliance schedule from the previous permit has been extended for approximately 18 months from the effective date of this Permit to August 31, 2021. As of September 1, 2021, the Permittee will be expected to meet the final ammonia effluent limits in Table 5. Interim steps in meeting the limit will include providing the final design plan, progress reports, and a final report upon completion (Table 6).

**Table 6 – Compliance Schedule**

Date	Deliverable
June 30, 2020	Provide the final design plan.
August 31, 2020	Provide a progress report on installation of the SAGR system.
August 31, 2021	Provide final report on completion of the project and meeting the ammonia limit, including sampling data demonstrating compliance with the ammonia limits.

6.6. Antidegradation

On the Flathead Reservation, all reservation surface waters are provided one of three different levels of antidegradation protection (Tier 1 through Tier 3, with Tier 3 being the most protective). Middle Crow Creek at the location of the Facility is not specifically designated as Tier 1, 2, or 3 at this time (although Tribal WQS “presume that most Tribal waters qualify for Tier 2 protection”). Tier 2 waters are high quality waters whose quality exceed levels necessary to support propagation of fish and wildlife and recreation in and on the water. Tier 2 waters shall have their quality maintained and protected unless degradation is allowed through an administrative process involving the CSKT, the EPA, and the public. The CSKT determine likelihood of significant degradation on a parameter-by-parameter basis

All applicable tribal water quality standards (required to be met at the end of pipe) were used to set the final effluent limits in this Permit. Furthermore, no changes to ambient concentrations or loading are proposed in this Permit. For these reasons, the proposed activity will not result in significant degradation, and antidegradation review is terminated per the CSKT Antidegradation Policy (see footnote page 7). Existing and designated uses - as well as the water quality - of the receiving water will continue to be protected under the conditions of the proposed permit.

6.7. Anti-Backsliding

Federal regulations 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 C.F.R. Part 122.62) [40 C.F.R. Part 122.44(1)(1)]. Most of the effluent limits in the previous Permit are being carried over to this Permit to comply with the anti-backsliding regulatory requirements. All changes from the previous permit (see Section 5) are either equal to or more stringent than previous limits, with the exception of the new chronic ammonia criteria.

The chronic ammonia limits are slightly higher than the final effluent limits in the previous permit (2.43 mg/L vs. 2.10 mg/L), but are based on a significantly more robust dataset. The previous permit

used an analysis on the receiving water performed in 2005 that had limited access to receiving water pH and temperature (the analysis used 21 datapoints on North Crow Creek – none from the actual receiving stream). Since then more data has become available on Middle Crow Creek and other nearby streams. The availability of more recent data, and a larger dataset in general, qualifies as information not available at the time of permit issuance which would have justified the application of a less stringent effluent limitation under 40 C.F.R. Part 122.44(l)(i). This more accurate chronic ammonia effluent limit is protective of aquatic life.

## 7. MONITORING REQUIREMENTS

### 7.1. Self-Monitoring Requirements - Outfall 001

Monitoring must be conducted according to test procedures approved under 40 C.F.R. Part 136 unless another method is required under 40 C.F.R. subchapters N or O.

Monitoring requirements have been increased from the previous permit to include the begin and end date and time of discharge, and monitoring for fecal coliform, total nitrogen, nitrate plus nitrite, total phosphorus, and temperature (Table 7). The beginning and ending dates of discharge are useful for calculation of total discharge/total load. Since Middle Crow Creek may be effluent dominated, tracking of temperature has been added so that effluent pH and temperature will be known. This will give greater insight into whether the ammonia criteria for Middle Crow Creek is being adequately protected. Monitoring requirements for nutrients allow tracking of pollutants of national concern (and this requirement is in line with Montana's Lagoon General Permit [MTG589xxx]). Additionally, monitoring for nitrates is required to determine if this Facility has reasonable potential to exceed the CSKT human health standard for nitrate of 10 mg/L. This standard is based on consumption of water and organisms, which are both protected uses of Middle Crow Creek (i.e. drinking water and fishing). The Facility will already be collecting nitrate + nitrite data as part of their monitoring for total nitrogen, and this dataset will be used to determine if they have reasonable potential to exceed the standard and require a permit limit at a future date. Note that effluent limits for these parameters are not included in this Permit.

Because lagoons can have large changes in water quality across depth, the renewal Permit will require at least three samples per discharge event, taken near the beginning, middle, and end of the discharge. These will represent water from upper, middle, and lower levels of the lagoon. These samples will be summarized, and the average value will be reported as the 30-day average, and the highest single value will be reported as the daily max. This requirement is a good practice for representative sampling and is in line with Montana's Lagoon General Permit (MTG589xxx).

**Table 7. Monitoring Requirements at Outfall 001**

Effluent Characteristic	Frequency	Sample Type <u>a/</u>
Flow, mgd <u>b/</u>	<u>c/</u>	Instantaneous
Discharge Begin Date and Time	<u>d/</u>	Report
Discharge End Date and Time	<u>d/</u>	Report
Biochemical Oxygen Demand (BOD <sub>5</sub> ), mg/L	<u>c/</u>	Grab
Total Suspended Solids, mg/L	<u>c/</u>	Grab
<i>E. coli</i> , Number/100 mL <u>e/</u>	<u>c/</u>	Grab
Fecal Coliform, Number/100 mL <u>e/</u>	<u>c/</u>	Grab
pH, standard units	<u>c/</u>	Instantaneous
Oil and grease, Visual <u>f/</u>	<u>c/</u>	Visual
Oil and grease, mg/L <u>f/</u>	<u>c/</u>	Grab
Temperature, °C	<u>c/</u>	Instantaneous
Nitrate + Nitrite (as N), mg/L	<u>c/</u>	Grab
Total Kjeldahl Nitrogen (as N), mg/L	<u>c/</u>	Grab
Total Ammonia Nitrogen (as N), mg/L	<u>c/</u>	Grab
Total Nitrogen (TN), mg/L <u>g/</u>	<u>c/</u>	Calculated
Total Phosphorus (TP), mg/L	<u>c/</u>	Grab

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

b/ 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 during the reporting period and the daily maximum flow (maximum volume discharged during a 24-hour period) shall be reported (in million gallons per day).

- c/ A minimum of three (3) samples or measurements shall be taken during any discharge of wastewater unless the discharge lasts only 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 pond discharge at different levels. If the discharge lasts longer than two weeks, another sample per week will be added to the total sampling regime. All of the samples collected during the 7-day or 30-day period are to be used in determining averages. If only one (1) sample is collected during the period, it shall be considered the same as the average for that period. The Permittee always has the option of collecting additional samples if appropriate.
- d/ The Permittee must record and report the date and time that discharge begins and the date and time that discharge ends.
- e/ The geometric mean shall be reported for *E. coli* and fecal coliform. See Definitions (section 1 of the Permit) for more information.
- f/ If a visible sheen or floating oil is detected or observed in the discharge, a grab sample shall be taken immediately, analyzed and recorded in accordance with the requirements of 40 C.F.R. Part 136.
- g/ For the purposes of this Permit, the term “Total Nitrogen (TN)” is defined as the calculated sum of analytical results from “Total Kjeldahl Nitrogen (TKN)” plus “Nitrate-Nitrite”.

7.2. Whole Effluent Toxicity (WET) Monitoring

Data from the Facility does not indicate the reasonable potential to require WET monitoring or limitations. The Permit contains a re-opener provision if the need for WET monitoring or limitations is determined at a future date.

**8. REPORTING REQUIREMENTS**

With the effective date of this Permit, the Permittee must electronically report DMRs semiannually using NetDMR. Electronic submissions by Permittees must be submitted semiannually to the EPA Region 8 no later than the 28th of the month following the completed reporting period (Table 8). The Permittee must sign and certify all electronic submissions of this Permit. NetDMR is accessed from the internet at <https://netdmr.zendesk.com/home>.

Table 8 – Due Dates for DMR Submittals

<b>Compliance Monitoring Period</b>	<b>Due Date</b>
January through June	July 28
July through December	January 28



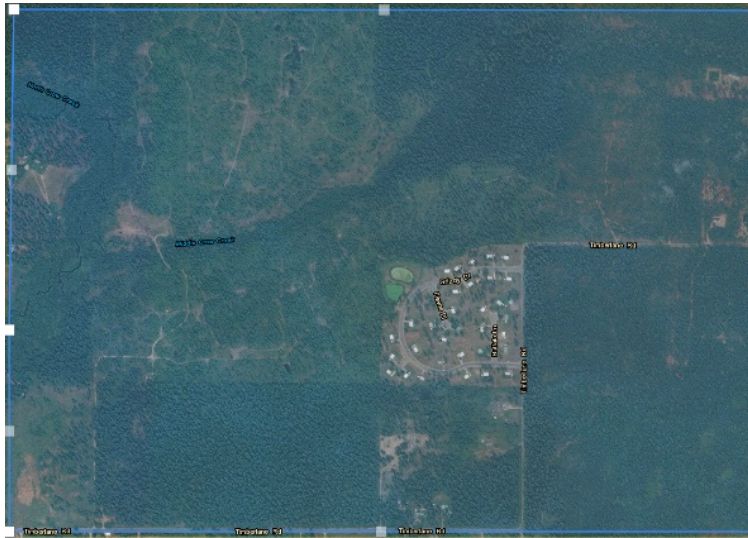
In addition, the Permittee must submit a copy of the DMR to the CSKT. See Section 5 of the Permit for more information on this subject.

## 9. ENDANGERED SPECIES CONSIDERATIONS

The Endangered Species Act (ESA) 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 C.F.R. Part 402. When a Federal agency’s action “may affect” a protected species, that agency is required to consult with the FWS, depending upon the endangered species, threatened species, or designated critical habitat that may be affected by the action (50 C.F.R. Part 402.14(a)).

The U. S. Fish and Wildlife Information for Planning and Conservation (IPaC) website program was used to determine federally-Listed Endangered, Threatened, Proposed and Candidate Species for the geographic area near the Woodcock Home Addition in Lake County, MT (Figure 3 and Table 9).

**Figure 3. IPaC Search Area**



**Table 9. Identified Species of Concern**

Species	Scientific Name	Status	EPA's Finding
Canada Lynx	<i>Lynx canadensis</i>	Threatened	NE
Grizzly Bear	<i>Ursus arctos horribilis</i>	Threatened	NE
North American Wolverine	<i>Gulo gulo luscus</i>	Proposed Threatened	WNJCE
Yellow-billed Cuckoo	<i>Coccyzus americanus</i>	Threatened	NLAA

NE = No Effect, NLAA = Not Likely to Adversely Affect, WNJCE = Will Not Jeopardize the Continued Existence of

Additionally, IPaC determined there are no critical habitats at this location.

9.1. Conclusion

EPA finds the issuance of this Permit will have *no effect* on Canada lynx or grizzly bear. The finding is based upon the following: (1) there have been no new disturbances to habitat since the last permit was issued; and (2) the listing status of these species has not changed since the last permit was issued.

The wolverine's listing status has changed since the last permit renewal. It was previously listed as a candidate species but is now proposed threatened. North American wolverines inhabit cold, high elevation alpine and boreal forests, and are unlikely to be found in the area of the Facility. Also, there have been no new disturbances to habitat since the last permit was issued. Therefore, EPA finds that this proposed permit action *will not jeopardize the continued existence of* this species.

The yellow-billed cuckoo was not listed in the previous permit renewal, but is now threatened. Yellow-billed cuckoos inhabit wooded areas with dense cover and water nearby, including woodlands with low, scrubby vegetation, overgrown orchards, abandoned farmland, and dense thickets along streams and marshes. It is possible that this species is found in the vicinity of the Facility. However, there have been no new disturbances to habitat since the last permit was issued. Therefore, EPA finds that this proposed permit action is *not likely to adversely affect* this species.

There is no critical habitat at this location according to IPaC.

Prior to public notice, a copy of the draft Permit and this Statement of Basis were sent to the FWS. On December 11, 2019, the FWS concurred with the EPA's conclusion that re-issuance of this NPDES Permit (MT-0030554) will have *no effect* on, is *not likely to adversely affect*, or *will not jeopardize the existence of* any of the species listed as threatened or proposed threatened in Table 9, nor their critical habitat under the ESA.

## **10. NATIONAL HISTORIC PRESERVATION ACT REQUIREMENTS**

Section 106 of the National Historic Preservation Act (NHPA), 16 U.S.C. § 470(f) requires that federal agencies consider the effects of federal undertakings on historic properties. The U.S. National Park Service (U.S. NPS) National Register of Historic Places for Lake County, MT was searched to determine and evaluate resources of concern near the Facility. The search did not return any results near the Facility, and EPA's preliminary determination is that this permit renewal will not impact any historic properties.

During the public comment period, the EPA will notify the Tribal Historic Preservation Office (THPO) of the CSKT of the planned issuance of this NPDES Permit and request their input on potential effects on historic properties and the EPA's preliminary determination in this regard.

## **11. MISCELLANEOUS**

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

Drafted by: Erik Makus, U.S. EPA, (406) 457-5017, January 2020.

**ADDENDUM:**

**AGENCY CONSULTATIONS**

On January 17, 2020, the CSKT tribal historic preservation office was notified of the EPA's intent to re-issue this NPDES permit and they were provided a copy of the draft permit and statement of basis. They did not provide any comments or feedback.

**PUBLIC NOTICE AND RESPONSE TO COMMENTS**

The Permit and statement of basis were public noticed in the Missoulian on January 18, 2020. No comments were received.