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 57201 MT Hwy 212 Charlo, MT 59824
PERMIT NUMBER:	MT-0022551
RESPONSIBLE OFFICIAL:	Leila Roberts, Secretary/Manager
FACILITY CONTACT:	Charlo Wastewater Treatment Facility P.O. Box 62 Charlo, MT 59824 (406) 471-9265 (406) 240-0319
PERMIT TYPE:	Minor POTW, Indian country, renewal
TYPE OF TREATMENT:	Aerated ponds, facultative lagoon, wetlands
FACILITY LOCATION:	½ mile south of Charlo on Highway 212 SW ¼ of Section 5, T19N, R20W Latitude 47.431651° N Longitude 114.175522° W Lake County, Montana
OUTFALL LOCATION(S):	Outfall 001 Lat 47.429444° N Long 114.175555° W

1. INTRODUCTION

This statement of basis (SoB) is for the issuance of a National Pollutant Discharge Elimination System (NPDES) permit to the Consolidated Charlo-Lake County Water & Sewer District, for the Charlo Wastewater Treatment Facility (WWTF). The Permit establishes discharge limitations for wastewater effluent discharged from the WWTF. 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 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 supports implementation of federal environmental laws consistent with the federal trust responsibility, the government-to-government relationship, and the EPA's 1984 Indian Policy.

2. BACKGROUND INFORMATION

The WWTF and its discharge are located within the boundaries of the Flathead Reservation which is home to the Confederated Salish and Kootenai Tribes (CSKTs) of the Flathead Indian Reservation. The CSKTs have been approved by the EPA for treatment as a state (TAS) for the purpose of implementing and managing the CSKT's water quality standards (WQS). The CSKTs WQS's have been approved by the EPA. This is a renewal permit for the Consolidated Charlo-Lake County Water & Sewer District.

2.1. Facility Description and Treatment Process

The WWTF is located south of the City of Charlo, MT. The WWTF consists of five lined treatment ponds; the first two are aerated cells, the third is a facultative cell, and the last two are wetland cells. Wastewater from the City of Charlo travels to the WWTF via two lines from the town. These lines are connected to a lift station where a splitter can direct flow to either of the aerated cells. 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 (cell 1), aeration pond (cell 2), the facultative pond, wetland cell 1, and finally wetland cell 2. The final discharge flows from the wetland cell 2 into the aerator building where it is treated by UV disinfection and passes through a small serpentine weir at approximately 100 feet per minute to provide disinfection. Flow is measured at the aerator building. The design flow for the WWTF is 0.08555 million gallons per day (mgd).

Figure 1. Aerial Image – Charlo Wastewater Treatment Facility Location

2.2. Chemicals Used

The WWTF utilizes a facultative lagoon process for treatment with ultraviolet light for disinfection prior to discharge. No chlorine or other chemicals are utilized by the WWTF.

3. WATER QUALITY CONSIDERATIONS

3.1. Description of Receiving Water

Discharge from the WWTF is piped underground for approximately 300 feet, flowing south of the WWTF towards Highway 212, where it daylights in a swale on the north side of the highway at approximately 47.429444° N, 114.175556° W. In an internal memo dated March 13, 2000, the Salish and Kootenai staff hydrologist determined the swale to be an intermittent water body[1]. The CSKT's

[1] Within this swale the WWTF effluent commingles with irrigation return flows and continues to flow southwest and then under Highway 212 through a culvert. The flow emerges south of the highway and ponds in a pasture belonging to the Rousch Ranch. The flow is either used for irrigation, continues downstream southwest to Dublin Gulch about a mile away, or runs dry depending on the time of the year. The Dublin Gulch flows for approximately seven miles before joining Mission Creek, which then drains into the Flathead River.

Surface Water Quality Standards and Antidegradation Policy was updated in 2019 and approved by the EPA, effective April 2, 2019. The Flathead River and its tributaries are classified as B-1 according to the Tribal Water Quality Standards. 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.

4. PERMIT HISTORY

Plant Performance and Compliance History

During the previous 5-year permit cycle from September 1, 2012 to August 31, 2017, the Charlo WWTF discharged a total of 11 times. All discharges were periodic and there were no exceedances of any permit limitations.

Parameter	Limitation	Min	Max	Exceedances
Biochemical Oxygen Demand (BOD_5), mg/L	30/45	3.0	40.0	0
Total Suspended Solids (TSS), mg/L	30/45	2.0	40.0	0
Escherichia coli (E. coli), #/100 ml	126/252	1.0	4.0	0
Oil and Grease (O&G), mg/L	10	0.0	0.0	0
pH, s.u.	6.0-9.0	7.0	8.3	0

5. MAJOR CHANGES FROM PREVIOUS PERMIT

Requirements for *E. coli* are being clarified to reflect changes made in the 2007 revised WQSs, and fecal coliform requirements are added to the discharge limitations. Based on the *E. coli* compliance history, the sampling requirement of *E. coli* and fecal coliform are required only during the recreation use months of May through September, and only one sample per discharge.

Limitations for pH are being modified to reflect tribal water quality standards.

Dissolved Oxygen (DO) monitoring is added to the discharge monitoring requirements to determine if DO limitations need to be required in the future.

Nutrient monitoring for ammonia, nitrogen and phosphorus monitoring will be added to the permit as a report only parameter. Data from nutrient monitoring will be used to determine if reasonable potential exists.

Biosolids reporting requirements for the facility are being modified with this permit issuance. The WWTF is required to follow 40 C.F.R Part 503 regulations for monitoring, reporting and disposal of biosolids.

6. PROPOSED PERMIT LIMITATIONS

The effluent limitations and the basis for the limitations are provided in the table below:

Table 1 – Proposed Effluent Requirements - Outfalls 001.

Characteristic	30-Day Average	7-Day Average	Daily Maximum	Basis a/
Flow, mgd	Report	N/A	Report	
Biochemical Oxygen Demand (BOD_5), mg/L	30	45	N/A	PP b/
Total Suspended Solids (TSS), mg/L	30	45	N/A	PP b/
E. coli, no./100 mL c/	252	N/A	126	CSKT WQS
Fecal Coliform, no./100 mL c/	400	N/A	200	CSKT WQS
Oil and Grease (O&G), mg/L	N/A	N/A	10	CSKT WQS
The pH of the discharge shall not be less than 6.5 or greater than 8.5 at any time.				CSKT WQS

a/ "PP" refers to limitations in the Previous Permit. The NPDES regulations (40 C.F.R. § 122.44(1)(1) Reissued permits) require that when a permit is renewed or reissued, interim 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 was issued have materially and substantially changed since the previous permit was issued and would constitute cause for permit modification or revocation and reissuance under 40 C.F.R. Part 122.62.

"CSKT WQS" refers to effluent limitations based on approved CSKT Water Quality Standards. See the section on Water Quality Considerations for information on how the effluent limitations were determined.

b/ The limits for BOD_5 and TSS are based on 40 C.F.R. Part 133.102, "Secondary Treatment Standards.

c/ The limit for *E. coli* and fecal coliform apply May through September. CSKT water quality standards require a geometric mean using 5 samples, due to infrequency of discharge, only one sample is being required.

Effluent Flow: Monitoring for effluent flow will continue with this permit to determine and track discharges and any effects on downstream uses or scouring due to intermittent discharges.

BOD_5 and TSS: The BOD_5 and TSS limitations will remain in effect for the WWTF. An evaluation of the compliance history of the WWTF for BOD_5 and TSS indicate that the lagoon operations have the capability of meeting the limitations and alternative limitations are not necessary.

Secondary Treatment Regulations found at 40 C.F.R. Part 133. Regulations at 40 C.F.R. § 133.102 require that the minimum level of effluent quality for secondary treatment is 30-day average concentrations of Biochemical Oxygen Demand 5-day (BOD_5) and Total Suspended Solids (TSS) that do not exceed 30 mg/L, and 7-day average concentrations of these parameters that do not exceed 45 mg/L. The secondary treatment regulations also provide a limit for pH to be maintained between 6.0 and 9.0.

The 85% removal requirements for BOD_5 and TSS required by 40 C.F.R. §§ 133.102(a)(3) and (b)(3) or 40 C.F.R. §§ 133.105(a)(3) and (b)(3) are not included in this permit. It has been the experience of EPA Region 8 that there are practical problems that prevent the determination of the actual percent removals of BOD in small municipal wastewater lagoon systems such as this one. The detention times in lagoon systems usually range from several weeks to several months. 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.

***E. coli*:** Limitations for *E. coli* will be maintained in the permit as prescribed by the CSKT WQSs.

Fecal coliform: The WWTF will be required to meet the limitations as defined in the CSKT WQS.

pH: The previous compliance limits will be modified to reflect current CSKT WQS requirements for streams with the B-1 classification.

Oil and Grease: 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. The concentration of oil and grease in any single sample shall not exceed 10 mg/L.

7. MONITORING REQUIREMENTS

Monitoring must be conducted according to test procedures approved under 40 C.F.R. Part 136, unless other test procedures have been specified in this Permit. Sludge monitoring procedures shall be those specified in 40 C.F.R. 503, or as specified in the Permit.

7.1. Self-Monitoring Requirements - Outfall 001 – Discharge from WWTF

Effluent Characteristic	Frequency	Sample Type a/
Total Flow, mgd b/	Daily	Instantaneous
BOD_5, mg/L	Monthly	Grab
TSS, mg/L	Monthly	Grab
E. coli, no./100 mL c/	Monthly	Grab
Fecal coliform, no./100 mL c/	Monthly	Grab
pH, units e/	Weekly	Grab
Oil and Grease, mg/L f/	Monthly	Grab

Dissolved Oxygen, mg/L	Weekly	Grab
Total Ammonia (as N), mg/L d/	Monthly	Grab
Total Nitrogen (N), mg/L d/ e/	Monthly	Grab
Total Phosphorus (P), mg/L d/	Monthly	Grab

a/ See Definitions, section 1.1 of the Permit, for definition of terms definitions

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 in million gallons per day (mgd) during the reporting period and the maximum flow rate observed, in mgd, shall be reported.

c/ The limit for *E. coli* and fecal coliform apply May through September.

d/ Monitoring for ammonia, nitrogen and phosphorus shall be performed only during the high production season of May through September.

e/ The Total Nitrogen measurement shall be determined by combining Total Kjeldalh Nitrogen + Nitrate and Nitrite measurements.

f/ Reservation waters shall not have a visible oil film (or be present in concentrations at or in excess of 10 milligrams per liter) if a visible sheen is seen, a sample shall be taken and analyzed. If a visual sheen is detected, a grab sample must be analyzed.

8. FACILITY INSPECTION REQUIREMENTS

On a weekly basis, unless otherwise modified in writing by the EPA, the Permittee shall inspect the wastewater treatment facility and lift station. The Permittee shall maintain documentation recording all information obtained during the inspection as required in the permit.

9. REPORTING REQUIRMENTS

Reporting of Monitoring Results: On October 22, 2015, the National Pollutant Discharge Elimination System (NPDES) Electronic Reporting Rule was published in the Federal Register (80 FR 64064). The rule became effective on December 21, 2015 and involves two phases. Phase 1 includes the requirement that by no later than December 21, 2016, entities that are required to submit DMRs must do so electronically unless a waiver from electronic reporting is granted to the entity. Phase 2 includes the requirement that by no later than December 21, 2020, other specified reporting must be done electronically.

With the effective date of this Permit, the Permittee must electronically report monthly discharge monitoring reports (DMR) on a monthly frequency using NetDMR. Electronic submissions by permittees must be submitted to the EPA Region 8 no later than the 28th of the month following the completed reporting period. The Permittee must sign and certify all electronic submissions in accordance with the signatory requirements of the Permit. NetDMR is accessed from the internet at https://netdmr.zendesk.com/home.

In addition, the Permittee must submit a copy of the DMR to the CSKT. Currently, the Permittee may submit a copy to the Tribes by one of three ways: 1. a paper copy may be mailed. 2. The email address for the Tribes may be added to the electronic submittal through NetDMR, or 3. The Permittee may provide the Tribes with viewing rights through NetDMR.

The reports that are to be submitted electronically after December 21, 2020, are to be submitted using "NeT". The instructions on how to use "NeT" are not yet available. The Permittee will in the future receive instructions on how to use "NeT". Until then, the Permittee shall continue to submit any other reports in paper format and mailing them to the specified addresses.

10. ENDANGERED SPECIES ACT 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. § 402.14(a)).

The U. S. Fish and Wildlife Information for Planning and Conservation (IPaC) website program was utilized to determine Federally-Listed Endangered, Threatened, Proposed and Candidate Species for Lake County, Montana. The IPaC Trust Resource Report findings are provided below for the Facility site.

Figure 2- IPaC Polygon Map

Table 1 – IPaC Species Listing, Lake County, Montana

SPECIES	SCIENTIFIC NAME	STATUS
BIRDS		

Yellow-billed Cuckoo (CH)	*Coccyzus americanus*	Threatened
MAMMALS		
Canada Lynx	*Lynx canadensis*	Threatened
Grizzly Bear (CH)	*Ursus arctos horribilis*	Threatened
CRITICAL HABITATS		
There are no critical habitats listed at this location (CH) = Critical Habitat. There is final critical habitat for this species (published in the Federal Register on September 12, 2014). The facility is outside the critical habitat.		

Analysis of Effects

The specific determinations for each of the species listed in Table 4, above, are as follows:

Yellow-billed Cuckoo (*Coccyzus americanus*)
The Yellow-billed Cuckoo is listed as threatened in Montana. There is proposed critical habitat for this species, but the location of the Charlo WWTF is outside the proposed critical habitat. As the Permits authorized discharge does not affect any potential habitat of the Yellow-billed Cuckoo and sets effluent limitations protective of water quality, the EPA has determined reissuing this NPDES Permit is expected to have *no effect* on the threatened Yellow-billed Cuckoo.

Grizzly Bear (*Ursus arctos horribilis*)
The Grizzly Bear is listed as threatened in Montana except for the Greater Yellowstone Ecosystem where it is delisted. There is proposed critical habitat for this species, but the location of the Charlo WWTF is outside the proposed critical habitat. Permit-authorized discharge does not affect any potential habitat of the Grizzly Bear and sets effluent limitations protective of water quality, the EPA has determined reissuing this NPDES Permit is expected to have *no effect* on the threatened Grizzly Bear.

Canada Lynx (*Lynx canadensis*)
The Canada Lynx is listed as threatened in Montana. There is final critical habitat for the Canada Lynx but the location of the Charlo WWTF is outside the critical habitat. Permit-authorized discharge does not affect any potential habitat of the Canada Lynx and sets effluent limitations protective of water quality, the EPA has determined reissuing this NPDES Permit is expected to have *no effect* on the threatened Canada Lynx.

10.1. Conclusion

The EPA has determined the reissuance of this NPDES Permit expected to have *no effect* on any of the species listed as threatened or endangered for Lake County. Due to the *no effect* determination, consultation with the FWS is not required.

11. NATIONAL HISTORIC PRESERVATION ACT REQURIEMENTS

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 Focus Database was utilized to determine and evaluate resources of concern in the Lake County, Charlo area.

The National Register of Historic Places is the official list of the Nation's historic places worthy of preservation. Authorized by the National Historic Preservation Act of 1966, the National Park Service's National Register of Historic Places is part of a national program to coordinate and support public and private efforts to identify, evaluate, and protect America's historic and archeological resources.

Based upon the information provided by the NPS database, no historical places were listed in the Charlo area. Therefore, the EPA does not anticipate any impacts on listed/eligible historic properties or cultural resources due to this permit issuance or discharge related activities from Outfall 001. Additionally, notification of the permitting action is sent to the Tribal Historic Preservation Office (THPO) during the public notice period.

12. MISCELLANEOUS

The effective date of the permit and the permit expiration date will be determined upon issuance of the permit. This NPDES Permit shall be effective for a fixed term not to exceed 5 years.

Permit drafted by: VelRey Lozano, Environmental Scientist, 8WP-CWW. October 2018.

Permit reviewed by: CWW Permit Tech, December 2018

ADDENDUM:

PUBLIC NOTICE AND RESPONSE TO COMMENTS

The permit and statement of basis were public noticed in the Published in the Missoulian on April 19, 2019. No comments were received during the comment period.

The only changes made to the permit were corrections to the mail codes for EPA offices.