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

PERMITTEE:	City of Polson
FACILITY NAME AND ADDRESS:	Polson Water Resource Recovery Facility 36010 Kerr Dam Road Polson, Montana 59860
PERMIT NUMBER:	MT-0020599
RESPONSIBLE OFFICIAL:	Ashley Walker Water and Sewer Superintendent 106 1st St. East Polson, Montana 59860 406-883-8215 wss2@cityofpolson.com
FACILITY CONTACT:	Brandon Parker, Operator 406-250-1974
PERMIT TYPE:	Renewal, individual coverage, minor, Publicly Owned Treatment Works
TYPE OF TREATMENT:	Secondary Treatment
FACILITY LOCATION:	NE ¼ of NE ¼ of Section 8, T22N, R20E Latitude 47.68650° N Longitude 114.17860° W Lake County
OUTFALL LOCATION:	Latitude 47.688055° N Longitude 114.183055° W

1. INTRODUCTION

This statement of basis (SoB) is for the issuance of a NPDES permit to the City of Polson, for the City of Polson Water Resource Recovery Facility (WRRF). The Permit establishes discharge limitations for any discharge of water from the WRRF. The SoB explains the nature of the discharges, and the EPA's decisions for limiting the pollutants in the wastewater, as well as 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 WRRF and its discharge are located within the boundaries of the Flathead Reservation which is home to the Confederated Salish and Kootenai Tribes (CSKT). The CSKT have been approved by the EPA for "Treatment as a State." The CSKT water quality standards (WQS) have been approved by the EPA (see Water Quality Considerations below for more information).

Polson, Montana is the county seat of Lake County and is located in northwestern Montana on the Flathead Indian Reservation at the southern shore of Flathead Lake. Polson is approximately 70 miles north of Missoula, 50 miles south of Kalispell, and 70 miles south of Glacier National Park. The WRRF serves the City which was reported to have a population of 4,607 people in 2018. According to the permit application, there are no significant industrial users discharging to the City's collection system or WRRF. The City has significant infiltration/inflow (I/I) averaging 0.2 million gallons per day (mgd) during rain/snow events. Most of this I/I is inflow and the City is actively disconnecting drains and other interconnections to the collection system to reduce this volume. The City is also replacing old sewer mains found to have infiltration with polyvinyl chloride (PVC) pipe.

Figure 1 – Overview of the City of Polson, Flathead River and Flathead Lake

2.1. Facility Description

The WRRF was originally constructed as a three-cell lagoon system in 1981 and had a design flow of 0.650 million gallons per day (mgd). A fourth polishing cell was added at a later date. In 2017, to address ongoing noncompliance with effluent limitations, the City began upgrading the WRRF to a mechanical sequencing batch reactors (SBR) activated sludge plant with plans to ultimately decommission the entire lagoon system. In early 2019, the City completed construction of the new mechanical WRRF and it is expected to be fully operational by May 30, 2019. The mechanical WRRF will have a design flow of 0.92 mgd.

Figure 2 – New mechanical WRRF (under construction), old lagoons and Outfall 001 location

2.2. Treatment Process

The upgraded WRRF includes dual rotary drum fine screens and vortex grit removal facilities, SBR tanks for biological treatment and solids separation, post-equalization effluent capacity, UV disinfection, aerobic sludge digestion and sludge dewatering and drying facilities. The treated effluent discharge to the Flathead River will use the same outfall (Outfall 001) as the one previously used for the lagoon system. The pipe for Outfall 001 extends into the Flathead River approximately 500 feet from the shoreline and 10 feet under the water's surface.

The existing lagoon cells will be drained, and aeration equipment and buried piping will be removed. The dikes on the earthen lagoon cells will be lowered (graded) to the sludge layer to allow drying and subsequent land application by third party contractors.

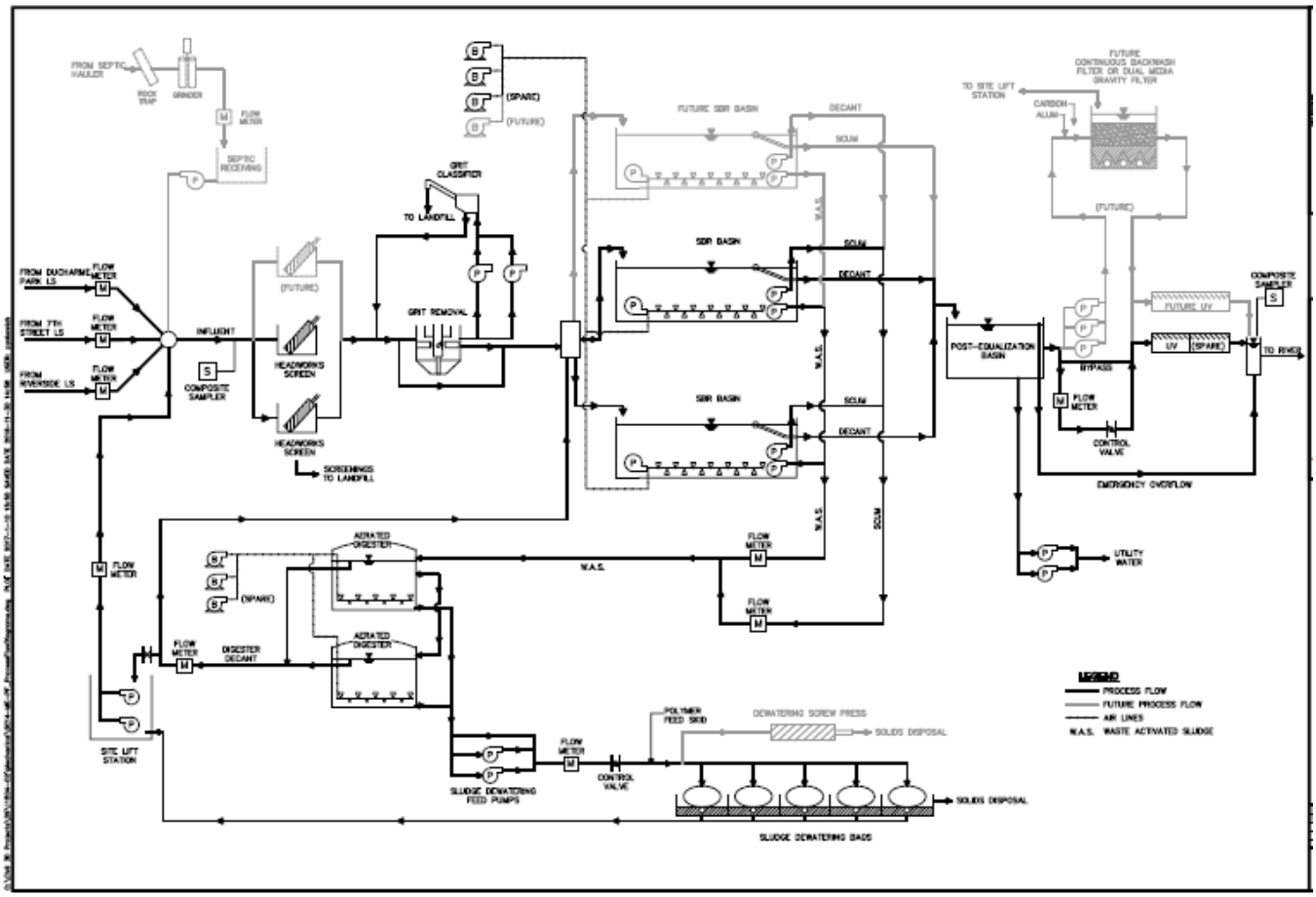

Figure 3 –Mechanical WRRF Schematic

2.3. Chemicals Used

The WRRF utilizes natural biological processes for treatment of the wastewater and UV light is utilized for disinfection prior to discharge. The newly upgraded WRRF includes the ability to inject chlorine in the influent as well as spray the surface scum in the SBR tanks for the purposes of filamentous bacteria control. No other chemicals are used in the treatment process.

WATER QUALITY CONSIDERATIONS

2.4. Description of Receiving Water

Outfall 001 discharges to the Flathead River just downstream of the outlet from Flathead Lake. The CSKT Surface Water Quality Standards and Anti-degradation Policy (Water Quality Standards) were 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 2019 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.

3. PERMIT HISTORY

The previous permit for the lagoon system was issued January 1, 2013 and expired on December 31, 2017. On May 23, 2017, the City was sent a letter automatically continuing the permit and requested a new permit application for mechanical SBR plant. On December 18, 2018, the EPA received a complete permit application for the new mechanical SBR plant.

4. PLANT PERFORMANCE AND COMPLIANCE HISTORY

There is no effluent data on the newly upgraded WRRF and data used in the permit application received on December 18, 2018 was taken from a comparable SBR treatment plant in Montana. A review of the past five years of effluent data from the lagoon system shows ongoing, consistent noncompliance for *Escherichia coli (E. coli)*, Biochemical Oxygen Demand (BOD_5) and flow. The newly upgraded WRRF was planned and designed to resolve the ongoing noncompliance issues for *E. coli*, BOD_5 and flow due to the use of UV disinfection, activated sludge treatment (SBR) and increased treatment capacity.

5. MAJOR CHANGES FROM PREVIOUS PERMIT

Effluent limitations for fecal coliform were included in this permit since CSKT Water Quality Standards include both fecal coliform and *E. coli* numeric criteria.

An 85% removal is required for TSS and BOD_5 since this facility is no longer a waste stabilization pond (lagoon) system as defined in 40 C.F.R. § 133.103.

The TSS limitations changed from 100 mg/L (30-day average) and 135 mg/L (7-day average) to 30 mg/L (30-day average) and 45 mg/L (7-day average) per the Secondary Treatment Standards in 40 C.F.R. § 133.102.

A total residual chlorine (TRC) limit is being applied due to potential use of chlorine to control filamentous bacteria as needed. The limit and monitoring are only required when chlorine is being used and for two days after the use of chlorine has ceased.

Monitoring for temperature and dissolved oxygen are being added to determine if there is reasonable potential to cause or contribute to the exceedance of CSKT Water Quality Standards for temperature and dissolved oxygen.

Weekly inspections of the WRRF have been removed since the facility is no longer a lagoon system and the newly updated WRRF will be electronically monitored and continuously discharging.

6. PROPOSED PERMIT LIMITATIONS

Section 101(a)(2) of the CWA states “it is the national goal that wherever attainable, an interim goal of water quality which provides for the protection and propagation of fish, shellfish, and wildlife and provides for recreation in and on the water to be achieved by July 1, 1983”. Section 301 of the CWA requires the EPA to develop NPDES effluent limits through evaluating treatment technology standards and water quality standards (WQS).

Table 1 – Effluent Limitations - Outfall 001

Effluent Characteristic	Effluent Limitation		
	30-Day Average a/	7-Day Average a/	Daily Maximum a/
Biochemical Oxygen Demand (BOD_5), mg/L	30	45	N/A
Total Suspended Solids (TSS), mg/L	30	45	N/A
E. coli, #/100 mL	252	N/A	126
Fecal Coliform, #/100 mL	400	N/A	200
Total Residual Chlorine (TRC), mg/L b/	0.011	N/A	0.019
Flow, mgd	0.92	N/A	N/A
The pH of the discharge shall not be less than 6.5 standard units (s.u) or greater than 9.0 s.u at any time.			
Percentage Removal Requirements (TSS and BOD_5 Limitation): In addition to the concentration limits for total suspended solids and BOD_5 indicated above, 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 at approximately the same times during the same period (85 percent removal).			
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 nor shall there be any visible sheen in the receiving water or adjoining shoreline.			

a/ See Definitions, section 1.1 of the permit, for definition of terms.

b/ The TRC limits apply only the days when chlorine is used and for two days after the usage of chlorine has ceased. When chlorine is not used, report "N/A" to the TRC field on the Discharge Monitoring Report (DMR). For the purposes of the permit, the minimum limit of analytical reliability in the analysis for TRC is considered to be 0.05 mg/L. For purposes of the permit and calculating averages and reporting in the DMR form, analytical values less than 0.05 mg/L shall be considered to be in compliance with this permit.

6.1.Technology Based Effluent Limitations

BOD_5, TSS and pH

Treated effluent from the WRRF is subject to the 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 also included in this permit.

6.2. Water Quality Based Effluent Limitations

pH

Effluent limitations for pH (6.5-9.0 s.u) are based upon CSKT Water Quality Standards which are more protective than the technology based effluent limitations (6.0-9.0 s.u) described above for pH. The more protective effluent limits of 6.5-9.0 s.u will be applied in the permit.

E. coli and Fecal Coliform

Effluent limitations for *E. coli* and Fecal Coliform were based upon the B-1 classification of the Flathead River in CSKT Water Quality Standards.

Chlorine

Effluent limitations for chlorine are based upon CSKT Water Quality Standards for non-priority pollutants.

7. MONITORING REQUIREMENTS

7.1. Self-Monitoring Requirements - Outfalls 001

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. Since Outfall 001 is submerged in the Flathead River, monitoring for compliance purposes for the permit shall be done at the location of the effluent composite sampler. The effluent composite sampler is not required to be used for grab samples. However, grab samples shall be taken at the location (at or near) of the effluent composite sampler, as accessibility allows.

Table 2 - Monitoring plan - Outfall 001

Effluent Characteristic	Frequency	Sample Type a/
Flow, mgd b/	Continuous	Continuous flow meter
BOD_5, mg/L c/	Monthly	Composite
TSS, mg/L c/	Monthly	Composite
E. coli, Number, #/100 mL	Monthly	Grab
Fecal Coliform, #/100 mL	Monthly	Grab
pH, standard units g/ h/	Daily	Instantaneous

Total Residual Chlorine (TRC), mg/L d/	Daily	Grab
Oil & Grease, mg/L e/	Monthly	Visual
Dissolved Oxygen, mg/L	Monthly	Grab
Total Ammonia (as N), mg/L	Monthly	Grab or Composite
Nitrite + Nitrate as N, mg/L	Monthly	Grab or Composite
Total Kjeldahl Nitrogen as N, mg/L	Monthly	Grab or Composite
Total Nitrogen, mg/L	N/A	Calculated f/
Total Phosphorus (P), mg/L	Monthly	Grab or Composite
Temperature, ºC g/ h/	Daily	Instantaneous

a/ See Definitions, section 1.1 of the permit, for definition of terms.

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

c/ In addition to monitoring the final discharge, influent samples shall be taken and analyzed for this constituent at the same frequency as required for this constituent in the discharge. Influent monitoring shall be taken prior to any return lines in the primary treatment process (e.g. at influent composite sampler).

d/ TRC monitoring applies only when chlorine is used. Chlorine shall be monitored daily during use and daily for two days after chlorine usage has ceased. When chlorine is not used, report "N/A" to the TRC field on the Discharge Monitoring Report (DMR). For the purposes of the permit, the minimum limit of analytical reliability in the analysis for TRC is considered to be 0.05 mg/L. For purposes of this permit and calculating averages and reporting in the DMR form, analytical values less than 0.05 mg/L shall be considered to be in compliance with this permit.

e/ If a visible sheen is detected, a grab sample shall be taken immediately and analyzed in accordance with the requirements of 40 C.F.R. Part 136. The concentration of oil and grease shall not exceed 10 mg/L in any sample.

f/ Calculated as the sum of nitrite + nitrate as nitrogen and Total Kjeldahl Nitrogen (TKN) concentrations.

g/ The daily maximum and minimum pH and temperature for the reporting period shall be reported.

h/ Daily shall mean Monday through Friday for pH and temperature monitoring only.

8. REPORTING REQUIREMENTS

Reporting of Monitoring Results: With the effective date of this Permit, the Permittee must electronically report monthly DMR on a quarterly frequency using NetDMR. Electronic submissions by

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

Other Reports: Legible copies of all other reports shall be signed and certified in accordance with the Signatory Requirements (see section 4.7 of the Permit), and submitted to the EPA Region 8 Policy, Information Management & Environmental Justice Program and the Tribe at the addresses given below:

original to: U.S. EPA, Region 8 (8ENF-PJ)
Attention: DMR Coordinator
1595 Wynkoop Street
Denver, Colorado 80202-1129

copy to: CSKT
Environmental Protection Division
301 South Main Street
Polson, Montana 59860

Until December 21, 2020, all other reports (e.g., Parts 2.8 and 2.9 of the Permit) as well as sewer overflow event reports, are to be submitted by mail to the given addresses above. Effective December 21, 2020, these reports are to be submitted using the National Pollutant Discharge Elimination System (NPDES) Electronic Reporting Tool (NeT), if this tool is available (40 CFR part 127). NeT is a tool suite developed by the EPA to facilitate electronic submittal of data by the regulated community directly to the EPA and its partners. It uses commercial "off-the-shelf" software and can support diverse form and data submission formats. For more information about NeT, please visit: https://www.epa.gov/compliance/national-pollutant-discharge-elimination-system-npdes-electronic-reporting-tool-net-fact.

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. § 402.14(a)).

The FWS Information for Planning and Conservation (IPaC) website program was utilized to determine federally-Listed Endangered, Threatened, Proposed and Candidate Species for the geographic area near Polson, Montana. The IPaC Trust Resource Report findings are provided below.

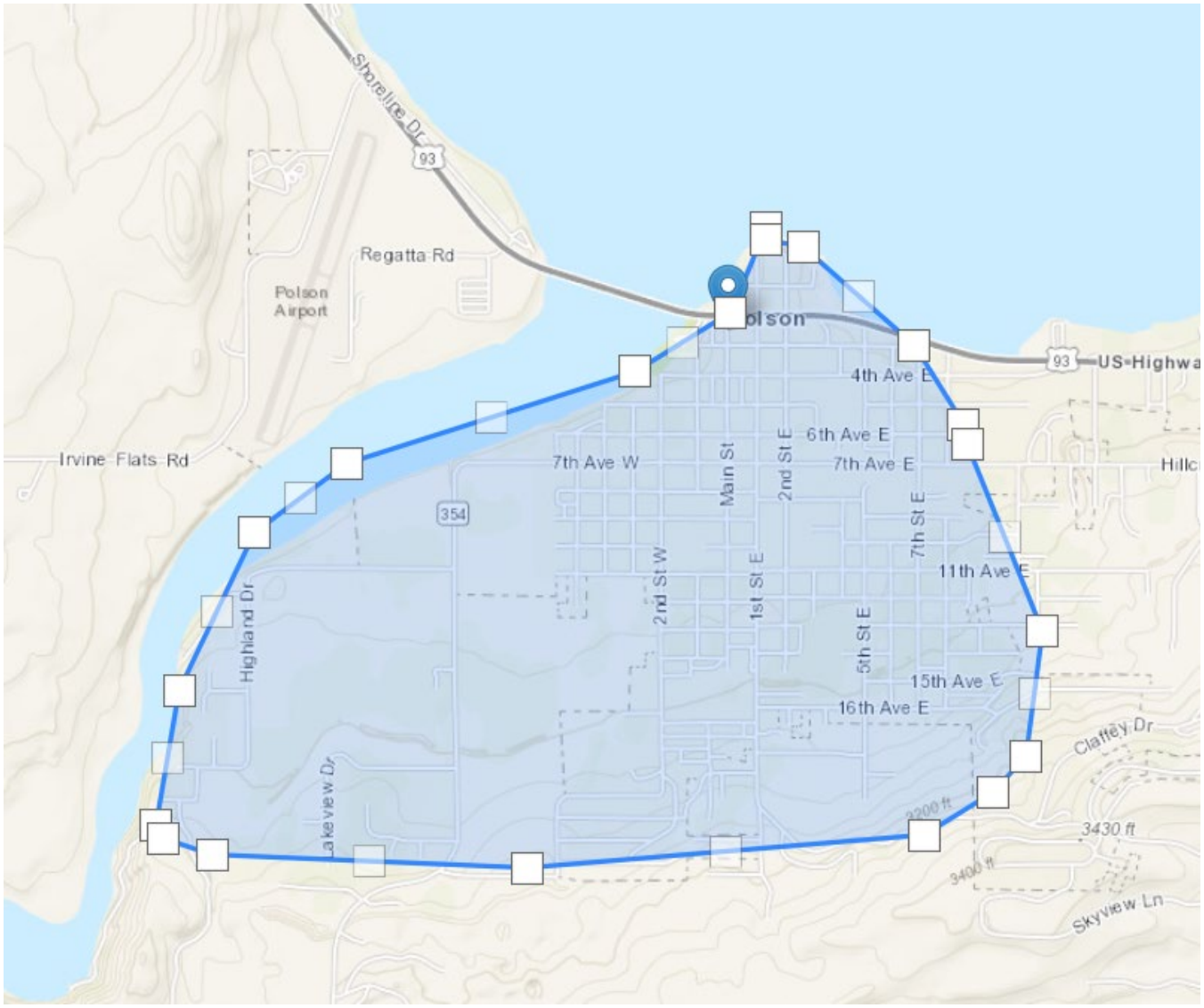

Figure 3 – IPaC Geographic Area Searched near Polson, Montana

9.1.Determination

The EPA has determined that discharges from the WRRF is *Not Likely to Adversely Affect* any of the listed species in Table 4.

Table 4 - Threatened, Endangered, and Candidate Species near Polson, Montana per IPaC			

Common Name	Scientific Name	Listing Status	Habitat
Yellow-Billed Cuckoo	*Coccyzus americanus*	Threatened	Yellow-billed Cuckoos use wooded habitat with dense cover and water nearby, including woodlands with low, scrubby, vegetation, overgrown orchards, abandoned farmland, and dense thickets along streams and marshes.
Bull Trout	*Salvelinus confluentus*	Threatened; Critical Habitat	Clark Fork, Flathead, Kootenai, St Mary, and Belly River basins; cold water rivers and lakes. Lake area specified as critical habitat.
Grizzly Bear	*Ursus arctos horribilis*	Threatened	Resident, transient; Alpine/subalpine coniferous forest.
Canada Lynx	*Lynx canadensis*	Threatened	Resident; western Montana-montane spruce/fir forests. Surrounding area specified as critical habitat.
Spaldings's Campion (or "catchfly")	*Silene spaldingii*	Threatened	Upper Flathead River Fisher river drainages; Tobacco Valley – open grasslands with rough fescue or bluebunch wheatgrass.
North American Wolverine	*Gulo gulo luscus*	Proposed Threatened	High elevation alpine and boreal forests that are cold and receive enough winter precipitation to reliably maintain deep persistent snow late into the warm season.

EPA finds the issuance of this Permit is *Not Likely to Adversely Affect* any of the above species listed by the FWS under the ESA. The finding is based upon the following: (1) the renewed permit is for an upgraded facility with improved water quality than the previous lagoon system; (2) effluent limits are protective of water quality.

Issuance of this permit and continuation of the effluent discharge to Flathead River will have no effect on the Yellow-Billed Cuckoo, Grizzly Bear, Canada Lynx, Spalding's Catchfly, or Wolverine. This is because this is a discharge of treated wastewater to the subsurface of Flathead River. Due to the

discharge location, the discharge will have no impact to the Yellow-Billed Cuckoo's woodland and dense thicket habitat, the Grizzly Bear, Canada Lynx and Wolverine's forested mountain habitat, nor the wetlands and open grasslands where the Spalding's Catchfly are found. The quality of the discharge is such that it maintains the current water quality of Flathead River and thus will not adversely affect the threatened mammals and bird listed above if they consume water from the river. Discharges from this facility are expected to not adversely affect the Bull Trout based on controls which protect the river from the discharge of chlorine, limit pH values to be protective of aquatic life and limit BOD and TSS discharges which are designed to protect aquatic life.

Prior to public notice, a copy of the draft Permit and this Statement of Basis was sent to the FWS requesting concurrence with the EPA's finding that reissuance of this NPDES Permit (MT-0020599) for the WRRF is *Not Likely to Adversely Affect* any of the species listed as threatened, proposed threatened or endangered near Polson, Montana nor their critical habitat under the ESA.

On April 2, 2019, the FWS concurred with the EPA's conclusion that the WRRF nor its discharge is *Not Likely to Adversely Affect* the species listed in Table 4.

10. 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 WRRF location.

The only historic property in Polson, Montana is the Polson Feed Mill which was added to the National Register of Historic Places on April 29, 1980. The Polson Feed Mill was built about 1910. The mill is significant because of its historic associations with the development of Polson and Lake County. The WRRF and Outfall 001 are approximately one mile from the Polson Feed Mill. Based upon the information provided by the U.S. NPS database, the EPA does not anticipate any impacts on listed/eligible historic property due to this permit issuance and/or discharges from Outfall 001.

During the public notice of this permit, the Tribal Historic Preservation Officer was contacted to confirm that any potential tribal historic properties are not anticipated to be negatively affected by the discharge or conditions of this permit. No comments were received the Tribal Historic Preservation Officer during the public notice period.

11. MISCELLANEOUS

Drafted by: Amy Clark, U.S. EPA, 303-312-7014

ADDENDUM:

PUBLIC NOTICE AND RESPONSE TO COMMENTS

The permit and statement of basis were public noticed in The Missoulian on May 3, 2019. No formal comments were received. However, WRRF requested the following changes in the final permit.

Comment:
pH sampling: effluent sampling can be modified to include daily grab sample/test Monday through Friday for first two years of permit term. Thereafter, if results are acceptable the monitoring may be reduced.

Response:
The permit was changed to reflect they do not have a continuous pH meter. Instead instantaneous pH samples will be required daily. The definition of "daily" for pH monitoring was included to specify only Monday through Friday since the WRRF is not manned during the weekend. A reduction in sample frequency was not added since pH data is needed to determine reasonable potential with CSKT's ammonia criteria.

Comment:
Nutrient sampling: sampling requirements for Total Ammonia, Nitrate + Nitrate, TKN and Total Phosphorous will be revised to allow the composite sample or a grab sample to be acceptable for purposes of these tests.

Response:
The permit was changed to reflect allowance for either a composite or a grab sample for: Total Ammonia, Nitrate + Nitrate, TKN and Total Phosphorous.

Comment:
Effluent temperature sampling: temperature sampling to be revised to allow daily testing (Monday to Friday) with potential reduction in frequency after two years.

Response:
The definition of "daily" for temperature monitoring was included to specify only Monday through Friday since the WRRF is not manned during the weekend. A reduction in sample frequency was not added since temperature data is needed to determine reasonable potential with CSKT's ammonia criteria.

Comment:
E coli/Fecal: Please let us know if there is any specific process/procedure needed in order for the City to use in-house (EPA approved method) testing for fecal and E coli testing and reporting.

Response:
Please see 40 C.F.R. Part 136 for all EPA approved testing methods.

Comment:
Sampling of receiving river: Ice and access present challenges with this sampling for October through April. The frequency/duration and location of the sampling will be further reviewed. Existing USGS sampling stations will be reviewed and, if available, may be an option for collection of this information. Further investigation of the options is needed before finalizing the location and frequency of this sampling.

Response:
Receiving water monitoring was removed from the final permit since this data was required for Ammox modeling which is not appropriate for a discharge to the Flathead River.