UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 8, MONTANA OFFICE
FEDERAL BUILDING, 10 W. 15th STREET, SUITE 3200
HELENA, MONTANA 59626

STATEMENT OF BASIS

PERMITEE:	City of Polson 106 First Street East Polson, MT 59860
FACILITY:	Polson Wastewater Treatment Facility
PERMIT NO.:	MT0020559
CONTACT:	Tony Porrazo Water/Wastewater Superintendent 106 First Street East Polson, MT 59860
RECEIVING WATER:	Flathead River
POPULATION:	5,200
PERMIT TYPE:	Minor, Renewal

A. Permit Status

This statement of basis is for the renewal of the National Pollutant Discharge Elimination System (NPDES) permit for the discharge from the Polson Wastewater Treatment Facility (WWTF). The WWTF 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 has been approved by the Environmental Protection Agency (EPA) for "Treatment as a State." The CSKT's water quality standards (WQS) have been approved by EPA.

The previous permit was issued on July 1, 2007 and expires on June 30, 2012. The previous permit will remain in effect until this permit is reissued.

B. Facility Description

The WWTF is located in the northeast ¼ of NE ¼ of Section 8, Township 22 N, Range 20 E (latitude 47°41'17" North and longitude 114°10'59" West) at 230 Kerr Dam Road. The WWTF discharges to the Flathead River just downstream of Flathead Lake. The facility was constructed in 1981 and has a design flow of 0.650 million gallons per day (mgd). There are three aerated cells and a polishing cell. The cells can be operated in parallel or series. The discharge pipe extends to the middle of the river so that it does not daylight during low flows. The discharge is continuous and is not disinfected. Flow is measured by taking instanteous readings at a weir. According to the permit application, there are no significant industrial users discharging to the system.

C. Past Discharge Data

Data from the Discharge Monitoring Reports (DMRs) from 2007 – 2011 was used to compile the information in the table below:

Table 1. Discharge Data.

Parameter	Averages	Range	Average	Permit Limit(s)	Number of Data Points	Number of Excursions
Flow, mgd	30-DA	0.3827-0.7200	0.4739		42	
	Daily Max	0.4102-1.2	0.5360		42	
Biological Oxygen Demand (BOD_5), mg/L	30-DA	4-73.7	23.1	30	42	8
	7-DA	6-130	22	45	42	8
Total Suspended Solids (TSS), mg/L	30-DA	9-71.4	25.7	100	40	0
	7-DA	9-91.5	30.8	135	40	0
E. coli, # organisms/100 mL		11-2400	672.5		41	
pH, standard units		7.21-9.19		6.5-9	41	2

There have been 8 violations of the 30-Day permit limits for BOD_5 and 8 violations of the 7-day permit limits for BOD_5. The BOD_5 violations have occurred primarily in the summer months. There have also been 2 pH violations. The permittee did not provide any explanations for these permit violations.

The facility's flow has also exceeded the design flow a number of times. The 30-day average flow exceeded the design flow four times. These exceedances occurred throughout the year with no clear pattern.

D. Technology Based Effluent Limitations

Treated effluent from the WWTF is subject to the Secondary Treatment Regulations found at 40 CFR Part 133. Regulations at 40 CFR 133.102 require that the minimum level of effluent quality for secondary treatment is 30-day average concentrations of BOD_5 and 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.

In accordance with federal regulations, states can adjust the maximum TSS limitations for waste stabilization ponds upward from those specified in the equivalent to secondary treatment standards to conform to TSS concentrations achievable with waste stabilization ponds. These regulations, found at 40 CFR 133.103(c), define TSS concentration achievable with waste stabilization ponds as the concentration that is achieved 90 percent of the time within a state or appropriate contiguous geographical area by waste stabilization ponds that are achieving the minimum effluent quality expected by the equivalent to secondary standards for BOD_5 (45 mg/L as a 30-day average).

Presently, the maximum discharge concentration of TSS as a 30-day average that can be established for waste stabilization ponds in the State of Montana is 100 mg/L. The maximum 7-day average discharge concentration of TSS that can be established for waste stabilization ponds is 135 mg/L. To qualify for an adjustment above the equivalent to secondary standards up to the maximum values allowed, a facility must use a waste stabilization pond as its principal process for secondary treatment and it operations and maintenance data must indicate that it cannot achieve the equivalent to secondary standards.

The special exception for TSS limits for ponds established under 40 CFR 133.103(c) will continue to be applied in this permit. Limits for TSS in the permit reflect the Montana requirements for waste stabilization ponds established under 40 CFR 133.103(c). These requirements are appropriate for a facility in Indian Country within the boundaries of the State of Montana because it is reasonable to assume the wastewater lagoon system performs comparatively to other such facilities located in the State of Montana.

The percent removal requirements for BOD_5 and TSS required by 40 CFR 133.102(a)(3) and (b)(3) or 40 CFR 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 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 best professional judgment, percent removal requirements will not be required in this permit.

E. Water Quality Based Effluent Limitations

1. Water Quality Classification

The Flathead River at the point of discharge is designated B-1 by Tribal Water Quality Standards (WQS). B-1 waters are to be maintained suitable for drinking, culinary and food processing purposes after conventional treatment; bathing, swimming and recreation; growth and propagation of salmonid fishes and associated aquatic life; waterfowl and furbearers; and agricultural water supply.

2. Ammonia

The previous permit determined that there was no reasonable potential for the discharge to exceed the chronic or acute aquatic life standards in the Tribal WQS. Based on the Flathead River's 7Q10, 1,770 cubic feet per second (cfs), it is unlikely that the discharge would cause an exceedance of ammonia standards in the river even if additional ammonia is formed from organic nitrogen in the discharge. There will be no ammonia limits in this permit but monitoring will be required.

3. *E. coli*

The previous permit had monitoring requirements only for *E. coli*. The Tribal WQS contain standards for *E. coli*. The geometric mean of *E. coli* may not exceed 126 colony forming units (cfu)/100 mL if resulting from domestic sewage and 10% may not exceed 252 cfu/100 ml. As shown in Table 1, *E. coli* values as high as 2,200 organisms/100 ml have been observed in the discharge. A mixing zone will not be allowed for *E. coli* to protect the designated uses particularly swimming and recreation. A 30 day average effluent limit of 126 cfu/100 mL and a 7 day limit of 252 cfu/100 ml will be included in this permit and will apply at the end of the discharge pipe.

The permittee will need to install disinfection to meet the permit limit for *E. coli*. A compliance schedule will be included in the permit to provide time for the permittee to install disinfection equipment and meet the limit.

4. Total Residual Chlorine

Tribal WQS contain a standard for total residual chlorine (TRC). If the permittee selects chlorination for disinfection, it will be necessary for the permit to request a permit modification. The permit modification will add a limitation on total residual chlorine.

F. Effluent Limitations

The effluent limitations and the basis for the limitations are given in Table 2. A flow limit based on the design flow of 0.650 mgd has been added. The system discharges continuously, serves a population of 5,200, and at times exceeds the design flow.

Table 2: Effluent Limitations

Effluent Characteristic	30-Day Average	7-Day Average	Basis a/
Flow, mgd	0.650	NA	Design flow of treatment plant
BOD_5, mg/L b/	30	45	Previous Permit 40 CFR 133.102
Total Suspended Solids, mg/L b/	100	135	40 CFR 133.102
***E. coli*, cfu/100 mL** c/	126	252	WQS
The pH of the discharge shall not be less than 6.5 or greater than 9.0 at any time. d/			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. The concentration of oil and grease in any single sample shall not exceed 10 mg/L.			Previous Permit

a/ The basis of the effluent limitations is given below:

"Previous Permit" refers to limitations in the previous permit. The NPDES regulations (40 CFR Part 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 CFR Part 122.62.

"WQS" refers to effluent limitations based on water quality standards. See the section on Water Quality Considerations for information on how the effluent limitations were determined.

b/ The limits for biochemical oxygen demand (BOD_5) and TSS are based on 40 CFR 133.102, "Secondary Treatment Standards."

c/ The limit for *E. coli* applies becomes effective 24 months after the effective date of the permit and will apply year round.

d/ The limits for pH are based on tribal water quality standards. The standards for B-1 water bodies state that variation of hydrogen ion concentration within the range of 6.5 su to 9.0 su must be less than 0.5 su.

G. Self-Monitoring Requirements

Flow will be measured and samples taken at the weir located downstream of the polishing cell. Annual monitoring for nitrate-nitrogen, Total Kjedahl Nitrogen, and total phosphorus have been added to the monitoring requirements to comply with the permit application requirements at 40 CFR 122.21(j)(4)(iii). Weekly BOD_5 samples will continue to be required as the facility has demonstrated difficulties with meeting the limit. Grab samples required in the previous permit have been changed to 24-hour flow based composite sampling to provide samples more representative of the discharge. To allow time to implement composite samples, grab samples may be collected for the first six months after the effective date of the permit.

Table 3. Monitoring Requirements

Effluent Characteristic	**Frequency**	**Sample Type** a/
Flow, MGD	Weekly	Instantaneous
BOD_5, mg/L	Weekly	Composite
TSS, mg/L	Monthly	Composite
***E. coli*, # cfu/100 ml b/**	Monthly	Grab
pH	Monthly	Instanteous
Oil and Grease c/	Monthly	Visual
Ammonia Nitrogen, mg/L	Monthly	Composite
Nitrate-Nitrogen, mg/L	Annually	Composite
Nitrite-Nitrogen, mg/L	Annually	Composite
Total K Nitrogen, mg/L	Annually	Composite
Total Nitrogen, mg/L	Annually	Calculated
Total phosphorus, mg/L	Annually	Composite

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

b/ Monitoring for *E.coli* applies year-round.

c/ In the event that an oil sheen or floating oil is observed in the discharge, a grab sample shall immediately be taken, analyzed, and reported.

2. Compliance Schedule

The permittee will have 24 months from the effective date of the permit to install treatment and comply with the *E. coli* limits.

Table 4. *E. coli* Compliance Schedule	
DATE	**ACTION**
Six months after effective date of permit.	Submit report that describes plan for installing treatment and funding available or plans to obtain funding.
18 months after effective date of permit.	Have treatment installed and report in writing to EPA that treatment is installed.
24 months after effective date of permit.	Comply with *E. coli* limits and submit report in writing to EPA that the facility is in compliance.

H. Biosolids

The use and/or disposal of sewage sludge shall be done under the authorization of an NPDES permit issued for the use and/or disposal of sewage sludge by the EPA Region 8 biosolids program.

I. Whole Effluent Toxicity Monitoring

40 CFR 122.21(j)(5) specifies which publicly-owned treatment works must conduct whole effluent toxicity (WET) testing. WET testing is required for facilities with (1) a design flow greater than 1 mgd; (2) an approved pretreatment program. The Director may require other facilities to conduct WET testing based on the following considerations: (1) variability of pollutants; (2) ratio of effluent flow to receiving stream flow; (3) existing controls on point and non point sources; (4) receiving stream characteristics. EPA's analysis indicates that the facility is not required to conduct testing at this time. There are no industrial users discharging to the WWTF. At this time, the facility will not be required to conduct WET testing.

J. Endangered Species Act (ESA) Requirements

Section 7(a) of the Endangered Species Act requires federal agencies to insure that any actions authorized, funded, or carried out by an Agency are not likely to jeopardize the continued existence of any federally-listed endangered or threatened species or adversely modify or destroy critical habitat of such species.

According to the U.S. Fish and Wildlife Service, Montana Field Office, internet site at http://www.fws.gov/mountain-prairie/mt.html, Table 5 lists the federally listed threatened, endangered and candidate species and proposed and designated critical habitat found on the Flathead Reservation in Montana.

Table 5: Threatened, Endangered, and Candidate Species on the Flathead Reservation

Common Name	Scientific Name	Status	Habitat
Bull Trout	*Salvelinus confluentus*	Threatened; Critical Habitat	Clark Fork, Flathead, Kootenai, St Mary, and Belly River basins; cold water rivers and lakes.
Grizzly Bear	*Ursus arctos horribilia*	Threatened	Resident, transient; Alpine/subalpine coniferous forest
Canada Lynx	*Lynx canadensis*	Threatened	Resident; western Montana-montane spruce/fir forests
Spaldings's Campion (or "catchfly")	*Silence spaldingii*	Threatened	Upper Flathead River Fisher river drainages; Tobacco Valley – open grasslands with rough fescue or bluebunch wheatgrass
Water Howellia	*Howellia aquatilis*	Threatened	Wetlands; Swan Valley, Lake and Missoula Counties
Wolverine	*Gulo gulo luscus*	Candidate	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
Whitebark Pine	*Pinus albicaulis*	Candidate	Forested areas in central and western Montana, in high-elevation, upper montane habitat near treeline

EPA finds this permit is Not Likely to Adversely Affect any of the species listed by the US Fish and Wildlife Service under the Endangered Species Act. The finding is based upon the following: (1) the renewed permit is for an existing facility; (2) the renewal of this permit does not allow for any increase in effluent limitations over the previous permit; (3) The facility does not provide any habitat for any of the endangered, threatened, or candidate species listed in Table 4; and (4) effluent limits are protective of water quality.

K. National Historic Preservation Act (NHPS) 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. EPA has evaluated its planned reissuance of the NPDES permit for the Facility to assess this action's potential effects on any listed /eligible historic properties or cultural resources. EPA does not anticipate any impacts on listed/eligible historic properties or cultural resources because this permit is a renewal and will not be associated with any new ground disturbance or changes to the volume or point of discharge.

L. Total Maximum Daily Load

On June 21, 2000 and September 21, 2000, U.S. District Judge Donald W. Molloy issued orders stating that until all necessary total maximum daily loads (TMDLs) under Section 303(d) of the Clean Water Act are established for a particular water quality limited segment, the EPA is prohibited from issuing new permits or from increasing already permitted discharges under the NPDES program. (The orders were issued pursuant to the lawsuit Friends of the Wild Swan, et al., v. U.S. EPA, CV 97-35-DWM, District of Montana, Missoula Division.)

Although the Confederated Salish and Kootenai Tribes 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, EPA specifically stated that the approval did not extend to waters in Indian Country. EPA finds that the issuance of this permit would not conflict with the Order because the permit limits are the same or lower than those in the previous permit, and the permit contains a condition that would allow the permit to be reopened to include any Waste Load Allocation applicable to the discharge developed and approved by the Tribes and/or EPA.

M. Miscellaneous

The effective date of the permit and the permit expiration date will be determined at the time of issuance. The permit will be issued for a period of approximately five years but not to exceed five years.

Prepared by Rosemary Rowe
July 11, 2012