



# UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 8, MONTANA OFFICE  
FEDERAL BUILDING, 10 W. 15<sup>th</sup> STREET, SUITE 3200  
HELENA, MONTANA 59626

## STATEMENT OF BASIS

---

PERMITEE: Salish and Kootenai Housing Authority  
P.O. Box 38  
Pablo, MT 59855  
(406) 675-4491

FACILITY: Woodcock Home Addition Wastewater Treatment Facility

PERMIT NO.: MT0030554

CONTACT: Bobbi Howell  
Salish and Kootenai Housing Authority  
P.O. Box 38  
Pablo, MT 59855  
(406) 675-4491

PERMIT TYPE: Minor POTW, Indian Country, Renewal

RECEIVING WATER: Swale draining to Middle Crow Creek approximately ¼ mile to the northwest.

LOCATION: Timberlane Road 3 miles southeast of Ronan, MT  
NW ¼ of Section 8, Township 20 N, Range 19 W  
Latitude 47.5145°N, Longitude 114.05350°W

POPULATION: 140

### A. Permit Status

This Statement of Basis is for the renewal of the National Pollutant Discharge Elimination System (NPDES) permit for the discharge of wastewater from the Woodcock Home Addition Wastewater Treatment Facility (WWTF). The WWTP 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 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 effective July 1, 2007 and will expire on June 30, 2012.

### B. Facility Description

The WWTF serves 35 homes in the Woodcock housing development. The system consists of two clay lined cells. The primary cell contains two aerators, and the secondary cell has a Pond Doctor which both aerates and circulates the contents of the cell. According to the renewal application submitted by SKHA, the design flow is 0.01 million gallons per day (mgd). The WWTF discharges twice per year in April and November. The



discharge is disinfected by ultraviolet light. The previous permit required an accurate system to measure flow to be installed.

C. Past Discharge Data

The data below covers the period from 2007-2011:

<b>Table 1: Discharge Data</b>					
<b>Parameter</b>	<b>Range</b>	<b>Average</b>	<b>Permit Limit(s)</b>	<b>Number of Data Points</b>	<b>Number of Excursions</b>
Biological Oxygen Demand (BOD <sub>5</sub> ), mg/L	11-93	38.2	30/45 <u>a/</u>	10	2
Total Suspended Solids (TSS), mg/L	9-17.5	14.5	30/45 <u>a/</u>	10	0
<i>E. coli</i> , # organisms/100 mL	1-200	83	126/252 <u>b/</u>	10	0
pH, standard units	6.8-7.8		6.5-9.0	10	0

a/ 30-Day/7-Day average

b/ Summer/Winter

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<sub>5</sub> 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. The previous permit contained limits for Total Suspended Solids (TSS) based on 40 CFR 133.105(d) which provides adjusted TSS requirements of 100 mg/L for Waste Stabilization ponds. Based on the discharge data provided for the four discharges, TSS ranged from 4 to 14 mg/L well below the 40 CFR 133.102 requirements. Therefore the permit limit for TSS will be set at 30 mg/L for the 30 day average and 45 mg/L for the 7 day average.

The percent removal requirements for BOD<sub>5</sub> 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 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 best professional judgment, percent removal requirements will not be required in this permit.

E. Water Quality Based Effluent Limitations

1. Water Quality Classification

According to the Tribal WQS, Flathead River and its tributaries, including Middle Crow Creek, are classified as 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.

2. Receiving Water Flows and Mixing Zone

No flow data is available for Middle Crow Creek. According to the CSKT, Middle Crow Creek is intermittent. The revised Tribal 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.

3. Ammonia

The previous permit used data from the nearest surface water station, North Crow Creek, to determine the applicable WQS for ammonia. The table below shows the applicable WQS for ammonia.

Condition	Period <u>a/</u>	Salmonids Present	Early Life Stages Present	Ambient Condition		Water Quality Standard
				pH	Temperature ° C	
Acute	Annual	Yes	NA	8.3 <u>b/</u>	NA	3.15
Chronic	Winter	NA	Yes	7.8 <u>c/</u>	3.7 <u>c/</u>	3.18
Chronic	Summer	NA	Yes	8.1 <u>c/</u>	11.2 <u>c/</u>	2.10

NA- Not Applicable  
a/ Winter is defined as November 1 through March 31 and summer as April 1 through October 31.  
b/ Based on 95<sup>th</sup> percentile of data of the annual data.  
c/ Based on 75<sup>th</sup> percentile of data the seasonal data.

The previous permit required monitoring of the discharge at the point where it flows into Middle Crow Creek for ammonia (Outfall 002). The purpose of this sample point was to determine if attenuation of ammonia in the swale was sufficient to meet the WQS. Nine samples were collected at Outfall 002. The ammonia values ranged from 7.69 mg/L to 19.7 mg/L. The average was 14.1 mg/L. All of the ammonia values at Outfall 002 exceeded the WQS. Since Middle Crow Creek is intermittent, the permit limits will be based on achieving the WQS the end of the discharge pipe. Ammonia limits will be added to the permit. The summer limits will be 2.10 mg/L for the 30-day average and 3.15 mg/L for the daily maximum. In the winter, only the daily maximum limits of 3.15 mg/L will apply since the chronic limits of 3.18 mg/L is higher than daily maximum.

4. E. coli

Under the Tribal WQS, 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. A 30 day average effluent limit of 126 cfu/100 mL and a 7 day limit of 252 cfu will be retained in this permit.

5. Total Residual Chlorine

The previous permit contained a limit for Total Residual Chlorine (TRC) which was used for disinfection at that time. However the permittee now uses ultraviolet light for disinfection. The TRC limit will be removed from this permit.

F. Effluent Limitations

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

<b>Table 3: Final Effluent Limitations</b>				
<b>Effluent Characteristic</b>	<b>30-Day Average</b>	<b>7-Day Average</b>	<b>Daily Maximum</b>	<b>Basis</b>
<b>BOD<sub>5</sub>, mg/L</b>	30	45	NA	40 CFR 133.102(a)(1)&(2)
<b>Total Suspended Solids, mg/L</b>	30	45	NA	40 CFR 133.102(b)(1)&(2)
<b>E. coli, cfu/100 ml</b>	126	252	NA	WQS
<b>Ammonia, mg/L <u>a/</u></b>				
<b>Summer <u>b/</u></b>	2.10	NA	3.15	WQS
<b>Winter</b>	NA	NA	3.15	WQS
The pH of the discharge shall not be less than 6.5 or greater than 9.0 at any time. <u>e/</u>				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.				WQS

a/ The ammonia limits become effective three years after the effective date of the permit.

b/ Summer is defined as April 1 – October 31 and winter is defined as November 1 – March 31.

G. Compliance Schedule

Based on the available discharge data, the permittee will not be able to meet the ammonia limits using the current treatment system. A three year compliance schedule will be included in the permit. During this time, the permittee may pursue options to meet the ammonia limits. These options may include elimination of discharge or performing a Use Attainability Analysis (UAA). Annual reports describing the progress being made in meeting the ammonia limits will be required.

H. Self-Monitoring Requirements

The table below identifies samples which will be taken at the end of the discharge pipe from the second cell, leading to the swale for the effluent characteristics and at the frequency identified in the table below.

<b>Table 4: Self-monitoring Requirements</b>		
<b>Effluent Characteristic</b>	<b>Frequency</b>	<b>Sample Type <u>a/</u></b>
<b>Flow, MGD</b>	Monthly <u>b/</u>	Instantaneous
<b>Effluent BOD<sub>5</sub>, mg/L</b>	Monthly <u>b/</u>	Grab
<b>Effluent TSS, mg/L</b>	Monthly <u>b/</u>	Grab
<b>E. coli, # cfu/100 ml <u>c/</u></b>	Monthly <u>b/</u>	Grab
<b>Ammonia Nitrogen, mg/L</b>	Monthly <u>b/</u>	Grab
<b>pH, standard units</b>	Monthly <u>b/</u>	Grab or Instantaneous
<b>Oil and Grease, Visual <u>d/</u></b>	Monthly <u>b/</u>	Observation

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

b/ Monthly when discharging.

c/ Monitoring for E.coli applies year-round.

d/ 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.

I. 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.

J. 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.

K. 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 4 lists the federally listed threatened, endangered and candidate species and proposed and designated critical habitat found on the Flathead Reservation in Montana.

<b>Table 3: Threatened, Endangered, and Candidate Species on the Flathead Reservation</b>			
<b>Common Name</b>	<b>Scientific Name</b>	<b>Status</b>	<b>Habitat</b>
Bull Trout	<i>Salvelinus confluentus</i>	Threatened; Critical Habitat	Clark Fork, Flathead, Kootenai, St Mary, and Belly River basins; cold water rivers and lakes.
Grizzly Bear	<i>Ursus arctos horribilia</i>	Threatened	Resident, transient; Alpine/subalpine coniferous forest
Canada Lynx	<i>Lynx canadensis</i>	Threatened	Resident; western Montana-montane spruce/fir forests
Spaldings's Campion (or "catchfly")	<i>Silence spaldingii</i>	Threatened	Upper Flathead River Fisher river drainages; Tobacco Valley – open grasslands with rough fescue or bluebunch wheatgrass
Water Howellia	<i>Howellia aquatilis</i>	Threatened	Wetlands; Swan Valley, Lake and Missoula Counties
Wolverine	<i>Gulo gulo luscus</i>	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	<i>Pinus albicaulis</i>	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.

**L. 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.

M. 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 Middle Crow Creek discharge developed and approved by the Tribes and/or EPA.

N. 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  
May 8, 2012

No comments were received during the comment period.  
Rosemary Rowe  
July 19, 2012

In response to comments made by the region, the compliance schedule for meeting the ammonia limitation was increased from three years to five years, and additional interim reporting requirements were added. The permit compliance schedule is shown below.

The permittee will have five years to develop and implement a plan to meet the ammonia limits in Section 1.3.2. Interim steps in meeting the limit will include the identification of alternatives. The permittee may meet the limits by eliminating the discharge or by working with the Tribes to develop site-specific criteria, or by other means. If the permittee elects to eliminate the surface discharge, the limits in 1.3.2. will not apply once the discharge is eliminated.

Date	Deliverable
Twelve months after the effective date of permit.	Provide progress report describing efforts made to meet the ammonia limit. Include a discussion of alternatives being considered and possible funding sources.
Twenty-four months after the effective date of permit.	Provide a list and detailed descriptions of the alternatives being considered to meet the ammonia limit, including estimated costs. Identify a preferred alternative.

Thirty months after the effective date of permit.	Provide a report identifying the selected alternative which will be developed to comply with the ammonia limits and identify funding sources.
Thirty –six months after the effective date of the permit.	Provide a progress report on developing design plans and obtaining funding for the selected alternative.
Forty-two months after the effective date of the permit.	Provide the final design plan. Initiate implementation of the plan.
Forty-eight months after the effective date of the permit.	Provide a progress report on implementation of the selected alternative.
Sixty months after the effective date of the permit.	Provide final report on completion of the plan and meeting the ammonia limit.

Rosemary Rowe  
October 5, 2012