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

STATEMENT OF BASIS

PERMITEE:	Blackfeet Tribe P.O. Box 850 Browning, MT 59417
FACILITY:	Blackfeet Community Water Treatment Plant
PERMIT NO.:	MT0030643
CONTACT:	Gerald Bechel Lead Operator P.O. Box 480 East Glacier, MT 59343
RECEIVING WATER:	Unnamed intermittent stream which flows to the Two Medicine River
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 Blackfeet Community Water Treatment Plant (WTP). The WTP and its discharge are located within the boundaries of the Blackfeet Reservation which is home to the Blackfeet Tribe (Tribe). The Tribe has been approved by the Environmental Protection Agency (EPA) for "Treatment as a State." The Tribe has adopted Water Quality Standards (WQS). The WQS have not been approved by EPA.

The previous permit became effective on September 1, 2007 and expires on August 31, 2012. The previous permit will remain in effect until this permit is reissued.

B. Facility Description

The WTP is located in t NE1/4 of the NW1/4 of Section 12, Township 31 N, Range 13 W (latitude 48°28'05" North and longitude 113°14'18" West) on Highway 49 north of the town of East Glacier. The WTP began operation in 2011. Water from the WTP serves the town of Browning and surrounding housing projects (population 8,000) and the community of East Glacier (population 500 year round, 1,100 in the summer).

Raw water is piped approximately two miles from the Lower Two Medicine Reservoir to the WTP. Water coming into the WTP is pretreated by screening particles greater than 0.5 millimeters (mm). Debris collected on the screens is removed by backpulsing and discharging to the backwash ponds. Backpulsing occurs about every thirty minutes. No chemicals are used in the pretreatment process.

The WTP uses mircrofiltration for treatment. The process uses loose, hollow fibers assembled into modules. During treatment, a vacuum is applied to the inside of the filers. Water flows from the outside of the fibers to the inside creating filtered or treated water. The accumulation of undesired particulates on the outside of the fibers is controlled by three processes: (1) continuous introduction of air to scour solids

from the surface of the fibers; (2) regular backwashing of the fibers; and (3) periodic cleaning with chlorine and critic acid. Backwash occurs every twenty-five minutes for sixty seconds. Previously filtered water that has not been chlorinated is drawn by a pump through the filters in the reverse direction. The backwash water is discharged to the backwash ponds. A maintenance clean is performed once per day. 50 mg/L of sodium hypochlorite is used to backwash the filters. The backwash is drained to the backwash ponds.

Twelve times per year the entire train is cleaned with sodium hypochlorite and six times per year with citric acid in a process called recovery clean. At the end of these cleaning processes, the cleaning solution is neutralized and then drained to the ponds. Sodium bisulfate and sodium hydroxide are used for neutralization. Neutralization is considered complete when the pH is between 6 and 9.0, and the chlorine concentration is less than 0.01 mg/L according to the project engineer. All backwash and neutralized chemicals are discharged to the backwash ponds. Following filtration, the water is chlorinated prior to distribution.

The backwash ponds consist of two settling ponds with a total surface area of 0.642 acres. The ponds are designed for infiltration and will discharge only in the event of an extreme precipitation event. The infiltration rate is estimated to be 7.5 ft/day. The ponds are designed to retain the 100 year, 24 hour precipitation event and the maximum process water discharged. The precipitation event would have to be more than 15 inches in 24 hours to cause a discharge. A discharge may also be necessary if one cell is taken off line for maintenance. Any discharge would be from a discharge pipe in the second cell. A manhole in the discharge line contains a weir where flow can be measured.

C. Past Discharge Data

No discharges have been reported from the WTP. However the WTP has not complied with all discharge monitoring and reporting over the last permit term.

D. Technology Based Effluent Limitations

There are no effluent limitation guidelines that apply to the type of discharge covered by this permit. Accordingly, the technology based effluent guidelines for Total Suspended Solids (TSS) are based on Best Professional Judgment as provided for in Section 402(a)(1) of the Clean Water Act. The previous permit set the TSS limits at 50 mg/L for a 30-day average and 100 mg/L as a daily maximum. These permit limits will be maintained in this permit.

E. Water Quality Based Effluent Limitations

The Blackfeet Tribe has adopted WQS but they have not been approved by the EPA. The unnamed intermittent stream's, to which the WTP discharges, designated uses are: aquatic life-no fish, immersion recreation, wildlife and cultural use. The Two Medicine River, which the unnamed intermittent stream discharges to a short distance from the WTP, has the following designated uses: drinking water, culinary, and food processing after conventional drinking water treatment; all life stages of salmonides, including growth and propagation; all life stages of non-salmonid fishes, including growth and propagation; agricultural uses, navigation and industrial uses; and cultural uses.

Sodium hypochlorite and critic acid are used in cleaning the filters at the WTP. Residual chlorine in the discharge as well as the pH of the discharge are of potential concern to aquatic life in the Two Medicine River. The Tribal WQS include limits on pH of 6.5 to 9.0 s.u. The Tribal WQS acute aquatic life standard for chlorine is 19 µg/L and the chronic aquatic life standard is 11µg/L. The WQS have a limited mixing zone policy which prohibits any acute toxicity in the mixing zone. However there is no detailed

mixing zone policy and implementation procedures at this time. Therefore the permit will have a 30 day average limit of 0.011 mg/L and a daily maximum of 0.019 mg/L for total residual chlorine.

F. Effluent Limitations

The effluent limitations and the basis for the limitations are given in Table 1.

Table 1: Effluent Limitations

Effluent Characteristic	30-Day Average	Daily Maximum	Basis a/
Total Suspended Solids, mg/L	50	100	BPJ
Total residual chlorine, mg/L	0.011 b/	0.019 b/	WQS
The pH of the discharge shall not be less than 6.5 or greater than 9.0 at any time			WQS

a/ BPJ means best professional judgment.
WQS means water quality standards.

b/ For the purposes of the permit, the minimum limit of analytical reliability in the analysis for total residual chlorine is considered to be 0.10 mg/L using the DPD spectrophotometric method of analysis. For purposes of calculating averages and reporting on the Discharge Monitoring Report form, analytical values less than 0.10 mg/L shall be considered to be in compliance with the permit.

G. Self-Monitoring Requirements

Flow shall be measured and samples taken at the manhole where the weir is located.

Table 2. Monitoring Requirements

Effluent Characteristic	Frequency a/	Sample Type b/
Flow, MGD	Weekly	Instantaneous
TSS, mg/L	Weekly	Grab
pH	Weekly	Grab or Instanteous
Total Residual Chlorine, mg/L	Daily	Grab or Instanteous

a/ Frequency of self monitoring applies only when discharge from the ponds is occurring.

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

H. Inspection Requirements

Weekly inspections of the filter backwash ponds are required. The inspection requirements include checking to see if a discharge is occurring, checking for leaks in the dikes, dike erosion, indications of animals burrowing in the dikes, and rooted plants growing in the ponds. Inspections may be delayed if weather conditions (e.g. lightening, icy footing, etc.) make it dangerous to conduct the inspection.

In addition to weekly inspections, the permittee is required to take periodic measurements of sediment in the filter backwash ponds. The purpose of this requirement is an attempt to keep the ponds from becoming too full of sediment and thus reducing their treatment efficiency to the point that the effluent limitations will not be met. The measurements are to be taken three times a year (in March-April, June-August, and October-November). After the measurements are taken, the permittee is to make a determination if sludge should be removed from the filter backwash pond(s) before the next measurements are to be taken. Measurements in a filter backwash pond do not have to be taken if the sludge has been removed from that pond within the previous 45 days.

I. 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 3 lists the federally listed threatened, endangered and candidate species and proposed and designated critical habitat found on the Blackfeet Reservation in Montana.

Table 3: Threatened, Endangered, and Candidate Species on the Blackfeet Reservation

Common Name	Scientific Name	Status	Habitat
Bull Trout	*Salvelinus confluentus*	Threatened	Clark Fork, Flathead, Kootenai, St Mary, and Belly River basins; cold water rivers and lakes.
Grizzly Bear	*Ursus arctos horribilis*	Threatened	Resident, transient; Alpine/subalpine coniferous forest
Canada Lynx	*Lynx canadensis*	Threatened	Resident; western Montana-montane spruce/fir forests
Piping Plover	*Charadrius melodus*	Threatened	Pondera County: Sandbars, alkali beaches
Sprague's Pipet	*Anthus spragueii*	Candiate	Grassland habitats with little or no shrub cover east of the Continental Divide
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 3; and (4) effluent limits are protective of water quality.

J. 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 WTP 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.

K. 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.)

The Blackfeet Tribe has not listed water bodies as impaired and has not 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. If a future waste load allocation is set for any parameter which could apply to the Blackfeet Community WTP, the permit contains a provision that would allow the permit to be reopened and modified.

L. 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
August 14, 2012