



**BLACKFEET**

***BLACKFEET TRIBE'S SURFACE WATER QUALITY STANDARDS AND  
ANTIDEGRADATION POLICY***

***APPROVED BY COUNCIL***

\_\_\_\_\_

***SUBMITTED TO EPA***

\_\_\_\_\_

***APPROVED BY EPA***

\_\_\_\_\_

***EFFECTIVE DATE:***

\_\_\_\_\_

**TABLE OF CONTENTS**  
**SURFACE WATER QUALITY STANDARDS**  
**OF THE BLACKFEET TRIBE**

<b>Part I</b>	<b>DECLARATION OF TRIBAL POLICY AND AUTHORITY .....</b>	<b>4</b>
1.0	Policy .....	4
2.0	Authority .....	5
3.0	Severability.....	5
4.0	Other Law .....	5
5.0	Provision for Review and Revision of Standards .....	6
<b>Part II</b>	<b>TRIBAL WATER QUALITY STANDARDS .....</b>	<b>6</b>
1.0	Introduction .....	6
2.0	Definition of Terms .....	7
3.0	Classes of Beneficial Uses for the Blackfoot Tribe .....	14
3.2	Domestic Water Supply Uses .....	15
3.3	Fish and Aquatic Life Uses .....	15
3.4	Recreation Uses .....	17
3.6	Agricultural Uses .....	18
3.7	Navigation and Industrial Uses.....	19
4.0	Designated Uses for Waters of the Tribe .....	20
4.2	Waters Included .....	21
4.3	Designated Uses of Tribal Surface Waters .....	21
TABLES 4.3-1 to 4.3-5 .....		22
DESIGNATED USES OF BLACKFEET TRIBAL WATERS -See Appendix B.....		22
5.0	Narrative Criteria to Protect Uses .....	23
6.0	Numeric Criteria to Protect Uses.....	25
6.5	Human Health Pollutants .....	27

<b>7.0 Biological Criteria .....</b>	<b>27</b>
<b>8.0 Radiological Criteria .....</b>	<b>28</b>
<b>9.0 Clean Sediment Policy and, Criteria .....</b>	<b>28</b>
<b>10.0 Contaminated Sediment Policy and Criteria .....</b>	<b>29</b>
<b>11.0 Nutrients Policy and Criteria .....</b>	<b>29</b>
<b>12.0 Site Specific Criteria .....</b>	<b>30</b>
<b>13.0 Wetlands Policy and Criteria .....</b>	<b>30</b>
<b>14.0 Antidegradation .....</b>	<b>31</b>
<b>15.0 Policy and Procedures for Tribal Implementation of Water Quality Standards.....</b>	<b>39</b>
<b>Part III 401 CERTIFICATION.....</b>	<b>43</b>
<b>1.0 Introduction .....</b>	<b>43</b>
<b>2.0 Purpose .....</b>	<b>44</b>
<b>3.0 Definitions .....</b>	<b>44</b>
<b>4.0 Authority to Act .....</b>	<b>44</b>
<b>5.0 Application .....</b>	<b>44</b>
<b>6.0 Public Notice and Public Hearings.....</b>	<b>46</b>
<b>APPENDIX A TABLES .....</b>	<b>48</b>
<b>Table A-1 .....</b>	<b>49</b>
Table A.1.2. Selenium Aquatic Life Criteria for Fresh Waters .....	60
Table A.1.3 Conversion Factors for Dissolved Metals Criteria .....	62
Table A.1.4 Parameters for Calculating Freshwater Dissolved Metals Criteria That Are Hardness-Dependent.....	63
<b>Table A-2 .....</b>	<b>64</b>
<b>Table A-3 .....</b>	<b>70</b>
<b>Table A-4 .....</b>	<b>71</b>
<b>Priority Pollutants .....</b>	<b>71</b>
<b>Table A-5 .....</b>	<b>75</b>
Table A-5.1.....	77
Table A-5.2.....	78

Table A-5.3.....	80
Table A-6.....	81
<b>APPENDIX B TABLES.....</b>	<b>83</b>
<b>Designated Use Tables 4.3-1 to 4.3-5 .....</b>	<b>83</b>
Table B-4.3.1 Two Medicine River Watershed .....	84
Table B-4.3.2 Saint Mary River Watershed.....	86
Table B-4.3.3 Birch Creek Watershed.....	87
Table B-4.3.4 Cut Bank Creek Watershed.....	88
Table B-4.3.5 Milk River Watershed .....	90
Appendix C .....	91

**SURFACE WATER QUALITY STANDARDS**  
**OF THE BLACKFEET TRIBE**

**Part I**                      **DECLARATION OF TRIBAL POLICY AND**  
**AUTHORITY**

**1.0 Policy**

The Blackfeet Tribe believes that the quality of water resources within the boundaries of the Blackfeet Reservation are of utmost value to the Tribe and all peoples that live within the Reservation and must be protected under the jurisdiction of the Tribe. Water quality influences all aspects of Tribal health and welfare, including its use for domestic and cultural purposes, the protection of aquatic life and wildlife, the protection of recreation in and on the water, and its use for the economic well-being of the Tribe.

The Blackfeet Tribe declares that it shall be its policy to develop, maintain, and periodically revise water quality standards on all surface waters within the Blackfeet Reservation boundaries and to do this under Tribal authority (Aquatic Lands Protection Ordinance 90A) and the authority of the Clean Water Act (CWA), 1972 and subsequent amendments. In accordance with this declaration, the following standards are adopted to preserve, protect, and maintain the chemical, physical, and biological integrity of the surface waters, including wetlands, of the Blackfeet Reservation.

Further, in implementing these water quality standards, the Tribe declares that:

- 1) All practicable methods to control and prevent pollution of waters on the Reservation shall be required.
- 2) The Tribe will seek to maintain the highest quality of Tribal waters.
- 3) Pollutants that enter ground waters and have a direct hydrologic connection to surface waters are considered to be from point sources for purposes of implementing these standards.
- 4) Without adequate water quality the economic security and political integrity of the Tribe is at risk.

**Public involvement in water quality:** It is the policy of the Blackfeet Tribe to involve the Tribal public in the development and revision of Tribal Water Quality Standards to facilitate public understanding and participation. In this process, a separate companion document to the Tribal Water Quality Standards has been prepared and is available to the public. This document (A Citizens Guide to Blackfeet Surface Water Quality Standards) provides a general overview of what water quality standards are and how they are applied, but this Guide is not formally a part of the standards requiring EPA approval. The Guide includes specific discussions of:

- 1) What the Blackfeet Water Quality Standards are;
- 2) How water quality standards are arrived at;
- 3) How standards are used to protect the quality of surface waters under the jurisdiction of the Blackfeet Tribe; and
- 4) How EPA and the public is involved in the process.

The Guide is available free from the Tribal Environmental Office and other locations where Tribal Water Quality Standards are available for review.

## 2.0 Authority

The water quality standards rules are adopted by the Tribal Council upon recommendation of the Natural Resource Department, under authority of the Constitution and Bylaws for the Blackfeet Tribe of the Blackfeet Reservation (Article VI), the Aquatic Lands Protection Ordinance 90A, and Land and Water Conservation Ordinance 62. After consideration of these authorities and in consultation with the Environmental Protection Agency (EPA), the following rules are promulgated.

These standards shall be effective under the Clean Water Act 30 days after adoption and immediately after approval by EPA. Prior to approval by EPA, and after adoption by the Tribe, these standards shall be applicable to Tribal waters insofar as Tribal authority allows.

## 3.0 Severability

If any word, phrase, clause, sentence, paragraph, section, or other part of these rules is held invalid by any court of competent jurisdiction, such judgment shall affect only that portion held invalid and all other provisions shall be in force.

## 4.0 Other Law

These rules in no manner supersede or negate the necessity of any person to obtain permits or conduct such environmental studies as may be required by Federal or Tribal authorities for any

conduct or activity affecting or potentially affecting Reservation waters and the designated uses of these waters.

Any applicable rule-making procedures required by Tribal law will be followed with respect to the classification and adoption of standards for all surface water bodies and wetlands of the Blackfeet Reservation including antidegradation policy decisions regarding Reservation waters.

## 5.0 Provision for Review and Revision of Standards

Standards will be reviewed and revised as necessary from time to time, but not less often than every three years from the time of the last public hearing for these standards.

Revisions will be in accordance with Tribal Ordinance 90A, any conditions stated in these standards, and the Clean Water Act. Proposed revisions will be solicited from the community through public hearings and other means of communication and public notices and hearings before Council will be completed before changes are made in the standards and these changes submitted to EPA for approval.

New or revised parts of the water quality standards will become effective after EPA approval. Until such time, the previously EPA-approved standards will be in force.

# Part II **TRIBAL WATER QUALITY STANDARDS**

## 1.0 Introduction

The practical purpose of tribal water quality standards is to provide the legal basis for maintaining and restoring the quality of waters within the Blackfeet Reservation boundaries. By maintaining those waters that are of high quality and restoring those waters that have been degraded from their natural condition the economic, recreational, spiritual, and social values of the Tribe and all of the people within the Reservation will be enhanced.

Water quality standards reflect the goals, or designated uses, the Tribe sets for each water body within the Reservation boundaries. These goals describe the beneficial uses and the desired water quality conditions that presently exist or are to be achieved for each of the Tribe's water bodies.

Designation of these uses for a particular waterbody does not mean that this waterbody has fully achieved the goal use at the present time. It does mean that, through Tribal and federal regulation and through voluntary nonpoint source efforts, the Tribe will strive to fully achieve the designated beneficial uses. The designated uses provide a legal basis to accomplish this goal.

Water quality standards consist of four basic parts, plus the descriptions of how each of these parts will be implemented (i.e., including all written general policies and implementation procedures). General policies are components of Tribal Water Quality Standards. These parts of our water quality standards are:

- a) A description of the kinds or classes of beneficial uses the Tribe will use and their assignment to particular waterbodies as designated uses.
- b) Specific numeric criteria for specific pollutants that will protect the designated uses.
- c) The descriptive or narrative criteria that apply to all waterbodies; these apply to all pollutants, whether or not they have numeric criteria, and may apply to sources of degradation not normally thought of as pollutants.
- d) An antidegradation policy that applies to all waterbodies and seeks to protect or limit any negative changes in water quality.

## 2.0 Definition of Terms

The specific meaning of terms used in the Blackfeet Water Quality Standards are important to understanding the standards and for legally determining what is intended by statements in the Standards. The following terms are used in the Blackfeet Water Quality Standards and have the meanings given below for each term defined. Other terms, not defined below, have the normal dictionary meaning of the words.

- 1. **“Acute standard”** means the water quality standard that is intended to protect a beneficial use over a short exposure period. This period is usually measured as an instantaneous or one hour average.
- 2. **“Beneficial use”** means any use set out in Part II, Section 3 as a use class or category of Tribal waters. These uses presently include categories and subcategories of Domestic water supplies, Fish and aquatic life, Recreation, Wildlife, Agriculture, Industrial and Navigation, and Cultural and Spiritual uses.



Additional uses or subcategories of uses may be added in the future. Definitions under each of these categories are contained in Part II, Section 3 of these standards.

3. ***“Best Management Practices” (“BMP’s”)*** means schedules of activities, operational practices, maintenance procedures, and other management practices adopted by rule or incorporated by the Tribe or agency as a condition of a permit or contract to prevent or reduce the pollution of Reservation waters. *Best Management Practices* may also include treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage that enter or have the potential to enter surface waters or ground waters of the Tribe.
4. ***“BEO”*** means the Blackfeet Environmental Office.
5. ***“Chronic standard”*** means the water quality standard that is intended to protect beneficial use over a prolonged exposure period. This period is usually based on a 30-day average but may be shorter (4-7 day) or longer (lifetime exposure).
6. ***“Classes of beneficial uses”*** are those uses the Tribe considers to be a benefit to the Tribe and must be protected under Tribal water quality standards when applied to a particular Tribal waterbody. These uses include classes and sub-classes of aquatic life, municipal water, cultural, spiritual, recreation, wildlife, industrial and agricultural uses and are defined in Part II, Section 3 of these standards.
7. ***“Contaminated sediments”*** means sediments containing any of the specifically regulated priority or non-priority pollutants included in the Tribal Numeric Chart for surface waters and any other pollutants found in sediments that are determined to be deleterious to existing and designated uses.
8. ***“Conventional water treatment”*** means, in order of application, the processes of coagulation, sedimentation, filtration and disinfection. It may also include taste and odor control and lime softening.

9. ***“Criteria”*** means water quality numeric values, or narrative statements, representing a quality of water which when met protect designated uses. Criteria that are adopted by the Tribe become Tribal Numeric or Narrative Criteria
10. ***“Cultural uses”*** means any use the Tribe or its members make of a Tribal waterbody which the Tribe, at its sole discretion, considers to be a use related to the culture of the Blackfeet people and which the Tribe seeks to protect.
11. ***“Deleterious substances”*** means any physical, chemical, or biological materials in concentrations or amounts that do or could impair the designated or existing uses of Reservation surface waters.
12. ***“Designated use”*** means those uses of Reservation waters which are specified, or designated, for particular waterbodies or segments of waters, whether or not they are being attained. In addition, it is the intent of these regulations that all “existing uses”, as defined herein, be designated as they become known.
13. ***“Discharge”*** means any addition of pollutants or combination of pollutants to Reservation waters from any point source. Discharge also means any pollutant-contaminated waters entering any surface waters of the Tribe as the result of a direct hydrologic connection from ground waters that have been degraded by any surface sources. A discharge from pollutant sources through direct hydrological connection may occur at multiple locations and do not require the existence of a discrete pipe or other typical point source conveyances.
14. ***“EPA”*** means the U.S. Environmental Protection Agency.
15. ***“Ephemeral stream”*** means a stream or part of a stream which flows only in direct response to precipitation in the immediate watershed or in response to the melting of a cover of snow or ice. The channel bottom is normally always above the local groundwater table, except under extreme conditions.

16. ***“Existing use”*** means a use actually attained in the water body or a use that the existing water quality would have allowed the water body to attain, on or after November 28, 1975. This definition applies whether or not the existing use is a designated use and included in Tribal water quality standards.
17. ***“Geometric mean”*** means the value obtained by taking the Nth root of the product of the measured values where zero values for measured values are taken to be the detection limit.
18. ***“High quality waters”*** are considered to be any water where existing water quality is significantly better than applicable criteria. Refer to section 14.4.2 for a more complete definition of high-quality waters.
19. ***“Intermittent stream”*** means a stream or reach of a stream that does not normally contain flowing surface water during the entire year. The stream or stream section is below the local groundwater table for at least some part of the year and obtains its flow from either or both surface runoff and ground water discharge during parts of the year. Intermittent streams may have some pooled waters that are separated by dry or non-flowing segments during parts of the year when the stream as a whole is not flowing. Intermittent streams may also have sub-surface flow during the entire year, which may allow for the existence of aquatic life during periods where there is no surface flow.
20. ***“Naturally occurring water quality”*** means the quality of a waterbody which has had little or no human influence. The quality of this water is not based upon one fixed concentration of parameters, but is described by the range, mean, mode, and other appropriate descriptors of seasonal and annual water quality in Reservation waters. Where there is insufficient data available to determine what the naturally occurring water quality of Tribal water is, the Tribe may infer the naturally occurring quality from similar waters that have sufficient data to describe a naturally occurring condition.
21. ***“Natural limitations”*** means qualities of the naturally occurring water quality or physical habitats in Tribal waters which limit the full expression of a beneficial use or may be less than the normal water quality standards for the classification

of that waterbody. Natural limitations are not the result of human-related activities affecting physical habitats or water quality.

- 22. ***“NPDES”*** means the National Pollutant Discharge Elimination System.
- 23. ***“Outstanding National Resource Waters (ONRW)”*** means waters that because of their exceptional water quality and/or their ecological, recreational, or cultural and spiritual significance are an outstanding National resource.
- 24. ***“Outstanding Tribal Resource Waters (OTRW)”*** is the term used by the Tribe for Reservation waters having the same attributes as ONRWs. This designation, under the Antidegradation provisions, may be applied by the Tribe to any surface water of the Tribe on approval by Council.
- 25. ***“Perennial water”*** means waters that normally flow throughout the year or contain standing water throughout most of the waterbody during the entire year. Perennial streams normally intersect and are partially fed by ground water but may be losing or gaining streams at particular locations. Under extreme climactic conditions a normally perennial stream may be intermittent. Although normally intermittent streams may have isolated perennial pools, they are differentiated from perennial streams by the relatively low proportion of the stream that is perennially pooled.
- 26. ***“Person”*** means an individual, association, partnership, corporation, commercial or professional establishment, institution, firm, government or agency, or any agent or employee thereof.
- 27. ***“Pesticide”*** means any insecticide, herbicide, rodenticide, fungicide or any substance or mixture of substances intended for preventing, destroying, repelling, altering life processes, or controlling insects, rodents, nematodes, fungi, algae, weeds, and other undesirable forms of terrestrial or aquatic plant and animal life.
- 28. ***“Point Source”*** means any discernable, confined, and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, dam gate

or spillway, well, discrete fissure, container, rolling stock, or vessel or other floating craft from which water-born pollutants are or may be discharged. Point Sources may also include waters originating at discrete locations on the surface that subsequently enter ground waters and reenter Tribal surface waters, as described under the definition of “discharge”.

29. **“Pollutant”** means any material that enters or has the potential to enter surface waters of the Tribe and impairs or has the potential to impair any designated or existing use of Tribal waters or that results in the exceedance of any numeric or narrative criterion. Pollutants include, but are not limited to, dredged soil, dirt, slurry, solid waste, incinerator residue, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt, or any industrial, municipal, or agricultural wastes discharged into or that in any way enter waters of the Tribe.
30. **“Pollution”** means any man-made or man-induced alteration that results in or has the potential to result in the degradation of the chemical, physical, biological, or radiological integrity, or to impair any of the designated or existing uses of any Tribal water.
31. **“Sediment”** means solid or semi-solid material which is carried by or may settle from suspension in Tribal water. This includes inorganic and organic particles originating from weathering, chemical precipitation, biological processes, scouring or any activity of man. Sediment may be in the water column or on the bottom of Tribal water. Sediment is generally defined as particles smaller than 1.0 cm, but may be defined as larger or smaller, in accordance with best available science.
32. **“Settleable solids”** means inorganic or organic particles that are being transported or have been transported by water from the site or sites of origin and are settled or are capable of being settled from suspension in Tribal waters.
33. **“Standards”** means water quality standards including all designated uses, all numeric criteria, all narrative criteria, all policies and procedures related to antidegradation and all written general policies and implementation procedures for any of the above.

34. **“Surface waters”** means any waters on the surface of the Reservation, including but not limited to streams (perennial, intermittent, and ephemeral), lakes, ponds, reservoirs, and wetlands. Constructed treatment facilities that are not within any of the Tribal surface waters, have been approved by the Tribe, and are used solely for treating, transporting, or impounding pollutants are not considered surface waters of the Tribe.
35. **“Toxic substances”** means EPA’s most recent published list of priority pollutants in CWA 304 (a) Criteria Recommendations and any concentrations or combinations of materials which are toxic or harmful to human, animal, plant, or aquatic life. Toxic substances may also, depending upon context, be used to describe any chemical, biological, or physical substance that causes injury or death to any form of aquatic life or any form of life that utilizes Tribal water, including wildlife and humans.
36. **“Tribal Numeric Chart Levels”** means the levels and concentrations considered by the Tribe to be numeric water quality criteria for priority, non-priority pollutants and any other constituents on these charts and the conditions of their application. Tribal Charts generally adopt the latest EPA updates to the CWA 304 (a) Criteria Recommendations for priority toxic and other pollutants but may be more stringent, at the discretion of the Tribe. Values and conditions for Tribal numeric charts are given in Appendix Tables.
- Tribal criteria for human health are based on the latest carcinogen risk levels (at a risk factor of one in one million) to protect human health.
37. **“True color”** means the color of water from which turbidity has been removed.
38. **“Turbidity”** means a condition in water or wastewater caused by the presence of suspended matter resulting in the scattering and absorption of light rays. Turbidity is expressed as nephelometric turbidity units (NTU).
39. **“Undesirable aquatic life”** means any form of aquatic life (plant, invertebrate, vertebrate, parasite) that is introduced or not native to the water and is

considered undesirable by the Tribe. In addition, the abundance or quantity or relative abundance of any species may be considered as “undesirable” if it significantly interferes with the attainment or maintenance of a designated use.

40. **“Use Attainability Analysis”** (UAA) means a structured scientific assessment of the ability of a waterbody to attain a particular designated use. It is based on the physical, chemical, biological, and economic factors that affect the attainment of an existing or designated use. A use attainability analysis typically consists of a water body survey and assessment, a waste load allocation, and, if appropriate, an economic analysis. UAAs may be used to determine whether a use could be attained were it not for natural or anthropogenic conditions that are not reparable within approximately 20 years and must conform to EPA’s latest guidance on use attainability analysis.
41. **“Waterbody” or “tribal waterbody” or “tribal water”** means any surface water, or part of surface water under jurisdiction of the Tribe. Entire streams, lakes, ponds, wetlands, etc. or portions of these waters (e.g., segments of a stream) may be defined as a waterbody for purposes of designating uses or applying water quality criteria. Unless draining into a surface water, or specifically designated, irrigation ditches are not considered to be a water of the Tribe for water quality purposes. Also, see “Surface water” and “Water of the Tribe”.
42. **“Waste”** means any material, gas, liquid or solid, that is a product or by-product of any human activity and that is disposed of or that enters waters of the Tribe and impairs or has the potential to impair any Tribal use.
43. **“Water of the Tribe”** means any surface water within the exterior boundaries of the Blackfeet Reservation. This includes, but is not limited to, rivers, streams, creeks, lakes, ponds, reservoirs, wetlands, springs, irrigation return flows to surface waters, and all other waters that are in a natural drainage. Treatment works approved by the Tribe, and which are used solely for treating transporting or impounding pollutants, are not considered a surface water of the Tribe. Tribal waters include waters that are perennial, intermittent, and ephemeral.

### 3.0 Classes of Beneficial Uses for the Blackfeet Tribe

#### 3.1 Introduction

The Tribe has identified the following list as beneficial uses of Tribal waters. “Beneficial uses” are not the same as “designated uses” but are the classes or types of uses that the

Tribe recognizes. These uses are known to exist or may exist in the future on one or more waters of the Tribe. Once a beneficial use is applied to a specific waterbody, the beneficial use is considered a designated use for that waterbody.

All beneficial uses are not appropriate for all waters of the Tribe. Because of this, each category of beneficial uses is evaluated to determine whether it should apply to a specific Tribal waterbody. For example, in assessing what designated uses should be applied to the upper Milk River segment, the Tribe would evaluate the entire list of Tribal beneficial uses to determine whether or not that use ever existed on the river or was to be a goal use the Tribe desires the river to meet.

The following Tribal beneficial uses include all of those uses required by the Clean Water Act and has, in addition, the class of “Cultural Uses”. If, in the future, other beneficial uses are determined which require protection under Tribal water quality standards, they may be added. In addition, refinements (or sub-classes) of the beneficial uses may be added or deleted, in compliance with the Clean Water Act, if the Tribe finds this useful in further protecting water quality and the uses it supports.

## 3.2 Domestic Water Supply Uses

**3.2.1 Domestic Water:** Waters that are naturally of high quality and are intended to be suitable for drinking, culinary, and food processing after only simple disinfection and/or conventional drinking water treatment.

## 3.3 Fish and Aquatic Life Uses

The Fish and Aquatic Life use has been divided into three sub-classes to reflect actual or potential populations to be protected in Blackfeet Tribal waters. The Blackfeet Tribe recognizes that the suitability of aquatic organisms for human ingestion are addressed in each of the three fish and aquatic life uses. The life uses that the Tribe identifies are:

### 3.3.1. Class 1 Cold Water Fishery

Provides for protection, propagation, and growth of salmonid fishes, as well as protection, growth, and propagation of associated aquatic life.



### 3.3.2 Class 1 Cool Water Propagation

Provides for protection, propagation, and growth of cool water fishes, as well as protection, growth, and propagation of associated aquatic life.

### 3.3.3. Aquatic Life other than Fish

Provides for the protection, propagation, and growth of a wide variety of aquatic invertebrate biota, including sensitive species. These are small perennial headwater streams, intermittent streams, or springs which due to natural habitat conditions, water flows or levels do not support nor have the potential to support fish.

The Tribe recognizes that, theoretically, only a single aquatic life classification would be necessary, since in all cases the most sensitive species in a waterbody is protected by the standards.

The Fish and Aquatic Life classifications recognize that salmonid species (trout, char, salmon, and whitefish) are a very significant part of the ecology of Tribal waters and are often the most sensitive species to be protected in a waterbody. It also recognizes that there may be particular species or life stages (ie., Bull trout, embryonic stages) that have specific water quality requirements that go beyond the needs of other salmonids or life stages (ie. temperature and sediment, enhanced sensitivity to metals as embryos). In addition, the classification recognizes that some species or life stages may be present in a waterbody at some times of the year and not at other times.

Federally listed threatened or endangered species or Tribal species of special concern may be the basis for a classification of Class 1 Cold Water or Class 1 Cool Water. Further, the classification recognizes that salmonids may occur in reduced numbers or sizes in waters where *natural* conditions of water quality or habitat significantly limit reproduction or growth. Also, waters that have natural limitations of flow, physical habitat, and/or water quality may be able to support **Aquatic Life Other Than Fish** with standards that protect this use but may not fully protect fish life.

The following Fish and Aquatic Life classifications specifically include *all aquatic life* in addition to fish life. The phrase, “other fish species and aquatic life normally associated with this waterbody in a natural or unimpaired state”, used in the aquatic life classifications is to be interpreted to mean:

- O all fish species, native or intentionally stocked species except those species that are not native and are not considered desirable by the Tribe; and

- O all aquatic or semi-aquatic vertebrates, such as frogs, turtles, snakes, etc.;
- O all aquatic or semi-aquatic invertebrates, except those species that are not native and are considered undesirable by the Tribe (e.g., invasive species);
- O all aquatic or semi-aquatic plants, diatoms, and soft algae, except those species that are not native and are considered undesirable by the Tribe (e.g., invasive species); and
- O “normally associated” means species that would be expected to occur in a waterbody with similar characteristics, location, and altitude in its natural state.

### 3.4 Recreation Uses

Recreational uses include any human uses of Tribal waters that may be considered recreational in character. The Tribe uses two categories of use, generally based on the likelihood of health effects from pathogens entering the body while recreating in or on the water. It is anticipated that most or all waters of the Tribe will be designated for one or both of these classes.

#### 3.4.1 Recreational Class 1

**Full body contact** Waters that are or have the Tribal goal of being, suitable for bathing, swimming, wading and recreation where the likelihood of pathogens entering the body from any orifice or break in the skin is high. The bacteriological density shall not exceed a 90-day geometric mean of 126 cfu E. coli per 100 ml and the statistical threshold value of 410 cfu E. coli per 100 ml more than 10 percent of the time during a 90-day period.

The concentration of total microcystins shall not exceed 8 µg/L in more than three ten-day periods per recreational season, for more than one recreational season, over a five-year period and the concentration of total cylindrospermopsin shall not exceed 15 µg/L in more than three ten-day

periods per recreational season, for more than one recreational season, over a five-year period.

#### 3.4.2 Recreational Class 2

**Incidental contact:** Waters that are or have the Tribal goal of being suitable for boating, fishing, and incidental contact recreation where the likelihood of pathogens entering the body from any orifice or break in the skin is low. These designations require a use attainability analysis.

#### 3.5 Wildlife Uses

Waters that are, or have the Tribal goal of being, suitable for reproductive, cover, and/or feeding habitat (depending on the species) of non-domesticated species of birds, mammals, reptiles, and amphibians.

It is the Tribal goal that *all* waters be designated for wildlife uses.

These waters shall be free from constituents in amounts that are harmful to the survival, growth, or reproduction of wildlife species, or constituents that bioaccumulate in aquatic food organisms to the extent that they are harmful to growth or reproduction of these species or their prey, including human populations.

#### 3.6 Agricultural Uses

Waters that are or have the Tribal goal of being suitable as an irrigation source for agricultural activities or domestic livestock use. Designation of a waterbody for agricultural use does not imply or convey any water quantity right.

**3.6.1 Irrigation use:** These waters shall be free from constituents in amounts that are harmful to soils or the growth of crops or contain constituents that bioaccumulate to the extent that they are harmful to the survival, growth or reproduction of domestic animals or people eating those crops.

**3.6.2 Livestock use:** These waters shall be free from constituents in amounts that are harmful to the growth of domestic animals or contain constituents that bioaccumulate to the extent that they are harmful to the survival, growth or reproduction of domestic animals or may be harmful to those animals or people eating them.

### **3.7 Navigation and Industrial Uses**

The quality of all waters are intended to be generally suitable for navigation and raw water for industrial uses. The Tribe will assume that the quality of water protected by other uses will protect these uses unless it can be shown otherwise.

### **3.8 Cultural and Spiritual Uses**

The cultural and spiritual use classification is intended to include any uses the Blackfeet Tribe, through its Cultural Committee and Tribal Council, considers to be a valid cultural and spiritual activity of the Tribe. The classification does not require specifying the exact nature of the cultural or spiritual activity nor the exact location of the activity on the waterbody. A conclusion by Council that a waterbody has, or is intended to have, cultural and spiritual uses is sufficient to classify a water as such and may only be removed from such classification by the Tribal Council and/or Cultural Committee. In general, all waters of the Tribe are considered to have cultural and spiritual significance; however, the Tribe has determined that two sub-categories of cultural uses are appropriate.

**3.8.1 High Quality Cultural and Spiritual Waters:** These are waters that have a naturally high quality, as determined by the Cultural Committee, have had little degradation from activities of man, and have been determined to merit the designation of High-Quality Cultural and Spiritual use. These waters are, or are intended to be, suitable for any cultural and spiritual activities performed on or in the water and for cultural uses of the water when removed from the waterbody. Cultural and Spiritual waters with the “high quality” designation may not have any new or increased discharges from point sources and are to be maintained at their present condition of water quality to the extent of Tribal authority.

**3.8.2 Cultural and Spiritual Waters:** These are waters that have a satisfactory quality, as protected by other designated uses, and are, or are intended to be, suitable for any cultural and spiritual activities performed on or in the water and for cultural and spiritual uses of the water when removed from the waterbody.

## 4.0 Designated Uses for Waters of the Tribe

### 4.1 Introduction

Once the Tribe establishes categories of Tribal Beneficial Uses, the BEO evaluates each individual Tribal waterbody to determine which of the uses are appropriate and should be assigned to this particular waterbody. Assigning a beneficial use to a particular waterbody makes the use a *designated use* for that water. The decision process of what uses should be designated to a particular waterbody is made based on requirements of the Clean Water Act (CWA) and on Tribal goals for that waterbody.

**4.1.1 Clean Water Act Requirements:** The CWA requires that any use actually attained now or at any time on or after November 28<sup>th</sup>, 1975, must be protected for that waterbody. These uses are collectively called “**existing uses**” in the CWA. The CWA also requires that all waters be designated for protection of aquatic life, wildlife, and recreation in and on the water, unless it can be shown that the waterbody is not capable of supporting these uses. For example, if a waterbody presently supports a trout population, it must be designated for one of the Tribe’s Aquatic Life, Salmonid classifications. However, if a stream does not support trout now, (possibly because temperatures are too high) but the waterbody did support trout in 1987, (when riparian vegetation kept the stream cooler), then it must be designated for a Salmonid classification as an “existing use” and the Tribe must apply standards that would protect and restore that use.

**4.1.2 Tribal Goals:** The Tribe has the authority and may designate waters for some uses even though the Clean Water Act does not require the Tribe to do this, and the use does not exist now. For example: A waterbody below a dam is dewatered almost every year since it was built in 1936. Although it supported trout before the dam was built, there is too little water in the stream to support trout now. The Tribe wishes to restore this stream and chooses to designate this stream for Class 1 Cold Water.

This is an allowable exercise of Tribal authority under the CWA, and the Tribe will set standards to protect this use, even though at present the stream does not support the use.

#### **4.2 Waters Included**

All waters of the Tribe are assigned one or more designated uses if the uses are known or can be assumed. "Water of the Tribe" means any surface water within the exterior boundaries of the Blackfeet Reservation. This includes, but is not limited to, rivers, streams, creeks, lakes, ponds, reservoirs, wetlands, springs, and all other waters that are in a natural drainage and are not specifically made for the treatment of waste. Tribal waters include waters that are perennial, intermittent, and ephemeral as well as those that hydrologically connect surface and groundwaters.

#### **4.3 Designated Uses of Tribal Surface Waters**

The uses designated to specific Tribal running and standing waters are shown on Tables 4.3-1 to 4.3-5. These tables are organized by the major drainages of Saint Mary River, Milk River, Cut Bank Creek, Two Medicine River, and Birch Creek.

**4.3.1 Rivers, streams, creeks, and all running waters.** Any Tribal running waters not included on Tables 4.3-1 to 4.3-5 are designated for ***Aquatic Life Class 1 Cold Water, Full Contact Recreation, Wildlife, Navigation and Industry, Agriculture*** and ***Cultural and Spiritual*** use until such time that information is available to warrant a change in the designated uses.

**4.3.2 Reservoirs, lakes, ponds, springs, and other non-flowing waters.** Any Tribal non-running waters which are not included on Tables 4.3-1 to 4.3-5 are designated for ***Aquatic Life, Class 1 Cold Water, Full Contact Recreation, Wildlife, Navigation and Industry, Agriculture*** and ***Cultural and Spiritual*** uses until such time as information is available to warrant a change in the designated uses.

**4.3.3 Wetlands.** The Blackfeet Reservation contains many wetlands, most of which have not been named and have little to no data regarding their water quality and existing uses. Although the Tribe is working on a classification system to delineate different groupings of wetlands for water quality standards purposes, this is not yet complete. All wetlands are considered to be waters of the Tribe, regardless of size, and are designated for ***Aquatic Life Class 1 Cold Water, Full Contact Recreation, Wildlife*** and ***Cultural and Spiritual uses*** until such time as information is available to warrant other uses.

**TABLES 4.3-1 to 4.3-5**  
**DESIGNATED USES OF BLACKFEET TRIBAL WATERS -See Appendix B**

## 5.0 Narrative Criteria to Protect Uses

### 5.1 Introduction

Both narrative and numeric criteria are designed to protect the beneficial uses designated for Tribal waters. Narrative criteria are intended to protect waters from pollutants and combinations of pollutants where there are no numeric criteria or to supplement numeric criteria to protect designated uses. In addition, both narrative and numeric criteria may be used as a basis to:

- a) establish maximum or minimum allowable levels or concentrations of pollutants and pollution in Tribal waters which will protect each of the beneficial uses of the Tribe, and;
- b) establish a basis for limiting the introduction of pollutants and/or pollution that could negatively affect existing or designated uses of Tribal surface waters.
- c) establish Total Maximum Daily Loads or other restoration goals that will protect existing and designated uses of Tribal waters.

There should not be changes to ambient water temperatures to levels which result in harmful acute or chronic effects to aquatic life, or which would not fully support existing and designated uses.

### 5.2 Policy

Narrative criteria apply to all uses and waters and may supplement the numeric criteria when there is a conflict. The Tribe will use the best professional judgment and/or weight of evidence approach in implementing narrative criteria. If possible, numeric translators will be developed to interpret the narrative criteria. In situations where the Tribal interpretation of the narrative water quality criterion is more stringent than the applicable numeric criteria for a pollutant (Criteria Chart or other numeric criterion specific to a designated use) the narrative criterion will take precedence. Likewise, if the numeric criterion is more stringent, the numeric criterion will be used.

### 5.3 Narrative Criteria

The narrative criteria given below are set by the Tribe to protect the beneficial uses defined in Section 3.0. These criteria apply to all tribal waterbodies, both classified and unclassified, at all places and all times. They are often referred to as the “free from” criteria.



### 5.3.1 Protection of Cultural and Traditional Uses

All waters with the cultural and spiritual designated use shall be free from contaminants at levels that cause or contribute to an impairment in water-based activities essential to maintaining the Tribe's cultural and traditional practices.

It is the goal of the Tribal Council that all surface waters of the Reservation shall be free from substances in concentrations or combinations which will adversely impact the structure or function of indigenous or intentionally introduced aquatic and wildlife communities.

All Reservation surface waters must be:

- a) ***free from*** pollution or pollutants (either alone or in combination with other pollutants and/ or pollution) that are or may become ***injurious to public health, safety, welfare***, or will cause or contribute to the violation of surface water quality standards (including existing and designated uses, numeric and narrative criteria, and antidegradation provisions).
- b) ***Free from*** substances attributable to municipal, industrial, or other discharges or agricultural practices that may cause or contribute to the formation of decaying or otherwise ***objectionable sludge deposits*** or emulsions beneath the surface of the water or upon adjoining shorelines.
- c) ***Free from floating debris, oil, scum***, and other floating materials attributable to municipal, industrial, or other discharges or agricultural practices in amounts ***sufficient to be unsightly or deleterious***. Floating oil is not to be present as a visible oil film or globules of grease.
- d) ***Free from*** material attributable to municipal, industrial, or other discharges or agricultural practices producing ***color, odor, or other conditions*** in such a degree as to ***create a nuisance*** or render ***any undesirable taste*** to fish flesh, ***or in any other way, make food fish inedible*** or ***harm wildlife*** ingesting aquatic food organisms.
- e) ***Free from*** substances attributable to municipal, industrial, or other discharges or agricultural practices in ***concentrations or combinations which are toxic or harmful*** to human, animal, plant or aquatic life

- f) **Free from** substances attributable to municipal, industrial, or other discharges or agricultural practices in **concentrations or combinations** which produce or encourage **undesirable** populations or conditions of **aquatic life or nuisance aquatic life**.
- g) **Free from** potentially deleterious substances that bioconcentrate in aquatic life will be kept at the lowest level possible, and in no case higher than numeric criteria to protect aquatic life.
- h) **Free from** substances that may negatively affect the structure and function of biological communities, whether via point source or non-point source.

### 5.3.2 Temperature

Ambient water temperatures will not result in harmful acute or chronic effects to aquatic life and will not impair either existing uses or designated aquatic life uses. Ambient water temperatures will provide for the protection, survival, recruitment, and growth of aquatic species.<sup>1</sup> Additionally, ambient water temperatures will maintain the natural thermal regime (i.e., daily and seasonal patterns of variability) and avoid major thermal modifications to prevent thermal shock or otherwise negatively affect aquatic life below any acute or chronic thresholds identified.

## 6.0 Numeric Criteria to Protect Uses

### 6.1 Introduction

Numeric criteria are the concentrations of pollutants in the water that are considered to be protective of a beneficial use when they are not exceeded. These numeric values are based upon the best scientific data available and usually follow EPA recommended values, however, they may be more stringent than EPA recommendations if the Tribe deems this is necessary to protect the designated uses of waters. Numeric criteria

---

<sup>1</sup> When available, the Tribe will consider site-specific information regarding the presence and timing of the aquatic species and life stages expected to occur. When site-specific information is unavailable, the Tribe will rely upon information from similar water bodies or sites and its knowledge of the historic and current ecology of Tribal waters to identify the most thermally sensitive aquatic species and life stages expected to occur. The Tribe will also consider scientifically defensible information regarding the thermal requirements of the most thermally sensitive species and life stages expected to occur to ensure their protection. Possible sources of information and methodologies include, but are not limited to, those described in the associated guidance: "Compilation of temperature requirement and criteria development information". The Tribe will also consider temporal variation and whether both acute and chronic temperature criteria are necessary to protect the species and life stages expected to occur.

consist of allowable concentrations of pollutants (usually, micrograms or milligrams per liter of water) for short term exposure (acute) and long-term exposure (chronic) and an averaging period over which they are measured. Acute criteria for aquatic life are to be protective for the short term and are usually based on one-hour exposures. Chronic criteria for aquatic life are usually based on 4- to 30-day exposures but may be based on life cycle exposures. Human health criteria are generally based on estimated lifetime exposures.

All human health criteria utilize the updated human health risk levels for priority pollutants and other pollutants “published” in the most recent EPA documents. (“Published” and “documents” may include those values given at the official EPA internet site.)

***Downstream protection.*** All waters designated in paragraph (a) of this section shall maintain a level of water quality that provides for the attainment and maintenance of the water quality standards of downstream waters, including the downstream waters of a state or another federally-recognized tribe.

## 6.2 Policy

The following shall be Tribal policy with regards to numeric water quality criteria:

- In the case of human health criteria, the Tribe has a choice of using one-in-a-million (1/1,000,000) or one-in-one hundred thousand (1/100,000) risk factor for cancer producing chemicals. The Tribe has chosen the more protective one-in-a-million risk factor. (It is noted that in some cases the State of Montana has chosen less than one in a million risk factors.)

## 6.3 Priority Pollutants

Appendix A, Table A-1, Blackfeet Numeric Water Quality Criteria Chart for Priority Pollutants, gives the Tribal numeric acute and chronic criteria for priority pollutants. Priority pollutants are defined by section 307 of the Clean Water Act and include metals, pesticides, and organic chemicals. Acute and chronic criteria are not available for all pollutants. Where they are available, these values are currently based upon the most recent EPA 304(a) criteria recommendations. It is important to take into account the footnotes to the numeric criteria. Where there is no numeric criterion for a pollutant, the narrative criteria will apply.

The toxicity to aquatic life of several of the metals concentrations varies by the hardness of the water. Generally, metals in softer water (lower hardness) are more toxic than metals in harder water. Where hardness is a factor, the concentrations for criteria in the Tables are based upon a hardness of 100. Criteria for other hardnesses should be calculated based on formulas in the Footnotes. Metal criteria are provided in the dissolved form except for aluminum which is the total recoverable form.

#### 6.4 Non-Priority Pollutants

Appendix A, Table A-2, **Numeric Water Quality Criteria Chart for Non-Priority Pollutants**, gives numeric acute and chronic criteria for non-priority pollutants. These include a variety of pollutants, including bacteria, oxygen, chlorine, ammonia, and pH. A number of these pollutants do not have both acute and chronic criteria, and some do not have any numeric criterion at the present time. Where there is no numeric criterion for a pollutant, the narrative criteria will apply.

#### 6.5 Human Health Pollutants

Appendix A, Tables A-1 and A-2, identify numeric criteria for the protection of human health from the consumption of aquatic organisms. The “water plus organism” criteria apply to waters designated for both water supply and one of the aquatic life uses to which the organism-only criteria apply.

Appendix A, Table A-, **Numeric Surface Water Maximum Contaminant Level (MCL) Criteria Adopted to Protect the Water Supply Designated Use**, include chemicals that affect the drinking water use and are based upon the Safe Drinking Water Act. These are to be applied to both classes of Tribal Drinking Water Supply uses in instances when both a MCL and water plus organism criteria are available for a particular parameter, the most stringent applies.

## 7.0 Biological Criteria

### 7.1 Policy

All future biological criteria will apply to all fish and aquatic life uses. Additionally, the Tribe intends to fully protect federally listed or proposed threatened or endangered species or species of special Tribal concern.

### 7.2 Numeric Biological Criteria

At this time, the Tribe does not have specific, numeric biological criteria, however, it is the intent of the Tribe to develop such criteria as resources allow. In the interim, narrative criteria apply.

## 8.0 Radiological Criteria

### 8.1 Policy

No person may cause radioactive materials to be present in surface waters in excess of natural quantities.

### 8.2 Numeric Radiological Criteria

Specific numeric criteria for radiological substances are contained in the numeric criteria chart for purposes of determining potential impairment.

## 9.0 Clean Sediment Policy and, Criteria

Clean sediments are particles of 1.0 cm or smaller that do not contain toxic materials in toxic amounts and are contained in the water column or deposited on the bottom of Tribal waters.

### 9.1 Policy

The Tribe recognizes that, although running waters normally carry sediments, sediment loads substantially above natural levels or of a finer material than natural, can be detrimental to the designated uses of those waters and particularly aquatic life uses. Excessive sediments can smother organisms, destroy spawning areas, and fill pools and ponds. It is Tribal policy that all waters be free from the deposition of anthropogenically induced or influenced levels of sediments in amounts that impair any of the designated uses of Tribal waters.

### 9.2 Criteria and Standards

Presently, the Tribe does not have numeric criteria for sediment deposition. Implementation procedures to translate our policy or numeric criteria may be developed in the future.

## 10.0 Contaminated Sediment Policy and Criteria

Contaminated sediments are particles of one centimeter or smaller that contain toxic materials in toxic amounts and is in the water column or deposited on the bottom of Tribal waters.

### 10.1 Policy

It is Tribal policy that all waters be free from the deposition of contaminated sediments in amounts that impair any of the designated uses of Tribal waters.

### 10.2 Criteria

Sediments that accumulate on the bottom of a water body shall be free from toxic or hazardous materials that may adversely affect aquatic life, human health, or the environment. Sediments are soils, sand, organic matter, or minerals. The Department/Tribe will determine protective values from published scientific documents, such as:

U.S. EPA Regional Screening Levels (RSLs);

[http://www.epa.gov/region6/6pd/rcra\\_c/pd-n/screen.htm](http://www.epa.gov/region6/6pd/rcra_c/pd-n/screen.htm)

- 2019 NMED Risk Assessment Guidance for Site Investigations and Remediation (February 2019)
- Washington Department of Ecology Sediment Cleanup Users Manual:  
<https://fortress.wa.gov/ecy/publications/documents/1209057.pdf>
- Assessing Ecological Risks Posed by Radionuclides: Screening-Level Radioecological Risk Assessment (2-2000)

A responsible party may use a different, scientifically defensible value based on site conditions upon providing sufficient justification and gaining approval from the tribal environmental department.

## 11.0 Nutrients Policy and Criteria

Nutrients are primarily forms of nitrogen and phosphorus that allow and encourage the growth of vegetation in aquatic systems. Some examples include phytoplankton (free floating algae), periphyton (mixture of algae, microbes and bacteria) or macrophytes (larger forms attached to the bottom).

### 11.1 Policy

Excessive nutrients in Tribal waters may impair designated uses by reducing oxygen in the water column, by encouraging undesirable species and amounts of plant life, and by degrading the aesthetic qualities of water. It is Tribal policy to seek control of excessive amounts of nutrients, regardless of the source.

### 11.2 Criteria

The Tribe will develop criteria based upon EPA recommendations, as this information becomes available.

## 12.0 Site Specific Criteria

The Tribe recognizes that, although the numeric table criteria will be protective of uses in the great majority of cases, there may be instances of specific water chemistry or sensitivity of a particular species that make pollutants more or less toxic or harmful to a designated use. Site specific criteria are a means of avoiding gross over or under-protection of designated uses and may be lower or higher in concentration than the usual numeric criteria to protect that use.

Site specific criteria apply to a specific waterbody and must not prevent attainment of downstream water quality standards. Although different from the numeric criteria specified in the numeric criteria tables, site specific criteria are required to fully protect all designated uses of the waterbody to which they are applied. As with all changes in water quality standards, site specific standards criteria will be submitted to EPA for approval along with the scientific rationale and evidence for the proposed new criteria.

### 12.1 Policy

Site specific criteria must be scientifically shown to fully protect all uses of a waterbody, and procedures to determine this protection must follow the latest EPA recommendation or allowed procedures. Any person wishing to propose site specific criteria must provide convincing scientific proof to the Tribe, at the expense of the proponent. The studies must be coordinated with the Tribe and EPA and must be approved by EPA before they are effective.

### 12.2 Criteria

Site specific criteria will be determined on a case-by-case basis. At present, there are no site-specific criteria for any Tribal water.

## 13.0 Wetlands Policy and Criteria

The Tribe recognizes that the natural water quality of wetlands may differ from that of associated surface waters, even when there is a direct hydrologic connection. In addition, there

are many wetlands that do not have any direct connection to other surface waters of the Tribe. The Tribe also recognizes that parameters such as temperature, pH, and dissolved oxygen may be naturally different in wetlands from other kinds of healthy waterbodies. For these reasons, and because there are a great many wetlands on the Reservation for which there is no water quality data, the following will apply to all wetlands until numeric wetlands criteria are developed.

### 13.1 Policy

The existing water quality of all unimpaired wetlands will be maintained; wetland form, functions and values will be protected. When a wetland is known to be impaired, based upon existing field data, these wetlands will be restored and enhanced as funding becomes available. Specifically, the Tribe intends to fully protect federally listed or proposed threatened or endangered species or species of special Tribal concern that may use wetlands of the Tribe. Existing wetlands may not be used as a treatment system to treat pollutants.

When any person shall undertake activities which have the potential to degrade a wetland, that person shall be responsible for collecting and analyzing water quality data to ensure no degradation of the wetland. The study design, parameters and frequencies of sampling shall be approved by the BEO prior to any activity potentially affecting a wetland.

### 13.2 Criteria

There are presently no criteria that are specific to the wetlands of the Tribe. Until specific criteria are developed, the following guidelines (which are considered to be narrative criteria for all wetlands) will apply:

- *For all **wetlands*** The narrative and numeric criteria of the associated waterbody will apply unless it can be scientifically shown that other criteria reflect the natural condition and protect the designated uses.

## 14.0 Antidegradation

### 14.1 Introduction

In addition to the water quality standards components described in previous Parts, the CWA requires that water quality standards of States and Tribes include an Antidegradation Policy and that procedures are developed to implement this policy which is designed to prevent the degradation or lowering of water quality. The three overall purposes of the Antidegradation policy and implementation are to:



- a) ensure a minimum level of water quality, (below which no Tribal waters should be degraded);
- b) provide a basis and process that helps maintain and protect the existing quality of waterbodies which are better than the narrative or numeric criteria; and
- c) provide a mechanism for protecting very high value waters (Outstanding Tribal Resource Waters).

These three purposes generally describe the three Tiers of waters that are protected under the Antidegradation provisions. It is also specifically noted that, in the Antidegradation context, the term “existing use” has a particular meaning as it is used below. Any use that actually existed, on or after November 28<sup>th</sup>, 1975, is an “existing use”. This means that if a use can be shown to have occurred during this time period, but the waterbody is not designated for this use, then that use must be protected with appropriate water quality.

#### 14.2 Levels of Antidegradation Protection (Tiers) of Blackfeet Surface Waters

In order to accomplish the goals of Antidegradation, the Tribe has established three levels or tiers of waterbody protection under the antidegradation policy, in accordance with EPA regulations. These are:

##### 14.2.1 Tier 1, Use Protected Waters

**Waters protected:** All Tribal waters must meet Tier1 water quality requirements.

**Basis for protection:** Existing uses of Tribal waters and the concentrations of pollutants or levels of pollution necessary to fully protect existing uses shall be maintained and protected for Tier 1 waters.

##### 14.2.2 Tier 2, High Quality Waters

“High quality waters”, within the meaning of Antidegradation, will be determined on a parameter by parameter-based test described in the implementation section 14.4.2.

**Waters protected:** All Tribal waters that have a quality better than numeric or narrative criteria and meet the definition of high-quality waters are protected.

**Basis for protection:** Only Tribal waters considered to be “High Quality” are protected under Tier 2. The Tribe recognizes that in order to accommodate legitimate tribal uses and economic development, waters considered under Tier 2 may be degraded to the protection level of narrative and numeric standards, but only after a clear social or economic need and examination of alternatives that would result in less degradation has been completed.

Where the quality of a waterbody is better than the levels (concentrations) necessary to support the propagation and growth of fish and other aquatic life, wildlife, and recreation in and on the water, that quality shall be maintained and protected, unless the **BEO recommends, and the Council finds:**

- O after compliance with the intergovernmental coordination and public participation provisions of any Tribal administrative procedures and continuing planning process,
- O that allowing lower water quality is **necessary** to reasonably accomplish the goals of the proposed development or activity, and, after a thorough analysis and consideration of all reasonable **alternatives**, and the proposed activity/development will,
  - a) accommodate important tribal economic or social development, and
  - b) the development will be in the area in which the high-quality water is located.
- O In allowing any degradation or lower water quality the BEO and the Council shall assure:

- a) that water quality is adequate to protect existing uses fully,
- b) that the highest requirements for all **new** and **existing** point sources are in place or legally agreed to, and
- c) the Tribe has required all cost-effective and reasonable best management practices for point source and nonpoint source pollution control.

#### 14.2.3 Tier 3 waters. Outstanding Tribal Resource Waters (OTRW).

**Waters protected:** Only waters specifically designated by the Tribe as an OTRW are Tier 3 waters. The Tribe may designate many or no waters as OTRWs, at its discretion, after consideration of information and petitions of nomination of waters as Outstanding Tribal Resource Waters. Outstanding Tribal Resource Waters (OTRW) has the same meaning as the CWA term Outstanding National Resource Waters (ONRW). The Tribe has determined that the following waters, by category or as individual waterbodies, are Tier 3 waters:

- (1) All waters located within tribally designated primitive or wilderness areas.
- (2) No individual waters have been designated.

**Basis for protection:** Where Tribal waters constitute an outstanding Tribal resource, such as waters of exceptional quality, or waters of ecological, recreational, or cultural significance, water quality shall be maintained and protected at its existing quality (with certain temporary exceptions, as described below).

#### 14.3 Applicability & Limitations of Antidegradation

- a) The requirements of Antidegradation provisions apply to any human activity degrading or potentially degrading a waterbody or segment of a waterbody.

- b) If the BEO or Council determines, based on important economic or social development, that degradation may be allowed in Tier 2 or Tier 1 waters, in no event may degradation of Reservation waters interfere with or become harmful, detrimental, or injurious to public health or welfare, recreation, safety, cultural or spiritual values, fish and wildlife uses, livestock uses, or other existing uses.
- c) In allowing degradation to lower water quality, the Department shall assure water quality adequate to protect existing uses fully and shall assure that the most stringent enforceable requirements will be applied to all new and existing point sources and that all cost-effective and reasonable best management practices for nonpoint source control will be achieved.
- d) Degradation of Outstanding Tribal Resource Waters (OTRW) is prohibited.
- e) No new or expanded discharges are allowed in OTRW waters or their tributaries, within the exterior boundaries of the Blackfeet Reservation, whether or not they would degrade existing water quality. Short term exceptions to this policy may be made by the Department if the activity will result in the cleanup of an existing pollution source or for an essential, but short term, activity such as bridge or road construction or repair. In this event, all practicable methods are used to minimize any water quality or habitat effects on the affected waters and to minimize the length of time that the exception will apply.

#### 14.4 Antidegradation Implementation

Implementation procedures for Antidegradation provisions are continuing to be developed. The following procedures are in effect at this time and will be added to and updated in subsequent revisions. Until Antidegradation implementation procedures are completed, the Tribal staff will work with EPA Region VIII staff to identify and apply appropriate antidegradation implementation procedures that are in addition to those specified in this section.

##### 14.4.1 Tier 1, Use Protected Waters

- a) **Waters included:** All surface waters of the Tribe are “use protected” under Tier 1
  
- b) **Determination that all existing uses are protected.**
  - i. During the water quality standards setting and revising process, the BEO will educate the public and other Tribal offices as to the meaning of “existing uses” under the Antidegradation context. The public will be encouraged to provide information on uses known for specific waterbodies through public meetings and/or written notices by the BEO and Council. The BEO and Council will actively seek and consider any public or private information brought to their attention regarding uses that existed on or after November 28<sup>th</sup>, 1975, for any surface water of the Tribe.
  
  - ii. Each instance of a potential “existing use” that is not a designated use which is brought to the Tribe’s attention will be confirmed or rejected by the BEO after examination of the source of information and seeking any additional confirmation of the use.
  
  - iii. Factors the Tribe will use in determining whether a non-designated use is an “existing use” include, but are not limited to:
    - O Whether there is any confirmatory evidence from other people;
    - O Whether there are written records documenting the use; and
    - O Whether other departments or agencies agree the use existed.
  
  - iv. Existing uses, if not designated, will be designated when they become known and are considered valid by the BEO. When bonafide existing uses are determined by the BEO, but have

not yet been designated by the Tribe, they must go through a WQS revision/adoption process before changing the uses designated for (or criteria and policies applied to) any waterbody and will be proposed to Tribal Council as designated uses.

#### 14.4.2 Tier 2, High Quality Waters

**Identification of “High Quality” waters:** The following shall govern how high-quality waters are identified.

- O all Tribal waters shall be considered high quality waters unless there is evidence that the natural water quality for the pollutant of concern exceeds narrative or numeric water quality criteria as outlined in this document. The following implementation procedures will be used to ensure identification and protection of Tier 2 waters:

High Quality waters are considered to be any water where existing water quality using a parameter-by-parameter approach that focusses upon the predicted impacts associated with the activity.

- a) Full written implementation procedures have not been developed by the Tribe at this time. However, in the interim, the following procedures will guide implementation of the protection of Tier 2 waters:
  - i. Assessment of water quality that is better than narrative and numeric water quality criteria will be evaluated on a seasonal basis, rather than considering all data for a year.
  - ii. Assessment of better than narrative and numeric criteria for acute or chronic criteria will be based upon a minimum of 3 samples per season.

- iii. Generally, the Tribe will interpret “measurably better” as the mean of seasonal data for each parameter considered will be at least 10% better than numeric criteria.

#### 14.4.3 Tier 3, Outstanding Tribal Resource Waters

##### Nomination of OTRWs

Surface waters of the Tribe that are of exceptional quality and/or are of exceptional recreational, ecological, or cultural significance may be designated by the Tribe as Outstanding Tribal Resource Waters (OTRW). OTRWs have the same meaning as ONRWs under the Clean Water Act.

Any person or Tribal Office wishing to nominate an OTRW for the Tribe’s consideration shall follow the petition requirements. The Petition form may be requested from the Department.

The Tribal Council, after consideration of the petition and recommendations of the BEO may designate any Tribal water as an OTRW. It is not necessary that water be considered Tier 2 water in order to be considered as an OTRW.

#### 14.5 Antidegradation Review Process

All new and existing surface water discharge permits shall undergo an Antidegradation review of water quality by the Department at the time of permit issuance or renewal.

At the present time it is only when a permit for a new or increased discharge is sought that the provisions for protecting Tier 2 waters are considered. Because the Tribe has very few discharge permits, this is likely to have few applications presently, but in the future there may be more. In addition, if high quality waters are identified that flow from Montana into the Reservation, identification of these waters as Tier 2 waters may affect any discussions on limits in discharge permits upstream of the Tribe.

## 15.0 Policy and Procedures for Tribal Implementation of Water Quality Standards

### 15.1 Introduction

***The following policies and procedures describe how the Blackfeet Tribe will implement the water quality standards provisions stated in the preceding sections.***

*Several of these policies or procedures are still under development by the Tribe and may be added to or modified on or before the next Triennial Review of the Blackfeet Water Quality Standards. There are some aspects of implementation procedures described within the water quality sections. These apply as implementation procedures and are considered a part of the current Blackfeet Water Quality Standards. As implementation procedures become further developed, they will be included in the sections below. Due to this, several categories of implementation have a heading as a place marker for the procedure which will be developed in the future.*

### 15.2 Mixing Zone Policy

#### 15.2.1 Policy

It is Tribal policy to allow the potential for, but not to automatically grant, a mixing zone below or adjacent to discharges which have a valid NPDES permit. A more detailed mixing zone policy and implementation procedures will be developed by the first Triennial Review and is expected to follow EPA Region VIII Policy Statement, Mixing Zone and Dilutions Policies and Procedures, as well as other accepted EPA guidance documents.

Applicants for a mixing zone must show evidence that:

- a) the mixing zone will not threaten or impair existing beneficial uses.
- b) the smallest mixing area practicable is being requested.
- c) all criteria, chronic and acute, will be met at the edge of the mixing zone, including temperature, pH, ammonia, and all other parameters included on the Tribal Numeric Criteria Charts.



- d) human health criteria for drinking water must be met within 1 mile of any intake for domestic use.

### 15.2.2 Implementation

All mixing zones must meet the following criteria or be considered in violation of Blackfoot Water Quality Standards.

- a) there shall be no acute toxicity within the mixing zone.
- b) the mixing zone shall not interfere with upstream or downstream migration of fish. Interference will be judged by fish not crossing the mixing zone, fish being attracted to the mixing zone and estimated to remain for periods of 24 hours or more, or any observed negative effects on behavior or health of fish in the mixing zone.
- c) mixing zones may not be granted within biologically important areas such as fish spawning/nursery areas or segments with occurrences of federally listed threatened or endangered species.

In addition, the following apply:

- d) dischargers with a valid mixing zone in their permit must periodically monitor at the edge of the mixing zone for any parameters that are, in the judgment of the Tribe, likely to exceed standards. Monitoring shall be at the expense of the discharger and in compliance with a sampling plan and protocol approved by the Tribe in the discharge permit. This must include:
  - i. periodic monitoring for chronic standard exceedances at the edge of the mixing zone, and

- ii. monitoring for acute standard exceedances at the “end of the pipe”.
  - iii. end-of-pipe sampling to determine compliance may be used in conjunction with sampling of the mixing zone and must take into account any changes in toxicity of discharged substances within the mixing zone and downstream due to changes in pH, temperature, hardness, or any other factor affecting toxicity in the waterbody.
- e) dischargers without a valid mixing zone allowance in their permit must meet standards at the end of the pipe (except as described at (f) below). The determination must consider any changes in toxicity of discharged substances within the mixing zone and downstream due to changes in pH, temperature, hardness, or any other factor affecting toxicity in the waterbody.
- f) for discharges to rivers and streams where it is reasonable to conclude that the discharge mixes in a near instantaneous and complete manner, a dilution allowance equal to or less than the critical low flows may be provided for purposes of developing chronic limitations. For minor publicly owned treatment works with adequate dilution where the discharge does not mix in a near instantaneous and complete manner, such dilution allowances may also be provided.

### 15.3 Implementation of Designated Uses

Future addition.

### 15.4 Implementation of Narrative Criteria

Implementation of narrative criteria will be developed as part of the mixing zone policy. Procedures will address various mechanisms used to implement water quality-based controls (chemical-specific, and biological criteria components), as well as how these mechanisms will be integrated to protect designated uses. Implementation is expected to follow EPA guidance documents and 40 CFR 131.11 (a) (2).

Future addition.

### 15.5 Implementation of Numeric Criteria

Implementation procedures are not complete at this time; however, the following applies in addition to any implementation procedures discussed under Section 6.0.

Neither chronic nor acute aquatic life concentration levels for any parameter may be exceeded more than once in any consecutive 3-year period, unless specifically stated otherwise.

#### 15.6 Application of Acute and Chronic Criteria

Allowable Frequency of Exceedances Averaging Periods

See discussion under Section 6.0.

#### 15.7 Calculation of Hardness

Calculation of hardness for purposes of hardness-dependent metals toxicity shall be based on the following:

Acute and chronic standards – Equations based on the variables in Table A-3 and instantaneous hardness value taken at the same time as the metal sample. For hardness values greater than 400 mg/L hardness as  $\text{CaCO}_3$ , a value of 400 mg/L will be used. If no, or only limited, hardness data are available, the Tribe will use representative hardness data to generate an assumed value.

#### 15.8 Calculation of pH

Future addition.

#### 15.9 Calculation of Flow

Future addition.

#### 15.10 Implementation of Wetlands Criteria

Future addition. Also see Section 13.0.

#### 15.11 Implementation of Clean Sediments Criteria

Future addition. Also see Section 9.0

#### 15.12 Implementation of Contaminated Sediments Criteria

Future addition. Also see Section 10.0

#### 15.13 Implementation of Biological Criteria

Future addition. Also see section 7.0.

#### 15.14 Implementation of Nutrients Criteria

Future addition. Also see Section 11.0.

#### 15.15 Variances from Water Quality Standards

Any application for a variance from these water quality standards must meet all the requirements at 40 C.F.R. 131.14. Applicants should work with the BEO before requesting a variance be adopted by Tribal Council.

#### 15.16 Compliance Schedules

The Tribe will decide whether to allow compliance schedules to dischargers needing additional time to be able to meet discharge limitations. The Tribe will decide whether to allow compliance schedules on a case-by-case basis. Any dischargers that exceed permit limits or any new unpermitted discharge shall follow the penalty policy of the Blackfeet Aquatic Lands Protection Ordinance (Ordinance 117 formerly known as Ordinance 90A).

Compliance Schedule Authorization Provision: The Tribe authorizes the use of compliance schedules, on a case-by-case basis, for water quality-based effluent limits in National Pollutant Discharge Elimination System (NPDES) permits, when appropriate, and consistent with 40 CFR 122.47, for new, recommencing, or existing dischargers to require compliance as soon as possible with water quality-based effluent limitations calculated to meet water quality standards.

Any request for a compliance schedule to meet tribal water quality standards should be directed to: Blackfeet Environmental Office Director, 62 Hospital Drive, Browning, MT 59417, (406) 338-7421. Applications should include the following information: facility description and contact; full description of permit compliance problem; and steps/time necessary to resolve the problem.

## Part III 401 CERTIFICATION

### 1.0 Introduction

Section 401 of the Federal Water Pollution Control Act (CWA) requires the applicants for a federal license or permit relating to any activity which may result in any discharge into navigable waters (i.e., waters of the United States) shall obtain a certification from the responsible governmental authority that such discharge will comply with the applicable provisions of sections 301, 302, 303, 306, and 307 of the Clean Water Act.

The tribe, acting through the Blackfeet Environmental Office (BEO), applied for and on May 2, **2012**, obtained recognition of the authority by the U.S. Environmental Protection Agency to implement the CWA 401 Program and to take all actions necessary to meet the requirements thereof.

## 2.0 Purpose

The purpose of this regulation is to establish procedures for application, public notice, and hearing in relation to processing applications for certification required by Section 401 of the CWA.

## 3.0 Definitions

1. "Applicant" for purposes of CWA 401 Certification means any person who applies for a license or permit issued by an agency of the federal government to conduct an activity that may result in a discharge of a pollutant to reservation surface waters or wetlands.

2. "Certification" means grant, grant with conditions, or denial of a request for certification issued by the Blackfeet Environmental Office.

The definitions of other terms used in these regulations shall be consistent with those used in the Blackfeet Aquatic Land Protection Ordinance (Ordinance 90A) and the Federal Clean Water Act and its implementing regulations. In the case of ambiguity, words will be given their ordinary meaning.

## 4.0 Authority to Act

A certification, certification with conditions, or denial of certification with conditions or alternatives shall be issued in letter form but must be assigned a docket number and retained as a part of the BEO official records. Such letters must be signed by a duly authorized agency office which, for purposes of this rule, includes the director of the BEO or persons duly authorized to act for him/her in his/her absence.

## 5.0 Application

1. No discharge of pollutants or construction of any facility that may precipitate a discharge of pollutants to Reservation surface waters, including wetlands, may commence without first obtaining a written certification of such discharge as described herein.
2. Application for certification may be made upon a form supplied by the department or in any manner that adequately and accurately describes the applicant's name and address; a description of the proposed point source or activity; its volume, biological, chemical, physical, and radiological characteristics; a description of the existing environmental conditions at the site of the proposed discharge; its location and duration and extent of the proposed

discharge. The applicant shall also supply the department with the size of the area potentially affected; the location or locations at which the discharge may enter Reservation waters; any environmental impact assessment, information, maps, and/or photographs provided to any licensing or permitting agency; the date or dates of the proposed activity's inception and termination; a description of the methods proposed to monitor the quality and characteristics of the discharge and operation of the facility from which the discharge will originate; and a description of the functions and operation of the activity and any practices proposed to minimize or treat pollutants or other effluent that may be discharged to Reservation waters.

3. In cases where a CWA 402 permit application has been made to the U.S. Environmental Protection Agency or a CWA 404 permit application has been made to the U.S. Army Corps of Engineers, or in cases where an applicant has applied for approval for a project pursuant to Blackfeet Aquatic Lands Protection Ordinance (ALPO) 90A, the applicant may submit a complete copy of that permit application to the department in lieu of subsection (2) above, but may be requested by the department to supply such additional information as may be reasonably required to afford it sufficient information to make a certification decision in conformity with the Clean Water Act.
4. Upon receipt of an application for certification, the department shall make a record of the date of its receipt. If upon examination the application is found to be defective or incomplete, it will be returned promptly to the applicant for correction or completion, and the date and reasons for the return shall be marked on a copy of the application and made of record in department files. The applicant shall be notified of the deficiencies by certified mail within 30 days of receipt by the department of the application. The applicant shall have another 30 days from notification of the incomplete application to supply complete information to the department or face rejection of the application. If no response or a grossly inadequate response is received by the department, the application shall be deemed to have been withdrawn by the applicant. In addition, an untimely response may not be considered by the department, although any applicant may reapply for certification at any time.
5. Within thirty (30) days of submission of a complete application and supporting scientific and technical information to the department for review by the 106 Water Quality Program, the department may either grant, deny, or grant with

conditions the application for 401 certifications. Response from the 106 Water Quality Program to the submitted application may be extended an additional forty-five (45) days upon determination that the time provided is insufficient to carry out consultation and technical review of an application.

6. If the department accepts the application and later determines that additional information is required before a certification decision can be made, such information may be required at a later date without rejecting the application. Once a complete application for certification is received by the department, it shall be granted, denied, or granted with conditions or alternatives.
7. The department shall issue a statement of its reasons for denial of certification in writing to the applicant and such statement shall be made a part of the department's official record with regard to the application.
8. The department's decision as to any complete application for certification shall constitute a "committee action" within the meaning of Ordinance 90A and may be appealed according to the terms of that Ordinance. Any person aggrieved by the department's final determination with respect to grant or deny grant of certification with conditions or alternatives may be appealed as set forth in Ordinance 90A.

## 6.0 Public Notice and Public Hearings

Public notice of an application shall be performed in relation to all applications as follows in accordance with the Blackfeet Environmental Office Plan of Operation;

1. By mailing notice of the application for certification to persons and organizations who have requested the same and to all others deemed appropriate.
2. When determined by the department as necessary to protect the public interest, by publication of notice on the Blackfeet Environmental Office website, and the local newspaper. However, certification action shall not be construed to constitute rulemaking procedures for any other purpose. The publication shall be made on a

form approved by the department, as appropriate, and the applicant shall arrange for publication and bear the cost of such publication and provide an affidavit of publication to the department.

3. Any person desiring to present views on an application in relation to water pollution control considerations shall do so by providing the same in writing to the department, whichever is identified in the last published notice or such longer period of time as the department may determine. In cases where the department has elected to seek public comment on an application, no application may be deemed complete until the public comment period and hearing, if any, has been completed.
4. If the department determines there is sufficient public interest in any application, a public hearing for the informal submission of informal oral or written testimony may be held. When this determination is made before notice of application as set out at (1), the notice shall include the time and place of the hearing. Otherwise, a separate notice of public hearing shall be made, and such notice shall be distributed and published in the manner provided above, at the sole expense of the applicant. In addition, it shall be the applicant's responsibility to obtain departmental approval of all notices referenced herein and to arrange for publication of same.



## APPENDIX A TABLES

### **A-1 *Numeric Water Quality Criteria for Priority Pollutants for Protection of Aquatic Life and Human Health***

#### **A.1.2 *Selenium Aquatic Life Criteria***

#### **A.1.3 *Conversion Factors for Dissolved Metals***

#### **A.1.4 *Parameters for Calculating Dissolved Metals Criteria that Are Hardness Dependent***

### **A-2 *Non--Priority Pollutants - Numeric Standards for Aquatic Life and Human Health***

#### **A-3 *Aquatic Life Hardness Correction Factors for Metals***

#### **A-4 *Maximum Contaminant Levels (MCLs)***

#### **A-5 *Freshwater Aquatic Life Criteria for total ammonia nitrogen (TAN)***

##### **A-5.1 – *Temperature and pH-Dependent Values of the CMC – Oncorhynchus absent***

##### **A-5.2 – *Temperature and pH-Dependent Values of the CMC – Oncorhynchus present***

##### **A-5.3 – *Temperature and pH – Dependent Values of the CCC***

#### **A-6 *Oxygen Standards for Aquatic Life Designated Uses***

Table A-1

**Numeric Water Quality Criteria for Priority Pollutants for Protection of Aquatic Life and Human Health**

Priority Pollutant	CASRN	Freshwater-Aquatic Life <sup>(+)</sup> :		Human Health <sup>(c)</sup> for Consumption Of:		Notes
		ACUTE (CMC) <sup>(a)</sup> (ug/L)	CHRONIC (CCC) <sup>(b)</sup> (ug/L)	Water + organism (ug/L) <sup>(++)</sup>	Organism only (ug/L) <sup>(+)</sup>	
1. Antimony	7440360	---	---	5.6	640	AL = Aquatic Life standards HH = Human Health standards
2. Arsenic	7440382	340	150	0.018	0.14	AL standards based on total As.
3. Beryllium	7440417	---	---	---	---	( f )
4. Cadmium	7440439	1.8 (d)	0.72 (d)	---	---	AL standards @ hardness of 100 (d, f)
5a. Chromium III	16065831	570 (d)	74 (d)	---	---	AL standards @ hardness of 10 (d)
5b. Chromium V	18540299	16	11	---	---	( f )
6. Copper	744058	*	*	1,300	---	* Acute (CMC) and chronic (CCC) freshwater copper criteria shall be developed using EPA's 2007 <u><i>Aquatic Life Ambient Freshwater Quality Criteria—Copper</i></u> (EPA-822-R-07-001), which incorporates use of the copper biotic ligand model (BLM). Where sufficiently representative ambient data for DOC, calcium, magnesium, sodium, potassium, sulfate, chloride, or alkalinity are not available, the Tribe shall use representative data that are protective over a range of expected conditions. Possible data sources include the US Geological Survey National Waters Information System (NWIS) and EPA's Storage and Retrieval Data Warehouse

Priority Pollutant	CASRN	Freshwater-Aquatic Life <sup>(+)</sup> :		Human Health <sup>(c)</sup> for Consumption Of:		Notes
		ACUTE (CMC) <sup>(a)</sup> (ug/L)	CHRONIC (CCC) <sup>(b)</sup> (ug/L)	Water + organism (ug/L) <sup>(++)</sup>	Organism only (ug/L) <sup>(+)</sup>	
7. Lead	7439921	65 (d)	2.5	---	---	
8a. Mercury	7439976	1.4	---	0.050	0.051	
8b. Mercury Methylmercury	22967926	---	---	---	0.3mg/kg	
9. Nickel	7440020	470 (d, )	52 (d)	610	4,600	AL standards. @ hardness of 100 (d)
10. Selenium	7782492	---	See table A.1.2 below	170	4,200	
11. Silver	7440224	1.6 (d )	---	---	---	AL standards. @ hardness of 100 (d). Use half of calculated acute value as criterion.
12. Thallium	7440280	---	---	0.24	0.47	
13. Zinc	7440666	120(d, )	120 (d)	7,400	26,000	AL standards @ hardness of 100 (d)
14. Cyanide	57125	22	5.2	4	400	As mg free Cyanide/L for aquatic life.
15. Asbestos	1332214	---	---	7 million fibers/L	---	
16. 2,3,7,8-TCDD Dioxin	1746016	---	---	5.0 E -9 *	5.1 E-9 *	
17. Acrolein	107028	3	3	3	400	
18. Acrylonitrile	107131	---	---	0.061*	7.0*	
19. Benzene	71432	---	---	0.58-2.1 *	16-58*	
20. Bromoform	75252	---	---	7.0*	120*	
21. Carbon Tetrachloride	56235	---	---	0.4*	5*	
22. Chlorobenzene	108907	---	---	100	800	

Priority Pollutant	CASRN	Freshwater-Aquatic Life <sup>(+)</sup> :		Human Health <sup>(c)</sup> for Consumption Of:		Notes
		ACUTE (CMC) <sup>(a)</sup> (ug/L)	CHRONIC (CCC) <sup>(b)</sup> (ug/L)	Water + organism (ug/L) <sup>(++)</sup>	Organism only (ug/L) <sup>(+)</sup>	
23. Chlorodibromomethane	124481	---	---	0.80*	21*	
24. Chloroethane	75003	---	---	---	---	(f)
25. 2-Chloroethylvinyl Ether	110758	---	---	---	---	( f )
26. Chloroform	67663	---	---	60*	2000*	
27. Dichlorobromomethane	75274	---	---	0.95*	27*	
28. 1,1-Dichloroethane	75343	---	---	---	---	( f )
29. 1,2-Dichloroethane	107062	---	---	9.9*	650*	
30. 1,1-Dichloroethylene	75354	---	---	300*	20,000*	
31. 1,2-Dichloropropane	78875	---	---	0.90*	31*	
32. 1,3-Dichloropropene	542756	---	---	0.27	12	
33. Ethylbenzene	100414	---	---	68	130	
34. Methyl Bromide	74839	---	---	100	10,000	

Priority Pollutant	CASRN	Freshwater-Aquatic Life <sup>(+)</sup> :		Human Health <sup>(c)</sup> for Consumption Of:		Notes
		ACUTE (CMC) <sup>(a)</sup> (ug/L)	CHRONIC (CCC) <sup>(b)</sup> (ug/L)	Water + organism (ug/L) <sup>(++)</sup>	Organism only (ug/L) <sup>(+)</sup>	
35. Methyl Chloride	74873	---	---	---	---	( f )
36. Methylene Chloride	75092	---	---	20*	1,000*	
37. 1,1,2,2-Tetrachloroethane	79345	---	---	0.2*	3*	
38. Tetrachloroethylene	127184	---	---	10*	29*	
39. Toluene	108883	---	---	57	520	
40. Trans-1,2 — Dichloroethylene	156605	---	---	100	4,000	
41. 1,1,1-Trichloroethane	71556	---	---	10,000	200,000	( f )
42. 1,1,2-Trichloroethane	79005	---	---	0.55*	8.9*	
43. Trichloroethylene	79016	---	---	0.6*	7*	
44. Vinyl Chloride	75014	---	---	0.022*	1.6*	
45. 2-Chlorophenol	95578	---	---	30	800	
46. 2,4-Dichlorophenol	120832	---	---	10	60	
47. 2,4-Dimethylphenol	105679	---	---	100	3,000	
48. 2-Methyl-4,6-Dinitrophenol	534521	---	---	2	30	
49. 2,4-Dinitrophenol	51285	---	---	10	300	

Priority Pollutant	CASRN	Freshwater-Aquatic Life <sup>(+)</sup> :		Human Health <sup>(c)</sup> for Consumption Of:		Notes
		ACUTE (CMC) <sup>(a)</sup> (ug/L)	CHRONIC (CCC) <sup>(b)</sup> (ug/L)	Water + organism (ug/L) <sup>(++)</sup>	Organism only (ug/L) <sup>(+)</sup>	
51. 4-Nitrophenol	100027	---	---	---	---	(f)
52. 3-Methyl-4-Chlorophenol	59507	---	---	500	2,000	(f)
53. Pentachlorophenol	87865	19(e)	15(e)	0.03*	0.04*	AL standard @ pH= 7.8. See footnote (e) below.
54. Phenol	108952	---	---	4,000	300,000	
55. 2,4,6-Trichlorophenol	88062	---	---	1.5*	2.8*	
56. Acenaphthene	83329	---	---	70	90	
57. Acenaphthylene	208968	---	---	---	---	(f)
58. Anthracene	120127	---	---	300	400	
59. Benzidine	92875	---	---	0.00014	0.011	
60. Benzo(a)anthracene	56553	---	---	0.0012*	0.0013*	
61. Benzo(a)pyrene	50328	---	---	0.00012*	0.00013*	
62. Benzo(b)fluoranthene	205992	---	---	0.0012*	0.0013*	
63. Benzo(ghi)Perylene	191242					(f)
64. Benzo(k)fluoranthene	207089	---	---	0.012*	0.013*	
65. Bis2-	111911					(f)

Priority Pollutant	CASRN	Freshwater-Aquatic Life <sup>(+)</sup> :		Human Health <sup>(c)</sup> for Consumption Of:		Notes
		ACUTE (CMC) <sup>(a)</sup> (ug/L)	CHRONIC (CCC) <sup>(b)</sup> (ug/L)	Water + organism (ug/L) <sup>(++)</sup>	Organism only (ug/L) <sup>(+)</sup>	
ChloroethoxyMethane						
66. Bis(2-Chloroethyl)Ether	111444	---	---	0.030*	2.2*	
67. Bis(2-Chloro-1-methylethyl) Ether	108601	---	---	200	4000	
68. Bis(2-Ethylhexyl)Phthalate	117817	---	---	0.32*	0.37*	
69. 4-Bromophenyl Phenyl Ether	101553					(f)
70. Butylbenzyl Phthalate	85687	---	---	0.10	0.10	
71. 2-Chloronaphthalene	91587	---	---	800	1,000	
72. 4-Chlorophenyl Phenyl Ether	70005723	---	---	---	---	(f)
73. Chrysene	218019	---	---	0.12*	0.13*	
74. Dibenzo(a,h)Anthracene	53703	---		0.00012*	0.00013*	
75. 1,2-Dichlorobenzene	95501	---	---	1,000	3,000	
76. 1,3-Dichlorobenzene	541731	---	---	7	10	

Priority Pollutant	CASRN	Freshwater-Aquatic Life <sup>(+)</sup> :		Human Health <sup>(c)</sup> for Consumption Of:		Notes
		ACUTE (CMC) <sup>(a)</sup> (ug/L)	CHRONIC (CCC) <sup>(b)</sup> (ug/L)	Water + organism (ug/L) <sup>(++)</sup>	Organism only (ug/L) <sup>(+)</sup>	
77. 1,4-Dichlorobenzene	106467	---	---	300	900	
78. 3,3-Dichlorobenzidine	91941	---	---	0.049*	0.15*	
79. Diethyl Phthalate	84662	---	---	600	600	
80. Dimethyl Phthalate	131113	---	---	2,000	2,000	
81. Di-n-Butyl Phthalate	84742	---	----	20	30	
82. 2,4-Dinitrotoluene	121142	---	---	0.049*	1.7*	
83. 2,6-Dinitrotoluene	606202	---	---	---	---	(f)
84. Di-n-Octyl Phthalate	117840					(f)
85. 1,2-Diphenylhydrazine	122667	---	---	0.03*	0.2*	
86. Fluoranthene	206440	---	---	20	20	
87. Fluorene	86737	---	---	50	70	
88. Hexachlorobenzene	118741	---	---	0.000079*	0.000079*	
89. Hexachlorobutadiene	87683	---	---	0.01*	0.01*	
90. Hexachlorocyclopentadiene	77474	---	---	4	4*	



Priority Pollutant	CASRN	Freshwater-Aquatic Life <sup>(+)</sup> :		Human Health <sup>(c)</sup> for Consumption Of:		Notes
		ACUTE (CMC) <sup>(a)</sup> (ug/L)	CHRONIC (CCC) <sup>(b)</sup> (ug/L)	Water + organism (ug/L) <sup>(++)</sup>	Organism only (ug/L) <sup>(+)</sup>	
91. Hexachloroethane	67721	---	---	0.1*	0.1*	
92. Indeno(1,2,3-cd) Pyrene	193395	---	---	0.0012*	0.0013*	
93. Isophorone	78591	---	---	34*	1,800*	
94. Naphthalene	91203	---	---	---	---	(f)
95. Nitrobenzene	98953	---	---	10	600	
96. N–Nitrosodimethylamine	62759	---	---	0.00069*	3.0*	
97. N-Nitrosodi-n-Propylamine	621674	---	----	0.0050*	0.51*	
98. N-Nitrosodiphenylamine	86306	---	---	3.3*	6.0*	
99. Phenanthrene	85018	---	---	---	---	
100. Pyrene	129000	---	---	20	30	
101. 1,2,4-Trichlorobenzene	120821	---	---	0.071	0.076	
102. Aldrin	309002	3.0	—	0.00000077*	0.00000077*	If field values averaged, use half of AL Table standard.
103. alpha-BHC	319846	---	---	0.00036*	0.00039*	
104. beta-BHC	319857	---	---	0.0080*	0.014*	

Priority Pollutant	CASRN	Freshwater-Aquatic Life <sup>(+)</sup> :		Human Health <sup>(c)</sup> for Consumption Of:		Notes
		ACUTE (CMC) <sup>(a)</sup> (ug/L)	CHRONIC (CCC) <sup>(b)</sup> (ug/L)	Water + organism (ug/L) <sup>(++)</sup>	Organism only (ug/L) <sup>(+)</sup>	
105. gamma-Hexachlorocyclohexane (HCH) (Lindane)	58899	0.95	---	4.2*	4.4*	
106. delta-BHC	319868					(f)
107. Chlordane	57749	2.4	0.0043	0.00031	0.00032	If field values averaged, use half of AL Table standard.
108. p,p' Dichlorodiphenyltrichloroethane (DDT)	50293	1.1	0.001	0.000030*	0.000030*	If field values averaged, use half of AL Table standard.
109. p,p' Dichlorodiphenyldichloroethylene (DDE)	72559	---	---	0.000018*	0.000018*	
110. p,p' Dichlorodiphenyldichloroethane (DDD)	72548	---	---	0.00012*	0.00012*	
111. Dieldrin	60571	0.24	0.056 ↓	0.0000012*	0.0000012*	
112. alpha-Endosulfan	959988	0.22	0.056	20	30	If field values averaged, use half of AL Table standard. Use sum of alpha & beta endosulfan.

Priority Pollutant	CASRN	Freshwater-Aquatic Life <sup>(+)</sup> :		Human Health <sup>(c)</sup> for Consumption Of:		Notes
		ACUTE (CMC) <sup>(a)</sup> (ug/L)	CHRONIC (CCC) <sup>(b)</sup> (ug/L)	Water + organism (ug/L) <sup>(++)</sup>	Organism only (ug/L) <sup>(+)</sup>	
113. beta-Endosulfan	33213659	0.22	0.056	20	40	If field values averaged, use half of AL Table standard. Use sum of alpha & beta endosulfan.
114. Endosulfan Sulfate	1031078	---	---	20	40	
115. Endrin	72208	0.086	0.036	0.03	0.03	Acute AL standard does not consider food chain intake; standard may be reduced in permits to protect upper trophic level organisms.
116. Endrin Aldehyde	7421934	---	---	1	1	
117. Heptachlor	76448	0.52	0.0038	0.0000059*	0.0000059*	If field values averaged, use half of AL Table standard.
118. Heptachlor Epoxide	1024573	0.52	0.0038	0.000032*	0.000032*	If field values averaged, use half of AL Table standard.
119. Polychlorinated	---	---	0.000064	0.000064*	0.000064*	Includes all arochlors. HH standard is

Priority Pollutant	CASRN	Freshwater-Aquatic Life <sup>(+)</sup> :		Human Health <sup>(c)</sup> for Consumption Of:		Notes
		ACUTE (CMC) <sup>(a)</sup> (ug/L)	CHRONIC (CCC) <sup>(b)</sup> (ug/L)	Water + organism (ug/L) <sup>(++)</sup>	Organism only (ug/L) <sup>(+)</sup>	
Biphenyls (PCBs)						AL = Aquatic Life standards HH = Human Health standards for total PCBs.
120. Toxaphene	8001325	0.73	0.0002	0.00070*	0.00071*	

#### Footnotes for Priority Pollutants Numeric Standards

\* This pollutant is a carcinogen. All carcinogen human health standards are based on a  $10^{-6}$  risk level.

(a) Acute aquatic life criteria- a one-hour average concentration of these parameters may not exceed these values more than once in any three-year period, on average.

(b) Chronic aquatic life criteria – the 96-hour average concentration of these parameters may not exceed these values more than once in any three-year period, on average, unless otherwise stated.

(c ) Human health criteria – These criteria will be implemented as a 30-day averages except those criteria based on short-term human health effects such as nitrates and any other constituents identified as based on short-term health effects. Nitrates (and any other constituents identified based on short-term health effects) will be implemented as an instantaneous, never-to-be-exceeded value. For purposes of discharge permits, nitrate will be limited as nitrate+nitrite.

(d). Some metals standards are a function of total hardness of waterbody. Assessment of waterbodies for meeting acute and chronic standards are based on waterbody hardness at the time of sampling. If concurrent hardness data are not available, assessment of chronic standards are based on the average hardness for any 30-day period. Table A-3 below shows hardness correction factors. Listed standards in criteria chart are at a hardness of 100 mg/L. If hardness data are above 400 mg/L, a value of 400 mg/L will be used in order to stay within the bounds of the data used to derive the criteria. Standards are expressed in terms of the dissolved metal in the water column, except for aluminum, which is for the total recoverable form. In order to express the standards as the

dissolved metal in the water column, their calculation will use the conversion factors in Tables A.1.3 and A.1.4 below. These factors convert the standards from the total recoverable to dissolved.

(e). Aquatic Life standards for pentachlorophenol are a function of pH, calculated as follows: Acute standard =  $\exp [1.005 (\text{pH}) - 4.869]$  WQS; Chronic standard =  $\exp [1.005 (\text{pH}) - 5.134]$ . Values displayed in table A-1 correspond to a pH of 7.8 as an example. Concurrent pH data will be used to derive the criteria whenever possible. If concurrent pH data are not available, representative data anticipated to be protective over a range of expected conditions will be used.

(f). No EPA Human Health criteria. Permit actions should use Tribal narrative criteria for toxics or, a MCL, if available. See Table A-4 for MCLs.

(+) These criteria apply to waters with aquatic life uses (i.e., Class 1 Cold, Class 1 Cool and Aquatic Life Other than Fish)

(++) These criteria apply to waters with both an aquatic life use and a domestic water supply use.

Table A.1.2. Selenium Aquatic Life Criteria for Fresh Waters

Criterion Element	Magnitude	Duration	Frequency
Fish Tissue <sup>a</sup> (Egg-Ovary) <sup>b</sup>	15.1 mg/kg dw	Instantaneous measurement <sup>c</sup>	Not to be exceeded
Fish Tissue <sup>a</sup> (Whole Body or Muscle) <sup>d</sup>	8.5 mg/kg dw or 11.3 mg/kg dw muscle (skinless, boneless filet)	Instantaneous measurement <sup>c</sup>	Not to be exceeded
Water Column <sup>e</sup> (Monthly Average Exposure)	1.5 µg/L in lentic aquatic systems  3.1 µg/L in lotic aquatic systems	30 days	Not more than once in three years on average

Criterion Element	Magnitude	Duration	Frequency
Water Column <sup>e</sup> (Intermittent Exposure) <sup>f</sup>	$WQC_{int} = \frac{WQC_{30\text{-day}} - C_{bkgnd}(1 - f_{int})}{f_{int}}$	Number of days/month with an elevated concentration	Not more than once in three years on average
<p><sup>a</sup> Fish tissue elements are expressed as steady-state.</p> <p><sup>b</sup> Egg/ovary supersedes any whole-body, muscle, or water column element when fish egg/ovary concentrations are measured.</p> <p><sup>c</sup> Fish tissue data provide point measurements that reflect integrative accumulation of selenium over time and space in fish population(s) at a given site.</p> <p><sup>d</sup> Fish whole-body or muscle tissue supersedes water column element when both fish tissue and water concentrations are measured.</p> <p><sup>e</sup> Water column values are based on dissolved total selenium in water and are derived from fish tissue values via bioaccumulation modeling. Water column values are the applicable criterion element in the absence of steady-state condition fish tissue data.</p> <p><sup>f</sup> Where <math>WQC_{30\text{-day}}</math> is the water column monthly element, for either a lentic or lotic waters; <math>C_{bkgnd}</math> is the average background selenium concentration, and <math>f_{int}</math> is the fraction of any 30-day period during which elevated selenium concentrations occur, with <math>f_{int}</math> assigned a value <math>\geq 0.033</math> (corresponding to 1 day).</p>			

Table A.1.3 Conversion Factors for Dissolved Metals Criteria

Metal	Freshwater CMC	Freshwater CCC
Arsenic	1.000	1.000
Cadmium	$1.136672 - [(\ln \text{ hardness})(0.041838)]$	$1.101672 - [(\ln \text{ hardness})(0.041838)]$
Chromium III	0.316	0.860
Chromium VI	0.982	0.962
Copper	0.960	0.960
Lead	$1.46203 - [(\ln \text{ hardness})(0.145712)]$	$1.46203 - [(\ln \text{ hardness})(0.145712)]$
Mercury	0.85	0.85
Nickel	0.998	0.997
Selenium	—	—
Silver	0.85	—
Zinc	0.978	0.986

Table A.1.4 Parameters for Calculating Freshwater Dissolved Metals Criteria That Are Hardness-Dependent

Chemical	mA	bA	mC	bC	Freshwater Conversion Factors (CF)	
					CMC	CCC
Cadmium	0.9789	-3.866	0.7977	-3.909	$1.136672 - [(\ln \text{hardness})(0.041838)]$	$1.101672 - [(\ln \text{hardness})(0.041838)]$
Chromium III	0.8190	3.7256	0.8190	0.6848	0.316	0.860
Lead	1.273	-1.460	1.273	-4.705	$1.46203 - [(\ln \text{hardness})(0.145712)]$	$1.46203 - [(\ln \text{hardness})(0.145712)]$
Nickel	0.8460	2.255	0.8460	0.0584	0.998	0.997
Silver	1.72	-6.59	—	—	0.85	—
Zinc	0.8473	0.884	0.8473	0.884	0.978	0.986

Hardness-dependent metals criteria are calculated using the following equations:

$$\text{CMC (dissolved)} = \exp\{mA [\ln(\text{hardness})] + bA\} \text{ (CF)}$$

$$\text{CCC (dissolved)} = \exp\{mC [\ln(\text{hardness})] + bC\} \text{ (CF)}$$



Table A-2

*Non--Priority Pollutants - Numeric Standards for Aquatic Life and Human Health*

Pollutant	CASRN	Freshwater-Aquatic Life <sup>(+)</sup> :		Human Health <sup>(c)</sup> for Consumption of:		Notes
		ACUTE (CMC) <sup>(a)</sup> (ug/L)	CHRONIC (CCC) <sup>(b)</sup> (ug/L)	Water + organism (ug/L) <sup>(++)</sup>	Organism only (ug/L) <sup>(+)</sup>	
1. Alkalinity	--	--	20,000			
2. Aluminum pH 5.0-10.5	7429905	---	---			See footnote ( g ) below
3. Ammonia	7664417	---	---	---	---	See Ammonia Tables.
4. Aesthetic Qualities		---	---	---	---	See Narrative Standards.
5. Atrazine	1912249	----	---	---	---	
6. E. coli						See Recreation Use classification at Section 3.4.
7. Barium	7440393	---	---	1,000	---	
8. Boron						See Narrative Standards.
9. Carbaryl	63252	2.1	2.1	---	---	

Pollutant	CASRN	Freshwater-Aquatic Life <sup>(+)</sup> :		Human Health <sup>(c)</sup> for Consumption of:		Notes
		ACUTE (CMC) <sup>(a)</sup> (ug/L)	CHRONIC (CCC) <sup>(b)</sup> (ug/L)	Water + organism (ug/L) <sup>(++)</sup>	Organism only (ug/L) <sup>(+)</sup>	
10. Chloride	16887006	860,000	230,000	---	---	
11. Chlorine	7782505	19	11	---	---	
12. Chlorophenoxy Herbicide (2,4,5,-TP)[Silvex]	93721	---	---	100	400	
13. Chlorophenoxy Herbicide (2,4-D)	94757	---	---	1,300	12,000	
14. Chlorpyrifos	2921882	0.083	0.041	---	---	
15. Color		---	---	---	---	See Narrative Standards.
16. Demeton	8065483	---	0.1	---	---	
17. Diazinon	333415	0.17	0.17	---	---	
18. Bis(Chloromethyl) Ether	542881	---	---	0.00015	0.017	
19. Gases, Total Dissolved						See Narrative Standards.
20. Guthion	86500	---	0.01	---	---	
21. Hardness						See Narrative Standards.
22. Hexachlorocyclohexane(HCH)-Technical	608731	---	---	0.0066	0.010	
23. Iron	7439896	---	1,000	---	---	

Pollutant	CASRN	Freshwater-Aquatic Life <sup>(+)</sup> :		Human Health <sup>(c)</sup> for Consumption of:		Notes
		ACUTE (CMC) <sup>(a)</sup> (ug/L)	CHRONIC (CCC) <sup>(b)</sup> (ug/L)	Water + organism (ug/L) <sup>(++)</sup>	Organism only (ug/L) <sup>(+)</sup>	
24. Malathion	121755	---	0.1	---	---	AL = Aquatic Life standards HH = Human Health standards DW = Domestic water supply
25. Methyl Tertiary Butyl Ether (MTBE)	---	---	---	---	---	
26. Nonylphenol	84852153	28	6.6	---	---	
27. Manganese	7439965	---	---	50	100	
28. Methoxychlor	72435	---	0.03	0.02	0.02	
29. Mirex	2385855	---	0.001	---	---	
30. Nitrates	14797558	---	---	10,000	---	
31. Nitrosamines		---	---	0.0008	1.24	
32. Dinitrophenols	25550587			10	1,000	
33. Nitrosodibutylamine	924163	---	---	0.0063*	0.22*	Criterion is based on carcinogenicity of 10 <sup>-6</sup> risk
34. Nitrosodiethylamine	55185	---	---	0.0008*	1.24*	Criterion is based on carcinogenicity of 10 <sup>-6</sup> risk
35. Nitrosopyrrolidine	930552	---	---	0.016*	34*	Criterion is based on carcinogenicity of 10 <sup>-6</sup> risk
36. Oil and Grease						See Narrative Standards.

Pollutant	CASRN	Freshwater-Aquatic Life <sup>(+)</sup> :		Human Health <sup>(c)</sup> for Consumption of:		Notes
		ACUTE (CMC) <sup>(a)</sup> (ug/L)	CHRONIC (CCC) <sup>(b)</sup> (ug/L)	Water + organism (ug/L) <sup>(++)</sup>	Organism only (ug/L) <sup>(+)</sup>	
37. Oxygen, Dissolved	7782447					See Oxygen Table.
38. Parathion	56382	0.065	0.013	---	---	
39. Pentachlorobenzene	608953	---	---	0.1	0.1	
40. pH	---	---	6.5-9.0	5.0-9.0		
41. Phosphorus Total	7723140					See Section 11.0
42. Nutrients (P and N species)						See Section 11.0
43. Solids Dissolved (TDS) and Salinity	---	---	---	250,000	---	See Narrative Standards,
44. Solid Suspended (TSS) &/or Turbidity						Not to exceed 120% of natural, except by permit.
45. Sulfide-Hydrogen Sulfide	7783064	---	2.0	---	---	
46. Tainting Substances	---	---	---	---	---	See Narrative Standards.
47. Temperature	---	---	---			See Narrative standards & Aquatic Life Classes.
48. 1,2,4,5-Tetrachlorobenzene,	95943	---	---	0.03	0.03	

Pollutant	CASRN	Freshwater-Aquatic Life <sup>(+)</sup> :		Human Health <sup>(c)</sup> for Consumption of:		Notes
		ACUTE (CMC) <sup>(a)</sup> (ug/L)	CHRONIC (CCC) <sup>(b)</sup> (ug/L)	Water + organism (ug/L) <sup>(++)</sup>	Organism only (ug/L) <sup>(+)</sup>	
49. Tributyltin (TBT)	---	0.46	0.072			
50. 2,4,5-Trichlorophenol	95954	---	---	300	600	
51. Clean Sediment						See Section 9.0
52. Contaminated Sediment						See Section 10.0
53. Microcystin	101043-37-2					See recreation use classification, Section 3.4
54. Cylindrospermopsin	---		---		---	See recreation use classification, Section 3.4

#### Footnotes for Non-Priority Pollutants Numeric Standards

\* This pollutant is a carcinogen. All carcinogen human health standards are based on a  $10^{-6}$  risk level.

(a) Acute aquatic life criteria- a one-hour average concentration of these parameters may not exceed these values more than once in any three-year period, on average.

(b) Chronic aquatic life criteria – the 96-hour average concentration of these parameters may not exceed these values more than once in any

three-year period, on average, unless otherwise stated.

(c) Human health criteria – These criteria will be implemented as a 30-day averages except those criteria based on short-term human health effects such as nitrates and any other constituents identified as based on short-term health effects. Nitrates (and any other

constituents identified based on short-term health effects) will be implemented as an instantaneous, never-to-be-exceeded value. For purposes of discharge permits, nitrate will be limited as nitrate+nitrite.

(f). No EPA Human Health criteria. Permit actions should use Tribal narrative criteria for toxics or, a MCL, if available. See Table A-4 for MCLs.

(+) These criteria apply to waters with aquatic life uses (i.e., Class 1 Cold, Class 1 Cool and Aquatic Life Other than Fish)

(++) These criteria apply to waters with both an aquatic life use and a domestic water supply use.

(g) The Tribe adopts the EPA's recommended 2018 aluminum criterion calculator by reference and may be found at <https://www.epa.gov/wqc/aquatic-life-criteria-aluminum>. Aluminum criteria apply in the total recoverable form and the criteria vary with ambient pH, hardness, and dissolved organic carbon concentration.

Table A-3

*Aquatic Life Hardness Correction Factors for Metals*

	Acute = $\exp \{ma [\ln (\text{hardness})] + ba\}$		Chronic = $\exp \{mc [\ln (\text{hardness})] + bc\}$	
	ma	ba	mc	bc
Cadmium	0.9789	-3.866	0.7977	-3.909
Copper				
Chromium (III)	0.8190	3.7256	0.8190	0.6848
Lead	1.273	-1.460	1.273	-4.705
Nickel	0.8460	2.255	0.8460	0.0584
Silver	1.72	-6.59	-----	-----
Zinc	0.8473	0.884	0.8473	0.884

Table A-4

**Maximum Contaminant Levels (MCLs)*****Adopted to Protect The Blackfeet Water Supply Designated Use and Potential Health Effects of Exceeding the MCLs)***

Chemical Name	CASRN	MCL (1)*	Potential Health Effects from Ingestion of Water (2)
---------------	-------	----------	--

\*All MCL units  
are ug/L

**Priority Pollutants**

Chlorobenzene	108-90-7	100	Liver, Kidneys
1,2,4-Trichlorobenzene	120-82-1	70	Adrenal Glands
1,1,1-Trichloroethane	71-55-6	200	Liver, nervous system, circulatory system
1,2-Dichlorobenzene	95-50-1	600	Liver, kidneys, circulatory system
1,4-Dichlorobenzene	106-46-7	75	Anemia, liver, kidneys, spleen, blood
1,2-trans-Dichloroethylene	156-60-5	100	Liver
Ethylbenzene	100-41-4	700	Liver, kidneys
Hexachlorocyclopentadiene	77-47-4	50	Kidneys, stomach
Toluene	108-88-3	1000	Nervous system, kidneys, liver
Antimony	7440-36-0	6	Blood cholesterol, blood sugar
Beryllium	7440-41-7	4	Intestinal lesions
Cadmium	7440-43-9	5	Kidneys
Chromium (total)	7440-47-3	100	Health effects not identified
Cyanide	57-12-5	200	Thyroid



Lead (adults)	7439-92-1	TT(3)	Physical/mental development (children), kidney, high blood pressure
Selenium	7782-49-2	50	Hair, fingernail, numbness, circulatory system

#### **Non-priority Pollutants**

Chemical Name	CASRN	MCL (1)	Potential Health Effects from Ingestion of Water (2)
Alachlor	15972-60-8	2	Eye, liver, kidneys, spleen, anemia, cancer
Atrazine	1912-24-9	3	Cardiovascular system, reproductive system
Carbofuran	1563-66-2	40	Blood, nervous system, reproductive system
2,4-D	94-75-7	70	kidney, liver, adrenal glands
Dalapon	75-99-0	200	Kidneys
Di(2-ethylhexyl)adipate	103-23-1	400	reproductive system
Dibromochloropropane	96-12-8	.2	Reproductive system, cancer
Dichloroethylene (cis-1,2-)	156-59-2	70	Liver
Dinoseb	88-85-7	7	Reproductive system

<u>Diquat</u>	<u>85-00-7</u>	<u>20</u>	<u>Cataracts</u>
<u>Endothall</u>	<u>145-73-3</u>	<u>100</u>	<u>Stomach, intestines</u>
<u>Ethylene dibromide (EDB)</u>	<u>106-93-4</u>	<u>0.05</u>	<u>Liver, stomach, reproductive system, kidneys,</u> <u>cancer</u>
<u>Glyphosphate</u>	<u>1071-83-6</u>	<u>700</u>	<u>Kidneys, reproductive system</u>
<u>Methoxychlor</u>	<u>72-43-5</u>	<u>40</u>	<u>Reproductive system</u>
<u>Oxamyl (Vydate)</u>	<u>23135-22-0</u>	<u>200</u>	<u>Nervous system</u>
<u>Picloram</u>	<u>1918-020-1</u>	<u>500</u>	<u>liver</u>
<u>Simazine</u>	<u>122-34-9</u>	<u>4</u>	<u>Blood</u>
<u>Styrene</u>	<u>100-42-5</u>	<u>100</u>	<u>Liver, kidneys, circulatory system</u>
<u>Xylenes</u>	<u>1330-20-7</u>	<u>10,000</u>	<u>Nervous system</u>
<u>Fluoride</u>	<u>7782-41-4</u>	<u>4,000</u>	<u>Bone, teeth</u>
<u>Nitrite</u>	<u>14797-65-0</u>	<u>1,000</u>	<u>Methemoglobinemia</u>
<b><u>Radiological (in pCi/l, except where noted)</u></b>			
<u>Alpha emitters</u>	<u>Multiple</u>	<u>15</u>	<u>Cancer</u>
<u>Beta/photon emitters</u>	<u>12587-47-2</u>	<u>4 mrem/y</u>	<u>Cancer</u>
<u>Combined Radium 226 &amp;</u>	<u>13982-63-6</u>	<u>5</u>	<u>Cancer</u>
<u>228</u>	<u>15262-20-1</u>		

(1) Current published Clean Water Act § 304(a) human health criteria based on Maximum Contaminant Levels (MCLs) of the Safe Drinking Water Act. Carcinogen criteria are based on a  $10^{-6}$  incremental risk assuming a daily consumption of 2 liters of water.

- (2) Potential health effects are based on consumption of water containing pollutant concentrations that exceed the MCL, in most cases, over many years.
- (3) For lead, the MCL requires a Treatment Technology (TT); however, the action level is 0.015 mg/L.

## Table A-5

Freshwater Aquatic Life Criteria for total nitrogen (TAN)

### Freshwater Aquatic Life Criteria for total ammonia nitrogen (TAN)

#### Acute criterion calculations

The one-hour average concentration of total ammonia nitrogen (in mg TAN/L) is not to exceed, more than once every three years on the average, the CMC (acute criterion magnitude) calculated using the following equation:

$$CMC = MIN\left(\left(\frac{0.275}{1 + 10^{7.204 - pH}} + \frac{39}{1 + 10^{pH - 7.204}}\right), (0.7249 * \left(\frac{0.0114}{1 + 10^{7.204 - pH}} + \frac{1.6181}{1 + 10^{pH - 7.204}}\right) * (23.12 * 10^{0.036 * (20 - T)}))\right)$$

Where salmonids in the genus *Oncorhynchus* are present, the acute criterion magnitude for TAN/L at pH 7.0 is calculated using the following equation and Table A-5.1:

$$CMC(at\ pH\ 7) = MIN(24.1, (0.7249 * (23.12 * 10^{0.036 * (20 - T)}))$$

Where *Oncorhynchus* species are absent, the acute criterion magnitude for TAN/L at pH 7.0 is calculated using the following equation and Table A-5.2:

$$CMC(at\ pH\ 7) = 0.7249 * MIN(51.93, (23.12 * 10^{0.036 * (20 - T)}))$$

The CMC, where *Oncorhynchus* species are absent, extrapolated across both temperature and pH is as follows:

$$CMC = 0.7249 * \left(\frac{0.0114}{1 + 10^{7.204 - pH}} + \frac{1.6181}{1 + 10^{pH - 7.204}}\right) * MIN(51.93, 23.12 * 10^{0.036 * (20 - T)})$$

When a threatened or endangered species occurs at a site and sufficient data indicate that it is sensitive at 1-hour average concentrations below the CMC, it is appropriate to consider deriving a site-specific criterion magnitude.

**Chronic criterion calculations**

The thirty-day rolling average concentration of total ammonia nitrogen (in mg TAN/L) is not to exceed, more than once every three years on the average, the chronic criterion magnitude (CCC) calculated using the following equation and Table A-5.3:

$$CCC = 0.8876 \times \left( \frac{0.0278}{1 + 10^{7.688 - pH}} + \frac{1.1994}{1 + 10^{pH - 7.688}} \right) \times (2.126 \times 10^{0.028 \times (20 - \text{MAX}(T, 7))})$$

In addition, the highest four-day average within the 30-day averaging period should not be more than 2.5 times the CCC (e.g., 2.5 x 1.9 mg TAN/L at pH 7 and 20°C or 4.8 mg TAN/L) more than once in three years on average. Where a threatened or endangered species occurs at a site and sufficient data indicate that it is sensitive at concentrations below the CCC, it is appropriate to consider deriving a site-specific criterion magnitude.

Table A-5.1.

Temperature and pH-Dependent Values of the CMC (Acute Criterion Magnitude; mg TAN / L) – *Oncorhynchus* spp. Present.

pH	Temperature (°C)																
	0-14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
6.5	33	33	32	29	27	25	23	21	19	18	16	15	14	13	12	11	9.9
6.6	31	31	30	28	26	24	22	20	18	17	16	14	13	12	11	10	9.5
6.7	30	30	29	27	24	22	21	19	18	16	15	14	13	12	11	9.8	9
6.8	28	28	27	25	23	21	20	18	17	15	14	13	12	11	10	9.2	8.5
6.9	26	26	25	23	21	20	18	17	15	14	13	12	11	10	9.4	8.6	7.9
7	24	24	23	21	20	18	17	15	14	13	12	11	10	9.4	8.6	8	7.3
7.1	22	22	21	20	18	17	15	14	13	12	11	10	9.3	8.5	7.9	7.2	6.7
7.2	20	20	19	18	16	15	14	13	12	11	9.8	9.1	8.3	7.7	7.1	6.5	6
7.3	18	18	17	16	14	13	12	11	10	9.5	8.7	8	7.4	6.8	6.3	5.8	5.3
7.4	15	15	15	14	13	12	11	9.8	9	8.3	7.7	7	6.5	6	5.5	5.1	4.7
7.5	13	13	13	12	11	10	9.2	8.5	7.8	7.2	6.6	6.1	5.6	5.2	4.8	4.4	4
7.6	11	11	11	10	9.3	8.6	7.9	7.3	6.7	6.2	5.7	5.2	4.8	4.4	4.1	3.8	3.5
7.7	9.6	9.6	9.3	8.6	7.9	7.3	6.7	6.2	5.7	5.2	4.8	4.4	4.1	3.8	3.5	3.2	3
7.8	8.1	8.1	7.9	7.2	6.7	6.1	5.6	5.2	4.8	4.4	4	3.7	3.4	3.2	2.9	2.7	2.5
7.9	6.8	6.8	6.6	6	5.6	5.1	4.7	4.3	4	3.7	3.4	3.1	2.9	2.6	2.4	2.2	2.1
8	5.6	5.6	5.4	5	4.6	4.2	3.9	3.6	3.3	3	2.8	2.6	2.4	2.2	2	1.9	1.7
8.1	4.6	4.6	4.5	4.1	3.8	3.5	3.2	3	2.7	2.5	2.3	2.1	2	1.8	1.7	1.5	1.4
8.2	3.8	3.8	3.7	3.5	3.1	2.9	2.7	2.4	2.3	2.1	1.9	1.8	1.6	1.5	1.4	1.3	1.2
8.3	3.1	3.1	3.1	2.8	2.6	2.4	2.2	2	1.9	1.7	1.6	1.4	1.3	1.2	1.1	1	0.96
8.4	2.6	2.6	2.5	2.3	2.1	2	1.8	1.7	1.5	1.4	1.3	1.2	1.1	1	0.93	0.86	0.79
8.5	2.1	2.1	2.1	1.9	1.8	1.6	1.5	1.4	1.3	1.2	1.1	0.98	0.9	0.83	0.77	0.71	0.65
8.6	1.8	1.8	1.7	1.6	1.5	1.3	1.2	1.1	1	0.96	0.88	0.81	0.75	0.69	0.63	0.59	0.54
8.7	1.5	1.5	1.4	1.3	1.2	1.1	1	0.94	0.87	0.8	0.74	0.68	0.62	0.57	0.53	0.49	0.45
8.8	1.2	1.2	1.2	1.1	1	0.93	0.86	0.79	0.73	0.67	0.62	0.57	0.52	0.48	0.44	0.41	0.37
8.9	1	1	1	0.93	0.85	0.79	0.72	0.67	0.61	0.56	0.52	0.48	0.44	0.4	0.37	0.34	0.32
9	0.88	0.88	0.86	0.79	0.73	0.67	0.62	0.57	0.52	0.48	0.44	0.41	0.37	0.34	0.32	0.29	0.27

Table A-5.2

Temperature and pH-Dependent Values of the CMC (Acute Criterion Magnitude; mg TAN / L) – *Oncorhynchus spp.* Absent.

Temperature (°C)																					
pH	0-10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
6.5	51	48	44	41	37	34	32	29	27	25	23	21	19	18	16	15	14	13	12	11	9.9
6.6	49	46	42	39	36	33	30	28	26	24	22	20	18	17	16	14	13	12	11	10	9.5
6.7	46	44	40	37	34	31	29	27	24	22	21	19	18	16	15	14	13	12	11	9.8	9
6.8	44	41	38	35	32	30	27	25	23	21	20	18	17	15	14	13	12	11	10	9.2	8.5
6.9	41	38	35	32	30	28	25	23	21	20	18	17	15	14	13	12	11	10	9.4	8.6	7.9
7	38	35	33	30	28	25	23	21	20	18	17	15	14	13	12	11	10	9.4	8.6	7.9	7.3
7.1	34	32	30	27	25	23	21	20	18	17	15	14	13	12	11	10	9.3	8.5	7.9	7.2	6.7
7.2	31	29	27	25	23	21	19	18	16	15	14	13	12	11	9.8	9.1	8.3	7.7	7.1	6.5	6
7.3	27	26	24	22	20	18	17	16	14	13	12	11	10	9.5	8.7	8	7.4	6.8	6.3	5.8	5.3
7.4	24	22	21	19	18	16	15	14	13	12	11	9.8	9	8.3	7.7	7	6.5	6	5.5	5.1	4.7
7.5	21	19	18	17	15	14	13	12	11	10	9.2	8.5	7.8	7.2	6.6	6.1	5.6	5.2	4.8	4.4	4
7.6	18	17	15	14	13	12	11	10	9.3	8.6	7.9	7.3	6.7	6.2	5.7	5.2	4.8	4.4	4.1	3.8	3.5
7.7	15	14	13	12	11	10	9.3	8.6	7.9	7.3	6.7	6.2	5.7	5.2	4.8	4.4	4.1	3.8	3.5	3.2	2.9
7.8	13	12	11	10	9.3	8.5	7.9	7.2	6.7	6.1	5.6	5.2	4.8	4.4	4	3.7	3.4	3.2	2.9	2.7	2.5
7.9	11	9.9	9.1	8.4	7.7	7.1	6.6	3	5.6	5.1	4.7	4.3	4	3.7	3.4	3.1	2.9	2.6	2.4	2.2	2.1
8	8.8	8.2	7.6	7	6.4	5.9	5.4	5	4.6	4.2	3.9	3.6	3.3	3	2.8	2.6	2.4	2.2	2	1.9	1.7
8.1	7.2	6.8	6.3	5.8	5.3	4.9	4.5	4.1	3.8	3.5	3.2	3	2.7	2.5	2.3	2.1	2	1.8	1.7	1.5	1.4
8.2	6	5.6	5.2	4.8	4.4	4	3.7	3.4	3.1	2.9	2.7	2.4	2.3	2.1	1.9	1.8	1.6	1.5	1.4	1.3	1.2
8.3	4.9	4.6	4.3	3.9	3.6	3.3	3.1	2.8	2.6	2.4	2.2	2	1.9	1.7	1.6	1.4	1.3	1.2	1.1	1	0.96
8.4	4.1	3.8	3.5	3.2	3	2.7	2.5	2.3	2.1	2	1.8	1.7	1.5	1.4	1.3	1.2	1.1	1	0.93	0.86	0.79
8.5	3.3	3.1	2.9	2.7	2.4	2.3	2.1	1.9	1.8	1.6	1.5	1.4	1.3	1.2	1.1	0.98	0.9	0.83	0.77	0.71	0.65
8.6	2.8	2.6	2.4	2.2	2	1.9	1.7	1.6	1.5	1.3	1.2	1.1	1	0.96	0.88	0.81	0.75	0.69	0.63	0.58	0.54
8.7	2.3	2.2	2	1.8	1.7	1.6	1.4	1.3	1.2	1.1	1	0.94	0.87	0.8	0.74	0.68	0.62	0.57	0.53	0.49	0.45
8.8	1.9	1.8	1.7	1.5	1.4	1.3	1.2	1.1	1	0.93	0.86	0.79	0.73	0.67	0.62	0.57	0.52	0.48	0.44	0.41	0.37

8.9	1.6	1.5	1.4	1.3	1.2	1.1	1	0.93	0.85	0.79	0.72	0.67	0.61	0.56	0.52	0.48	0.44	0.4	0.37	0.34	0.32
9	1.4	1.3	1.2	1.1	1	0.93	0.86	0.79	0.73	0.67	0.62	0.57	0.52	0.48	0.44	0.41	0.37	0.34	0.32	0.29	0.27



Table A-5.3

Temperature and pH-Dependent Values of the CCC (Chronic Criterion Magnitude; mg TAN / L).

Temperature (°C)																								
pH	0-7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
6.5	4.9	4.6	4.3	4.1	3.8	3.6	3.3	3.1	2.9	2.8	2.6	2.4	2.3	2.1	2	1.9	1.8	1.6	1.5	1.5	1.4	1.3	1.2	1.1
6.6	4.8	4.5	4.3	4	3.8	3.5	3.3	3.1	2.9	2.7	2.5	2.4	2.2	2.1	2	1.8	1.7	1.6	1.5	1.4	1.3	1.3	1.2	1.1
6.7	4.8	4.5	4.2	3.9	3.7	3.5	3.2	3	2.8	2.7	2.5	2.3	2.2	2.1	1.9	1.8	1.7	1.6	1.5	1.4	1.3	1.2	1.2	1.1
6.8	4.6	4.4	4.1	3.8	3.6	3.4	3.2	3	2.8	2.6	2.4	2.3	2.1	2	1.9	1.8	1.7	1.6	1.5	1.4	1.3	1.2	1.1	1.1
6.9	4.5	4.2	4	3.7	3.5	3.3	3.1	2.9	2.7	2.5	2.4	2.2	2.1	2	1.8	1.7	1.6	1.5	1.4	1.3	1.2	1.2	1.1	1
7	4.4	4.1	3.8	3.6	3.4	3.2	3	2.8	2.6	2.4	2.3	2.2	2	1.9	1.8	1.7	1.6	1.5	1.4	1.3	1.2	1.1	1.1	0.99
7.1	4.2	3.9	3.7	3.5	3.2	3	2.8	2.7	2.5	2.3	2.2	2.1	1.9	1.8	1.7	1.6	1.5	1.4	1.3	1.2	1.2	1.1	1	0.95
7.2	4	3.7	3.5	3.3	3.1	2.9	2.7	2.5	2.4	2.2	2.1	2	1.8	1.7	1.6	1.5	1.4	1.3	1.3	1.2	1.1	1	0.96	0.9
7.3	3.8	3.5	3.3	3.1	2.9	2.7	2.6	2.4	2.2	2.1	2	1.8	1.7	1.6	1.5	1.4	1.3	1.3	1.2	1.1	1	0.97	0.91	0.85
7.4	3.5	3.3	3.1	2.9	2.7	2.5	2.4	2.2	2.1	2	1.8	1.7	1.6	1.5	1.4	1.3	1.3	1.2	1.1	1	0.96	0.9	0.85	0.79
7.5	3.2	3	2.8	2.7	2.5	2.3	2.2	2.1	1.9	1.8	1.7	1.6	1.5	1.4	1.3	1.2	1.2	1.1	1	0.95	0.89	0.83	0.78	0.73
7.6	2.9	2.8	2.6	2.4	2.3	2.1	2	1.9	1.8	1.6	1.5	1.4	1.4	1.3	1.2	1.1	1.1	0.98	0.92	0.86	0.81	0.76	0.71	0.67
7.7	2.6	2.4	2.3	2.2	2	1.9	1.8	1.7	1.6	1.5	1.4	1.3	1.2	1.1	1.1	1	0.94	0.88	0.83	0.78	0.73	0.68	0.64	0.6
7.8	2.3	2.2	2.1	1.9	1.8	1.7	1.6	1.5	1.4	1.3	1.2	1.2	1.1	1	0.95	0.89	0.84	0.79	0.74	0.69	0.65	0.61	0.57	0.53
7.9	2.1	1.9	1.8	1.7	1.6	1.5	1.4	1.3	1.2	1.2	1.1	1	0.95	0.89	0.84	0.79	0.74	0.69	0.65	0.61	0.57	0.53	0.5	0.47
8	1.8	1.7	1.6	1.5	1.4	1.3	1.2	1.1	1.1	1	0.94	0.88	0.83	0.78	0.73	0.68	0.64	0.6	0.56	0.53	0.5	0.44	0.44	0.41
8.1	1.5	1.5	1.4	1.3	1.2	1.1	1.1	0.99	0.92	0.87	0.81	0.76	0.71	0.67	0.63	0.59	0.55	0.52	0.49	0.46	0.43	0.4	0.38	0.35
8.2	1.3	1.2	1.2	1.1	1	0.96	0.9	0.84	0.79	0.74	0.7	0.65	0.61	0.57	0.54	0.5	0.47	0.44	0.42	0.39	0.37	0.34	0.32	0.3
8.3	1.1	1.1	0.99	0.93	0.87	0.82	0.76	0.72	0.67	0.63	0.59	0.55	0.52	0.49	0.46	0.43	0.4	0.38	0.35	0.33	0.31	0.29	0.27	0.26
8.4	0.95	0.89	0.84	0.79	0.74	0.69	0.65	0.61	0.57	0.53	0.5	0.47	0.44	0.41	0.39	0.36	0.34	0.32	0.3	0.28	0.26	0.25	0.23	0.22
8.5	0.8	0.75	0.71	0.67	0.62	0.58	0.55	0.51	0.48	0.45	0.42	0.4	0.37	0.35	0.33	0.31	0.29	0.27	0.25	0.24	0.22	0.21	0.2	0.18
8.6	0.68	0.64	0.6	0.56	0.53	0.49	0.46	0.43	0.41	0.38	0.36	0.33	0.31	0.29	0.28	0.26	0.24	0.23	0.21	0.2	0.19	0.18	0.16	0.15
8.7	0.57	0.54	0.51	0.47	0.44	0.42	0.39	0.37	0.34	0.32	0.3	0.28	0.27	0.25	0.23	0.22	0.21	0.19	0.18	0.17	0.16	0.15	0.14	0.13
8.8	0.49	0.46	0.43	0.4	0.38	0.35	0.33	0.31	0.29	0.27	0.26	0.24	0.23	0.21	0.2	0.19	0.17	0.16	0.15	0.14	0.13	0.13	0.12	0.11
8.9	0.42	0.39	0.37	0.34	0.32	0.3	0.28	0.27	0.25	0.23	0.22	0.21	0.19	0.18	0.17	0.16	0.15	0.14	0.13	0.12	0.12	0.11	0.1	0.09
9	0.36	0.34	0.32	0.3	0.28	0.26	0.24	0.23	0.21	0.2	0.19	0.18	0.17	0.16	0.15	0.14	0.13	0.12	0.11	0.11	0.1	0.09	0.09	0.08

Table A-6

***Oxygen Standards for Aquatic Life Designated Uses\*\****

The following oxygen standards shall apply to Tribal waters. These standards are to protect life stages of fish species at some or all life stages and other forms of aquatic life that are associated with the water classification. At present, there are no numeric oxygen standards specific to sensitive species classifications; however, these may be added in the future.

Freshwater Aquatic Life Criteria for *dissolved oxygen* are as follows:

**Criteria for Waters Designated Cold, Cool, and Other Aquatic Life**

Coldwater Aquatic Life		
Early Life	Other Life	
	Stages <sup>1,2</sup>	Stages
30 Day Mean	N/A <sup>3</sup>	6.5
7 Day Mean	9.5 (6.5)	N/A
7 Day Mean Minimum	N/A	5.0
1 Day Minimum <sup>4</sup>	8.0 (5.0)	4.0

1. These are water column concentrations to achieve the required inter-gravel dissolved oxygen concentrations shown in parentheses. For species that have early life stages exposed directly to the water column, the figures in parentheses apply.

2. Includes all embryonic and larval stages and all juvenile forms to 30-days following hatching.

3. N/A (Not Applicable)

4. All minima should always be considered as instantaneous concentrations to be achieved

\*\* These standards generally apply to all waters of the Tribe. However, oxygen standards for lakes and reservoirs may be adjusted with site-specific standards to recognize differences in natural or attainable levels in the hypolimnion as opposed to the epilimnion. Standards for these different lake strata may be set as site specific standards as information becomes known of appropriate values that protect the designated uses and are natural or attainable.

## APPENDIX B TABLES

### Designated Use Tables 4.3-1 to 4.3-5

B-4.3.1 Two Medicine Drainage

B-4.3.2 St. Mary Drainage

B-4.3.3 Birch Creek Drainage

B-4.3.4 Cut Bank Drainage

B-4.3.5 Milk River Drainage

Table B-4.3.1 Two Medicine River Watershed

Two Medicine River Watershed	Domestic Water	3.3.1. Class 1-Cold Water Fishery	3.3.2 Class 1-Cool Water Propagation	3.3.3. Aquatic Life other than Fish	Recreation Class 1-Full body contact	Recreation Class 2-Incidental contact	Wildlife growth and Propagation	Agriculture	Navigation and Industrial Uses	Cultural and Spiritual
Two Medicine River	X	X			X		X	X	X	X
Two Medicine Diversion	X	X			X		X	X	X	X
South Fork Two Medicine River	X	X			X		X	X	X	X
Deep Creek	X	X			X		X	X	X	X
Badger Creek	X	X			X		X	X	X	X
Little Badger Creek	X	X			X		X	X	X	X
White Tail Creek	X	X			X		X	X	X	X
Midvale Creek	X	X			X		X	X	X	X
Railroad Creek	X	X			X		X	X	X	X

Two Medicine River Watershed	Domestic Water	3.3.1. Class 1-Cold Water Fishery	3.3.2 Class 1-Cool Water Propagation	3.3.3. Aquatic Life other than Fish	Recreation Class 1-Full body contact	Recreation Class 2-Incidental contact	Wildlife growth and Propagation	Agriculture	Navigation and Industrial Uses	Cultural and Spiritual
Badger Creek Tributaries	X	X			X		X	X	X	X
Evans Creek	X	X			X		X	X	X	X
Lower Two Medicine Lake	X	X			X		X	X	X	X
Dog Gun Lak	X	X			X		X	X	X	X
Cooper Lake	X	X			X		X	X	X	X
Magee Lake	X	X			X		X	X	X	X
Mittens Lake	X	X			X		X	X	X	X
Twin Lakes	X	X			X		X	X	X	X
Any unnamed or unidentified tributaries in Two Medicine River watershed	X	X			X		X	X	X	X

Table B-4.3.2 Saint Mary River Watershed

Table B-4.3.2 Saint Mary River Watershed	Domestic Water	3.3.1 Class 1-Cold Water Fishery	3.3.2 Class 1- Cool Water Propagation	3.3.3 Aquatic Life other than Fish	Recreation Class 1-Full body contact	Recreation Class 2- Incidental contact	Wildlife growth and Propagation	Agriculture	Navigation and Industrial Uses	Cultural and Spiritual
Saint Mary River	X	X			X		X	X	X	X
Otatso Creek	X	X			X		X	X	X	X
Swiftcurrent Creek	X	X			X		X	X	X	X
Kennedy Creek	X	X			X		X	X	X	X
Boulder Creek	X	X			X		X	X	X	X
Divide Creek	X	X			X		X	X	X	X
Lee Creek	X	X			X		X	X	X	X
Wild Creek	X	X			X		X	X	X	X
Roberts Creek	X	X			X		X	X	X	X
Willow Creek	X	X			X		X	X	X	X
Any unnamed or unidentified tributaries in Saint Mary River watershed	X	X			X		X	X	X	X
Lower St. Mary Lake	X	X			X		X	X	X	X
Duck Lake	X	X			X		X	X	X	X
Spider Lake	X	X			X		X	X	X	X
Pike Lake	X	X			X		X	X	X	X
Flat Top Lake	X	X			X		X	X	X	X
Sherburne Lake	X	X			X		X	X	X	X

Table B-4.3.3 Birch Creek Watershed

Table 4.3.3 Birch Creek Watershed	Domestic Water	3.3.1. Class 1- Cold Water Fishery	3.3.2 Class 1- Cool Water Propagation	3.3.3 Aquatic Life other than Fish	Recreation Class 1-Full body contact	Recreation Class 2- Incidental contact	Wildlife growth and Propagation	Agriculture	Navigation and Industrial Uses	Cultural and Spiritual
Birch Creek-	X	X			X		X	X	X	X
Haywood-Eagle Creek	X	X			X		X	X	X	X
Blacktail Creek	X	X			X		X	X	X	X
Any unnamed or unidentified tributaries in Birch Creek Watershed	X	X			X		X	X	X	X
Four Horn Lake	X	X			X		X	X	X	X
Swift Reservoir	X	X			X		X	X	X	X
Alkali Lake	X	X			X		X	X	X	X



Table B-4.3.4 Cut Bank Creek Watershed

Table B-4.3-4 Cut Bank Creek Watershed	Domestic Water	3.3.1. Class 1-Cold Water Fishery	3.3.2 Class 1-Cool Water Propagation	3.3.3 Aquatic Life other than Fish	Recreation Class 1-Full body contact	Recreation Class 2- Incidental contact	Wildlife growth and Propagation	Agriculture	Navigation and Industrial Uses	Cultural and Spiritual
Cut Bank Creek	X	X			X		X	X	X	X
Old Maid Coulee	X	X			X		X	X	X	X
N. & S. Cut Bank Creek to Glacier Park Boundary	X	X			X		X	X	X	X
Flatiron Creek	X	X			X		X	X	X	X
Greasewood Creek	X	X			X		X	X	X	X
Willow Creek	X	X			X		X	X	X	X
Depot Creek	X	X			X		X	X	X	X

Table B-4.3-4 Cut Bank Creek Watershed	Domestic Water	3.3.1. Class 1-Cold Water Fishery	3.3.2 Class 1-Cool Water Propagation	3.3.3 Aquatic Life other than Fish	Recreation Class 1-Full body contact	Recreation Class 2- Incidental contact	Wildlife growth and Propagation	Agriculture	Navigation and Industrial Uses	Cultural and Spiritual
Any unnamed or unidentified tributaries of Cut Bank Creek	X	X			X		X	X	X	X
Mission Lake	X	X			X		X	X	X	X
Buffalo Lake	X	X			X		X	X	X	X
Sharp Lake	X	X			X		X	X	X	X
Kipp Lake	X	X			X		X	X	X	X
Hidden Lake	X	X			X		X	X	X	X
Guardipee Lake	X	X			X		X	X	X	X
Hope Lake	X	X			X		X	X	X	X
No Chief-Whisky John Lake	X	X			X		X	X	X	X

Table B-4.3.5 Milk River Watershed

Table B-4.3.5 Milk River Watershed	Domestic Water	3.3.1 Class 1- Cold Water Fishery	3.3.2 Class 1- Cool Water Propagation	3.3.3 Aquatic Life other than Fish	Recreation Class 1-Full body contact	Recreation Class 2- Incidental contact	Wildlife growth and Propagation	Agriculture	Navigation and Industrial Uses	Cultural and Spiritual
Milk River International Border to Confluence with Middle Fork	X	X			X		X	X	X	X
Middle Fork Milk River	X	X			X		X	X	X	X
North Fork Milk River	X	X			X		X	X	X	X
Dry Fork Milk River	X	X			X		X	X	X	X
Livermore Creek	X	X			X		X	X	X	X
South Fork of Milk River	X	X			X		X	X	X	X
Toad Creek	X	X			X		X	X	X	X
Fox Creek	X	X			X		X	X	X	X
Arnoux Creek	X	X			X		X	X	X	X
Sand Rock Coulee	X	X			X		X	X	X	X
Any unnamed or unidentified tributaries to the Milk River	X	X			X		X	X	X	X

Table B-4.3.5 Milk River Watershed	Domestic Water	3.3.1 Class 1- Cold Water Fishery	3.3.2 Class 1- Cool Water Propagation	3.3.3 Aquatic Life other than Fish	Recreation Class 1-Full body contact	Recreation Class 2- Incidental contact	Wildlife growth and Propagation	Agriculture	Navigation and Industrial Uses	Cultural and Spiritual
Goose Lake	X	X			X		X	X	X	X
Horse Lake	X	X			X		X	X	X	X
Croff Lake	X	X			X		X	X	X	X
Spider Lake	X	X			X		X	X	X	X



