Presented below are water quality standards that are in effect for Clean Water Act purposes.

EPA is posting these standards as a convenience to users and has made a reasonable effort to assure their accuracy. Additionally, EPA has made a reasonable effort to identify parts of the standards that are not approved, disapproved, or are otherwise not in effect for Clean Water Act purposes.

FOND DU LAC BAND OF LAKE SUPERIOR CHIPPEWA

WATER QUALITY STANDARDS OF THE FOND DU LAC RESERVATION

ORDINANCE # 12/98, as amended

Adopted by Resolution # 1403/98 of the Fond du Lac Reservation Business Committee on December 10, 1998

Amended by Resolution # 1286/01 of the Fond du Lac Reservation Business Committee on September 11, 2001

Amended by Resolution #1321/20 of the Fond du Lac Reservation Business Committee on July 8, 2020

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FOND DU LAC BAND OF LAKE SUPERIOR CHIPPEWA

WATER QUALITY STANDARDS OF THE FOND DU LAC RESERVATION

ORDINANCE # 12/98

CHAPTER 1

AUTHORITY, PURPOSE AND SCOPE

Section 101 Authority

This Ordinance is enacted pursuant to the inherent sovereign authority of the Fond du Lac Reservation Business Committee (Reservation Business Committee), as the governing body of the Fond du Lac Band of Lake Superior Chippewa, as granted by Article VI of the Revised Constitution of the Minnesota Chippewa Tribe, and as recognized under the Treaty of LaPointe, 10 Stat. 1109, under Section 16 of the Indian Reorganization Act, 25 U.S.C. § 476, and under sections 303 and 518 of the Clean Water Act, 33 U.S.C. §§ 1313 & 1377.

Section 102 Purpose

The purpose of this Ordinance is to protect the health and welfare of the Fond du Lac Band and other residents of the Fond du Lac Reservation through:

a. The designation of uses for which the waters of the Fond du Lac Reservation shall be protected;

b. The establishment of water quality criteria in order to attain and sustain those designated uses;

c. The protection and enhancement of fish and other aquatic life and wildlife on and near the Fond du Lac Reservation;

d. The prevention of degradation of existing water quality; and

e. The protection of the Fond du Lac Band's political integrity, economic security, and health and welfare.

Section 103 Scope

The water quality standards established under this Ordinance shall apply to all waters of the Fond du Lac Reservation, including wetlands. The standards will be applied to activities on the Reservation which may impact the quality of waters upon, under, flowing through or adjacent to the Fond du Lac Reservation, and shall be the primary basis for managing discharges attributable to point and non-point sources of pollution, and the physical alterations of waterbodies including wetlands.

Section 104 Reservation of Rights

The Reservation Business Committee reserves the right to amend or repeal all or any part of this Ordinance at any time. All the rights, privileges, or immunities conferred by this Ordinance or by acts done pursuant thereto shall exist subject to the power of the Reservation Business Committee. Nothing in this Ordinance shall be construed to constitute a waiver of the sovereign immunity of the Fond du Lac Band or a consent to jurisdiction by any forum not expressly authorized to exercise jurisdiction under this Ordinance. The water quality standards established under this Ordinance are not intended to control, and shall not be invalidated by, natural background phenomena or acts of God.

Any proposed changes or revisions to these standards shall be preceded by a public notice in a local newspaper and a minimum forty-five consecutive day comment period. During this comment period, any Band member or other interested persons may request a public hearing prior to adoption of such changes or revisions by the Reservation Business Committee. Upon approval of a public hearing request, the Reservation Business Committee shall by public notice in a local newspaper announce the date, time and location of such public hearing and said public notice shall be published at least forty-five consecutive days prior to the public hearing. Any reports, documents and data relevant to the discussion at the public hearing shall be available at least thirty days before the hearing.

These standards shall be reviewed and updated, as necessary and appropriate, by the Reservation Business Committee at least once every three years. Prior to such action, any proposed changes or revisions to these standards shall be preceded by a public notice in a local newspaper and a minimum forty-five consecutive day comment period. In addition, the Reservation Business Committee shall conduct a public hearing to obtain comments on these standards and there shall be public notice in a local newspaper to announce the date, time and location of such public hearing. The public notice shall be published at least forty-five consecutive days prior to the public hearing. Any reports, documents and data relevant to the discussion at the public hearing shall be available at least thirty days before the hearing.

Section 105 Antidegradation Policy and Implementation

The Reservation Business Committee hereby declares the following anti-degradation policy for all waters on or adjacent to the Fond du Lac Reservation:

a. Policy

1. Existing instream water uses, as defined pursuant to 40 C.F.R. Part 131, and the level of water quality necessary to protect existing uses shall be maintained and protected. No further water quality degradation which would interfere with or become injurious to existing or designated uses shall be permitted.

2. Waters in which the existing quality surpasses, on a pollutant by pollutant basis, the standards prescribed under this Ordinance, and unequivocally attains those levels necessary to support and maintain existing water uses, aquatic and wetland habitats, and wildlife and recreation in and on the water, are considered high quality for the purposes of this antidegradation policy and implementation procedures.

3. Degradation of water quality shall not be permitted where it will be injurious to existing or designated uses. The Reservation Business Committee or appropriate permitting authority shall impose the most stringent regulatory controls for all new and existing point sources, and shall impose cost effective and reasonable best management practices for non-point sources and wetland alterations.

4. For waters identified as high quality under 105.a.2 of this Ordinance, the Fond du Lac Reservation Business Committee, after appropriate public notice and intergovernmental coordination requirements and after due consideration of such technical, economic, social and other criteria in the area in which the water is located, may choose to allow lower water quality, where lower water quality is determined to be necessary to support important social and economic development.

5. Waters proposed in this Ordinance as Outstanding Reservation Resource Waters (ORRW) shall be designated as such upon approval of this Ordinance and maintained and protected. Waters may be designated an ORRW because of exceptional cultural, aesthetic, recreational or ecological significance. Upon approval of this Ordinance, other waters may be designated ORRW as determined by the Reservation Business Committee

after at least one public hearing. Water quality in ORRWs shall be maintained and protected without degradation.

6. In situations giving rise to potential water quality impairment due to a thermal discharge, the Reservation Business Committee shall implement the anti-degradation policy through regulations consistent with Section 316 of the Clean Water Act, as amended, 33 U.S.C. § 1326.

b. Implementation

1. Lowering of Water Quality

A significant Lowering of Water Quality is defined as: 1) the projected or observed diminished chemical or biological integrity of Reservation surface waters as established by the Fond du Lac Environmental Program through the collection and analysis of baseline biological data, and the determination of reference conditions for such surface waters; or, 2) a new or increased loading of a pollutant from any regulated existing or new facility, either point source or nonpoint source, for which there is a control document or reviewable action, as a result of any activity including, but not limited to:

A. Construction of a new regulated facility or modification of an existing regulated facility such that a new or modified control document is required;

B. Modification of an existing regulated facility operating under a current control document such that the production capacity of the facility is increased;

C. Addition of a new source of untreated or pretreated effluent containing or expected to contain any pollutant to an existing wastewater treatment works, whether public or private;

D. A request for an increased limit in an applicable control document; and

E. Other deliberate activities that, based on the information available, could be reasonably expected to result in an increased loading of any pollutant to any waters of the Fond du Lac Reservation.

2. **Review of Antidegradation Demonstrations**

For all waters, the Reservation Business Committee shall ensure that the level of water quality necessary to protect existing uses is maintained. In order to achieve this requirement, and consistent with 40 C.F.R. Part 132, water quality standards use designations must include all existing uses. Controls shall be established as necessary on point and nonpoint sources of pollutants to ensure that the criteria applicable to the designated use are achieved in the water and that any designated use of a downstream water is protected. Where water quality does not support the designated uses of a waterbody or ambient pollutant concentrations exceed water quality criteria applicable to the waterbody, the Reservation Business Committee shall not allow a lowering of water quality for the pollutant or pollutants preventing the attainment of such uses or exceeding such criteria.

3. **Outstanding Reservation Resource Waters (ORRW)**

For water designated as ORRW, the Reservation Business Committee or appropriate permitting authority shall ensure, through the application of appropriate controls on point and non-point pollutant sources, that water quality is maintained and protected. No new or increased discharges or alterations of the background conditions are allowed to Outstanding Reservation Resource Waters; however, a short-term, temporary exemption may be permitted, provided that an entity seeking to engage in such discharge demonstrate that such discharge will arise entirely from one of the following and meets the Outstanding Reservation Resource Waters Antidegradation Demonstration requirements below:

a. Maintenance or repair of existing roads, bridges, culverts, boat landings, septic systems, or other similar structures; construction of buildings, wells, roads or other similar structures.
b. Response actions undertaken to alleviate a release into the environment of hazardous substances, pollutants, or contaminants which may pose an imminent and substantial threat to public health or welfare.
c. Actions undertaken to restore culturally important species and their habitats.

Any regulated activity that has the potential to cause or contribute to any lowering of water quality in a water designated by the Reservation Business Committee as an ORRW is

inconsistent with the intent of this Ordinance. Waters designated Outstanding Reservation Resource Waters include: Perch Lake, Rice Portage Lake, Dead Fish Lake, Jaskari Lake, and Wild Rice Lake.

4. **Exceptional Resource Waters**

For purposes of implementing the provisions of this chapter, any surface waters that meet the definition of "high quality waters" at Section 201(bb) and that are not specifically classified as Outstanding Reservation Resource Waters are classified as Exceptional Resource Waters. Exceptional Resource Waters are subject to the provisions of 105(a)(2) and (4) of the Fond du lac antidegradation policy.

Exceptional Resource Waters are of high quality and culturally important for the ecosystems they support. All existing in-stream uses and the level of water quality fully protective of those in-stream uses shall be maintained and protected, or improved in the case of a degraded waterbody. Where designated uses of the waterbody are impaired, there shall be no lowering of water quality with respect to the pollutant or pollutants that are causing the impairment.

For Exceptional Resource Waters, the Reservation Business Committee shall ensure, or request the appropriate permitting authority to ensure, that no action resulting in a lowering of water quality occurs unless an antidegradation demonstration has been completed and the information thus provided is determined by the Reservation Business Committee to adequately support the lowering of water quality.

The Reservation Business Committee or appropriate permitting authority shall establish conditions in the control document applicable to the regulated activity that prohibit the regulated activity from undertaking any deliberate action, such that there would be an increase in the rate of mass loading of any BCC or other pollutant, unless an antidegradation demonstration is provided to the Reservation Business Committee and approved. Imposition of limits due to improved monitoring data or new water quality criteria or values, or changes in loadings of any BCC or other pollutant within the existing capacity and processes, and that are covered by the existing applicable control document, are not subject to an antidegradation review.

For BCCs or other pollutants known or believed to be present in a discharge, from a point or nonpoint source, a monitoring

requirement shall be included in the control document. The control document shall also include a provision requiring the source to notify the Reservation Business Committee and appropriate permitting authority of any increased loadings. Upon notification, the Reservation Business Committee or appropriate permitting authority shall require actions as necessary to reduce or eliminate the increased loading. The procedures described above serve to implement the authority defined in Section 105(a)(4).

c. **Antidegradation Demonstration**

Any entity seeking to lower water quality in an Exceptional Resource Water or create a new or increased discharge of bioaccumulative substances of immediate concern or other pollutants must first submit an antidegradation demonstration for consideration and approval or disapproval by the Reservation Business Committee. The antidegradation demonstration shall include, but may not be limited, to the following:

1. Pollution Prevention Alternative Analysis. Identify any cost-effective pollution prevention alternatives and techniques that are available to eliminate or significantly reduce the extent to which the increased loading results in a lowering of water quality;

2. Alternative or Enhanced Treatment Analysis. Identify alternative or enhanced treatment techniques that are available that would eliminate the lowering of water quality and their costs relative to the cost of treatment necessary to achieve the applicable effluent limitations; and

3. Social and Economic Analysis. Identify the social and economic development benefits to the area in which the waters are located that will be foregone if the lowering of water quality is not allowed.

d. **Antidegradation Decision**

Once the Reservation Business Committee determines the information provided in an antidegradation demonstration is administratively complete, the Reservation Business Committee shall use that information to determine whether or not the lowering of water quality is necessary and, if necessary, whether or not the lowering of water quality will support important social and economic development goals. If the proposed lowering of water quality is either not necessary, or will not support important social and economic development goals, the Reservation Business Committee shall deny the request to lower water

quality. If the lowering of water quality is necessary, and will support important social and economic development goals, the Reservation Business Committee may approve all or part of the proposed lowering to occur as necessary.

Prior to issuing a decision, the Reservation Business Committee shall publish a notice in a local newspaper and provide a minimum forty-five consecutive day comment period. During this comment period, any Band member or other interested persons may request a public hearing of such changes or revisions by the Reservation Business Committee. Upon approval of a public hearing request, the Reservation Business Committee shall by public notice in a local newspaper announce the date, time and location of such public hearing and said public notice shall be published at least forty-five consecutive days prior to the public hearing. The Reservation Business Committee shall send a notice of the public hearing to all identified interested and affected persons and parties at least forty-five consecutive days prior to the public hearing. Any reports, documents and data relevant to the discussion at the public hearing shall be available at least thirty days before the hearing. In no event may the decision reached by the Reservation Business Committee allow the water quality to be lowered below the minimum level required to fully support existing and designated uses. Final decisions on requests to lower water quality shall be issued by the Reservation Business Committee within 90 days of the public comment period.

CHAPTER 2

DEFINITIONS

Section 201 General Definitions

The following definitions shall apply to the terms of this Ordinance:

a. **Acute toxicity** shall mean concurrent and delayed adverse effect(s) that results from an acute exposure and occurs within any short observation period which begins when the exposure begins, may extend beyond the exposure period, and usually does not constitute a substantial portion of the life span of the organism.

b. **Aesthetics** shall mean a stream, reach, lake or impoundment with an exceptional beauty or found representing the traditional value system of the Fond du Lac Band of Chippewa as determined by the Fond du Lac Reservation Business Committee.

c. **Alteration** shall mean a human-caused change in water quality or quantity, physical habitat, or hydrologic characteristic that impacts a waterbody or wetland in such a manner as to adversely affect function, biologic or ecologic integrity.

d. **Antidegradation** shall mean the policy set forth in the water quality regulations under the Clean Water Act, as established by the United States Environmental Protection Agency, whereby existing and future uses and the level of water quality necessary to maintain those uses is maintained and protected. (See 40 C.F.R. § 131.12).

e. **Aquatic biota** shall mean animal and plant life in the water.

f. **Bioaccumulation Factor (BAF)** shall mean the ratio (in L/kg) of a substance's concentration in tissue of an aquatic organism to its concentration in the ambient water, in situations where both the organism and its food are exposed and the ratio does not change substantially over time.

g. **Bioaccumulative Chemical of Concern (BCC)** shall mean any chemical that has the potential to cause adverse effects which, upon entering surface waters, by itself or as its toxic transformation product, accumulates in aquatic organisms by a human health bioaccumulation factor greater than 1000, after considering metabolism and other physicochemical properties that might enhance or inhibit

bioaccumulation, in accordance with the methodology in appendix B of 40 C.F.R. Part 132. Chemicals with half-lives of less than eight weeks in the water column, sediment, and biota are not BCCs. The minimum BAF information needed to define an organic chemical as a BCC is either a field-measured BAF or a BAF derived using the BSAF methodology. The minimum BAF information needed to define an inorganic chemical, including an organometal, as a BCC is either a field-measured BAF or a laboratory-measured BCF. BCCs include, but are not limited to, the pollutants identified as BCCs in Section A of Table 6 of 40 C.F.R. Part 132.

h. **Bioaccumulative Substances of Immediate Concern (BSIC)** shall mean the list of substances identified in the September, 1991 Bi-National Program to restore and protect the Lake Superior Basin. They include: 2, 3, 7, 8-TCDD; octachlorostyrene; hexachlorobenzene; chlordane; dieldrin, DDT, DDE, and other metabolites; toxaphene; PCBs; and mercury. Other chemicals may be added to the list following assessments of environmental effects and impacts after public review and comment.

i. **Bioconcentration factor (BCF)** shall mean the ratio in L/kg of a substance's concentration in tissue of an aquatic organism to its concentration in the ambient water, in situations where the organism is exposed through the water only and the ratio does not change substantially over time.

j. **Biological integrity** shall mean a balanced, integrated, adaptive community of organisms having a species composition, diversity, and functional organization comparable to that of the natural habitat of the region.

k. **Biota-Sediment Accumulation Factor (BSAF)** shall mean the ratio (in kg of organic carbon/kg of lipid) of a substance's lipid-normalized concentration in tissue of an aquatic organism to its organic carbon-normalized concentration in surface sediment, in situations where the ratio does not change substantially over time, both the organism and its food are exposed, and the surface sediment is representative of the average surface sediment in the vicinity of the organism.

l. **Carcinogen** shall mean a substance which causes an increased incidence of benign or malignant neoplasms, or substantially decreases the time to develop neoplasms, in animals or humans.

m. **Chronic standard (CS)** shall mean the highest water concentration of a toxicant to which organisms can be exposed indefinitely without causing chronic toxicity.

n. **Chronic toxicity** shall mean the concurrent and delayed adverse effect(s) that occurs only as a result of a chronic exposure.

o. **Cold water fisheries** shall mean a stream, reach, lake or impoundment where water temperature, habitat and other characteristics are suitable for support and propagation of cold water fish and other aquatic life, or serving as a spawning or nursery area for cold water fish species. Examples of cold water fish include brook trout and rainbow trout.

p. **Control Document** shall mean any authorization issued by the Reservation Business Committee or appropriate permitting authority to any source of pollutants to waters under its jurisdiction that specifies conditions under which the source is allowed to operate.

q. **Designated uses** shall mean those uses set forth in the water quality standards herein.

r. **Dissolved oxygen** shall mean the amount of oxygen dissolved in water expressed as a concentration in milligrams per liter.

s. **Effluent** shall mean discharges into surface waters from other than natural sources.

t. **Exceptional Resource Waters** shall mean high quality waters not specifically classified as Outstanding Reservation Resource Waters. Exceptional Resource Waters are subject to the provisions of 105(a)(2) and (4) of the Fond du Lac antidegradation policy.

u. **Existing Discharger** shall mean any building, structure, facility or installation from which there is or may be a "discharge of pollutants," as defined in 40 C.F.R. § 122.2, to the Lake Superior Basin, that is not a new discharger. "Discharge of pollutants" may occur via surface runoff which is collected or channeled by man; through pipes, sewers or other conveyances which do not lead to a treatment works; through pipes, sewers or other conveyances which lead to treatment works; or through directly hydrologically connected groundwater.

v. **Expanded Discharge** shall mean a discharge of a pollutant to a Reservation surface water in the Lake Superior Basin that changes in volume, quality, location, or any other manner after either: the effective date the water was designated as an Outstanding Reservation Water; or the effective date of this Ordinance if the water was designated as an Exceptional Resource Water. In determining whether an increased loading would result from the change in the discharge, the Reservation Business Committee shall compare the loading that would result from the change with the loading that exists as of the effective date specified above, whichever applies.

w. **Final acute value (FAV)** is (a) a calculated estimate of the concentration of a test material such that 95 percent of the genera (with which acceptable acute toxicity tests have been conducted on the material) have higher Genus Mean Acute Values (GMAVs), or (b) the Species Mean Acute Value (SMAV) of an important and/or critical species, if the SMAV is lower than the calculated estimate.

x. **Fishery** shall mean a balanced, diverse community of fishes controlled by the water quality, quantity and habitat of a waterbody.

y. **Genus mean acute value (GMAV)** shall mean the geometric mean of the SMAVs for the genus.

z. **GLI Pollutant** shall mean a toxic pollutant listed as a pollutant of initial focus in the Great Lakes Initiative (GLI) Guidance, 40 C.F.R. Part 132, Table 6, as amended through March 12, 1997.

aa. **GLI Guidance** shall mean the Water Quality Guidance for the Great Lakes System, 40 C.F.R. Part 132, as amended through March 12, 1997.

bb. **High Quality Waters** shall mean surface waters of the Reservation in which, on a parameter by parameter basis, the quality of the waters exceeds levels necessary to support propagation of fish, shellfish, and wildlife and recreation in and on the water.

cc. **Human cancer value (HCV)** is the maximum ambient water concentration of a substance at which a lifetime of exposure from either: drinking the water, consuming fish from the water, and water-related activities; or consuming fish from the water, and water-related recreation activities, will represent a plausible upper-bound risk of contracting cancer of one in 100,000 using the exposure assumptions specified in the Methodologies for the Development of Human Health Criteria and Values specified in appendix C of 40 C.F.R Part 132.

dd. **Human noncancer value (HNV)** is the maximum ambient water concentration of a substance at which adverse noncancer effects are not likely to occur in the human population from lifetime exposure via either: drinking the water, consuming fish from the water, and water-related activities; or consuming the fish from the water, and water-related activities, using the Methodologies for the Development of Human Health Criteria and Values in appendix C of 40 C.F.R Part 132.

ee. **Indigenous** shall mean produced, growing or living naturally in a particular region or environment.

ff. Maximum standard (MS) shall mean the highest concentration of a toxicant in water to which aquatic organisms can be exposed for a brief time with zero to slight mortality. The MS equals the FAV divided by two.

gg. Milligrams per liter (mg/l) shall mean the concentration at which one milligram is contained in a volume of one liter; one milligram per liter is equivalent to one part per million (ppm) at unity density.

hh. Mixing zone shall mean a limited area or volume of water where initial dilution of a discharge takes place and where numeric water quality criteria can be exceeded but acutely toxic conditions are prevented.

ii. Narrative standard shall mean a standard or criterion expressed in words rather than numerically.

jj. Natural background shall mean characteristics that are not man induced that relate to water quality; the levels of pollutants present in ambient water that are from natural, as opposed to human-induced, sources.

kk. New Discharge shall mean a discharge that was not in existence on the effective date of this Ordinance.

ll. Nephelometric turbidity units (NTU) shall mean a measure of turbidity in water.

mm. Non-point source shall mean a source of pollution that is not a discernible, confined and discrete conveyance; a diffuse source which flows across natural or manmade surfaces, such as run-off from agricultural, construction, mining or silvicultural activities or from urban areas.

nn. Nutrient shall mean a chemical element or inorganic compound taken in by green plants and used in organic synthesis.

oo. Outstanding reservation resource waters (ORRW) shall mean those waters of the highest quality that are designated by the Reservation Business Committee for their uniqueness or ecological sensitivity. Waters may be designated as ORRW because of their exceptional cultural, aesthetic, recreational or ecological significance.

pp. pH shall mean the negative logarithm of the effective hydrogen ion concentration in gram equivalents per liter; a measure of the acidity or alkalinity of a solution, increasing with increasing alkalinity and decreasing with increasing acidity.

qq. Point source shall mean any discernible, confined and discrete conveyance from which pollutants are or may be discharged into a water body.

rr. Pollutant shall mean dredged spoil, solid waste, incinerator residue, filter backwash, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt and industrial, municipal and agricultural waste discharged into water.

ss. Primary contact recreational shall mean the recreational use of a stream, reach, lake or impoundment involving prolonged contact and the risk of ingesting water in quantities sufficient to pose a health hazard. Examples are swimming and water skiing.

tt. Public water supply shall mean a stream, reach, lake or impoundment specifically designated by the Fond du Lac Reservation Business Committee as suitable to provide an adequate supply of drinking water for the continuation of the health and well-being of the residents of the Fond du Lac Reservation.

uu. Reservation Business Committee shall mean the governing body of the Fond du Lac Band of Lake Superior Chippewa.

tt. Secondary Contact Recreational shall mean the recreational use of a stream, reach, lake or impoundment in which contact with the water may, but need not, occur and in which the probability of ingesting water is minimal. Examples are fishing and boating.

vv. Species mean acute value (SMAV) is the geometric mean of the results of all acceptable flow-through acute toxicity tests (for which the concentrations of the test material were measured) with the most sensitive tested life stage of the species. For a species for which no such result is available for the most sensitive tested life stage, the SMAV is the geometric mean of the results of all acceptable acute toxicity tests with the most sensitive tested life stage.

ww. Total Maximum Daily Loan (TMDL) shall mean the sum of the individual wasteload allocations for point sources and load allocations for nonpoint sources and natural background. A TMDL sets and allocates the maximum amount of a pollutant that may be introduced into a water body and still assure attainment and maintenance of water quality standards.

xx. Toxic shall mean harmful to living organisms.

yy. Toxicity shall mean the state or degree of being toxic or poisonous, lethal or sub-lethal adverse effects on representative sensitive organisms, due to exposure to toxic materials.

zz Toxic unit means a measure of acute or chronic toxicity in an effluent. One acute toxic unit (Tua) is the reciprocal of the effluent concentration that causes 50 percent effect of mortality to organisms for acute exposures (100/LC50); one chronic toxic unit (Tuc) is the reciprocal of the effluent concentration that causes no observable effect concentration on test organisms for chronic exposures (100/NOEC).

aaa. Turbidity shall mean a measure of the amount of suspended material, particles or sediment which has the potential for adverse impacts on aquatic biota.

bbb. Warm water fisheries shall mean a stream, reach, lake or impoundment where water temperature, habitat and other characteristics are suitable for support and propagation of warm water fish and other aquatic life, or serving as a spawning or nursery area for warm water fish species. Examples of warm water fish species include large mouth bass and bluegills.

ccc. Waste Loading Allocation (WLA) shall mean the portion of a receiving water's loading capacity that is allocated to one of its existing or future point sources of pollution. A WLA is the allocation for an individual point source that ensures that the level of water quality to be achieved by the point source is derived from and complies with all applicable water quality standards.

ddd. Waters of the Fond du Lac Reservation shall mean all waters within the exterior boundaries of the Fond du Lac Reservation, including but not limited to lakes, ponds, reservoirs, springs, streams, flowages, rivers, wetlands, and any subterranean waters having a demonstrable hydrologic connection with the surface.

eee. Water quality monitoring shall mean an integrated assessment of water quality that incorporates physical, chemical and biological components.

fff. Whole-effulent toxicity (WET) shall mean the total toxic effect of an effulent measured directly with a toxicity test.

ggg. Wild rice areas shall mean a stream, reach, lake or impoundment, or portion thereof, presently, historically or that has the potential to sustain the growth of wild rice (*Zizania palustris* or manoomin) .

hhh. WQBEL shall refer to water quality-based effluent limits.

iii. **7Q10** shall refer to an instream flow rate calculated as the minimum 7 consecutive day average flow with a recurrence frequency of once in ten years. The 7Q10 flow shall be calculated using methods recommended by the U.S. Geologic Survey.

CHAPTER 3

GENERAL STANDARDS AND DESIGNATED USES

Section 301 **General Standards**

To every extent practical and possible, as determined by the Reservation Business Committee, the following general water quality criteria shall apply to all waters of the Fond du Lac Reservation; provided, however, that where more stringent standards for designated water bodies are set, the stricter standards supersede the general standards:

a. Waters of the Fond du Lac Reservation shall be free from suspended and submerged solids or other substances that enter the waters as a result of human activity and that will settle in the bed of a body of water or be deposited upon the shore of that body of water to form putrescent or otherwise objectionable deposits, or that will adversely affect aquatic life.

b. Waters of the Fond du Lac Reservation shall be free from floating debris, oil, scum and other floating materials entering the waters as a result of human activity in amounts sufficient to be unsightly or cause degradation.

c. Waters of the Fond du Lac Reservation shall be free from material entering the waters as a result of human activity producing color, odor, taste or other conditions in such a degree as to create a nuisance.

d. Waters of the Fond du Lac Reservation shall be free from nutrients (nitrogen and phosphorus) entering the waters as a result of human activity in concentrations that create nuisance growths of aquatic weeds and algae. For the lakes listed in Appendix 5, the thresholds for nitrogen, phosphorus and chlorophyll *a* found in Appendix 5, shall be used to assess attainment of this standard, prioritize restoration projects and establish water quality targets for restoration, and inform §401 certifications.

   The lakes listed in Appendix 5 will be considered in attainment with their nitrogen thresholds if the summer (June 1 through September 30) mean concentration for nitrogen is not exceeded. Exceedance of the summer mean total phosphorus threshold and either the summer mean chlorophyll-a threshold or the Fond du Lac Secchi disk transparency index, developed as a component of the Fond du Lac Assessment Methodology, is required to indicate a polluted condition.

e. Waters of the Fond du Lac Reservation shall be free from substances entering the waters as a result of human activity in concentrations that are toxic.

For toxic substances lacking a published numeric criteria in these water quality standards, criteria will be derived as necessary using the procedures contained in the Final Water Quality Guidance for the Great Lakes System, 40 C.F.R. Part 132. Where there are insufficient data to derive a criterion, the procedures in the Final Water Quality Guidance for the Great Lakes System, 40 C.F.R. Part 132, shall be used to derive a secondary value to protect aquatic life and human health. The following methodologies, including future amendments, for developing criteria (Tier I and Tier II) to protect aquatic life, human health, and wildlife, and the bioaccumulation factors for calculating human health and wildlife standards, are adopted and incorporated by reference into this chapter:

1. Great Lakes Water Quality Initiative Methodology for Development of Aquatic Life Criteria and Values, 40 C.F.R. Part 132, Appendix A, as amended through March 12, 1997, except that the daily human consumption of fish by Fond du Lac band members is assumed to be 0.060 kg/day.

2. Great Lakes Water Quality Initiative Methodology for Deriving Bioaccumulation Factors, 40 C.F.R. Part 132, Appendix B, as amended through March 12, 1997, except that for human health standards and criteria, the baseline BAF is multiplied by the following lipid fractions which apply to fish in both trophic levels 3 and 4: 0.06 for Class A, B, and C1 waters, and 0.015 for Class C2.

3. Great Lakes Water Quality Initiative Methodology for Development of Human Health Criteria and Values, 40 C.F.R. Part 132, Appendix C, as amended through March 12, 1997.

4. Great Lakes Water Quality Initiative Methodology for Development of Wildlife Criteria, 40 C.F.R. Part 132, Appendix D, as amended through March 12, 1997.
5. U.S. EPA "Technical Support Document for Water Quality Based Toxics Control;"

6. U.S. EPA Region V "Permitting Strategy;" and

7. U.S. EPA "Quality Criteria for Water, 1986." For substances where numeric criteria have not been adopted for the public water supply use, these narrative water quality criteria shall be

implemented considering any drinking water standards or health advisories issued by the U.S. Environmental Protection Agency under the Safe Drinking Water Act.

f. Aquatic Life Ambient Freshwater Criteria for Ammonia: The Band adopts criteria based upon the EPA's ammonia toxicity dataset used to derive water quality criteria to protect aquatic life from acute and chronic effects of ammonia in freshwater ecosystems. The one-hour average concentration of total ammonia nitrogen (TAN) in milligrams per liter is not to exceed, more than once every three years on the average, the CMC (acute criterion magnitude) calculated according to the first equation provided in Appendix 4. 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 average, the chronic criterion magnitude (CCC) calculated using the second equation provided in Appendix 4.

g. The pH of a stream, lake or reservoir shall not be permitted to fluctuate in excess of 1.0 unit over a period of twenty-four (24) hours for other than natural causes.

h. If a stream or lake is capable of supporting aquatic life, the dissolved oxygen standard will be a daily minimum of 5 mg/l for other than natural causes. For waters designated as cold water fisheries, the dissolved oxygen criterion will be a daily minimum of 8 mg/l to protect early life stages of cold water fish (enabling a required intergravel dissolved oxygen concentration of 5 mg/l). This criterion applies only when and where these early life stages occur.

i. Settleable and suspended solids (turbidity) should not reduce the depth of the compensation point for photosynthetic activity by more than 10 percent from the seasonally established norm for aquatic life

j. Concentrations of radioactive materials shall not exceed concentration caused by naturally occurring materials.

k Existing mineral quality shall not be altered by municipal, industrial and in-stream activities or other waste discharges so as to interfere with the designated uses for a water body. Since aquatic biota in this ecoregion are known to be sensitive to the effects of elevated ionized substances (cations and anions) in the water, the specific conductance in all waters of the Reservation shall not exceed an annual average continuous exposure of 300 µS/cm. Exceedances of this numeric criterion are indicative of polluted conditions.

l. The introduction of heat by other than natural causes shall not increase the temperature of Reservation waters by more than three degrees

Fahrenheit from ambient temperatures for Reservation lakes, and five degrees Fahrenheit from ambient temperatures for Reservation streams above that which existed before the addition of heat, based upon the monthly average of daily maximum temperature.

The normal daily and seasonal variations that were present before the addition of heat from other than natural sources, and which are outside the mixing zone, shall be maintained.

No material increase in temperature shall be allowed from man-introduced heat for receiving waters classified as C1 coldwater, applied as a matter of practice at the edge of the mixing zone.

m. All naturally occurring biological communities and the habitat needed to support them, as determined by sampling, data analysis and establishment of reference conditions shall be maintained and protected in all waterways and wetlands of the Reservation. The biological quality of Reservation streams will be assessed by comparison with the Upper Midwest cool and cold water biological condition gradient (BCG) models for fish and benthic macroinvertebrate communities (Gerritsen, J. and J. Stamp. 2012. *Calibration of the Biological Condition Gradient (BCG) in Cold and Cool Waters of the Upper Midwest: Fish and Benthic Macroinvertebrate Assemblages*. Prepared for U.S. EPA Office of Science and Technology and U.S. EPA Region 5), and the Indexes of Biological Integrity (IBIs) developed by the Minnesota Pollution Control Agency for Northern Coldwater, Northern Headwaters, and Northern Stream classes (fish), and Northern Coldwater, Northern Forest Streams (Glide pool) and Northern Forest Streams (riffle run) to determine the degree to which the streams are fully, partially, or not supporting their designated aquatic life uses. (MPCA 2014b. *Development of a Fish-based Index of Biological Integrity for Assessment of Minnesota's Rivers and Streams.* Wq-bsm2-03; MPCA 2014c. *Development of a Macroinvertebrate-based Index of Biological Integrity for Assessment of Minnesota's Rivers and Streams.*A BCG score that decreases or stays the same over time is indicative of the same or improving biological condition. A BCG score that increases over time is indicative of diminishing biological condition.

n. Water quantity and quality and habitat alterations that may limit the growth and propagation of, or otherwise cause or contribute to an adverse effect to wild rice and other flora and fauna of cultural importance to the Band shall be prohibited.

o. Natural hydrologic conditions supportive of the natural biological community, including all flora and fauna, and physical characteristics naturally present in the waterbody shall be protected to prevent any adverse effects. The migration of fish and other aquatic biota normally present shall not be hindered.

p.. Any lake or stream which supports wild rice growth shall not exceed instantaneous maximum sulfate levels of 10 milligrams per liter.

q. All Waters of the Reservation 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.

Section 302 Standards of Designated Use

Waters of the Reservation are assigned designated uses to serve the purposes defined in Sections 101(a)(2) and 303(c) of the Clean Water Act: to ensure that water quality standards should provide, wherever attainable, water quality sufficient for the protection of fish, shellfish, and wildlife, recreation in and on the water, as well as considering the use and value of waters for cultural purposes, public water supplies, industrial purposes, and navigation. Designated uses are assigned to individual waterbodies in order to protect water quality appropriate for each use. Some waters of the Reservation may have natural ambient water quality containing concentrations of parameters that exceed water quality criteria necessary for the protection of a designated use. Natural ambient water quality is defined as the quality in absence of human caused additions of a substance, and shall be determined by water quality monitoring. Designated uses will not be used to control, and are not invalidated by, natural ambient water quality. The following standards of designated use shall apply to the waters of the Fond du Lac Reservation:

A. Public water supply: A stream, reach, lake or impoundment specifically designated by the Reservation Business Committee as suitable to provide an adequate supply of drinking water for the continuation of the health and well-being of the residents of the Fond du Lac Reservation.

B. Wildlife: All surface waters capable of providing a water supply, vegetative habitat and food, including but not limited to wild rice, and prey for the support and propagation of wildlife located within the Fond du Lac Reservation.

C. Aquatic life:

1. Cold Water Fisheries: A stream, reach, lake or impoundment where water temperature, habitat and other characteristics are suitable for support and propagation of cold water fish and other aquatic life, or serving as a spawning or nursery area for cold water fish species. Examples of cold water fish include brook trout and rainbow trout.

2. **Warm water fisheries**: A stream, reach, lake or impoundment where water temperature, habitat and other characteristics are suitable for support and propagation of warm water fish and other aquatic life, or serving as a spawning or nursery area for warm water fish species. Examples of warm water fish species include large mouth bass and bluegills.

3. **Subsistence fishing (netting)**: That portion of the Fond du Lac Reservation necessary to provide a sufficient diet of fish in order to sustain a healthy, current, on-Reservation population, including any stream, reach, lake or impoundment where spearing, netting or bow fishing is allowed as provided under applicable Band conservation laws.

D. **Recreation**:

1. **Primary contact recreational**: The recreational use of a stream, reach, lake or impoundment involving prolonged contact and the risk of ingesting water in quantities sufficient to pose a health hazard. Examples are swimming and water skiing.

2. **Secondary contact recreational**: The recreational use of a stream, reach, lake or impoundment in which contact with the water may, but need not, occur and in which the probability of ingesting water is minimal. Examples are fishing and boating.

E. **Cultural**: Water-based activities essential to maintaining the Band's cultural heritage, including but not limited to ceremony, subsistence fishing, hunting and harvesting. This use includes primary and secondary contact.

1. **Wild rice areas**: A stream, reach, lake or impoundment, or portion thereof, presently, historically or with the potential to be vegetated with wild rice (manoomin).

2. **Aesthetic waters**: A stream, reach, lake or impoundment which has been determined by the Reservation Business Committee to possess exceptional beauty or be significant to the preservation or exercise of the traditional value system of the Fond du Lac Band of Lake Superior Chippewa, which may include but is not limited to primary (direct) contact with water or the preservation of wetlands for the maintenance of traditional medicinal plants.

F. **Agricultural**: The water quality is adequate for uses in irrigation and livestock watering.

G. **Navigation**: The water quality is adequate for navigation in and on the water.

H. **Commercial**: The water quality is adequate for use(s) as commercial water supply for business processes.

I. **Wetland**: The designated use as defined in Chapter 7 applies to all wetlands.

CHAPTER 4

DESIGNATED USES APPLICABLE TO RESERVATION WATERS

	TOWNSHIP	RANGE	SECTION	DESIGNATED USE
LAKES				
Bang	48N	19W	1, 2	B, C2, D1, D2, E1, F, G, H
Big Lake Chi-zaaga'iganing	49N	18W	20, 21, 28, 33	B, C2, C3, D1, D2, F, G, H
Cedar Gaagiizhikikaag	49N	18W	10, 15	B, C2, D1, E1, F, G, H
Dead Fish* Zhaaganaashiins Odabiwining	49N	19W	1, 12	B, C2, D1, E1, F, G, H
East Twin	50N	18W	23, 24, 25, 26	B, C2, D1, E1, F, G, H
First Lake	49N	17W	21	B, F, G, C2, D1, H
Hardwood Chi-maanakikii-zaaga'igan	49N	18W	5, 6	B, C2, D1, E1, F, G, H
Jaskari* Naawonigami zaaga/igan	48N 49N	19W 19W	1, 2, 36	B, C2, D1, E1, F, G, H
Lac	49N	19W	12, 13	B, C2, D1, E2, F, G, H
Lost Wanishini-zaaga'igan	50N	18W	29, 30	B, C2, C3, D1, D2, F, G, H
Martin (Jo Martin)	50N	19W	12	B, C1, C2, C3, D1, D2, E2, F, G, H
Miller (Mud)*	49N	19W	13, 14, 23	

	TOWNSHIP	RANGE	SECTION	DESIGNATED USE
Mashkiigwaagamaag				B, C2, D1, E1, F, G, H
Pat Martin	49N	17W	6	B, C2, C3, D1, E1, F, G, H
Perch* Aatawemegokokaaning	48N 48N 49N 49N	18W 19W 18W 19W	6 1 29, 30, 31 36	B, C2, C3, D1, E1, E2, F, G, H
Rice Portage* Chi-awasonigaming	49N	19W	25, 26	B, C2, D1, E1, E2, F, G, H
Side Beke-zaagidawaag	50N	18W	32	B, D1, E1, F, G, H, C2
Simian Chi-wizo-zaaga'iganing	50N	17W	29	B, C2, C3, D1, E1, F, G, H
Sofie	49N	18W	29, 32	B, C2, C3, D1, F, G, H
Spring	48N	19W	1	B, C2, D1, E1, F, G, H
Spruce (Spirit)	49N	19W	27	B, C2, D1, E1, F, G, H
Third Lake	49N	17W	21	B, C2, C3, D1, D2, F, G, H
West Twin Webiindikomaan-zaaga'iganing	50N	18W	23, 26	B, C2, C3, D1, D2, E1, F, G, H
Wild Rice* Manoomini-zaaga'iganing	48N	18W	3	B, C2, D1, E1, F, G, H
Second Lake	49N	17W	21	B, E1, C2, D1, F, G
STREAMS				
Annamhasung Creek	48N	19W	2	

	TOWNSHIP	RANGE	SECTION	DESIGNATED USE
	49N	19W	26, 27, 34, 35	B, C2, D1, F, H, G
Martin Branch	50N 50N	18W 19W	3, 4, 5, 7, 8 12	B, C1, C3, D1, E2, F, G, H
Otter Creek Nigigo-ziibiwishe	48N 49N 49N	17W 17W 18W	3 19, 20, 28, 29, 30, 32, 33, 34 25, 26	B, C1, C3, D1, E2, F, G, H
Simian Creek	49N 49N 50N 50N	17W 18W 17W 18W	6 1, 2, 3, 10 20,21, 22,29, 30,31 32 25, 36	B, C2, C3, D1, F, G, H
Spring Creek	50N	18W	4, 5	B, C2, D1, F, G, H
Fond du Lac Creek Anishinaabekwe-ziibiwishe	49N	17W	4, 9, 16,18, 20, 21	B, C1, C3, D1, E2, F, G, H
Stoney Brook Asini-ziibi	48N 49N 49N 50N 50N	19W 18W 19W 18W 19W	1,2 6, 7, 17, 18, 19, 30 1,2,3,1112,14,15 22,23,24 25,26,27 35 3, 4, 9, 16, 21 28, 31, 32, 33	B, C1, C2, C3, D1, F, G, H

	TOWNSHIP	RANGE	SECTION	DESIGNATED USE
	51N	18W	14, 23, 24, 25 34, 36 34, 35	
St. Louis River Chi-gamii-ziibi	49N 50N 50N 51N 51N	17W 17W 18W 18W 19W	3,4, 10 7, 15, 16, 17, 18, 22, 26, 27, 33, 34 1, 2, 12 27, 28, 29, 30, 34, 35, 36 25, 26, 27	B, C2, C3, D1, D2, E2, F, G, H

* Outstanding Reservation Resource Water

Waters not listed above will have the following designated uses: B, C2*, D1, F*, G*, H* (*if open water present).

CHAPTER 5

SAMPLING AND ANALYSIS

Section 501 Sample Collection, Preservation and Analysis

Sample collection, preservation and analysis used to determine water quality and to maintain the standards set forth in the Water Quality Standards shall be performed in accordance with procedures prescribed by the latest editions of any of the following authorities:

a. Lake and Reservoir Bioassessment and Biocriteria, Technical Guidance Document, U.S. Environmental Protection Agency, May, 1995;

b. Biological Criteria, Technical Guidance for Streams and Small Rivers, Revised Edition, U.S. Environmental Protection Agency, May 1996, EPA 822-B-96-001;

c. EPA Guidelines Establishing Test Procedures for the Analysis of Pollutants, Clean Water Act, 40 C.F.R. 136.

d. American Public Health Association, Standard Methods for the Examination of Water and Wastewater, 20th ed.

e. ***Fish Community Sampling Protocol for Stream Monitoring Sites:*** http://www.pca.state.mn.us/index.php/view-document.html?gid=21237

f. ***MPCA Stream Habitat Assessment (MSHA) Protocol for Stream Monitoring Sites:*** http://www.pca.state.mn.us/index.php/view-document.html?gid=6088

g. ***MPCA Development of a Macroinvertebrate-based Index of Biological Integrity for Assessment of Minnesota's Rivers and Streams:*** http://www.pca.state.mn.us/index.php/view-document.html?gid=21215

h. ***Concepts and Approaches for Bioassessment of Nonwadeable Streams and Rivers,*** EPA/600/R-06/127, September 2006

i. ***Best Practices for Continuous Monitoring of Temperature and Flow in Wadeable Streams*** (EPA/600/R – 13/170F, September 2014

j. http://www.seagrant.umn.edu/downloads/sh015.pdf , ***Wild Rice***

Monitoring Field Guide

k. http://www.seagrant.umn.edu/downloads/sh016.pdf , ***Wild Rice Monitoring Handbook***

l. Other or superseding methods published and/or approved by EPA.

CHAPTER 6

WATER QUALITY STANDARDS AND CRITERIA

Section 601 Applicability

If the maximum permissible levels of a substance as set forth in Appendix 1, Water Quality Standards Applicable to A, B, C1, D1 and D2 Designated Waters are exceeded in any waters of the Fond du Lac Reservation, it shall be considered indicative of a polluted condition which is actually or potentially harmful, detrimental or injurious with respect to the designated uses and shall therefore be considered a violation of this Ordinance.

The ambient water quality standards in Appendix 1 are standards for the protection of aquatic life, human health, and wildlife from the GLI pollutants. The standards for a GLI pollutant include the CS, MS, and FAV. Some pollutants do not have an MS or an FAV because of insufficient data. For these pollutants, Tier II numeric criteria will be calculated according to GLI methodology. The daily human consumption of fish caught by Fond du lac Band members is assumed to be 0.060 kg/day. In addition to these standards, the standards contained in 40 C.F.R. Part 141, subparts B & G and Part 143 shall be applicable to the surface waters of the Reservation.

Some of the GLI pollutants listed in this Chapter have both aquatic life and human health standards and four of the GLI pollutants have wildlife standards, as provided in tables 1 to 4 of the GLI Guidance. The most stringent chronic aquatic life, human health, or wildlife standard listed is the applicable standard except when a less stringent chronic or maximum standard applies when setting an effluent limitation. For any aquatic life, human health, or wildlife chronic standard, a blank space in the following tables means no GLI standard is available and the most stringent listed chronic standard is applicable. For the aquatic life MS and FAV, blank spaces mean the GLI guidance lists no MS or FAV.

Standards for metal are expressed as total metal but must be implemented as dissolved metal standards, using appropriate conversion factors. Standards for GLI pollutants followed by (TH) or (pH) vary with total hardness or pH. The formulas for these standards are found in Appendix 2.

Bacteriological standards can be found in Appendix 3.

Nutrient and chlorophyll *a* thresholds for primary fisheries lakes can be found in Appendix 5.

Criteria are elements of the Fond du Lac water quality standards, expressed as constituent concentration, levels, or narrative statements, representing a quality of water that supports a particular use. When criteria are met, water quality will generally protect the designated use. When criteria are not met, the designated uses may be affected adversely. The Fond du Lac water quality standards allow for the consideration of dilution in establishing limits on point source discharges based on numeric chronic criteria. As a result, such limits will assure ambient concentrations less than or equal to the number chronic criteria at stream flows equal or greater than the minimum 7 consecutive day average flow with a recurrence frequency of once in ten years (7Q10). However, excursions above the magnitude component of the numeric chronic criteria due to flows less than 7Q10 are not expected to adversely affect designated uses unless the duration and frequency components are also exceeded, which is unlikely to occur given the design flow.

CHAPTER 7

WETLANDS WATER QUALITY STANDARDS

Section 701 Designated Uses

For all wetlands, as defined by the Cowardin classification scheme, the uses to be protected include, but are not limited to: baseflow discharge, cultural opportunities, flood flow attenuation, groundwater recharge, indigenous floral and faunal diversity and abundance, nutrient cycling, organic carbon export/cycling, protection of downstream water quality, recreation, resilience against climatic effects, sediment/shoreline stabilization, surface water storage, wild rice, and water-dependent wildlife to the extent that such uses, functions, and values occur as represented by reference wetlands.

Section 702 Criteria

All wetlands, as defined by the Cowardin classification scheme, shall maintain biological, physical, chemical, and hydrological conditions - as determined by reference wetlands - including, but not limited to: base flow, flow regime, wetland hydroperiod; chemical, nutrient, dissolved oxygen regime of the wetland; conditions favorable to protect propagation of threatened, endangered, and at-risk species; conductivity; floristic quality; integrity of species diversity, abundance, and zonation; normal movement of fauna; pH of wetland waters; salinity; size and shape; soil type horizon structure; water currents, erosion, or sedimentation patterns; water levels or elevations; and water temperature variations.

Section 703 Antidegredation

Tier I: For all wetlands, using the Cowardin classification scheme, there shall be no degradation of existing uses.

Tier II: Using the Cowardin classification scheme: there shall be no net loss to the water quality, functions, area, or ecological integrity of high quality lacustrine, lacustrine fringe, palustrine, riverine, and slope wetlands, unless, after satisfying applicable antidegradation provisions including avoidance, minimization, and mitigation/replacement requirements, the authorized tribe determines that allowing degradation is necessary to accommodate important social or economic development in the area in which the wetlands are located.

Tier III: There shall be no loss to the water quality, functions, values, area, or ecological integrity of wetlands designated as Outstanding Reservation Resource Waters (ORRW), as per applicable Tier III requirements.

CHAPTER 8

SITE-SPECIFIC WATER QUALITY STANDARDS OR CRITERIA

Section 801 Applicability

This Section applies when a discharger requests a site-specific criterion or a site-specific modification to a standard, or the Reservation Business Committee determines that a site-specific criterion or modification is necessary to protect endangered or threatened species under Section 705, or highly exposed subpopulations under Section 707. Site-specific criteria or modifications to standards must be protective of designated use and aquatic life, wildlife and human health. Site-specific criteria or modifications must be preceded by a site-specific study of the effects of local environmental conditions on aquatic life, human health, or wildlife toxicity, and how these effects relate to the calculation of standards or bioaccumulation criteria. Aquatic life impact analysis must be conducted according to the EPA methods in Chapter 3 of the U.S. EPA Water Quality Standards Handbook, Second Edition (EPA-823-B-94-005a, August 1994), which is adopted and incorporated by reference. The Reservation Business Committee shall approve the site-specific study and, upon approval, the Reservation Business Committee shall use the study data to develop each site-specific criterion or standard, which then shall be submitted to EPA for approval.

Section 802 Endangered and Threatened Species

The Reservation Business Committee shall apply the provisions in items A to C when modifying a standard or developing a site-specific criterion:

a. Any site-specific modifications that result in less stringent standards or site-specific criteria must not jeopardize the continued existence of endangered or threatened species listed or proposed under Chapter 6134 or Section 4 of the Endangered Species Act (ESA), 16 U.S.C. § 1533, or result in the destruction or adverse modification of such species' critical habitat.

b. More stringent modifications or site-specific criteria must be developed to protect endangered or threatened species listed or proposed under Chapter 6134 or Section 4 of the ESA where the water quality jeopardizes the continued existence of such species or results in the destruction or adverse modification of such species' critical habitat.

c. More stringent modifications or site-specific criteria must also be developed to protect candidate (C1) species being considered by the U.F.

Fish and Wildlife Service for listing under Section 4 of the ESA, where such modifications are necessary to protect such species.

Section 803 Aquatic Life

The Reservation Business Committee shall modify an aquatic life standard to a more stringent or less stringent site-specific standard, or determine a site-specific criterion, based upon the results of a site-specific study completed according to Section 701 if the study demonstrates that:

a. The local water quality characteristics, such as pH, hardness, temperature, and color, alter the biological availability or toxicity of a pollutant;

b. Local physical and hydrological conditions exist that alter the toxicity of a pollutant; or

c. The sensitivity of the aquatic organisms that occur at that site differs from the species actually used in developing the standards or criteria. The taxa that occur at the site cannot be determined merely by sampling downstream and/or upstream of the site at one point in time. The phrase "occur at the site" does not include taxa that were once present at the site but cannot exist at the site now due to permanent physical alteration of the habitat at the site. It does include the species, genera, families, orders, classes, and phyla that:

1. Are usually present at the site;
2. Are present at the site only seasonally due to migration;
3. Are present intermittently because they periodically return to or extend their ranges into the site;
4. Were present at the site in the past, are not currently present at the site due to degraded conditions, and are expected to return to the site when conditions improve; or
5. Are present in nearby bodies of water, are not currently present at the site due to degraded conditions, and are expected to be present at the site when conditions improve.

If items A, B or C indicates that the pollutant is more toxic at the site or organisms are more sensitive, or if additional protection is necessary to maintain designated aquatic life uses, the Reservation Business Committee shall calculate a more stringent site-specific standard or criterion. If item A, B or C indicates that the GLI pollutant is less toxic at the site or organisms are less sensitive than those used in the calculation of the standard or criterion, and neither item A, B nor C indicate greater toxicity, the Reservation

Business Committee shall calculate a less stringent site-specific standard or criterion.

Section 804 Wildlife

The Reservation Business Committee shall modify a wildlife standard to a more stringent or less stringent site-specific standard, or determine a site-specific criterion, based upon the results of a site-specific study completed according to Section 701. More stringent site-specific water quality standards or criteria shall be developed when a site-specific bioaccumulation factor is derived which is higher than the systemwide BAF. Less stringent site-specific water quality standards or criteria shall be developed when a site-specific BAF is derived which is lower than the systemwide BAF. The Reservation Business Committee's modification evaluation shall evaluate both the mobility of the prey organisms and wildlife populations in defining the site for which the criteria or modified standards are developed. In addition, for less stringent site-specific water quality standards or criteria to be applied in a permit there must be a demonstration by either the discharger or the Reservation Business Committee that:

a. Any increased uptake of the toxicant by prey species utilizing the site will not cause adverse effects in wildlife populations; and

b. Wildlife populations utilizing the site or downstream surface waters of the state will continue to be fully protected.

Section 805 Site-Specific Modifications to Protect Threatened or Endangered Species

The Reservation Business Committee shall modify both aquatic life and wildlife standards or develop criteria on a site-specific basis to protect threatened or endangered species where the water quality jeopardizes the continued existence of such species or results in the destruction or adverse modification of such species' critical habitat. The provisions in items A and B apply to site-specific standards or criteria to protect endangered or threatened species:

a. Site-specific modifications to aquatic life standards, or site-specific criteria, shall be calculated by the Reservation Business Committee when one of the following methods is applicable:

    1. If the species mean acute value for a listed or proposed species, or an applicable surrogate of such species, is lower than the calculated FAV, the lower species mean acute value must be used instead of the calculated FAV in developing the site-specific criterion or standard.

    2. The site-specific criterion or standard must be calculated using the recalculation procedure for site-specific

modifications when the sensitivities of organisms used to derive the GLI pollutant standard or criterion are different from the sensitivities of the organisms that occur at the site. The recalculation procedure is described in Chapter 3 of the U.S. EPA Water Quality Standards Handbook, Second Edition (EPA-823-B-94-005a), August 1994), which is adopted and incorporated by reference.

3. If the methods in items (1) and (2) are both applicable, the Reservation Business Committee shall follow both methods to calculate site-specific modifications to aquatic life standards or site-specific criteria, then compare the results and apply the more stringent standards or criteria.

b. For any modifications to wildlife standards or criteria, the Reservation Business Committee shall evaluate both the mobility of prey organisms and wildlife populations in defining the site for which standards or criteria are developed and must use the following method to calculate site-specific standards criteria:

1. Substitute appropriate species-specific toxicological, epidemiological or exposure information including changes to the BAF used in the GLI Guidance methodology;

2. Use an interspecies uncertainty factor of 1 where epidemiological data are available for the species in question. If applicable, species-specific exposure parameters must be derived using the GLI Guidance methodology;
3. Apply an intraspecies sensitivity factor to the denominator in the effect part of the wildlife equation in the GLI Guidance methodology in accordance with the other uncertainty factors described in the method; and

5. Compare the resulting wildlife criterion or standard for the species in question to the class-specific avian and mammalian wildlife values previously calculated 40 C.F.R. Part 132, Appendix A, entitled "Great Lakes Water Quality Initiative Methodologies for Development of Aquatic Life Criteria and Values," as amended through March 12, 1997, and apply the lowest of the three as the site-specific standard or criterion.

Section 806 Bioaccumulation Factors

The Reservation Business Committee shall modify the BAFs on a site-specific basis to larger values if data from the site-specific study show that a bioaccumulation value derived from local bioaccumulation data is greater than the systemwide value. Site-specific BAFs must be derived using the GLI Guidance methodology. The Reservation Business Committee shall modify BAFs on a site-specific basis to lower values if:

a. The fraction of the total chemical freely dissolved in the ambient water is less than that used to derive the systemwide BAFs;

b. Input parameters of the Gobas model, such as the input structure of the aquatic food web and the disequilibrium constant, are different at the site than those used to derive the systemwide BAFs;

c. The percent lipid of the aquatic organisms that are consumed and occur at the site is lower than that used to derive the systemwide BAFs; or

d. Site-specific, field measured BAFs or biota-sediment accumulation factors are determined.

Section 807 Human Health

The Reservation Business Committee shall modify human health standards or determine criteria on a site-specific basis to provide additional protection necessary for highly exposed subpopulations. A subpopulation is highly exposed if the dosage of the GLI pollutant is greater for the subpopulation due to increased fish consumption rates, increased water ingestion rates, or an increased BAF. The Reservation Business Committee shall develop less stringent site-specific human health standards or criteria if the study approved under Section 701 demonstrates that:

a. Local fish consumption rates are lower than the rate used in deriving human health standards or criteria using the methodology provided by 40 C.F.R. Part 132, Appendix C, entitled "Great Lakes Water Quality Initiative Methodology for Development of Human Health Criteria and Values," as amended through March 12, 1997; or

b. A site-specific BAF is derived under Section 706 which is lower than that used in deriving human health standards or criteria using the methodology provided by 40 C.F.R. Part 132, Appendix C, entitled "Great Lakes Water Quality Initiative Methodology for Development of Human Health Criteria and Values," as amended through March 12, 1997.

CHAPTER 9

MIXING ZONES AND VARIANCES

Section 901 Applicability

For acute and chronic mixing zones, the conditions in items A to C shall apply:

a. At the edge of an acute mixing zone approved under Section 802, acute aquatic life toxicity must not exceed the maximum standard or criterion, or 0.3 TUa for WET. If the discharger does not have an approved acute mixing zone demonstration, the Reservation Business Committee shall apply the FAV, or 1.0 TUa for WET, directly to the discharge. If acute mixing zones from two or more proximate sources interact or overlap, the combined effect must be evaluated to ensure that applicable standards and criteria will be met in the area of overlap.

b. At the edge of a chronic mixing zone, chronic toxicity must not exceed the chronic standard or criterion, or 1.0 TUc for WET. A chronic mixing zone must equal:

    1. Not more than 25 percent of the applicable stream design flows using dynamic models found in Chapter 4 of the EPA Technical Support Document for Water Quality Based Toxics Control (EPA-505-2-90-001, March,1991), unless an alternate chronic mixing zone demonstration is approved under Section 802; or

    2. For lakes, the area of 10:1 dilution of receiving water volume to effluent volume, unless a chronic mixing zone demonstration approved under Section 802 identifies an alternate dilution ratio in which case the chronic mixing zone must equal the area corresponding to the alternate dilution ratio. The mixing zone in lakes must not exceed the area of discharge-inducing mixing.

c. Acute and chronic mixing zones must not jeopardize the continued existence of endangered or threatened specific listed or proposed under Chapter 6134 or Section 4 of the Endangered Species Act, 16 U.S.C. § 1533, or result in the destruction or adverse modification of such species' critical habitat.

d. Any permit with acute or chronic mixing zones shall define such zones using at a minimum maps showing measurements in feet or meters from

established discharge points. Seasonal sampling confirmation of the effectiveness of acute and chronic mixing zones shall be provided by the permittee on a quarterly or monthly basis. If toxicity is indicated, it shall be considered a trigger to conduct the tests to determine the source(s) of toxicity within seven (7) days, and to require action return to compliance within thirty (30) days.

Section 902 Demonstration Requirements

The Reservation Business Committee shall approve an acute or chronic mixing zone demonstration if the discharger proposing a mixing zone completes a demonstration that complies with items A to N:

a. Define the mixing zone size, shape, location of the area of mixing, manner of diffusion and dispersion, and amount of dilution at the boundaries;

b. Determine the discharge-induced mixing area for lake discharges;

c. For discharge to a lake, determine the dilution ratio of receiving water volume to effluent volume. If this dilution ratio is other than 10 to 1 and results in a mixing zone that is no greater than the area of discharge-induced mixing, the calculated ratio must be used in the WLA calculation for lakes;

d. Document the substrate character and geomorphology of the mixing zone;

e. Ensure that the mixing zone will maintain a zone of passage for mobile aquatic life, protect spawning, nursery areas, and migratory routes, and not intersect river mouths;

f. Ensure the mixing zone will protect the existence of threatened or endangered species;

g. Document that the mixing zone does not affect drinking water intakes;

h. Document background water quality concentrations;

i. Show the mixing zone does not promote undesirable aquatic life or dominance of nuisance species;

j. Ensure that the mixing zone will not result in the following:

1. Objectionable deposits formed by settling;
2. Floating debris, oil or scum;
3. Objectionable taste, odor, color or turbidity; or

4. Attraction of organisms to the area of discharge.

k. Prevent or minimize overlapping mixing zones;

l. Document the ability of the habitat to support endemic or naturally occurring species;

m. Assume no GLI pollutant degradation unless both of the following conditions are met:

1. field studies or other information demonstrate that degradation of the GLI pollutant is expected to occur under the full range of environmental conditions expected to be encountered; and

2. field studies or other information address other factors that affect the level of GLI pollutants in the water column including sediment resuspension, chemical separation, and biological and chemical transformation.

n. Show that the mixing zone will not interfere with the designated or existing uses of the receiving water or downstream surface waters.

Section 903 BCC Mixing Zones

After the effective date of this Ordinance, acute and chronic mixing zones shall not be allowed for new and expanded discharges of BCCs to Reservation waters. Acute and chronic mixing zones for existing discharges of BCCs must be phased out by March 23, 2007, except under the provisions of items A to E. After the effective date of this Chapter for new and expanded discharges and March 23, 2007, for existing discharges, WLAs developed under Sections 801 and 802 for discharges of BCCs must be set equal to the most stringent applicable water quality standard or site-specific criterion for the BCC in question. The provisions for exceptions to the acute and chronic mixing zone phase-out for existing discharges of BCCs are in items A to E:

a. Mixing zones for BCCs shall be allowed for existing discharges after March 23, 2007, if the discharger demonstrates that the failure to maintain an existing mixing zone would preclude water conservation measures that would lead to overall load reductions in BCCs discharges;

b. Mixing zones shall be allowed for existing discharges after March 23, 2007, upon the request of the discharger if the Reservation Business Committee determines that:

1. The discharger is in compliance with and will continue to implement technology-based treatment and pretreatment requirements under Sections 301, 302, 304, 306, 307, 401 and 402 of the Clean Water Act, 33 U.S.C. §§ 1311, 1312,

1314, 1316, 1317, 1341, and 1342, and is in compliance with its existing permit WQBELS, including those based on a mixing zone; and

2. The discharger has reduced and will continue to reduce the loading of the BCC for which a mixing zone is requested to the maximum extent possible by the use of cost-effective controls or pollution prevention alternatives that have been adequately demonstrated and are reasonably available to the discharger.

c. In making the determination in item B, the Reservation Business Committee must consider:

1. The availability and feasibility, including cost effectiveness, of additional controls or pollution prevention measures for reducing and ultimately eliminating BCCs for that discharge, including those used by similar discharges;

2. Whether the discharger of affected communities will incur unreasonable economic effects if the mixing zone is eliminated; and

3. The extent to which the discharger will implement an ambient monitoring plan to ensure compliance with water quality standards and criteria at the edge of any authorized mixing zone or to ensure consistency with any applicable TMDL or assessment and remediation plan.

d. Any exceptions to the mixing zone phase-out provision for existing discharges of BCCs granted under this Section must:

1. Not result in any less stringent effluent limitations than those existing on the effective date of this Ordinance in the previous permit;

2. Not jeopardize the continued existence of any endangered or threatened species listed under Chapter 6134 or Section 4 of the Endangered Species Act, 16 U.S.C. § 1533, or result in the destruction or adverse modification of such species' critical habitat;

3. Be limited to one permit term unless the Reservation Business Committee makes a new determination in accordance with this Section for each successive permit application in which a mixing zone for the BCCs is sought;

4. Reflect all information pertaining to the size of the mixing zone considered by the Reservation Business Committee under Section 2;

5. Protect all designated and existing uses of the receiving water;

6. Meet all applicable aquatic life, wildlife, and human health standards and criteria at the edge of the mixing zone for a WLA in the absence of a TMDL, or, if a TMDL has been established, be consistent with any TMDL or such other strategy consistent with this Ordinance;

7. Ensure the discharger has developed and conducted a GLI pollutant minimization program for BCCs if required to do so.

8. Ensure that alternative means for reducing BCCs elsewhere in the watershed are evaluated.

e. For each draft permit that would allow a mixing zone for one or more BCCs after March 23, 2007, the fact sheet or statement of basis for the draft permit, required to be made available through public notice must:

1. Specify the mixing provisions used in calculating the effluent limitations;

2. Identify each BCC for which a mixing zone is proposed.

Section 904 Variances

This part applies to pollutant specific variance requests from individual point source dischargers to surface waters for WQBELS which are included in a permit. This part does not apply to new dischargers, unless the proposed discharge is necessary to alleviate an imminent and substantial danger to public health and welfare. A water quality standards or criteria variance shall not be granted if any of the following conditions exist:

a. If it would jeopardize the continued existence of any endangered or threatened species listed under Chapter 6134 or Section 4 of the Endangered Species Act, 16 U.S.C. § 1533, or result in destruction or adverse modification of such species' critical habitat; or

b. If standards or criteria will be attained by implementing effluent limitations required under Sections 301(b) and 306 of the Clean Water Act, 33 USC §§ 1311(b) and 1316, and by the permittee implementing

cost-effective and reasonable best management practices for non-point source control.

Section 905 Maximum Time Frame

A variance shall not exceed five years or the term of the permit, whichever is less.

Section 906 Conditions to Grant

Noting that all variances and site-specific criteria require approval by USEPA, the Reservation Business Committee shall grant a variance if the following conditions are met:

a. The permittee demonstrates to the Reservation Business Committee that attaining the water quality standards or criterion is not feasible because:

1. Naturally occurring pollutant concentrations prevent attainment of the water quality standard or criterion;

2. Natural, ephemeral, intermittent, or low-flow conditions or water levels prevent the attainment of water quality standards or criteria, unless these conditions may be compensated for by discharging sufficient volume of effluent to enable water quality standards or criteria to be met without violating water conservation requirements;

3. Human-caused conditions or sources of pollution prevent the attainment of water quality standards or criteria and cannot be remedied, or would cause more environmental damage to correct than to leave in place;

4. Dams, diversions, or other types of hydrologic modifications preclude the attainment of water quality standards or criteria, and it is not feasible to restore the waterbody to its original condition or to operate the modification in a way that would result in attainment of the water quality standard;

5. Physical conditions related to the natural features of the waterbody, such as the lack of a proper substrate cover, flow, depth, pools, riffles and the like, unrelated to chemical water quality, preclude attainment of water quality standards or criteria; or

6. Controls more stringent than those required under Sections 301(b) and 306 of the Clean Water Act, 33 U.S.C. §§ 1311(b) and 1316, would result in substantial and widespread economic and social impact;

b. The permittee shows that the variance conforms with Reservation Business Committee antidegradation procedures; and

c. The permittee characterizes the extent of any increased risk to human health and the environment associated with granting the variance, such that the Reservation Business Committee is able to conclude that any increased risk is consistent with the protection of the public health, safety and welfare.

Section 907 Application and Public Notice

Preliminary determinations regarding variance application submittals shall be preceded by a public notice in a local newspaper and a minimum of forty-five consecutive day comment period. The Reservation Business Committee shall also notify other Great Lakes Tribes and states regarding such preliminary determinations. During the comment period, any Band member or other interested persons may request a public hearing prior to adoption of such changes or revisions by the Reservation Business Committee. Upon a public hearing request, the Reservation Business Committee shall by public notice in a local newspaper announce the date, time and location of such public hearing and said public notice shall be published at least forty-five consecutive days prior to the public hearing. The Reservation Business Committee shall send a notice of the public hearing to all identified interested and affected persons and parties at least forty-five consecutive days prior to the public hearing. Any reports, documents and data relevant to the discussion at the public hearing shall be available at least thirty days before the hearing.

Section 908 Final Decision

The Reservation Business Committee shall issue a final decision regarding variance applications submittals within 90 days of the public comment period. If a variance is granted, the appropriate permitting authority shall include and incorporate into the permit the following conditions:

a. An effluent limitation representing currently achievable treatment conditions based on discharge monitoring which is no less stringent than that achieved under the previous permit;

b. A schedule of compliance activities which indicates reasonable progress will be made toward attaining water quality standards or criteria;

c. An effluent limitation sufficient to meet the underlying water quality standards or criterion, upon the expiration of the variance, when the duration of the variance is shorter than the duration of the permit;

d. A provision allowing the appropriate permitting authority either independently or at the request of the Reservation Business Committee to reopen and modify the permit based on the Reservation Business Committee triennial water quality standards revisions applicable to the variance;

e. For BCCs, a GLI pollutant minimization program; and

f. Authority is provided to assess penalty and/or cost of environmental damage as a consequence to violation of the variance that is under the permittee's control.

Section 909 Renewal of Variance

The renewal of a variance is subject to the requirements of Sections 901 to 905.

Section 910 Notice of Variances

The Reservation Business Committee shall list all variances to these standards in a public notice.

CHAPTER 10

ENFORCEMENT & PROSECUTION

Section 1001 Enforcement

The Environmental Protection Office of the Fond du Lac Band shall be responsible for the identification of violations of this Ordinance, and enforcement of the provisions of this Ordinance shall be achieved through the issuance of a summons and complaint through the Fond du Lac Division of Resource Management.

Section 1002 Prosecution

Prosecution for violations of this Ordinance shall be brought in Fond du Lac Tribal Court by the prosecutor of the Fond du Lac Band pursuant to the provisions of this Ordinance and the Fond du Lac Civil Code, FDL Ord. #04/92, as amended.

Section 1003 Remedies

a. **Civil penalties.** Violation of any provision of this Ordinance may be punished or remedied by a civil penalty not to exceed $500. Each day of any continuing violation may be charged as separate violation, and a separate penalty may be imposed.

b. **Seizure and Forfeiture.** In addition to civil penalty, any personal property which has been used in connection with a violation of this Ordinance, including vehicles and other equipment, may be seized and forfeited in satisfaction of any judgment entered pursuant to this Ordinance, pursuant to the Fond du Lac Civil Code.

c. **Monetary Damages and Injunctive Relief.** In addition to civil penalty, seizure and forfeiture, the Reservation Business Committee may seek, and the Fond du Lac Tribal Court may grant, money damages or injunctive relief against any violator of this Ordinance to compensate for damages to, or to prevent imminent harm against, any Band resource caused by the violation.

CHAPTER 11

AMENDMENTS AND SEVERABILITY

Section 1101 Amendments

The provisions of this Ordinance may be amended by separate ordinance and resolution of the Reservation Business Committee.

Section 1102 Severability

If any section, provision, or portion of this Ordinance is adjudged unconstitutional or invalid by a court of competent jurisdiction, the remainder of this Ordinance will not be affected thereby.

CERTIFICATION

We do hereby certify that the foregoing Ordinance was duly presented and adopted by Resolution #1403/98, by a vote of 4 for, 0 against, 0 silent, with a quorum of 5 being present at a Special Meeting of the Fond du Lac Reservation Business Committee held on December 10, 1998 on the Fond du Lac Reservation, and subsequently amended by Resolution #1286/01, on September 11, 2001, and further amended by Resolution #1321/20, on July 8, 2020.

Kevin R. Dupuis, Sr., Chairman

Ferdinand Martineau, Jr., Sec./Treas.

APPROVED AS TO FORM:

Sean Copeland, Tribal Attorney

1200501.wqs.wpd

Appendix 1. Standards Specific to Designated Use

Water Quality Standards Applicable to A, B, C1, D1 and D2 Designated Use Waters							
Substance	**Units**	**Aquatic Life Chronic Standard**	**Aquatic Life Maximum Standard**	**Aquatic Life Final Acute Value**	**Human Health Chronic Standard**	**Wildlife Chronic Standard**	**Applicable Chronic Standard**
Arsenic, total	ug/l	148	340	680	2		2
Benzene	ug/l				9.5		9.5
Cadmium, total (TH)	ug/l	App. 2	App. 2	App. 2			App. 2
Chlordane	pg/l				28		28
Chlorobenzene	ug/l	10	423	846	230		10
Chromium III, total (TH)	ug/l	App. 2	App. 2	App. 2			App. 2
Chromium VI, total	ug/l	11	16	32			11
Copper, total (TH)	ug/l	App. 2	App. 2	App. 2			App. 2
Cyanides*	ug/l	5.2	22	44	587		5.2
DDT	pg/l				18	11	11
Dieldrin	pg/l	56000	240000	480000	0.81		0.81
2,4-Dimethylphenol	ug/l	21	137	274	336		21
2,4-Dinitrophenol	ug/l	71	379	758	51		51
Endrin	ug/l	0.036	0.086	0.17	0.0039		0.0039
Hexachlorobenzene	pg/l				52		52
Hexachloroethane	ug/l				0.75		0.75
Lindane	ug/l		0.95	1.9	0.057		0.057
Mercury*	ug/l	0.91	1.7	3.4	0.00077	0.0013	0.00077
Methylene Chloride	ug/l				45		45
Nickel, total (TH)	ug/l	App. 2	App. 2	App. 2			App. 2
Parathion	ug/l	0.013	0.065	0.13			0.013
PCBs (class)	pg/l				3.2	120	3.2
Pentachlorophenol (pH)	ug/l	App. 2	App. 2	App. 2	0.93		0.93
Selenium, total	ug/l	5.0	20	40			5.0
2,3,7,8-TCDD	pg/l				0.0010	0.0031	0.0010
Toluene	ug/l	253	1352	2703	3180		253
Toxaphene	pg/l				7.7		7.7

Water Quality Standards Applicable to A, B, C1, D1 and D2 Designated Use Waters							
Trichloroethylene	ug/l				19		19
Zinc, total (TH)	ug/l	App. 2	App. 2	App. 2			App. 2

*These do not reflect % lipid adjustment

Water Quality Standards Applicable to A, B, C2, D1, D2, and I Designated Use Waters							
Substance	**Units**	**Aquatic Life Chronic Standard**	**Aquatic Life Maximum Standard**	**Aquatic Life Final Acute Value**	**Human Health Chronic Standard**	**Wildlife Chronic Standard**	**Applicable Chronic Standard**
Arsenic, total	ug/l	148	340	680	2		2
Benzene	ug/l				11		11
Cadmium, total (TH)	ug/l	App. 2	App. 2	App. 2			App. 2
Chlordane	pg/l				113		113
Chlorobenzene	ug/l	10	423	846	400		10
Chromium III, total (TH)	ug/l	App. 2	App. 2	App. 2			App. 2
Chromium VI, total	ug/l	11	16	32			11
Copper, total (TH)	ug/l	App. 2	App. 2	App. 2			App. 2
Cyanides*	ug/l	5.2	22	44	587		5.2
DDT	pg/l				71	11	11
Dieldrin	pg/l	56000	240000	480000	3.3		3.3
2,4-Dimethylphenol	ug/l	21	137	274	417		21
2,4-Dinitrophenol	ug/l	71	379	758	54		54
Endrin	ug/l	0.036	0.086	0.17	0.016		0.016
Hexachlorobenzene	pg/l				209		209
Hexachloroethane	ug/l				2.8		2.8
Lindane	ug/l		0.95	1.9	0.22		0.22
Mercury*	ug/l	0.91	1.7	3.4	0.00077	0.0013	0.00077
Methylene Chloride	ug/l				46		46
Nickel, total (TH)	ug/l	App. 2	App. 2	App. 2			App. 2
Parathion	ug/l	0.013	0.065	0.13			0.013
PCBs (class)	pg/l				13	120	13
Pentachlorophenol (pH)	ug/l	App. 2	App. 2	App. 2	1.9		1.9
Selenium, total	ug/l	5.0	20	40			5.0
2,3,7,8-TCDD	pg/l				0.0040	0.0031	0.0031

Water Quality Standards Applicable to A, B, C2, D1, D2, and I Designated Use Waters							
Toluene	ug/l	253	1352	2703	4942		253
Toxaphene	pg/l				31		31
Trichloroethylene	ug/l				27		27
Zinc, total (TH)	ug/l	App. 2	App. 2	App. 2			App. 2

* These do not reflect % lipid adjustment

Water Quality Standards Applicable to B, C2, C3, D1,D2, and I Designated Use Waters							
Substance	**Units**	**Aquatic Life Chronic Standard**	**Aquatic Life Maximum Standard**	**Aquatic Life Final Acute Value**	**Human Health Chronic Standard**	**Wildlife Chronic Standard**	**Applicable Chronic Standard**
Arsenic, total	ug/l	148	340	680	53		53
Benzene	ug/l	114	4487	8974	125		114
Cadmium, total (TH)	ug/l	App. 2	App. 2	App. 2			App. 2
Chlordane	pg/l				113		113
Chlorobenzene	ug/l	10	423	846	1478		10
Chromium III, total (TH)	ug/l	App. 2	App. 2	App. 2			App. 2
Chromium VI, total	ug/l	11	16	32			11
Copper, total (TH)	ug/l	App. 2	App. 2	App. 2			App. 2
Cyanides*	ug/l	5.2	22	44	17280		5.2
DDT	pg/l				71	11	11
Dieldrin	pg/l	56000	240000	480000	3.3		3.3
2,4-Dimethylphenol	ug/l	21	137	274	3734		21
2,4-Dinitrophenol	ug/l	71	379	758	1087		71
Endrin	ug/l	0.036	0.086	0.17	0.016		0.016
Hexachlorobenzene	pg/l				210		210
Hexachloroethane	ug/l				3.1		3.1
Lindane	ug/l		0.95	1.9	0.23		0.23
Mercury*	ug/l	0.91	1.7	3.4	0.00077	0.0013	0.00077
Methylene Chloride	ug/l	1561	9600	19200	1113		1113
Nickel, total (TH)	ug/l	App. 2	App. 2	App. 2			App. 2
Parathion	ug/l	0.013	0.065	0.13			.013

Water Quality Standards Applicable to B, C2, C3, D1,D2, and I Designated Use Waters							
PCBs (class)	pg/l				13	120	13
Pentachlorophenol (pH)	ug/l	App. 2	App. 2	App. 2	5.5		App. 2
Selenium, total	ug/l	5.0	20	40			5.0
2,3,7,8-TCDD	pg/l				0.0040	0.0031	0.0031
Toluene	ug/l	253	1352	2703	23265		253
Toxaphene	pg/l				31		31
Trichloroethylene	ug/l				169		169
Zinc, total (TH)	ug/l	App. 2	App. 2	App. 2			App. 2

* These do not reflect % lipid adjustment

Appendix 2. Standards that vary with Total Hardness (TH) or pH

a. Designated use A, B, C1, C2, C3, D1,D2, and I standards that vary with total hardness (TH) applicable to all surface waters of the Reservation, are listed in this subsection. Total hardness is the sum of the calcium and magnesium concentrations expressed as calcium carbonate in mg/l. For ambient or effluent total hardness values greater than 400 mg/l, 400 mg/l must be used in the calculation of the standard. Exp. is the base e exponential function.

Cadmium total	formula, results in ug/l		Example standards at hardness of: 50	100	200	300	400
CS	exp.(0.7852 [ln (TH mg/l)]-2.715)		1.4	2.5	4.2	5.8	7.3
MS	exp.(1.128 [ln (TH mg/l)] -3.6867)	2.1	4.5	9.9	16	22	
FAV	exp.(1.128 [ln (TH mg/l)] -2.9935)	4.1	9.0	20	31	43	

Chromium III total	formula, results in ug/l	Example standards at hardness of: 50	100	200	300	400
CS	exp. (0.819[ln (TH mg/l)]+0.6848)	49	86	152	212	268
MS	exp. (0.819[ln (TH mg/l)]+3.7256)	1022	1803	3181	4434	5612
FAV	exp. (0.819[ln (TH mg/l)]+4.4187)	2044	3606	6362	8867	11223

Copper total	formula, results in ug/l		Example standards at hardness of: 50	100	200	300	400
CS	exp. (0.8545[ln (TH mg/l)]-1.702)		5.2	9.3	17	24	30
MS	exp. (0.9422[ln (TH mg/l)]-1.700)		7.3	14	27	39	52
FAV	exp. (0.9422[ln (TH mg/l)]-1.0069)	15	28	54	79	103	

Nickel total	formula, results in ug/l	Example standards at hardness of: 50	100	200	300	400
CS	exp. (0.846[ln (TH mg/l)]+0.0584)	29	52	94	132	169
MS	exp. (0.846[ln (TH mg/l)]+2.255)	261	469	843	1188	1516
FAV	exp. (0.846[ln (TH mg/l)]+2.9481)	522	938	1687	2377	3032

Zinc total	formula, results in ug/l	Example standards at hardness of: 50	100	200	300	400
CS	exp. (0.8473[ln(TH mg/l)]+0.884)	67	120	216	304	388
MS	exp. (0.8473[ln(TH mg/l)]+0.884)	67	120	216	304	388
FAV	exp. (0.8473[ln(TH mg/l)]+1.5772)	133	240	431	608	776

b. Designated use A, B, C1, C2, C3, D1 and D2 standards that vary with pH are listed in this subsection. Exp. is the base e exponential function.

Pentachloro-phenol	formula, results in ug/l	Example standards at pH of: 6.5	7.0	7.5	8.0	8.5
CS	exp. (1.005[pH]-5.134) not to exceed 5.5 ug/l	4.0	5.5	5.5	5.5	5.5
MS	exp. (1.005[pH]-4.869)	5.3	8.7	14	24	39
FAV	exp. (1.005[pH]-4.175)	11	17	29	48	79

c. Conversion factors for transforming total metals to dissolved metals.

Metal	Conversion Factors	
	Acute	Chronic
Arsenic	1.000	1.000
Chromium (III)	0.316	0.860
Chromium (VI)	0.982	0.962
Copper	0.960	0.960
Mercury	0.85	0.85
Nickel	0.998	0.997
Zinc	0.978	0.986

Appendix 3. Bacteriological standards

For designated use D1 (primary contact recreational) and D2 (secondary contact recreational) waters of the Reservation, density criteria for the indicator species *E.coli* will be used. In bacteriological surveys, the monthly geometric mean is used in assessing attainment of standards when a minimum of five samples are collected in a thirty day period. The monthly geometric mean for *E.coli* shall not exceed 126 organisms/100 ml*. When fewer than five samples are collected in a month, densities of *E.coli* shall not exceed 235 organisms per 100 ml in any single sample.

*source: USEPA

Calculated to nearest whole number using equation:

$$\text{(Mean } E.coli \text{ density)} = \frac{\text{antilog}_{10} \text{ illness rate}/1000 + 11.74}{9.40}$$

Appendix 4. Ammonia Aquatic Life Criteria for Fresh Waters

mg TAN/L	
Acute (CMC) equation (1 hour average)	$CMC = MIN\left(\left(\frac{0.275}{1+10^{7.204-pH}}+\frac{39.0}{1+10^{pH-7.204}}\right),\left(0.7249\times\left(\frac{0.0114}{1+10^{7.204-pH}}+\frac{1.6181}{1+10^{pH-7.204}}\right)\times\left(23.12\times 10^{0.036\times(20-T)}\right)\right)\right)$
Chronic (CCC) equation (30-day rolling average)*	$CCC = 0.8876\times\left(\frac{0.0278}{1+10^{7.688-pH}}+\frac{1.1994}{1+10^{pH-7.688}}\right)\times\left(2.126\times 10^{0.028\times(20-MAX(7.7))}\right)$
Note: Ammonia criteria are a function of pH and temperature. At the standard normalized pH of 7.0 and temperature of 20 °C, the acute criterion would be 17 mg TAN/L and the chronic criterion would be 1.9 mg TAN/L. Criteria duration: the acute criterion is a one-hour average and the chronic criterion is a thirty-day rolling average. Criteria frequency: Not to be exceeded more than once in 3 years. * Not to exceed 2.5 times the CCC as a 4-day average within the 30-days, *i.e.* 4.8 mg TAN/L at pH 7 and 20 °C more than once in 3 years on average.	

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.

Ammonia Criterion Duration	Criteria Magnitude (mg TAN/L) pH 7.0, T=20°C
Acute (1-hour average)	17
Chronic (30-day rolling average)	1.9*
*Not to exceed 2.5 times the criterion continuous concentration as a 4-day average within a 30-day period.	
Criteria frequency: Not to be exceeded more than once in three years on average.	

Site specific criteria for ammonia may be calculated based on US EPA guidance and water quality standards regulation at 40 CFR §131.11(b) (1) (ii) where there are demonstrated differences in the sensitivity of species present in a particular lake or river segment than those that were used to develop national criteria

Appendix 5. Nutrient and Chlorophyll *a* Thresholds for Primary Fisheries Lakes

Lake	Total Phosphorus mg/L	Total Nitrogen mg/L	Chlorophyll *a* µg/L
Big Lake (North Basin)	0.018	0.77	7
Big Lake (South Basin)	0.021	0.83	7
Joe Martin Lake	0.015	0.618	3
Lost Lake	0.023	1.025	13
Pat Martin Lake	0.021	0.739	7
Perch Lake (North Basin)	0.032	0.944	18
Perch Lake (South Basin)	0.044	1.686	8
Simian Lake	0.047	1.352	16
Sofie Lake	0.036	0.854	33
Third Lake	0.044	1.548	44
West Twin Lake (North Basin)	0.022	0.83	11
West Twin Lake (South Basin)	0.024	0.812	11

Secchi Disk Transparency Index

Lake	**Secchi Lower Threshold (m)**
Big Lake (South Basin)	2.5
Big Lake (North Basin)	2.5
Joe Martin Lake	2.5
Sofie Lake	0.5
Pat Martin Lake	0.5
Perch Lake (North Basin)	0.5
West Twin Lake (North) Basin)	1
West Twin Lake (South Basin)	1
Lost Lake	1
Third Lake	1
Perch Lake (South Basin)	0.3
Simian Lake	0.3