*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.*

# Leech Lake Band of Ojibwe
# Water Quality Standards Act

**Ordinance # 2025-01**

**Leech Lake Band of Ojibwe**
**190 Sailstar Drive NW**
**Cass Lake, MN 56633**

**October 24, 2024**

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## I. SHORT TITLE

This ordinance shall be known as the Leech Lake Band of Ojibwe Water Quality Standards Act (the "Act").

## II. AUTHORITY

The Leech Lake Band of Ojibwe is a federally recognized sovereign Indian nation governed by a Constitution and Bylaws adopted by the Minnesota Chippewa Tribe pursuant to the Indian Reorganization Act of 1934, 25 U.S.C. § 461, *et. seq.,* as revised in 1963. The Leech Lake Reservation Business Committee (LLRBC) is the duly elected governing body of the Band as granted by Article VI of the revised Constitution of the Minnesota Chippewa Tribe and the Band is a signatory to the Treaty of February 22, 1855, 10 Stat. 1165, which established reservations for the Pillager and Winnibigoshish Bands on Cass Lake, Leech Lake, and Lake Winnibigoshish. The Band's sovereign authority over the Reservation extends to activities of non-members within the Reservation boundaries whenever such activities impact or may impact the economic security, political integrity, or health and welfare of the Band.

The U.S. Environmental Protection Agency (EPA) has found the Band is eligible, pursuant to section 518 of the Clean Water Act of 1972, as amended (CWA) and 40 CFR § 131.8, for purposes of treatment in a similar manner as a state for the purposes of CWA Section 303(c). Pursuant to 40 CFR § 131.4(c), the Band is also eligible to the same extent as a state for the purposes of issuing certifications under CWA Section 401.

## III. PURPOSE

Protecting and sustaining the Treaty-protected Reservation Homeland, and its lands, groundwaters, surface waters, and other natural resources is essential to the continuing survival of the Band. The Band's Tribal laws, resolutions, and policies acknowledge that ground and surface waters are used for cultural, spiritual, and traditional purposes in addition to drinking water and other domestic purposes. Accordingly, the purpose of this ordinance is to protect, maintain, and improve the quality of ground and surface waters of the Leech Lake Reservation for public drinking water supplies, the propagation of wildlife, fish, and aquatic life, and for domestic, industrial, agricultural, recreational, navigational, cultural, spiritual, and other beneficial uses of water for current and future generations of Band members. This ordinance will protect the health and welfare of the Band and other residents of the Leech Lake Reservation by governing water quality decisions and activities that affect Reservation Waters.

Pursuant to the regulatory power delegated to the Band by the EPA, the LLRBC enacts Leech Lake Reservation Water Quality Standards (LLWQS), which are at least as stringent as those required by the CWA. The LLRBC finds that the LLWQS outlined in this document will only adequately protect the health of the Reservation population and the quality of the reservation environment if applied with equal force to Band members and non-members, and, thus the LLWQS shall be equally applicable to all activities that may impact Reservation Waters and shall serve as basic precepts to safeguard all Reservation Waters. In all cases where potential

uses and criteria conflict, the LLWQS shall protect the Band's general interests. This protection will be provided by:

1. The identification and protection of designated uses for specific Reservation waters.

2. The prescription of water protection criteria to attain and sustain those uses.

3. The establishment of water quality standards and an antidegradation policy that meet the provisions of 40 CFR Part 131 and are consistent with Section 303 of the Clean Water Act and other applicable laws, to protect Reservation Waters.

4. The establishment of procedures for the issuance of Reservation Water permits; issuing water quality certifications for licenses and permits issued by a federal agency or other jurisdictions for activities that affect Reservation Waters; and, enforcement measures the Band may invoke if the provisions in the ordinance are violated.

5. The preservation of all things within the aquatic community which support the health and welfare, cultural, spiritual, and religious uses, environmental quality, safety, economic security, and ultimately the sovereignty of the Band.

The LLWQS shall serve as a basis for developing and implementing control strategies that protect uses of water within the Reservation including, but not limited to:

1. Traditional and contemporary cultural, ceremonial, spiritual, and religious practice uses.

2. Band water supplies.

3. Propagation of fish and other aquatic life.

4. Wild and domestic animals and associated consumptive and non-consumptive uses.

5. Wildlife habitat and natural food web and food chain maintenance.

6. Harvesting plants and animals for human consumption (*e.g.*, wild rice, whitefish, and other life forms associated with aquatic and riparian habitats).

7. Domestic, recreational, and agricultural purposes.

8. Sustained yield forestry practices.

9. Aquaculture, commercial, navigational, and other legitimate uses.

## IV. WATER QUALITY STANDARDS APPLICABILITY OVERVIEW

1. These LLWQS apply to all waters of the Leech Lake Reservation (Reservation Waters). In addition, the LLWQS shall provide the basis for all water management decisions affecting

water quality within the Reservation boundaries, including, but not limited to point-source permitting, non-point source controls, and the physical alterations of water bodies including wetlands.

2. The Band intends the criteria in this ordinance to maintain water quality necessary to protect designated uses at all times, at all locations, and in all Reservation Waters.

3. The LLWQS will be the basis for managing discharges attributable to point and non-point sources of pollution.

4. The LLWQS may be revised as the need arises, or as the result of updated scientific information, and at a minimum will be reviewed once every three years pursuant to the requirements set forth in Section 303(c)(1) of the CWA and federal regulations at 40 CFR 131.20.

## V. DEFINITIONS

1. "AKART" is an acronym that means “all known, available and reasonable methods of prevention, control and treatment.” AKART shall represent the most current methodology that can be reasonably required for preventing, controlling, or abating the pollutants associated with a discharge. The concept of AKART applies to both point and nonpoint sources of pollution. The term "best management practices" typically applies to nonpoint source pollution controls and is considered a subset of the AKART requirement.

2. “Band,” “Tribe,” and/or “Tribal” shall mean the Leech Lake Band of Ojibwe, a federally recognized sovereign Indian Tribe.

3. “Band Water Supply” shall mean a stream, reach, lake, impoundment, or groundwater resource specifically designated by the Band as suitable, with treatment, to supply drinking water for the continuation of the health and well-being of the residents of the Leech Lake Reservation.

4. “Best Management Practices” (BMPs) shall mean schedules of activities, prohibitions or practices, maintenance procedures, and other management activities, engineering structures, or a combination of these to prevent or reduce pollution to Reservation Waters. BMPs also include treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

5. “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.

6. “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 bioaccumulation

factor (BAF) greater than 1000, after considering metabolism and other physicochemical properties that might enhance or inhibit bioaccumulation, following the methodology in Appendix B of 40 CFR 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 Biota-Sediment Accumulation Factor 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 CFR Part 132 (See Appendix A).

7. "Bioaccumulative Substances of Immediate Concern" shall mean the list of substances identified as such in Appendix A.

8. "Bioconcentration Factor" (BCF) shall mean the ratio of the concentration of the substance in a specific genus to the exposure concentration, at equilibrium.

9. "Biota-Sediment Accumulation Factor" shall mean the ratio (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.

10. "Clean Water Act" (CWA) shall mean the Federal Water Pollution Control Act, as amended, commonly referred to as the Clean Water Act, United States Code, Title 33, sections 1251 *et seq*.

11. "Chronic Standard" (CS) shall mean the highest water concentration of a toxicant to which aquatic organisms can be exposed indefinitely without causing chronic toxicity.

12. "Division of Resource Management" (DRM) shall mean the Band's Division of Resource Management.

13. "Environmental Protection Agency" (EPA) shall mean the United States Environmental Protection Agency.

14. "Exceptional Ojibwe Resource Water" (EORW) shall mean those Reservation Waters designated by the Band as having an exceptional level of cultural, recreational, and/or ecological significance.

15. "Existing uses" shall mean those uses actually attained by a water body on or after November 28, 1975, whether or not they are included in the water quality standards.

16. "GLI Pollutant" shall mean a toxic pollutant listed as a pollutant of initial focus in the Great Lakes Initiative Guidance, 40 CFR Part 132, Table 6, as amended through March

12, 1997 (See Appendix A).

17. "Groundwater" shall mean the supply of fresh water found beneath the earth's surface, usually in aquifers.

18. "LLBO" is an acronym which shall mean the Leech Lake Band of Ojibwe, a federally recognized sovereign Indian Tribe.

19. "Leech Lake Reservation Business Committee" (LLRBC) shall mean the five-member governing body of the Leech Lake Band that is empowered with authority and jurisdiction through the Constitution and bylaws of the Minnesota Chippewa Tribe.

20. "Natural conditions" shall mean the normal background characteristics and other physical, chemical, and biological conditions of waters and the course in which it flows, and the normal background daily and seasonal variations in weather, climatic, and atmospheric conditions that affect these waters; *i.e*., the levels of non-anthropogenic substances/chemicals present in ambient water that are from natural, as opposed to human-induced (anthropogenic) sources.

21. "Outstanding Ojibwe Resource Waters" (OORW) shall mean those Reservation Waters designated by the Band to be of the highest quality. Reservation Waters may be designated as OORW because of their high cultural, aesthetic, recreational, and/or ecological significance.

22. "Priority pollutants" shall mean EPA 'priority list' of pollutants found in 40 CFR Part 423 Appendix A, consisting of compounds and families of compounds that are among the most persistent, prevalent, and toxic chemicals known; the current list consists of 126 toxic pollutants for which there are existing analytical test methods (See Appendix B).

23. "Surface Water" shall mean all water naturally open to the atmosphere above the surfaces of the ground, including but not limited to rivers, lakes, reservoirs, ponds, streams (including intermittent streams), impoundments, and wetlands. Surface water does not include waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of the CWA (other than cooling ponds as defined in 40 CFR § 423.11(m), which also meet the criteria for this definition).

24. "Reservation Waters" shall mean all waters within the exterior boundaries of the Leech Lake Reservation, including but not limited to lakes, ponds, reservoirs, springs, streams, flowages, rivers, wetlands, and any subterranean waters, but the term does not include any pond, reservoir, or facility built solely for reduction or control of pollution or cooling of waters prior to discharge.

25. "Water Quality Certification" or "401 Certification" shall mean the Band's certification under CWA Section 401(a)(1) that a proposed project or activity for which a federal license or permit is required is not expected to cause a violation of relevant Water Quality Standards provided that any conditions (if present) applied to certification are followed.

26. “Water Quality Standards” (WQS) shall mean duly enacted provisions of Tribal, federal, or state law that consist of a designated use or uses for the waters, water quality criteria for such waters, an antidegradation policy, and other policies or standards that protect the public health or welfare, enhance the quality of water, and serve the purposes of the CWA.

27. “Water Resource Program” (WRP) shall mean the Water Resources Program operating within the Environmental Department of the Leech Lake Division of Resource Management.

28. “Wetlands” as defined in Eggers and Reed (2014) and the United States Army Corps of Engineers regulatory program shall mean those areas inundated or saturated by surface or ground-water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas (33 CFR 328).

29. “Wild Rice Areas” shall mean a stream, reach, lake or impoundment, or portion thereof, that presently, has historically, or that has the potential to sustain the growth of wild rice.

## VI. ANTIDEGRADATION POLICY

The perpetual existence of the Band is dependent on the ability of the land and waters of the Reservation to provide abundant natural resources for consumption, subsistence, cultural preservation, religious practice, spiritual well-being, and sustainable economic development. The Band adopts the following Antidegradation Policy, which shall be applied to all Reservation Waters, to maintain adequate water quality to support these functions at present and in the future.

### 1. Policy

**A.** The purpose of the Antidegradation Policy is to guide decisions that affect water quality and prevent unnecessary degradation from pollution sources, and to protect, maintain, and enhance existing surface water quality to protect all existing and designated current and future actual uses.

**B.** Existing instream water uses, as defined pursuant to 40 CFR 131, and the level of water quality necessary to protect existing uses shall be maintained and protected for all Reservation Waters. No water quality degradation which would interfere with or become injurious to existing or designated uses shall be permitted.

**C.** Any potential modification of tier classification shall be subject to public participation consistent with the requirements of 40 CFR 131.20 and 40 CFR 25.

**D.** Where designated uses of the waterbody are not attained, there shall be no lowering of the water quality with respect to the pollutant or pollutants that are causing the nonattainment.

**E.** In situations giving rise to potential water quality impairment due to a thermal discharge, the anti-degradation policy shall be implemented consistent with Section 316 of the Clean Water Act.

**F.** For the purposes of the Antidegradation Policy, Reservation Waters are classified within the following tiers by the Band (the list of waterbodies and their assigned tiers are found at Tables 1 and 2 (*See* subsections VIII (6) and VIII (7)):

1) Tier 1 –Existing instream water uses and the level of water quality necessary to protect existing and designated uses shall be maintained and protected.

2) Tier 2 – For each Tier 2 body of water, the existing water quality of the waterbody is of a higher quality than necessary to maintain existing or designated uses, and that level of water quality shall be maintained, unless the Band makes a finding to the contrary after compliance with public notice requirements consistent with 40 CFR Part 25 and intergovernmental cooperation requirements consistent with 40 CFR Part 25, review of technical, social, economic, and other criteria, that a lowering of water quality is necessary to support important social and economic development within Leech Lake Reservation, and the resulting water quality will be sufficient to protect existing and designated uses. Waterbodies shall not be excluded from Tier 2 protections solely because water quality does not exceed levels necessary to support all of the uses specified in Section 101(a)(2) of the Clean Water Act.

3) Tier 2.5 – Each Tier 2.5 body of water constitutes an Exceptional Ojibwe Resource Water (EORW), with an exceptional level of cultural, spiritual, traditional, recreational, and/or ecological significance. For each Tier 2.5 body of water, water quality is of a higher quality than necessary to maintain existing and designated uses, and that water quality shall be maintained, unless the Band makes a finding to the contrary after compliance with public notice requirements consistent with 40 CFR Part 25 and intergovernmental cooperation requirements consistent with 40 CFR Part 25, review of technical, social, economic, and other criteria, that a lowering of water quality is necessary to support important social and economic development within Leech Lake Reservation, and that discharges will not exceed ambient water quality levels, AKART pollution controls are implemented, there is no increased loads of BCCs, and the resulting water quality will be sufficient to protect existing and designated uses.

4) Tier 3 – Each Tier 3 body of water constitutes an Outstanding Ojibwe Resource Water (OORW), with the highest level of cultural, spiritual, traditional, recreational, and/or ecological significance. For each Tier 3 body of water, water quality is of a higher quality than necessary to maintain existing and designated uses, and that level of water quality shall be maintained. Waters may be designated OORW by LLRBC following public participation consistent with the requirements of 40 CFR 131.20 and 40 CFR 25.

## 2. Implementation

In addition to compliance with the General Water Quality Standards, the specific requirements for each of the following tiered water protections shall be met.

**A.** Tier 1 Protection of Reservation Waters.

1) Prior to the issuance of any permit with new or expanded discharges under the Clean Water Act or other applicable law that would authorize a discharge that may degrade a waterbody, the applicant for a permit shall demonstrate, to the Environmental Director's satisfaction, that the resulting water quality in the receiving water will be sufficient to protect existing uses and that ambient water quality shall conform to the narrative and numeric water quality criteria in these Water Quality Standards.

2) During the development of a draft permit, the Band will work with the permitting agency and the permit applicant to ensure that data for the waterbody and proposed discharge is reviewed and, for any data gaps, monitoring requirements will be required to ensure that existing uses are protected.

3) Compliance with applicable Tribal, state, and federal legal and regulatory requirements for new and existing pollution sources.

4) If a permit is granted, the permit holder shall provide monitoring data or other information about the waterbody annually or according to such other schedule as provided by the WRP. The WRP will review such data and perform site inspections to ensure existing uses are protected.

**B.** Tier 2 Protection of Ojibwe Resource Waters.

1) Prior to the issuance of any permit with new or expanded discharges under the Clean Water Act or other applicable law that would authorize a discharge that may degrade a waterbody with a Tier 2 classification, the applicant for the permit shall demonstrate, to the Environmental Director's satisfaction:

   i. The proposed lowering of water quality is necessary to accommodate important social or economic development on or near the Reservation;

   ii. The resulting water quality will be sufficient to protect existing uses;

   iii. Cost-effective pollution control methods have been implemented or do not exist; and,

   iv. Compliance with applicable Tribal, state, and federal legal and regulatory requirements will be achieved for new and existing pollution sources.

2) An Antidegradation Demonstration will be required for any lowering of water quality. After compliance with public notice requirements consistent with 40 CFR Part 25 and intergovernmental cooperation requirements consistent with 40 CFR Part 25, economic and social factors shall be considered as part of the decision. See sections VI(2)(E), VI(3), VI(4), and VI(5) below.

3) If a permit is granted, the permit holder shall provide monitoring data or other information about the waterbody annually or according to such other schedule as provided by the WRP. The WRP will review such data and perform site inspections to ensure existing uses are protected.

**C.** Tier 2.5 Protection of Exceptional Ojibwe Resource Waters.

1) Prior to the issuance of any permit with new or expanded discharges under the Clean Water Act and other applicable law that would authorize a discharge that may degrade a waterbody with a Tier 2.5 classification, the applicant for the permit shall demonstrate, to the Environmental Director's satisfaction:

   i. The proposed lowering of water quality is necessary to accommodate important social or economic development on or near the Reservation;

   ii. Existing uses will be maintained and protected;

iii. Discharges will not exceed acute or chronic water quality criteria and will not exceed ambient water quality levels at the location of the discharge;

iv. AKART pollution control methods, including best management practices, have been implemented or do not exist;

v. Compliance with applicable Tribal, state, and federal legal and regulatory requirements will be achieved for new and existing pollution sources.

vi. No increased loads of bioaccumulative chemicals of concern ("BCCs") shall be discharged.

2) An Antidegradation Demonstration will be required for any lowering of water quality. After compliance with public notice requirements consistent with 40 CFR Part 25 and intergovernmental cooperation requirements consistent with 40 CFR Part 25, economic and social factors shall be considered as part of the decision. See sections VI(2)(E), VI(3), VI(4), and VI(5) below.

3) If a permit is granted, the permit holder shall provide monitoring data or other information about the waterbody annually or according to such other schedule as provided by the WRP. The WRP will review such data and perform site inspections to ensure existing uses are protected.

**D.** Tier 3 Protection of Outstanding Ojibwe Resource Waters (OORW).

1) New or expanded discharges to OORW's or to tributaries of an OORW that may degrade the water quality of an OORW are prohibited with the following exceptions:

i. Short-term, temporary (no more than 6 months) lowering of water quality;

ii. Short-term response actions undertaken by the Band to alleviate a release into the environment of hazardous substances, pollutants, or contaminants that may pose an imminent and substantial danger to public health or welfare.

iii. Any expansion or significant modification of structures or discharges related to the allowable exemptions listed above will not be allowed without prior written approval of the DRM Director.

iv. If a permit is granted, the permit holder shall provide monitoring data or other information about the waterbody annually or according to such other schedule as provided by the WRP. The WRP will review such data and perform site inspections to ensure existing uses are protected.

**E.** Lowering Water Quality

1) An anti-degradation demonstration is necessary where an activity may result in a Lowering of Water Quality.

2) A Lowering of Water Quality is defined as:

   i. The projected or observed diminished chemical or biological integrity of Reservation surface waters due to human activity as established by the DRM through the collection and analysis of baseline chemical or biological data, and the determination of reference conditions for such surface waters; or

   ii. 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.

3) The following is a non-exclusive list of activities that shall require an anti-degradation determination due to their potential to cause a Lowering of Water Quality:

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

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

   iii. 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;

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

   v. Other deliberate activities that, based on the information available, could be reasonably expected to result in an increased loading of any pollutant, including heat, to Reservation Waters.

## 3. Antidegradation Demonstration

Any entity seeking to conduct an activity that may result in a Lowering of Water Quality or create a new or increased discharge of Bioaccumulative Substances of Immediate Concern to any Reservation Waters must first submit an antidegradation demonstration for consideration and approval or disapproval by the Environmental Director. The antidegradation demonstration shall include, but need not be limited to, the following analyses:

**A.** Pollution Prevention Alternative Analysis

Identify any practicable 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.

**B.** 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

**C.** 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.

## 4. Review of Antidegradation Demonstration

**A.** For all Reservation Waters, the Band shall ensure that the level of water quality necessary to protect existing uses is maintained. Controls shall be established as necessary on point and nonpoint sources of pollutants to ensure that the criteria applicable to the designated use(s) are achieved in the water and that any designated use of 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 or if the proposed lowering of water quality would not be consistent with the antidegradation policy (e.g., where Tier 2, 2.5, or 3 requirements apply), the Band shall not allow a Lowering of Water Quality for the pollutant or pollutants preventing the attainment of such uses or exceeding such criteria.

**B.** For BCCs or other pollutants known or likely 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 DRM LLRBC and appropriate permitting authority of any increased loadings. Upon notification, the LLRBC or appropriate permitting authority shall require actions as necessary to reduce or eliminate the increased loading.

## 5. Antidegradation Decision

Once the DRM determines the information provided in an antidegradation demonstration is administratively complete, and after compliance with public notice requirements consistent with 40 CFR Part 25 and intergovernmental cooperation requirements consistent with 40 CFR Part 25, the LLRBC shall review the antidegradation demonstration 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 the Band's interests and accommodate important economic or social development in the area in which the waters are located. The LLRBC's antidegradation decision may approve all or part of the proposed Lowering of Water Quality if the DRM determines that the proposed lowering would satisfy the antidegradation policy, require the inclusion of conditions on the proposed Lowering of Water Quality, or deny the proposed Lowering of Water Quality.

## VII. GENERAL WATER QUALITY STANDARDS

### 1. General Criteria

The following general water quality criteria shall apply to all Reservation Waters. However, where more stringent standards for designated water bodies are set, the stricter standards shall supersede these general standards:

**A.** Reservation Waters shall be free from suspended and submerged solids or other substances that enter the waters as a result of anthropogenic 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.** Reservation Waters 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 impair the maintenance or attainment of designated uses.

**C.** Reservation Waters 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.** Natural hydrological conditions supporting 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.

**E.** Reservation Waters must be free from nutrients entering the waters, as a result of human activity, in concentrations that create nuisance growths of aquatic weeds and algae. Nutrient concentrations in surface waters must not be altered so as to cause an imbalance in natural populations of aquatic flora or fauna, or to impair the maintenance or attainment of designated uses.

**F.** The pH of a stream, lake, or reservoir shall not fluctuate as a result of human activity in a manner as to harm aquatic organisms.

**G.** Dissolved oxygen in streams or the epilimnion of lakes or reservoirs shall not decrease below 5 mg/L, on a daily basis.

**H.** Dissolved oxygen in streams, lakes, and reservoirs where early life stages of coldwater species are present or expected to be present shall not decrease below 8 mg/L on a daily basis.

**I.** Concentrations of radioactive materials shall not exceed concentrations caused by naturally occurring materials.

**J.** Existing mineral quality shall not be altered so as to interfere with the designated uses for a water body.

**K.** The introduction of heat by other than natural causes that increase the temperature of Reservation Waters shall not result in a Lowering of Water Quality unless approved in an Antidegradation Decision as described in Section VI(2)(E).

**L.** The natural daily and seasonal temperature variations of Reservation waters shall be maintained. No material increase in temperature shall be allowed for receiving waters designated as coldwater.

**M.** Any stream, reach, lake, wetland, or impoundment that is presently, was historically, or could potentially be suitable for the support and propagation of wild rice, and all upstream and downstream connected waters shall not exceed instantaneous maximum sulfate levels of 10 milligrams per liter. Sulfate shall not exceed levels that would cause adverse effects to wild rice, including through reduction to sulfide.

## 2. Biological Criteria

**A.** Policy and Scope

Biological monitoring data are used as an assessment tool for interpreting the narrative criterion in VII(2)(B) for lakes, rivers, and wetlands within the exterior boundaries of the Reservation to identify water quality problems and prioritize abatement projects. The biological assessment tools are derived from data that reflects the natural condition and represent a direct measure of the support for aquatic life use designations for Reservation Waters.

**B.** Narrative Criterion

All naturally occurring biological communities and the habitat needed to support them shall be maintained and protected in all waterways and wetlands of the Reservation. Aquatic habitat, which includes all Reservation Waters, will not be degraded. Sediments and aquatic flora and fauna, and the use thereof, must not be impaired or endangered, the species composition will not be altered, and propagation or migration of fish and other aquatic biota normally present must not be hindered by human activities. Average dissolved oxygen levels shall be maintained at levels that will not cause adverse effects to aquatic life.

**C.** Implementation

The biological quality of any given surface water body will be assessed by comparison to the biological conditions determined to be the natural condition for that surface waterbody. In all cases, sampling and analysis techniques used shall be consistent with DRM methods and standard operating procedures.

Functional and structural attributes, of vegetation and macroinvertebrate communities, will be used, in conjunction with habitat quality and chemical data, to determine the degree to which a waterbody is fully, partially, or not supporting its designated aquatic life uses. A finding of biological degradation must be supported by data gathered for the factors listed below:

1) The resident aquatic macroinvertebrate community will be evaluated based on an index of biological integrity calculated from measurements of attributes including, but not limited to:

   i. Species diversity and composition;

   ii. Feeding composition; and

   iii. Species abundance and condition.

2) The resident aquatic plant community will be evaluated based on an index of biological integrity calculated from measurements of attributes including, but not limited to:

   i. Species diversity and composition, including algae; and

   ii. Species abundance and condition.

3) Habitat quality will be evaluated based on a quantitative or qualitative assessment including, but not limited to:

   i. River and lake morphological features that provide spawning, nursery, and refuge areas for fish and invertebrates;

   ii. Bottom substrate size and variety;

   iii. Variations in water depth;

   iv. Sinuosity of a river course;

   v. Physical or hydrological alterations of the stream or lakebed including excessive sedimentation;

   vi. Types of land use in the sub-watershed; and

   vii. Other scientifically accepted and valid factors of habitat quality.

4) Bacteriological criteria in waters protected for primary contact recreational use (Class 1D1) are based upon EPA's most recent 2012 bacteriological criteria recommendations unless otherwise noted. Compliance will be based on the statistical threshold value and a monthly geometric mean. The following bacteria criteria apply to all Reservation Waters:

   i. The bacteriological density shall not exceed a 30-day geometric mean of 126 MPN E. coli per 100 ml; and, the statistical threshold value of 410

MPN E. coli per 100 ml more than ten percent of the time during any 30-day period.

ii. Beach advisories (Appendix C) shall be issued whenever bacteria levels exceed the beach action value of 235 MPN E. coli per 100 mL.

5) In no more than three ten-day periods per year, in no more than one year over a five-year period, the concentration of the following cyanotoxins shall not exceed:

- 6 µg/L total Microcystin
- 7 µg/L total Anatoxin-a
- 15 µg/L total Cylindrospermopsin

** = *Advisories based on Minnesota Department of Health values and U.S. EPA exposure parameters* (https://www.pca.state.mn.us/business-with-us/harmful-algae-blooms-water-recreation-advisories)

6) Beach advisories shall be issued whenever cyanotoxin levels exceed the concentrations in Section VII(2)(C)(5).

## 3. Wetland Specific Criteria

All wetlands (designated use Class 4), as defined by  and according to the classification scheme in Eggers and Reed (2014), 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; specific conductance; 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.

## 4. Eutrophication and Water Clarity Criteria

The following criteria are the Leech Lake Band of Ojibwe's eutrophication and water clarity criteria for the protection of aquatic life for Northern Minnesota polymictic and dimictic (mixed and stratified) lakes, and Northern Minnesota rivers.

Mixed or polymictic lakes are typically shallow lakes in which frequent mixing of the water column occurs. These are classified as having a maximum depth of 15 feet or less, or with 80 percent or greater of the lake being the littoral zone. Stratified or dimictic lakes are typically deeper lakes that mix once in the spring and again in the fall.

Lake eutrophication criteria for Northern Minnesota polymictic and dimictic lakes

| | Total Phosphorus (µg/L) | Chlorophyll-a (µg/L) | Secchi depth (m) |
|---|---|---|---|
| Polymictic | 30 | 16 | 1.1 |
| Dimictic | 20 | 9 | 1.8 |

MPCA (2022) https://www.pca.state.mn.us/sites/default/files/wq-bsm4-05.pdf

For this standard to be exceeded the following is required.

- Mean TP must be exceeded as well as Chlorophyll-a, or Secchi, or both.
- A minimum of two years of data within a 10-year period is needed. Each year requires at least 4 sampling events, and these samples should be reasonably spaced through the summer index period (June through September).
- The average of all available data from the most recent 10 years is used for assessment.

Northern Minnesota River eutrophication standards

| Nutrient | Response (stress) | | | |
|---|---|---|---|---|
| **Total Phosphorus µg/L** | **Chlorophyll-a (seston) µg/L** | **Diel dissolved oxygen flux mg/L** | **Biological oxygen demand mg/L** | **Periphyton chlorophyll-a mg/m2** |
| 50 | 7 | 3.0 | 1.5 | 150 |

MPCA (2013) https://www.pca.state.mn.us/sites/default/files/wq-s6-08.pdf

For assessment purposes this means the cause indicator (total phosphorus) and response indicators (Chl a, BOD5, diel DO flux, or pH) are used in combination and not independently.

For total phosphorus (TP), chlorophyll-a (seston), and BOD5, the following are required:

- A minimum of 12 measurements per parameter within the 10-year assessment period (minimum 2 years required).
- Data compared to the standard is a seasonal average – June to September data only.
- If multiple values exist for a parameter along a given reach for a single day, a daily average will be calculated prior to determining a seasonal average.
    - For DO flux
        - A minimum of a 4-day deployment is required – June to September.
        - A minimum of two deployments over separate years in the assessment window is required.
        - It is preferred that the deployments coincide with summers when chemistry is collected and that the deployment is taken during mid-late summer.
        - Multiple deployments will be summarized separately.
    - For periphyton chlorophyll-a
        - A minimum of 2 years of data is required within the last 10 years. The average of all available data from the most recent 10 years is used for assessment.

TSS (mg/l) and S-Tube (cm) criteria for Northern River Nutrient Region

| TSS | S-tube Exceeds | S-tube Meets |
|---|---|---|
| 15 | 40 | 55 |

MPCA (2011) https://www.pca.state.mn.us/sites/default/files/wq-s6-11.pdf

A stream is considered to exceed the standard for TSS/S-tube if 1) the standard is violated more than 10% of the days of the assessment season (April through September) as determined from a data set that gives an unbiased representation of conditions over the assessment season, and 2) at least three measurements violate the standard.

A stream is considered to meet the standard for TSS/S-tube if the standard is met at least 90% of the days of the assessment season. A designation of meeting the standard for TSS/S-tube generally requires at least 20 suitable measurements from a data set that gives an unbiased representation of conditions over at least two different years. However, if it is determined that the data set adequately targets periods and conditions when exceedances are most likely to occur, a smaller number of measurements may suffice.

S-tube measurements that fall between the two relevant surrogate values are considered to be indeterminate in exceeding or meeting the TSS standard. If a stream satisfies neither the criterion for exceeding the standard nor the criterion for meeting the standard, the stream is considered to have insufficient information regarding TSS levels.

## 5. Coldwater Criteria for Reservation Lakes

The following are the Leech Lake Band of Ojibwe's criteria to protect coldwater lake habitats. The Leech Lake Band of Ojibwe Class 2A criteria uses standards for Lake Whitefish protection as this provides the most stringent and appropriate protection for coldwater lakes on the Reservation.

The criteria for Reservation Lakes classified as 2A for coldwater habitat protections will meet the following. $T_{DO3}$* between July 26th and August 24th shall not exceed 17.2 degrees C. Total Phosphorus shall not exceed 12 (ug/L). Chlorophyll-a shall not exceed 5 (ug/L). Secchi Depth shall be at least 2.6 (m) or greater.

*$T_{DO3}$ *is defined as the water temperature in Degrees Celsius at the depth in the water column where dissolved Oxygen is equal to 3.0 mg/L.*

The following is required for the assessment of the above coldwater standards.

- $T_{DO3}$ assessment requires a minimum of 3 years of data during the index period of July 26th - August 24th. The average of $T_{DO3}$ data from the most recent 10-year period is used.
- Eutrophication parameters require a minimum of 2 years of data within a 10-year period. The average of all available data from the most recent 10 years will be used.

## VIII. DESIGNATED USES

Reservation Waters are assigned designated uses to serve the purposes of the Band, the Clean Water Act, as defined in sections 101(a)(2) and 303(c), and other applicable law, which require that water quality standards should provide, wherever attainable, water quality 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 public water supplies, agriculture, industrial purposes and navigation.

### 1. Class 1: Band Water Supply, Cultural and Spiritual, Subsistence Fisheries and Recreation

**A.** Band Water Supply: A stream, reach, lake, impoundment, or groundwater resource specifically designated by the Band as suitable, with treatment, to supply drinking water for the continuation of the health and well-being of the residents of the Leech Lake Reservation.

**B.** Cultural and Spiritual: A stream, reach, lake, impoundment, or wetland which has been determined by the Band to possess exceptional beauty or be significant to the preservation or exercise of the traditional cultural value system of the Leech Lake Band, which may include but is not limited to primary (direct) contact with waters, the maintenance of traditional medicinal plants, traditional sweat lodge practices, and the ceremonial ingestion of surface waters.

**C.** Subsistence Fisheries: Those Reservation waters that are used to provide a sufficient diet of fish in order to sustain Band members 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 Reservation Water where contact with and ingestion of the water is likely. 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 which the probability of ingesting water is minimal. Examples are fishing and boating.

### 2. Class 2: Aquatic Life

**A.** Coldwater Fisheries: A stream, reach, lake, or impoundment where water temperatures, habitat, and other characteristics are suitable for support and propagation of coldwater fish and other aquatic life or serves as a spawning or nursery area for coldwater fish species. Examples of coldwater fish include but are not limited to, lake whitefish, cisco (tullibee), brook trout, lake trout, rainbow trout, and brown trout.

**B.** Warmwater Fisheries: A stream, reach, lake, impoundment, or wetland where water temperatures, habitat, and other characteristics are suitable for support and propagation of warmwater fish and other aquatic life, or that serves as a spawning or nursery area for warmwater fish species. Examples of warm water fish include northern pike, black crappie, bluegill sunfish, largemouth bass, and yellow perch.

**C.** Wild Rice Areas: Any stream, reach, lake, wetland, or impoundment that is presently, was historically, or could potentially be suitable for the support and propagation of wild rice and all connected waters.

### 3. Class 3: Wildlife

All surface waters capable of providing a water supply and vegetative habitat for the support and propagation of wildlife within the Leech Lake Reservation.

### 4. Class 4: Wetlands

Those areas that have a predominance of hydric soils, are inundated or saturated by surface or groundwater at a frequency and duration to support, and that under normal circumstances support, a prevalence of vegetation typically adapted for life in saturated soils. "Normal circumstances" refers to the soil and hydrologic conditions normally present, without regard to, whether vegetation has been removed or whether the lands have been otherwise modified/manipulated by human activity. These areas will be protected and maintained for some of the following uses – including, but not limited to maintaining biological diversity, preserving wildlife habitat, providing recreational activity, erosion control, groundwater recharge, low flow augmentation, stormwater retention, flood mitigation, and prevention of stream sedimentation.

### 5. Class 5: Agricultural, Navigational, and Industrial

**A.** Agricultural: Waters used, or potentially used, to provide crop irrigation and livestock watering.

**B.** Navigational: Waters used, or potentially used, for navigation in and on the water.

**C.** Industrial: Waters used, or potentially used, as a commercial water supply for business purposes.

## Table 1: Designated Uses of Leech Lake Reservation Lakes by HUC-8 Watershed

***Mississippi River Headwaters Watershed (07010101)***

***Note: All Waters listed in Table 1 are Exceptional Ojibwe Resource Waters unless specified otherwise. Exceptional Ojibwe Resource Waters equate to Antidegradation Tier 2.5.***

| Name | Township | Range | Section | Designated Use |
|---|---|---|---|---|
| Amik | 147 N | 27 W | 15 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Andrusia | 146 N | 31 W | 7,8,17-20,30 | 1B, 1C, 1D1, 1D2, 2A, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Ball Club | 144 & 145 N | 25 & 26 W | 1,2,9,10,14,16,21, 22,23,26,27,31,35 | 1B, 1C, 1D1, 1D2, 2A, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Biauswah | 147 N | 27 W | 8,9,16,17 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Big | 146 & 147 N | 31 W | 3-6 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Big Rice | 147 N | 30 & 31 W | 19,24,25,30 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Blue Sky | 146 N | 31 W | 9,10 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Bog | 147 N | 29 W | 28 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Buck | 146 N | 31 W | 12-14,23,24 | 1B, 1C, 1D1, 1D2, 2A, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Bullhead | 146 N | 30 W | 7 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Burns | 146 N | 29 & 30 W | 1,6,7,12 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Cass | 145 & 146 N | 30 & 31 W | 3,4,8-11,13,14,16,18, 21-24,27-29,32,33 | 1B, 1C, 1D1, 1D2, 2A, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Cut Foot Sioux | 146 & 147 N | 27 W | 3,4,11,21,23, 25-28,35,36 | 1B, 1C, 1D1, 1D2, 2A, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Dixon | 148 N | 28 & 29 W | 24,25,30,31,36 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Drewery | 145 & 146 N | 31 W | 3,4,33,34 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Dry Creek | 147 N | 27 W | 21,22 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Egg | 146 N | 26 W | 3,10 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Farley | 147 N | 28 W | 10,11 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| First River | 146 N | 26 W | 6-8 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Flora | 147 N | 31 W | 19,20 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Goche | 145 N | 27 W | 22 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Greely | 147 N | 27 W | 9 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Hale | 147 N | 28 W | 24 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |

| | | | | |
|---|---|---|---|---|
| Jessie | 147 N | 31 W | 30-32 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Kenogama | 146 & 147 N | 29 W | 4,5,8,9,33 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Kitchi | 146 & 147 N | 30 W | 4-8,31,33 | 1B, 1C, 1D1, 1D2, 2A, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Little Ball Club | 146 N | 26 W | 29,32 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Little Cut Foot Sioux | 146 & 147 N | 26 & 27 W | 32,33 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Little Lost | 146 N | 31 W | 15 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Little Pimushe | 147 N | 30 W | 19,30 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Little Rice | 147 N | 30 W | 30,31 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Little White Oak | 144 N | 25 W | 2-4,10,11 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Little Winnibigoshish | 145 & 146 N | 26 & 27 W | 6,25,30,31,36 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Little Wolf | 145 N | 31 W | 32 | 1B, 1C, 1D1, 1D2, 2A, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Lost | 146 N | 31 W | 14,15,22,23 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Lost | 147 N | 28 W | 1,12 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Lower Pigeon | 148 N | 27 & 28 W | 1,6,7,12 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Luck | 146 N | 31 W | 14,23 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Lydick | 144 & 145 N | 29 & 30 W | 1,2,7 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Mark | 145 N | 30 W | 2 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| McDonald | 146 N | 30 W | 15;16 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Middle Pigeon | 147 N | 27 & 28 W | 22 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Minisogama | 147 N | 29 W | 27,34 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Minny | 146 N | 29 W | 19 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Mission | 146 N | 31 W | 20,21 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Moose | 147 N | 30 W | 11,14,15,21,22 | 1B, 1C, 1D1, 1D2, 2A, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Mosomo | 147 N | 27 W | 8,17 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Moss | 144 N | 31 W | 2,3 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Mud | 145 N | 32 W | 1 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| One Loaf | 148 N | 27 W | 31 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |

| | | | | |
|---|---|---|---|---|
| Pigeon Dam | 147 N | 27 & 28 W | 19,20,25,30 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Pike Bay | 145 N | 30 & 31 W | 18,19,30,13-15, 22-27,34-36 | 1B, 1C, 1D1, 1D2, 2A, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Pimushe | 148 N | 30 & 31 W | 6-8,17-20,31 | 1B, 1C, 1D1, 1D2, 2A, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Popple | 147 N | 30 W | 26;27 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Pug Hole | 146 N | 30 W | 7,8 | 1B, 1C, 1D1, 1D2, 2A, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Rabbits | 146 N | 29 W | 1,2,11,12 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Raven | 146 N | 29 W | 10,11 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Reed | 145 N | 32 W | NE24 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Rice | 147 N | 29 & 30 W | 25,30 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Schoolhouse | 146 N | 26 & 27 W | 19,24 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Schram | 146 N | 30 W | 28,33 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Silver | 146 N | 31 W | 9;16 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Simpson | 147 N | 27 W | 17 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Sioux | 148 N | 28 W | 32 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Stocking | 146 N | 32 W | 13,24 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Strawberry | 145 N | 30 W | 18 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Sugar | 146 N | 29 W | 13,14,22-26 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Sunken | 147 N | 27 W | 16 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Swenson | 146 N | 32 W | 11-14 | 1B, 1C, 1D1, 1D2, 2A, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Tamarack | 146 N | 27 W | 32,33 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Tank | 146 N | 30 W | 34,35 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Ten | 146 N | 31 W | 10 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Ten Section | 145 N | 31 W | 35 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Tibbett | 146 N | 26 W | 7,18 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Tower | 146 N | 29 W | 7 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Tuttle | 146 N | 26 W | 29 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Two Mile | 147 N | 26 W | 20,29 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |

| | | | | |
|---|---|---|---|---|
| Upper Pigeon | 148 N | 28 W | 36 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Wart | 147 N | 27 W | 6 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| White Oak | 144 N | 25 & 27 W | 2,12,27,28 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Wilderness | 147 N | 28 W | 4 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Windigo | 146 N | 31 W | 35,36 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Winnibigoshish | 145-147 N | 26-29 W | 2-7,11-13,18, 20,21,24-32,34-36 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Wolf | 145 & 146 N | 32 W | 1;2;25;26;35;36 | 1B, 1C, 1D1, 1D2, 2A, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Unnamed (Preacher) | 147 N | 32 W | 24 | 1B, 1C, 1D1, 1D2, 2A, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Unnamed (Grandpa) | 147 N | 32 W | 13, 24 | 1B, 1C, 1D1, 1D2, 2A, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Unnamed Lakes | 147 N | 31 & 32 W | 19, 24, 25, 30 | 1B, 1C, 1D1, 1D2, 2A, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Unlisted Lakes in HUC-8 # 07010101 | Various | Various | Various | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| All Wetlands in HUC-8 # 07010101 | Various | Various | Various | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |

***Leech Lake River Watershed (07010102)***

***Note: All Waters listed in Table 1 are Exceptional Ojibwe Resource Waters unless specified otherwise. Exceptional Ojibwe Resource Waters equate to Antidegradation Tier 2.5.***

| Name | Township | Range | Section | Designated Use |
|---|---|---|---|---|
| Aultman | 142 N | 28 W | 33,34 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Bag | 141 N | 30 W | 17 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Big Hanson | 141 N | 30 W | WC15 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Blackduck | 142 N | 28 W | 4,5 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Blacksmith | 144 N | 27 & 28 W | 13,18,19,24 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Blot | 141 N | 28 W | 18 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Bobolink | 143 N | 29 W | 12 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Boxell | 141 N | 28 W | 22,27,28 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Boy | 142 N | 27 & 28 W | 9,13,14,16-21, 23-25,29-31 | 1B, 1C, 1D1, 1D2, 2A, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Bullhead | 141 N | 28 W | 25,26,35,36 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Camp | 142 N | 28 W | 28,33 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |

| | | | | |
|---|---|---|---|---|
| Camp | 145 N | 31 W | 35 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Cedar | 141 N | 29 W | 11,14 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Chub | 144 N | 27 W | 25 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Conklin | 141 N | 30 W | 7 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| County | 141 N | 28 W | 12 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Craig | 141 N | 28 W | SC27 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Crooked | 144 N | 31 W | 26,34-36 | 1B, 1C, 1D1, 1D2, 2A, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Crown | 141 N | 28 W | 11,12 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Current | 142 N | 28 W | 3,29 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Deep | 142 N | 30 W | 28,33,34 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Demro | 145 N | 27 W | 28 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Drumbeater | 144 N | 27 & 28 W | 19,24,25,30 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Experiment | 145 N | 30 & 31 W | 33,36 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Faherty | 144 N | 31 W | 23,24 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Foot | 145 N | 30 W | 19 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Football | 141 N | 28 W | 10 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Ford | 141 N | 27 W | 19,30 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Gijik | 141 N | 28 W | 25,36 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Gooseberry | 141 N | 28 W | C5 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Gould | 142 N | 30 & 31 | 7,12 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Grass | 145 N | 29 & 30 | 13,18 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Hagen | 141 N | 29 W | 16 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Hanson | 141 N | 30 W | 10,15 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Haugen | 141 & 142 N | 28 W | 4,33 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Haynes | 141 N | 29 W | 24,25 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Hazel | 141 N | 29 W | 25 | 1B, 1C, 1D1, 1D2, 2A, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Hessie | 144 N | 31 W | NW11 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |

| | | | | |
|---|---|---|---|---|
| Hole in the Bog | 144 N | 28 W | 9 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Horseshoe | 141 N | 29 W | 3,10,11 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Inguadona | 140 & 141 N | 27 W | 5-8,17,18,29,32 | 1B, 1C, 1D1, 1D2, 2A, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Iverson | 142 N | 28 W | NW27 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Jack | 141 & 142 N | 30 W | 2,3,34,35 | 1B, 1C, 1D1, 1D2, 2A, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Kego | 141 N | 28 W | 14,23 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Lauer | 141 N | 29 W | 9,10 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Leech | 141-144 N | 28-32 W | 1-3 | 1B, 1C, 1D1, 1D2, 2A, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Life Raft | 144 N | 30 W | 23 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Little Moss | 144 N | 31 W | 14 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Little Portage | 145 N | 29 W | 14,15,23,27 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Little Turtle | 141 N | 30 W | 5,6 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Little Twin | 144 N | 31 W | 11,12 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Lomish | 142 N | 27 W | 31,32 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Long | 141 N | 27 & 28 W | 7,18,13,23,24,26,27 | 1B, 1C, 1D1, 1D2, 2A, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Lower Sucker | 144 & 145 N | 29 & 30 W | 31,32,35,36 | 1B, 1C, 1D1, 1D2, 2A, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Lundeen | 141 N | 28 W | 11-14 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Mad Dog | 142 N | 28 W | NC21 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Maple | 141 N | 28 W | 14,15,22,23 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Marshall | 141 N | 28 W | WC6 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Middle Sucker | 145 N | 29 & 30 W | 24,25,30 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Mud | 141 N | 29 W | 13,14,23,24 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Nellie | 141 N | 28 W | 27,28,34 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Nomad | 142 N | 30 W | 34 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Nushka | 145 N | 27 W | 34,35 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Pine | 141 N | 29 W | 17-20 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Pollywog | 141 N | 29 W | 24-26 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |

| | | | | |
|---|---|---|---|---|
| Portage | 142 N | 27 W | 28,29,32,33 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Portage | 144 N | 31 W | 15,16,21,22 | 1B, 1C, 1D1, 1D2, 2A, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Portage | 145 N | 28 & 29 W | 30,31,22,23,25-27,35,36 | 1B, 1C, 1D1, 1D2, 2A, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Rabbit | 142 N | 27 W | NC31 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Rat | 141 N | 29 W | 7,8 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Rice | 142 N | 30 W | 20 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Rice | 145 N | 27 W | 33,34 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Shell | 141 N | 30 W | 13,14,24 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Silver | 141 N | 28 & 29 W | 19,24,25,30 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Six Mile | 144 & 145 N | 27 & 28 W | 1,5-8,17 | 1B, 1C, 1D1, 1D2, 2A, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Spearns | 141 N | 29 W | NC24 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Spring | 143 N | 32 W | 1 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Spruce | 141 N | 30 W | NE16 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Steamboat | 144 N | 31 & 32 W | 19,24,25,29,30 | 1B, 1C, 1D1, 1D2, 2A, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Steamboat Bay | 144 N | 31 W | 20,21,28,29 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Swamp | 143 N | 31 W | 5-8,17,18 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Thirteen | 144 N | 31 W | 12-14 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Three Island | 141 N | 28 W | 7,8,17,18 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Town Line | 141 & 142 N | 28 W | 2,3,34,35 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Turtle | 141 & 142 N | 30 W | 5,32 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Twin | 144 N | 31 W | 1,2,11 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Upper Sucker | 145 N | 29 & 30 W | 19,24 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Wabegon | 142 N | 30 W | 21,28 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Wawa | 141 N | 29 W | 9,10,15,16 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Welsh | 144 N | 31 W | 25,26 | 1B, 1C, 1D1, 1D2, 2A, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Unlisted Lakes in HUC-8 # 07010102 | Various | Various | Various | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| All Wetlands in HUC-8 # 07010102 | Various | Various | Various | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |

| ***Big Fork River Watershed (09030006)***<br><br>***Note: All Waters listed in Table 1 are Exceptional Ojibwe Resource Waters unless specified otherwise. Exceptional Ojibwe Resource Waters equate to Antidegradation Tier 2.5.*** | | | | |
|---|---|---|---|---|
| **Name** | **Township** | **Range** | **Section** | **Designated Use** |
| Alice | 148 N | 27 W | 31 | 1B, 1C, 1D1, 1D2, 2A, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Bass | 148 N | 26 W | 15,22 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Beaver | 148 N | 26 W | 10 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Bird's Eye | 148 N | 26 W | 21 | 1B, 1C, 1D1, 1D2, 2A, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Bowstring | 146 & 147 N | 25 & 26 W | 1,10,11,14,20,21, 23,25,28,29,31,36 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Cedar | 148 N | 28 W | 9,15,16 | 1B, 1C, 1D1, 1D2, 2A, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Dunbar | 148 N | 28 W | 8,9,16 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Four Towns | 148 & 149 N | 25 & 26 W | Various | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Little Sand | 148 N | 26 & 27 W | 4,12,18 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Little Whitefish | 148 & 149 N | 26 W | 4,5,33 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Lower Twin | 148 N | 28 W | 21 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Minni-Car-Car | 147 & 148 | 26 W | 4,32,33 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Mushgee | 148 N | 26 W | 27,34 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Nature's | 148 & 149 N | 27 W | 4,5,8,9,16,17,21,20 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Portage | 147 & 148 N | 26 W | 3,4,10,33,34 | 1B, 1C, 1D1, 1D2, 2A, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Rice | 148 & 149 N | 27 W | 1,2,35,36 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Roosevelt | 147 N | 27 W | 4,9 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Round | 148 N | 27 & 28 W | 13,14,18,19,23,25,26,29 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Rush Island | 148 N | 26 W | 15,21,22 | 1B, 1C, 1D1, 1D2, 2A, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Sand | 147 & 148 N | 26 W | 3,4,17-19,21,30-33. | 1B, 1C, 1D1, 1D2, 2A, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Stone Axe | 148 N | 26 W | 8 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Taylor | 147 N | 25 W | 15,16,21,22 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Virgin | 148 N | 28 W | 23,26 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Unlisted Lakes in HUC-8 # 09030006 | Various | Various | Various | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |

| | | | | |
|---|---|---|---|---|
| All Wetlands in HUC-8 # 09030006 | Various | Various | Various | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |

## Table 2: Designated Uses of Leech Lake Reservation Streams by HUC-8 Watershed

***Mississippi River Headwaters Watershed (07010101)***

***Note: All Waters listed in Table 2 are Exceptional Ojibwe Resource Waters unless specified otherwise. Exceptional Ojibwe Resource Waters equate to Antidegradation Tier 2.5.***

| Name | Township | Range | Section | Designated Use |
|---|---|---|---|---|
| Ball Club River | 145 & 146 N | 25 & 26 W | 3-6,9,10,11,31,32 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Farley Creek | 147 N | 28 W | 10,14,23-25 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| First River | 146 N | 26 W | 8-10 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Fisherman's Brook | 145 & 146 N | 26 W | 3,2,10,11,34,35 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Island Lake Creek | 147 N | 29 W | 22,23,27 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Kitchi Creek | 146 & 147 N | 30 W | 1-4,6,10,11,19,29-32 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Lydick Brook | 145 & 146 N | 30 W | 1,6,7,31,36 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Mississippi River | 146 N | 26,27,29, 30,32 | 1-3,6,11-13,19, 21-25,28-36 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Pigeon River | 147 N | 28 W | 1,12,13,18,19 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Raven Creek | 146 N | 29 W | 3,10-13,18 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Simpson Creek | 147 N | 27 W | 9,14-16,23 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Third River | 147 N | 29 W | 1,7,12,17-20, 24,25,29-32 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Turtle River | 147 N | 31 W | 1,6,22,23,25,26,30,31 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Unlisted Streams in HUC-8 # 07010101 | Various | Various | Various | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |

***Leech Lake River Watershed (07010102)***

***Note: All Waters listed in Table 2 are Exceptional Ojibwe Resource Waters unless specified otherwise. Exceptional Ojibwe Resource Waters equate to Antidegradation Tier 2.5.***

| | | | | |
|---|---|---|---|---|
| Bear Brook | 144 N | 27 W | 3,10,15,22,25,29,30,32 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Boy River | 141-143 N | 27 & 28 W | 4,5,8,9,16,17,20,21, 26-29,31-33,36,31-33 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Crooked Creek | 143 N | 31 W | 2 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Drumbeater Creek | 144 N | 28 W | 25,35,36 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Leech Lake River | 144 N | 25-28 W | 2-7, 12-14,16, 22,23,32-36 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |

| | | | | |
|---|---|---|---|---|
| Portage Creek | 144 & 145 N | 29 W | 1,12,36 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Six Mile Brook | 145 N | 26-28 W | 16,17,22,23,25,26, 29,30,32,35,36 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Steamboat River | 143 & 144 N | 31 W | 3,4,9,20,21,28, 29,32,33 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Sucker Creek | 144 N | 30 W | 1,11,12,14,23,24 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Unlisted Streams in HUC-8 # 07010102 | Various | Various | Various | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |

| ***Big Fork River Watershed (09030006)***<br><br>***Note: All Waters listed in Table 2 are Exceptional Ojibwe Resource Waters unless specified otherwise. Exceptional Ojibwe Resource Waters equate to Antidegradation Tier 2.5.*** | | | | |
|---|---|---|---|---|
| Bowstring River | 147 N | 25-27 W | 5,6,8,15-17, 21-23,25-28 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Dinner Creek | 147 N | 26 & 27 W | 6,31,36 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Dunbar Creek | 148 N | 28 W | 4,5,9 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Dunbar River | 148 N | 28 W | 14,21-23 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Grouse Creek | 146 & 147 N | 25 W | 3,11,13,14,28,33,34 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Popple River | 148 N | 28 W | 2,12,18-20 | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |
| Unlisted Streams in HUC-8 # 09030006 | Various | Various | Various | 1B, 1C, 1D1, 1D2, 2B, 2C, 3, 4, 5A, 5B, 5C |

## IX. DUTIES AND RESPONSIBILITIES

Acting under authority delegated by the LLRBC, the DRM will implement the Leech Lake Reservation Water Quality Standards, including the antidegradation policy, by establishing and maintaining controls on the introduction of pollutants into Reservation Waters. The DRM will have the following duties and responsibilities:

1. Monitor water quality to assess the effectiveness of pollution controls and to determine whether water quality standards are being attained;

2. 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 as prescribed by the DRM.

3. Analyze data to assess the impact of effluent(s) on receiving waters, establish standards, and develop approaches for pollution control;

4. Compile information for pollution control discharge permits and determine data collection methods to be employed in research projects and surveys;

5. Review beneficial use designations;

6. Review the adequacy of the existing database and obtain additional data when required including;

7. Collect water samples from streams, rivers, lakes, processed water, or water from other sources to assess pollution problems;

8. Prepare samples for testing, record data, and prepare summaries for review.

9. Review project operations and coordinate water pollution control activities with other constituent agencies and other local, state, and federal agencies, as appropriate;

10. Encourage voluntary implementation of best management practices to control non-point sources of pollutants to achieve compliance with the Leech Lake Reservation Water Quality Standards;

11. Require the highest and best degree of wastewater treatment practicable and commensurate with protecting and maintaining designated uses and existing water quality;

12. Investigate complaints concerning water pollution problems;

13. Ensure compliance with the provisions for public participation required by the Clean Water Act and other applicable laws; and

**14.** Ensure that all discharges and all projects that have the potential to impact water quality comply with the Leech Lake Reservation Water Quality Standards.

**15.** Assess and collect administrative fees associated with the WRP's review, inspection, compliance monitoring, and enforcement activities under this ordinance. This shall include mileage at the GSA rate, current at the time of travel; and, as further directed by, the DRM Director or the Access Permit Fee Schedule adopted by the LLRBC, as amended from time to time. A denial of an application for a permit or activity shall not affect the applicant's obligation to pay fees provided for in this ordinance.

## X. WATER QUALITY STANDARDS AND NUMERIC CRITERIA

### 1. Applicability

A. Where water quality standards applicable to Class 1 (A through D), Class 2 (A through C), Class 3, Class 4, and Class 5 (A through C) in Tables 3 through 13 are exceeded in any Reservation Waters, it shall be considered indicative of a polluted condition that is actually or potentially harmful, detrimental, or injurious to the designated uses and shall therefore be considered a violation of this ordinance.

B. Derivation of the appropriate water quality criteria for any of the pollutants listed in Appendices A & B that currently lack numerical standards for the protection of human health, wildlife and/or aquatic life will be achieved using methods contained in the sources referenced below. For human health criteria, EPA's default subsistence fish consumption rate of 142.4 g/day will be used along with a cancer risk level of 1 in 1,000,000.

- EPA's Methodology for Deriving Ambient Water Quality Criteria for the Protection of Human Health (2000) https://www.epa.gov/sites/default files/2018-10/documents/methodology-wqc-protection-hh-2000.pdf, (used for derivation of human health criteria)

- EPA's Guidelines for Deriving Numerical National Water Quality Criteria for the Protection of Aquatic Organisms and Their Uses (1985) https://www.epa.gov/sites/default/files/2016-02/documents/guidelines-water-quality-criteria.pdf, (used for derivation of criteria for protection of aquatic life)

- The methods for deriving water quality criteria for the protection of human health and aquatic life and their uses in CFR 40 Part 132 https://www.ecfr.gov/current/title-40/chapter-I/subchapter-D/part-132, (used for derivation of wildlife criteria)

### 2. Natural Water Quality

**A.** Natural conditions exist where there is no discernable impact from point or non-point source pollutants attributable to human activity or from physical alteration of wetlands. Natural background levels are defined by water quality monitoring. Where water quality monitoring data are not available; background levels can be predicted based on data from a watershed with similar characteristics.

**B.** Where natural background levels do not exceed applicable standards, the addition of pollutants from human activity and resulting point or non-point source discharges shall be limited such that, in total, the natural background levels and the additions from human activity shall not exceed the standards.

**C.** Where natural background levels exceed applicable standards, the background levels may be used for the development of site-specific standards for controlling the addition of the

same pollutants from point or nonpoint source discharges in place of the standards. In the adoption of standards for individual Waters of the Reservation, the DRM will be guided by the standards herein but may make reasonable modifications of the same on the basis of evidence brought forth at a public hearing if it is shown to be desirable and in the public interest to do so in order to encourage the best use of the Waters of the Reservation or the lands bordering such waters. Adoption of site-specific standards will be performed in accordance with Section XII.1.

**3. <u>Additivity, General</u>**

If a discharge is composed of a mixture of more than one chemical and the chemicals have the same mode of toxic action, the WRP may apply an additive model to determine the toxicity of the mixture using the following formula:

If $\frac{C_1}{FCV_1} + \frac{C_2}{FCV_2} + \cdots + \frac{C_n}{FCV_n} \geq 1$, then a toxic condition may be indicated. (1)

Where,

$C_1 \ldots . C_n$ is the concentration of the first to the *n*th toxicant, and

$FCV_1 \ldots . FCV_n$ is the Final Chronic Value (FCV) as defined in 40 CFR 132.2, for the first to the *n*th toxicant.

**4. <u>Risk Levels and Additivity, Carcinogens</u>**

Concentrations of carcinogenic chemicals from point or non-point sources, singly or in mixtures, must not exceed cancer risk levels of one chance in 1,000,000 in surface waters. Carcinogenic chemicals will be considered additive in their effect according to the following formula unless an alternative model is supported by available scientific evidence. The additive formula applies to chemicals that have a human health-based standard calculated with a cancer potency factor.

If $\frac{C_1}{CC_1} + \frac{C_2}{CC_2} + \cdots + \frac{C_n}{CC_n} \geq 1$, then a risk level great than $10^{-6}$ is indicated.
Where,

$C_1 \ldots . C_n$ is the concentration of the first to the *n*th carcinogen, and
$CC_1 \ldots . CC_n$ is the drinking water plus fish consumption criterion (dfCC) for the first to the *n*th carcinogenic chemical.

## 5. Protection of Downstream Waters

All waters designated in Tables 1 and 2 of Section VIII of this document 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 Tribe.

**Table 3. Leech Lake Band of Ojibwe Numerical Water Quality Standards for the Protection of Human Health**

**The Leech Lake Band of Ojibwe consume a subsistence diet of fish. The Criteria in this Table are EPA Human Health Calculator Criteria based on a Fish Consumption Rate of 142.4 grams/day (EPA's "default" subsistence rate) and a Cancer Risk Level of 1 in 1,000,000 people ($10^{-6}$). https://www.epa.gov/wqs-tech/water-quality-standards-tools-tribes (Note: Criteria are Instantaneous Maximum Limitations).**

| Pollutant | CAS Number | Use Class 1A and 1B Standards (µg/L unless otherwise noted) | Use Class 1C Standards (µg/L unless otherwise noted) |
|---|---|---|---|
| 1,1,1-Trichloroethane [a] | 71556 | See Table 4 | 30000 |
| 1,1,2,2-Tetrachloroethane | 79345 | 0.1 | 0.4 |
| 1,1,2-Trichloroethane | 79005 | 0.41 | 1.3 |
| 1,1-Dichloroethylene [a] | 75354 | See Table 4 | 2000 |
| 1,2,4,5-Tetrachlorobenzene | 95943 | 0.004 | 0.004 |
| 1,2,4-Trichlorobenzene | 120821 | 0.011 | 0.011 |
| 1,2-Dichlorobenzene [b] | 95501 | See Table 4 | 500 |
| 1,2-Dichloroethane [a] | 107062 | See Table 4 | 97 |
| 1,2-Dichloropropane | 78875 | 0.77 | 4.6 |
| 1,2-Diphenylhydrazine | 122667 | 0.02 | 0.03 |
| 1,2-Trans-Dichloroethylene | 156605 | 100 | 600 |
| 1,3-Dichlorobenzene | 541731 | 2 | 2 |
| 1,3-Dichloropropene | 542756 | 0.24 | 1.8 |
| 1,4-Dichlorobenzene [b] | 106467 | See Table 4 | 100 |
| 2,4,5-Trichlorophenol [c] | 95954 | See Table 4 | 90 |
| 2,4,6-Trichlorophenol | 88062 | 0.37 | 0.42 |
| 2,4-Dichlorophenol [c] | 120832 | See Table 4 | 9 |
| 2,4-Dimethylphenol | 105679 | 100 | 400 |
| 2,4-Dinitrophenol | 51285 | 10 | 50 |
| 2,4-Dinitrotoluene | 121142 | 0.042 | 0.25 |
| 2-Chloronaphthalene | 91587 | 200 | 200 |
| 2-Chlorophenol [c] | 95578 | See Table 4 | 100 |
| 2-Methyl-4,6-Dinitrophenol | 534521 | 1 | 4 |
| 3,3'-Dichlorobenzidine | 91941 | 0.017 | 0.022 |
| 3-Methyl-4-Chlorophenol | 59507 | 200 | 400 |
| 4,4'-DDD | 72548 | 0.000019 | 0.000019 |
| 4,4'-DDE | 72559 | 0.0000026 | 0.0000026 |
| 4,4'-DDT | 50293 | 0.000004 | 0.000004 |

**The Leech Lake Band of Ojibwe consume a subsistence diet of fish. The Criteria in this Table are EPA Human Health Calculator Criteria based on a Fish Consumption Rate of 142.4 grams/day (EPA's "default" subsistence rate) and a Cancer Risk Level of 1 in 1,000,000 people ($10^{-6}$). https://www.epa.gov/wqs-tech/water-quality-standards-tools-tribes (Note: Criteria are Instantaneous Maximum Limitations).**

| Pollutant | CAS Number | Use Class 1A and 1B Standards (µg/L unless otherwise noted) | Use Class 1C Standards (µg/L unless otherwise noted) |
|---|---|---|---|
| Acenaphthene | 83329 | 10 | 10 |
| Acrolein | 107028 | 3 | 60 |
| Acrylonitrile | 107131 | 0.058 | 1 |
| Aldrin | 309002 | 1.2e-7 | 1.2e-7 |
| alpha-BHC | 319846 | 0.000058 | 0.000058 |
| alpha-Endosulfan | 959988 | 4 | 4 |
| Anthracene | 120127 | 50 | 60 |
| Antimony [d,e] | 7440360 | 5 | 90 |
| Arsenic [d,f] | 7440382 | 0.0053 | 0.0073 |
| Asbestos [d,g] | 1332214 | 7 million fibers/L | -- |
| Barium [d,g,h] | 7440393 | 1000 | -- |
| Benzene | 71432 | 0.48 | 2.4 |
| Benzidine | 92875 | 0.00013 | 0.0016 |
| Benzo(a) Anthracene | 56553 | 0.0002 | 0.0002 |
| Benzo(a) Pyrene | 50328 | 0.00002 | 0.00002 |
| Benzo(a) Pyrene Equivalent of cPAHs (BaPE) [i] | Various | 0.00002 | 0.00002 |
| Benzo(b) Fluoranthene | 205992 | 0.0002 | 0.0002 |
| Benzo(k) Fluoranthene | 207089 | 0.002 | 0.002 |
| beta-BHC (beta-HCH) | 319857 | 0.0019 | 0.0021 |
| beta-Endosulfan | 33213659 | 6 | 6 |
| Bis(2-Chloro-1-Methylethyl) Ether | 108601 | 200 | 500 |
| Bis(2-Chloroethyl) Ether | 111444 | 0.028 | 0.33 |
| Bis(2-Ethylhexyl) Phthalate | 117817 | 0.055 | 0.057 |
| Bis(Chlormethyl) Ether | 542881 | 0.00014 | 0.0026 |
| Bromoform | 75252 | 5.2 | 18 |
| Butylbenzyl Phthalate | 85687 | 0.02 | 0.02 |
| Carbon Tetrachloride | 56235 | 0.3 | 0.7 |
| Chlordane | 57749 | 0.000047 | 0.000047 |

**The Leech Lake Band of Ojibwe consume a subsistence diet of fish. The Criteria in this Table are EPA Human Health Calculator Criteria based on a Fish Consumption Rate of 142.4 grams/day (EPA's "default" subsistence rate) and a Cancer Risk Level of 1 in 1,000,000 people ($10^{-6}$). https://www.epa.gov/wqs-tech/water-quality-standards-tools-tribes (Note: Criteria are Instantaneous Maximum Limitations).**

| Pollutant | CAS Number | Use Class 1A and 1B Standards (µg/L unless otherwise noted) | Use Class 1C Standards (µg/L unless otherwise noted) |
|---|---|---|---|
| Chlorobenzene [c] | 108907 | See Table 4 | 100 |
| Chlorodibromomethane | 124481 | 0.66 | 3.1 |
| Chloroform | 67663 | 60 | 300 |
| Chlorophenoxy Herbicide (2,4,5-TP) [Silvex] | 93721 | 50 | 60 |
| Chlorophenoxy Herbicide (2,4-D) [a] | 94757 | See Table 4 | 1800 |
| Chrysene | 218019 | 0.02 | 0.02 |
| Copper [c] | 7440508 | See Table 4 | -- |
| Cyanide | 57125 | 4 | 70 |
| Di-n-Butyl Phthalate | 84742 | 4 | 4 |
| Dibenzo(a,h) Anthracene | 53703 | 0.00002 | 0.00002 |
| Dichlorobromomethane | 75274 | 0.79 | 4 |
| Dieldrin | 60571 | 1.9e-7 | 1.9e-7 |
| Diethyl Phthalate | 84662 | 100 | 100 |
| Dimethyl Phthalate | 131113 | 300 | 300 |
| Dinitrophenols | 25550587 | 10 | 100 |
| Dioxin (2,3,7,8-TCDD TEQ) [d] | 1746016 | 7.2e-10 | 7.2e-10 |
| Endosulfan Sulfate | 1031078 | 5 | 6 |
| Endrin | 72208 | 0.005 | 0.005 |
| Endrin Aldehyde | 7421934 | 0.2 | 0.2 |
| Ethylbenzene [b] | 100414 | See Table 4 | 19 |
| Fluoranthene | 206440 | 3 | 3 |
| Fluorene | 86737 | 10 | 10 |
| Gamma-BHC (HCH); Lindane [a] | 58899 | See Table 4 | 0.66 |
| Heptachlor | 76448 | 8.8e-7 | 8.8e-7 |
| Heptachlor Epoxide | 1024573 | 0.0000048 | 0.0000048 |
| Hexachlorobenzene | 118741 | 0.000012 | 0.000012 |
| Hexachlorobutadiene | 87683 | 0.001 | 0.001 |
| Hexachlorocyclohexane (HCH) - Technical | 608731 | 0.0014 | 0.0015 |

**The Leech Lake Band of Ojibwe consume a subsistence diet of fish. The Criteria in this Table are EPA Human Health Calculator Criteria based on a Fish Consumption Rate of 142.4 grams/day (EPA's "default" subsistence rate) and a Cancer Risk Level of 1 in 1,000,000 people ($10^{-6}$). https://www.epa.gov/wqs-tech/water-quality-standards-tools-tribes (Note: Criteria are Instantaneous Maximum Limitations).**

| Pollutant | CAS Number | Use Class 1A and 1B Standards (µg/L unless otherwise noted) | Use Class 1C Standards (µg/L unless otherwise noted) |
|---|---|---|---|
| Hexachlorocyclopentadiene | 77474 | 0.6 | 0.6 |
| Hexachloroethane | 67721 | 0.02 | 0.02 |
| Indeno(1,2,3-cd) Pyrene | 193395 | 0.0002 | 0.0002 |
| Isophorone | 78591 | 31 | 280 |
| Manganese [d,g,j] | 7439965 | 50 | 100 |
| Mercury, Total [k] | 7439976, 22967926 | -- | 4.1e-5 |
| Methoxychlor | 72435 | 0.003 | 0.003 |
| Methyl Bromide | 74839 | 100 | 2000 |
| Methylene Chloride [a] | 75092 | See Table 4 | 200 |
| Methylmercury [d,l] | 22967926 | -- | 0.04 *mg/kg* |
| N-Nitrosodi-n-Propylamine [d] | 621647 | 0.0045 | 0.071 |
| N-Nitrosodimethylamine [d] | 62759 | 0.00065 | 0.42 |
| N-Nitrosodiphenylamine [d] | 86306 | 0.75 | 0.84 |
| Nickel [d,e] | 7440020 | 35 | 48 |
| Nitrate as N [d,g] | 14797558 | 10000 | -- |
| Nitrobenzene | 98953 | 10 | 80 |
| Nitrosamines [d] | -- | 0.000758 | 0.0646 |
| Nitrosodibutylamine [d] | 924163 | 0.0051 | 0.031 |
| Nitrosodiethylamine [d] | 55185 | 0.000758 | 0.0646 |
| Nitrosopyrrolidine [d] | 930552 | 0.016 | 4.8 |
| Pentachlorobenzene | 608935 | 0.02 | 0.02 |
| Pentachlorophenol (PCP) | 87865 | 0.005 | 0.005 |
| Phenol [c] | 108952 | See Table 4 | 40000 |
| Polychlorinated Biphenyls (PCBs) [d,m] | 1336363 | 0.000009 | 0.000009 |
| Pyrene | 129000 | 4 | 4 |
| Selenium [d] | 7782492 | 26 | 120 |
| Tetrachloroethylene | 127184 | 3.4 | 4.3 |
| Thallium [d] | 7440280 | 0.058 | 0.066 |

**The Leech Lake Band of Ojibwe consume a subsistence diet of fish. The Criteria in this Table are EPA Human Health Calculator Criteria based on a Fish Consumption Rate of 142.4 grams/day (EPA's "default" subsistence rate) and a Cancer Risk Level of 1 in 1,000,000 people ($10^{-6}$). https://www.epa.gov/wqs-tech/water-quality-standards-tools-tribes (Note: Criteria are Instantaneous Maximum Limitations).**

| Pollutant | CAS Number | Use Class 1A and 1B Standards (µg/L unless otherwise noted) | Use Class 1C Standards (µg/L unless otherwise noted) |
|---|---|---|---|
| Toluene [b] | 108883 | See Table 4 | 78 |
| Toxaphene | 8001352 | 0.00011 | 0.00011 |
| Trichloroethylene | 79016 | 0.4 | 1 |
| Vinyl Chloride | 75014 | 0.02 | 0.24 |
| Zinc [d] | 7440666 | 530 | 720 |

**Footnotes:**

a. EPA has issued a Maximum Contaminant Level (MCL) for this chemical that is more stringent. Refer to EPA's National Primary Drinking Water Regulations.

b. The Canadian Aesthetic Objective (AO) for this chemical is more stringent. See the applicable water quality guideline document at https://www.canada.ca/en/health-canada/services/environmental-workplace-health/reports-publications/water-quality.html#tech_doc.

c. The criterion for organoleptic (taste and odor) effects for this chemical is more stringent. Refer to National Recommended Water Quality Criteria - Organoleptic Effects.

d. EPA did not update its National Recommended Human Health Water Quality Criteria for this pollutant in 2015. This table's criteria values are calculated using the 2015 revised inputs for body weight, drinking water intake rate, and a fish consumption rate of 142.4 g/day (refer to 2015 EPA Updated Ambient Water Quality Criteria for the Protection of Human Health). The criteria values in this table therefore may not match the values at https://www.epa.gov/wqc/national-recommended-water-quality-criteria-tables which are based on pre-2015 inputs.

e. This criterion was revised to reflect EPA's q1* or RfD as contained in the Integrated Risk Information System (IRIS) as of May 17, 2002. The fish tissue bioconcentration factor (BCF) is from the 1980 Ambient Water Quality Criteria document.

f. This criterion for arsenic refers to the inorganic form only.

g. Criteria for these pollutants are from the National Recommended Water Quality Criteria - Human Health Criteria Table. They are not calculated based on this table's inputs for fish consumption rate and cancer risk level.

h. This human health criterion is the same as originally published in the Quality Criteria for Water, 1976 ("Red Book") which predates the 1980 methodology and did not utilize the fish ingestion BCF approach. This same criterion value is published in the Quality Criteria for Water, 1986 ("Gold Book").

i. The carcinogenic PAHs used for this calculation and their applicable potency factors are listed in Table 5 of this document.

j. The Human Health for the consumption of Water + Organism criterion for manganese is not based on toxic effects, but rather is intended to minimize objectionable qualities such as laundry stains and objectionable tastes in beverages.

k. This value was calculated by using the equation of AWQC = TRC / BAF from EPA's Guidance for implementing the January 2001 Methylmercury Water Quality Criterion https://www.epa.gov/sites/default/files/2019-02/documents/guidance-implement-methylmercury-2001.pdf, where AWQC = Water concentration-based ambient water quality criterion for methylmercury in milligrams per liter (mg/L), TRC = Tissue residue concentration; (which is the water quality criterion for methylmercury in fish tissue in mg/kg calculated using EPA's Human Health Calculator Criteria based on a fish consumption rate of 142.4 mg/kg and a cancer risk level of 1 in 1,000,000 people), and BAF = Bioaccumulation factor for trophic levels 2, 3, and 4, weighted on the basis of fish consumption rates for each trophic level in liters per kilogram (L/kg). In the absence of specific Tribal consumption rate percentages among trophic levels, EPA's trophic level consumption rate percentages from the 2015 EPA Updated Ambient Water Quality Criteria for the Protection of Human Health https://www.epa.gov/wqc/human-health-water-quality-criteria-and-methods-toxics (based on the NHANES 2003-2010 dataset https://www.epa.gov/sites/default/files/2015-01/documents/fish-consumption rates-2014.pdf) were used to calculate an average weighted BAF across trophic levels 2, 3, and 4.

l. This fish tissue residue criterion for methylmercury is based on the total fish consumption rate.

m. This criterion applies to total PCBs (*e.g.*, the sum of all congener or all isomer or homolog or Aroclor analyses).

**Table 4. Additional Leech Lake Band of Ojibwe Numerical Water Quality Standards for the Protection of Human Health**

| The Criteria in this Table have been Adopted by the Leech Lake Band of Ojibwe from Applicable Sources other than the EPA Human Health Calculator and are not Based on EPA's Default Fish Consumption Rate. (Note: Criteria are Instantaneous Maximum Limitations) | | | |
|---|---|---|---|
| **Pollutant** | **CAS Number** | **Use Class 1A and 1B Standards (µg/L unless otherwise noted)** | **Standard Reference** |
| 1,1,1-Trichloroethane [1] | 71556 | 200 | EPA DW MCL |
| 1,1-Dichloroethylene [1] | 75354 | 7 | EPA DW MCL |
| 1,2-Cis-Dichloroethylene [1] | 156592 | 70 | EPA DW MCL |
| 1,2-Dichloroethane [1] | 107062 | 5 | EPA DW MCL |
| 1,2-Dichlorobenzene [2] | 95501 | 3 | Canadian Organoleptic Std. |
| 1,4-Dichlorobenzene [2] | 106467 | 1 | Canadian Organoleptic Std. |
| 2-Chlorophenol [3] | 95578 | 0.1 | EPA Organoleptic Std. |
| 2-Methyl-4-Chlorophenol [3] | 1570645 | 1,800 | EPA Organoleptic Std. |
| 2,3-Dichlorophenol [3] | 576249 | 0.04 | EPA Organoleptic Std. |
| 2,3,4,6-Tetrachlorophenol [3] | 58902 | 1 | EPA Organoleptic Std. |
| 2,4,5-Trichlorophenol [3] | 95954 | 1 | EPA Organoleptic Std. |
| 2,4-Dichlorophenol [3] | 120832 | 0.3 | EPA Organoleptic Std. |
| 2,5-Dichlorophenol [3] | 583788 | 0.5 | EPA Organoleptic Std. |
| 2,6-Dichlorophenol [3] | 120832 | 0.2 | EPA Organoleptic Std. |
| 3-Chlorophenol [3] | 108430 | 0.1 | EPA Organoleptic Std. |
| 3,4-Dichlorophenol [3] | 95772 | 0.3 | EPA Organoleptic Std. |
| 3-Methyl-6-Chlorophenol [3] | 615747 | 20 | EPA Organoleptic Std. |
| 4-Chlorophenol [3] | 106489 | 0.1 | EPA Organoleptic Std. |
| Alachlor [1] | 15972608 | 2 | EPA DW MCL |
| Alpha Particles [1] | -- | 15 picocuries per Liter (pCi/L) | EPA DW MCL |
| Atrazine [1] | 1912249 | 3 | EPA DW MCL |
| Beryllium [1] | 7440417 | 4 | EPA DW MCL |
| Beta Particles and Photon Emitters [1] | -- | 4 millirems per year | EPA DW MCL |
| Boron [4] | 7440428 | 500 | EPA DW Health Advisory |
| Bromate [1] | 15541454 | 10 | EPA DW MCL |
| Cadmium [1] | 7440439 | 5 | EPA DW MCL |
| Carbofuran [1] | 1563662 | 40 | EPA DW MCL |

| | | | |
|---|---|---|---|
| Chlorite [1] | 67481 | 1000 | EPA DW MCL |
| Chlorobenzene [3] | 108907 | 20 | EPA Organoleptic Std. |
| Chlorophenoxy Herbicide (2,4-D) [1] | 94757 | 70 | EPA DW MCL |
| Chromium, Total [5] | 7440473 | 50 | Canadian MAC |
| Copper, Total [3] | 7440508 | 1,000 | EPA Organoleptic Std. |
| Dalapon [1] | 75990 | 200 | EPA DW MCL |
| Dibromoethane [1] | 106934 | 0.05 | EPA DW MCL |
| Di(2-ethylhexyl) adipate [1] | 103231 | 400 | EPA DW MCL |
| Dinoseb [1] | 88857 | 7 | EPA DW MCL |
| Dioctyl Phthalate [1] | 117817 | 6 | EPA DW MCL |
| Diquat [1] | 2764729 | 20 | EPA DW MCL |
| Endothall [1] | 145733 | 100 | EPA DW MCL |
| Ethylbenzene [2] | 100414 | 1.6 | Canadian Organoleptic Std. |
| Fluoride [1] | 7681494 | 4,000 | EPA DW MCL |
| Gamma-BHC (HCH); Lindane [1] | 58899 | 0.2 | EPA DW MCL |
| Glyphosate [1] | 1071836 | 700 | EPA DW MCL |
| Haloacetic Acids [1] | Various | 60 | EPA DW MCL |
| Lead, Total [1] | 7439921 | 15 | EPA DW MCL |
| Methylene Chloride [1] | 75092 | 5 | EPA DW MCL |
| Nitrite as N [1] | 14797650 | 1,000 | EPA DW MCL |
| Oxamyl (Vydate) [1] | 23135220 | 200 | EPA DW MCL |
| PFOA [6] | 335671 | 0.004 | EPA PFAS MCL |
| PFOS [6] | 1763231 | 0.004 | EPA PFAS MCL |
| PFHxS [6] | 355464 | 0.01 | EPA PFAS MCL |
| PFNA [6] | 375951 | 0.01 | EPA PFAS MCL |
| HFPO-DA (Gen X Chemicals) [6] | 13252136 | 0.01 | EPA PFAS MCL |
| PFNA, PFHxS, PFBS, and HPFO-DA (as mixture) [6] | Various | 1 (Unitless) | EPA PFAS MCL |
| Phenol [3] | 108952 | 300 | EPA Organoleptic Std. |
| Picloram [1] | 1918021 | 500 | EPA DW MCL |
| Radium 226 and Radium 228 (combined) [1] | -- | 5 picocuries per Liter (pCi/L) | EPA DW MCL |
| Simazine [1] | 122349 | 4 | EPA DW MCL |
| Styrene [1] | 100425 | 100 | EPA DW MCL |
| Toluene [2] | 108883 | 24 | Canadian Organoleptic Std. |
| Total Trihalomethanes [1] | 67663 | 80 | EPA DW MCL |
| Uranium [1] | -- | 30 ug/L | EPA DW MCL |
| Xylene, Total [2] | 1330207 | 20 | Canadian Organoleptic Std. |

**Footnotes:**

1. EPA DW MCL = This numerical standard is a Maximum Contaminant Limit adopted from the US EPA's National Primary Drinking Water Regulations https://www.epa.gov/ground-water-and-drinking-water/national-primary-drinking-water-regulations.
2. Canadian Organoleptic Std. = This numerical standard is the Canadian Aesthetic Objective (AO) for this chemical. See the applicable water quality guideline document at https://www.canada.ca/en/health-canada/services/environmental-workplace-health/reports-publications/water-quality.html#tech_doc.

3. EPA Organoleptic Std. = This numerical standard is an adopted standard from US EPA's National Recommended Water Quality Criteria for organoleptic (taste and odor) effects https://www.epa.gov/wqc/national-recommended-water-quality-criteria-organoleptic-effects.

4. This value is the 2008 EPA drinking water health advisory for boron https://www.epa.gov/sites/default/files/2014-09/documents/drinking_water_health_advisory_for_boron.pdf.

5. Canadian MAC = This numerical standard is the Canadian Maximum Acceptable Concentration (MAC) for this chemical. See the applicable water quality guideline document at https://www.canada.ca/en/health-canada/services/environmental-workplace-health/reports-publications/water-quality.html#tech_doc.

6. EPA PFAS MCL = This numerical standard is a Maximum Contaminant Limit adopted from US EPA's 2024 Final PFAS National Primary Drinking Water Regulations https://www.epa.gov/sdwa/and-polyfluoroalkyl-substances-pfas.

**Table 5. Carcinogenic Polycyclic Aromatic Hydrocarbons for Use in the Table 3 Benzo(a) Pyrene Equivalent Standard Calculation for the Protection of Human Health**

| Carcinogenic Polycyclic Aromatic Hydrocarbons from EPA Priority Pollutant List [A] | CAS Number | Relative Potency Factors [B] |
|---|---|---|
| Benzo(a) Anthracene | 56553 | 0.2 |
| Benzo(a) Pyrene | 50328 | 1 |
| Benzo(b) Fluoranthene | 205992 | 0.8 |
| Benzo(g,h,i) Perylene | 191242 | 0.009 |
| Benzo(k) Fluoranthene | 207089 | 0.03 |
| Chrysene | 218019 | 0.1 |
| Dibenz(a,h) Anthracene | 53703 | 10 |
| Fluoranthene | 206440 | 0.08 |
| Indeno(1,2,3-cd) Pyrene | 193395 | 0.07 |

**Footnotes:**

A. The list of carcinogenic PAHs is a subset of EPA priority pollutants from the Minnesota Department of Health 2016 Guidance for Evaluating the Cancer Potency of Polycyclic Aromatic Hydrocarbon (PAH) Mixtures in Environmental Samples https://www.health.state.mn.us/communities/environment/risk/docs/guidance/pahguidance.pdf.

B. The carcinogenic PAH Relative Potency Factors are from the Minnesota Department of Health 2016 Guidance for Evaluating the Cancer Potency of Polycyclic Aromatic Hydrocarbon Mixtures in Environmental Samples https://www.health.state.mn.us/communities/environment/risk/docs/guidance/pahguidance.pdf.

**Table 6. Leech Lake Band of Ojibwe Water Numerical Quality Standards for the Protection of Coldwater and Warmwater Fisheries (Use Class 2A and 2B Waters)**

<table>
<tr><th>Pollutant</th><th>CAS Number</th><th>Use Class 2A and 2B Standards (unless noted as representing only one Class 2 use type)<br>(µg/L unless otherwise noted)</th></tr>
<tr><td>2,4-Dimethylphenol [i,ii]</td><td>105679</td><td>21 (CS)<br>137 (MS)</td></tr>
<tr><td>Acetochlor [i,iii]</td><td>34256821</td><td>1.7 (CS)<br>86 (MS)</td></tr>
<tr><td>Aluminum<br>(pH 5.0-10.5) [i,iv]</td><td>7429905</td><td>Use EPA Al. Criteria Calculator V2.0<br>(See weblink in footnote [iv] of this table)<br><table><tr><th>Version</th><th>Freshwater Acute[a]<br>(1-hour,<br>total aluminum)</th><th>Freshwater Chronic[a]<br>(4-day,<br>total aluminum)</th></tr><tr><td>2018 AWQC<br>(vary as a function of a site's pH, DOC and total hardness)</td><td>1-4,800 µg/L</td><td>0.63-3,200 µg/L</td></tr></table>Values are not to be exceeded more than once every three years on average.</td></tr>
<tr><td>Ammonia<br>(Total Ammonia Nitrogen (TAN))</td><td>7664417</td><td>Criteria are pH, temperature and life-stage dependent,<br>See Tables 7-9.<br><table><tr><th colspan="2">2013 Final Aquatic Life Criteria for Ammonia<br>(Magnitude, Frequency, and Duration)<br>(mg TAN/L)<br>pH 7.0, T=20°C</th></tr><tr><td>Acute<br>(1-hour average)</td><td>17</td></tr><tr><td>Chronic<br>(30-day rolling average)</td><td>1.9*</td></tr><tr><td colspan="2">*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 three years on average.</td></tr><tr><td colspan="2">Criteria frequency: Not to be exceeded more than once in three years on average.</td></tr></table></td></tr>
<tr><td>Anthracene [i,v]</td><td>120127</td><td>0.035 (CS)<br>0.32 (MS)</td></tr>
<tr><td>Arsenic [i]</td><td>7440382</td><td>150 (CS)<br>340 (MS)</td></tr>
<tr><td>Atrazine [i,vi]</td><td>1912249</td><td>10 (CS)<br>323 (MS)<br>(Applicable to Class 2B Waters Only)</td></tr>
<tr><td>Cadmium, Total<br>[i,vii,viii]</td><td>7440439</td><td>Varies with Total Hardness<br>See Tables 10 and 11</td></tr>
<tr><td>Chloride, Total [i]</td><td>16887006</td><td>230,000 (CS)<br>860,000 (MS)</td></tr>
<tr><td>Chlorine [i]</td><td>7782505</td><td>11 (CS)<br>19 (MS)</td></tr>
<tr><td>Chlorobenzene [i,ii]</td><td>108907</td><td>10 (CS)<br>423 (MS)</td></tr>
<tr><td>Chlorpyrifos [i]</td><td>2921882</td><td>0.041 (CS)<br>0.083 (MS)</td></tr>
</table>

| | | |
|---|---|---|
| Chromium III, Total [i,vii] | 16065831 | Varies with Total Hardness<br>See Tables and 10 and 11 |
| Chromium VI, Total [i,vii] | 18540299 | 11 (CS)<br>16 (MS) |
| Copper, Total [vii,ix] | 7440508 | Varies with pH, Total Hardness, and Dissolved Organic Carbon using the Biotic Ligand Model, See Table Footnote [iv] below.<br>(Freshwater aquatic life will be considered protected if the 24-hour average and four-day average concentrations do not respectively exceed the acute and chronic criteria concentrations calculated by the Biotic Ligand Model.<br>The 24-hour average or the four-day average should not exceed the calculated acute and chronic criteria more than once every three years) |
| Cyanide [i] | 57125 | 5.2 (CS)<br>22 (MS) |
| Diazinon [i] | 333415 | 0.17 (CS)<br>0.17 (MS) |
| Dieldrin [i,x] | 60571 | 0.056 (CS)<br>0.24 (MS) |
| Endrin [i] | 72208 | 0.036 (CS)<br>0.086 (MS) |
| Fluoranthene [i,v] | 206440 | 1.9 (CS)<br>3.5 (MS) |
| Gamma-BHC (HCH); Lindane [i,xi] | 58899 | 0.95 (MS) |
| Guthion [i] | 865000 | 0.01 (CS) |
| Heptachlor [i,x] | 76448 | 0.0038 (CS)<br>0.52 (MS) |
| Heptachlor Epoxide [i,x] | 1024573 | 0.0038 (CS)<br>0.52 (MS) |
| Iron, Total [i] | 7439896 | 1,000 (CS) |
| Lead, Total [i,vii] | 7439921 | Varies with Total Hardness<br>See Tables 10 and 11 |
| Malathion [i] | 121755 | 0.1 (CS) |
| Metolachlor [i,v] | 51218452 | 23 (CS)<br>271 (MS) |
| Mirex [i] | 2385855 | 0.001 (CS) |
| Naphthalene [i,xii] | 91203 | 81 (CS) |
| Nickel [i,vii] | 7440020 | Varies with Total Hardness<br>See Tables 10 and 11 |
| Parathion [i] | 56382 | 0.013 (CS)<br>0.065 (MS) |
| Pentachlorophenol (PCP) [i,xiii] | 87865 | Varies with pH<br>See footnote [xiii] below |

| | | |
|---|---|---|
| pH [xiv] | -- | 6.5-9 |
| Phenanthrene [i,v] | 85018 | 3.6 (CS)<br>32 (MS) |
| Phenol [i,v] | 108952 | 123 (CS)<br>2,214 (MS) |
| Polychlorinated Biphenyls (PCBs) [i,xv] | 1336363 | 0.014 (CS) |
| Selenium [vii] | 7782492 | See Table 12 for Chronic and Acute Standard Calculations and the Magnitude, Duration, and Frequency Criterion Elements for exceedance determinations |
| Silver [i,vii] | 7440224 | Varies with Total Hardness<br>See Tables 10 and 11 |
| Toxaphene [i] | 8001352 | 0.0002 (CS)<br>0.73 (MS) |
| Zinc [i,vii] | 7440666 | Varies with Total Hardness<br>See Tables 10 and 11 |

**Footnotes:**

i. The procedures described in the "Guidelines for Deriving Numerical National Water Quality Criteria for the Protection of Aquatic Organisms and Their Uses" indicate that, except possibly where a locally important species is very sensitive, freshwater aquatic organisms and their uses should not be affected unacceptably if the four-day average concentration of the parameter does not exceed the chronic criterion more than once every three years on the average and if the one-hour average concentration does not exceed the acute criterion more than once every three years on the average.

ii. This standard is an adopted standard from Minnesota Rules Chapter 7052, and applies to designated use classes 2A (Coldwater Fisheries) and 2B (Warmwater Fisheries), for the protection of aquatic life https://www.revisor.mn.gov/rules/7052/.

iii. This standard is based on MPCA Statement of Need and Reasonableness, Book III of III (Exhibit 32SR1699), July 2007, Section V (Proposed Standards for Acetochlor and Metolachlor).

iv. The EPA aluminum criteria are based on the water chemistry data (for pH, hardness and DOC) entered into the criteria calculator for a given location. Use the following link to access the criteria calculator https://www.epa.gov/wqc/aquatic-life-criteria-aluminum. Final acute values are not applicable, only acute and chronic criteria.

v. This standard is an adopted standard from Minnesota Rules Chapter 7050, and applies to designated use classes 2A (Coldwater Fisheries) and 2B (Warmwater Fisheries), for the protection of aquatic life https://www.revisor.mn.gov/rules/7050.0222/.

vi. This standard is an adopted standard from Minnesota Rules Chapter 7050, designated use class 2B (Warmwater Aquatic Biota), for the protection of aquatic life. https://www.revisor.mn.gov/rules/7050.0222/. This standard will be applied to all Reservation Waters designated as Class 2B (Warmwater Fisheries).

vii. See Table 12 for Dissolved Metals Conversion Factors.

viii. The U.S. District Court in Arizona issued an order vacating the EPA criterion recommendation for Cadmium. However, the chronic Cadmium criterion in these standards is based on a sound scientific rationale and protective of the designated use based on “other scientifically defensible methods” under 40

CFR 131.11(b)(1)(iii). The scientific studies captured in appendices C-1 and C-2 of the 2016 Cadmium document are of sufficient quality to derive aquatic life criteria. Based on those studies and following the EPA's 1985 Guidelines, the freshwater chronic criterion adopted by the Tribe is protective of 95% of genera at very low effect levels. To reaffirm this finding, the Tribe identified and analyzed 12 individual chronic freshwater cadmium toxicity tests across 12 separate publications published after 2016 and confirmed the protectiveness of the adopted criterion.

ix. The EPA copper criteria is based on the Biotic Ligand Model which varies with pH, Total Hardness, and Dissolved Organic Carbon. See https://www.epa.gov/sites/default/files/2019-02/documents/al-freshwater-copper-2007-revision.pdf for more information.

x. The freshwater criterion is based on the 1980 criteria which used different Minimum Data Requirements and derivation procedures from the 1985 Guidelines. If evaluation is to be done using an averaging period, the acute criteria values given should be divided by 2 to obtain a value that is more comparable to a CMC derived using the 1985 Guidelines.

xi. If evaluation is to be done using an averaging period, the acute criteria values given should be divided by 2 to obtain a value that is more comparable to a CMC derived using the 1985 Guidelines.

xii. This standard is an adopted standard from the Leech Lake Band of Ojibwe Hazardous Substances Control Act (HSCA) https://www.epa.gov/sites/default/files/2019-05/documents/leechlakebandtasappattachments22-35.pdf.

xiii. Pentachlorophenol is pH dependent. The equation for calculation of the acute criteria is: Acute criteria = $e^{1.005\ (pH)\ -\ 4.869}$ and the equation for calculation of the chronic criteria is: Chronic criteria = $e^{1.005\ (pH)\ -\ 5.134}$ https://www.epa.gov/sites/default/files/2019-03/documents/1995-updates-wqc-protection-al.pdf

xiv. For a stream, wetland, or the epilimnion of a lake or reservoir that is designated for an aquatic life use, it will be considered an exceedance of the pH standard if 1) the standard is violated more than 10% of the days as determined from a data set that represents unbiased conditions and 2) there are at least three measurements that violate the standard. A stream or the epilimnion of a lake that is designated for an aquatic life use will be considered to meet the standard for pH if the standard is met at least 90% of the days of the monitoring season. A designation of meeting the standard for pH generally requires at least 20 suitable measurements from a data set that gives an unbiased representation of conditions over at least two different years.

xv. This criterion applies to total PCBs, (e.g., the sum of all congener or all isomer or homolog or Aroclor analyses).

## Table 7. Temperature and pH-Dependent Values of CMC (Ammonia Acute Criterion Magnitude)(mg TAN/L) – Unionid Mussels Present, Oncorhynchus Present (Class 2A))

| | Temperature (°C) | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **pH** | 0-14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 |
| 6.5 | 33 | 33 | 32 | 29 | 27 | 25 | 23 | 21 | 19 | 18 | 16 | 15 | 14 | 13 | 12 | 11 | 9.9 |
| 6.6 | 31 | 31 | 30 | 28 | 26 | 24 | 22 | 20 | 18 | 17 | 16 | 14 | 13 | 12 | 11 | 10 | 9.5 |
| 6.7 | 30 | 30 | 29 | 27 | 24 | 22 | 21 | 19 | 18 | 16 | 15 | 14 | 13 | 12 | 11 | 9.8 | 9.0 |
| 6.8 | 28 | 28 | 27 | 25 | 23 | 21 | 20 | 18 | 17 | 15 | 14 | 13 | 12 | 11 | 10 | 9.2 | 8.5 |
| 6.9 | 26 | 26 | 25 | 23 | 21 | 20 | 18 | 17 | 15 | 14 | 13 | 12 | 11 | 10 | 9.4 | 8.6 | 7.9 |
| 7.0 | 24 | 24 | 23 | 21 | 20 | 18 | **17** | 15 | 14 | 13 | 12 | 11 | 10 | 9.4 | 8.6 | 8.0 | 7.3 |
| 7.1 | 22 | 22 | 21 | 20 | 18 | 17 | 15 | 14 | 13 | 12 | 11 | 10 | 9.3 | 8.5 | 7.9 | 7.2 | 6.7 |
| 7.2 | 20 | 20 | 19 | 18 | 16 | 15 | 14 | 13 | 12 | 11 | 9.8 | 9.1 | 8.3 | 7.7 | 7.1 | 6.5 | 6.0 |
| 7.3 | 18 | 18 | 17 | 16 | 14 | 13 | 12 | 11 | 10 | 9.5 | 8.7 | 8.0 | 7.4 | 6.8 | 6.3 | 5.8 | 5.3 |
| 7.4 | 15 | 15 | 15 | 14 | 13 | 12 | 11 | 9.8 | 9.0 | 8.3 | 7.7 | 7.0 | 6.5 | 6.0 | 5.5 | 5.1 | 4.7 |
| 7.5 | 13 | 13 | 13 | 12 | 11 | 10 | 9.2 | 8.5 | 7.8 | 7.2 | 6.6 | 6.1 | 5.6 | 5.2 | 4.8 | 4.4 | 4.0 |
| 7.6 | 11 | 11 | 11 | 10 | 9.3 | 8.6 | 7.9 | 7.3 | 6.7 | 6.2 | 5.7 | 5.2 | 4.8 | 4.4 | 4.1 | 3.8 | 3.5 |
| 7.7 | 9.6 | 9.6 | 9.3 | 8.6 | 7.9 | 7.3 | 6.7 | 6.2 | 5.7 | 5.2 | 4.8 | 4.4 | 4.1 | 3.8 | 3.5 | 3.2 | 3.0 |
| 7.8 | 8.1 | 8.1 | 7.9 | 7.2 | 6.7 | 6.1 | 5.6 | 5.2 | 4.8 | 4.4 | 4.0 | 3.7 | 3.4 | 3.2 | 2.9 | 2.7 | 2.5 |
| 7.9 | 6.8 | 6.8 | 6.6 | 6.0 | 5.6 | 5.1 | 4.7 | 4.3 | 4.0 | 3.7 | 3.4 | 3.1 | 2.9 | 2.6 | 2.4 | 2.2 | 2.1 |
| 8.0 | 5.6 | 5.6 | 5.4 | 5.0 | 4.6 | 4.2 | 3.9 | 3.6 | 3.3 | 3.0 | 2.8 | 2.6 | 2.4 | 2.2 | 2.0 | 1.9 | 1.7 |
| 8.1 | 4.6 | 4.6 | 4.5 | 4.1 | 3.8 | 3.5 | 3.2 | 3.0 | 2.7 | 2.5 | 2.3 | 2.1 | 2.0 | 1.8 | 1.7 | 1.5 | 1.4 |
| 8.2 | 3.8 | 3.8 | 3.7 | 3.5 | 3.1 | 2.9 | 2.7 | 2.4 | 2.3 | 2.1 | 1.9 | 1.8 | 1.6 | 1.5 | 1.4 | 1.3 | 1.2 |
| 8.3 | 3.1 | 3.1 | 3.1 | 2.8 | 2.6 | 2.4 | 2.2 | 2.0 | 1.9 | 1.7 | 1.6 | 1.4 | 1.3 | 1.2 | 1.1 | 1.0 | 0.96 |
| 8.4 | 2.6 | 2.6 | 2.5 | 2.3 | 2.1 | 2.0 | 1.8 | 1.7 | 1.5 | 1.4 | 1.3 | 1.2 | 1.1 | 1.0 | 0.93 | 0.86 | 0.79 |
| 8.5 | 2.1 | 2.1 | 2.1 | 1.9 | 1.8 | 1.6 | 1.5 | 1.4 | 1.3 | 1.2 | 1.1 | 0.98 | 0.90 | 0.83 | 0.77 | 0.71 | 0.65 |
| 8.6 | 1.8 | 1.8 | 1.7 | 1.6 | 1.5 | 1.3 | 1.2 | 1.1 | 1.0 | 0.96 | 0.88 | 0.81 | 0.75 | 0.69 | 0.63 | 0.59 | 0.54 |
| 8.7 | 1.5 | 1.5 | 1.4 | 1.3 | 1.2 | 1.1 | 1.0 | 0.94 | 0.87 | 0.80 | 0.74 | 0.68 | 0.62 | 0.57 | 0.53 | 0.49 | 0.45 |
| 8.8 | 1.2 | 1.2 | 1.2 | 1.1 | 1.0 | 0.93 | 0.86 | 0.79 | 0.73 | 0.67 | 0.62 | 0.57 | 0.52 | 0.48 | 0.44 | 0.41 | 0.37 |
| 8.9 | 1.0 | 1.0 | 1.0 | 0.93 | 0.85 | 0.79 | 0.72 | 0.67 | 0.61 | 0.56 | 0.52 | 0.48 | 0.44 | 0.40 | 0.37 | 0.34 | 0.32 |
| 9.0 | 0.88 | 0.88 | 0.86 | 0.79 | 0.73 | 0.67 | 0.62 | 0.57 | 0.52 | 0.48 | 0.44 | 0.41 | 0.37 | 0.34 | 0.32 | 0.29 | 0.27 |

**Footnote:** Unionid mussels are common within the Leech Lake Reservation and are assumed to be present in all waters. *Oncorhynchus* species are interpreted as a proxy for coldwater species, therefor *Oncorhynchus* present criterion is applicable to coldwater (2A) waters.

## Table 8. Temperature and pH-Dependent Values of CMC (Ammonia Acute Criterion Magnitude) (mg TAN/L) – Unionid Mussels Present, Oncorhynchus Absent (Class 2B)

| | Temperature (°C) | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **pH** | 0-10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 |
| 6.5 | 51 | 48 | 44 | 41 | 37 | 34 | 32 | 29 | 27 | 25 | 23 | 21 | 19 | 18 | 16 | 15 | 14 | 13 | 12 | 11 | 9.9 |
| 6.6 | 49 | 46 | 42 | 39 | 36 | 33 | 30 | 28 | 26 | 24 | 22 | 20 | 18 | 17 | 16 | 14 | 13 | 12 | 11 | 10 | 9.5 |
| 6.7 | 46 | 44 | 40 | 37 | 34 | 31 | 29 | 27 | 24 | 22 | 21 | 19 | 18 | 16 | 15 | 14 | 13 | 12 | 11 | 9.8 | 9.0 |
| 6.8 | 44 | 41 | 38 | 35 | 32 | 30 | 27 | 25 | 23 | 21 | 20 | 18 | 17 | 15 | 14 | 13 | 12 | 11 | 10 | 9.2 | 8.5 |
| 6.9 | 41 | 38 | 35 | 32 | 30 | 28 | 25 | 23 | 21 | 20 | 18 | 17 | 15 | 14 | 13 | 12 | 11 | 10 | 9.4 | 8.6 | 7.9 |
| 7.0 | 38 | 35 | 33 | 30 | 28 | 25 | 23 | 21 | 20 | 18 | **17** | 15 | 14 | 13 | 12 | 11 | 10 | 9.4 | 8.6 | 7.9 | 7.3 |
| 7.1 | 34 | 32 | 30 | 27 | 25 | 23 | 21 | 20 | 18 | 17 | 15 | 14 | 13 | 12 | 11 | 10 | 9.3 | 8.5 | 7.9 | 7.2 | 6.7 |
| 7.2 | 31 | 29 | 27 | 25 | 23 | 21 | 19 | 18 | 16 | 15 | 14 | 13 | 12 | 11 | 9.8 | 9.1 | 8.3 | 7.7 | 7.1 | 6.5 | 6.0 |
| 7.3 | 27 | 26 | 24 | 22 | 20 | 18 | 17 | 16 | 14 | 13 | 12 | 11 | 10 | 9.5 | 8.7 | 8.0 | 7.4 | 6.8 | 6.3 | 5.8 | 5.3 |
| 7.4 | 24 | 22 | 21 | 19 | 18 | 16 | 15 | 14 | 13 | 12 | 11 | 9.8 | 9.0 | 8.3 | 7.7 | 7.0 | 6.5 | 6.0 | 5.5 | 5.1 | 4.7 |
| 7.5 | 21 | 19 | 18 | 17 | 15 | 14 | 13 | 12 | 11 | 10 | 9.2 | 8.5 | 7.8 | 7.2 | 6.6 | 6.1 | 5.6 | 5.2 | 4.8 | 4.4 | 4.0 |
| 7.6 | 18 | 17 | 15 | 14 | 13 | 12 | 11 | 10 | 9.3 | 8.6 | 7.9 | 7.3 | 6.7 | 6.2 | 5.7 | 5.2 | 4.8 | 4.4 | 4.1 | 3.8 | 3.5 |
| 7.7 | 15 | 14 | 13 | 12 | 11 | 10 | 9.3 | 8.6 | 7.9 | 7.3 | 6.7 | 6.2 | 5.7 | 5.2 | 4.8 | 4.4 | 4.1 | 3.8 | 3.5 | 3.2 | 2.9 |
| 7.8 | 13 | 12 | 11 | 10 | 9.3 | 8.5 | 7.9 | 7.2 | 6.7 | 6.1 | 5.6 | 5.2 | 4.8 | 4.4 | 4.0 | 3.7 | 3.4 | 3.2 | 2.9 | 2.7 | 2.5 |
| 7.9 | 11 | 9.9 | 9.1 | 8.4 | 7.7 | 7.1 | 6.6 | 3.0 | 5.6 | 5.1 | 4.7 | 4.3 | 4.0 | 3.7 | 3.4 | 3.1 | 2.9 | 2.6 | 2.4 | 2.2 | 2.1 |
| 8.0 | 8.8 | 8.2 | 7.6 | 7.0 | 6.4 | 5.9 | 5.4 | 5.0 | 4.6 | 4.2 | 3.9 | 3.6 | 3.3 | 3.0 | 2.8 | 2.6 | 2.4 | 2.2 | 2.0 | 1.9 | 1.7 |
| 8.1 | 7.2 | 6.8 | 6.3 | 5.8 | 5.3 | 4.9 | 4.5 | 4.1 | 3.8 | 3.5 | 3.2 | 3.0 | 2.7 | 2.5 | 2.3 | 2.1 | 2.0 | 1.8 | 1.7 | 1.5 | 1.4 |
| 8.2 | 6.0 | 5.6 | 5.2 | 4.8 | 4.4 | 4.0 | 3.7 | 3.4 | 3.1 | 2.9 | 2.7 | 2.4 | 2.3 | 2.1 | 1.9 | 1.8 | 1.6 | 1.5 | 1.4 | 1.3 | 1.2 |
| 8.3 | 4.9 | 4.6 | 4.3 | 3.9 | 3.6 | 3.3 | 3.1 | 2.8 | 2.6 | 2.4 | 2.2 | 2.0 | 1.9 | 1.7 | 1.6 | 1.4 | 1.3 | 1.2 | 1.1 | 1.0 | 0.96 |
| 8.4 | 4.1 | 3.8 | 3.5 | 3.2 | 3.0 | 2.7 | 2.5 | 2.3 | 2.1 | 2.0 | 1.8 | 1.7 | 1.5 | 1.4 | 1.3 | 1.2 | 1.1 | 1.0 | 0.93 | 0.86 | 0.79 |
| 8.5 | 3.3 | 3.1 | 2.9 | 2.7 | 2.4 | 2.3 | 2.1 | 1.9 | 1.8 | 1.6 | 1.5 | 1.4 | 1.3 | 1.2 | 1.1 | 0.98 | 0.90 | 0.83 | 0.77 | 0.71 | 0.65 |
| 8.6 | 2.8 | 2.6 | 2.4 | 2.2 | 2.0 | 1.9 | 1.7 | 1.6 | 1.5 | 1.3 | 1.2 | 1.1 | 1.0 | 0.96 | 0.88 | 0.81 | 0.75 | 0.69 | 0.63 | 0.58 | 0.54 |
| 8.7 | 2.3 | 2.2 | 2.0 | 1.8 | 1.7 | 1.6 | 1.4 | 1.3 | 1.2 | 1.1 | 1.0 | 0.94 | 0.87 | 0.80 | 0.74 | 0.68 | 0.62 | 0.57 | 0.53 | 0.49 | 0.45 |
| 8.8 | 1.9 | 1.8 | 1.7 | 1.5 | 1.4 | 1.3 | 1.2 | 1.1 | 1.0 | 0.93 | 0.86 | 0.79 | 0.73 | 0.67 | 0.62 | 0.57 | 0.52 | 0.48 | 0.44 | 0.41 | 0.37 |
| 8.9 | 1.6 | 1.5 | 1.4 | 1.3 | 1.2 | 1.1 | 1.0 | 0.93 | 0.85 | 0.79 | 0.72 | 0.67 | 0.61 | 0.56 | 0.52 | 0.48 | 0.44 | 0.40 | 0.37 | 0.34 | 0.32 |
| 9.0 | 1.4 | 1.3 | 1.2 | 1.1 | 1.0 | 0.93 | 0.86 | 0.79 | 0.73 | 0.67 | 0.62 | 0.57 | 0.52 | 0.48 | 0.44 | 0.41 | 0.37 | 0.34 | 0.32 | 0.29 | 0.27 |

**Footnote:** Unionid mussels are common within the Leech Lake Reservation and are assumed to be present in all waters.

## Table 9. Temperature and pH-Dependent Values of AmmoniaCCC (Chronic Criterion Magnitude) in mg TAN/L for Class 2A and 2B Waters

| | Temperature (°C) | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **pH** | 0-7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 |
| 6.5 | 4.9 | 4.6 | 4.3 | 4.1 | 3.8 | 3.6 | 3.3 | 3.1 | 2.9 | 2.8 | 2.6 | 2.4 | 2.3 | 2.1 | 2.0 | 1.9 | 1.8 | 1.6 | 1.5 | 1.5 | 1.4 | 1.3 | 1.2 | 1.1 |
| 6.6 | 4.8 | 4.5 | 4.3 | 4.0 | 3.8 | 3.5 | 3.3 | 3.1 | 2.9 | 2.7 | 2.5 | 2.4 | 2.2 | 2.1 | 2.0 | 1.8 | 1.7 | 1.6 | 1.5 | 1.4 | 1.3 | 1.3 | 1.2 | 1.1 |
| 6.7 | 4.8 | 4.5 | 4.2 | 3.9 | 3.7 | 3.5 | 3.2 | 3.0 | 2.8 | 2.7 | 2.5 | 2.3 | 2.2 | 2.1 | 1.9 | 1.8 | 1.7 | 1.6 | 1.5 | 1.4 | 1.3 | 1.2 | 1.2 | 1.1 |
| 6.8 | 4.6 | 4.4 | 4.1 | 3.8 | 3.6 | 3.4 | 3.2 | 3.0 | 2.8 | 2.6 | 2.4 | 2.3 | 2.1 | 2.0 | 1.9 | 1.8 | 1.7 | 1.6 | 1.5 | 1.4 | 1.3 | 1.2 | 1.1 | 1.1 |
| 6.9 | 4.5 | 4.2 | 4.0 | 3.7 | 3.5 | 3.3 | 3.1 | 2.9 | 2.7 | 2.5 | 2.4 | 2.2 | 2.1 | 2.0 | 1.8 | 1.7 | 1.6 | 1.5 | 1.4 | 1.3 | 1.2 | 1.2 | 1.1 | 1.0 |
| 7.0 | 4.4 | 4.1 | 3.8 | 3.6 | 3.4 | 3.2 | 3.0 | 2.8 | 2.6 | 2.4 | 2.3 | 2.2 | 2.0 | **1.9** | 1.8 | 1.7 | 1.6 | 1.5 | 1.4 | 1.3 | 1.2 | 1.1 | 1.1 | 0.99 |
| 7.1 | 4.2 | 3.9 | 3.7 | 3.5 | 3.2 | 3.0 | 2.8 | 2.7 | 2.5 | 2.3 | 2.2 | 2.1 | 1.9 | 1.8 | 1.7 | 1.6 | 1.5 | 1.4 | 1.3 | 1.2 | 1.2 | 1.1 | 1.0 | 0.95 |
| 7.2 | 4.0 | 3.7 | 3.5 | 3.3 | 3.1 | 2.9 | 2.7 | 2.5 | 2.4 | 2.2 | 2.1 | 2.0 | 1.8 | 1.7 | 1.6 | 1.5 | 1.4 | 1.3 | 1.3 | 1.2 | 1.1 | 1.0 | 0.96 | 0.90 |
| 7.3 | 3.8 | 3.5 | 3.3 | 3.1 | 2.9 | 2.7 | 2.6 | 2.4 | 2.2 | 2.1 | 2.0 | 1.8 | 1.7 | 1.6 | 1.5 | 1.4 | 1.3 | 1.3 | 1.2 | 1.1 | 1.0 | 0.97 | 0.91 | 0.85 |
| 7.4 | 3.5 | 3.3 | 3.1 | 2.9 | 2.7 | 2.5 | 2.4 | 2.2 | 2.1 | 2.0 | 1.8 | 1.7 | 1.6 | 1.5 | 1.4 | 1.3 | 1.3 | 1.2 | 1.1 | 1.0 | 0.96 | 0.90 | 0.85 | 0.79 |
| 7.5 | 3.2 | 3.0 | 2.8 | 2.7 | 2.5 | 2.3 | 2.2 | 2.1 | 1.9 | 1.8 | 1.7 | 1.6 | 1.5 | 1.4 | 1.3 | 1.2 | 1.2 | 1.1 | 1.0 | 0.95 | 0.89 | 0.83 | 0.78 | 0.73 |
| 7.6 | 2.9 | 2.8 | 2.6 | 2.4 | 2.3 | 2.1 | 2.0 | 1.9 | 1.8 | 1.6 | 1.5 | 1.4 | 1.4 | 1.3 | 1.2 | 1.1 | 1.1 | 0.98 | 0.92 | 0.86 | 0.81 | 0.76 | 0.71 | 0.67 |
| 7.7 | 2.6 | 2.4 | 2.3 | 2.2 | 2.0 | 1.9 | 1.8 | 1.7 | 1.6 | 1.5 | 1.4 | 1.3 | 1.2 | 1.1 | 1.1 | 1.0 | 0.94 | 0.88 | 0.83 | 0.78 | 0.73 | 0.68 | 0.64 | 0.60 |
| 7.8 | 2.3 | 2.2 | 2.1 | 1.9 | 1.8 | 1.7 | 1.6 | 1.5 | 1.4 | 1.3 | 1.2 | 1.2 | 1.1 | 1.0 | 0.95 | 0.89 | 0.84 | 0.79 | 0.74 | 0.69 | 0.65 | 0.61 | 0.57 | 0.53 |
| 7.9 | 2.1 | 1.9 | 1.8 | 1.7 | 1.6 | 1.5 | 1.4 | 1.3 | 1.2 | 1.2 | 1.1 | 1.0 | 0.95 | 0.89 | 0.84 | 0.79 | 0.74 | 0.69 | 0.65 | 0.61 | 0.57 | 0.53 | 0.50 | 0.47 |
| 8.0 | 1.8 | 1.7 | 1.6 | 1.5 | 1.4 | 1.3 | 1.2 | 1.1 | 1.1 | 1.0 | 0.94 | 0.88 | 0.83 | 0.78 | 0.73 | 0.68 | 0.64 | 0.60 | 0.56 | 0.53 | 0.50 | 0.44 | 0.44 | 0.41 |
| 8.1 | 1.5 | 1.5 | 1.4 | 1.3 | 1.2 | 1.1 | 1.1 | 0.99 | 0.92 | 0.87 | 0.81 | 0.76 | 0.71 | 0.67 | 0.63 | 0.59 | 0.55 | 0.52 | 0.49 | 0.46 | 0.43 | 0.40 | 0.38 | 0.35 |
| 8.2 | 1.3 | 1.2 | 1.2 | 1.1 | 1.0 | 0.96 | 0.90 | 0.84 | 0.79 | 0.74 | 0.70 | 0.65 | 0.61 | 0.57 | 0.54 | 0.50 | 0.47 | 0.44 | 0.42 | 0.39 | 0.37 | 0.34 | 0.32 | 0.30 |
| 8.3 | 1.1 | 1.1 | 0.99 | 0.93 | 0.87 | 0.82 | 0.76 | 0.72 | 0.67 | 0.63 | 0.59 | 0.55 | 0.52 | 0.49 | 0.46 | 0.43 | 0.40 | 0.38 | 0.35 | 0.33 | 0.31 | 0.29 | 0.27 | 0.26 |
| 8.4 | 0.95 | 0.89 | 0.84 | 0.79 | 0.74 | 0.69 | 0.65 | 0.61 | 0.57 | 0.53 | 0.50 | 0.47 | 0.44 | 0.41 | 0.39 | 0.36 | 0.34 | 0.32 | 0.30 | 0.28 | 0.26 | 0.25 | 0.23 | 0.22 |
| 8.5 | 0.80 | 0.75 | 0.71 | 0.67 | 0.62 | 0.58 | 0.55 | 0.51 | 0.48 | 0.45 | 0.42 | 0.40 | 0.37 | 0.35 | 0.33 | 0.31 | 0.29 | 0.27 | 0.25 | 0.24 | 0.22 | 0.21 | 0.20 | 0.18 |
| 8.6 | 0.68 | 0.64 | 0.60 | 0.56 | 0.53 | 0.49 | 0.46 | 0.43 | 0.41 | 0.38 | 0.36 | 0.33 | 0.31 | 0.29 | 0.28 | 0.26 | 0.24 | 0.23 | 0.21 | 0.20 | 0.19 | 0.18 | 0.16 | 0.15 |
| 8.7 | 0.57 | 0.54 | 0.51 | 0.47 | 0.44 | 0.42 | 0.39 | 0.37 | 0.34 | 0.32 | 0.30 | 0.28 | 0.27 | 0.25 | 0.23 | 0.22 | 0.21 | 0.19 | 0.18 | 0.17 | 0.16 | 0.15 | 0.14 | 0.13 |
| 8.8 | 0.49 | 0.46 | 0.43 | 0.40 | 0.38 | 0.35 | 0.33 | 0.31 | 0.29 | 0.27 | 0.26 | 0.24 | 0.23 | 0.21 | 0.20 | 0.19 | 0.17 | 0.16 | 0.15 | 0.14 | 0.13 | 0.13 | 0.12 | 0.11 |
| 8.9 | 0.42 | 0.39 | 0.37 | 0.34 | 0.32 | 0.30 | 0.28 | 0.27 | 0.25 | 0.23 | 0.22 | 0.21 | 0.19 | 0.18 | 0.17 | 0.16 | 0.15 | 0.14 | 0.13 | 0.12 | 0.12 | 0.11 | 0.10 | 0.09 |
| 9.0 | 0.36 | 0.34 | 0.32 | 0.30 | 0.28 | 0.26 | 0.24 | 0.23 | 0.21 | 0.20 | 0.19 | 0.18 | 0.17 | 0.16 | 0.15 | 0.14 | 0.13 | 0.12 | 0.11 | 0.11 | 0.10 | 0.09 | 0.09 | 0.08 |

**Table 10. Metal Conversion Factors for Use Class 2A and 2B Water Quality Standards**

| Metal | Conversion Factor for Chronic Standard | Conversion Factor for Maximum Standard |
|---|---|---|
| Cadmium, Total | 1.101672-[(ln hardness)(0.041838)] | 1.136672-[(ln hardness)(0.041838)] |
| Chromium III, Total | 0.860 | 0.316 |
| Chromium VI, Total | 0.962 | 0.982 |
| Copper, Total | 0.960 | 0.960 |
| Lead, Total | 1.46203-[(ln hardness)(0.145712)] | 1.46203-[(ln hardness)(0.145712)] |
| Nickel, Total | 0.997 | 0.998 |
| Silver, Total | — | 0.850 |
| Zinc, Total | 0.986 | 0.978 |

**Table 11. Parameters for Calculating Freshwater Dissolved Metals Criteria That Are Hardness-Dependent for Use Class 2A and 2B Water Quality Standards**

| Metal | mC | bC | mA | bA | Conversion Factors (CS) | Conversion Factors (MS) |
|---|---|---|---|---|---|---|
| Cadmium | 0.7977 | -3.909 | 0.9789 | -3.866 | 1.101672-[(ln(hardness))(0.041838)] | 1.136672-[(ln(hardness))(0.041838)] |
| Chromium III | 0.8190 | 0.6848 | 0.8190 | 3.7256 | 0.860 | 0.316 |
| Lead | 1.273 | -4.705 | 1.273 | -1.460 | 1.46203-[(ln(hardness))(0.145712)] | 1.46203-[(ln(hardness))(0.145712)] |
| Nickel | 0.8460 | 0.0584 | 0.8460 | 2.255 | 0.997 | 0.998 |
| Silver | — | — | 1.72 | -6.59 | — | 0.85 |
| Zinc | 0.8473 | 0.884 | 0.8473 | 0.884 | 0.986 | 0.978 |

**Footnotes:**

Hardness-dependant metals' criteria may be calculated from the following:

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

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

**Table 12. Summary of the Recommended Freshwater Selenium Ambient Chronic Water Quality Criterion for Protection of Aquatic Life (Use Class 2A and 2B Waters) (https://www.epa.gov/system/files/documents/2021-10/selenium-adopting-tsd-draft-2021.pdf).**

| Media Type | Fish Tissue [1] | | Water Column [4] | |
|---|---|---|---|---|
| **Criterion Element** | **Egg-ovary [2]** | **Fish Whole-body or Muscle [3]** | **Monthly Average Exposure** | **Intermittent Exposure** |
| **Magnitude** | 15.1 mg/kg dry weight | 8.5 mg/kg dry weight whole-body<br>or<br>11.3 mg/kg dry weight muscle (skinless, boneless fillet) | 1.5 µg/L in lentic aquatic systems<br><br>3.1 µg/L in lotic aquatic systems | $WQC_{int} = \frac{WQC_{30-day} - C_{bkgrnd}(1 - f_{int})}{f_{int}}$ |
| **Duration** | Instantaneous measurement [6] | Instantaneous measurement [6] | 30 days | Number of days/month with an elevated concentration |
| **Frequency** | Not to be exceeded | Not to be exceeded | Not more than once in three years on average | Not more than once in three years on average |

1. Fish tissue elements are expressed as steady-state.
2. Egg-ovary supersedes any whole-body, muscle, or water column element when fish egg-ovary concentrations are measured, except as noted in footnote 4 below.
3. Fish whole-body or muscle tissue supersedes water column element when both fish tissue and water concentrations are measured, except as noted in footnote 4 below.
4. Water column values are based on dissolved total selenium in water and are derived from fish tissue values via bioaccumulation modeling. When selenium inputs are increasing, water column values are the applicable criterion element in the absence of steady-state condition fish tissue data.
5. Where $WQC_{30\text{-}day}$ is the water column monthly element for either lentic or lotic waters; $C_{bkgrnd}$ is the average background selenium concentration; and $f_{int}$ is the fraction of any 30-day period during which elevated selenium concentrations occur, with $f_{int}$ assigned a value ≥0.033 (corresponding to 1 day).
6. Fish tissue data provide instantaneous point measurements that reflect integrative accumulation of selenium over time and space in fish population(s) at a given site.

**Table 13. Leech Lake Band of Ojibwe Numerical Water Quality Standards for the Protection of Wildlife (Use Class 3 Waters)**

| Pollutant | CAS Number | Use Class 3 Standards (µg/L unless otherwise noted) |
|---|---|---|
| 4,4'-DDT* | 50293 | 1.1e-5 |
| Mercury (including methylmercury)* | 7439976, 22967926 | 1.3e-3 |
| PCBs (class)* | 1336363 | 1.2e-4 |
| 2,3,7,8-TCDD* | 1746016 | 3.1e-9 |

**Footnotes:**

* This numerical standard is from CFR 40 Part 132 (Water Quality Guidance for the Great Lakes System) https://www.ecfr.gov/current/title-40/chapter-I/subchapter-D/part-132,

## XI. ENFORCEMENT

The Band is authorized to take enforcement action under this ordinance over all persons to require compliance with the Tribal Water Quality Standards (WQS) and all other applicable regulatory requirements under this ordinance.

### 1. Corrective Action by the Environmental Director

**A.** The Environmental Director is authorized to take corrective actions directly and/or to require the person not in compliance with this ordinance to undertake corrective action when the Environmental Director determines that such corrective action will be done properly and promptly by the owner or operator.

**B.** The Environmental Director shall give priority to those violations or potential violations of this ordinance that pose the greatest threat to human health and the environment.

**C.** The Environmental Director may issue orders to require that corrective actions are taken pursuant to this ordinance.

**D.** The corrective actions undertaken directly by the Environmental Director, under Subsection (A) may include temporary or permanent relocation of residents (or temporary closure of businesses where necessary to protect the public health) and the establishment of alternative household or public water supplies.

**E.** The Environmental Director may undertake a human health or ecological risk assessment in connection with the performance of any corrective action implemented under this Section. The costs of any such assessment may be treated as corrective action costs.

**F.** Whenever costs are incurred by the DRM for undertaking corrective action, inspection, risk assessment, or enforcement action with respect to non-compliance with this ordinance, the person who violated this ordinance shall be liable for such costs.

**G.** Any indemnification, hold harmless, or similar agreement or conveyance shall not be effective to limit the liability of the person who violated this ordinance.

### 2. Corrective Action by Owner or Operator.

**A.** As soon as a violation of this ordinance is discovered, the owner or operator shall take immediate action to stop the activity causing or contributing to the violation.

**B.** Within 24 hours of the activity that required the corrective action, the owner or operator shall notify the Environmental Director of the violation as well as the corrective action taken in response to the violation.

**C.** Nothing in this Subsection shall prevent the Environmental Director from taking or requiring corrective action under this ordinance or any other provision of Band or federal law.

**3. <u>Administrative Enforcement.</u>**

**A.** The Environmental Director is authorized to take enforcement action under this ordinance as may be necessary over all persons to require compliance with this ordinance.

**B.** The Environmental Director is authorized to conduct inspection of, and issue administrative subpoenas regarding, activities that have or may result in a violation of this ordinance.

**C.** If after investigation, the Environmental Director determines that a person is not in compliance with this ordinance, the Environmental Director may issue a NOV to the person or persons who may be responsible for the violation. The NOV shall contain the following information, at minimum:

1) A statement of the factual basis for the Environmental Director's issuance of the NOV;

2) The corrective action, if any, necessary to achieve compliance with the applicable standards or requirements of this ordinance;

3) A 14-day time period for the person to comply or request an informal hearing before the WRP Manager, and

4) A statement that, if the person receiving the NOV does not respond within 14 days, the DRM may initiate a civil prosecution of the violations as provided in this ordinance.

**D.** Any person who does not comply with a Notice of Violation (NOV), an order, or an agreed order issued by the Environmental Director is subject to enforcement action.

**E.** The NOV shall be served on the person responsible for the violation by:

1) Email; and

2) Mailing a copy both by certified mail with return receipt requested and regular U.S. mail to the recipient's last known address, with service by mail deemed served three days after it has been deposited in regular U.S. mail.

**F.** An NOV may be amended at any time to:

1) Correct clerical errors;

2) Cite additional authority for a stated violation; or,

3) Review of Agency Actions.

**G.** The informal and formal administrative review procedures set forth in this subsection must be exhausted prior to any judicial review of a notice, NOV, order, or decision issued pursuant to this ordinance.

**H.** Any person who receives a notice, NOV, order, or decision ("Requesting Party") may request administrative review of the actions of the DRM under this ordinance.

**I.** The first step in the administrative review process is informal review. This step must be taken before the Requesting Party may seek either formal review or judicial review. The request for informal review shall be made in writing to the WRP Manager within 14 days of receipt of the notice, NOV, order, or decision issued by the WRP Manager. The WRP Manager shall schedule either an in person or video conference with the Requesting Party within 14 days of receiving the request. The WRP Manager shall issue his or her decision within 14 days after the informal administrative review conference.

**J.** If the informal administrative review process does not resolve the Requesting Party's concern, the next step in the administrative review process is formal review. This second step must be taken before the Requesting Party may seek judicial review.

**K.** Formal administrative review of a notice, an NOV, or an alleged violation of an Agreed Order or Unilateral Order may only be requested by the person subject to the notice, NOV, Agreed Order, or Unilateral Order.

**L.** A request for formal administrative review must be in writing and must be received by the DRM Director within 20 days from the date that the Requesting Party received the decision issued by the WRP Manager. "Date of receipt" means:

1) Five business days after the date of mailing; or

2) Confirmation of receipt of email notice

**M.** The request for formal administrative review must be plainly labeled as "Request for Formal Administrative Review" and must include the following:

1) The requestor's name, address, email address (if available) and phone number;

2) The specific DRM action to be reviewed;

3) The date of the specific DRM action;

4) A copy of the notice, NOV, order, or decision to be reviewed;

5) A copy of the decision issued by the WRP Manager;

6) A short and plain statement explaining why the requestor considers the Department's action to be unlawful or otherwise improper;

7) The specific relief requested;

8) If the requestor is represented by legal counsel, the name of the requestor's attorney, and the attorney's address, email address, and phone number; and

9) The signature of the requestor or his or her attorney.

**N.** Upon receipt of a valid request for formal administrative review, the DRM Director shall set a date for review of the action within 20 days of receipt of a valid request.

**O.** The DRM Director's response to a request for formal administrative review must be:

1) Mailed to the last known address of the Requesting Party; or

2) Hand delivered to the last known address of the Requesting Party.

**P.** Any otherwise applicable time period for the DRM to issue its decision regarding the subject of administrative review is suspended during the informal and formal administrative review process.

**Q.** The DRM Director shall issue his/her decision within 14 days of the conclusion of the formal hearing and this decision shall be the final agency action.

**R.** If resolution is not reached through the formal administrative review, then the DRM Director or the Requesting Person may within 10 days file a petition with the Tribal Court requesting judicial review of the decision issued following formal administrative review.

**S.** Either party to the final agency action may seek judicial review in the Leech Lake Tribal Court. The Leech Lake Tribal Court shall sit as an Appellate Court to determine, on the administrative record, whether the DRM Director's decision was arbitrary, capricious, or otherwise not in accordance with applicable law.

**T.** Emergency Action. Whether or not a notice, NOV, or other action has been initiated, if the DRM Director finds that an emergency exists or is likely, the DRM Director may request that the Tribal Attorney bring an action to secure such relief as is necessary to protect human health and the environment under this ordinance.

**4. <u>Judicial Enforcement.</u>**

**A.** The DRM Director may at any time request the Tribal Attorney to file an action to address any one of the matters set out below in sections XI(4)(A)(1) through (4) for a temporary restraining order, a preliminary injunction, a permanent injunction, or any other relief provided by law, including the assessment and recovery of civil fines in an amount of no more than five hundred (500) dollars per day per violation, in any of the following instances:

1) Whenever a person has violated, or is in violation of, any provision, requirement, or prohibition of this ordinance, including, but not limited to, an order issued pursuant to this ordinance;

2) Whenever a person has violated, or is in violation of, any duty to allow or carry out inspection, entry or monitoring activities; and

3) Whenever the Director believes that a person is creating an imminent and substantial endangerment to the public health or the environment, the Director shall request the Tribal Attorney to pursue injunctive relief, which may include the assessment of civil fines, where the endangerment to the public health or the environment is caused by a violation, as specified in subsections (1) and (2).

4) Any person who fails to provide a timely notice to the DRM as required by this ordinance or submits false information required under this ordinance shall be subject to a civil fine of not more than five hundred (500) dollars for time each untimely action or all for each time that false information is submitted.

**B.** Instead of, or in addition to, a monetary penalty, the DRM Director may request the Tribal Attorney to seek injunctive relief from the Tribal Court requiring the violator to remediate the damage caused, perform community service, or conduct supplemental environmental projects.

**C.** Days of Violation. For purposes of determining the number of days of violation for which a civil fine may be assessed under this ordinance, if the Director has notified the alleged violator in writing of the nature of the violation and a prima facie showing can be made that the conduct or events giving rise to the violation are likely to have continued or re-occurred past the date of the notice, the days of violation shall be presumed to include the date of such notice, each day of the violation prior to such notice and each day thereafter until the violator establishes that continuous compliance has been achieved, except to the extent that the violator can prove by a preponderance of the evidence that there were intervening days during which no violation occurred or that the violation was not continuing in nature.

**D.** Notice of Violation. Notice under this Section shall be accomplished by the issuance of a written notice of violation (NOV) or written order to comply or by filing a complaint in

the Leech Lake Tribal Court that alleges any violation described in Subsection (A) of this Section.

**E.** Factors for Determining Civil Fines. In determining the amount of a civil fine assessed under this ordinance, the Tribal Court shall consider:

1) The history, seriousness, and duration of the violation;

2) Any good faith efforts to comply with the applicable requirements;

3) The violator's full compliance history, including the severity and duration of past violations, if any;

4) The economic impact of the penalty on the violator;

5) As an aggravating factor only, the economic benefit, if any, resulting from the violation; and

6) Any other factors that the court deems relevant.

**F.** Noncompliance with Administrative Subpoenas. The Tribal court may assess fines for noncompliance with administrative subpoenas issued under this Ordinance where the violator does not have sufficient cause to violate or refuse to comply with such subpoena.

**G.** Administrative Remedies. The following additional administrative remedies are available to the DRM Director for violations of this ordinance:

1) Civil Fines. Violation of this ordinance may be subject to a civil fine not to exceed five hundred dollars ($500.00) per day, per violation. Each day of a continuing violation may be charged as a separate violation, and a separate fine may be imposed for each violation.

2) Monetary Damage and Injunctive Relief. In addition to civil fines, the DRM Director may seek, and the Leech Lake Tribal Court may grant, money damages or injunctive relief against any violator of this ordinance to compensate for damages to the quality of the Reservation Environment or to prevent imminent harm to human health caused by the violation.

## 5. Jurisdiction and Venue.

Any judicial claim or action under this ordinance shall be brought in the Leech Lake Band of Ojibwe Tribal Court, which court shall have exclusive jurisdiction to hear the appeal of any final agency action regarding any alleged violation The Court may require compliance, assess civil fines, or collect any fees under this ordinance, and award any other relief deemed appropriate.

## 6. Effective Date.

The LLRBC has determined that this ordinance shall take effect on the day of its enactment by the LLRBC.

## XII. RESERVATION OF RIGHTS

LLRBC reserves and does not waive the Tribe's sovereign immunity by its enactment of this ordinance and the Tribe reserves all of its rights to exercise its legislative and or executive powers to oversee the proper administration of this ordinance by the DRM.

## XIII. AMENDMENTS AND SEVERABILITY

### 1. Amendments

a. The provisions of this ordinance may be repealed or amended at the discretion of the LLRBC by separate ordinance and resolution.
b. The LLWQS may be revised as the need arises, or as the result of updated scientific information, and at a minimum will be reviewed once every three years pursuant to the requirements set forth in Section 303(c)(1) of the CWA and federal regulations at 40 CFR 131.20.
c. Any potential modification of water quality standards shall be subject to public participation consistent with the requirements of 40 CFR 131.20 and 40 CFR 25. In addition, any amendments adopted by LLRBC shall be submitted to the US EPA Region 5 Regional Administrator for review and approval.

### 2. 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.

## XIV. APPENDICES

### Appendix A. Pollutants of Initial Focus - including Bioaccumulative Substances of Immediate Concern

**Adapted from Pollutants of Initial Focus in the Great Lakes Water Quality Initiative Table 6 and Minnesota Administrative Rules 7052.0350**

This list of toxic pollutants – referred to as GLI Pollutants – was established by the Great Lakes Initiative. It includes Bioaccumulative Substances of Concern (BCCs) and Bioaccumulative Substances of Immediate Concern (BSICs) (*as further distinguished by the State of Minnesota Administrative Rule 7052.0350)* on the top section along with non-BCC water pollutants below.

Sources: ecfr.gov/current/title-40/chapter-I/subchapter-D/part-132 Table 6 and https://www.revisor.mn.gov/rules/7052.0350/

| **BCCs (*BSICs as well)** | |
|---|---|
| Chlordane* | Lindane; gamma-hexachlorocyclohexane; gamma-BHC |
| 4,4′-DDD; p,p′-DDD; 4,4′-TDE; p,p′-TDE* | Mercury* |
| 4,4′-DDE; p,p′-DDE* | Mirex |
| 4,4′-DDT; p,p′-DDT* | Octachlorostyrene* |
| Dieldrin* | PCBs; polychlorinated biphenyls* |
| Hexachlorobenzene* | Pentachlorobenzene |
| Hexachlorobutadiene; hexachloro-1, 3-butadiene | Photomirex |
| Hexachlorocyclohexanes; BHCs | 2,3,7,8-TCDD; dioxin* |
| alpha-Hexachlorocyclohexane; alpha-BHC | 1,2,3,4-Tetrachlorobenzene |
| beta-Hexachlorocyclohexane; beta-BHC | 1,2,4,5-Tetrachlorobenzene |
| delta-Hexachlorocyclohexane; delta-BHC | Toxaphene* |
| | |
| **Non-BCCs** | |
| Acenaphthene | 2,4-Dimethylphenol; 2,4-xylenol |
| Acenaphthylene | Dimethyl phthalate |
| Acrolein; 2-propenal | 4,6-Dinitro-o-cresol; 2-methyl-4,6-dinitrophenol |
| Acrylonitrile | 2,4-Dinitrophenol |
| Aldrin | 2,4-Dinitrotoluene |
| Aluminum | 2,6-Dinitrotoluene |
| Anthracene | Dioctyl phthalate; di-n-octyl phthalate |
| Antimony | 1,2-Diphenylhydrazine |
| Arsenic | Endosulfan; thiodan |
| Asbestos | alpha-Endosulfan |
| 1,2-Benzanthracene; benz[a]anthracene | beta-Endosulfan |
| Benzene | Endosulfan sulfate |
| Benzidine | Endrin |
| Benzo[a]pyrene; 3,4-benzopyrene | Endrin aldehyde |
| 3,4-Benzofluoranthene; benzo[b]fluoranthene | Ethylbenzene |
| 11,12-Benzofluoranthene; benzo[k]fluoranthene | Fluoranthene |

| | |
|---|---|
| 1,12-Benzoperylene; benzo[ghi]perylene | Fluorene; 9H-fluorene |
| Beryllium | Fluoride |
| Bis(2-chloroethoxy) methane | Guthion |
| Bis(2-chloroethyl) ether | Heptachlor |
| Bis(2-chloroisopropyl) ether | Heptachlor epoxide |
| Bromoform; tribomomethane | Hexachlorocyclopentadiene |
| 4-Bromophenyl phenyl ether | Hexachloroethane |
| Butyl benzyl phthalate | Indeno[1,2,3-cd]pyrene; 2,3-o-phenylene pyrene |
| Cadmium | Isophorone |
| Carbon tetrachloride; tetrachloromethane | Lead |
| Chlorobenzene | Malathion |
| p-Chloro-m-cresol; 4-chloro-3-methylphenol | Methoxychlor |
| Chlorodibromomethane | Methyl bromide; bromomethane |
| Chlorethane | Methyl chloride; chloromethane |
| 2-Chloroethyl vinyl ether | Methylene chloride; dichloromethane |
| Chloroform; trichloromethane | Napthalene |
| 2-Chloronaphthalene | Nickel |
| 2-Chlorophenol | Nitrobenzene |
| 4 -Chlorophenyl phenyl ether | 2-Nitrophenol |
| Chlorpyrifos | 4-Nitrophenol |
| Chromium | N-Nitrosodimethylamine |
| Chrysene | N-Nitrosodiphenylamine |
| Copper | N-Nitrosodipropylamine; N-nitrosodi-n-propylamine |
| Cyanide | Parathion |
| 2,4-D; 2,4-Dichlorophenoxyacetic acid | Pentachlorophenol |
| DEHP; di(2-ethylhexyl) phthalate | Phenanthrene |
| Diazinon | Phenol |
| 1,2:5,6-Dibenzanthracene; dibenz[a,h]anthracene | Iron |
| Dibutyl phthalate; di-n-butyl phthalate | Pyrene |
| 1,2-Dichlorobenzene | Selenium |
| 1,3-Dichlorobenzene | Silver |
| 1,4-Dichlorobenzene | 1,1,2,2-Tetrachloroethane |
| 3,3′-Dichlorobenzidine | Tetrachloroethylene |
| Dichlorobromomethane; bromodichloromethane | Thallium |
| 1,1-Dichloroethane | Toluene; methylbenzene |
| 1,2-Dichloroethane | 1,2,4-Trichlorobenzene |
| 1,1-Dichloroethylene; vinylidene chloride | 1,1,1-Trichloroethane |
| 1,2-trans-Dichloroethylene | 1,1,2-Trichloroethane |
| 2,4-Dichlorophenol | Trichloroethylene; trichloroethene |
| 1,2-Dichloropropane | 2,4,6-Trichlorophenol |
| 1,3-Dichloropropene; 1,3-dichloropropylene | Vinyl chloride; chloroethylene; chloroethene |
| Diethyl phthalate | Zinc |

# Appendix B. EPA Priority Pollutant

**Priority Pollutants are a set of EPA regulated chemical pollutants for which there are existing analytical test methods. They are found in 40 CFR Part 423, Appendix A.**

Source: govinfo.gov/content/pkg/CFR-2014-title40-vol29/pdf/CFR-2014-title40-vol29-part423-appA.pdf

| | | | | | |
|---|---|---|---|---|---|
| 1 | Acenaphthene | 44 | Methylene chloride | 87 | Trichloroethylene |
| 2 | Acrolein | 45 | Methyl chloride | 88 | Vinyl chloride |
| 3 | Acrylonitrile | 46 | Methyl bromide | 89 | Aldrin |
| 4 | Benzene | 47 | Bromoform | 90 | Dieldrin |
| 5 | Benzidine | 48 | Dichlorobromomethane | 91 | Chlordane |
| 6 | Carbon tetrachloride | 49 | (Removed) | 92 | 4,4-DDT |
| 7 | Chlorobenzene | 50 | (Removed) | 93 | 4,4-DDE |
| 8 | 1,2,4-trichlorobenzene | 51 | Chlorodibromomethane | 94 | 4,4-DDD |
| 9 | Hexachlorobenzene | 52 | Hexachlorobutadiene | 95 | Alpha-endosulfan |
| 10 | 1,2-dichloroethane | 53 | Hexachlorocyclopentadiene | 96 | Beta-endosulfan |
| 11 | 1,1,1-trichloreothane | 54 | Isophorone | 97 | Endosulfan sulfate |
| 12 | Hexachloroethane | 55 | Naphthalene | 98 | Endrin |
| 13 | 1,1-dichloroethane | 56 | Nitrobenzene | 99 | Endrin aldehyde |
| 14 | 1,1,2-trichloroethane | 57 | 2-nitrophenol | 100 | Heptachlor |
| 15 | 1,1,2,2-tetrachloroethane | 58 | 4-nitrophenol | 101 | Heptachlor epoxide |
| 16 | Chloroethane | 59 | 2,4-dinitrophenol | 102 | Alpha-BHC |
| 17 | (Removed) | 60 | 4,6-dinitro-o-cresol | 103 | Beta-BHC |
| 18 | Bis(2-chloroethyl) ether | 61 | N-nitrosodimethylamine | 104 | Gamma-BHC |
| 19 | 2-chloroethyl vinyl ethers | 62 | N-nitrosodiphenylamine | 105 | Delta-BHC |
| 20 | 2-chloronaphthalene | 63 | N-nitrosodi-n-propylamine | 106 | PCB-1242 (Arochlor 1242) |
| 21 | 2,4,6-trichlorophenol | 64 | Pentachlorophenol | 107 | PCB-1254 (Arochlor 1254) |
| 22 | Parachlorometa cresol | 65 | Phenol | 108 | PCB-1221 (Arochlor 1221) |
| 23 | Chloroform | 66 | Bis(2-ethylhexyl) phthalate | 109 | PCB-1232 (Arochlor 1232) |
| 24 | 2-chlorophenol | 67 | Butyl benzyl phthalate | 110 | PCB-1248 (Arochlor 1248) |
| 25 | 1,2-dichlorobenzene | 68 | Di-N-Butyl Phthalate | 111 | PCB-1260 (Arochlor 1260) |
| 26 | 1,3-dichlorobenzene | 69 | Di-n-octyl phthalate | 112 | PCB-1016 (Arochlor 1016) |
| 27 | 1,4-dichlorobenzene | 70 | Diethyl Phthalate | 113 | Toxaphene |
| 28 | 3,3-dichlorobenzidine | 71 | Dimethyl phthalate | 114 | Antimony |
| 29 | 1,1-dichloroethylene | 72 | Benzo(a) anthracene | 115 | Arsenic |
| 30 | 1,2-trans-dichloroethylene | 73 | Benzo(a) pyrene | 116 | Asbestos |
| 31 | 2,4-dichlorophenol | 74 | Benzo(b) fluoranthene | 117 | Beryllium |
| 32 | 1,2-dichloropropane | 75 | Benzo(k) fluoranthene | 118 | Cadmium |
| 33 | 1,3-dichloropropylene | 76 | Chrysene | 119 | Chromium |

| | | | | | |
|---|---|---|---|---|---|
| 34 | 2,4-dimethylphenol | 77 | Acenaphthylene | 120 | Copper |
| 35 | 2,4-dinitrotoluene | 78 | Anthracene | 121 | Cyanide, Total |
| 36 | 2,6-dinitrotoluene | 79 | Benzo(ghi) perylene | 122 | Lead |
| 37 | 1,2-diphenylhydrazine | 80 | Fluorene | 123 | Mercury |
| 38 | Ethylbenzene | 81 | Phenanthrene | 124 | Nickel |
| 39 | Fluoranthene | 82 | Dibenzo(,h) anthracene | 125 | Selenium |
| 40 | 4-chlorophenyl phenyl ether | 83 | Indeno (1,2,3-cd) pyrene | 126 | Silver |
| 41 | 4-bromophenyl phenyl ether | 84 | Pyrene | 127 | Thallium |
| 42 | Bis(2-chloroisopropyl) ether | 85 | Tetrachloroethylene | 128 | Zinc |
| 43 | Bis(2-chloroethoxy) methane | 86 | Toluene | 129 | 2,3,7,8-TCDD |

## Appendix C. Beach Closure Sign

# WARNING

## HIGH LEVELS OF BACTERIA IN THESE WATERS MAY POSE A RISK TO YOUR HEALTH

**Questions concerning this posting should be directed to:**
**The LLBO DRM Environmental Department at 218-335-7400**