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.

GRAND PORTAGE RESERVATION

WATER QUALITY STANDARDS

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GRAND PORTAGE RESERVATION
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I. INTRODUCTION

The Grand Portage Band of Chippewa is a sovereign Indian nation, federally recognized and organized under the Indian Reorganization Act of June 18, 1934, 48 Stat. 984 and 25 U.S.C. Section 476, as amended. The governing body of the Grand Portage Band of Chippewa, the Reservation Tribal Council, has the inherent authority to regulate activities and natural resources of the Reservation. The Reservation Tribal Council does hereby enact the following water quality standards which apply to all waters upon, under, flowing through or bordering upon the Grand Portage Reservation including the shoreline waters of Lake Superior within the Grand Portage Zone. The Grand Portage Zone is described as follows: That part of Lake Superior beginning at the intersection of the west line of Range 5 East and the shoreline of Lake Superior, thence to a point in Lake Superior one half mile south as measured along the southerly extension of the west line of Range 5 East, thence northeasterly to a point on the Minnesota-Michigan boundary line at latitude 47 degrees, 58 minutes, 40 seconds, thence northerly along the Minnesota-Michigan boundary line to a point which forms the common boundary between Minnesota, Michigan and the Province of Ontario, Canada, and thence westerly along the International Boundary line to the confluence of the Pigeon River.

II. PURPOSE

The purposes of the Grand Portage Reservation water quality standards are:

1. To designate uses for which the waters of the Grand Portage Reservation will be protected;

2. To prescribe water quality criteria imposed in order to attain and sustain the designated uses;

3. To prevent degradation of existing water quality;

4. To promote and protect the health and welfare, the political integrity, and the economic well-being of the Grand Portage Reservation, its members and all residents of the Reservation, and;

5. To protect and enhance the propagation of fish and other aquatic life, wildlife, and recreation in and on the water.

III. APPLICABILITY

1. These standards apply to all waters of the Grand Portage Reservation. Waters of the Grand Portage Reservation are defined as all waters, including wetlands, upon, under, flowing through, or bordering upon the Grand Portage Reservation.

   In addition, these water quality standards 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. It is the intent of the Band that, where feasible, water quality criteria necessary to protect designated uses must be met at all times and at all locations in all waters of the Grand Portage Reservation.

3. Water quality standards will be the basis for managing discharges attributable to point and non-point sources of pollution. Water quality standards are not used to control, and are not invalidated by, natural background phenomena or acts of God.

4. The Grand Portage Reservation water quality standards may be revised from time to time, as the need arises, or as the result of updated scientific information, at a minimum will be reviewed every three years.

IV. DEFINITIONS

Acute: Stimulus severe enough to rapidly induce an effect; in aquatic tests, an effect observed in 96 hours or less typically is considered acute. When referring to aquatic toxicology or human health, an acute effect is not always measured in terms of lethality.

Acute Toxicity: Acute toxicity can be any "adverse effect," which is defined as debilitating, harmful or toxic to the normal functions of the organism. Acute exposure occurs within any short observation period which begins when the exposure begins and may extend beyond the exposure period, and usually does not constitute a substantial portion of the life span of an organism.

Ambient: Completely surrounding; encompassing; circulating.

Antidegradation Policy: A policy that ensures that water quality is protected in order to maintain existing uses, high quality waters, and outstanding national resource waters.

Background Levels: The biological, chemical, and physical conditions of a water body, upstream from the point or non-point source discharge under consideration.

Best Management Practices: Methods that have been determined to be the most effective,

practical means of preventing or reducing pollution from non-point sources.

Bioaccumulation Factor (BAF): 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.

Biological Integrity: The presence of a biological community that at a site is indistinguishable in either structure or function from the biological community that would be expected absent anthropogenic impacts as determined based on a defined reference condition appropriate to the ecoregion in which the water body is located.

Carcinogenic: A substance which causes an increased incidence of benign or malignant neoplasms, or substantially decreases the time to develop neoplasms, in animals or humans.

Criterion Continuous Concentration (CCC): The highest water concentration of a toxicant to which organisms can be exposed indefinitely without causing chronic toxicity.

Chronic Toxicity: Concurrent and delayed adverse effects that occur as a result of chronic exposure.

Clean Water Act: The Federal Pollution Control Act (Public Law 92-500), as amended (33 U.S.C. 1251 et seq.).

Designated Uses: Those uses set forth in these water quality standards for each water body or segment whether or not they are being attained. Examples of designated uses can include cold-water fisheries and public water supply.

Dissolved Oxygen: The amount of oxygen dissolved in water or the amount of oxygen available for biochemical activity in water, commonly expressed as a concentration in milligrams per liter.

Escherichia coli (E. Coli): A specific bacterial species occurring as part of the normal intestinal flora in vertebrates. Also known as Colon bacillus.

Effluent: Wastewater, treated or untreated that flows out of a treatment plant, sewer, or industrial outfall.

Epilimnion: The layer of water that overlies the thermocline of a lake and that is subject to the action of wind.

Existing Uses: Uses actually attained in the water body on or after November 28, 1975, whether or not they are included in the water quality standards.

Grand Portage Zone: The area in the Minnesota waters of Lake Superior bounded by a line as follows: beginning at the mouth of the Reservation River, thence due south to the Minnesota boundary in Lake Superior, thence northeastward along such Minnesota boundary to the

Canadian boundary in Lake Superior, thence westward along such Canadian boundary to the shore of lake Superior, thence southwestward along the shore of Lake Superior to the point of beginning (See Cooperative Agreement Between the Grand Portage Band of Chippewa and the Minnesota Pollution Control Agency (July 1996)).

High Quality Waters: Surface waters of the Reservation in which, on a parameter-by-parameter basis, the quality of water exceeds levels necessary to support the propagation of fish, shellfish, wildlife, and recreation in and on the water.

Human Health Criteria: Criteria adopted by the Tribe for the purpose of protecting human beings from adverse health effects due to consumption of contaminated water and fish.

Indigenous: Originating in, and characterizing a particular region or country; native; innate; inherent.

Milligrams per Liter (mg/L): The concentration at which one milligram is contained in a volume of one liter; one milligram per liter is equivalent to one part per million (ppm) at unit density.

Narrative Criterion: Narrative statements representing a quality of water that supports a particular use. When criteria are met water quality will generally protect the designated use.

New or Increased Discharge: Any building, structure, facility, or installation from which there is or may be a "a discharge of pollutants", as defined in the Code of Federal Regulations, title 40, section 122.2, to surface waters of the Reservation, the construction of which commenced after July 16, 1996.

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

NTU: Nephelometric Turbidity Units; a measure of turbidity in water.

Nutrient: A chemical taken in by organisms and used in organic synthesis.

Outstanding Tribal Resource Waters - Prohibited (OTRW-P): Those waters of the highest quality that are protected for uniqueness or ecological sensitivity. Waters may be classified as OTRW-Protected because of exceptional cultural, aesthetic, recreational or ecological significance, as determined by the Reservation Tribal Council. The antidegradation section of the standards also states that no pollutants may be discharged from point sources to a reservation water body assigned this provision.

Outstanding Tribal Resource Waters - Restricted (OTRW-R): All waters of the Reservation, except those portions designated as OTRW-Prohibited.

pH: The negative logarithm of the effective hydrogen ion concentration in gram equivalents per

liter; a measure of the acidity or alkalinity of a solution, increasing with increasing alkalinity and decreasing with increasing acidity.

Point Source: Any discernible, confined, and discrete conveyance from which pollutants are or may be discharged into a water body.

Primary Contact Recreational: Activities where a person would have direct contact with the water to the point of complete submergence, including but not limited to skin diving, swimming, and water skiing.

Public Water Supply: A stream, river, lake, or impoundment specifically classified by the Reservation Tribal Council as suitable to provide an adequate supply of drinking water for the continuation of the health and well-being of the residents of the Grand Portage Reservation.

Reservation Tribal Council (RTC): The governing body of the Grand Portage Band of Chippewa.

Secondary Contact Recreational: The recreational use of a stream, river, lake, or impoundment in which contact with the water may, but need not, occur and in which the probability of ingesting water is minimal; examples are fishing and boating.

Toxicity: State or degree of being toxic or poisonous; lethally or sub-lethally adverse effects on organisms, due to exposure to toxic materials.

Tribe: The Grand Portage Band of Chippewa.

Turbidity: (1) A measure of the amount of suspended material, particles, or sediments that cause light traveling through a water column to scatter. (2) The clarity of the water expressed as nephelometric turbidity units (NTU) and measured with a calibrated turbidimeter.

Waters of the Reservation: Any accumulation of water, surface or underground, natural or artificial, public or private, or parts thereof which are wholly or partially within, flow through, or border upon the Grand Portage Reservation; including but not limited to lakes, streams, and wetlands.

Wetland: Those areas that have a predominance of hydric soils, are inundated or saturated by surface or ground water at a frequency and duration to support, and that under normal circumstances do 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 the vegetation has been removed or whether the lands have been otherwise modified/manipulated by human activity.

Wild Rice Areas: A stream, river, lake, or impoundment, or portion thereof, presently has or historically had the potential to sustain the growth of wild rice (also known as *Zizania palustris* or manoomin).

V. DESIGNATED USES

Waters of the Reservation are assigned designated uses to serve the purposes of the Clean Water Act, as defined at sections 101(a)(2) and 303(c) which means 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, industrial purposes and navigation. Certain existing uses are considered to be covered by several additional special designated uses for tribal cultural activities.

Designated uses are assigned to individual water bodies in order to protect water quality appropriate for each use. Some waters of the Reservation may have natural ambient water quality containing concentrations of parameters that exceed water quality criteria necessary for the protection of a designated use. Natural ambient water quality is defined as the quality in absence of human caused additions of a substance; and shall be determined by water quality monitoring. Designated uses will not be used to control, and are not invalidated by, natural ambient water quality.

A. PUBLIC WATER SUPPLY - a stream, river, lake or impoundment specifically classified by the Grand Portage Reservation Tribal Council as suitable to provide an adequate supply of drinking water for the continuation of the health and well-being of the residents of the Grand Portage Reservation. These are waters that with conventional treatment will be suitable for human intake and meet federal regulations for drinking water.

B. AQUATIC LIFE

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

2. Warm Water Fisheries - a stream, river, lake or impoundment where water temperature, habitat and other characteristics are suitable for support and propagation of warm water fish and other aquatic life, or serving as a spawning or nursery area for warm water fish species. Examples of warm water fish species include large-mouth bass and walleyed pike.

3. Subsistence Fishing (Netting Area) - that portion of Lake Superior referred to as the Grand Portage Zone, including Grand Portage Bay, necessary to provide a sufficient diet of fish in order to sustain a healthy, on-Reservation population.

4. Wetland - an area that will be protected and maintained for some of the following uses: maintaining biological diversity, preserving wildlife habitat, providing recreational activities, erosion control, groundwater recharge, low flow augmentation, storm water retention, and prevention of stream sedimentation.

C. WILDLIFE - All surface waters capable of providing a water supply and vegetative habitat for the support and propagation of all wildlife located within the Grand Portage area.

D. RECREATION

Primary Contact Recreational - the recreational use of a stream, river, lake or impoundment involving prolonged contact and the possibility of ingesting water in quantities sufficient to pose a health hazard; examples are swimming and water skiing.

1. Lake Superior Coastal Waters - high intensity use: Great Lakes coastal waters public beaches where the majority of people swim due to the close proximity to the village, exceptionally clear water, and cobble or sand substrates.

2. Inland waters – moderate intensity use: Inland rivers or lakes with moderate swimming use due to remote location, dense aquatic vegetation, and waters that are mildly stained.

3. Inland waters – infrequent use: 1) Remote intermittent streams and streams surrounded by sedge meadows; and 2) inland bogs, wetlands and shallow lakes surrounded by floating sedge and peat mats where swimming is not an existing use due to highly stained waters and deep mucky substrates that create dangerous conditions for swimming.

E. CULTURAL

1. Wild Rice Areas - a stream, river, lake, wetland or impoundment, or portion thereof, presently, historically or with the potential to be vegetated with wild rice.

2. Aesthetics - a stream, river, lake, wetland or impoundment, with an uncharacteristic beauty or which represents the traditional value system of the Grand Portage Band of Chippewa, as determined by the Grand Portage Reservation Water Resources Board.

F. FORESTRY WATER SUPPLY - all waters of the Reservation shall be of sufficient quality for use in forestry applications.

G. INDUSTRIAL WATER SUPPLY - all waters of the Reservation shall be of sufficient quality to be used as a water supply for commercial processes.

H. NAVIGATION - all waters of the Reservation shall be of sufficient quality for use in navigation.

Table 1. Designated Uses

NAME	TOWNSHIP	RANGE	SECTION	DESIGNATED USES
LAKES:				
CENTER LAKE	T 63 N	R 5 E	11	B1, B4, C, D3, E1, F, G, H
CHEVANS LAKE	T 64 N	R 5 E	35	B2, B4, C, D3, F, G, H
CUFFS LAKE	T 63 N	R 5 E	12 & 13	B2, B4, C, D3, E1, F, G, H
DUTCHMAN LAKE	T 63 N	R 6 E	6 & 7	B2, B4, C, D3, F, G, H
HELMER/ NELSON POND	T 63 N	R 5 E	13	B2, B4, C, D3, E1, F, G, H
LITTLE LAKE	T 63 N	R 6 E	3	B1, B4, C, D3, F, G, H
LOON LAKE	T 63 N	R 5 E	4	B2, B4, C, D3, E1, F, G, H
MOUNT MAUD LAKE	T 63 N	R 5 E	1	B2, B4, C, D3, E1, F, G, H
NORTH LAKE	T 63 N	R 5 E	8 & 9	B2, B4, C, D3, E1, F, G, H
SPECKLED TROUT LAKE	T 63 N	R 5 E	7 & 8	B1, B2, C, D2, F, G, H
SWAMP LAKE	T 63 N	R 4 E R 5 E	1 & 12 6 & 7	B1, B4, C, D2, E1, F, G, H
SWEDE LAKE	T 64 N	R 5 E	16 & 17	B2, B4, C, D3, F, G, H
TAYLOR LAKE	T 63 N	R 5 E	16 & 17	B1, B4, C, D2, D2, F, G, H
TEAL LAKE	T 64 N	R 6 E	27 & 34	B2, B4, C, D3, D2, E1, F, G, H
TURTLE LAKE	T 63 N	R 5 E	16	B2, B4, C, D2, F, G, H
UNNAMED LAKE	T 63 N	R 5 E	16	B2, B4, C, D3, F, G, H
CREEKS:				
CEDAR CREEK	T 63 N	R 5 E	8, 17, 18	B1, C, D2, F, G, H
EAGLE MARSH CREEK	T 64 N	R 4 E	31, 32, 33	B2, C, D3, E1, F, G, H
GRAND PORTAGE CREEK	T 63 N T 64 N	R 6 E R 6 E	4, 5, 6 31, 32, 33	B1, C, D1, D2, F, G, H

NAME	TOWNSHIP	RANGE	SECTION	DESIGNATED USES
HOLLOW ROCK CREEK	T 63 N	R 5 E	9, 10, 14, 15, 16, 23, 24, 25	B1, C, D1, D2, F, G, H
POPLAR CREEK	T 64 N T 63 N	R 5 E R 6 E	35, 36 1,20,29,30	B2, C, D3, F, G, H
RED ROCK CREEK	T 63 N	R 5 E	21, 22, 26, 27, 28, 35	B1, C, D1, D2, F, G, H
RIVERS:				
PIGEON RIVER	T 64 N	R 4 E R 5 E R 6 E R 7 E	25 &36 13, 14, 20, 21, 22, 29, 30, 31 18, 19, 20, 21, 22, 23, 24, 26, 27 19, 30	B1, B2, C, D2, E1, F, G, H
RESERVATION RIVER	T 62 N T 63 N	R 5 E R 5 E	6 7, 18, 19, 30, 31	B1, C, D2, F, G, H
LAKE SUPERIOR BAYS:				
CANNONBALL BAY	T 62 N T 63 N	R 5 E	4, 5, 6 33, 34, 35	B1, B3, C, D1, F, G, H
CLARK'S BAY	T 64 N	R 7 E	28, 33, 34	B1, B3, C, D1, F, G, H
DERONDA BAY	T 63 N	R 5 E R 6 E	25 16, 17, 19	B1, B3, C, D1, F, G, H
GRAND PORTAGE BAY	T 63 N	R 6 E	3, 4, 9, 10, 11, 16	B1, B3, C, D1, F, G, H
LITTLE PORTAGE BAY	T 64 N	R 7 E	26	B1, B3, C, D1, F, G, H
MORRISON BAY	T 64 N	R 7 E	32 & 33	B1, B3, C, D1, F, G, H
PIGEON BAY	T 64 N	R 7 E	25, 26, 27, 28	B1, C, D1, F, G, H
WAUSWAUGONING BAY	T 63 N, T 64 N	R 6 E	2, 11, 25, 30, 31, 35, 36	A, B1, C, D1, E2, F, G, H
OTHER:				
WETLANDS				B4, C, D3, F, G, H

VI. ANTIDEGRADATION POLICY

Introduction: The Tribe's existence has been dependent on the ability of the land and waters to provide natural resources for consumption, subsistence, cultural preservation, religious practice, and sustainable economic development. Areas within the Reservation serve as a refuge for Tribal members to continue to practice a life that exemplifies sustainable economic development, and that preserves the resources critical to cultural integrity and survival of the Tribe. The following Antidegradation policy will be applied to waters of the Reservation in order to maintain adequate water quality to support these functions.

Protection of Existing Uses: Existing in-stream uses, as defined pursuant to 40 CFR 131, and the level of water quality necessary to protect existing uses shall be maintained and protected. No further water quality degradation that would interfere with or become injurious to existing uses is allowable.

Protection of High Quality Waters: This antidegradation policy provides for the maintenance and protection of high quality waters through the classification of all waters within the exterior boundaries of the Grand Portage Reservation as Outstanding Tribal Water Resources (OTWR). Two subcategories of OTWR exist as follows:

(a) OTWR-Restricted (lowered water quality may be allowed under limited circumstances)
(b) OTWR-Prohibited (Discharges and permanent lowering of water quality are prohibited)

Each of the two subcategories of Grand Portage High Quality Waters has specific implementation procedures as outlined below in Section VII.

VII. IMPLEMENTATION OF ANTIDEGRADATION POLICY

Cooperative Agreement with Minnesota: The classifications referred to above are intended to comply with terms of a cooperative agreement between the Grand Portage Band and the Minnesota Pollution Control Agency (MPCA), and approved by EPA, dated July 16, 1996. Under this agreement, the Band and MPCA will work cooperatively to plan and administer independently adopted water quality standards and certification programs under the Clean Water Act. A copy of the Agreement can be found in Attachment #1.

Protection of Designated and Existing Uses: For all waters, the Reservation Water Resources Board will ensure that the level of water quality necessary to protect existing uses is maintained. In order to achieve this requirement, and consistent with 40 CFR 131.10, these water quality standards contain use designations which include all existing uses. Controls will be established as necessary for point and non-point sources of

pollutants to ensure the water quality criteria applicable to the designated uses are achieved and that any designated use of downstream water is protected. Where water quality does not support the designated use of a water body or ambient pollutant concentrations exceed water quality criteria and values applicable to the water body, the Reservation Water Resources Board must not allow a lowering of water quality for the pollutant or pollutants preventing attainment of such uses.

Thermal discharges: In those cases where the potential lowering of water quality is associated with thermal discharge, the decision to allow such degradation shall be consistent with section 316 of the Clean Water Act (CWA).

Protection of endangered or threatened species: No lowering of water quality will be allowed that would threaten the continued existence of Federally-listed threatened or endangered species or listed critical habitat.

Outstanding Tribal Water Resources -Restricted: In Reservation waters classified as restricted discharge areas, or OTWR-Restricted, actions resulting in a lowering of water quality cannot occur unless an antidegradation demonstration has been completed pursuant to the requirements listed below.

Antidegradation Demonstration: Any person or entity proposing a new or increased discharge of any pollutant to a water body classified as an Outstanding Tribal Resource Water-Restricted must first provide the Grand Portage Water Resources Board (GPWRB) the following information in support of the proposed new or increased discharge for consideration:

1. Identify any cost-effective pollution prevention alternatives and techniques that are available that would eliminate or substantially reduce the extent to which the new or increased loading will result in lowering of water quality;

2. 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 applicable effluent limitations;

3. Identify social or economic development and the benefits to the reservation that will be foregone if the lowering of water quality is not allowed.

The GPWRB will impose the most stringent statutory and regulatory controls for all new and existing point sources and will impose the best management practices for non-point sources and wetland alterations. A monitoring requirement will be included in any applicable control document for bioaccumulative chemicals of concern known or believed to be present in a point or non-point source discharge.

Antidegradation Decision: Once the GPWRB determines that the information provided

by the entity proposing to lower water quality 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, and due consideration of technical, economic, social and other criteria in the area in which the water is located, may decide to allow lower water quality if it has been adequately demonstrated that there are no prudent and feasible alternatives, and lower water quality is necessary to accommodate important social and economic development on the reservation. In no event may the decision reached under this section allow water quality to be lowered below the minimum level required to fully support existing and designated uses.

2. Outstanding Tribal Water Resources-Prohibited: Discharges will be prohibited in that portion of Lake Superior north of latitude 47 degrees, 57 minutes, 13 seconds, east of Hat Point, south of the Minnesota-Ontario boundary, and west of the Minnesota-Michigan boundary. These waters will be referred to as OTWR-Prohibited. The following two exceptions are allowed:

- Exemptions for response actions pursuant to the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), as amended, or similar Federal or Tribal authorities, undertaken to alleviate a release into the environment of substances which may pose imminent and substantial danger to public health or welfare may be allowed by the Water Resources Board.

- Short-term, temporary (i.e., weeks or months) lowering of water quality from sources resulting from activities meant to protect public health and welfare, or result in higher water quality in the future such as the maintenance existing roads, culverts, septic systems, boat docks and ramps, may be allowed by the Water Resources Board when there is no prudent and feasible alternative and best management practices have been imposed.

VIII. IMPLEMENTATION OF WATER QUALITY STANDARDS

NPDES PERMITS

NPDES permits shall be issued by EPA to discharge to the waters of the Reservation in a manner consistent with Tribal Water Quality Standards. Chronic Aquatic Life Criteria will be applied as maximum standards not to be exceeded in waters of the Reservation.

Discharges in Tribal waters are **PROHIBITED** for:

The portion of the Shoreline Waters described in the 1996 Cooperative Agreement signed by the Grand Portage Band, the Minnesota Pollution Control Agency, and the US EPA, that prohibits any new or expanded discharges within Grand Portage Zone of Lake Superior from north of latitude 47 degrees, 57 minutes, 13 seconds and east of Hat Point.

IX. SAMPLING AND ANALYSIS

1. Sample collection, preservation and analysis used to determine water quality and to maintain the standards set forth in the Water Quality Standards shall be performed in accordance with procedures prescribed by the latest editions of the following authorities:
   a. American Public Health Association, Standard Methods for the Examination of Water and Wastewater;
   b. "Methods for Chemical Analysis of Water and Wastes"; and
   c. "EPA Guidelines Establishing Test Procedures for Analysis of Pollutants".

2. AVERAGING PERIODS to assess attainment of the standards for the Chronic Aquatic Life Criteria will be based upon a four-day average. Acute Aquatic Life Criteria shall not apply due to the implicit debilitating effects and mortality rates of aquatic organisms over a short period of time. Monitoring for the human health and wildlife criteria will be a thirty-day average.

X. ENVIRONMENTAL DEPARTMENT DUTIES AND RESPONSIBILITIES

Acting under authority delegated by the Grand Portage Reservation Water Resources Board established by the Grand Portage Water Resources Ordinance as amended in 2004, the Environmental Department will implement the Grand Portage Water Quality Standards, including the anti-degradation policy by establishing and maintaining controls on the introduction of pollutants into waters of the Reservation. The Environmental Department 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. Analyze data to assess impact of effluent(s) on receiving waters, establish standards, and develop approaches for pollution control;

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

4. Review the adequacy of the existing data base and obtain additional data when required including;

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

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

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

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

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

8. Investigate complaints concerning water pollution problems;

9. Ensure compliance with the provisions for public participation required by the Clean Water Act;

10. Ensure that all dischargers and all projects that have the potential to impact water quality are in compliance with the Grand Portage Water Quality Standards.

XI. GENERAL STANDARDS

The following general water quality criteria will apply to all waters of the Reservation.

1. Waters must be free from suspended and submerged solids or other substances that enter the waters as a result of human activity and that will settle in the bed of a body of water to form foul smelling or otherwise objectionable deposits, or that will adversely affect aquatic life.

2. Waters must 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, adversely affect uses, or cause degradation.

3. Waters must be free from materials 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.

4. Nutrient Criteria

A. Policy and Scope

Nutrient monitoring data are used as an assessment tool for interpreting the narrative criterion for lakes, rivers, and wetlands within the exterior boundaries of the Reservation. The nutrient assessment tools are derived from data which reflects the natural condition of Reservation waters and represent a direct measure of the support for aquatic life use designations for Grand Portage lakes, rivers, and wetlands. The criterion will be used to assess attainment of designated uses, prioritize abatement projects, and inform 401 certifications.

B. Narrative Criterion
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 impair the maintenance or attainment of designated uses.

5. Waters must be free from substances entering the water as a result of human activity in concentrations that are toxic or harmful to human, animal, plant, or aquatic life.

Toxic substances must not be present in receiving waters in quantities that are toxic to human, animal, plant, or aquatic life, or in quantities that interfere with normal propagation, growth, and survival of the sensitive aquatic biota.

Where a numeric water quality criterion for a particular pollutant is not specified in these Water Quality Standards, the Water Resources Board will adopt EPA standards for that pollutant until a site-specific criterion for that chemical can be developed.

Aquatic life will be as it naturally occurs. Ambient water quality must be sufficient to support life stages of all indigenous species. Aquatic habitat, which includes all waters of the Reservation, 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 discharge of sewage, industrial waste, or other pollutants to the waters.

6. Biological Criteria

A. Policy and Scope
Biological monitoring data are used as an assessment tool for interpreting the narrative criterion 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 which reflects the natural condition and represent a direct measure of the support for aquatic life use designations for Grand Portage lakes, rivers, and wetlands.

B. Narrative Criterion
Reservation waters shall be free from substances in concentrations or combinations that would adversely alter the structure and function of aquatic communities, as defined by the un-impacted natural condition. Water quality shall be maintained to support aquatic life designated uses.

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 water body. In all cases sampling and analysis techniques shall be used that are consistent with Grand Portage 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 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 of:

(a) species diversity and composition;

(b) feeding characteristics; and

(c) 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 of:

(a) species diversity and composition, including algae; and

(b) species abundance and condition;

(3) Habitat quality will be evaluated based on a quantitative or qualitative assessment of:

(a) river and lake morphological features that provide spawning, nursery, and refuge areas for fish and invertebrates;

(b) bottom substrate size and variety;

(c) variations in water depth;

(d) sinuosity of a river course;

(e) physical or hydrological alterations of the stream or lake bed including excessive sedimentation;

(f) types of land use in the sub-watershed; and

(g) other scientifically accepted and valid factors of habitat quality.

7. Waters capable of supporting wild rice will be of sufficient quantity and quality as to permit the propagation and maintenance of a healthy "wild rice" ecosystem in addition to the associated aquatic life and their habitats.

8. The pH of a stream, lake, bay, or river will not be permitted to fluctuate in excess of 0.5 units outside the estimated natural seasonal maximum and minimum as defined by Tribal monitoring data.

9. For waters designated as cold-water fisheries, the dissolved oxygen standard will be a minimum daily mean concentration of 9.0 mg/l when and where early life stages of cold-water fish occur and 6.0 mg/l for all other cold-water aquatic life stages. For waters designated as warm water fisheries, the dissolved oxygen standard will be a minimum daily mean concentration of 5.5 mg/l when and where early life stages of warmwater fish occur and 5.0 mg/l for all other warmwater aquatic life stages. Where natural conditions alone create dissolved oxygen concentrations less than 110 percent of the applicable criteria means or minima or both, the minimum acceptable concentration is 90 percent of the natural concentration.

10. The pH of a stream, lake, bay, or river will not be permitted to fluctuate in excess of 0.5 standard units outside the estimated natural seasonal maximum and minimum as defined by Tribal monitoring data.

11. Sulfates must not exceed 10 mg/l in wild rice habitats.

12. Bacteria criteria in waters protected for all three categories of primary contact recreational use are based upon EPA's most recent 2012 bacteria criteria recommendations. Compliance will be based on both the statistical threshold value and a 90-day geometric mean. The following bacteria criteria apply to all waters of the Reservation:

    (a) The bacteriological density shall not exceed a 90-day geometric mean of 126 cfu *E. coli* per 100 ml; and, the statistical threshold value of 410 cfu *E. coli* per 100 ml more than ten percent of the time during a 90-day period.[1]

13. Concentrations of radioactive materials must not exceed concentrations caused by naturally occurring materials.

14. Existing mineral quality will not be altered by municipal, industrial, and in-stream activities or other waste discharges so as to interfere with the designated uses for a water body.

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1 A beach action value of 235 cfu *E. Coli* per 100 ml as a single sample maximum must not be exceeded for the purpose of issuing beach advisories.

15. There will be no material increase in the temperature of Reservation waters other than natural causes, based upon the average of temperatures taken from mid-depth or three (3) feet (whichever is less) for streams and taken from the surface to the bottom or surface to the bottom of the epilimnion if a lake is stratified.

The normal daily and seasonal variations present before the addition of heat, from other than natural sources, must be maintained.

In no case will human-introduced heat be permitted when the maximum temperature specified for the water body (68 degrees F for cold-water fisheries and 86 degrees F for warm water fisheries) would thereby be exceeded.

XIII. NUMERIC WATER QUALITY CRITERIA AND METHODOLOGY

{GENERAL: If Water Quality Standards are exceeded in waters of the Reservation, it will be considered indicative of a polluted condition that is actually or potentially harmful, detrimental, or injurious with respect to the designated uses and will therefore be considered a violation of the Grand Portage Water Quality Standards.}

1. NATURAL WATER QUALITY

The waters of the Reservation may, in a natural condition, have water quality characteristics or chemical concentrations approaching or exceeding the water quality standards. 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.

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. When reasonable justification exists to preserve the higher natural quality of a water resource, the Water Resources Board may use the natural background levels that are lower than the applicable site-specific standards to control the addition of the same pollutants from human activity.

Where background levels exceeded applicable standards, the background levels may be used as the standards for controlling the addition of the same pollutants from point and non-point source discharges in place of the standards.

In the adoption of standards for individual waters of the Reservation, the Water

Resources Board 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.

2. ADDITIVITY, GENERAL

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

$$\frac{C_1}{FCV_1} + \frac{C_2}{FCV_2} + \ldots + \frac{C_n}{FCV_n}$$

Equals a value of one or more, a toxic condition may be is indicated;

where: $C_1 \ldots C_n$ is the concentration of the first to the *nth* toxicant.

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

3. RISK LEVELS AND ADDITIVITY, CARCINOGENS

Concentrations of carcinogenic chemicals from point or non-point sources, singly or in mixtures, must not exceed 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.

$$\frac{C_1}{CC_1} + \frac{C_2}{CC_2} + \ldots + \frac{C_n}{C_{cn}}$$

Equals a value of one or more, a risk level of greater than 10^{-6} is indicated;

where: $C_1 \ldots C_n$ is the concentration of the first to the *nth* carcinogen.

$CC_1 \ldots CC_n$ Is the drinking water plus fish consumption criterion (dfCC) for the first to the *nth* carcinogenic chemical.

For the chlorinated dibenzo-p-dioxins (CDDs) and chlorinated dibenzofurans (CDFs) listed in 40 CFR, part 132, appendix F, Table 1., potential adverse additive effects in effluents shall be accounted for in accordance with 40 CFR, part 132, appendix F,

Procedure 4: Additivity.

4. SITE-SPECIFIC WATER QUALITY CRITERIA

Water quality criteria may be recalculated to reflect conditions needed to protect uses of a particular water body or segment on a case-by-case basis based on site-specific information. Site-specific water quality criteria will be consistent with local fish consumption rates. Bioaccumulation factors and the formulas used for water quality criterion will be consistent with the Final Water Quality Guidance for the Great lakes System, 40 CFR 132, Appendix F, Procedure 1.

Table 2. Aquatic Life Ambient Aluminum Criteria

Site	**Total Aluminum CCC (µg/L)**
Streams	
Cedar Creek	476
Eagle Marsh Creek	359
Grand Portage Creek	710
Hollow Rock Creek	625
Pigeon River	684
Poplar Creek	602
Red Rock Creek	643
Reservation River	804
Lakes	
Center Lake	86
Chevans Lake	126
Cuffs Lake	190
Dutchman Lake	325
Helmer-Nelson Pond	340
Little Lake	610
Loon Lake	160
Mt Maud Lake	318
North Lake	524
Swamp Lake	246
Swede Lake	594
Taylor Lake	270
Teal Lake	653
Trout Lake	295
Turtle Lake	350

Chronic criteria are expressed as a four-day average concentration not to be exceeded more than once every three years.

Table 3. Aquatic Life Specific Conductance Criteria

Site	**SC Criterion µS/cm**
Lakes	
Center Lake	144
Chevans Lake	154
Cuffs Lake	122
Dutchman Lake	129
Helmer-Nelson Pond	176
Little Lake	279
Loon Lake	85
Mt Maud Lake	169
North Lake	228
Swamp Lake	114
Swede Lake	286
Taylor Lake	144
Teal Lake	264
Trout Lake	136
Turtle Lake	139
Streams	
Cedar Creek	158
Eagle Marsh Creek	212
Grand Portage Creek	158
Hollow Rock Creek	158
Pigeon River	158
Poplar Creek	279
Red Rock Creek	158
Reservation River	158

Chronic criteria are expressed as a four-day average concentration not to be exceeded more than once every three years.

A. Numeric Nutrient Criteria

Site-specific nutrient criteria are derived from median ambient concentrations based upon data collected from each of the reservation's waterbodies. These criteria shall apply to

Designated Use Classes A., B., C., D., E., and F year-round. Calculated annual median concentrations of total nitrogen, total phosphorus, and chlorophyll-a shall not exceed criteria by twenty-five percent more than once every three years. Median annual concentrations of dissolved organic carbon shall be maintained within the range shown in the table below.

Table 4. Aquatic Life and Recreation Nutrient Criteria

Nutrient Criteria				
Site	**Chl-a µgL**	**TN mgL**	**TP mgL**	**DOC mgL**
Streams				
Cedar Creek	0.5	0.33	0.012	4.5 - 14.7
Eagle Marsh	2.9	1.00	0.035	13.6 - 30.5
Grand Portage Creek	0.5	0.60	0.025	7.9 - 30.1
Hollow Rock Creek	0.5	0.59	0.018	6.0 - 20.5
Pigeon River	1.0	0.50	0.026	4.3 - 17.5
Poplar Creek	2.0	0.80	0.052	13.2 - 31.6
Red Rock Creek	0.6	0.87	0.020	9.7 - 24.5
Reservation River	1.0	0.70	0.026	6.2 - 16.8
Lakes				
Center Lake	5.5	0.81	0.027	12.2 - 22.9
Chevans Lake	2.0	1.10	0.017	16.1 - 46.0
Cuffs Lake	3.2	0.79	0.025	8.3 - 17.6
Dutchman Lake	6.5	0.90	0.026	11.4 - 23.2
Helmer-Nelson Pond	3.0	1.10	0.039	13.4 - 37.5
Little Lake	3.0	0.70	0.014	7.4 - 22.8
Loon Lake	5.0	0.83	0.023	7.2 - 14.9
Mt Maud Lake	5.0	0.90	0.032	10.7 - 31.5
North Lake	2.0	0.54	0.011	4.8 - 11.8
Swamp Lake	6.6	0.92	0.024	11.9 - 22.7
Swede Lake	4.0	0.70	0.015	2.6 - 17.1
Taylor Lake	2.8	0.46	0.011	2.9 - 9.4
Teal Lake	2.0	0.83	0.012	11.5 - 23.1
Trout Lake	3.0	0.60	0.010	4.8 - 12.5
Turtle Lake	1.0	0.52	0.020	2.2 - 17.3

5. VARIANCES FROM WATER QUALITY STANDARDS

The Water Resources Board may grant variances from water quality standards on a case-by-case basis at least as protective as the Final Water Quality Guidance for the Great

Lakes System, 40 CFR 132, Appendix F, Procedure 2.

6. * STANDARDS THAT VARY WITH TOTAL HARDNESS (TH)

Total hardness is the sum of the calcium and magnesium concentrations expressed as calcium carbonate in mg/L. For ambient or effluent total hardness values greater than 400 mg/L, 400 mg/L must be used in the calculation of the standard. Exp. is the base e exponential function. Formula results are in µg/L.

	Example Standards at Hardness of:				
	50	100	200	300	400
Cadmium, total					
CCC = exp. (0.7852[ln (TH mg/L)]-2.715)		1.4 7.3	2.5	4.2	5.8
Chromium (III), total					
CCC = exp. (0.819[ln (TH mg/L)]+0.6848)	49	86	152	212	268
Copper, total					
CCC = exp. (0.8545[ln(TH mg/L]-1.702)		5.2 30	9.3	17	24
Nickel, total					
CCC = exp. (0.846[ln(TH mg/lL]+0.0584)		29 169	52	94	132
Zinc, total					
CCC = exp. (0.8473[ln(TH mg/L)]+0.884)	67	120	216	304	388

7. ** STANDARD THAT VARIES WITH pH

Exp. is the base e exponential function. Formula results are in µg/L. The Chronic Standard shall not exceed the human health-based criterion of 5.5 µg/L.
Example standards at pH of:

Pentachlorophenol	6.5	7.0	7.5	8.0	8.5
CCC = exp. (1.005[pH] – 5.134)	4.0	5.5	5.5	5.5	5.5

8. CONVERSION FACTORS FOR TRANSFORMING TOTAL METALS TO DISSOLVED METALS

Table 5. Conversion Factors

METALS	CCC (µg/L) CONVERSION FACTOR
Arsenic	1.000
Chromium (III)	0.860
Chromium (VI)	0.962
Copper	0.960
Mercury	0.85
Nickel	0.997
Selenium	0.922
Zinc	0.986

9. **Aquatic Life Ambient Freshwater Criteria for Ammonia**

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

$$CMC = MIN\left(\left(\frac{0.275}{1+10^{7.204-pH}}+\frac{39.0}{1+10^{pH-7.204}}\right), \left(0.7249\times\left(\frac{0.0114}{1+10^{7.204-pH}}+\frac{1.6181}{1+10^{pH-7.204}}\right)\times\left(23.12\times 10^{0.036\times(20-T)}\right)\right)\right)$$

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

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

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

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

In addition, the highest four-day average within the 30-day averaging period should not be more than 2.5 times the CCC (e.g., 2.5 x 1.9 mg TAN/L at pH 7 and 20°C or 4.8 mg TAN/L) more than once in three years on average.

Ammonia Criterion Duration	Criteria Magnitude (mg TAN/L) pH 7.0, T=20°C
Chronic (30-day rolling average)	1.9*

*Not to exceed 2.5 times the criterion continuous concentration as a 4-day average within a 30-day period. Criteria frequency: Not to be exceeded more than once in three years on average.

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

Table 5. Temperature and pH-Dependent Values of the CCC (Chronic Criterion Magnitude) for Ammonia.

	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	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	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
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	0.9	0.85	0.79
7.5	3.2	3	2.8	2.7	2.5	2.3	2.2	2.1	1.9	1.8	1.7	1.6	1.5	1.4	1.3	1.2	1.2	1.1	1.0	0.95	0.9	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	0.9	0.88	0.83	0.78	0.73	0.68	0.64	0.6
7.8	2.3	2.2	2.1	1.9	1.8	1.7	1.6	1.5	1.4	1.3	1.2	1.2	1.1	1.0	1.0	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	1.0	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	1.0	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	1.0	0.9	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	0.4	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	0.4	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	0.4	0.37	0.34	0.32	0.3	0.28	0.27	0.25	0.23	0.22	0.21	0.19	0.18	0.17	0.16	0.15	0.14	0.13
8.8	0.49	0.46	0.43	0.40	0.38	0.35	0.33	0.31	0.3	0.27	0.26	0.24	0.23	0.21	0.2	0.19	0.17	0.16	0.15	0.14	0.13	0.13	0.12	0.11
8.9	0.42	0.39	0.37	0.34	0.32	0.30	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

10. METHODOLOGY TO DEVELOP OR REVISE WATER QUALITY CRITERIA

Human health criteria currently listed in Table 3 and the associated bioaccumulation factors (BAFs) were derived using the methodologies in 40 CFR 132, Appendices C and B. Human health criteria were recalculated using the following modified assumptions: (a) human consumption of 142.5 grams per day of fish; (b) human consumption of trophic level 3 fish is one quarter of the fish consumption total and consumption of trophic level 4 fish is three quarters of the fish consumption total; (c) a one-in-one-million cancer risk factor; and (d) the combined total of 2.01 liters per day ingestion of water (i.e., 2.0 liters per day for drinking water criteria combined with 0.01 liters per day incidental ingestion).

Aquatic life criteria currently listed in Table 3 of these standards were calculated using the methodologies in 40 CFR 132, Appendix A. Wildlife criteria, and associated BAFs, listed in Table 3 of these standards were calculated using the methodology in 40 CFR 132, Appendix D and B.

For future numeric criteria development or modification, or where numeric criteria are needed to implement a narrative criterion, the Grand Portage Water Resources Board will use the methodologies required by 40 CFR 132.4(a)(2) through (5) which are hereby adopted and incorporated by reference into this chapter:

1. Appendix A to Part 132 – Great Lakes Water Quality Initiative Methodology for development of aquatic life criteria. However, Chronic Criteria will be used in place of Acute Criteria and shall not be exceeded in waters of the Reservation.

2. Appendix B to Part 132 - Great Lakes Water Quality Initiative Methodology for deriving bioaccmulation factors for development of human health and wildlife criteria.

3. Appendix C to Part 132 – Great Lakes Water Quality Initiative Methodology for development of human health criteria, with the exception of the modified assumptions as stated on page 24, in the first paragraph of number 9, shall be used to calculate new or revised criteria.

4. Appendix D to Part 132 – Great Lakes Water Quality Initiative Methodology for development of wildlife criteria.

For pollutants listed in Table 5 of 40 CFR 132, or for any other pollutants other than those in Table 5 for which the Grand Portage Water Resources Board demonstrates that a methodology or procedure in 40 CFR 132 is not scientifically defensible, the Board shall: (a) apply methodologies or procedures acceptable under 40 CFR 131; or (b) apply alternative implementation procedures that are consistent with all applicable Grand Portage tribal laws.

Table 7. Numeric Criteria for Designated Uses A, B1, B2, B3, B4

SUBSTANCE OR CHARACTERISTIC (µg/l unless otherwise noted)	HUMAN HEALTH CRITERIA (Fish & Water Consumption)	AQUATIC LIFE CHRONIC CRITERIA (CCC)	WILDLIFE CRITERIA
Arsenic, total	5.64E-03	147.9	
Benzene (c)	9.11E-01		
Benzo(a)pyrene (c) (PAH)	1.35E-04		
Beryllium (c)	5.18 ng/l		
Cadmium	5.03		
Chlordane (c)	9.70E-06		
Chlorobenzene	5.33E+01		
Chromium III, total (TH)	1.92E+05	*	
Chromium VI, total	2.93E-04	10.98	
Cyanides, free	1.40E+2	5.2	
DDT (c)	1.56E-06		1.1E-5
Dieldrin (c)	6.88E-08	0.056	
2, 4 Dimethylphenol	3.18E+02		
2, 4 Dinitrophenol	4.88E+01		
Dioxin (2, 3, 7, 8 TCDD) (c)	9.14E-11		3.1E-9
Endrin	1.09E+02	0.036	
Hexachlorobenzene (c) (HCB)	4.78E-06		
Hexachloroethane (c)	6.94E-02		
Lindane (gamma-BHC)	5.25E-02	0.011	
Mercury, total	1.96E-04	0.9081	1.3E-3
Methylene Chloride (c)	4.24		
Parathion		0.013	
Pentachlorophenol (c), (pH)	1.63E-01	*	
Polychlorinated biphenyls (PCBs), total (c)	2.57E-07		1.2E-4
Selenium, total	9.78E+01	5.0	
Toluene	7.40E+02		
Toxaphene (c)	7.16E-07		
Trichloroethylene (c)	1.80		

*(c) - carcinogen

XIV. ENFORCEMENT AND CIVIL PENALTIES

These water quality standards shall be enforced in accordance with the Clean Water Act and this Chapter XIV. For any violation of these water quality standards that is not enforceable by the Band through the certification process of the Clean Water Act (33 U.S.C. § 1341), the following procedures shall apply:

1. Violation of the water quality standards

Any person who acts to violate these water quality standards or who acts to cause a violation of these water quality standards shall be subject to penalties as well as any other actions set forth herein. In the event of a violation of the water quality standards, the Tribal Water Resources Board shall serve the alleged violator, in person or by certified mail, with a notice of violation. The notice of violation shall state which provisions of the water quality standards are allegedly being violated, and the action that must be taken to correct such violation (including the time within which action must be taken), as well as federal or Band provisions or regulations mandating that such action be taken.

2. Order to cease activity

In the event of non-compliance with any notice of violation, the Tribal Water Resources Board may order the cessation of the activity causing the violation of the water quality standards without additional notice to the alleged violator. The alleged violator shall be served with a statement of reason(s) for the cessation order, and the actions the alleged violator must take before the order will be lifted. A copy of this cessation order and a statement of reason(s) for the order shall be delivered to the Chairperson of the Grand Portage Band of Chippewa within 5 days of its issuance.

3. Remedies

In the event an alleged violator fails to take action in accordance with the cessation order served pursuant to this Chapter, the Tribal Water Resources Board may pursue one or more of the following remedies:

a. continue its cessation order; or

b. assess penalties as set forth in XIV (4) herein; and take any other action deemed appropriate, so long as the rights of due process guaranteed by the Indian Civil Rights Act, 25 U.S.C. § 1301 *et seq.*, and the Constitution of the Minnesota Chippewa Tribe, Article XIII (applicable to members only) are upheld.

4. Civil penalties

Any person found violating this Chapter shall be subject to civil penalties by the Tribal Water Resources Board of up to five thousand dollars ($5,000.00) per day for each day of such violation or continued violation of a cessation order. The Tribal Water Resources Board shall personally, or via certified United States mail, first class, serve the alleged violator with notice of penalty. The penalty

shall be due and payable to the Grand Portage Band of Chippewa within twenty days of such notice. Failure to pay any penalties imposed shall be considered an additional violation of this Chapter.

5. Appeals

Any person aggrieved by any action taken by the Tribal Water Resources Board may appeal to the Grand Portage Band Tribal Court in accordance with the Rules of Procedure for that Court.

The filing of an appeal shall not stay any cessation order or any order to pay penalties unless a stay is granted by the Tribal Court.

The Tribal Court may reverse a decision of the Tribal Water Resources Board only if the appealing party can show by clear and convincing evidence that the Tribal Water Resources Board abused its discretion in the decision making process or acted arbitrarily or capriciously.

6. Sovereign immunity

The Grand Portage Band of Chippewa hereby waives its sovereign immunity from suit for the express and limited purpose of enforcing these water quality standards. This waiver of sovereign immunity is expressly limited to the enforcement procedures contained in this Section only, which are exclusively as follows:

a. administrative enforcement by the Tribal Water Resources Board through:

(1) the issuance of notices of violation;

(2) the issuance of cessation orders,

(3) civil penalties; and

b. judicial enforcement by the Tribal Water Resources Board through the issuance of declaratory and injunctive relief in the Grand Portage Band of Chippewa Tribal Court.

No other relief shall be available under this express and limited waiver of sovereign immunity. This waiver *shall not* extend to enforcement of these water quality standards in any forum other than the Grand Portage Band of Chippewa Tribal Court nor for any purpose other than the specific enforcement procedures cited in this Section XIV. The limited waiver of sovereign immunity contained in this Section XIV (6) *shall* extend to the agencies, departments, committees, and other sub-entities of the Grand Portage Band of Chippewa.

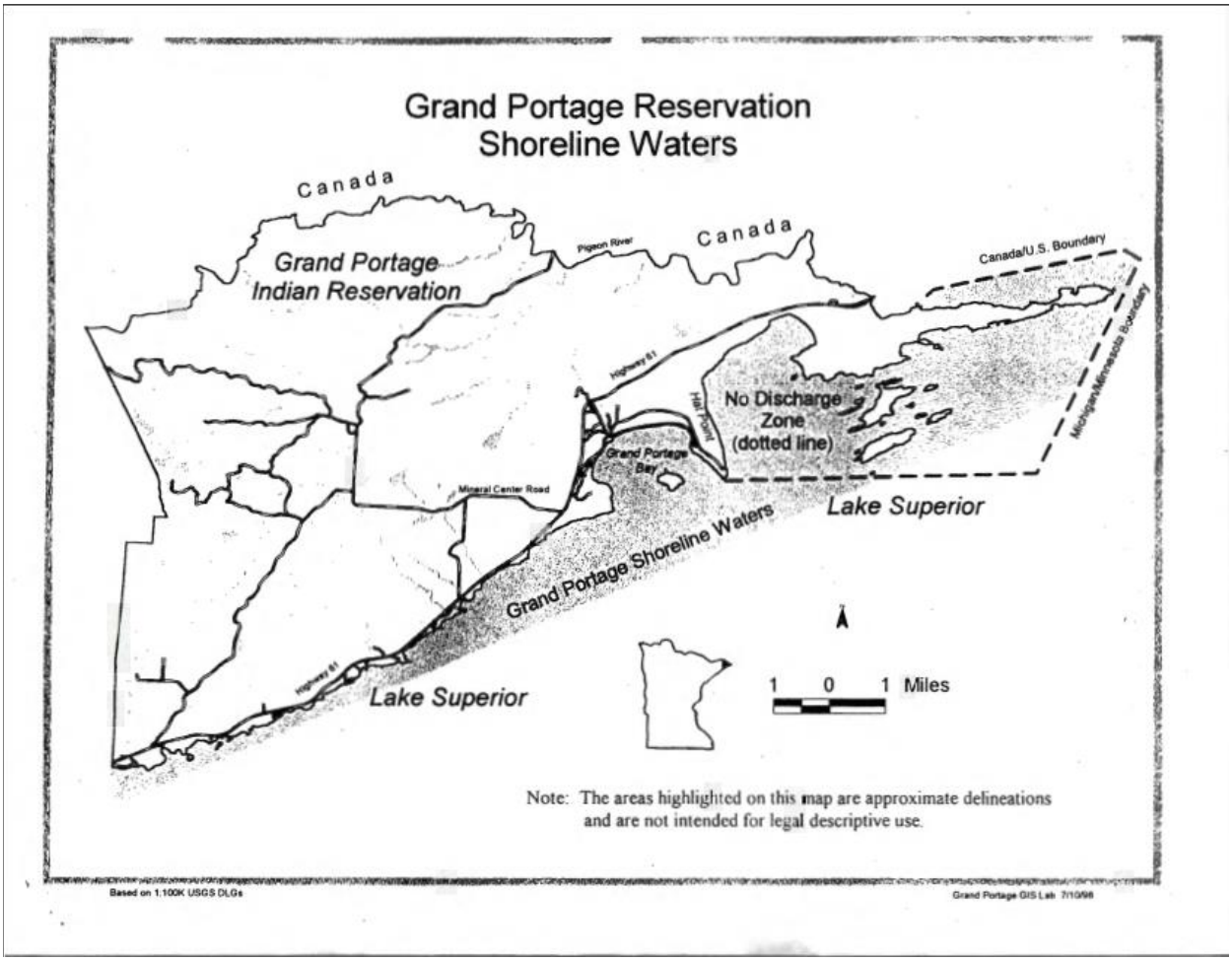
7. Severability

If any clause, sentence, paragraph, Section, or part of this Chapter shall, for any reason, be adjudicated by any court of competent jurisdiction, to be invalid or unconstitutional, such judgment shall not affect, impair, or invalidate the remainder thereof, but shall be confined in its operation to the clause, sentence, paragraph, Section, or part thereof directly involved in the controversy in which the judgment shall have rendered.

8. Construction

This Chapter shall be interpreted and applied consistent with all other Codes, Laws, Ordinances, and Regulations of the Grand Portage Band of Chippewa.

ATTACHMENT 1



ATTACHMENT 2

Grand Portage Variance from Human Health and Wildlife Mercury Criterion

Location	Implementation Procedures	Designated Uses	Mercury Criterion to Protect Designated Uses	Variance Concentration Limit
Grand Portage Bay	OTWR- Restricted.	B. Aquatic Life 2. Subsistence Fishing	0.196 ng/L	2.26 ng/L
Grand Portage Bay	OTWR- Restricted.	C. Wildlife	1.3 ng/L	2.26 ng/L