

Bacteriological Criteria for Grand Portage Reservation

Coastal and Inland Waters

In Grand Portage many of the inland lakes have fine organic muck substrates or false bottoms. They tend to be shallow (less than eight feet) at their deepest locations, have dark root beer colored water stained from naturally occurring tannic acids, and have diverse abundant aquatic vegetation including wild rice. These lakes are not used for swimming except when a boat or canoe tips.





Most Grand Portage Residents live near Lake Superior. There are no seasonal or year-round residents on any of the inland lakes.



Only one inland lake is used for swimming because it is fairly deep (20 feet), has clear water, a cobble bottom, and doesn't have a lot of vegetation



Lake Superior waters are clear and cold.
The coastal beaches in Grand Portage tend to be scoured bedrock, boulders and cobble, and sand.



Swimmers in Grand Portage use several beaches in Lake Superior especially in Grand Portage Bay



Clean Water Act Requirements

- All waters must have “Primary Recreational Contact” as one of their designated uses
- Without being required to conduct a use attainability analyses (UAA), the only way the Tribe can have water bodies designated for only secondary contact recreation is to apply bacteriological criteria sufficient to support primary contact recreation. Although primary contact recreation may not be occurring in wetlands, EPA still requires the designated use to be assigned to wetlands as well.

Options

- Designate all Reservation water bodies for primary contact recreation and ensure the appropriate bacteriological criteria are applied to protect the use (using *E. coli* or enterococci);
- Keep primary and secondary contact recreational uses, but apply primary contact bacteria criteria to both categories; or
- Keep primary and secondary contact recreational uses, but conduct a UAA to demonstrate the primary contact use is not attainable for certain water bodies. If choosing this option, the Tribe must also submit bacteriological criteria to protect the secondary contact recreational use. Otherwise, it implies the water quality of the water body is not good enough to support this use.

To avoid conducting a Use Attainability Analysis, bacteriological criteria was created based on EPA guidance and use intensity.



DESIGNATED USES

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.

Primary contact recreational use is divided into subcategories based upon frequency of use.

- **High intensity use** - shall not exceed a monthly geometric mean of 126 Escherichia coli per 100 ml, or a single sample maximum of 235 cfu Escherichia coli /100 ml.
- **Moderate intensity use** - shall not exceed a monthly geometric mean of 126 Escherichia coli per 100 ml, or a single sample maximum of 299 cfu Escherichia coli /100 ml.
- **Infrequent use** - shall not exceed a monthly geometric mean of 206 cfu Escherichia coli per 100 ml, or a single sample maximum of 940 cfu Escherichia coli /100 ml.