Bad River Reservation and Water Quality Standards

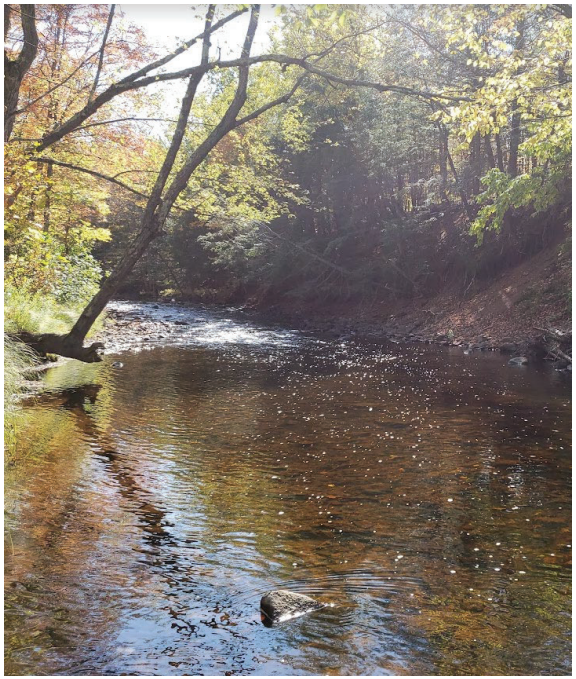
Mashkiiziibii Natural Resources Department Presentation #1 for the Hearing with the US Army Corps of Engineers
February 27, 2024 – Odanah, WI

Topics

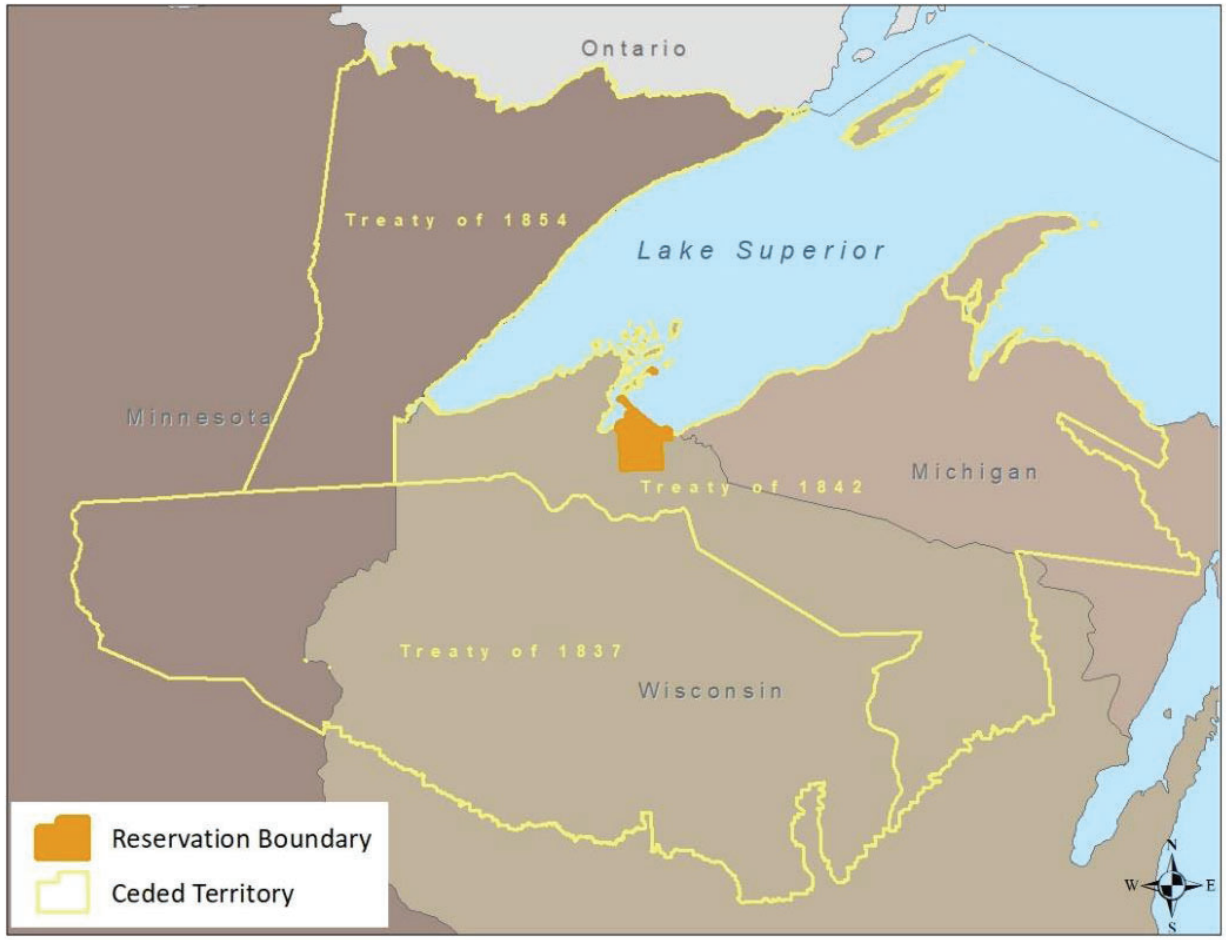
- Bad River Reservation
- Bad River Tribal Water Quality Standards
  - Designated Uses of Water Resources
  - Criteria to Protect Uses
  - Outstanding Tribal Resource Waters, Outstanding Resource Waters, and Exceptional Resource Waters

Bad River Band of Lake Superior Tribe of Chippewa Indians

Bad River Reservation

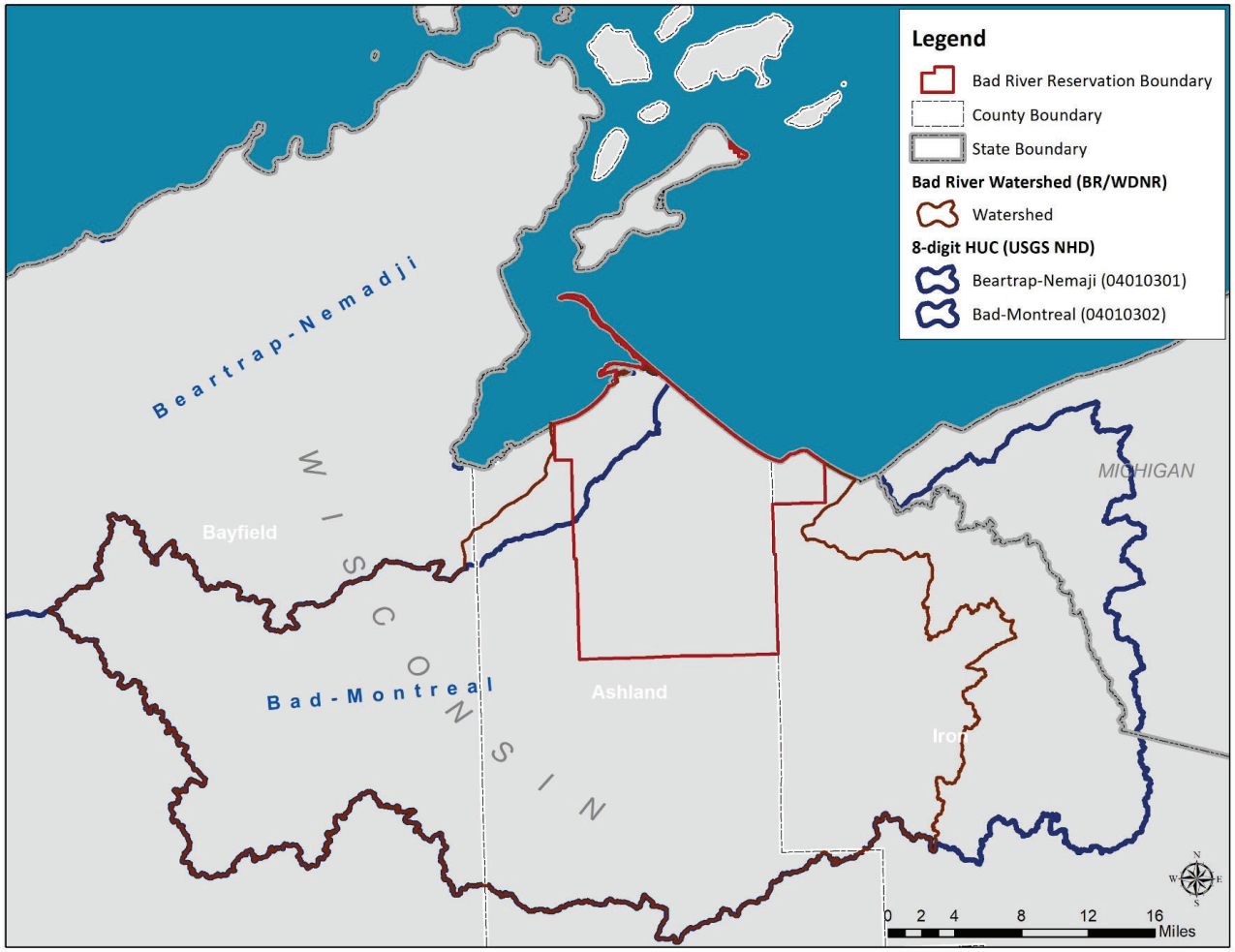


Bad River Reservation & Treaty Ceded Territories



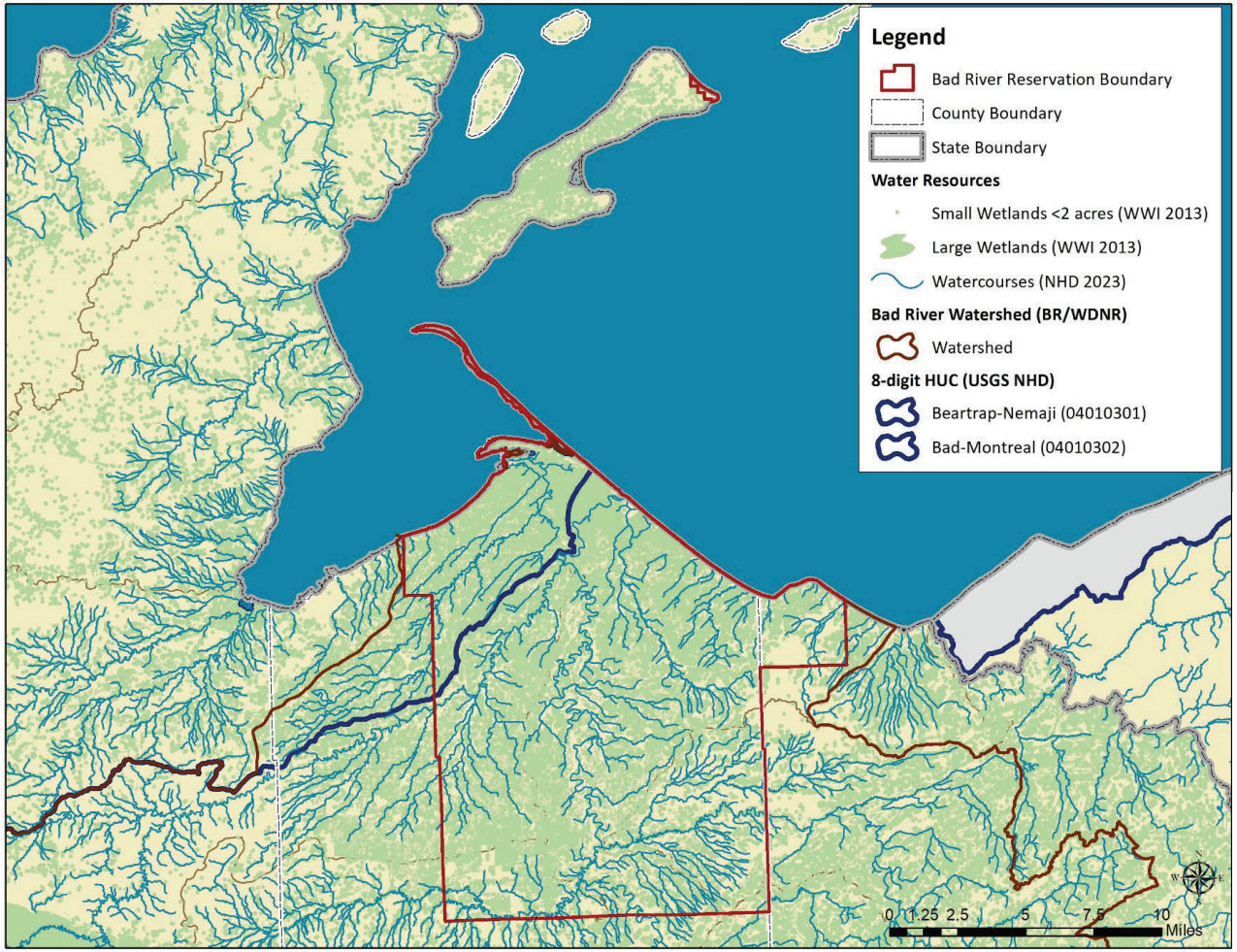
- **The Bad River Reservation was created under the Treaty of 1854, one of three Treaties the Bad River Band of Lake Superior Tribe of Chippewa signed with the United States.**
  - The Tribe retains usufructuary rights to the lands ceded in the 1837 and 1842 Treaties which includes lands in Michigan, Minnesota, and Wisconsin.
  - The Federal Government has a fiduciary Trust Responsibility to the Tribe under these treaties.
- **The Bad River Reservation is 124,655 acres**
  - 124,459 acres on mainland
  - 196 acres on Madeline Island

Bad River Reservation & Lake Superior Basin

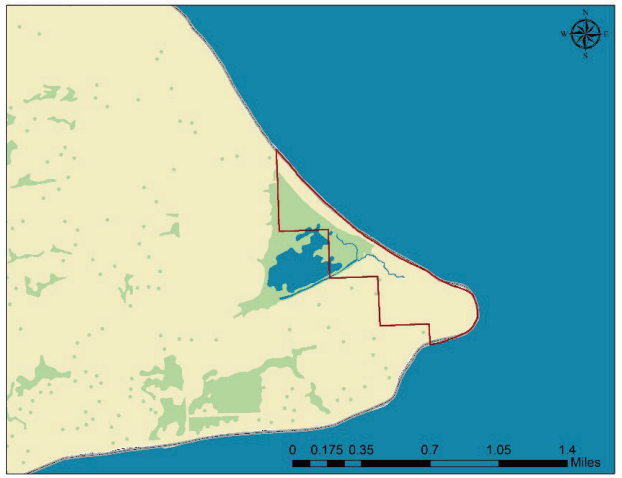


- The entire Bad River Reservation falls within the Lake Superior Basin.
- The Reservation mainland occupies a downstream portion of the USGS…
  - Bad River-Montreal Subbasin
    - USGS NHD 8-digit HUC 04010302
  - Beartrap-Nemadji Subbasin
    - USGS NHD 8-digit HUC 04010301
- The Tribe and the State of Wisconsin have recognized the Bad River Watershed as the watershed boundary draining lands upstream of the mainland Reservation
  - includes all the Bad River-Montreal Subbasin (aside from the Montreal HUC10) and the Beartrap Creek Subwatershed (HUC12) from the Beartrap-Nemadji Subbasin
  - Watershed Detail - Lower Bad River (wi.gov)
- The Reservation falls within Ashland and Iron Counties of Wisconsin.

Bad River Reservation & it's Water Resources



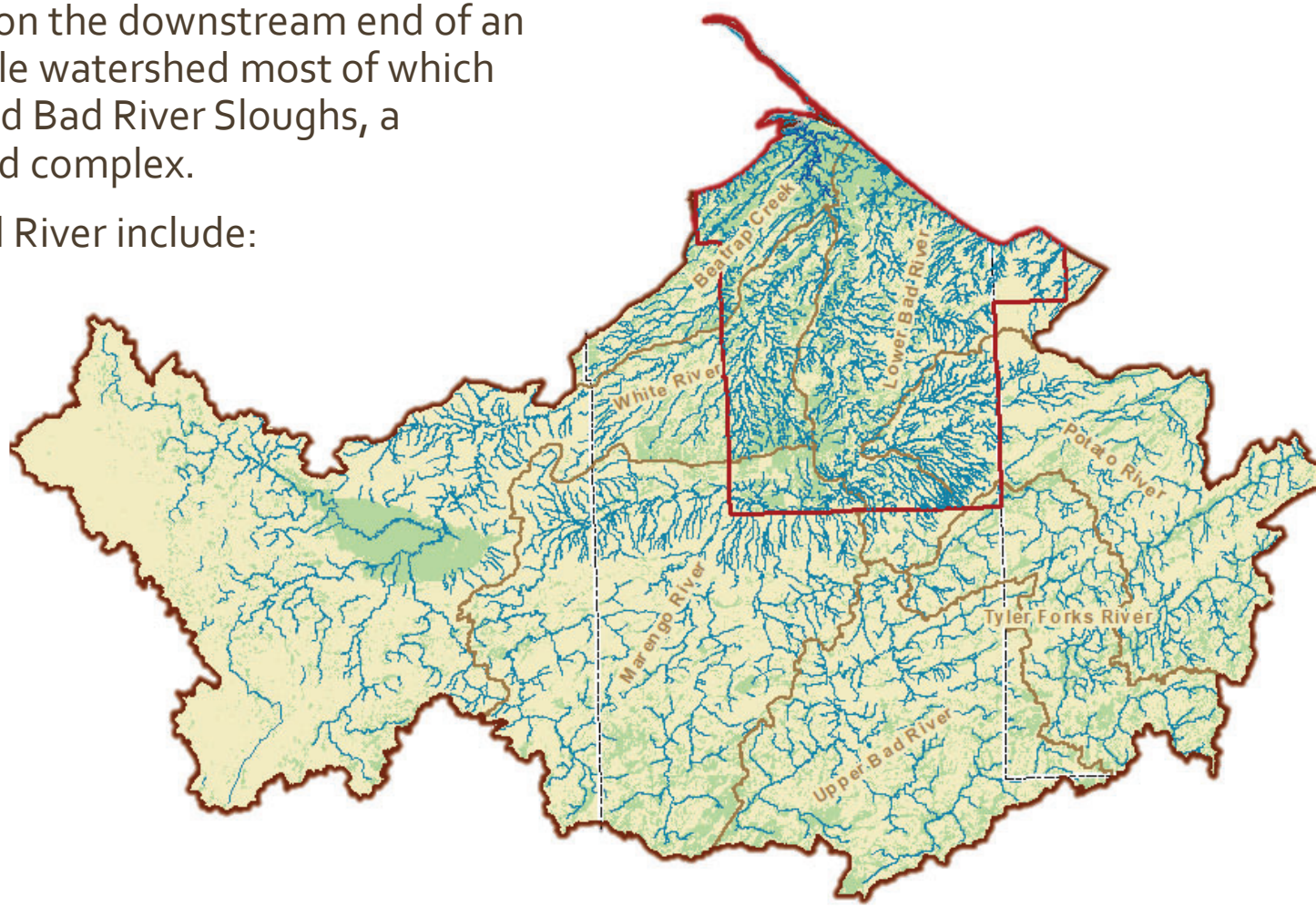
- The Reservation has…
  - 38 miles of Lake Superior shoreline
    - 36 miles of shoreline on the mainland
    - 2 miles of shoreline on Madeline Island
  - 52,554 acres of mapped wetlands[1] (WWI 2013)
    - 52,506 acres on the mainland
    - 48 acres on Madeline Island
  - 545 acres of lakes and ponds
    - 543 acres on the mainland
    - 2 acres on Madeline Island
  - 475.01 miles of streams (NHD 2023)



[1]Small wetland acreage is included, calculated by assuming each small wetland point from the WWI equals 1 acre of wetland.

Bad River Reservation Streams & Rivers

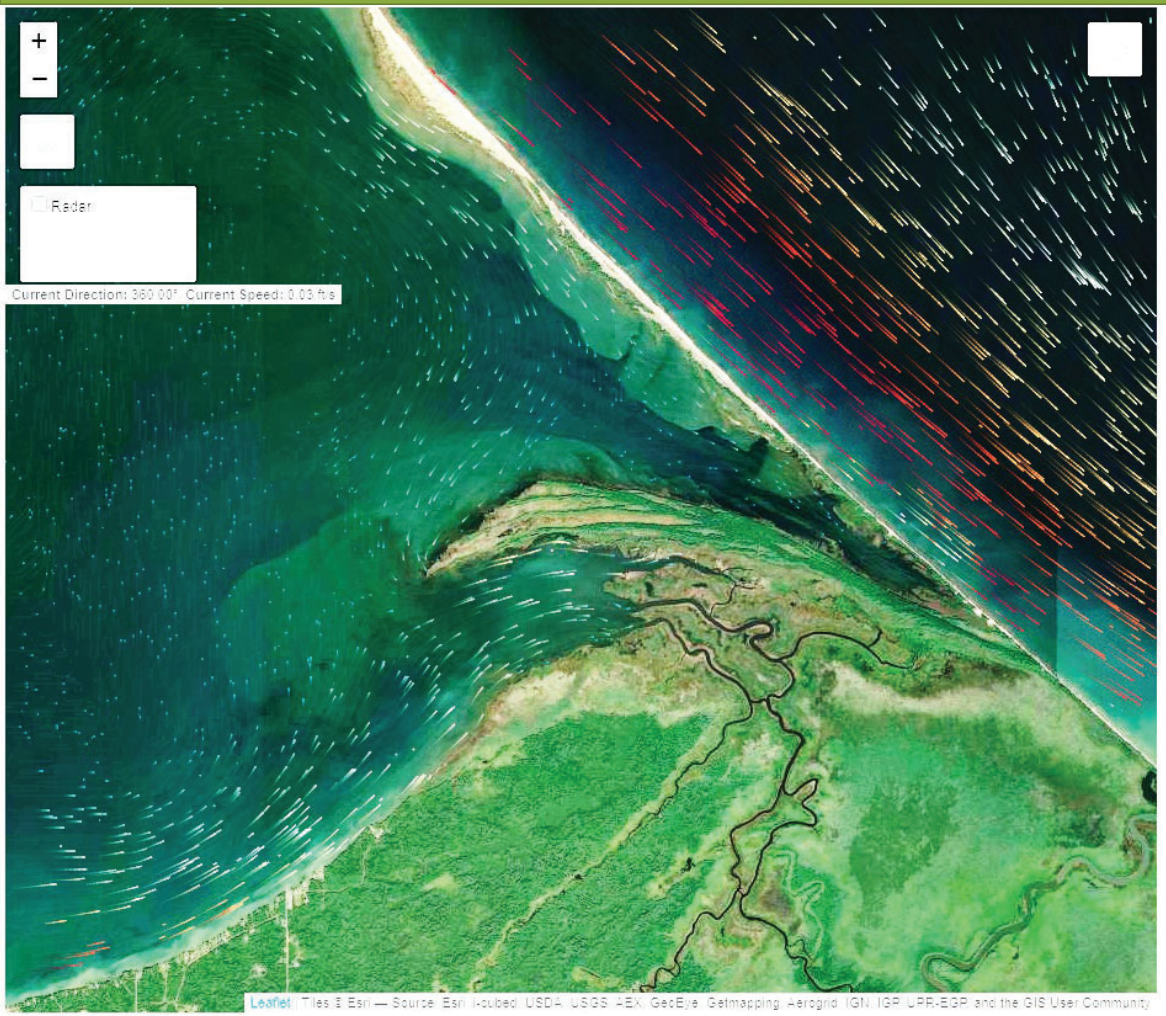
- The mainland Reservation sits on the downstream end of an approximately 1,000 square mile watershed most of which drains through the Kakagon and Bad River Sloughs, a hydrological connected wetland complex.
- The main tributaries to the Bad River include:
  - White River
  - Marengo River
  - Tyler Forks River
  - Potato River
- The main tributaries to the Kakagon River include:
  - Wood Creek
  - Beartrap Creek
  - Sucker Creek



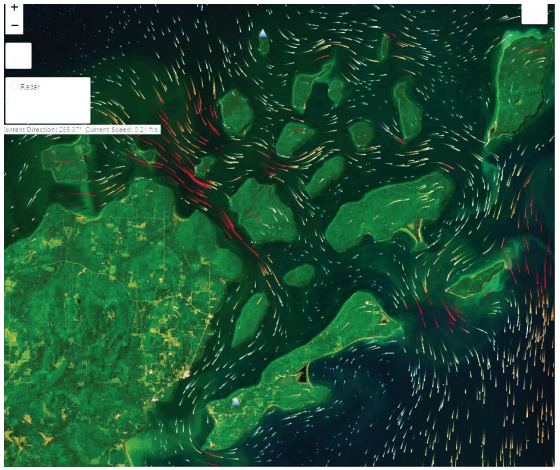
Bad River Reservation's Extraordinary Water Resources

- Kakagon and Bad River Sloughs Wetland Complex:
  - Wetland of International Importance (Ramsar site),
  - World Blue Globe Award Winner
  - National Natural Landmark (NPS)
  - Important Habitat Area (Lake Superior LAMP)
  - Wisconsin Wetland GEM™ (WWA)
  - Wisconsin Bird Conservation Initiative Important Bird Area
  - Wisconsin Land Legacy Place
  - TNC Priority Conservation Area
  - Aquatic Resources of National Importance (EPA)
  - 13% of Lake Superior's coastal wetlands
- Bad River and White River support self-sustaining populations of lake sturgeon (along with only two other waterways in Lake Superior basin)
- Cold water streams, such as Tyler Forks River, Potato River, Winks Creek, and Graveyard Creek
  - Graveyard Creek supports coaster brook trout
- Unique lakes, such as oxbow lakes, Honest John Lake, and Bog Lake
- Reservation waters support rare, threatened, and endangered species, including but not limited to: piping plover, gray wolves, wood turtle, yellow rail, Rufa red knot, mayfly species, swamp-pink, Ram's-head lady's-slipper, Hooker's orchid

Bad River Reservation & Lake Superior Hydrological Connections



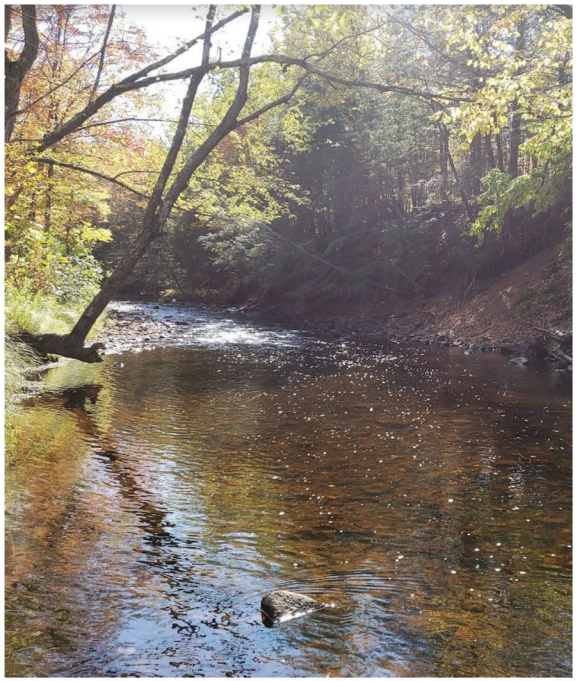
- Due to Lake Superior's seiche, long shore currents, and other currents occurring in the Apostle Islands and Chequamegon Bay, Reservation waters not only flow into the Lake but also have the Lake flow into them.
  - USGS has documents the seiche pushing water upstream from the lake all the way to Beartrap @ US Hwy 2 and past Bad River @ US Hwy 2.
  - The Kakagon and Bad River Sloughs have a daily fluctuation due to seiche.
  - Depending on prevailing currents, water levels, and other seasonal factors, water from streams and rivers along the Bayfield Peninsula have been carries into the Chequamegon Bay and out into the Apostle Islands near Madeline Island



Bad River Band of Lake Superior Tribe of Chippewa Indians

Water Quality Standards

TAS Authority under CWA in 2009



Water Quality Standards

- Bad River Band obtained treatment in a similar manner as states for Clean Water Act Sections 303 and 401 program authority from the U.S. Environmental Protection Agency on June 26, 2009.
- July 6, 2011: Bad River Tribal Council Approves WQS.

Nibi (water) is the lifeblood of our Mother, the Earth. ***Nibi*** is a living, moving part of life that changes with its surrounding environment. ***Nibi*** connects the past and the present with the fate of future generations.

Water Quality Standards

Clean Water Act (CWA)

- Objective: "restore and maintain the chemical, physical and biological integrity of the Nation's waters" (CWA 101(a))
- Goal: "water quality which provides for the protection and propagation of fish, shellfish and wildlife and provides for recreation in and on the water" wherever attainable (CWA 101(a)(2))

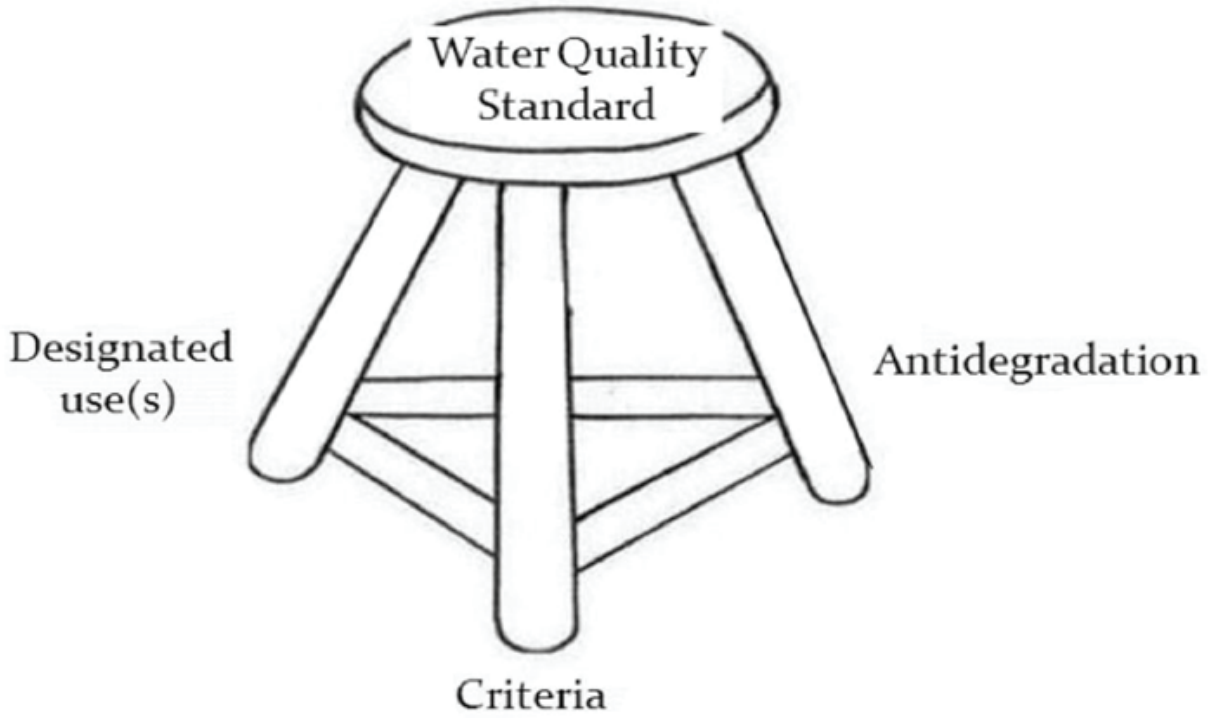
Water Quality Standards

- Water Quality Standards (WQS) establish water quality goals and provide a regulatory basis for the water quality management activities authorized under the CWA.
  - Core of water quality management programs
- Provide legal basis to protect waters that may be impacted from uses upstream of reservation land.
- Provides protection of designated water uses (e.g. cultural, traditional, way of life).
- Protect Public Health or Welfare
- Enhance the quality of water

Water Quality Standards

Three Main components:

- Designated Uses
- Criteria
- Antidegradation



Designated Uses

- "those uses specified in the WQS regulations for each water body or segment whether or not they are being attained." (40 CFR 131.3(f))
- Goals/Objective/Desired conditions of a waterbody
- Function of, or activity in a water that is supported by level of water quality

Importance

- Establish Water Quality goals for a specific water body and communicate these goals to the public.
- Identifying DU leads to identification of the right WQ criteria to protect those uses.

Designated Uses

- 1. Cultural (C1). Water-based activities essential to maintaining the Tribe's cultural heritage, including but not limited to ceremony, subsistence fishing, hunting and harvesting. This use includes primary and secondary contact and ingestion.
- 2. Wild Rice (W1). Supports or has the potential to support wild rice habitat for sustainable growth and safe consumption.
- 3. Wildlife (W2). Supports the proper habitat for propagation of wildlife, which will allow the safe ingestion of any wildlife resources that provide a dietary food source for Tribal subsistence.
- 4. Aquatic Life and Fish (A). Supports conditions for a balanced aquatic community.
- 5. Cold Water Fishery (F1). Supports or has the potential to support the existence of cold water fishery communities and/or spawning areas. No thermal discharge to such waters will be allowed.
- 6. Cool Water Fishery (F2). Supports or has the potential to support the existence of cool water fishery communities and/or spawning areas for at least a portion of the year.
- 7. Recreational (R). Supports primary contact recreation and secondary contact recreation. This includes Tribal activities including water contact such as boating, hunting, fishing and harvesting. This use includes primary and secondary contact and ingestion.
- 8. Commercial (C2). Supports the use of water in propagation of fish fry for the Tribal Hatchery and/or irrigation of community agricultural projects.
- 9. Navigation (N). The water quality is adequate for navigation in and on the water.
- 10. Wetland (W3). An area that will be protected and maintained for at least some of the following uses: maintaining biological diversity, preserving wildlife habitat, providing recreational activities, erosion control, groundwater recharge, low flow augmentation, storm water retention, prevention of stream sedimentation, and the propagation of wild rice.

Designated Uses

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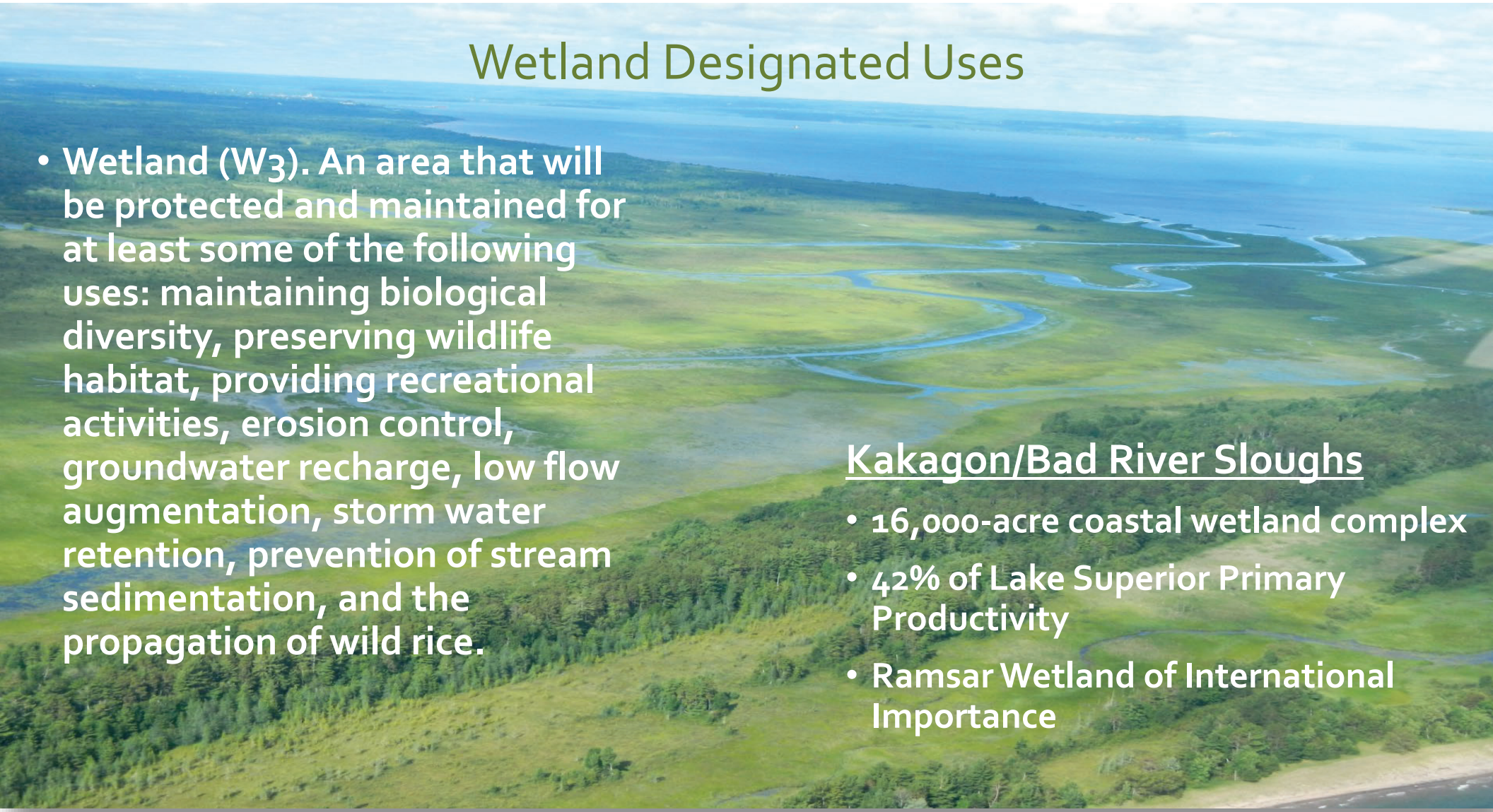
Wetland Designated Uses

- **Wetland (W3). An area that will be protected and maintained for at least some of the following uses: maintaining biological diversity, preserving wildlife habitat, providing recreational activities, erosion control, groundwater recharge, low flow augmentation, storm water retention, prevention of stream sedimentation, and the propagation of wild rice.**



Kakagon/Bad River Sloughs

- 16,000-acre coastal wetland complex
- 42% of Lake Superior Primary Productivity
- Ramsar Wetland of International Importance

Criteria

States/Tribes shall adopt criteria to protect designated uses into their WQS. CWA 303 (c)(1)

Types of Criteria

- Protect Human Uses
  - Human Health Criteria
  - Recreational Criteria
- Protect Aquatic Life Uses
  - Aquatic Life Criteria
  - Biological Criteria
- Nutrient and Sediment Criteria
- Narrative and Numeric

❖Criteria protects designated uses.

❖Waters with multiple use designations, criteria supports the most sensitive use.

Narrative Criteria

- **E 6 (i). Narrative criteria for aesthetic water quality.** All waters (including wetlands) within the Reservation shall be free from substances, attributable to wastewater discharges or pollutant sources resulting from other than natural background conditions, that:

a. Settle to form objectionable deposits;

b. Float as debris, scum, oil, or other matter forming nuisances;

c. Produce objectionable color, odor, taste, or turbidity;

d. Cause injury to, are toxic to, or produce adverse physiological responses in humans, animals, or plants;

e. Produce undesirable or nuisance aquatic life;

f. Produce nutrients or other substances that stimulate algal growth producing objectionable algal densities, nuisance aquatic vegetation, dominance of any nuisance species instream, or cause nuisance conditions in any other fashion; or

g. Adversely affect the natural biological community of the waterbody.

Narrative Criteria

- **E 6 (ii) c. Water quantity and quality** that may limit the growth and propagation of, or otherwise cause or contribute to an adverse effect to wild rice, wildlife, and other flora and fauna of cultural importance to the Tribe shall be prohibited. This includes, but is not limited to , a requirement that sulfate levels shall not exceed concentrations causing or contributing to any adverse effects in waters, including those with a Wild Rice designated use.
- **E 6 (ii) d. Natural hydrological** conditions supportive of the natural biological community, including all flora and fauna, and physical characteristics naturally present in the waterbody shall be protected to prevent any adverse effects.
- **E 6 (ii) e. Pollutants** or human-induced changes to waters, the sediments of waters, or area hydrology that results in changes to the natural biological communities and wildlife habitat shall be prohibited. The migration of fish and other aquatic biota normally present shall not be hindered. Natural daily and seasonal fluctuations of flow (including naturally occurring seiche), level, stage, dissolved oxygen, pH, and temperature shall be maintained.
- **E 6 (ii) g. Temperature** – No measurable change (increase or decrease) in temperature from other than natural causes shall be allowed that causes or contributes to an adverse effect to the natural biological community. For those waters designated as a Cold Water Fishery, there shall be no measurable increase in temperature from other than natural causes.
- **E 6 (ii) h. The presence of pollutants** in quantities that result in bioaccumulation in aquatic organisms that may cause or contribute to an adverse effect to consumers of aquatic organisms shall be prohibited.

Numeric Criteria

- **7 (iii). Turbidity** – Shall not exceed 5 NTU over natural background turbidity when the background turbidity is 50 NTU or less, or turbidity shall not increase more than 10 percent when the background turbidity is more than 50 NTU.
- **7 (iv). Bacteriological Water Quality Criteria** - The geometric mean of not less than 5 samples equally spaced over a 30-day period shall not exceed an E. coli count of 126 Colony Forming Units (CFU) per 100 milliliters (mL) for fresh waters. Any single sample shall not exceed an E. coli count of 235 CFU per 100 mL.
- **Other examples:** Dissolved Oxygen, pH, Aquatic Life, Human Health, and Wildlife.

Antidegradation

Framework for maintaining and protecting existing uses.

- Applicable to all surface waters of the Reservation.
- Water Resources of the Tribe are integral to its member's health, welfare and economic security and political integrity of the Tribe itself.
- The Tribe has depended on the natural resources, particularly the water resources, to provide cultural preservation and resources for consumption, subsistence, and sustainable economic development.

Antidegradation

Provides for the maintenance and protection of water quality to ensure that all designated and existing uses are met and maintained for the 7th Generation.

- Tier 2 Exceptional Resource Waters (ERW). Anishinaabosibiing
- Tier 2.5 Outstanding Resource Waters (ORW). Chi minosibii
- Tier 3 Outstanding Tribal Resource Waters (OTRW). Chi minosingbii.
- Any surface water not specifically classified as ORW or OTRW are classified as a Tier 2 ERW.

Antidegradation

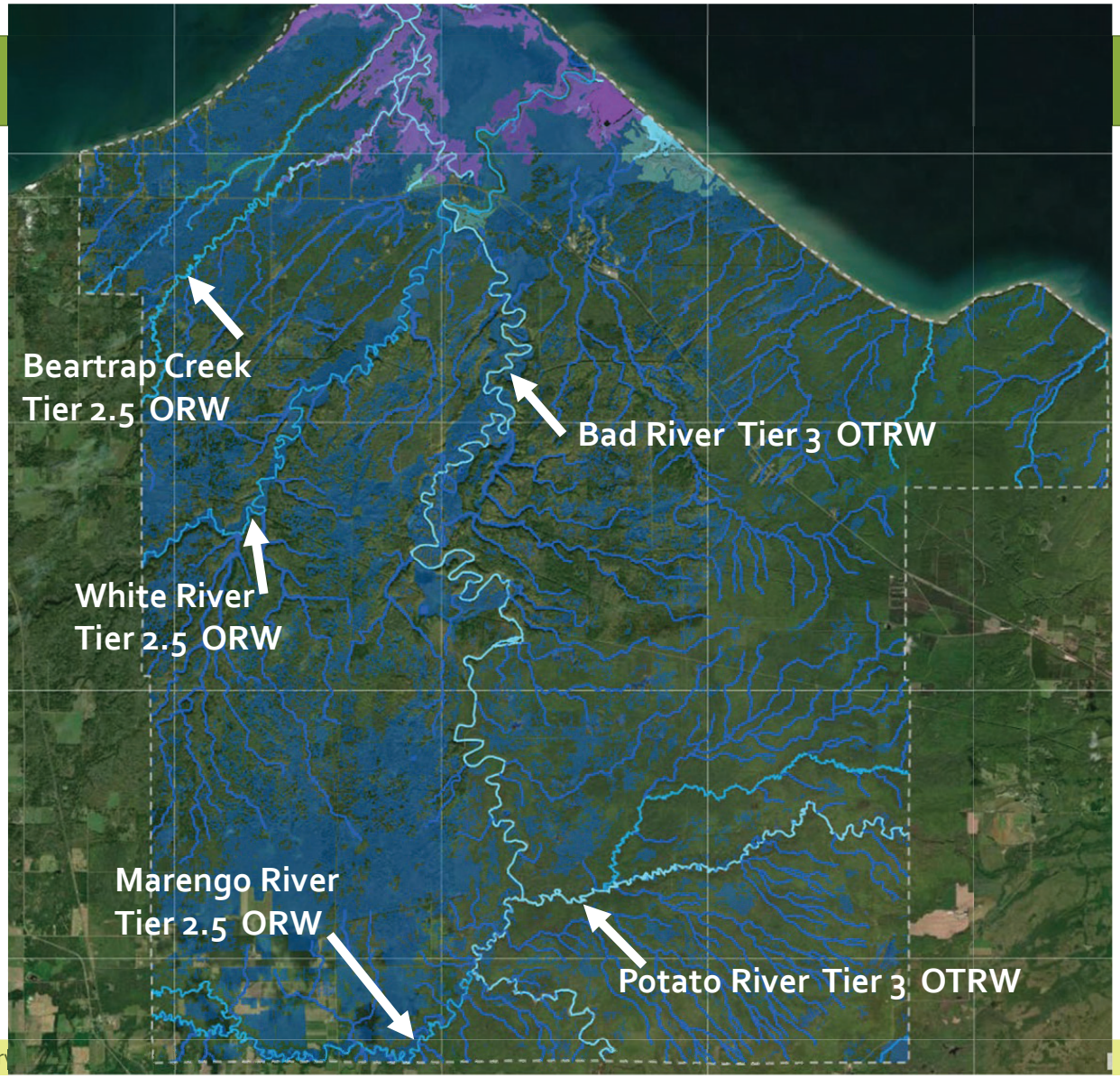
Tier 3 Outstanding Tribal Resource Waters (OTRW).
Waters viewed as pristine, highly valued waters important to culture, recreation, wild rice, and exceptional ecological significance.

- No new or increased discharges or alterations of the background conditions are allowed.

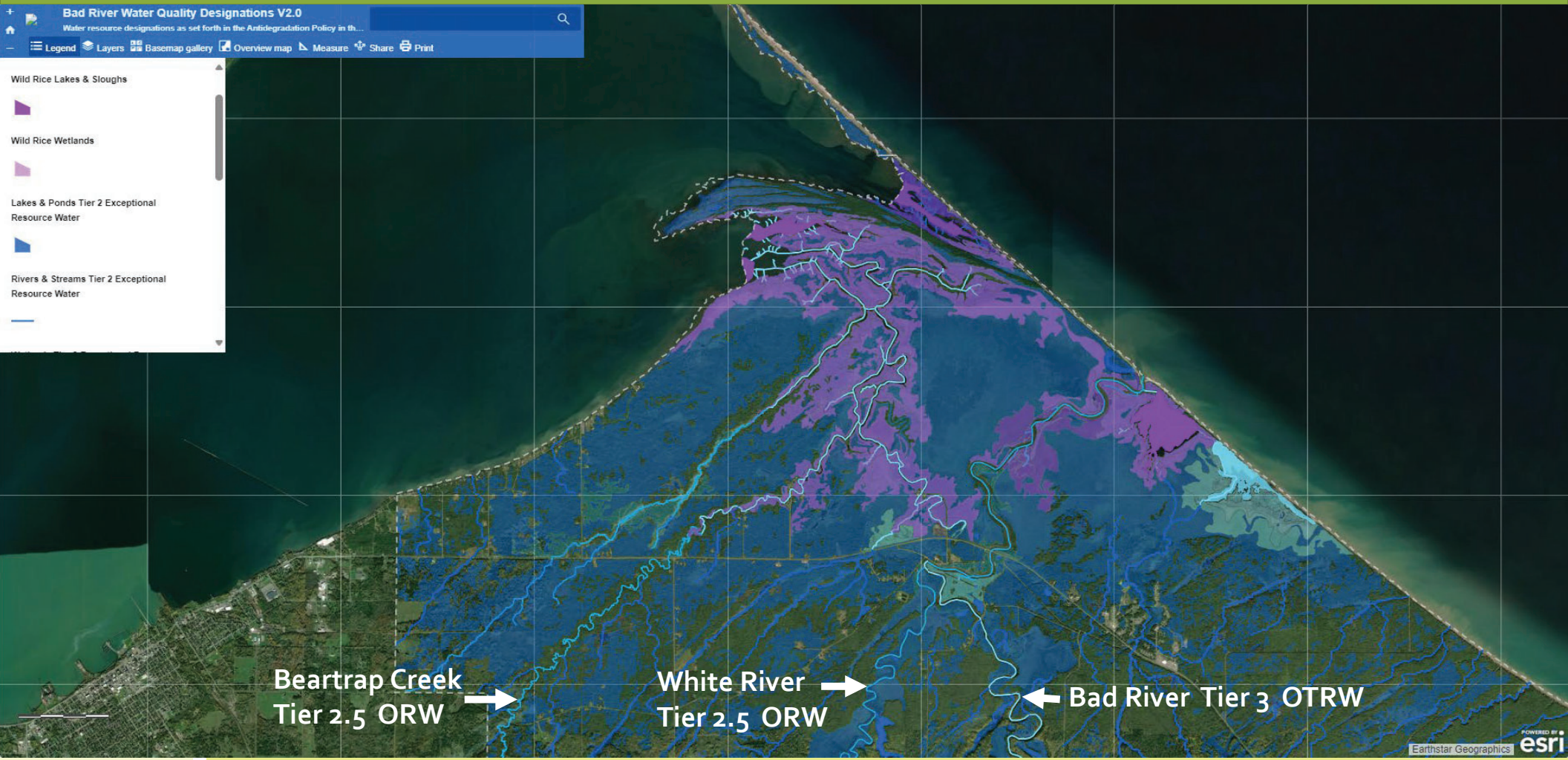
- However, a short-term, temporary (no more than 6 months, and no more than necessary) lowering of water quality may be allowed…

Bad River Water Quality Designations Map

Water Resource Designations as set forth in the Antidegradation Policy in the Bad River Band's Water Quality Standards.


Beartrap Creek
Tier 2.5 ORW
Bad River Tier 3 OTRW
White River
Tier 2.5 ORW
Marengo River
Tier 2.5 ORW
Potato River Tier 3 OTRW

Bad River Water Quality Designations Map



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