

**Bad River Band Lake Superior Chippewa 401(a)(2):
Adverse Impacts to Wetlands & Other Aquatic Resources,**

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Who am I:

- Wildlife Biologist - BS from UMaine
- Nearly 33 years with EPA, 5 ½ with HQ and 27 with New England Region, as Senior Wetland Ecologist for the Wetlands Protection Program, last 8 as Chief of the Regional Wetlands Program
- Also, last 4 years as EPA's rep on the IJC St.Croix River (Maine) Watershed Council
- I worked on over 30 hazardous waste sites throughout New England regarding wetland impacts, appropriate remedial actions
- Along with a small cadre of EPA Regional wetland scientists who served as a type of SWAT team for controversial projects, I also did special projects for EPA throughout the country, including Yahoo Backwater Area Pumps in MS, Big River Water Supply Impoundment in RI, and Bayou aux Carpes Site in LA; and since I retired from EPA, in particular, the Pebble Mine in AK

Proposed RGPs

Physical and Biological Resources

Extensive emergent wetlands & streams

- 52,554 acres of mapped wetlands (NWI) - NWI underestimates
- 543 acres of lakes and ponds
- 475 miles of streams (NHD)

- Substantial water exchange between Reservation waters and Lake Superior

Fish and wildlife resources that use the Reservation, its rivers and streams, and its variety of wetlands—some examples; most are wetland/water dependent

Birds: Hairy woodpecker, northern goshawk, Coopers hawk, sharp-shinned hawk, great horned owl, great gray owl, barred owl, bald eagle, osprey, trumpeter swan, turkey vulture

Fish: muskellunge, northern pike, large & small mouth bass, walleye, perch, lake sturgeon, yellow perch, sunfish

Mammals: beaver, porcupine, squirrels, mice, voles, bobcat, coyote, black bear, muskrat, red and gray fox, fisher, raccoon, ermine, striped skunk, river otter, lynx

Reptiles and Amphibians: timber rattlesnake, blue spotted salamander, eastern tiger salamander, mudpuppy, four toed salamander; northern ring-necked snake, north American racer, red-bellied snake; northern leopard frog, mink frog, gray tree frog, boreal chorus frog, wood frog; spiny soft-shell turtle, blanding's turtle, snapping turtle, eastern musk turtle, northern map turtle; skinks

- Other Significant Tribal Values/Uses protected by WQS
- Wild Rice cultivation and harvesting - food and cultural

Connectivity Report : Findings related to the Proposed RGPs

- The scientific literature unequivocally demonstrates that streams, individually or cumulatively, exert a strong influence on the integrity of downstream waters. All tributary streams, including perennial, intermittent, and ephemeral streams, are physically, chemically, and biologically connected to downstream rivers via channels and associated alluvial deposits where water and other materials are concentrated, mixed, transformed, and transported.
- The literature provides robust evidence that streams are biologically connected to downstream waters by the dispersal and migration of aquatic and semiaquatic organisms, including fish, amphibians, plants, microorganisms, and invertebrates, that use both upstream and downstream habitats during one or more stages of their life cycles, or provide food resources to downstream communities.
- Riparian/floodplain wetlands and open waters improve water quality through the assimilation, transformation, or sequestration of pollutants, including excess nutrients and chemical contaminants such as pesticides and metals, that can degrade downstream water integrity. In addition to providing effective buffers to protect downstream waters from point source and nonpoint source pollution, these systems form integral components of river food webs, providing nursery habitat for breeding fish and amphibians, colonization opportunities for stream invertebrates, and maturation habitat for stream insects.

Connectivity Report: Findings related to the proposed RGPs

- Wetlands and open waters in non-floodplain landscape settings (hereafter called “non-floodplain wetlands”) provide numerous functions that benefit downstream water integrity. These functions include storage of floodwater; recharge of ground water that sustains river baseflow; retention and transformation of nutrients, metals, and pesticides; export of organisms or reproductive propagules to downstream waters; and habitats needed for stream species. Variations in the degree of connectivity influence the range of functions provided by streams and wetlands, and are critical to the integrity and sustainability of downstream waters.
- The incremental effects of individual streams and wetlands are cumulative across entire watersheds and therefore must be evaluated in context with other streams and wetlands. Downstream waters are the time-integrated result of all waters contributing to them. For example, the amount of water or biomass contributed by a specific ephemeral stream in a given year might be small, but the aggregate contribution of that stream over multiple years, or by all ephemeral streams draining that watershed in a given year or over multiple years, can have substantial consequences on the integrity of the downstream waters. Similarly, the downstream effect of a single event, such as pollutant discharge into a single stream or wetland, might be negligible but the cumulative effect of multiple discharges could degrade the integrity of downstream waters.
- In addition, when considering the effect of an individual stream or wetland, all contributions and functions of that stream or wetland should be evaluated cumulatively.

Adverse Impacts to Aquatic Resources

CWA Section 404(e) —

(1) In carrying out his functions relating to the discharge of dredged or fill material under this section, the Secretary may, after notice of opportunity for public hearing, issue general permits on a State, regional, or nationwide basis for any category of activities involving discharges of dredged or fill material if the Secretary determines that *the activities in such category are similar in nature, will cause only minimal adverse environmental effects when performed separately, and will have only minimal cumulative adverse effects on the environment.* Any general permit issued under this subsection shall (A) be based on the guidelines described in subsection (b)(1) of this section, ...

Adverse Impacts to Aquatic Resources

- The proposed RGP could potentially fill and/or alter hundreds of acres of wetlands and other waters over the life of the RGP.
 - General permits still need to comply with the Section 404(b)(1) Guidelines
- It appears that the Corps did not completely evaluate direct and indirect adverse impacts in compliance with NEPA, Corps, or EPA regulations (404(b)(1) Guidelines)
- Where is the Corps Statement of Findings and Environmental Assessment?

Pollutants of Concern

- Fill
 - sand, soil, rock, stone
 - chemicals that may be a part of fill (e.g., oil, pesticides, etc.)
 - woody debris
 - concrete, cement, other demolition debris
 - grass, turf
 - dredged material
 - drilling muds

Compliance with the CWA Section 404(b)(1)
Guidelines (binding regulations)

Compliance with the CWA Section 404(b)(1) Guidelines

- Cumulative adverse impacts (Section 230.10(c)) — As there are direct surface water connections between the streams and wetlands within and adjacent to the Reservation, and with Lake Superior, it is a given that material/pollutants from discharges from covered activities will be transported to other wetlands and Lake Superior.
 - **Has the Corps identified and evaluated these potentially significant adverse impacts? If so, where is that evaluation?**

Compliance with the CWA Section 404(b)(1) Guidelines - Significant Impacts

Section 230.10(c): Except as provided under section 404(b)(2), no discharge of dredged or fill material shall be permitted which will cause or contribute to significant degradation of the waters of the United States. ...

- The Guidelines require the analysis of all direct, secondary (indirect), and cumulative adverse impacts to the affected aquatic resources.
 - **Has the Corps evaluated (indirect) impacts to the Lake—particularly on wetlands and streams on the Reservation that are tributary to the Lake?**
 - **No apparent evaluation of cumulative impacts in the contributing sub-watershed**