
Leech Lake Ojibwe: Our Environmental Challenge

Narrator: Wild rice is still abundant on the Leech Lake reservation, but community members are concerned about how environmental harms might affect this important resource.

Jeff Harper, Water Quality Specialist, Leech Lake Division of Resources

Management: When we came here—about 5,000 years ago—we came here and the water was clean. We saw that the fish lived here. They were healthy. The wild rice lived here. It was healthy. And now humans are dirtying the lakes as fast as we can. We're causing it to fill in by erosion, we cause pollution to the lake, and we know that everything that we do harms the resources.

Narrator: Changes to the ecosystem affect the rice. Logging, dams, and mines all contribute to rice habitat destruction.

Colleen Wells, Archeologist and Field Director, Leech Lake Band of Ojibwe

Heritage Sites Program: Because wild rice prefers the edges of lakes, where the water is shallow and there is a stable, silty kind of mucky bottom. That's where it proliferates.

Jeff Harper: In the 1870s, the federal government dammed up the Mississippi River chain. And when they did that, it raised the water levels up 10 feet, so that they were able to float logs down the river from the logging industry, and also to have constant flow of water for the flour mills.

Steve Smith, Biology and Chemistry Instructor, Leech Lake Tribal College: Water-level variations can be very detrimental, harmful to the rice plants. And any kind of pollution sources will hinder the growth of wild rice. There are several threats to wild-rice productivity and the sustainability of wild rice. One of the major threats is overdevelopment of lakes, wild-rice lakes. I think another impending threat is climate change. We don't know exactly how our local wild-rice lakes will respond to those changes. That's one of the reasons we want to have a better understanding of the ecology of these rice plants, so we can identify those threats and perhaps mitigate or abate some of those threats.

Susan Kedzie, Invasive Species Coordinator, Leech Lake Division of Resources

Management: One of the really, really scary scenarios of aquatic species impacting wild rice is the potential invasion of Asian carp, who root out vegetation right at the margins of lakes. And that's where the wild rice is growing. That's its habitat.



So, that's a problem, because it causes disturbance which can create another step, which opens up a whole other cascade of invasive species that can come in and take advantage of that open space.

Invasives also have the potential to alter the way ecosystems function. So you want to make sure that you keep all of your native plants and animals in place, so that they can do the job that they're here to do. And each plant or animal has a specific function, and we as biologists don't necessarily know what each one of those functions are. So we always kind of generalize and say protect as much as you possibly can.

Jeff Harper: Another one of our concerns is the mining that's going on just a little bit to the east of us, probably 40 miles away. They're beginning to try to extract different kinds of ore from the earth. Those ores that are easily available, they're going to use sulphate and different kinds of acid to withdraw the ores from the rock, and they're going to discharge that to the river.

Narrator: The growing popularity of wild rice as a commercial food has led to another threat.

Steve Smith: There are farmers, that have taken wild-rice seed and they hybridize it, manipulate it to be able to grow it on fields to mechanically harvest it. Wild rice is much like the Ojibwe people are—part of their natural world, historically. The wild rice is also a part of its ecosystem, intimately tied to its ecosystem. And this cultivated rice violates that arrangement.

Narrator: The loss of wild rice would affect many things about Ojibwe life.

Susan Kedzie: I guess I would even say that any impact environmental—whether it's an oil spill or an invasive species—has greater impact here on a reservation because it's culturally important and also spiritually. It helps people connect with their past, connect with their ancestors.