

Keweenaw Bay Indian Community Wetlands Program Plan 2023-2027



Mud Lakes, L'Anse Indian Reservation, Baraga County, MI

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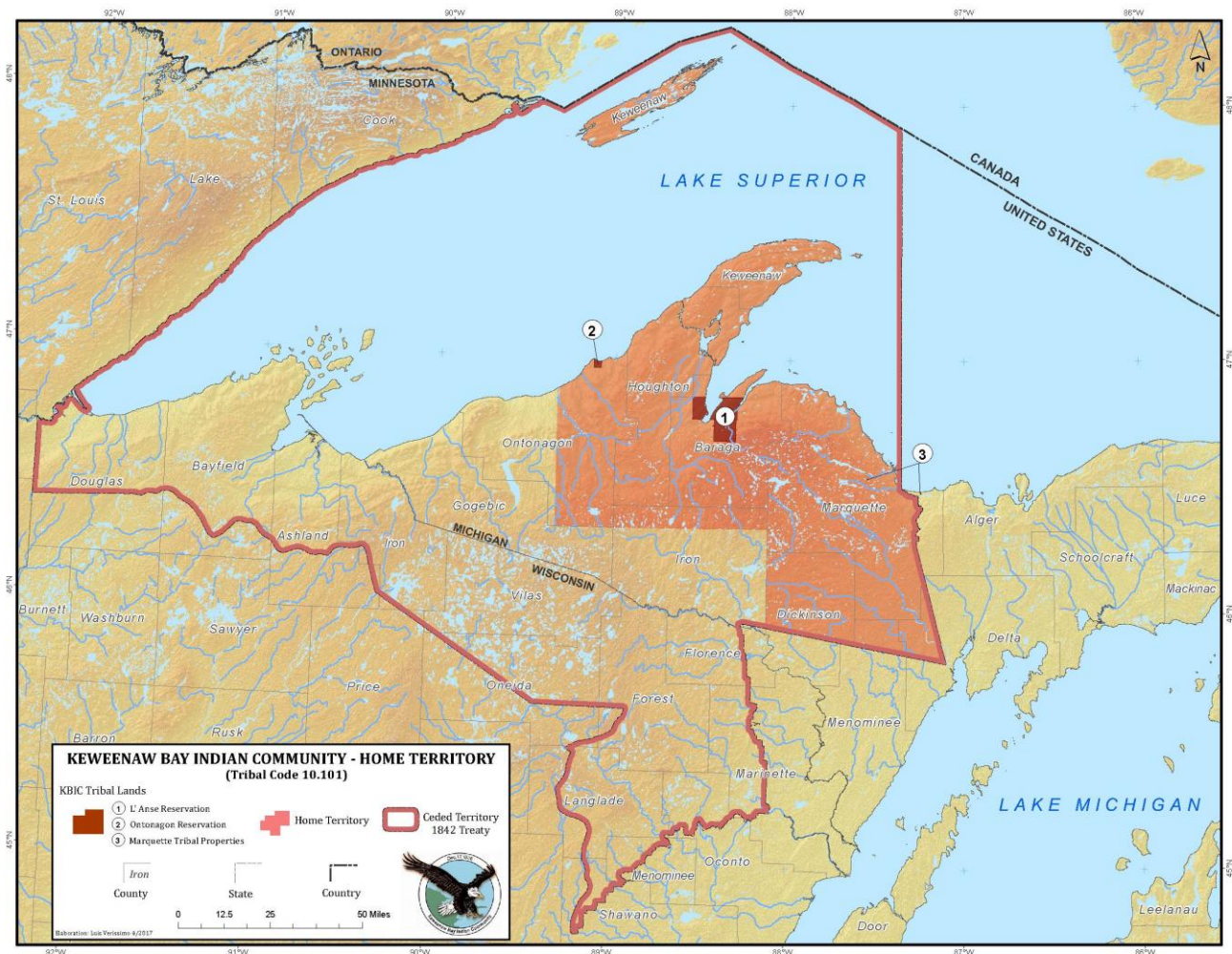
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OVERVIEW

The purpose of the Keweenaw Bay Indian Community (KBIC) Wetland Program Plan is to identify strategies for developing a comprehensive wetlands conservation and monitoring program for the protection, enhancement, restoration, and sustainability of wetland resources vital to the KBIC. Conveying and sharing information through education and collaboration efforts will raise awareness of KBIC's rich wetland resources that provide valuable services, and enhance commitment to preserving wetlands for generations to come.

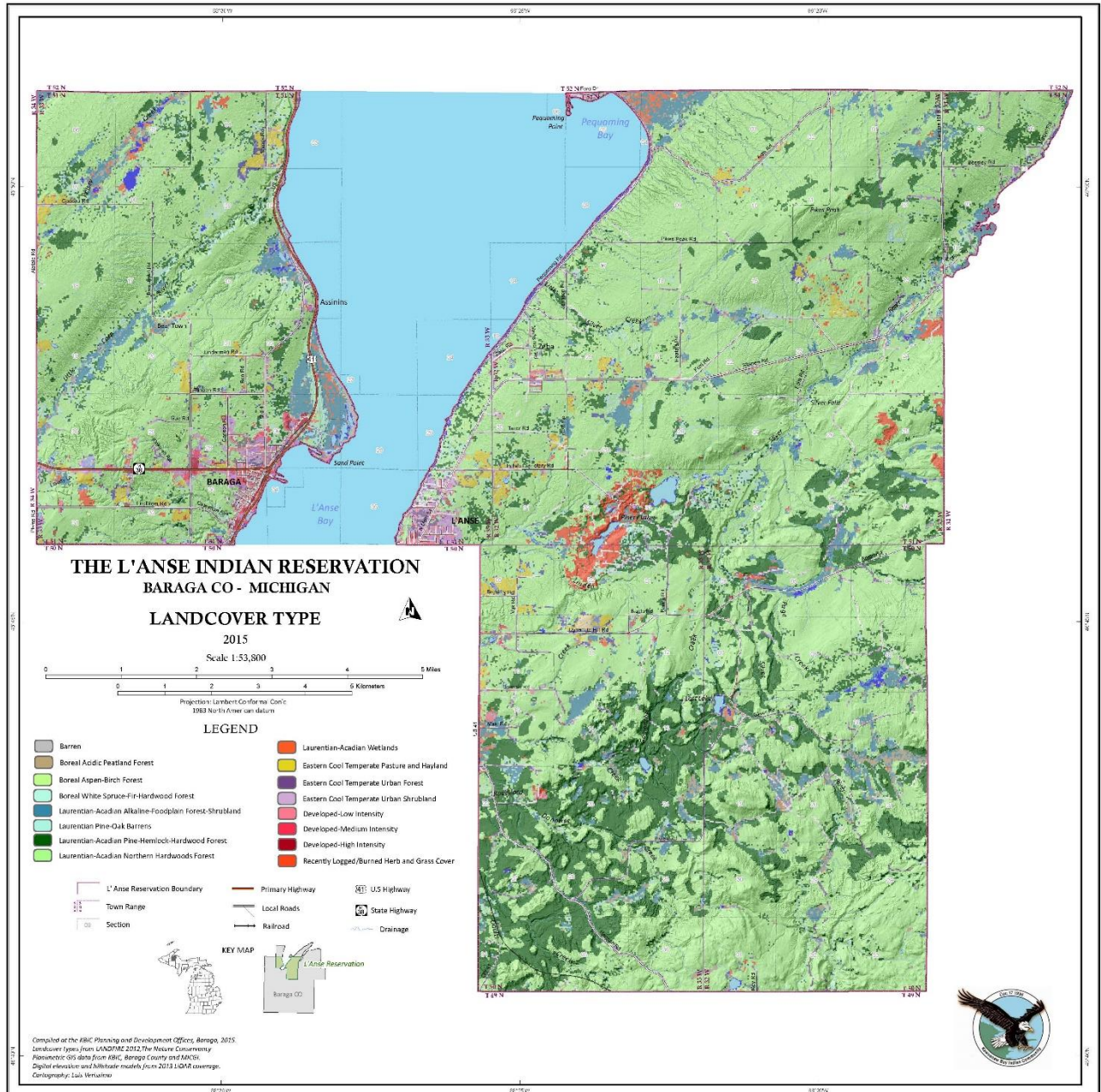
INTRODUCTION

The KBIC is a federally recognized Tribe and is signatory to the Treaties with the Chippewa of 1842 and 1854. The members and descendants of the Tribe retain their right to fish, hunt, and gather throughout the ceded territory under the Treaty of 1842. Established under the Treaty of 1854, the primary land base of the KBIC is the L'Anse Indian Reservation. KBIC also has land holdings in Ontonagon and Marquette Counties.



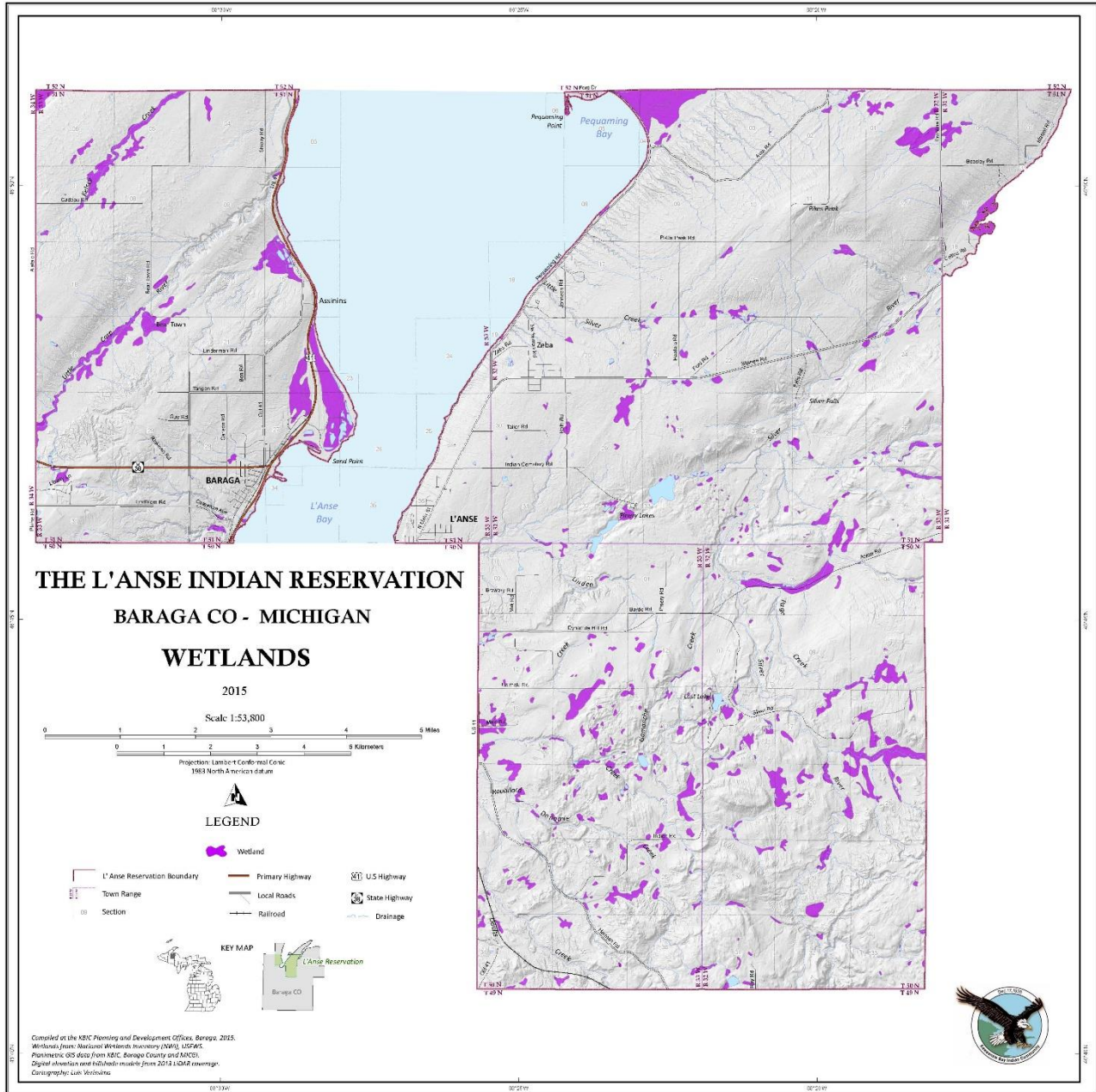
Map of KBIC L'Anse Indian Reservation, Home Territory, and 1842 Treaty Territory

The L'Anse Indian Reservation consists of approximately 59,000 acres, which is heavily forested. This is a water-rich community, with approximately 23 miles of Lake Superior shoreline, over 200 miles of streams and rivers, and close to 5,000 acres of inland lakes and wetlands. These diverse habitats sustain a healthy population of fish, wildlife, and plant species. In addition to recognizing our Treaties with the Federal Government, KBIC honors the First Treaty with all orders of creation, which includes obligations and connections to the natural environment.



Map of Forest Cover Types on the L'Anse Indian Reservation

The people of KBIC have a long and deep place-based cultural connection with water and wetlands and embrace the role of nurturing, protecting, and healing the natural environment. Wetlands are highly productive ecosystems that provide a number of gifts for both human and more-than-human communities, including pollution filtration, nursery habitat for fish and wildlife, and flood control during storm events or spring snow melt. For the Ojibwa, wetlands are often referred to as ‘living medicine cabinets’, providing habitat for culturally significant plant species. Importantly, in the Ojibwa language, the words for bog (mashkiig), swamp (waabashkiki) and medicine (mashkiki) are similar in origin, revealing the connection between different types of wetland ecosystems and the importance of wetlands for medicinal plants (KBIC Cultural Teachings).



Wetland Resources of the L'Anse Indian Reservation

Wetlands are one of the most important natural resources, playing unique roles and serving many important ecological, environmental, and cultural functions, which contribute to the overall health and wellbeing of the environment and all life. Given the special characteristics, functional relationships, and cultural importance of wetlands, as well as emerging threats (including direct and indirect impacts from climate change), a special program for monitoring and assessment is needed to maintain wetland health, productivity, and to prevent loss or degradation of wetlands across the landscape.

The KBIC Natural Resources Department (NRD) has spent a significant amount of time and funding establishing a baseline for the quality, quantity, and extent of the wetland resources of the L'Anse Indian Reservation and surrounding area. In addition to gathering biological data, a community survey was conducted in 2018 to better understand the uses of and values held for wetlands by KBIC members. Results of this survey are summarized in a separate report and can be made available upon request. Wetlands are also addressed in a number of existing guidance documents including the Wildlife Stewardship Plan, Forest Stewardship Plan, Hazard Mitigation Plan, Integrated Resource Management Plan, and Climate Planning documents currently under development. Other projects supporting monitoring and protection/restoration of wetlands include those focused on manoomin, or wild rice. These projects gathered water, pore water, and sediment quality data. A larger *Manoomin Cultural and Ecosystem Characterization Study* funded through NOAA provides a template for understanding non-monetary ways of valuing wetlands. A significant step forward for KBIC was the hiring of a full-time Wetland Specialist in 2021 to continue to build capacity for long-term wetland monitoring and assessment.



*Pictured above and to the right:
NRD staff and contract botanist
conducting wetland plant surveys in
2017*

PROGRAM GOALS AND FRAMEWORK

Acknowledging that wetlands are ecologically diverse habitats, that the surrounding landscape directly influences wetland quality and distribution, and that protection and restoration of these unique ecosystems is vital to the existence of many plants and animals on which KBIC membership depends, the overall goals of the KBIC WPP are to:

1. Enhance knowledge of wetland extent and condition to deepen our awareness of the ecological services wetlands provide
2. Identify threats to wetlands to improve protection, conservation, and restoration efforts
3. Ensure no net-loss of wetlands.

The U.S. EPA Core Elements Framework (CEF) was used in developing the KBIC WPP. The CEF defines four Core Elements of a comprehensive wetlands program:

1. Monitoring & Assessment
2. Regulatory Activities
3. Voluntary Restoration & Protection
4. Water Quality Standards for Wetlands

Goals, objectives, actions, and a tentative timeline are detailed in the following sections of this document.

PROGRAM PLAN

Core Element 1: Monitoring & Assessment

From 2017 through 2021, the KBIC Natural Resources Department (NRD) collected water quality, sediment, vegetation (including aquatic), macroinvertebrate, and wildlife data in approximately 40 wetland ecosystems following various methodologies. The results and lessons learned from these baseline data collection activities will guide the development of a KBIC Wetlands Monitoring Strategy (in progress). This document details the KBIC Wetlands Program monitoring goals, objectives, and activities to be completed over the next five (5) years. Future monitoring and assessment needs are dependent upon adopting and implementing a long-term, sustainable wetlands monitoring program.

The goals, objectives, and actions related to Monitoring and Assessment are outlined below.

Goal: Enhance knowledge of wetland extent and condition to deepen our awareness of the ecological services wetlands provide

Objective: Establish and implement a wetlands monitoring program following the KBIC Wetland Monitoring Strategy

Action: Monitor wetlands as outlined in the KBIC Wetlands Monitoring Strategy					
Activity	2023	2024	2025	2026	2027
Seek and apply for funding opportunities to implement and sustain a tribal wetland monitoring and assessment program			X	X	

Collaborate with tribal, state, and federal wetland resource partners to identify mutual data needs and uses, shared goals and objectives, and program decisions and environmental outcomes resulting from a wetland monitoring and assessment program.	On-going				
Conduct rapid assessments	X	X	X		
Survey vernal pools	X	X		X	X
Conduct wetland vegetation surveys	X	X	X	X	X
Conduct water quality sampling	X	X	X	X	X
Develop geospatial resources based on new data collected	X	X	X	X	X
Research and incorporate methods to gauge the effects of climate change on tribal wetlands and their associated resources.	X	X	X	X	X
Research and incorporate methods to steward tribal wetlands and associated resources in regards to any potential climate change effects.	X	X	X	X	X
Conduct Wetland Ecosystem Valuation if applicable and beneficial, and when resources allow.					X

Core Element 2: Regulatory Activities

Until recently, KBIC has not had a position within the NRD focused on wetlands monitoring. NRD staff in the wildlife, water, and/or Great Lakes/Lake Superior programs completed monitoring of wetlands and/or participation in wetland related regulatory issues. Currently, regulatory actions pertaining to wetlands within the L’Anse Indian Reservation are addressed in partnership with ACOE. When coastal wetlands are in question, the Michigan Department of Environment, Great Lakes, and Energy or the Michigan Department of Natural Resources may be involved.

Goal: Identify threats to wetlands to improve wetland protection, conservation, and restoration efforts

Objective: Establish wetland boundaries as a foundation for future restoration, protection, conservation, and possible permitting

<i>Action: Identify extent/boundary of wetlands within the L’Anse Indian Reservation</i>					
Activity	2023	2024	2025	2026	2027
Delineate wetlands following ACOE protocols	X	X	X		
Participate in wetland permit reviews and on-Reservation investigations with ACOE and MDEGLE staff	On-going				
Develop wetland mitigation guidelines that reflect KBIC values associated with wetlands					X

Core Element 3: Voluntary Restoration & Protection

Compared to the other Great Lakes basins, the Lake Superior basin has many intact, almost pristine ecosystems. The approach to stewardship within the Lake Superior basin often focuses on protection instead of restoration after degradation has occurred. However, KBIC is aware of and

continues to address issues such as legacy contamination from point-sources that have impacted both land and water resources. KBIC is also concerned about non-point source runoff, habitat alteration and fragmentation, introduced species, changes in land use within a watershed, and changes in the quantity and flow of water. In addition, changes in seasonal weather patterns, increases in extreme weather events, changes in Lake Superior ice cover and water levels, change in abundance and distribution of coastal wetlands, loss of native plant and animal species, and increase in non-native and invasive species are existing impacts of climate change on wetland ecosystems.

To the extent possible, emphasis is placed on protection of intact ecosystems over restoration once systems have been altered and ecological and functional values have been lost. Restoration efforts will be evaluated on a site-specific, case-by-case basis.

Goal: No net loss of wetlands within the L'Anse Indian Reservation

Objective: Identify and collect information related to wetlands and rare, vulnerable, and culturally significant species that rely on wetlands

Action: Develop a database of wetlands and wetland resources to facilitate voluntary restoration and protection					
Activity	2023	2024	2025	2026	2027
Improve understanding of cultural practices that depend on wetlands	X	X			
Develop geospatial resources, including mapping historic extent of wetlands			X	X	X
Wetland outreach and education through social media, NRD website, collaborations, and partnerships	On-going				
Develop recommendations for wetland stewardship actions to be shared with other KBIC land management Departments	On-going				
Research and incorporate methods to manage tribal wetlands and associated resources in regards to any potential climate change effects.	X	X	X	X	X

Core Element 4: Water Quality Standards for Wetlands

The Keweenaw Bay Indian Community was granted Treatment as a State (TAS) status for Water Quality under §518(e) of the Clean Water Act (CWA) on April 21, 2020, by the Environmental Protection Agency (EPA). TAS permits KBIC to administer a water quality standards (WQS) program for KBIC's L'Anse Indian Reservation under CWA §106, CWA §303 and the certification program under CWA §401. KBIC is currently in the process of developing and seeking approval of WQS, however, standards specific to wetlands are not included at this time. Wetlands are currently included in the draft WQS in the following locations: Definitions, Designated Uses, and Outstanding National Resource Waters. Wetlands are also addressed in sections and protections related to wild rice waters.

At this time, there are no specific goals or objectives related to the development of water quality standards for wetlands on the L'Anse Indian Reservation. Focus remains on developing a comprehensive Water Quality Protection and Management Program as outlined in the KBIC Surface Water Quality Monitoring Strategy (2020-2025). However, over the next 5 years, KBIC will review EPA and other resources relevant to the development of wetland water quality standards. This will include the *Program Building Activities Menu* found at the link below.

https://www.epa.gov/sites/default/files/201607/documents/program_building_activities_menu.pdf

PARTNERSHIPS AND FUNDING

A number of partners and funding sources have supported projects related to wetland monitoring and developing a KBIC wetland monitoring program/strategy. The main sources of funding have been/continue to be the Bureau of Indian Affairs (BIA), Environmental Protection Agency (EPA), and the Administration for Native Americans (ANA). Trainings have also been offered through other Tribal communities including wetland monitoring strategies (2013) and wetland delineation training supported by the ACOE (2019). KBIC hopes to continue to receive financial and technical support from the aforementioned agencies. Academic institutions such as Michigan Technological University, Central Michigan University, and University of Minnesota have also conducted studies in the area related to wetlands and wild rice. Several of these efforts have been collaborative with shared data and resources. In the future, KBIC would like to expand partnerships to include other Tribal agencies/communities, Michigan Department of Natural Resources, Michigan Department of Environment, Great Lakes, and Energy, Great Lakes Indian Fish & Wildlife Commission, National Oceanic and Atmospheric Administration, Michigan State University Extension, and Ducks Unlimited.



Drone image of a portion of the Sand Point system, L'Anse Indian Reservation. This area is home to a variety of wetland types including spruce/tamarack bog, coastal fen, and open marsh.