

# Integrated Resource Management Plan (IRMP) *for the Keweenaw Bay Indian Community*

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# Acknowledgements

We first acknowledge that *Nayaano-nibiimaang Gichigamiin* (“The Five Freshwater Seas,” the Laurentian Great Lakes) bioregion is the ancestral, traditional, and contemporary lands and waters of numerous Indigenous nations, including the Anishinaabeg—the Three Fires Confederacy of Ojibwe, Odawa, and Potawatomi peoples. Indigenous peoples are the region’s original caretakers and knowledge keepers, and we recognize their centuries-long relationships as the foundation for governance of the world’s largest system of freshwater that continues into the present day. We acknowledge the more-than-human worlds who call this region home, and have done so since time immemorial.

We gratefully acknowledge the thoughtful contributions from KBIC community members and resource managers who were instrumental in the development, update, revision, and writing of this newly revised IRMP over the course of many years. The IRMP Interdisciplinary Team included a Working Group, Reviewers, Collaborators and Contributors consisting of Natural Resource Department staff, KBIC government staff, KBIC community members, and WUPPDR and Michigan Tech researchers and writers. Funding for this work was provided by the Bureau of Indian Affairs. Miigwech.

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# Important Terms

*Aki* (the earth)

*Anishinaabe* (the people)

*Asemaa* (tobacco)

*Manoomin* (wild rice)

*Nayaano-nibiimaang Gichigamiin* (the Great Lakes)

*Nibi* (water)

*Ojibwe Gichigami* (Lake Superior)

*Ojibwemowin* (the language of the Ojibwa)

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# 1. An Overview and Guide to the IRMP

## 1.1. Vision, Background, and Purpose

***Our Vision:*** To lead, learn, and live in a good way while honoring our ancestors and strengthening relationships with all beings; we prioritize the protection and restoration of the lands, waters, and resources of the Keweenaw Bay Indian Community for Seven Generations so that all may flourish and thrive.

***Background:*** The Keweenaw Bay Indian Community (KBIC) is dedicated to the long-term protection of natural resources, healthy ecosystems, and the preservation of Ojibwa culture - this dedication has contributed to our people's resiliency for many generations. As part of our commitment, climate change is recognized as a priority to current natural resource management and environmental protection planning initiatives. As a result, the 2023 KBIC Integrated Resource Management Plan (IRMP) has been updated to integrate climate change concerns and actions as part of our governance decisions and practices. Following guidance from Tribal Council in Resolution KB-016-2015, the KBIC Natural Resources Department (NRD) secured funding from the Bureau of Indian Affairs (BIA) to support this initiative so that we may strengthen Community capacity to adapt within evolving climate change effects as identified as a priority in the KBIC Strategic Plan.

***Purpose:*** The purpose of the IRMP is to support and guide integrated planning, stewardship and management practices across KBIC government community offices that ensure the restoration and protection of natural resources within our homelands. Natural resources are also considered cultural resources and/or treaty resources. Treaty resources are essential sources of life contributing to the livelihoods of our people and relatives, including the winged ones, and those with fins, the two-, four-, and many-legged, and our many relations with roots.

## 1.2. Synopsis

An integrated resource management plan (IRMP), as defined in Title 25 of U.S. Code, is (2023): the plan developed pursuant to the process used by tribal governments to assess available resources and to provide identified holistic management objectives that include quality of life, production goals and landscape descriptions of all designated resources that may include (but not be limited to) water, fish, wildlife, forestry, agriculture, minerals, and recreation, as well as community and municipal resources, and may include any previously adopted tribal codes and plans related to such resources. Once developed by a Tribal Nation, IRMPs are approved by the Bureau of Indian Affairs (BIA) regional director of the BIA region where the Tribe is located (DOI 2023).

We expand on this definition and understand each IRMP term to mean the following:

***I.R.M.P.***

- ***Integrated*** ~~ ***interwoven, interconnected, interdependent, cooperative***
- ***Resource*** ~~ ***gift, abundance, blessing, source of life***
- ***Management*** ~~ ***stewardship, care, nurturing, restoration***
- ***Plan*** ~~ ***hope, vision, collaborative, adaptive***

The KBIC IRMP begins with the section ‘Who We Are,’ to establish our people’s inherent, long held rights and responsibilities within the Lake Superior region. The next sections that follow are organized by KBIC governance areas, specifically focused on the following:

1. Strengthening Ojibwa Culture
2. Leadership and Law Making
3. Land Stewardship
4. Protecting Health and Wellbeing, Safety, and Infrastructure

Each of the four governance area sections begins with an overview of the primary community offices, committees, and/or boards that serve within the particular governance areas, and the importance of integrated resource management and planning within these areas.

For each community office within KBIC governance areas, a brief **DESCRIPTION** of the mission/goal/purpose statement and/or its history, followed by the primary responsibilities and composition; for some sections, internal and/or external partnerships are noted. Then, a statement of the specific **PROGRAMS/ACTIVITIES** is provided, followed by **PRIORITY CONCERNS** for natural, cultural, and treaty resources and/or concerns due to climate change. Some programs include **ACCOMPLISHMENTS**, and each include proposed **OBJECTIVES** and timelines, and recommended **ACTIONS**. Finally, each of the four governance areas closes with a summary of integrated resource management planning and/or connections to Ojibwa knowledge that inform IRMP practices.

### 1.3. Recommended Use

This KBIC IRMP (2023) continues to honor the intentions and practices of the original IRMP developed in 2003. Continuing its established foundation, this IRMP is intended to be used as a guide specifically for building and strengthening KBIC governance for current and future generations. Recommended uses include, but are not limited to, 1) support for policy development and implementation, 2) guidance for creating and expanding programs, 3) utilized as rationale for funding opportunities and capacity building, 4) building and continuing

educational and outreach initiatives, and 5) enhancing collaboration across KBIC departments as well as with external partners and co-stewards.

## 1.4. Future Amendments, Reviews, and Revisions

As a living document, this IRMP will remain in effect until further notice by the KBIC Tribal Council. The process for making changes to this IRMP (2023) will take place through an Amendment process as well as annual Reviews. Future updates and/or revisions, comprehensively and/or in part, are also dependent on future changes to the KBIC Strategic Plan.

The process for future changes through an Amendment requires KBIC Tribal Council approval. When an Amendment is needed, the proposed change(s) must be brought before Council. Once approved, the KBIC Natural Resources Department is responsible for updating the document, disseminating the updated version across the KBIC government, and linking the updated version on the Department website.

This IRMP will be reviewed annually between the months of May and June. Results of the review process will be brought to the Tribal Council for review and approval no later than the end of June. Annual reviews will focus on the specific objectives proposed across and within the KBIC governance areas and community offices. The KBIC Natural Resources Department will serve as the primary lead and facilitator for annual IRMP reviews.

At the discretion of the KBIC Tribal Council, future changes and/or updates to the KBIC Strategic Plan will also guide IRMP update and revision needs. The KBIC Natural Resources Department will serve as the primary lead and facilitator for the required changes due to any changes to the KBIC Strategic Plan.



## 2. Who We Are

### 2.1. Since time immemorial

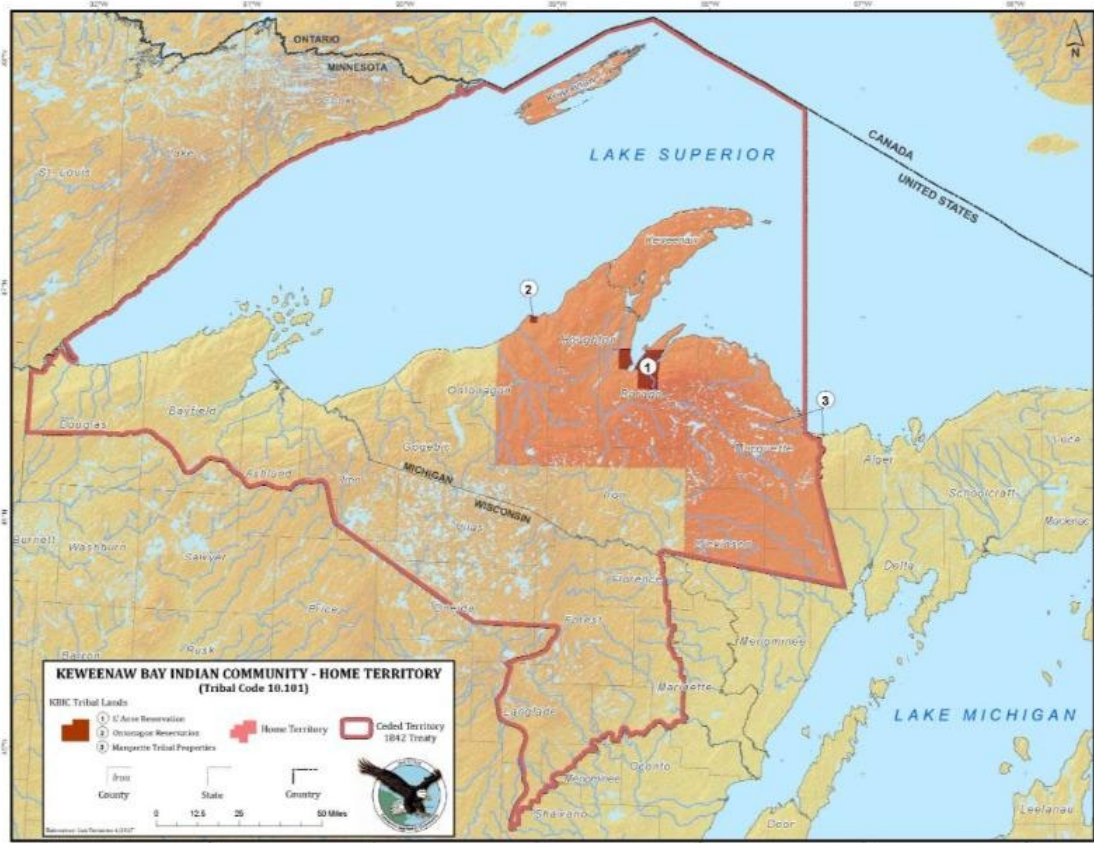
We understand our reciprocal obligations to place, people, and life, because many Indigenous Nations have cared for *Nayaano-nibiimaang Gichigamiin* (the Great Lakes) since time immemorial. These responsibilities have been and continue to be shared among all citizens. Our stewardship principles are informed by Anishinaabe knowledge systems passed from one generation to the next. Through mutual respect, we aim to live in reciprocity with living beings of many kinds. As it has always been, Anishinaabe teachings are gained from being in relationship with the lands and waters, attentive seasonal observations, and day to day interactions with our more-than-human relatives.

*Nayaano-nibiimaang Gichigamiin* is and has always been governed by law. The foundation for KBIC sovereignty is rooted in the First Treaty, also known as Sacred Law, Original Instructions, and the Great Laws of Nature (Johnston 1976). The First Treaty is the longstanding agreement between the Creator and all orders of creation, including humans, that all beings are relatives of one another and will be interdependent upon one another. All must honor, respect, and care for each other. These obligations are timeless across generations. Human nations are one sovereign among many sovereigns—fish nations, plants and tree nations, and many other wildlife beings are sovereigns as well. We are a collection of the sources of life that have sustained us since time immemorial, including all sky beings. The waters are gifters of life, and we exchange breath with the trees as they exhale and we inhale. We care for our teachers, the plant nations, the fish and wildlife nations, and in reciprocity, they share their wisdom and medicines with us throughout the seasons. Being a sovereign requires diplomacy between nations, and that is Sacred Law; each nation acknowledges and has respect for one another's autonomy.

Often described in terms of authority and power, sovereignty centers on autonomy by the KBIC, often articulated as self-determination and self-governance. Collective strength is only realized by sustaining diplomacy with other sovereigns. Indigenous agreements between Nations were common practice prior to the establishment of the U.S. and Canada. In *Nayaano-nibiimaang Gichigamiin*, the Haudenosaunee Six Nations Confederacy includes Mohawk, Oneida, Onondaga, Cayuga, Seneca, and Tuscarora Nations; and the Anishinaabeg Three Fires Confederacy includes Ojibwa, Odawa, and Potawatomi peoples. Indigenous Nations remain rights holders, affirmed by a series of 18th- and 19th-century treaties negotiated with federal governments. In exchange for millions of acres of ceded territory, the Anishinaabeg reserved their existing rights to hunt, fish, and gather, and secured “usual privileges of occupancy” throughout the land cession (Treaty With the Chippewa 1836, 1837, 1842, 1854). Indigenous sovereignty is inherent—sovereignty was not granted to Indigenous Nations by the U.S. or

Canada. In fact, federal governments recognized Indigenous Nations as sovereigns—treaties can only be established between sovereign Nations.

Revitalizing shared *Nayaanibiimaang Gichigamiin* governance and stewardship has been the work of Indigenous Peoples. Today, it remains an ongoing commitment to ensure that Indigenous rights and responsibilities are protected for seven generations to come, and simultaneously, to honor the past seven generations, including our treaty makers.



**Figure 1.** Keweenaw Bay Indian Community - Home Territory, Upper Peninsula of Michigan. Source map created by Luis Verissimo, KBIC (2016)

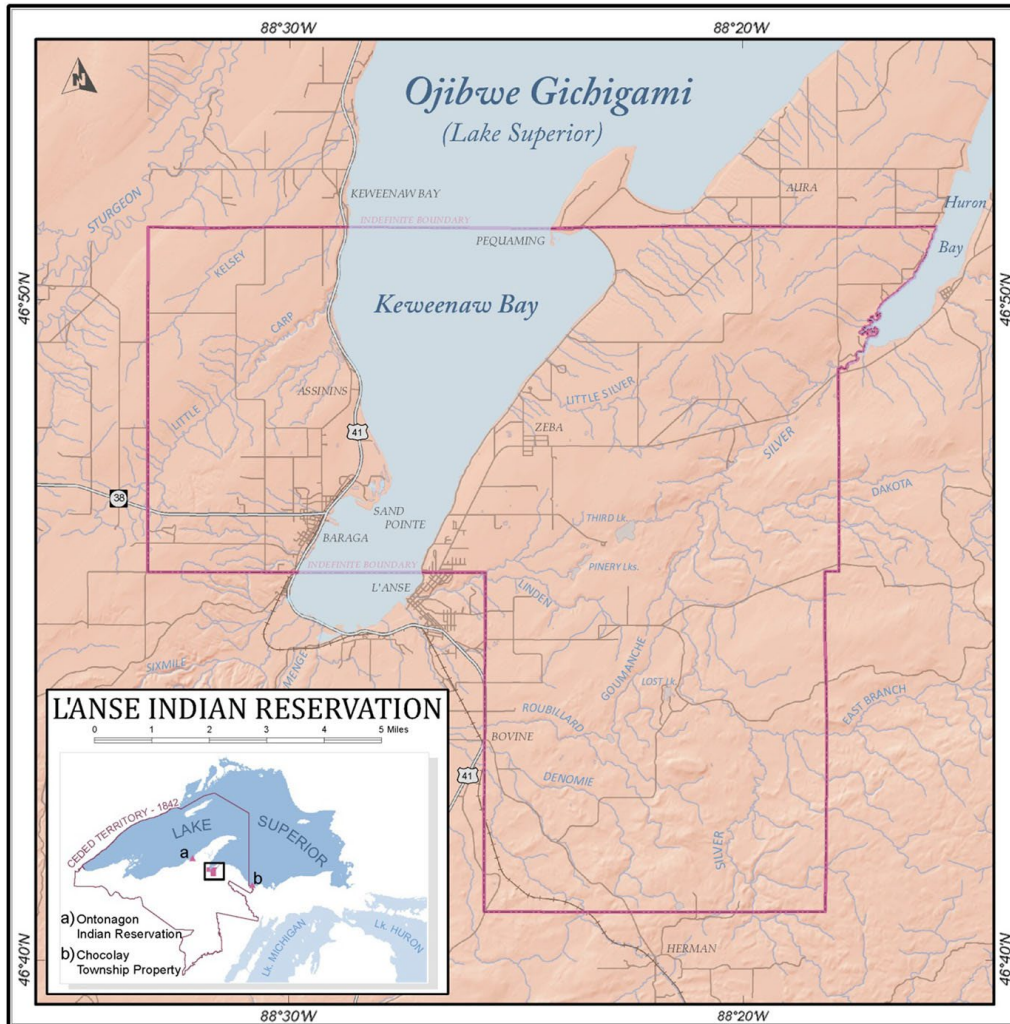
## 2.2. Keweenaw Bay Indian Community

We are an Ojibwa Tribal Nation known as the Keweenaw Bay Indian Community Lake Superior Band of Chippewa Indians (hereafter KBIC or “Community”). Our homelands are located along shores of Lake Superior in the present-day Upper Peninsula of Michigan (see Figure 1). Our landscape is an interconnected network of rivers, streams, lakes, and wetlands, most of which flow into *Ojibwe Gichigami* (Lake Superior). As such, *Nibi* (water) is integral to the lives and livelihoods of our Community. A subsistence lifeway has sustained Ojibwa people for

generations, thus we continue to engage in hunting, fishing and gathering across the watershed landscape. Because of our dependence, the people of KBIC have relationships with the water and lands and retain many place-based responsibilities. We embrace our role as stewards so that we may maintain, protect, and restore healthy relationships within the Lake Superior ecosystem.

KBIC includes L'Anse Indian Reservation lands in Baraga, Marquette, and Ontonagon Counties, as well as other lands owned or held in trust within the western Upper Peninsula of Michigan; we also retain obligations to parts of the Anishinaabe migration route as described in the Creation Story. The L'Anse Reservation in its entirety encompasses nearly one third of the Baraga County area and small acreages of Ontonagon and Marquette Counties. Our landscape is considered rural and isolated with low population density.

KBIC is the successor in interest to both the L'Anse and Ontonagon Reservations. The L'Anse Reservation is KBIC's primary land base and is located wholly within Baraga County. Located within five watersheds that are either wholly or partially within the L'Anse Reservation, the region comprises large areas of forested land, diverse aquatic and terrestrial plants and wildlife, and vast lake and river systems with more than 160 tributaries, 80 miles which are rivers, and approximately 19 miles of southern Lake Superior shoreline (Sweat and Rheaume 1998). Of the approximately 55,000 acres within the L'Anse Reservation, about 3,000 acres are wetlands, consisting of numerous small wetlands, pond edges, and lake borders in the community. The Ontonagon Reservation is much smaller and has no permanent residences. It is approximately 3,000 acres in size and contains about 2 miles of Lake Superior shoreline and numerous wetland areas.



**Figure 2.** *Ojibwe Gichigami*, her tributaries, and treaty-established territories of the Keweenaw Bay Indian Community. Lake Superior's Keweenaw Bay, Upper Peninsula of Michigan. *Source* map created by Luis Verissimo, KBIC (2016)

### 2.3. Contemporary Governance

In December 1936, the KBIC achieved federal recognition upon adoption of their Constitution and By-laws, making KBIC the first federally-recognized Indian tribe, and retaining the largest land base, in the State of Michigan (KBIC 2010). It was at this time that the Community was established as a legal and political entity, organized in accordance with the provisions of the U.S. Indian Reorganization Act (1934).

Strengthening since our 1936 federal recognition, the KBIC government has grown substantially. Contemporary governance includes an elected 12-person Tribal Council that provides Community leadership, and establishing a Tribal code of Law necessary for our people's wellbeing. These activities are supported by KBIC enterprises and other economic development initiatives, and guided by the Attorney's Office and Judicial system as well as the Gaming

Commission. In the past several decades, KBIC leadership has initiated many departments, committees, boards, and other programs to ensure the strengthening of Ojibwa culture, land stewardship, and the protection of health and wellbeing, safety, and infrastructure.

Significant to Ojibwa contemporary governance, KBIC treaty rights were reaffirmed by the Supreme Court of Michigan in the *People v. Jondreau* decision (1971). This ruling set a national precedent for contemporary legal recognition by other federally recognized tribes in the United States (Wilkinson 2005). Moreover, the *Jondreau* decision served as a legal basis for the further assertion of KBIC authority for shared natural resource management with federal, regional, state, and local partners, including the restoration and protection of Lake Superior ecosystems (Gagnon 2016).

Following the *Jondreau* decision, the KBIC sought to more holistically understand the management of treaty resources within the context of existing state and federal governments. As a result, in the late 1980s, the Community hired its first biologist, and soon thereafter, constructed the fish hatchery facility that remains in operation today. Also, in 1989, KBIC became the 11th member tribe of the Great Lakes Indian Fish and Wildlife Commission (GLIFWC) whose work ensures the exercise of off-reservation treaty rights within ceded territories (1836, 1837, 1854, and 1855 Treaties With the Chippewa) across present-day Michigan, Wisconsin, and Minnesota (GLIFWC 2010). KBIC hatchery operations further expanded into fisheries and water quality programs, and in 1999 the KBIC Tribal Council established the KBIC Natural Resources Department (NRD), to which it delegated primary responsibility for natural resources programs (see Gagnon 2016 for more details). Today, NRD programs, staff, and partnerships are inclusive of both environmental health and natural resources sections for air and water quality, brownfields and other waste management initiatives, wildlife and wetland management, and a growing native plants program for plant and pollinator relations and reestablishing healthy habitats for many. Finally, due to the Great Lakes Restoration Initiative (2010) that began in 2010 by federal mandate, additional remediation and restoration programs are implemented across our homelands, including Sand Point.

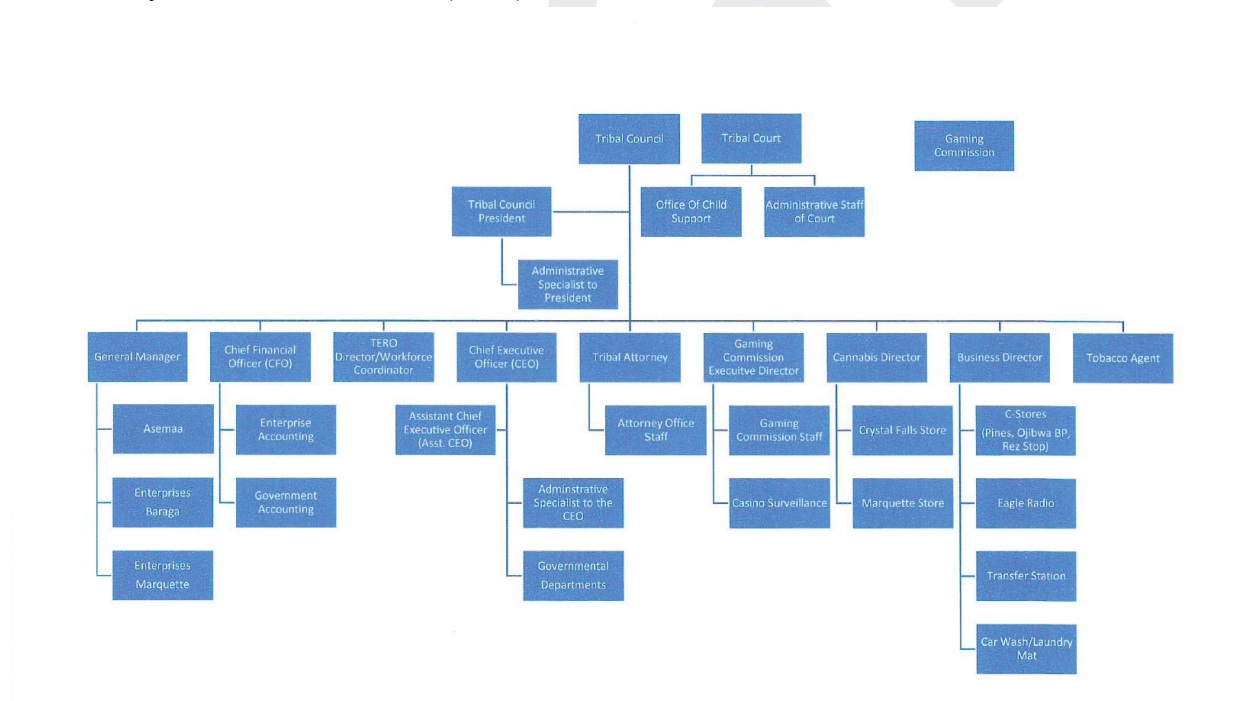
## 2.4. Governance Jurisdictions and Organization

The territorial jurisdiction of KBIC includes all lands within the exterior boundaries of the L'Anse Federal Indian Reservation and all lands held in trust for the Tribe by the United States of America. Pursuant to the Treaty of 1854 with the Lake Superior Chippewa, the Tribe retains territorial jurisdiction over all ceded territory, as defined by this Treaty that is traditionally the territory of the KBIC, for the purposes hunting, fishing, trapping, and gathering. The KBIC exercises civil jurisdiction over all actions which arise where personal jurisdiction is held over one party and arise within the territorial jurisdiction of the Court. The Tribe may regulate through taxation, licensing, or other means, the activities of non-members who enter consensual relationships with the Tribe or its members, such as in commercial dealings, contracts, leases and

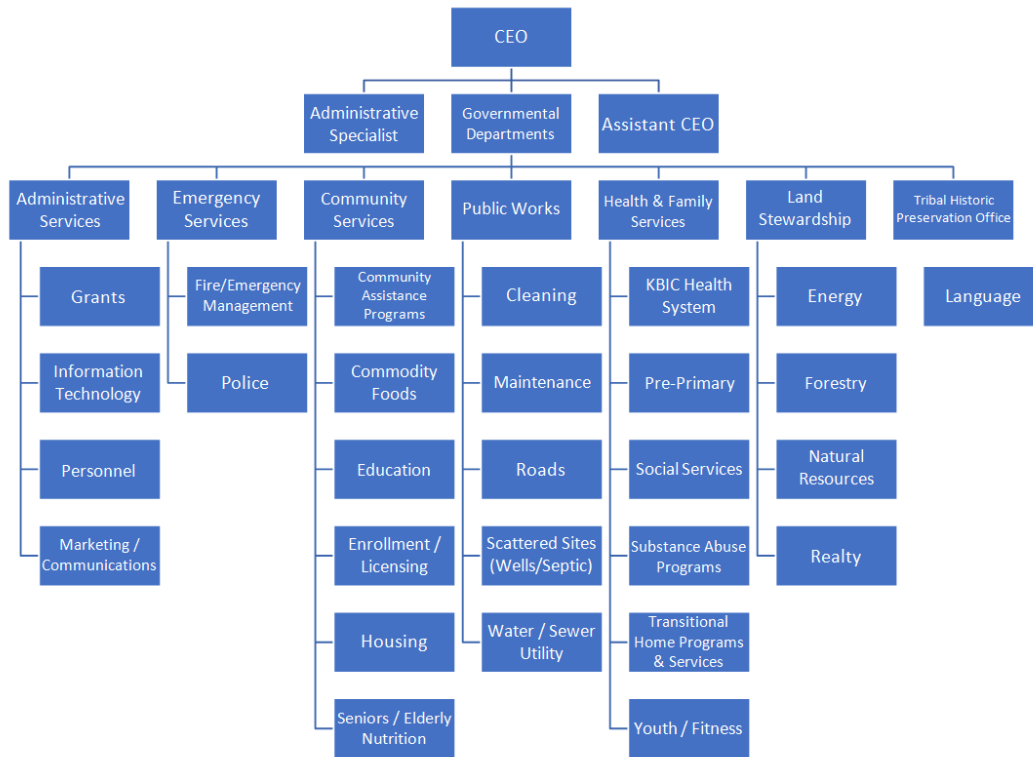
other arrangements. Tribes also retain inherent power to exercise civil authority over the conduct of non-Indians on fee lands within the Reservation when that conduct threatens or has some direct effect on the political integrity, the economic security, or the health and welfare of the Tribe.

KBIC has an inherent interest in the protection and promotion of the health, safety, and welfare of its people and its natural resources. KBIC is concerned with the development and implementation of laws and regulations that protect Tribal resources and the quality of life for future generations. The KBIC considers it unconditional that the Lands created by the Treaty of 1842 are forever the territory of the KBIC, and an adulteration of this environment of an ungoverned use of its resources has the potential to cause serious harm to the Tribe. The KBIC holds the authority to regulate, advise, and consult non-Indian entities to protect Tribal resources as well as the absolute authority to regulate Indians within the same. The Keweenaw Bay Tribal Conservation Department was developed to enforce and ensure compliance of the Keweenaw Bay Indian Community's Tribal Code of Law.

Below, Figure 2 illustrates the Current Government Organization of the Keweenaw Bay Indian Community (2023), and Figure 3 is the Current CEO Organization of the Keweenaw Bay Indian Community Government Offices (2023).



**Figure 3:** Current Government Organization of the Keweenaw Bay Indian Community (2023).



**Figure 4:** Current CEO Organization of the Keweenaw Bay Indian Community Government Offices (2023).

## 2.5. Governance Focus Areas

The Keweenaw Bay Indian Community Tribal Council and Community Offices protect the sovereignty of our tribe, provides governance and services to members, and manages the business function of the tribal community. Specifically, KBIC governance centers on 1) Advancing Member Well Being, growing vitality for its economy and people; 2) Providing for Ourselves, being self-sufficient to sustain our way of life; and 3) Prioritizing Activities to Benefit Our Next 7 Generations, with every opportunity our community has. The KBIC Government Mission Statement is as follows.

*To provide exceptional services for our membership; a safe, positive work environment for employees and sustained economic prosperity, while protecting our sovereignty and preserving our culture and natural resources for future generations.*

The next four sections of the KBIC IRMP provides a descriptive overview of specific priority governance areas and our contemporary integrated resource management and planning for the Keweenaw Bay Indian Community: 1) Strengthening Ojibwa Culture, 2) Leadership and Law Making, 3) Landscape Stewardship, and 4) Protecting Health and Wellbeing, Safety, and Infrastructure.

## 3. Strengthening Ojibwa Culture

### 3.1. Overview

Ojibwa culture is the foundation for KBIC governance, and as such, is essential to integrated resource management planning. Ojibwa culture strengthens KBIC governance, and moreover, contributes to our identity as a self-determined people.

The KBIC maintains cultural resources that can be described as internal and external resources, and the continuance of our collective cultural resources remains a high priority. Internal cultural resources are within each of us and include our traditional beliefs and practices passed down from our ancestors. We may not always be aware or be able to articulate in our daily lives, but our internal resources are who we are, how we interact with others, and other Ojibwa teachings that are reflected through our actions. External cultural resources are the lands and waters we are a part of, significant for the place-based relationships and practices of our people; these include location sites that are both on and off the reservation. Some examples include burial grounds and modern cemeteries at Sand Point, Assinins, Indian Cemetery Road, and others. Annual Pow Wow activities, the Harvest Feast, and other seasonal ceremonies and teachings are also demonstrations of Ojibwa culture. Cultural resources can also be seen through seasonal treaty rights practices such as our specific gathering areas, fishing and hunting camps, *manoomin* (wild rice) beds, maple sugar bushes, forest and wetland medicinal areas, and other harvest processing and living areas.

The explicit care and stewardship of KBIC's cultural resources involve various KBIC entities and, in alphabetical order, some are outlined below:

- Cultural Committee
- Education
- Tribal Historic Preservation Office (THPO)

Cultural resource responsibilities are diverse such as monitoring and inventorying resources, cultural leadership, sharing Ojibwa teachings, and engaging in issues which may harm or impact cultural resources in a negative way. Overall, these entities contribute to strengthening Ojibwa culture for the benefit of current and future generations.

### 3.2. Cultural Committee

Beginning with a **DESCRIPTION**, the purpose of the KBIC Cultural Committee is to advance, promote, educate, enhance, identify, encourage and preserve the Ojibwa culture, language and traditional activities, materials and areas for the benefit of future generations including acting as



a liaison and submitting recommendations to the Tribal Council. The Committee is responsible for defending all ancestral burial and traditional cultural properties from disinterment or desecration. The KBIC Cultural Committee derives its authority from a Tribal Council [Resolution adopted in 2005](#). They implement strategic planning using a written structure and bylaws, and members serve terms with defined lengths.

The **PROGRAMS/ACTIVITIES** provided by the Cultural Committee for and within our Community include, *Ojibwemowin* (the Ojibwa language) support, a traditional clinic and medicine, organizing regalia making for pow wow and other traditional dress, and supporting trauma healing and cultural learning and acceptance. The Committee also works to recognize and embrace new responsibilities of elders specifically to ensure the revitalization and preservation of Ojibwa teachings and practices for current and future generations. Importantly, the Committee operates as a resource for KBIC departments and members to call upon when in need of cultural guidance, traditional harvesting, and other needs such as providing support for feasts, ceremonies, and funerals. They frequently partner internally with the KBIC Health System and Natural Resources Department, periodically advise other KBIC Committees and work across all KBIC governance areas. Finally, the Cultural Committee is sometimes called on to advise external partnerships, including with the Keweenaw Historical Society and Michigan Technological University.

The **PRIORITY CONCERNS** noted by the Cultural Committee are **the revitalization of *Ojibwemowin*** within KBIC, and a number of concerns related to **current and future access to diverse habitat areas** for gathering food and medicines. Not only is habitat loss a primary concern but also the loss of plant community diversity, and in particular, the loss of diverse habitat areas that result in different plant communities in different kinds of habitats. For example, areas such as wetlands and forests are known to foster plant community diversity, and a variety of plant communities thrive in different kinds of wetlands and forest types. Additionally, the Cultural Committee is concerned by how a changing climate will affect traditional medicines and their habitats. The wellbeing of the Community depends on protecting diversity across the region’s ecosystems and within specific kinds of habitat areas.

Known resource concerns are listed below alongside the ecosystem and/or social issues related to specific cultural resources. Climate change concerns potentially connected to, or contributing to, are highlighted in yellow.

| <b>Cultural resources of concern</b> | <b>Ecosystem &amp;/or phenology concerns</b>             | <b>Other concerns</b>                                  |
|--------------------------------------|--|--|
| Ojibwemowin                          | Impacts to traditional ecosystem knowledge and practices | Traditional teachings and practice are at risk of loss |

|  |  |  |
|--|--|--|
| Medicines and harvesting/foraging          | Shortages in some plants; Habitat decreases; collection times are changing   | Strategic timber harvesting impacts  |
| Cranberries, blueberries                   | stamp sands at Sand Point  | Loss of traditional harvesting places  |
| Fish and fishing                           | Mercury levels in certain lakes and fish; stamp sands in the Keweenaw; low walleye numbers; disruption in spawning cycles (smelt, walleye); shortened and disrupted harvesting seasons | Prejudicial beliefs and behaviors by a subset of the public during spring spearing and tribal commercial fishing                                     |
| Forests, sugar maple trees, and sugar bush | Decreases in maple sap production; shortened sap seasons; wildfire long-range impacts contributing to increases in air quality index at unhealthy levels                               | Forest management plan does not incorporate traditional sugar bush practices into its strategic harvesting plan; Strategic timber harvesting impacts |
| Wildlife and wild game hunting             | Shortages in some wild game; Habitat decreases; shortened seasons; increase in wildlife moving into towns  | Strategic timber harvesting impacts; more people are moving into wildlife habitat; the mating seasons; population decrease of some species           |
| Manoomin and propagation                   | Growth of manoomin; stamp sands at Sand Point are potentially impacting the bed  | There is little if any wild rice on the reservation  |
| Place-based relations and values           | Increased pressure on natural resources; potential for social, environmental, and political change   | New flux of residents, some climate related  |

**A Focus on Climate Concerns:**

The KBIC Cultural Committee has many climate concerns, including but not limited to, greater storm severity, extreme variances and changes in temperature and precipitation amounts (decreases in snow, rain) (weather), rapid snow melts, drought, increase in wildfire severity/occurrence (negatively affecting air quality more often), and river and lake level rises. These concerns cause additional impacts such as, stronger storms creating greater erosion along shorelines and roads (and needing more maintenance), damaging homes, forests (i.e., widow makers), and ecosystems, and stamp sands migration. Shoreline changes also cause cancellation of ceremonies. Climate changes are also affecting population densities, composition, and seasons of plants and animals which affects harvesting and for some, shortened seasons for harvesting. Insect populations are undergoing changes as well (grasshoppers, ticks, beetles, earwigs, black flies) and some are causing increased damage to forests and gardens, and/or risks to health (Lyme disease). Finally, particular seasonal cycles and timing are noticeably different, including, rapid snow melts, deer getting antlers later, plants/medicines gathering delayed, rapid fish spawnings, and fall colors take place earlier.

The **OBJECTIVES** of the Cultural Committee are many and ongoing. Two primary ongoing objectives include, 1) engaging in diverse practices to protect *Nibi* (the water) and 2) enhancing individual and Community use of *Asemaa* (tobacco). *Asemaa* is known as the traditional guide in Ojibwa culture and offering *Asemaa* is an act of respect for the land, water, and all others. Protecting *Nibi* as the lifeblood of *Aki* (Mother Earth) is a timeless obligation of the Ojibwa peoples and a shared responsibility by all human kinds. The Committee's 5- and 10-year objectives are listed below:

***5-year:***

- Inventory forest lands, both trust and simple fee, for trees and medicines (e.g., sugar maple trees)
- Map burial locations in Global Information Systems (password protected and searchable system)
- Create an elder oral history database that is digitized, indexed, and searchable
- Provide *Ojibwemowin* opportunities to adults and children
- Update trail and recreational areas to include *Ojibwemowin* signage
- Develop a Reservation Cultural Resource Protection code

***10-year:***

- Update the Forest Management Plan to include cultural areas of importance and definitions/descriptions of medicinal plants and sugar bushing areas
- Implement a Reservation Cultural Resource Protection Code

**ACTIONS** specifically recommended are the protection of diverse habitat areas and plant communities for harvesting foods and gathering medicines, and specifically, for these protections to be considered in the planning for various land use purposes (e.g., development, leasing). Other actions related to climate change are: Controlled Burns, and to Amend/Change/Review priorities, objectives, and actions as climate changes and impacts are more well known. Additional actions contributing to strengthening Ojibwa culture are as follows:

- Conduct scientific research on specific areas that are suitable for planting wild rice to discover most suitable areas for wild rice production.
- Update the strategic timber harvesting plan.
- Update the Forest Management Plan.

### 3.3. Education

Beginning with a **DESCRIPTION**, the KBIC Educational Department works to promote confident students and empower individuals to achieve their fullest potential to meet the challenges of today and the next seven generations by working together with students, families, and area schools.

The **PROGRAMS/ACTIVITIES** provided by the Educational Department include various programs and incentives in order to encourage confidence and empower students to complete their K-12 education. Tutors are accessible within the Baraga County Public Schools. Scholarships are provided for assistance with college. The Ojibwa Community Library is open to the public and provides a large selection of print and digital services as well as free membership for interested community members. This department partners internally with the Tribal Council, Education Committee, Cultural Committee, Youth Department, KBOCC, Transportation, and Health Department on pandemic related issues, and externally, with the Baraga and L'anse Area Schools.

The **PRIORITY CONCERNS** noted by the Educational Department include environmental impacts (e.g., to soil and water) and toxic substances, and decreased harvesting activities by Community members. Specifically, there is a concern that potential pollutants from mining activities now affect some people's decisions about harvesting blueberries along the Yellow Dog Plains, and a concern for the increased migration of stamp sands in the waters and on lands. Also, it was noted that many used to spend substantial time gathering throughout Zeba but currently the trails are well grown over, evidence that people are not visiting or harvesting in that area as much as they used to.

**A Focus on Climate Concerns:** The KBIC Educational Department has many climate concerns, including but not limited to, increased storm frequency and intensity (affecting boating/fishing, even from the shore), invasive species (Emerald Ash Borer - affecting cultural practice of making baskets which teaches humility and love), and drought. These climate related impacts are also affecting changes in hunting seasons (deer, fish) throughout the year. For example, the ice is not as thick which affects ice fishing access.

Climate related impacts require more time and effort by KBIC. Some projects already in the works to mitigate these impacts are Sand Point's restoration of coastal habitat (NRD, Cultural Committee), invasive species removal (NRD), and recent burning activities (Fire and Emergency Management).

The change in climate is also impacting our lunar calendar, and we may need to change the names. We have already gone from 13 to 12 moons. This illustrates that we are always evolving and the language is evolving. We are an adaptive people.

Notable **ACCOMPLISHMENTS** are included below:

- Established links between KBIC and public area schools

- *Maawndoonganan* Anishinaabe Resource Manual: Curriculum created (women-led) for teaching and learning about Michigan’s Tribal Nations that align with Michigan Social Studies Standards (Confederation of Michigan Tribal Education Departments 2021)
- Established an Educational Specialist position
- KBIC ability to pay for a student’s 3 tier program (in August 2022)

The **OBJECTIVES** of the Educational Department is to contribute to the next iteration of the KBIC Strategic Plan (last updated in 2013) to address recognized gaps in the education section. This is important as the Strategic Plan helps steer KBIC goals.

**ACTIONS** specifically recommended by the Educational Department are to create, support, and implement enhanced opportunities for KBIC K-12 education that promote and bridge Ojibwa livelihoods and ways of life, and climate change as a priority. Several opportunities require increased capacity, particularly for increased educational programming and teaching materials connecting K-12 curriculum and Ojibwa ways, and additional support for teachers, such as role models and student mentors, in our schools. The encouragement of teaching and learning engagement throughout the calendar year is especially important, particularly cultural practices of importance such as being good stewards, taking care of the land, soil, and waters, and learning more about significant KBIC livelihoods such as fishing.

### 3.4. Tribal Historic Preservation Office

Beginning with a **DESCRIPTION**, the mission of the Tribal Historic Preservation Office (THPO) is to protect and preserve all aspects of Ojibwa (Anishinaabe), also known as Chippewa, culture including the aspects of development, protecting cultural sites and artifacts, and intellectual property rights for culturally specific language and art. The Tribal Historic Preservation Office was established after the Keweenaw Bay Indian Community Tribal Council assumed the responsibilities of the State Historic Preservation Office (SHPO) in February of 2005.

THPO’s **PROGRAMS/ACTIVITIES** include monitoring, inventorying, storing, and protecting culturally significant resources. Significant work projects include Section 106 reviews and protecting on burial sites. Section 106 refers to the federal review process designed to ensure the historic properties are considered during federal project planning and execution. The advisory council on historic preservation, an independent federal agency, administers the review process with assistance from the state historic preservation office (SHPO). THPO presently archives elder interviews, books, articles, ethnographic material, and other physical resources. In order to protect culturally significant resources, some documents that are deemed sensitive are withheld from public access and display. Currently, Archives access is restricted, and to access the Archives, a written request is required. The request must state the reason for access, and what information will be gathered and utilized. The THPO internally partners with the Public Works

and the Natural Resources Department and externally partners with the National Park Service, the SHPO, Michigan Technological University, and the 12 federally recognized Tribes of Michigan, such as, Lac Vieux Desert Band of Lake Superior Chippewa Indians and the Bay Mills Indian Community.

THPO notes specific **PRIORITY CONCERNS** related to Ojibwa cultural beliefs, values, and practices, and in particular, traditions of honoring *Aki* (the earth) and only taking what we need, having respect for *Aki*, and especially, living in relationship with *Aki*.

**A Focus on Climate Concerns:** The KBIC THPO has many climate concerns, including but not limited to, shoreline erosion, and changes to forests, hunting season changes, and some medicines are harder to find and harvest. There is concern for the number of trees being harvested, and some clear cuts, which may be part of the cause for more deer to come into town.

Changes to water bodies, fish, and fishing are also a concern. Some fish that used to be in certain rivers no longer are, for example, chinook are not running in certain rivers. For Lake Superior and other lakes, ice is delayed, not coming until February and only stays for a few weeks, and whole lakes are not freezing. The length of the spearing season has decreased and timing is inconsistent. Finally, changes in climate place Wild Rice in jeopardy.

Notable **ACCOMPLISHMENTS** are included below:

- KBIC established an environmental review protocol for Reservation improvements, projects, etc., which includes clearance from the THPO.
- A database has been started, along with an oral history collection of elder's stories.

The **OBJECTIVES** of the THPO are to continue focused work on Section 106 reviews, protecting burial sites and protecting other KBIC cultural resources as needed.

**ACTIONS** specifically recommended include enhanced cultural education and an increase in cultural practices focused on relationships with and respect for *Aki*.

### 3.5. Concluding Statements

Ojibwa culture is the foundation for KBIC governance, and as such, will remain essential to integrated resource management planning and strengthening KBIC governance and our identity as a self-determined people. The explicit care and stewardship of KBIC's cultural resources will remain a priority. Our responsibilities to KBIC cultural resources will continue to grow and strengthen, including the monitoring and inventorying of KBIC resources, cultural leadership, sharing Ojibwa teachings, and engaging in issues which may harm or impact cultural resources

in a negative way. We honor our ancestors by practicing Ojibwa culture, today and into the future, as it has been since time immemorial.

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## 4. Leadership and Law Making

### 4.1. Overview

Informed by Ojibwa culture and directed by the priorities of our people, KBIC leadership and law making includes the everyday government planning, decision making, and implementation of the KBIC government, economic and gaming infrastructure, as well as the judicial system. Integrated resource management planning, as evidenced in the first IRMP of the KBIC (2003), has been and remains a priority of KBIC leadership and law making practices. The KBIC current leadership and law making is a direct reflection of our identity as a self-determined people.

The KBIC's leadership and law making involve the entities that are outlined below, in alphabetical order:

- Attorney's Office
- CEO Office, Enterprise, and Economic Development
- Gaming Commission and Safety
- Tribal Council
- Tribal Court

KBIC leadership and law making responsibilities are diverse and adaptive to our changing environment, climate related changes, and priority community needs. Overall, these entities contribute to strengthening the Keweenaw Bay Indian Community government for the benefit of current and future generations.

### 4.2. Attorney's Office

Beginning with a **DESCRIPTION**, the mission of the Attorney's Office is to provide legal services to the Tribal Council and its subordinate departments, committees, offices, and businesses to support, defend and advance the interests of the Keweenaw Bay Indian Community.

Guided by Tribal/Federal Law and Tribal Code, the **PROGRAMS/ACTIVITIES** of the Attorney's Office are to provide legal services to department heads, directors, officers, employees, and staff of the community and community enterprises. Additionally the Office acts as a liaison to other sovereign Indian nations as well as federal, state and local governments, court systems, professional associations, and interest groups on matters of interest to the Community. The Attorney's Office's legal services encompass a wide range of issues including but not limited to advice to community and council, prosecuting crimes, child neglect matters, enterprises, casino, gas stations, and cannabis and tobacco companies. The primary internal



partners are the Tribal Police and the Tribal Court, and external partners include the Department of Justice, the Federal Government, and the Michigan State Courts.

The **PRIORITY CONCERNS** noted by the Attorney's Office are the health status of the community (per capita) in relation to surrounding communities and the concentration of deaths and tragedies in the past several years.

Notable **ACCOMPLISHMENTS** include the success of the Casino and more recently, the Cannabis Company.

The **OBJECTIVES** of the Attorney's Office are to protect the Community's sovereignty from encroachment, provide legal advice to the Tribal Council and its subordinate departments, represent the Community and its representatives in judicial executive and administrative proceedings, coordinate with federal, state and local agencies, and criminal prosecutions.

**ACTIONS** specifically recommended are to continue implementing policy to decrease climate impacts such as the use of energy efficient lights, and support transitions to clean energy sources such as solar panels.

**A Focus on Climate Concerns:** The KBIC Attorney's Office has climate concerns related to the unpredictability of and within seasons, including longer winter and shorter summer seasons, Lake Superior shoreline erosion, and consequential impacts for specific wildlife such as the significant decrease in the owl population.

### 4.3. Chief Executive Office, Enterprise, Economic Development

Beginning with a **DESCRIPTION**, the CEO, Enterprise, and Economic Development office serves many roles which include administrative office services, oversight on policies and procedures, coordinated office services such as personnel, budget preparations, and records control.

The **PROGRAMS/ACTIVITIES** provided by these offices include coordinated office services such as personnel, budget preparations, and records control. It also oversees planning, reviewing, developing, implementing, updating, and administrating management policies and procedures. Some other departments' activities are also coordinated and directed by this office. To assure compliance with Tribal policies the CEO's Office confers with program administrators. The office is also in charge of assuring that the Tribal Center runs in an orderly manner. The department heads are overseen by the office. Correspondence is reviewed and answered by the office. Grants, contracts, and compliance are monitored and assured by the office. The office

analyzes jobs regarding use in wage and salary adjustments, promotions and works with personnel and department heads to evaluate, recruit, interview and recommend people for vacant positions as well as planning and carrying out policies relating to all phases of personnel activity.

Notable **ACCOMPLISHMENTS** by the CEO, Enterprise, and Economic Development office include establishing the gas station in L’Anse, the Rez stop.

#### 4.4. Tribal Council

Beginning with a **DESCRIPTION**, the Tribal Council is the governing body of the KBIC as stated in the [Constitution and By-laws of the Keweenaw Bay Indian Community](#), Article III, Section 1 (KBIC 1936). As outlined in Article IV–Nominations and Elections, Tribal Council is composed of 12 members that are elected to serve three-year terms by the voting membership. Half of the 12 council members are from the L’Anse district and the other half are from the Baraga district. Tribal elections occur annually in December with reorganization taking place the following January. One third of the Council is up for election every year. The President, Vice-President, Secretary, Assistant Secretary, and Treasurer are elected from within the Tribal Council.

At the time of this writing, the 2024 sitting Tribal Council Members are as follows: Doreen Blaker (President), Rodney Loonsfoot (Vice-President), Susan LaFerner (Secretary), Elizabeth “Liz” Julio (Assistant Secretary), Theodore Austin Ayres (Treasurer), Robert “RD” Curtis (Council Member), Everett Ekdahl Jr. (Council Member), Sue Ellen Elmblad (Council Member), Dale Goodreau (Council Member), Kim Klopstein (Council Member), Sam Loonsfoot (Council Member), and Toni J. Minton (Council Member).

The **PROGRAMS/ACTIVITIES** provided by the Tribal Council are specified within the KBIC Constitution. Article VI of the Constitution outlines the Powers and Duties of the Tribal Council, and in the Bylaws of the Keweenaw Bay Indian Community, Article I specifies the Duties of the Officers that serve the Tribal Nation.

The **PRIORITY CONCERNS** noted by the KBIC Tribal Council are articulated in Tribal Council Resolution KB-016-2015, which states the following:

“NOW THEREFORE BE IT RESOLVED THAT: the Keweenaw Bay Indian Community Tribal Council formally supports a Climate Change Adaptation Initiative and directs the Natural Resources Department to oversee and coordinate the initiative which shall include efforts to determine potential local effects, assessment of climate change vulnerabilities for the L’Anse Indian Reservation, integration of climate change planning into existing management plans, development of policies and strategies to address climate change, communication and

coordination with other tribal and agencies, and community outreach to identify impacts and adaptation strategies and to provide education related to climate change.”

In an effort to protect the health, security, and general welfare of the Community, and recognizing that the effects of climate change will negatively impact the local environment, fish and wildlife, natural resources, and infrastructure on which the Community relies, the Tribal Council created this Resolution also acknowledging our responsibilities to the natural world, stating that “through traditional knowledge, practice, experience, and relationships with nature, KBIC has an important role in defending and healing the natural environment.”

Notable **ACCOMPLISHMENTS** by the Tribal Council include Resolution KB-016-2015.

The **OBJECTIVES** of the Tribal Council for integrated resource management planning are included in an updated **2024 KBIC Strategic Plan** with states the following regarding the Value of Environment:

*Our vision for the Keweenaw Bay Indian Community is a community where:*

- The waters of Lake Superior, inland lakes and streams are the cleanest water in the world—swimmable, drinkable, fishable
- Clean/green energy resources are explored and utilized toward self-sufficiency as a Nation
- The Reservation has a Land Use Management Plan to assist in development
- Preservation and protection of land, air, and water quality are executed without sacrificing sovereignty
- Forests are managed and sustainable
- Our traditions and culture are honored through preservation of our homelands

Additionally, Goal 1 from the 2020-2025 KBIC [Hazard Mitigation Plan](#) states the following action (2020:131): Work to improve existing local government policies and codes to reduce the impacts of natural hazards.

## 4.5. Tribal Court

Beginning with a **DESCRIPTION**, in 1973, the Keweenaw Bay Indian Community Tribal Court (Tribal Court) was established by the Keweenaw Bay Indian Community Tribal Council authority pursuant to Article VI, Section 1, clause (l) of the Constitution of the Keweenaw Bay Indian Community (Constitution).

In 2018, the People of the Keweenaw Bay Indian Community amended the Constitution creating the Tribal Court under Article IX *Judicial Branch*, to provide for a separate branch of

government free from political interference and conflicts of interest for the development and enhancement for the fair administration of justice.

The judicial power of the Keweenaw Bay Indian Community is vested in the Tribal Court, which extends to all cases arising under the Constitution, ordinances, resolutions, regulations, or judicial decisions of the Keweenaw Bay Indian Community; and will be exercised to the fullest extent consistent with self-determination and the sovereign powers of the Tribe. This jurisdiction is based on the Tribe's inherent sovereignty, traditional custom, and federal law.

The Tribal Court is a two-tiered system with a Trial Court and an Appellate Court. The Trial Division has a Chief Judge and an Associate Judge, both elected pursuant to the provisions of Article XI. The Chief Judge presides over the Trial Court and is the Administrator of the Court, pursuant to Article XI. The Appellate Court is the Supreme Court of the Keweenaw Bay Indian Community, and consists of a three (3) Justice panel appointed by the Tribal Council pursuant to Section 12 of Article XI.

The **PROGRAMS/ACTIVITIES** of the Tribal Court is to provide a mechanism to resolve disputes to all persons, regardless of citizenship in the Keweenaw Bay Indian Community. The jurisdiction to hear those disputes is defined by tribal law. The Tribal Court is considered to be a court of general jurisdiction and hears cases ranging from -- criminal offense, traffic misdemeanors and civil infractions, property disputes, child dependency and neglect, juvenile delinquency, divorce, marriage, guardianship and conservatorships, natural resource violations, eviction, civil suits, child support, paternity, child custody and parenting time, torts, and contracts to name a few. The final decisions of the Trial Court are appealable to the Appellate Court.

The Tribal Court staff consists of a Chief Judge, Associate Judge, Chief Court Clerk, Deputy Court Clerk, Court Security Officer, and Probation Officer. In 2006, the Office of Child Support Services (KBIC-OCSS) was created within the Tribal Court, and consists of a Director, Child Support Specialist, and Outreach Coordinator. KBIC-OCSS provides services for those seeking to establish paternity or a child support order, and outreach to provide education and ease of access to KBIC-OCSS. KBIC-OCSS houses a "Fatherhood and Motherhood is Sacred" Program to strengthen families through responsible parenting practices and education. Today, in 2024, KBIC-OCSS is still the only IV-D federally funded tribal child support agency in the State of Michigan.

In 2010, within the Probation Department of the Tribal Court, a Healing to Wellness Program was implemented in response to the rise in recidivism and opiate addiction/opiate associated crime. The purpose of the Healing to Wellness Program is to support probation clients in regaining their health and well-being by utilizing a holistic, comprehensive approach through monitoring, case management, peer recovery, and a variety of wrap around services to address

recovery as an alternative to incarceration. The Healing to Wellness Program is overseen by the Healing to Wellness Coordinator, who works with the Healing to Wellness Team, from professional fields who deal with persons suffering from a substance abuse disorder.

The Tribal Court also houses a law library located in the jury room that is accessible to public use.

## 4.6. Concluding Statements

Leadership and law making is dedicated to strengthening KBIC sovereignty and autonomy today, and for seven generations. Informed by Ojibwa culture, as it has been since time immemorial, KBIC leadership promotes the reality that we are a self-determined people. Leadership is committed to conducting KBIC governance in a good way, including government planning, decision making, and overseeing the KBIC government, economic and gaming infrastructure, as well as the judicial system. Integrated resource management planning continues to be a guiding and supportive priority of KBIC leadership and law making practices. KBIC leadership and law making responsibilities will continue to aim for adaptive governance, specifically, to the changing environment, climate related changes, and priority community needs.

## 5. Land Stewardship

### 5.1. Overview

Land stewardship remains the foundation to the KBIC and the Ojibwa peoples' identity as well as the ongoing protection and restoration of 1842 treaty resources and the 1854 Reservation lands for current and future generations, thereby honoring the rights of all to flourish and thrive.

Land stewardship with and by the KBIC involves programs associated with natural resources, forestry, and real estate and transportation, as well as engaging in partnerships with many internal and external agencies, groups, and organizations. Specific entities, in alphabetical order, are outlined below:

- Forestry Department
- Natural Resources Department
  - Central Support
  - Environmental Health
    - Air Quality*
    - Lands*
    - Sustainability*
    - Water Quality*
  - Fisheries and Aquaculture
  - Great Lakes
  - Wildlife and Habitat
    - Invasive Species*
    - Plants*
    - Pollinators*
    - Wetlands*
    - Wildlife*
- Real Estate/Transportation Department

KBIC land stewardship responsibilities are vast, working to protect and restore treaty resources and good relations within the changing environment, climate related changes, and priority community needs. Overall, these entities contribute to strengthening the Keweenaw Bay Indian Community landscape stewardship for the benefit of current and future generations.

### 5.2. Forestry

Beginning with a **DESCRIPTION**, the Forestry Department, established in 2010, mission is to enhance and sustain Seven Generations of diverse forest resources for the KBIC. Forests within

the L'Anse Reservation are composed of a variety of forest cover types and tree species, primarily northern hardwoods (sugar and red maple mixed with Eastern hemlock, yellow birch, red oak, basswood, and black cherry), and second, mixed aspen cover types. Forests are currently made up of trees of about the same age, as most timber stands originated around 1930. This was a period of time in which the L'Anse Reservation experienced heavy logging, followed by broad, intense wildfires.

The Forestry Department aims to ensure sustainable utilization of all timber and non-timber forest resources for Tribal members, and continue sustainability practices and stewardship for forest health, timber quality, and forest diversity while protecting water resources, wildlife habitat, and culturally sensitive areas on the Reservation. Current implementation of sustainable forest stewardship within KBIC benefits future generations. An important step in this process was the development of the Forest Management Plan (FMP 1997) which identified proper measures of KBIC forest lands' management. By building upon the methodology established in the FMP, the Forest Management Plan was updated into the [2018-2028 Forest Stewardship Plan](#) to guide KBIC Forestry Department activities, as well as the KBIC Timber Management Plan. Thus, the KBIC Forester, Natural Resource Department managers, and the Tribal Council continue to work toward objectives that meet the Tribe's goal of sustainable, diverse forest resources for Seven Generations.

The **PROGRAMS/ACTIVITIES** provided by the Forestry Department seek to balance many uses and values of KBIC forests through various activities, including guidance from the [Tribal Climate Adaptation Menu](#) (2019) and resulting workshops that help to frame KBIC forest work. These activities include monitoring forest growth and health, tree and wildlife shrub planting for habitat enhancement, pre-commercial timber stand improvements and crop tree release, timber harvest to improve forest health and reduce fuel loading (promoting tribal loggers), professional recommendations on sugarbush management, guidance for finding and harvesting culturally important plants and/or medicines as well as trees, and providing Free Use Permits to KBIC members which are available for all KBIC members.

Day to day, the Forestry Department's scope typically focuses on the next three years of work. This includes seasonal activities such as helping people locate and identify needed forest resources to harvest (plants, trees, and medicines). inventorying tribal lands (e.g., collecting data on forest health and density primarily in winter season, updated every 5-10 years), permitting tree removals (e.g., trees that have blown down in recent storms), and setting up timber sales. Additionally, KBIC has entered into landscape scale conservation efforts and partnerships to promote good land stewardship across the Reservation. There is also interest in biomass for electricity, in support of KBIC energy sovereignty, and so KBIC has partnered with the Forest Service for a pre-feasibility study. At the larger scale, the Department is learning more about KBIC opportunities with the carbon credit program of the National Indian Carbon Coalition.

The Forestry Department maintains many partnerships including internally with the KBIC Land Stewardship group (Realty, Forestry, Natural Resources Department, Fire and Emergency Management, and a request for Tribal Council members), which was formed based on a need for more vision development and collaborative sharing, specifically to ensure that tribal interests are met (winter 2022) for marketing wood at a smaller scale. External partners include Timber companies (within last year), the U.S. Forest Service, and the BIA to specifically address ongoing KBIC trust fund issues.

The **PRIORITY CONCERNS** noted by the Forestry Department include, but are not limited to, forest pests and forest-related diseases, altered natural disturbance regimes, forest pressure from biofuel markets, and forests affected by increased human presence and forest resource overuse. From 2018-2028 Forest Stewardship Plan, additional priority concerns are also noted:

- Protection and planning for forest lands
- Loss of habitat, wetlands, and plants and trees of cultural significance
- Reducing the human carbon footprint
- Cultural changes with climate related changes
- Natural disaster/emergency preparedness
- Environmental toxics on our lands and resulting adverse health impacts
- Safe and available drinking water
- Traditional foods, and how they may be used or exploited and modified for profit purposes
- Native plant use and natural medicines
- Invasive forest plants substantially increasing their range
- Educating youth about traditional and cultural resource use and protection
- Increasing and sharing knowledge of wild edible plants and medicines
- Healthy populations of pollinators

**A Focus on Climate Concerns:** The Forestry Department has interrelated and confounding climate concerns due to the increase and intensity of wind storms, changing water regimes, hotter drier summer seasons and the reduction in winter freeze days, absence of historic and contemporary fires, and the increase in wildfires regionally and abroad. Climate related changes directly alter forests' natural distributions and the occurrence of natural disturbances, contribute to changes in tree phenology and growth trends, and affects forest health and safety, population density of specific species (trees, plants, wildlife), water levels and distributions, increases in pest and disease outbreaks (i.e. spruce budworm, hemlock wooly adelgid, oak wilt) and increases in non-native and invasive species across forested lands, and finally, human capacities to implement adaptive management and stewardship practices. More detailed explanation on these concerns include the following:



- Forest waters, specifically water levels and water quality, is the priority concern to focus on to mitigate heavy water events, particularly for ephemeral and/or perennial waters. With the uncertainties, and lack of data, associated with forest water regimes, we must anticipate and restrict some forest activities due to confounding adverse forest related impacts. Additionally, mitigating impacts need to include strategic planting within ephemeral pool sites to create increased plant diversity.
- Adverse effects of wind storms can be exacerbated by climate change, because even a few felled acres becomes more hazardous due to hotter, drier conditions which confounds the risk and reality of natural disturbance events (i.e., wildfires).
- The decrease in frozen ground days result in a reduced season for harvesting timber, particularly because frozen grounds are ideal for heavy equipment (County Road Commission restrictions), and also adversely impacts the reduction in the spread of invasive species, erosion, and water quality.
- Particular species of concern include 1) sugar maples, stressed, in part, on account of 100 year old trees not adapted to specific sites with an absence of fire; 2) red oak, presently working with FEM on how trees are stressed and impacted, and historical land use and impacts. It is also unknown, specifically, which forest areas have been historically cut over and/or burned. 3) Boreal species populations are decreasing from the landscape (i.e. white birch, balsam fir, spruce); and 4) economically important species (i.e., sugar maple and aspen) are decreasing from the landscape.

Notable **ACCOMPLISHMENTS** by the Forestry Department include continuous assisted migration planting, emerald ash borer mitigation work, and a number of outreach and knowledge sharing projects such as workshops on the sugar bush and cultivating mushrooms. Other accomplishments include the updated 2018-2028 [Forest Stewardship Plan](#), which addresses climate related changes as a priority, and the development and implementation of the 2021 Forest Harvest Policy. The harvest of forest resources provides subsistence, cultural, and economic benefits to Keweenaw Bay Indian Community members, thus, the purpose of the 2021 Forest Harvest Policy is to establish the methods, approval process, and guidelines to allow Tribal Members 1) harvest for personal use, with and without a free-use permit; and 2) to harvest and sell, or exchange, forest resources with a paid permit.

The **OBJECTIVES** of the Forestry Department, included in the 2018-2028 FSP (5-7), are as follows.

**Objective 1:** Promote forest ecosystem health and resiliency with species diversity, wildlife habitat, and healthy soil and water resources; so that all values and uses of the forest may be sustained for

Seven Generations.

- Use timber sales as a tool to improve and restore ecosystem health, and achieve stand-level objectives (i.e., large game habitat, small mammal habitat, water quality protection, wild/natural features, cultural and recreational features, etc.)
- Use timber sale specifications and layout to maintain and promote retention tree species, retention patches, and snags
- Forestry practices should follow the best management practice (BMP) guidelines described in [KBIC Forest Stewardship Plan](#) and the KBIC Timber Management Plan
- Develop and implement Forest Development projects to plant, release, and perform site preparation to improve forest health and achieve forest stewardship objectives

**Objective 2:** Promote the ability for Tribal members to sustainably harvest forest (non-timber) and

cultural products from Reservation land.

- Identify and develop/promote potential sugar bush areas
- Identify firewood gathering areas
- Identify potential areas of gathering (plants, boughs, berries, etc.)
- Revise and update KBIC's Timber Use Policy of 1993 to reflect current Tribal needs and values

**Objective 3:** Generate income from timber sales to economically diversify Tribal assets and support

Tribal members

- Manage for healthy forests and diverse species and age classes across the landscape in order to promote ecological sustainability and economic returns for the Tribe

**Objective 4:** Preserve cultural and historic resources

- Work closely with Cultural Committee and THPO to identify and protect cultural and historical resources on the ground
- Ensure Phase 1 Archeological Survey and the report sent to Tribal Historic Preservation Officer is conducted before forestry projects on Trust Land.
- Ensure Tribal Historic Preservation Officer has identified no properties of interest regarding religious or cultural sites where forestry projects are located on Fee Land.

**Objective 5:** Provide Community members forest stewardship education and involvement

Team up with education partners (KBIC Youth Program, L'Anse and Baraga public schools, etc.)

for forest stewardship education opportunities.

- Team up with education partners (KBIC Youth Program, L'Anse and Baraga public schools, etc.) for forest stewardship education opportunities.
- Create and promote opportunities to share Community traditional knowledges (TK) about its forestlands.
- Partner with Keweenaw Bay Ojibwa Community College to provide forestry education opportunities for natural resources students.

**ACTIONS** specifically recommended for the Forestry Department are included in the Forest Stewardship Plan objectives ([FSP 2018:30](#)). As an ongoing priority action, the Department supports the continuation of cultural gratitude, reciprocity, and thanksgiving for good harvests. Additionally, Department actions aim to ensure the diversification, and/or increase in the resiliency of on the ground species, as well as natural regeneration while anticipating what will be and recognizing what was. In doing so, the Department will support the following actions:

- Pursue BIA funding for climate resiliency projects, specifically for red oak restoration projects, and the improvement of forest roads to ensure these roads can withstand high flow events.
- Prioritize and support culturally important trees and medicines such as cedar, white birch and sugar maple through restoration projects and promote workshops for knowledge and practice sharing.
- Continued ecology-based planning with the U.S. Forest Service.
- Secure long term outlets for forest conservation on the reservation.
- Promote long term and wide scale landscape planning (40+ years) including conservation easements and carbon credit programs.
- Ensure reservation lands are not sold and harvested only in sustainable ways.
- Internalize the need for renewable, green energy sources such as the fuel wood project for biomass which ultimately involves tribal members and benefits the KBIC.
- Update the Stand Exam/Inventory on KBIC Trust and Fee Lands to determine and communicate current conditions, which will also inform the Forest Stewardship Plan:
  - Timber resources
  - Potential Forestry or NRD project areas
  - Forest protection concerns including insect and disease, weather events and timber trespass
  - Potential gathering areas (boughs, berries, leeks, etc)
  - Firewood collection areas
  - Potential sugar bush areas
- Improve and protect the forest landscape when conducting land management and timber sales:
  - Protect soil and water resources by following practices identified by KBIC's Treatment as a State (TAS) authority for Water Quality, Michigan Department of Natural Resources and Michigan Department of Environmental Quality Sustainable Soil and Water Practices on Forest Land (MI DNR & DEQ, 2009)
  - Maintain and promote stand diversity, favoring minor tree species where feasible
  - Retain legacy trees and/or patches on the ground to improve the future forest, and wildlife habitat and connectivity (i.e., buffered stream corridors, large seed trees, wildlife den trees)

- Retain long-lived conifers such as hemlock, northern white cedar, and white pine where feasible
- Maintain and improve site productivity by retaining at least 25-33% of slash, tops, and limbs (MDNRE, 2010)
- Maintain forest aesthetics
- Promote a healthy and resilient forest landscape by improving forest conditions using the above guidelines
- Monitor the forest for pest and disease infestations and communicate to NRD Invasives Management
- Obtain Forest Development funding to conduct Forest Development climate change projects. Monitor these projects and communicate results and lessons learned.
  - Use pre-commercial timber stand improvement (TSI) for weed-and-clean operations
  - Use Forest Development tree planting projects to establish refugia of better climate adapted tree species

### 5.3. Natural Resources

Beginning with a **DESCRIPTION**, the Natural Resources Department was established in 1999, growing from the KBIC Hatchery facility and operations which began in 1988. The Natural Resources Department administers a multitude of programs for land stewardship within Keweenaw Bay Indian Community jurisdictions on the L'Anse, Marquette, and Ontonagon reservation territories as well as [1842 Treaty](#) ceded territory across the western Upper Peninsula of Michigan. Projects facilitated by the Department are primarily funded through grants from the U.S. Department of Interior's Bureau of Indian Affairs (BIA), U.S. Environmental Protection Agency (EPA), U.S. Fish and Wildlife Service (USFWS), and U.S. Department of Agriculture (USDA). Hatchery operations remain funded by the KBIC Tribal Council.

The **PROGRAMS/ACTIVITIES** provided by the Natural Resources Department encompass a range of natural resource protection areas including central support, environmental health, fisheries and aquaculture, Great Lakes, and wildlife and habitat. Governed by the KBIC Tribal Council, Department activities are vast, including Lake Superior fishery assessments, Baraga County stream assessments, surface water and groundwater monitoring, air and radon studies, brownfield programs, wildlife and wetland management, environmental assessments, monitoring of resource extraction and exploration activity in the Lake Superior basin, binational participation in the protection, restoration, and enhancement of Lake Superior and Ojibwa knowledge, fish stocking by the KBIC hatchery, and a variety of ecosystem restoration initiatives. The Department's programs and activities are informed by KBIC guiding documents such as this IRMP, and the 2005 KBIC [Strategic Plan](#), the 2014 [Wildlife Stewardship Plan](#), [2018-2028 Forest Stewardship Plan](#), the 2020-2025 KBIC [Hazard Mitigation Plan](#), and the KBIC [Seasons of Research guide](#) (2021).

The Natural Resources Department works with others within KBIC and also maintains numerous external partnerships. Primary internal partners include entities such as the Attorney's Office, and KBIC Housing, Reality and Roads, Public Works, the Transfer station, Solid Waste facility, Enterprises as well as additional KBIC Committees and Advisory Boards. Some of our external partnerships include local, state, regional, and federal government offices and organizations (Villages of L'Anse and Baraga, Baraga County Road Commission, [Torch Lake Public Action Council](#) (PAC), [Western Upper Peninsula Planning and Development Region](#) (WUPPDR), Michigan's [Environment, Great Lakes, and Energy](#) (EGLE), [Superior Watershed Partnership, Community Environmental Monitoring Program](#) (CEMP), [Great Lakes Restoration Initiative](#) (GLRI) partners, [GLIFWC](#), EPA, BIA, USGS, Army Corps of Engineers, FEMA, Indian Health Service, educational and research institutions ([KBOCC](#), [Michigan Tech](#), [Great Lakes Research Center](#)), and grassroots organizations.

The **PRIORITY CONCERNS** of the Natural Resources Department (NRD) center on the protection, stewardship, and restoration of treaty resources, and more specifically, the Lake Superior ecosystem and its many relationships that support land and life in our region.

**A Focus on Climate Concerns:** The KBIC Natural Resources Department is committed to addressing, mitigating, and facilitating the adaptation to many current and forecasted climate related concerns including, but not limited to, fluctuating water levels (groundwater and surface waters), warming water and air temperatures, shoreline erosion and needs for stabilization, seasonal and phenological shifts and migrations in plant, forest, wildlife, insect, and human populations and habitats. Additionally, the Department is concerned about the often unpredictable and extreme weather events such as prolonged drought and increased humidity (particularly for the elderly, other vulnerable populations, and wildlife), high winds and heavy precipitation events (contributing to fallen trees and hung-up branches, as well as increased flooding), and the current infrastructure capacities of roads, bridges, culverts, and the local wastewater treatment plants. Finally, fluctuating water levels also affect numerous historic underground storage tanks, water wells (households and institutions), and septic tanks on the Reservation.

As a result of these climate related concerns, Department staff also recognize additional climate related consequences such as the increase in wildfires here and abroad (impacting local air quality and adversely affecting those with respiratory disorders), and the changing geographic range for, and increase in, diseases and viruses including, but not limited to, climate and insect related diseases to both humans and wildlife (i.e., West Nile, Eastern equine encephalitis (EEE), Lyme, white-nosed syndrome for bats, and chronic wasting disease for deer). These realities are exacerbated by the extended warmer seasons and the shorter, warmer winter seasons.

Notable **ACCOMPLISHMENTS** by the Natural Resources Department include EPA approval of KBIC Treatment in a similar manner as a State (TAS) for air and water quality (2020), the

Solid Waste facility and programs (oil recycling program, tires, compliance assistance), the Brownfields program progress on specific sites and enhanced departmental staff capacity, the formation of the KBIC Committee for Alternative and Renewable Energy (CARE) and the development of the [Strategic Energy Plan](#) (2008), participation in the creation of the [Tribal Climate Adaptation Menu](#) (Tribal Adaptation Menu Team 2019), development and Tribal Council adoption of the KBIC [Hazard Mitigation Plan](#) (2020), and the development and Tribal Council approval of the KBIC [Guidance for Research Partnerships](#) (2021).

The **OBJECTIVES** of the Natural Resources Department are outlined in our guiding documents (see the 2005 KBIC [Strategic Plan](#), the 2014 [Wildlife Stewardship Plan](#), [2018-2028 Forest Stewardship Plan](#), the 2020-2025 KBIC [Hazard Mitigation Plan](#), and the 2021 KBIC [Seasons of Research guide](#)) while other objectives are program specific, further detailed in this IRMP including central support, environmental health, fisheries and aquaculture, Great Lakes, and wildlife and habitat subsections below.

**ACTIONS** specifically recommended by the Natural Resources Department are outlined in KBIC guiding documents (i.e., 2005 KBIC [Strategic Plan](#), 2014 [Wildlife Stewardship Plan](#), [2018-2028 Forest Stewardship Plan](#), and the 2020-2025 [Hazard Mitigation Plan](#)), while other actions are program specific, further detailed within this IRMP subsections below for central support, environmental health, fisheries and aquaculture, Great Lakes, and wildlife and habitat. Additional recommended actions include the following:

- Serve as the lead for the **IRMP annual review** focused on the objectives across KBIC primary governance areas.
- Support the **KBIC Natural Resources Committee** to provide active guidance and engagement by Community members.
- Increase **collaboration and partnerships** between governments, communities, and educational partners at multiple scales, including 1) the development of a Data Sharing Agreement for enhanced data sovereignty, transparency, and sharing between all parties; 2) environmental monitoring and research partnership opportunities (i.e., CEMP and Michigan Tech); and 3) knowledge sharing initiatives, particularly south to north, as different climate regimes, many species, and weather patterns move south to north with climate related changes and migrations of various species (e.g., trees, plants, insects, and other fish and wildlife species).
- Support **infrastructure** needs of the community, focused on 1) *water* issues (Public Works and Housing has been and is currently working with Indian Health Services to address some of these timely issues); 2) *recycling* infrastructure such as a cardboard bailer; and 3) local *food processing* infrastructure (agricultural and forestry products, game, and fish) and community member engagement, composting programs and manure management, flood mitigation, and promoting outreach initiatives of local food benefits.

The specific Natural Resources Department Action Items, from the 2020-2025 KBIC [Hazard Mitigation Plan](#), are listed below.

**Action Item 1: Reduction of Human and Wildlife Impacts to Shoreline Erosion (2020:142)** Areas of Lake Superior experience bank erosion problems due to human and wildlife impacts. Numerous mitigation efforts have corrected problems, but some areas have an ongoing need for stabilization.

**Action Item 2: Wild Rice Restoration (2020:142-143)** Wild rice is used in the daily lives of community members, as well as, ceremonies, and feasts. It is also recognized as a preferred source of food for migrating waterfowl and has high ecological value for both wildlife and fish habitat. It can also help to maintain water quality by securing loose soil, tying up nutrients, and slowing winds across shallow wetlands. The amount of wild rice throughout the Great Lakes region has declined from historic levels due mainly to water fluctuations from hydro dams and degradation of water quality from logging and shoreline development over the past century. The long-term goal is to develop harvestable self-sustaining wild rice populations on the reservation and within the ceded territory for future generations.

**Action Item 4: Green Infrastructure Installation (2020:143-144)** Green infrastructure is a cost-effective, resilient approach to managing wet weather impacts that provides many community benefits. While single-purpose gray stormwater infrastructure—conventional piped drainage and water treatment systems—is designed to move urban stormwater away from the built environment, green infrastructure reduces and treats stormwater at its source while delivering environmental, social, and economic benefits.

**Action Item 5: Wildlife Diseases (2020:144-145)** Wildlife inventory and monitoring plays a large role in KBIC's ability to assess environmental conditions, set management priorities, and to carry out ongoing management activities in an effective manner. The Wildlife Program collects data throughout the L'Anse Reservation and regionally on waterfowl, frogs and toads, sand hill cranes, songbirds, mammals, turtles and salamanders. The program has also monitored wildlife for health-related issues such as chronic wasting disease and avian influenza. Continued monitoring is important to calculate the impact due to a changing climate and other factors.

**Action Item 6: Brownfield Restoration (2020:145)** Due to the historical industrial and commercial activity and land use as well as activities such as illegal dumping, environmental impacts are present or suspected to be present on some of these KBIC lands. Properties where environmental impacts are known or suspected to be present are referred to as "brownfield sites", or simply "brownfields". Remediation of the identified brownfields is an ongoing project priority with the Natural Resources Department.

**Action Item 17:** Household Hazardous Waste Collection Program (2020:149) The project aims to collect household hazardous waste from KBIC members and non-members throughout Baraga County.

**Action Item 18:** Legacy Mining and Stamp Sand Remediation (2020:149-150) Stamp mills from legacy mining dumped stamp sand into Keweenaw Bay. This stamp sand was carried southward by the Keweenaw Current and deposited at Sand Point. Further north in Lake Superior, Buffalo Reef and Torch Lake is a natural spawning ground for lake trout and whitefish. Mine tailings from over 30 years of copper stamp mill production were deposited off the town of Gay, Michigan. The tailings are migrating towards Buffalo Reef and are threatening the spawning ground. These two sites have ongoing projects for restoration and remedial dredging operations, respectively.

**Action Item 24:** Disaster Debris Management (2020:152) Develop a plan for the management of debris from natural disasters.

**Action Item 29:** Identify and Inventory Datasets for Quantitative Hazard Analysis (2020:154) Through the hazard mitigation planning process there were many data gaps identified including flood depth grids for rigorous hydrological modeling, structural and wild fire events, abandoned mine status, age and estimated value of all critical facilities, comprehensive asset inventory, dam inundation modeling for Baraga County's high hazard dams, and updated flood erosion maps for current and rising lake levels.

### 5.3.1. Central Support

Beginning with a **DESCRIPTION**, the Central Support's function is to ensure cohesive operations and assisting other sections in their efforts. These efforts currently include KBIC food sovereignty initiatives and community assistance and outreach. We believe that food sovereignty is the ability to feed ourselves and feed ourselves well; a state of being in which our community is able to have a safe, culturally acceptable, and nutritionally adequate diet through a sustainable food system that promotes community self-reliance and social justice throughout the 1842 Treaty ceded-territory. Our food system begins with our relationships with our forests and waters. The ability to hunt, fish, and gather within ceded territories provide us with access to fresh and local foods across the seasons. Access to these resources give us an array of healthier food options. Our territory is rich with foods and medicines throughout our forest and water landscape.

The **PROGRAMS/ACTIVITIES** provided by Central Support include supporting the community with operating and maintaining a teaching facility, community processing kitchen, food storage appliances, fish processing facility, and oversight of a community garden. Facilities are available for fish, game, and plant processing and there is space for community storage of



foods. Staff facilitate and support educational initiatives and outreach activities such as food safety trainings and workshops and use of the buildings and grounds to ensure teaching and learning stewardship, to strengthen our relationships with our natural environment, and increase community food sovereignty.

At the DIGs [Community Garden](#), in L'Anse on Brewery Rd, also known as the Peoples' Garden and the Debweyendan ("believe in it) Indigenous Garden (DIGs) initiative there is cultivation of food and herb plants. This provides opportunity to increase gardening and food gathering knowledge, food sovereignty practices, composting activities, and enhancing habitat for native plants and pollinators. In addition to planting and cultivating seeds for food sovereignty revitalization, medicinal plants are also increasingly in high demand and as such, sweetgrass, sage, and tobacco are cultivated at the Green House and cultivated at the DIGs.

Guiding documents for the Central Support program include this IRMP, the KBIC [Strategic Plan](#) (2005), the [Lake Superior Manoomin Cultural and Ecosystem Characterization Study](#) (2020), and additional food sovereignty and community assistance program initiatives supported by the KBIC and their partners. Partners and support include GLIFWC, WUPPDR, KBOCC Native Food Pathways program, MSU extension service, Native American Agricultural Fund, Michigan Health Endowment Fund, and research entities such as Michigan Tech.

The **PRIORITY CONCERNS** noted by Central Support center on culturally significant landscapes that support food sovereignty in our community, specifically, waters, woodlands, wetlands, berry groves, and gardens. Importantly, the migration of our people to this area is tied to our prophecies that we should move west until we found the "food that grows on the water", wild rice. There are historical accounts of manoomin beds in this area and because of this, manoomin restoration, research, and educational outreach is a priority. Our community has identified manoomin as a culturally important food source and we aim to support harvestable manoomin beds within our homelands.

Notable **ACCOMPLISHMENTS** of Central Support, in partnership with the Plants program, include the additions to infrastructure and utilities (electricity, water, and restrooms) at the [DIGs site in L'Anse](#), specifically, the education center complete with a commercial kitchen and appliances, fish processing facility, and cold storage facilities. The growth of DIGs, the [workshop series](#) for community garden and landscape harvesting, and the ongoing education, outreach, and initiatives (such as Garden for Heart) contribute to the strengthening of food sovereignty for KBIC. Program staff also contributed to the [Lake Superior Manoomin Cultural and Ecosystem Characterization Study](#) (2020), participated in the region's Food Summit (2019) as well as co-hosted the [Food Sovereignty Symposium](#) (2022).

The **OBJECTIVES** of Central Support are to continue implementing, enhancing and/or strengthening current program initiatives, emphasizing traditional food relations and community assistance. Community assistance is provided to fishermen, hunters, and gatherers; some of the plant focus areas are as follows:

- [Greenhouse](#)
- [Native Plant Gathering](#)
- [Manoomin \(Wild Rice\) Stewardship and Restoration](#)

Finally, priority objectives of Central Support are to develop and implement a Food Systems Assessment for the KBIC as well as a Shared Kitchen Feasibility Study for a space to produce value added food products through processes such as canning, pickling, smoking, and freezing.

**ACTIONS** specifically recommended by Central Support are to continue enhancing food sovereignty and community assistance initiatives within KBIC, including partnerships with others to focus on supporting KBIC food systems and assistance needs within our community.

#### 5.3.1.1. Debweyendan Indigenous Gardens

Beginning with a **DESCRIPTION**, the Debweyendan Indigenous Gardens (DIGs) grew out of the Bemaadizijig Ogitigaaniwaa (the People's Garden) which had its beginnings in 2013. The gardens exist to benefit the current food needs of the community with a vision to nurture the next seven generations. There is strong reliance on traditional Indigenous knowledge to guide practices at the garden. Debweyendan translates to 'believe in it'. Experiences at the DIGs are a well-spring of inspiration where community members enter the space with gratitude and a willingness to participate in the work required to grow their own food. The DIGs encompasses 5 acres of land dedicated to advancing food sovereignty in our community. At the garden, KBIC treaty resources are promoted and food sovereignty is on the pathway to being realized by community members. Community involvement in the garden has the power to transform, as there is advocacy for improved health, deepening relationships with plants, soil, the manidoosheg, medicinal plants, the learning and relearning of tending to and growing foods, the joy of harvesting and preparations of nourishing meals. At the gardens, three of the medicines for all people, asemaa, mashkodewashk and wiingashk, are grown in abundance and made available to health practitioners, cultural committee members, and we are able to satisfy requests to many beyond our reservation boundaries. Many other medicinal plants are grown for teas and salves, there are beehives, pollinator gardens, native fruit plots, over 200 fruit trees, active composting, and effective volunteer programs. In accord with a directive from Tribal Council, the DIGs allows us to be self-sufficient to sustain our way of life. "We grow food on our own land, harvest fish from our waters, and hunt in our own forests. We value and are grateful for what nature gives us to consume." (KBIC website)

Through deepening dedication, the growth of the DIGs, the [workshop series](#) for community gardening and landscape harvesting, and the ongoing education, outreach, and initiatives (such as Garden for Heart) contribute to the strengthening of food sovereignty for KBIC.

**PROGRAMS/ACTIVITIES** at the DIGs include providing 50 plots rented out annually to community members. There is seed saving of vegetable plants grown at the garden, availability of seeds and plant starts for all who have sign up for a plot, and mentorship. There are shared plots and plants grown in the hoop houses for all gardeners to partake of, including peas, carrots, greens, potatoes, Three Sisters, medicinal herbs, blueberries, strawberries and raspberries.

Garden for Heart, a Volunteer Reciprocity Program began in 2019 to seek help from the community in the much-needed care for the garden. For every three volunteer hours dedicated to the garden, high quality tools and gardening reference books are offered as gifts of gratitude.

Through our youth program, the young ones are guided to build lifelong connections to their food resources. They care for the fruit tree orchard, care for the asemaa plants and other garden beds. Elders have been invited to the garden to share teachings on the medicines and tell stories of Anishinaabe lifeways. The youth are engaged in many garden activities to teach respect, and reckon with the challenges and rewards of growing their own food.

Manoomin camp, Waawaaskeshii camp, fish-net tying, adventure camp, open house for community members and ongoing workshops are hosted at the DIGs which is being recognized as an increasingly valuable venue to promote teachings within the KBIC community. In all these programs, staff facilitate and support educational initiatives and outreach activities for KBIC and the public.

**PRIORITY CONCERNS** The foundation is in place to provide 50+ community members/families with gardening space. In addition, there are plots of land dedicated to the growing of corn, beans, squash, potatoes, tobacco, medicines, native fruits and fruit trees. The maintenance of the garden at this time is outpaced by the expectation to provide our community with garden-fresh foods. There is a need for several full-time staff to care for the soils, plants and people at the DIGS.

The fruit trees planted in 2013, and again each successive year have not thrived. They are planted in an area with a high water table and near-clay soil. To better nurture the fruit trees, considerable effort is needed to tend to and amend the soil. Irrigation lines have been installed to drip irrigate the fruit trees, however current water pressure is insufficient to meet the needs of the fruit trees during drier summer months. The planting of cedar trees among the fruit trees is a consideration, whose greater presence at the garden will satisfy both cultural and aesthetic interests, and eventually remedy the hydrology around the fruit trees.

Many members in the community express a desire to have a garden plot; however there are elders and others who do not have transportation. There is a need to offer transportation services

to these community members wishing to have a garden plot, yet have no means to travel to the DIGs.

Staff of the Natural Resources Department, including use of vehicles to transport plants, equipment for hauling mulch, and staff time to help with mowing/weeding and seasonal setup and closedown have supported the DIGs. There is a need for dedicated hands-on staff with sufficient funding to care for the DIGs.

**A Focus on Climate Concerns:** With proper care and diversity of plantings, gardens can be very resilient to changes in climate. Concerns would be pathogens that may thrive through warmer winter temperatures. Intensity of high winds and hail storms in summer storms have already done damage to our hoop houses and severely damaged fruit trees. Sporadic waterings swinging between longer phases of drought and then followed by extreme storm water events present challenges to perennial plantings at the garden.

Notable **ACCOMPLISHMENTS** at the DIGs within the Plants Program include the construction of three seasonal hoop houses, additions to infrastructure and utilities (electricity, water, and restrooms) and a small all-season greenhouse for propagating plant starts for gardeners. Specifically, the teaching center, complete with a commercial kitchen and appliances, is a facility for growing knowledge about food sovereignty, through providing workshops. The Fish Processing Facility offers tribal commercial fishers a licensed, state certified space to process their catches and sell fresh caught filleted fish to the public. Cold storage is available to aid in the fish processing/preservation. Fish waste is put through a grinder and hauled over to an on-site composting heap. With respect for complete recycling and gratitude for the gifts of the fish, this fish compost is used to fertilize corn/potato/squash plots at the DIGS.

The growth of DIGs, the [workshop series](#) for community garden and landscape harvesting, and the ongoing education, outreach, and initiatives (such as Garden for Heart reciprocity volunteer program) contribute to the strengthening of food sovereignty for KBIC. Staff participated in the region's Food Summit (2019) as well as co-hosted the [Food Sovereignty Symposium](#) (2022).

Through support from the Portage Health Foundation and Michigan Health Endowment Fund, the DIGs received funding for two years to support a Food Systems Specialist, responsible to map a food systems report for the community.

**OBJECTIVES** of the DIGs is to continue growing current initiatives, and sustain partnerships with the Plants Program. For example, proximity and connections to the Forest Recovery Site, where acres of forested land have been cleared of Barberry shrubs by our Invasive Species Program, opens opportunity for this land to have medicinal and food plants of the forest to be planted and tended, including ginseng, blue cohosh, wild ginger, bloodroot and wild leeks. There is also a recent planting of American Chestnuts trees and a wildlife hedgerow to provide habitat and nourishment for wildlife. Restoration efforts at the Forest Recovery Site integrate perfectly with food sovereignty goals at the garden. Within the garden plots, there is careful utilization of

the land with the benefits of agricultural practices, in keeping with traditional ecological knowledge. By natural extension to the forested areas around the DIGs, there is further opportunity for exercising of Treaty Rights and deepening kinship with wild food plants. From forests transitioning to gardens, each supplies foods and medicines, each bestows blessings.

The community will be better served with increased community involvement at the garden. This could include that the responsibilities taken on thus far by the NRD will be shared with the Health Department, KBIC Youth Programs, K-12 schools, educational institutions and community partners.

**ACTIONS** taken to fully support the DIGs would be to seek funding to employ four seasonal full-time staff to tend to the DIGs. These four would be at the garden every day and all day during the growing season. In the spirit that the *Ojibwa peoples are known as the Keepers of the Medicines*, these four would bring to life the teachings of the four medicines for all people. One would embrace Asemaa and assure that gratitude is given to all who engage with the garden. Youth would be mentored and care for the asemaa plots. Another would see to the overall beauty of the garden through the teachings of mashkodewashk. Caring for the medicine plants, weeding, mulching, and mowing would be priority tasks. Wiingashk teaches of the need to bring together and strengthen the goodness expressed in our community. This person will seek to honor and amplify the connections between gardeners, community partners and collaborators. One with the spirit of Giizhik would fulfill the need for mentorship, ceremony, and teaching at the garden. The tasks of the team of four will be interchangeable. Together these staff will bring the DIGs to a new level of serving our community, with effective outreach and enhanced programs at the garden.

### 5.3.2. Environmental Health

The Environmental Health section of the Natural Resources Department includes programs focused on 1) Air Quality, 2) Lands, 3) Sustainability, and 4) Water Quality, as organized below.

#### 5.3.2.1. Air Quality

Beginning with a **DESCRIPTION**, the Air Quality program was created to address air quality and air pollution issues that affect the Keweenaw Bay Indian Community lands and livelihoods. Air quality directly impacts all land stewardship programs, activities, priority concerns, objectives, and actions.

The **PROGRAMS/ACTIVITIES** provided by the Air Quality program consider a number of local and regional air pollution sources directly affecting the KBIC. Some examples, although not exhaustive, include the several industrial manufacturing shops that are adjacent to the L'Anse Reservation (e.g., a biomass electrical generation plant operating within a ½ mile boundary), ongoing mineral exploration activity on and surrounding the L'Anse Reservation, homes and

businesses that regularly emit exhaust from everyday and other various operations, and residential and commercial open burning activities.

The program's primary responsibilities are the administration of the Clean Air Act (CAA), in partnership with the EPA, specifically Sections 103 and 105 as well as the State and Tribal Indoor Radon Grants (SIRG) and Environmental Justice Small Grants (EJSG) programs. Per SIRB and EJSG programs, the Air Quality Specialist (AQS) oversees work plan deliverables, facilitates proper training, and maintains communications with all air quality related project staff. The AQS is also responsible for CAA grant writing, QAPP creation, work plan deliverables, CEU training, and program reporting, and also administering the KBIC CAA Treatment as a State (TAS) authority. TAS for air quality includes reviewing federal CAA Rules and Regulations that affect KBIC air quality, and the review and consultation with EGLE and EPA on permits within 50 miles of the L'Anse Reservation. Air permits include New Source Review, Permits to Install, and Renewal Operating Permits that involve air quality emissions produced by Title V sources, mining operations, energy generating systems, and smaller facilities that hold section specific air quality requirements, including both point and non-point sources. Thus the AQS responds to CAA CFR rules and regulations with comment letters and NTAA support. Finally, the AQS assists other NRD departments with hazardous waste, open burning, renewable energy, and other building and home assessments' concerns.

Guiding documents and policies for the Air Quality program include this IRMP, the Clean Air Act, both the EPA and KBIC Strategic Plans, the EPA-Tribal environmental plan (ETEP), and the KBIC draft Waste Ordinance. Additionally, program work is specifically detailed within current grant-funded work plans. Air Quality staff works internally with KBIC government departments and provides support as needed with Housing, Public Works, Health, Forestry, Real Estate/Transportation, Fire, and Head-Start. Additionally, they assist staff within the NRD as needed on programmatic air related issues. External partners include the EPA, State of Michigan, National Tribal Air Association, Institute of Environmental Professionals/NAU, Michigan Tech University, Region 5 (R5) Tribal Air Program colleagues and R5 tribal environmental groups, and assorted researchers with air quality, and other air quality related climate specific, concerns.

The **PRIORITY CONCERNS** noted by the Air Quality program centers on maintaining good air quality for the KBIC, as documented in the KBIC [Strategic Plan](#) (2005) and the KBIC Integrated Resources Management Plan (IRMP).

**A Focus on Climate Concerns:** The Air Quality program has climate concerns at many scales, and more specifically, include the following:

- Continued global warming from greenhouse gas emissions resulting in an increase in air contaminants, Ozone and precursors
- Current and forecasted weather patterns and elevated temperatures result in increased utility use as well as energy supply issues (air conditioning, heating sources, automobiles)
- Local and regional droughts and wildfires result in decreased carbon sequestration as well as decreased air quality, including increased haze, air particulates, and toxic deposition locally and regionally; further consequences to human and more-than-human life are also an expected concern
- Increased utilization and effects of biomass fuel and energy sources which result in the loss of forest cover and habitats and an increase in particulate matter
- Increased atmospheric radiation from pole shift which results in a range of known and unknown consequences to lives and livelihoods

Notable **ACCOMPLISHMENTS** of the Air Quality program include the 2020 attainment of the KBIC Clean Air Act TAS and its development of Air Quality standards for the Reservation. As the Program's most significant project to date, TAS certification requires extensive, ongoing research and review to remain current on permits, trends, and issues that affect KBIC homelands, tribal sovereignty, and an increased need for capacity building. Additional recent project accomplishments include a mold assessment study and outreach project with KBIC Housing Department HUD grant, an EPA Tools for Schools and Flag program, developing a tribal radon testing program and QAPP, Warden Plant public hearings, assistance on the open burning action plan within the draft KBIC Hazardous Waste Ordinance, and working with EGLE and EPA to address multiple air related issues on and around the reservation, and also, air quality sampling, inspections, and addressing violations. Finally, the Air Quality Program, in partnership with hosting an ITEP summer intern to assist with data and report compilation, reviewed and documented benefits of KBIC participation in the EPA Energy Star Program.

The **OBJECTIVES** of the KBIC Air Quality program include three main priorities: 1) Air Quality Administration and Capacity Development, 2) Basic Air Quality Assessment and Education, and 3) Emissions Inventory Preparation.

**ACTIONS** specifically recommended by the KBIC Air Quality program include, but are not limited to, continue working towards the development of a community partnership with the L'Anse Library on an R5 Air Sensor Loan Program, deploying additional local air sensors for attaining baseline air quality data at sites deemed as areas of concern on the L'Anse Reservation, and maintain collaborations with EJSG consultants responsible for creating a health risk assessment report for purposes of studying effects of airborne toxic contaminants that are

reflective of KBIC priority concerns. Additional actions include producing the KBIC Level IV Emissions Inventory inclusive of a 50 miles radius of reservation, developing a public health alert plan for smoke and haze associated with wildfires, participating in the CEMP/Eagle Mine project, and providing energy assessment consulting as needed for the KBIC CARE.

#### 5.3.2.2. Lands

Beginning with a **DESCRIPTION**, the Lands program, established in 2003, currently focuses on four primary areas, including environmental response, underground storage tanks, open dumps, legacy, and brownfields. These focus areas are critical to health and wellbeing of many lives and livelihoods across Reservation lands and waters, and throughout the KBIC homelands and 1842 ceded territories.

The **PROGRAMS/ACTIVITIES** provided by the Lands program are diverse and collaborative, specific to each focus area, 1) Environmental Response, 2) Underground Storage Tanks, 3) Open Dumps, 4) Legacy, and 5) Brownfields, as organized below.

*Environmental Response:* KBIC NRD staff respond to spills on the reservation and within the ceded territory. KBIC NRD Environmental Response program has a spill response trailer with absorbent boom, supplies and 800 feet of hard boom to help for spills of contaminants and cleanup purposes.

*Underground Storage Tanks:* NRD assists with compliance and technical assistance activities related to underground storage tanks (UST). By assisting with release prevention, cleanup assistance, and collaboration with state and federal agencies, NRD works to protect and improve the environmental health within the reservation boundaries.

*Open Dumps:* Illegal dumping (Illegal waste disposal means deliberately dumping, tipping or burying waste on private or public land that's not licensed to accept it.) is prohibited within our community. It has been proven that illegal dumping has a lasting effect on watersheds, degradation of quality of drinking water, wildlife disruption and contaminated soil. KBIC Title 110 Waste Management Ordinance 110.106, b. "Open dumping of any waste anywhere within the Reservation Environment is expressly prohibited." and enforcement orders may impose civil fines.

*Legacy:* Legacy pollution sites are environmental hazards that affect our natural resources, cultural resources, and public health. The quality and health of the water, wildlife, fish, plants and medicines continue to sustain our well-being and culture. The effects of practices such as historical mineral development; have included negative economic impacts associated with the boom and bust cycle of the industry, and environmental legacies that persist on our landscape today.

*Brownfields:* As sites, areas, and/or lands that are known or suspected to have been negatively impacted by historical industrial practices, commercial activity, and/or illegal dumping (i.e., Sand Point), the KBIC Natural Resources Department developed the Tribal Response Program in



2003. Funding for the program is provided by the U.S. Environmental Protection Agency. The goal of the program is to investigate and address properties that are known or suspected to be contaminated in some form. Various activities are initiated under the program including; completing an inventory of potential brownfield sites within and near the L'Anse Reservation, developing a formal process for the KBIC to identify, assess, clean up, and redevelop the known or potential brownfield sites, developing protocol for responding to community requests for site investigation, fostering public participation and education, and developing and maintaining a public record of brownfield sites of concern (e.g., [KBIC Brownfields Map](#) and the KBIC Brownfields StoryMap) A record of all known brownfield sites is located in the KBIC Tribal Response Program [Public Record 2008-2013](#) and [Public Record 2014-2020](#). Additionally, the Brownfields focus area is guided by Community member input. For example, a Brownfields Community Survey requested the identification of potential and/or actual sites, providing program opportunities to learn from its members. The Survey invited members to express their concerns and ideas involving potential and known sites, as well as their priorities for clean-up of contamination and the reuse of these properties.

Guiding documents include this IRMP, the KBIC Strategic Plan, the 2020-2025 KBIC [Hazard Mitigation Plan](#), and KBIC Waste Management Ordinance, KBIC Hazardous Substance Control Ordinance, and environmental policies established by the EPA. The program works internally with Water Quality, Plants, and many KBIC committees (i.e., CARE and Waste Advisory Board) and government departments, and externally, in partnership with the EPA, EGLE, as well as research entities.

The **PRIORITY CONCERNS** noted by the Lands program are the rights and responsibilities associated with the five focus areas of the program. For brownfields, the program prioritizes both known and unknown contaminated areas within the community as potential health risks to humans and ecosystems. We prioritize the environmental response and mitigation of irreparable adverse impacts posed by current and legacy environmental issues posed by underground storage tanks, open dumps, and brownfields within the KBIC homelands.

**A Focus on Climate Concerns:** The Lands program is concerned by the current and forecasted climate related changes for the L'Anse reservation and 1842 Treaty ceded territory. These concerns include, but are not limited to, fluctuating water levels (groundwater and surface waters), warming water and air temperatures, shoreline erosion and needs for stabilization, human populations migrating to the area which increases pressures on the region's natural resources, habitats, and infrastructure and services. Additionally, the program is concerned about extreme weather events such as high winds and heavy precipitation events which contributes to increased flooding and continued sediment and waste runoff into Lake Superior and other water bodies; there is also concern about the current infrastructure capacities of local wastewater treatment plants. Finally, fluctuating water levels also affect numerous historic underground storage tanks, water wells (households and institutions), and septic tanks (some of

which are not anchored) on the Reservation. Importantly, in the 1990's, the reservation's groundwater level, in some places, was approximately three feet lower than present day.

Notable **ACCOMPLISHMENTS** of the Lands program include the continued growth of the program, its expertise, and funding opportunities. Additional accomplishments include the co-development of the 2020-2025 KBIC [Hazard Mitigation Plan](#) with WUPPDR (2020), the Solid Waste Facility's full-service [transfer station](#) available to the general public, participation in and contributions to the [Torch Lake PAC](#), increased and enhanced research, educational, and outreach initiatives, and sustained engagement in KBIC CARE and the TAS water team.

The **OBJECTIVES** of the Lands program seek to support and facilitate good land stewardship relations by KBIC, our partners, and the general public within the L'Anse Reservation and 1842 Treaty ceded territory, within our specific focus areas as follows:

*Environmental Response:*

- Ensure that the Tribe has necessary training and equipment/ supplies to respond to releases of oil and/ or hazardous substances.
- Collaborate with and participate in environmental emergency response planning, preparedness, and mitigation activities with Tribal and non-Tribal partners
- Stay informed on spill activity throughout the area and be available to provide technical assistance on point source and nonpoint source contamination issues.

*Underground Storage Tanks (UST):*

- Provide UST compliance assistance
- Update UST and LUST inventory
- Update spill response plans from UST operators

*Open Dumps:* Develop standard operating procedure (SOP) for identifying and responding to illegal dumping/burning incidents including routine reconnaissance, receiving/responding to tips and complaints, characterizing the site, reporting, taking cleanup action, and record keeping.

*Legacy:* Ensure participation on environmental issues that have impacted Tribal treaty or trust issues.

*Brownfields:*

- Completing an inventory of potential brownfield sites within and near the L'Anse Reservation.
- Developing a formal KBIC process for identifying, assessing, cleaning up and redeveloping known or potential brownfield sites.

- Developing protocol for responding to Community requests for site investigation.
- Fostering public participation and education.
- Developing and maintaining a public record.

**ACTIONS** specifically recommended by the Lands program are to continue emphasized actions towards current program priorities and objectives, and continue to enhance focus on climate related changes as opportunities and funding allows.

#### 5.3.2.3. Sustainability

Beginning with a **DESCRIPTION**, the Sustainability program, currently focuses on two primary areas; solid waste and energy. These focus areas support the implementation of sustainability projects throughout Reservation lands and waters, the KBIC homelands, and the 1842 Treaty ceded territory.

The **PROGRAMS/ACTIVITIES** provided by the Sustainability program involve Solid Waste and Energy.

*Solid Waste:* KBIC obligations include responsible and safe solid and electronic-waste disposal. Currently, the KBIC operates a [Solid Waste Facility](#) located in Baraga that provides curbside trash pickup services to over 400 customers located in the L'Anse and Baraga area, as well as a full-service [transfer station](#) that is open to the general public. The transfer station accepts unusable furniture, microwaves, some appliances, and waste oil, facilitates dump trailer rentals, and has a permanent [E-Waste](#) (electronic-waste materials) drop off site that takes monthly collections to recycle community E-Waste rather than have it end up in a landfill. (The facility however does not currently accept tires, hazardous waste, or paints.) For those who wish to learn and understand more about the issues, the KBIC Natural Resource Department website provides further information on [solid waste](#) and [hazardous waste](#), as well as the kinds of hazardous substances often found in tribal communities. More specifically, additional information includes descriptions of waste types and differences in industry/business and consumer derived wastes, area hazardous waste generators, how wastes can be problematic, as well as waste management and solutions to support the remediation of waste issues.

*Energy:* Energy sustainability is the ability to ensure equitable access to ample, safe, and affordable energy across our region, and the capacity to plan for diverse renewable energy system transitions in our community into the future. We currently provide resource conservation education to tribal members, evaluate energy efficiency options for tribal government offices and members, explore green energy sources, and work to expand recycling opportunities. For those who wish to learn more, the KBIC Natural Resource Department website provides further information on [energy sustainability](#).

Guiding documents include this IRMP, the 2005 KBIC [Strategic Plan](#), the [KBIC Strategic Energy Plan](#) (2008), KBIC Waste Management Ordinance, and environmental policies established by the EPA. The program works internally with Water Quality, Plants, and many KBIC committees (i.e., CARE) and government departments, and externally, in partnership with the EPA, EGLE, as well as research entities.

The **PRIORITY CONCERNS** noted by the Sustainability program are minimizing waste and energy impacts on environments and contributing to healthy ecosystem relationships. For wastes, we prioritize public awareness of the [Solid Waste Facility and transfer station](#) and the promotion and support of everyday actions of informed and responsible disposal practices. For energy, we prioritize low cost energy sources, job creation, benefits for the community, reducing fossil fuel dependence, and supporting a self-sustainable energy system.

**A Focus on Climate Concerns:** The Sustainability program is concerned by the current and forecasted climate related changes for the L'Anse reservation and 1842 Treaty ceded territory. These concerns include, but are not limited to, increased energy usage due to extreme temperature fluctuations, population influx due to climate refugees, disaster debris management, and solid waste management which requires consideration of reducing landfill inputs.

Notable **ACCOMPLISHMENTS** of the Sustainability program include the continued growth of solid waste programs related to, “reduce, reuse, recycle, respect”. Additional accomplishments include the co-development of several solar panels on tribal government buildings and supporting the design of additional panels for the future.

The **OBJECTIVES** of the Sustainability program are to seek to support and implement sustainability issues and potentials throughout the Reservation lands and 1842 Treaty ceded territory, as well as participating in community sustainability initiatives, within our specific focus areas as follows:

*Solid Waste:* Continue to support, promote, and facilitate KBIC obligations for responsible and safe waste disposal programs.

*Energy:* Energy sustainability goals are to create an alternative, self-sustainable clean energy system which preserves the environment, conserves our natural resources, and lowers energy costs.

**ACTIONS** specifically recommended by the Sustainability program are to continue emphasized actions towards current program priorities and objectives, and continue to enhance focus on climate related changes as opportunities and funding allows.

#### 5.3.2.4. Water Quality

Beginning with a **DESCRIPTION**, the Water Quality program, established in 2000, addresses many water quality and water resource management issues within, and that affect, the L'Anse Reservation. The program is multi-focused, including surface waters, groundwaters, and the abundant resources and opportunities provided by waters across the landscape. For the Keweenaw Bay Indian Community (KBIC) water is the gift of life, and water is sacred. Water and water resources provide subsistence, cultural, and social benefits for the community. The L'Anse Reservation is inundated by lake and river systems with several hundred tributaries (Sweat and Rheume, 1998), and consists of approximately 5,000 acres of lakes and wetlands, over 200 miles of streams and rivers, and 23 miles of Lake Superior shoreline.

The **PROGRAMS/ACTIVITIES** provided by the Water Quality program are diverse and collaborative, including monitoring, sampling, and reporting, assessment, compliance, research, and education and outreach activities within our community and the public. The KBIC water quality monitoring program is the foundation of our program, providing baseline water quality information and a dataset of reservation waters since 2000. Current problems relating to water quality are identified, characterized, and addressed through the program. While surface water resources are believed to be relatively pristine, monitoring efforts are needed to assure their future quality. The monitoring design is a combination of fixed and rotating sites. All sites selected are located on or adjacent to the L'Anse Indian Reservation. In addition, macroinvertebrate and habitat surveys are completed every fall to assess stream and river health and to monitor for changes in riparian zones. Beach monitoring is also conducted throughout the summer months to assess the safety of local beaches by testing for E.coli.

Following [TAS approval](#) (2020) and the adoption of KBIC-specific water quality standards (2023), a primary responsibility of the Water Quality program is the administration of the Clean Water Act (CWA) Treatment as a State (TAS) authority, in partnership with the EPA and USACE, specifically administering Sections 303 and 401. KBIC water quality standards protect designated uses and surface water integrity for waters of the Reservation. Other guiding documents for the Water Quality program include this IRMP, the KBIC [Strategic Plan](#), [Wildlife Stewardship Plan](#) (2014), and the [Lake Superior Manoomin Cultural and Ecosystem Characterization Study](#) (2020). The Water Quality program works internally across Natural Resources Department programs, Forestry, and with additional KBIC government departments. Externally, the KBIC Water Quality program works in partnership with many others, including, state, regional, tribal and intertribal, federal, and binational organizations and sponsors, including the BIA, EPA, USACE, state agencies, GLIFWC, GLWQA TEK Task Force, as well as research entities. The Natural Resources department website includes more information about the Water Quality program focus areas listed below.

- [Beach Monitoring](#)

- [Abandoned Wells](#)
- [Macro-invertebrate Sampling](#)
- [Groundwater Program](#)
- [Storm Water Compliance](#)
- [Surface Water Monitoring](#)
- [Uranium Study](#)
- [Water Reports & Studies](#)
- [Community Environmental Monitoring Program \(CEMP\)](#)
- [KBIC TAS Approval & Water Quality Standards](#)

The **PRIORITY CONCERNS** noted by the Water Quality program are specific to different program focus areas, types and habitats of various water bodies, as well as concerns across the aquatic and terrestrial system as a whole. The program priority concerns are specifically, but not limited to, pollution and contamination, degradation to and changes to natural systems, invasive species, land use decisions and impacts, water-related pathogens, natural disasters, and climate related changes.

**A Focus on Climate Concerns:** The water quality program is concerned by current and expected climate related changes as all changes greatly impact hydrology and water quality for surface and groundwaters, wetlands, and the many lives that depend on good quality, and ample quantity of, water. Current and forecasted impacts of climate change on aquatic ecosystems include changes in water quality with shifts in seasonal weather patterns, increase in extreme weather events (both drought and flooding risk increases), changes in Lake Superior temperatures, ice cover and water levels, change in abundance and distribution of coastal wetlands, loss of native plant and animal species, increase in rates of water-related disease, bacteria, virus, and other pathogens, and increase in non-native and invasive species.

Notable **ACCOMPLISHMENTS** of the Water Quality program include the 2020 [KBIC TAS Approval and Water Quality Standards](#) development and approval (2023). KBIC is the first tribe in Michigan to achieve TAS regulatory authority for water quality. TAS permits KBIC to administer a water quality standards (WQS) program for KBIC's L'Anse Indian Reservation under CWA §303 and the certification program under CWA §401.

Another accomplishment for the expansion of our program included KBIC beaches. The Lake Superior [Beach Monitoring](#) program was established in 2017 for beaches within reservation waters. To determine bacteria levels, sampling and notification results are conducted weekly during the beach season. Beaches included in our weekly monitoring include First Sands, Zeba boat launch, Alligator, Head of the Bay, Ojibwa Campground, and Sand Point. Finally, in partnership with others, the Water Quality program continues their ongoing support and

participation in annual events such Lake Superior Day, World Water Day, and a newly established Tribal Water Day.

The **OBJECTIVES** of the Water Quality program aim to strengthen the comprehensive protection and restoration of L’Anse Reservation and 1842 Treaty waters, including surface waters, wetlands, groundwaters, and the abundant resources and opportunities provided by waters across the landscape. Specific objectives are listed below.

- Administer the [KBIC water quality standards program](#) for waters of the Reservation under CWA §303 and the certification program under CWA §401
- Continue [water quality program focus areas](#) for monitoring, sampling, and reporting, assessment, compliance, research, and education and outreach activities within our community and the public

Additional 5 and 10 year objectives include applying for [CWA §319](#) for nonpoint source management program and to continue the process for WQS approval and regulation.

5-year Objectives:

- Obtain Federal WQS approval
- Secure beach monitoring funding through EPA with WQS approval
- Apply for [CWA §319](#) for nonpoint source management program
- Continue triannual review of WQS

10-year Objectives:

- Continue triannual review of WQS.

**ACTIONS** specifically recommended by the Water program include the actions listed above, and additionally, from the 2020-2025 KBIC [Hazard Mitigation Plan](#) (2020:145), Action Item 8: Watershed Assessment for Stream Infrastructure. This project will assess the condition of the road/stream crossings for aquatic organism passage and watershed connectivity.

### 5.3.3. Fisheries and Aquaculture

Beginning with a **DESCRIPTION**, the KBIC Fisheries and Aquaculture program goal is to “Facilitate sustainable harvest of fisheries resources within Lake Superior and 1842 Ceded Territory for Tribal members.” Part of achieving this goal includes following a management plan which includes fish stocking. The goal underpinning fisheries program initiatives is to contribute to a self-sustaining fishery on the reservation and 1842 ceded waters by rearing native fish for stocking into Lake Superior and adjacent streams, specifically to ensure that the KBIC stocking numbers are greater than KBIC harvesting levels.

The Fisheries program receives tribal and federal funding for its operation with KBIC Licensing monies, Parks and Wildlife and Hatchery monies through the Bureau of Indian Affairs, and grants from agencies such as U.S. Fish and Wildlife Service (Tribal Wildlife Grant) and USDA-NRCS (EQIP). Hatchery renovations continue to improve rearing success to help achieve fisheries program goals. The Fisheries program also engages in multipartner, regional management of fish populations through seasonal assessment activities within Lake Superior and some inland water bodies. A host of fish species are considered in many aspects of KBIC fisheries management, with many non-native species recognized as important components of regional fisheries dynamics.

Fish retain an important role in the identity of the KBIC Ojibwa people as they have since time immemorial. Fish remain integral to the entire ecosystem's life webs including essential consumption for humans and other species, ecological community dynamics, socio-economic impacts, and health and wellbeing. Additionally, the KBIC recognizes that all families are connected to historical and contemporary fishing in some way, and as such, support treaty protected fishing rights as well as Ojibwa values to protect and restore fisheries. Our traditional territory is composed of several hundred inland lakes and thousands of miles of rivers, streams, and creeks. The area is also adjacent to Lake Superior and encompasses hundreds of miles of coastal and shoreline habitats. KBIC licenses approximately 20 tribal members to commercially fish Lake Superior, with a typical annual fish harvest of approximately 200,000 pounds. Over 700 Tribal members are annually licensed to harvest fish for subsistence purposes and sport fishing throughout the western Upper Peninsula. In addition, those members who fish, distribute them out to the rest of our community for ceremonial, communal, and everyday consumption for our people.

The **PROGRAMS/ACTIVITIES** provided by the Fisheries program is to support and protect healthy aquatic ecosystems for fish populations in partnership with others across regional waters. Guided by the Lake Superior Fisheries Management Plan (2023), the program's activities aim to achieve many interrelated goals outlined in KBIC agreements and collaborations with various multiscale organizations. These goals center on activities for hatchery operations and fish stocking, fisheries management, disease surveillance, habitat restoration, and Aquatic Invasive Species early detection and management.

While KBIC fish hatchery operations began in 1989, there have been several moves; from home basement to Zeba pumphouse to the current locations in Pequaming and L'Anse. Our current cold-water facility is on 15 acres in Pequaming, Michigan, it began in 1993. It currently consists of two rearing buildings using groundwater for operational supply. Our walleye rearing began in 2009, and consists of two 1/2 acre rearing ponds approximately 1 mile east of L'Anse Village on Brewery Road, using impounded surface water for operational supply. KBIC raises lake trout, brook trout (coaster and stream), and walleye for annual stocking into western Upper Peninsula



of Michigan waters. Stocking records are maintained at the Natural Resource Department offices and information is shared with other organizations. Stocking has occurred at 97 locations within 56 separate water bodies within the six counties of the western Upper Peninsula, including 29 locations on the L'Anse Indian Reservation. The majority of our stocking effort is immediately on or near our L'Anse Indian Reservation, with additional stocking into waters in areas further afield as co-managers request and resources are available. Since 1993, approximately 1.7 million lake trout, 1.5 million brook trout, and 9.1 million walleye have been placed into Lake Superior and its tributaries.

The Fisheries program aims to manage both cold water and cool water systems, and has a focus on the following species for high priority management: lake trout, brook trout (stream and coaster), lake sturgeon, and walleye. The program utilizes standardized fisheries survey procedures to provide appropriate fishery recommendations to KBIC Leadership. These efforts are supported by the Great Lakes Fishery Commission, Great Lakes Indian Fish and Wildlife Commission, U.S. Fish and Wildlife Service, Ottawa National Forest, and Michigan Department of Natural Resources. Major objectives for standardized surveys include assessing and monitoring extraction response to commercially valuable fish species (lake trout and lake whitefish, cisco, etc.), evaluating fish stocking success as evidenced by marked hatchery fish survival and contribution to collected data-sets, monitoring and assessing abundance of ecologically and culturally important species such as the imperiled lake sturgeon, stream habitat and biota monitoring. For all of the different fisheries programs, disease surveillance is conducted through the sampling of fish for screenings for the exotic virus Viral Hemorrhagic Septicemia (VHS). Other information on potentially diseased fish is also shared by public observations. The Fisheries and Aquatic Invasive Species (AIS) programs also engage in Portage and Torch Lakes management, as it relates to subsistence fishing. We survey, track, monitor and manage a robust walleye population and associated subsistence harvest in the Portage Lake complex. We are also currently experimenting with various protocols aimed at early detection of AIS, and aimed at gathering baseline data for pollution sensitive organisms (macroinvertebrates, mussels, isopods, etc; absence presence surveys, relative density and diversity indices, etc). Tribal resources continue to be used for restoration and enhancement of fisheries with our stocking efforts in the western U.P. which are coordinated with co-managers.

With the support of the Great Lakes Restoration Initiative, and working with the USDA-NRCS and the Baraga County Road Commission (BCRC), the KBIC Fisheries program, with Public Works, works to improve the health of stream systems located in and around the reservation. This is done through the installation of culverts or bridges that allow for aquatic organisms to pass through, specifically in areas where the older culverts (which would be replaced) were either too small or perched above the river making it difficult for fish to pass through and for the streams to have proper water flow. The KBIC has also been maintaining and collecting data from an adult sea lamprey trap on the Silver River Watershed, through a subcontract with the US Fish

and Wildlife Service and the Great Lakes Indian Fish and Wildlife Commission. By assessing the number of adult sea lamprey (an invasive species) estimates on the potential number of larval lamprey can be generated. This then allows for control experts to assess the most effective way to eradicate larval lamprey. The KBIC also does assessments of both lake trout and lake sturgeon throughout Keweenaw Bay and western Lake Superior following protocols set by GLIFWC and the Lake Superior Technical Committee. Doing so helps gauge the abundance and health of the trout and sturgeon. Fishery program staff continue to meet with regional tribal, federal, state, and local entities to coordinate restoration efforts and bring recommendations to leadership for approval.

Guiding documents and policies for the Fisheries program include this IRMP, the Lake Superior Fisheries Management Plan (2023), [Wildlife Stewardship Plan](#) (2014), and other guidance provided by Lake Superior partners. Fisheries staff work internally with KBIC government departments and provide support as needed with Water Quality, AIS, Wildlife, and Public Works. Additionally, they assist staff within the Department as needed on fisheries related issues. External partners are also many, including federal, intertribal, and state and regional entities, as well as research partners concerning fisheries, invasive species, contamination, and other climate related concerns such as Michigan Tech.

The **PRIORITY CONCERNS** noted by the Fisheries program include sustainable harvesting by subsistence, commercial, and sports fishers, aquatic invasive species, toxic contamination from legacy and current activities, fishery habitats, and the confounding adverse effects of a changing climate. Due to contemporary human consumptive pressures, combined with increased potential detrimental effects of climate change, habitat loss and/or degradation, AIS introductions and expansions, and resultant overall changes to local, regional and global fisheries, maintaining KBIC natural resources integration and planning efforts are critical. There is concern that the cumulative and degradative effects of these factors, particularly for biologically sensitive and culturally important species of fish (lake sturgeon, coaster brook trout and others) and other organisms, will continue to challenge the KBIC Fisheries program.

Sustainable harvesting remains a priority for the Fisheries program, locally and abroad. Increasing human consumption pressure on natural resources must be recognized at the local, regional and global scales. Maintaining a management perspective that ensures resource sustainability can be difficult when pressed with the realities of consumptive demand. For example, certain fish markets of the Great Lakes are strongly influenced, and at times driven, by international economies and the dynamics of global supply and demand, (as evidenced by recent European interests in marketing the eggs from Lake Superior cisco, aka lake herring). A major goal of the KBIC-NRD is to encourage and perpetuate a viable commercial and subsistence fishery for our members, but best management practices must be implemented at all scales, emphasizing goals of balance and sustainability.

Aquatic Invasive Species (AIS), toxic contamination, and habitat issues directly impact KBIC fisheries. AIS concerns prompted KBIC-NRD to actively seek financial and staff support to develop and maintain an AIS component to the overall Fisheries program. Since 2015, our AIS Division has assumed certain departmental efforts to monitor, document, and when warranted, attempt to control various AIS, with a primary focus on sea lamprey, purple loosestrife, and Eurasian water milfoil. Toxic contamination is a priority concern for fisheries and the wellbeing of our fish reliant community. Contamination originates from ongoing point and nonpoint air depositions and re-emissions, as well as legacy (e.g., stamp sands accumulations at Buffalo Reef, Sand Point, and others) and current industrial activity sources such as mining and energy generation. In particular, stamp sand deposits and legacy mining impacts are of concern to our fisheries, the loss of spawning habitat in areas such as Buffalo Reef, as well as the continued contribution to contaminants found in our fish. Our tribe is aware and concerned with the current trends of elevated dangerous chemical levels in the food resources our members have retained rights to hunt, fish and gather for. As a result, we work closely with GLIFWC, and Michigan's DNR, EGLE, and DHHS in collecting fish samples for toxics and contaminant analyses from KBIC priority harvest inland lakes (including Portage Lake, Torch Lake), and Lake Superior. We also provide comment when needed on new potentially threatening sources of contaminants. The loss and degradation of habitat has prompted KBIC to conduct stream crossing surveys, develop additional partnerships and workgroups, and seek funding to increase stream conductivity and improve habitat. KBIC also relies on their established partnerships for guidance on additional habitat concerns such as the loss of reefs and fish consumption advisories.

**A Focus on Climate Concerns:** Several aspects of the KBIC-NRD Fisheries program take into account the potential effects of a changing climate. Efforts to document water temperature trend and pattern changes in area streams, lakes, and wetlands are ongoing. Forecasting potential influence of changing water temperature patterns on fish migration, reproductive and foraging behavior, recruitment, and survivability is considered a top priority in management.

Changes in climate are suspected to partially drive the establishment and changing distributions of invasive species. The AIS program actively surveys and monitors established invasive species, as well as those species of multi-agency concern that are considered a threat, and/or newly established, within the 1842 Treaty ceded territory (e.g., Asian carp).

Assisting in the tracking and reporting of various biological and environmental conditions that relate to climate change and KBIC-NRD departmental objectives is also an ongoing challenge. From a fisheries perspective, some examples of these efforts include regular fish disease testing of coldwater and cool water aquaculture operations, as well as in wild fish populations. A warming climate and resultant warming waters of the region also periodically lead to concerns of fish disease outbreaks.

The Fisheries program coordinates with other natural resource department programs to collect data that complements fisheries, macroinvertebrate, and habitat assessments. Increasing unpredictability in weather, large-scale precipitation events, river flow fluctuations and wet and dry periods make it essential to continue our efforts to attempt to understand potential and resultant detrimental effects of climate change on KBIC-NRD Fisheries management objectives and actions.

KBIC-NRD regularly works with multiple agencies to investigate various environmental challenges, on a Lake Superior basin-wide scale, including climate change effects such as ice coverage trends, AIS, coastal warming, river plume inputs, habitat degradation, and others. The Fisheries program will continue contributing staff, capacity, and time in surveys and data collections pertaining to the best management of the region's fishery.

Notable **ACCOMPLISHMENTS** of the Fisheries program include sustaining the Fish Hatchery facility and strengthening its operations, continuous fisheries management with multiple partners, the development of the Aquatic Invasive Species program, and growing engagement in habitat restoration projects. For example, aquatic organisms and fish passage improvements have been made on 44.93 miles of stream from 2012-2016. Additional stream improvements are ongoing through local and regional partnerships. Finally, an updated Lake Superior Fisheries Management Plan was reviewed and approved June, 2023 by the Tribal Council.

The **OBJECTIVES** of the Fisheries program aim to support sustainable fisheries and harvest seasons within Lake Superior and 1842 Ceded Territory through its hatchery operations and fish stocking, adaptive fisheries management, disease surveillance, habitat restoration project, and educational and outreach initiatives. Aligning with the 2023 Lake Superior Fisheries Management Plan, the current objectives are listed below, followed by program 5-year and 10-year objectives.

- Minimum annual production and stocking target include the following:
  - 25,000 spring fingerling walleye (Opportunistic additional stocking of surplus fertilized eggs and newly hatched fry)
  - 40,000 fingerling stream strain brook trout (Opportunistic additional stocking of surplus eggs and fry)
  - 30,000 coaster strain brook trout
  - 50,000 fingerling lake trout
- To develop biologically sound management plans and/or prescriptive guidance for all 1842 ceded waters of Lake Superior and applicable inland lakes, impoundment reservoirs, and streams, on a minimum 5 year basis, an updated Lake Superior Fisheries Management Plan was reviewed and approved June, 2023; additionally, the recommendation to the KBIC Tribal Council that this plan be reviewed on an annual

basis was approved. Regular fish stocking prescriptions, inland lakes spear-harvest guidance, and stream fishery updates should be generated for review annually.

- Conduct stream biological surveys on each watershed every 3-5 years. Conduct fishery surveys for lakes on the Reservation every 3-5 years. Coordinate off-Reservation stream and lake surveys with Ottawa National Forest, MDNR, USFWS, and other partners and/or researchers.
- Gather periodic data from commercial and subsistence fishermen to assist in the management of those fisheries.
- Maintain all fishery data in appropriate and modernized database formats, and compile applicable findings into periodic reports.
- Improve and/ or maintain fishery habitat for the benefit of native species
- Collaborations on fish consumption and health advisories
- Community education, outreach, and aid in fishing opportunities
- Engage in restorative habitat improvements

#### 5-year Objectives:

- Continuation of standardized surveys for focal fisheries
- Acquisition of proper equipment and capacity support to effectively continue fisheries survey efforts (new Lake Superior Research Vessel, New Lab and Building space, etc.)
- Critical review and evaluation of stocking prescriptions for each focal hatchery species
- Review new AIS Lake Superior Basin-Wide Early Detection Protocol, and become fully equipped to conduct full survey in future years
- Acquisition of capability/ capacity for performing standardized walleye surveys
- Development of early life history capability for walleye program
- Continued expansion of walleye rearing capability and collaborations
- Continued expansion of cold water rearing capability and collaborations
- Continued habitat monitoring, restoration, rehabilitation and education efforts
- Development of a priority listing of areas to protect for future fishery and strategies
- Development, Implementation of schedules for ceded inland lake surveying
- Develop and Implement Baseline Mussel Survey for 1842 Ceded Territory

#### 10-year Objectives:

- Development of long-term and stable standardized fisheries survey and management rotations for ceded inland lakes, streams and regions of Lake Superior.
- Implementation of strategies to protect critical areas and species.

**ACTIONS** specifically recommended by the Fisheries program support our objectives, and are listed below. Additionally, Action Item 14 from the 2020-2025 KBIC [Hazard Mitigation Plan](#) (2020:148) recommends the relocation of the KBIC Fish Hatchery. The current hatchery facility

located on the bay in Pequaming, Michigan is extremely vulnerable to rising lake levels. An alternate location may be identified through a planning process and cost-benefit analysis.

- Continued Long-Term Monitoring of Important Aspects of Regional Fisheries
  - Standardized spring, summer and fall lake trout surveys
  - River and stream surveys to evaluate habitat, macroinvertebrate and fish communities
  - Continued hatchery fish survival evaluations (recent focal species and strains include lake trout, stream brook trout, coaster brook trout, walleye)
  - Implementation of standard nearshore coaster brook trout surveys, utilizing electro-fishing vessel (recently acquired by KBIC-NRD)
  - Initiation and Continuance of Walleye Population Monitoring and Propagation
  - Long-Term adult walleye population monitoring in Huron Bay and Portage Lake
  - Establishment of inland lakes walleye survey schedules
  - Develop and implement baseline survey protocols for native and invasive mussels
  - Continued monitoring and tracking of KBIC Commercial and Subsistence Fisheries
  - Standardized Multi-Agency lake sturgeon surveys in western Lake Superior
- Strategic Aquaculture Goals and Prescriptive Stocking Continues with Expansions
  - Continued stocking of lake trout in Lake Superior, and brook trout in Lake Superior and regional coldwater lake and stream systems.
  - Additional rearing areas and tanks, new well, and water system changes to improve biosecurity and water reuse capability.
  - Acquisition of walleye survey capacity and capability (inland assessment nets, boat, etc.)
  - Development of walleye egg collection and incubation plan for walleye production
  - Walleye incubation building, improve current pond aeration, and expand capacity with additional pond(s)
  - Continued health monitoring of hatchery species
  - Continued coordination and collaborations with regional managers to achieve goals
- Continued Habitat Monitoring, Restoration and Rehabilitation Efforts
  - Stream road-crossing improvements, baseline and continued fishery data collections
  - Strategic acquisition of wetland and riparian areas vital to lake and stream health
  - Stream and lake habitat monitoring and improvement efforts
  - Improvements to public access of Sand Point Kids Derby Pond and other areas
  - Continue participation with partners in relevant projects
- Contaminant Monitoring in Fish, Mussels, Aquatic Food Sources
  - Assist multiple partners in collecting samples for contaminant analyses

- Continued dissemination of the most up to date consumption advisory information for the 1842 Ceded Territory
- Continue participation with partners in relevant studies
- Public education and views
- Continued Water Quality and Habitat Coordinative Efforts with KBIC-NRD Programs
  - Temperature trend data collection efforts throughout 1842 Ceded Territory, with emphasis on priority fish stocking areas, and areas for native fish management focus.
  - As part of these efforts, continued opportunity providence to aspiring students from the Keweenaw Bay Ojibwa Community College (KBOCC)
  - Continued work within the KBIC-NRD, and with partnering agencies, to collect water quality, chemistry, stream flow, water level, and other data that complement fisheries, macroinvertebrate and habitat assessments.
- Continued participation in Regional Workgroups and governmental planning (such as land use, health, and comprehensive) and educational activities to convey and receive current information and views to bring to management plans.
  - Bring KBIC influence to regional work plans
  - Provide KBIC Leadership with information for decision-making
  - Public education and views

#### 5.3.3.1. Aquatic Invasive Species

Beginning with a **DESCRIPTION**, the Aquatic Invasive Species program focuses on the management of aquatic invasive species (AIS). Invasive species are species that are not native to an ecosystem and cause harm in some form, and are a prevalent issue. They usually are more aggressive than native species which can cause them to be able to out-compete native species for space and resources. As a result, non-native species can overtake areas and cause issues for the KBIC as native aquatic beings are a vital part of the culture and traditions of the members of the KBIC. Some invasives can stress key native species populations or degrade habitat and water quality. In order to address, manage, and/or control the spread of invasive species, the KBIC has developed this Integrated Resource Management Plan, which reinforces the goals and objectives of the AIS management plan, supporting the protection and restoration of current and future areas of culturally significant species within ceded territory water bodies.

Specific goals for addressing aquatic invasive species are included within the AIS Management Plan. From the [AIS Management Plan](#) (2015:30), adaptive management goals include: 1) Implement practices that prevent new AIS introductions and limit the spread of existing AIS populations, and 2) Mitigate or eliminate ecological, cultural, economic, and public health impacts of AIS.

The **PROGRAMS/ACTIVITIES** provided by the invasive species program are primarily guided by the [Aquatic Invasive Species Management Plan](#) (2015). AIS program activities detailed in the Plan provide a range of specific actions to better prevent, monitor, assess, and control aquatic invasive species in water bodies of interest to the KBIC. AIS program activities are also informed by the Fisheries program as well as the Wildlife Stewardship Plan which serves as guides for the stewardship of native, naturalized, and other culturally important species in the Keweenaw Bay Indian Community for current and future generations. Overall, actions aim to minimize the negative impacts caused by invasive species to natural aquatic ecosystems including relationships between native plants, fish, and human communities.

Aquatic invasive species disperse widely across water bodies and administrative boundaries. The number of new invasives being introduced into local ecosystems continues to out-pace management and control activities and is too much for any one agency to manage alone. Thus our programs work cooperatively, in conjunction with local, tribal and intertribal, federal, state, regional, and local authorities, plans, and laws, towards sharing management and control objectives. These programs engage in activities to protect native species in the diverse waterbodies within KBIC lands.

The **PRIORITY CONCERNS** noted by the Invasive Species program are centered on the many natural resource species, and the habitats that support them, that KBIC members depend on as aquatic food sources, medicines, and other everyday, ceremonial, and seasonal needs. Due to the Upper Peninsula's large number of lakes and rivers, aquatic invasive species have been found throughout the region. There have been long term and remaining KBIC concerns about the disappearance, availability, and location of native aquatic beings on the L'Anse Indian Reservation and ceded territory waters. Known concerns by KBIC leadership, the Department, and the wider community include issues or threats regarding the condition, existence, and management of native species due to the prevalence of invasives.

**A Focus on Climate Concerns:** The Aquatic Invasive Species program is greatly concerned by current and expected climate related changes. Natural stresses due to climate change include drought, heavy precipitation events, and a shift in temperatures. In particular, concerns include those that are posed by climate change to specific resources, and how resources will be managed as a result. Climate change may provide an advantage for invasive species that are able to shift quickly into a new geographic range and/or tolerate a wider range of climatic conditions. The expansion of non-native plants and fish will increase the stress on native species populations within Lake Superior, particularly in shallow near-shore regions and coastal wetlands (Kling et al., 2003). For example, the proliferation of *Phragmites australis* (common reed), an invasive plant that has spread very quickly across the lower Great Lakes region in recent years, will be favored by lower lake water levels and higher water temperatures that may result from climate change.



Notable **ACCOMPLISHMENTS** include internal and external partnerships for information sharing, participation in policy making and intergovernmental engagement as well as regional coalitions, cooperation in restoration projects, collaboration in educational and outreach initiatives, cooperative invasive species management and control across water bodies.

The **OBJECTIVES** of the Aquatic Invasive Species program are included in the [AIS](#) Management Plan (2015:31-41). The Plan outlines objectives associated with, (1) education, (2) inspection and sanitation, (3) monitoring, (4) rapid response, (5) direct management, (6) laws and regulations, (7) coordination among agencies, (8) research, and (9) documentation of plan implementation.

**ACTIONS** specifically recommended by the Aquatic Invasive Species program are included in the [AIS](#) Management Plan (2015:31-40). Actions will continue to address the number of impacted areas that require an active role in addressing invasives which ultimately will enhance changes for the betterment of our environment within KBIC waters. Aquatic Invasive Species monitoring includes the following areas.

- Sea Lamprey surveillance and control efforts should continue to be high management priority (recent adult trapping and assessments in the Misery, Ravine and Silver Rivers; larval and transformer survey assistance with USFWS on several regional streams and nearshore areas; sea lamprey attack rate tracking should remain a priority in various standardized fisheries assessments)
- Continued attempts to track, and at times control, purple loosestrife, Eurasian water milfoil, and other invasive aquatic plant species in 1842 Ceded Territory Waters.
- Continued involvement in standardized, Lake Superior region-wide surveillance and early detection surveys for exotic and/ or invasive fish species
- Continued participation in various multi-agency efforts for early AIS detections (fish, plants, pathogens, mussels, insects, and others).

Additional recommended actions are included in the 2020-2025 KBIC [Hazard Mitigation Plan](#) (2020:137) for addressing and mitigating negative impacts from invasive species. As such, the Aquatic Invasive Species program includes the specific potential actions listed below.

- i. Educate the public about invasive species with emphasis on preventing new invasions and why this is important.
- ii. Inspection and sanitation of recreational and professional equipment that touches or encounters surface waters.
- iii. Monitor lakes and streams of high priority to KBIC in cooperation with other management agencies for the purpose of early detection of new populations and source waters.
- iv. Implement a rapid response plan that provides guidance to those who have discovered a new population of invasive species.

- v. Direct management (where possible) of existing populations of invasive species to prevent spread to other areas or bodies of water and minimize impacts.
- vi. Employ existing laws and regulations to minimize spread of invasive species.
- vii. Coordinate with other agencies and organizations regarding education, information, monitoring, and management to increase efficiency and economy in implementation of the plan.
- viii. Review new research findings on specific invasive species and participate in basic research as opportunities arise.
- ix. Conduct periodic review of local plans and their implementation and complete an analysis of progress and areas where adaptations are warranted.

Additionally, the 2020-2025 KBIC [Hazard Mitigation Plan](#) specifies in Action Item 21 (2020:150-151) the installation of boat washing and fish cleaning stations at Buck's Marina. The use of recreational boats at Buck's Marina can be a significant pathway for the spread of aquatic invasive species. One method to decontaminate boats and trailers is to use a pressure washer to spray and clean any material off before and after launch. Pressurized washing with heated water can help remove potential aquatic invasive species and kill invertebrates, plants, and diseases. Individuals who utilize the marina would also benefit from a fish cleaning station. A station would provide a convenient location for people to clean their catch prior, reduce and reuse fish waste for compost, and maintain clean areas around the Marina as well as Lake Superior's Keweenaw Bay.

#### 5.3.4. Great Lakes

Beginning with a **DESCRIPTION**, the Great Lakes program currently focuses on primary collaborative areas for the protection and restoration of the Great Lakes. Each of these focus areas are considered in the context of our local community to Great Lakes basin wide interactions.

The **PROGRAMS/ACTIVITIES** provided by the Great Lakes program are specific to each of its nine focus areas, including the 1) Great Lakes Water Quality Agreement, 2) Lake Superior Partnership Working Group, 3) [Great Lakes Restoration Initiative](#), 4) Tracking environmental activities, 5) KBIC NRD Youth Stewardship, 6) Beach Clean-up program, 7) Community Environmental Monitoring Program, 8) Clean Water Act §401 Water Quality Certification, and 9) Outreach activities, as organized below.

##### 1) *Great Lakes Water Quality Agreement*

The KBIC participates in [Great Lakes Water Quality Agreement](#) (GLWQA) meetings and discussions, specifically with the [Great Lakes Executive Committee](#), and serves with other governments to fulfill the commitments outlined within [GLWQA Annexes](#), including Annex 2-Lakewide Management, Annex 9-Climate Change Impacts, and Annex 10-Science.

## 2) *Lake Superior Partnership Working Group*

The KBIC participates in the [Lake Superior Partnership Working Group](#) (LSPWG) including the Management Committee and LSPWG subcommittees to help guide and address the actions listed within the [Lake Superior Lakewide Action Management Plan](#) (LAMP). Actions listed within the LAMP address protection, restoration, and education related to all aspects of the Lake Superior basin ecosystem. LSPWG subcommittees focus on the specific areas of interest listed below.

- *Outreach and Engagement:* The KBIC participates in the development of outreach and engagement materials and events. The outreach materials include information related to the unique aspects of the Lake Superior basin and include information about past or potential impacts.
- *Habitat:* The KBIC participates in discussions, environmental monitoring, projects, protection efforts, and restoration efforts of species and unique habitat types that are of importance to the Lake Superior basin ecosystem.
- *Chemical:* The KBIC participates in discussions, environmental monitoring, and projects related to chemicals of concern to the Lake Superior basin ecosystem and historic impacts.
- *Aquatics:* The KBIC participates in discussions, environmental monitoring, projects, and restoration of aquatic habitat and species in the Lake Superior basin.
- *Transportation & Resource Extraction:* The KBIC participates in discussions, tracking, and monitoring of activities within the Lake Superior Basin such as mining and pipelines that have caused historic impacts and have the potential to cause current/future impacts.

## 3) *Great Lakes Restoration Initiative*

Since its creation in 2010, the KBIC has participated in [Great Lakes Restoration Initiative](#) (GLRI) meetings, planning, projects, and implementation. GLRI focuses on enhancing collaborative and basin-wide efforts to protect and restore the Great Lakes. Current GLRI work is organized by the [Action Plan III](#) FY 2020-2024.

## 4) *Tracking environmental activities*

The KBIC tracks projects, reviews permits, and provides comments, if needed, regarding potential environmental impacts within the Great Lakes basin. Some of these activities are related to: legislative changes, proposed changes to guidance documents, land use activities such as mining, pipelines, or other infrastructure and development.

## 5) *KBIC NRD Youth Stewardship*

The goal of the program is to strengthen intergenerational relationships and connections between the youth and the environment. This is done by engaging youth in stewardship and conservation practices and interaction with their environment. Youth are able to have hands on experience working with fisheries, wildlife, great lakes and plants programs to learn teachings and gain

knowledge of native plants and food sovereignty, fish rearing, wildlife investigation, forest navigation and mapping, personal and field safety, geo heritage, water monitoring, tours and outreach and education. The opportunities the program offers provides career building for youth to pursue a possible career in environmental conservation and to become stewards of the community.

#### *6) Beach Clean-up Program*

The beach clean-up program was established more than a decade ago as part of the annual KBIC Lake Superior Day event. The program has since expanded to include weekly beach clean-ups and daily Adopt-a-Beach opportunities for the community along Lake Superior shoreline. where people can come and participate in being good stewards in protecting the waters of the community. In addition, a Lake Superior Day event is held annually. Education is provided on the harms of microplastics on the beaches and in the surrounding waters and why we promote removal of items that breakdown into microplastics. The Adopt-a-beach program is planned with coordination with the [Alliance for the Great Lakes](#).

#### *7) Community Environmental Monitoring Program*

The KBIC has partnered with the Superior Watershed Partnership (SWP) in order to conduct the [Community Environmental Monitoring Program \(CEMP\)](#) in 2019. The independent program started in 2012 and is designated to monitor the Eagle Mine operations, located in the Lake Superior watershed that straddles the headwater regions of the [Salmon Trout River](#). In addition to monitoring Eagle Mine operations, CEMP also includes monitoring activities concerning the Humboldt Mill as well as the designated transportation route to and from these facilities. Specifically, CEMP includes the monitoring of air quality, groundwater quality, surface water quality, wildlife, plant life, as well as education and outreach initiatives. Monthly meetings are held by the CEMP Technical Committee (Eagle Mine, SWP, and the KBIC) to share updates, review monitoring results, and to discuss outreach plans and additional monitoring requests. To discuss CEMP Agreement timelines and other program issues and operations, quarterly meetings are held by the CEMP Policy group (Eagle Mine, SWP, KBIC, CFMC). Through this partnership, KBIC shares Ojibwa stewardship responsibilities and our First Treaty obligations with other communities; this allows for dialogue on, as well as KBIC teaching and learning of, more diverse worldviews. Overall, engagement in CEMP provides a more comprehensive understanding of groundwater quality, surface water quality, air quality, and plant life within the Lake Superior ecosystem for all involved entities, including the KBIC.

#### *8) Clean Water Act §401 Water Quality Certification*

The Clean Water Act [§401](#) water quality certification program authorizes the KBIC to prepare water quality certifications for federal permits and licenses for activities that may result in any changes to waters of the Reservations covered by [KBIC TAS approval](#). This provides KBIC a formal role in commenting on federal licenses or permits for activities that may affect waters of the Reservation ([CWA 401 Handbook](#); [Water Quality Standards Handbook](#)).

### 9) *Outreach activities*

The Great Lakes section coordinates events such as Lake Superior Day, and the Adopt-a-Beach program. Staff participate in other KBIC organized events such as Environmental Fair, Pow-wow, and Kid's fishing derby. Staff also participate in partner organized events such as MTU World Water Day. Materials are also prepared for Facebook and other media sources related to Great Lakes news and facts.

Guiding documents and policies for the Great Lakes program include this IRMP, binational and federal mandates (e.g., GLWQA and CWA), and other guidance provided by working with Great Lakes partner governments. Great Lakes program staff work internally across KBIC NRD programs and with other KBIC government offices, and maintain many external partnerships including local, federal, intertribal, and state and regional entities.

The **PRIORITY CONCERNS** noted by the Great Lakes program are the monitoring and mitigation of potential irreparable adverse impacts posed by legacy, current, and future processes and practices. Within these program areas, our priorities are to participate with others to share Ojibwa teachings as well as enhance KBIC understandings of ecosystem conditions and impacts more holistically.

Notable **ACCOMPLISHMENTS** of the Great Lakes program include the continued growth of partnerships and monitoring programs (such as with USGS described below), and participation in and contributions to the [Torch Lake PAC](#) and the [Buffalo Reef Task Force](#).

Operated in cooperation with KBIC and GLIFWC, the U.S. Geological Survey (USGS) supports the collection and delivery of both streamflow and water-level information for five local sites. The data are served online - most in near real time. Current data typically are recorded at 15- to 60-minute intervals, stored onsite, and then transmitted to USGS offices every 1 to 4 hours, depending on the data relay technique used. Recording and transmission times may be more frequent during critical events. See local site information and more general information about the network below:

- [Falls River](#) (near L'Anse)
- [Silver River](#) (near L'Anse)
- [Salmon Trout River](#) (near Big Bay)
- [East Branch Salmon Trout River](#) (near Dodge City)
- [Middle Branch Escanaba River](#) (near Humboldt)

The **OBJECTIVES** of the Great Lakes program are to remain engaged in basin wide partnerships, monitoring, education, and tracking environmental activities within our specific focus areas.

**ACTIONS** specifically recommended by the Great Lakes section are to continue working and expanding partnerships with others to focus on the protection of Water and Treaty Resources and to continue Great Lakes ecosystem education in our community.

### 5.3.5. Wildlife and Habitat

The Wildlife and Habitat section of the Natural Resources Department includes programs focused on 1) Manoomin (Wild Rice) Stewardship and Restoration, 2) Native Plants and Habitat, 3) Pollinators, 4) Terrestrial Invasive Species, 5) Wetlands, and 6) Wildlife, as organized below.

#### 5.3.5.1. Manoomin (Wild Rice) Stewardship and Restoration

Beginning with a **DESCRIPTION**, wild rice (*Zizania palustris*) or *manoomin* in Ojibwemowin, is a culturally and ecologically important aquatic food plant to our Community. Directly translated as “the good berry,” manoomin is the impetus of the Anishinaabe migration story. In part, the Anishinaabe ancestors who once lived on the Eastern seaboard were guided by prophecy to travel westward to the place where “food grows on water.” That food is manoomin, one of few native grains to North America that produces a nutritious seed, acting as a food source for wildlife and humans alike.

Historically and currently, manoomin is a dietary staple served at seasonal celebrations, feasts, funerals, and weddings and is a required component in the spirit plate. In Ojibwa cultures, manoomin is the first solid food given to a newborn and the last food given to an elder before they pass on. Manoomin is also a source of spiritual connection as many cultural teachings are maintained through the practices of harvesting, processing, and caring for manoomin. As such, manoomin is considered to be a cultural keystone species, highlighting the importance of this plant relative to the community identity of KBIC.

Manoomin is endemic to the Great Lakes Region and since the early 1900s we have witnessed a drastic decline of manoomin from historical levels. As an aquatic grass, manoomin requires clean, clear, slow flowing waters to thrive. Manoomin is a plant that is sensitive to water level changes, especially during the floating leaf stage (mid-June), caused by heavy precipitation or wave action from boating. However, as an annual plant, manoomin also requires occasional hydrological disruptions, such as a flood event or draw down, in order to thrive amongst perennial aquatic plants. Manoomin is also highly sensitive to heavy sedimentation caused by deforestation and lake shore development; as well as elevated levels of sulfate from mining.

**PROGRAMS/ACTIVITIES** Since 1991, the KBIC has invested tribal resources into the restoration and revitalization of manoomin through reseeding efforts, habitat improvement, and cultural workshops. The importance of manoomin is being reaffirmed in the creation of KBIC

Water Quality Standards (WQS) through the CWA Treatment as State process. The KBIC WQS include a narrative criteria protecting manoomin waterbodies from further degradation.

Restoration efforts, including seeding and habitat improvement, have taken place since the early 1990's across much of the Western Upper Peninsula. These efforts have focused on areas with historic accounts as well as new waterbodies that were found to have suitable conditions for manoomin. KBIC follows guidelines from the Great Lakes Indian Fish & Wildlife Commission (GLIFWC) that recommends seeding at least 50lbs/acre for 3-5 years in one location as manoomin is an annual plant that is known to follow a 4 year boom and bust cycle. After several decades of seeding and growing partnerships, KBIC now focuses on less than a dozen waterbodies, with 5 priority sites, as they have shown greatest potential for sustaining manoomin on the landscape for humans, wildlife, and natural reseeding.

Access to the waterbody, considering both land ownership and changing environmental conditions, is a large factor that goes into choosing which sites to continue our seeding efforts. Priority is given to sites that are located on or near to the reservation with both NRD staff capacity and tribal member accessibility as a concern. Ongoing partnerships with MDNR and KBOCC will allow for expanded restoration efforts to happen by increasing capacity to monitor more bodies of water.

Since 1999, KBIC has hosted an annual Manoomin Camp, either on Reservation or at our sister tribe, Lac Vieux Desert. While the specifics of each camp have varied over the years, generally teachers who carry the spirit of manoomin in their hearts are invited to share their knowledge of traditional harvesting and tool making. Rice Camp has historically been a multiple day event with tool making of push poles, knockers, and paddles occurring before demonstrational harvesting (not in recent years) and then processing of manoomin.

Ongoing monitoring efforts include measurement of environmental metrics including manoomin plant counts, plant height, water clarity, muck layer, water depth, competitive vegetation, and browsing data. These attributes in combination with narrative descriptions of each water body inform the suitability of potential sites for restoration efforts. Current high levels of Lake Superior are impacting manoomin growth at water bodies connected to the Lake. We continue to monitor bodies of water for changing conditions.

KBIC leads the Western UP Wild Rice Group and NRD staff actively participate in the Michigan Wild Rice Initiative and several associated subcommittees. KBIC has an MOA with the State of Michigan that provides funding to support manoomin activities in the 1842 Ceded Territory. These partnerships have increased KBIC's capacity to carry out restoration and monitoring activities.

**PRIORITY CONCERNS** At this time in Michigan there are no state regulations on the harvest of manoomin. Within Reservation lands, however, there are tribally recognized Wild Rice Chiefs who have a close kinship with manoomin. Among other responsibilities of caring for manoomin, Wild Rice Chiefs open and close manoomin waters for harvest. In 2018, the Michigan Wild Rice Initiative was established to further address the absence of manoomin regulations in Michigan, among other goals. Along with the twelve Michigan tribes, KBIC is in partnership with the GLIFWC, NRCS, MDNR, MDOT, MDEGLE, USGS and other entities to develop a regulatory plan for manoomin in the State of Michigan.

Availability of green seed for restoration and processing; funding; and capacity continue to be the main limiting factors in accomplishing our goal of successful restoration efforts. Due to the regional decline of manoomin, securing green manoomin seed for seeding efforts has become more difficult as availability declines and the price increases. With hopes of Net River Impoundment being a potential seed source tempered by the dam blowing out, this challenge of securing seed will continue into the future. Funding for green seed, staff time, and supplies for cultural revitalization efforts is often tied to grants, restricting the ability of NRD staff to have long term, consistent programming. However, expanding partnerships are providing new opportunities to engage the community in manoomin related activities.

Ojibwa teachings tell us that manoomin, as a plant relative, may leave a place until conditions are right again. The impacts of colonization on disrupting traditional practices of ceremony and harvesting have resulted in broken relationships between the Anishinaabe and manoomin. Cultural revitalization is just as important as habitat restoration in order to heal these relationships and create conditions suitable for manoomin. There is a need for further investment in educational and mentorship programs for community members of all ages to pass on the traditional knowledge of ricing (including tool making, harvesting, processing). There is growing concern that the next generation will not have the knowledge or skills to honor the manoomin-Ojibwa relationship and that opportunities to connect with manoomin in many different ways is required to support this relationship.

**A Focus on Climate Concerns:** Manoomin requires cold winters to produce a hard freeze that scarifies the seed and limits perennial plant growth. Warming temperatures, especially during winter, and a predicted increase in summer storms that can uproot the plant, are unfavorable to manoomin. In Michigan, manoomin is located at its southernmost range with limited space for assisted migration north. With regional warming climates and ricing season being pushed back by a week or two, finding available green rice for reseeded and processing has proven to be difficult. Due to these factors, GLIFWC has classified manoomin as highly vulnerable in its Climate Change Vulnerability Assessment.

Notable **ACCOMPLISHMENTS** since 2002 include:



- Updated monitoring strategy to build a comprehensive data set of manoomin beds, including site-specific environmental information
- Expanded partnerships that have increased access to resources and seeding locations
- Creation of the Western UP Wild Rice Group
- Participation in the Michigan Wild Rice Initiative and subcommittees
- Viable manoomin beds exist within several waterbodies within the Western UP, with additional locations to the East
- Wild Rice became the official native grain of the State of Michigan (2023)
- KBIC Wild Rice (Manoomin) Report
- Creation of a KBIC Manoomin Restoration Guidance Document including vision, goals, & objectives of restoration; social and ecological attributes to assess restoration; site profiles; and updated monitoring strategy

**OBJECTIVES** The objectives of this program cover both ecological restoration and cultural revitalization so that in future generations our community will have a meaningful relationship with manoomin. Please see the KBIC Manoomin Restoration Guidance Document for more details. Specific short term objectives include:

- Productive, self-sustaining manoomin beds that support wildlife and KBIC ricing traditions
- A manoomin bed that contributes green seed for KBIC restoration activities
- Increased community participation in manoomin activities
- Increased collaboration across departments and programs
- Robust mentorship and educational programs for all ages

**ACTIONS** The specific actions as articulated by the Manoomin Team are to:

- Improve and expand monitoring efforts at 5 priority manoomin sites to build a long-term dataset that tracks the biomass of manoomin beds annually
- Conduct studies to research environmental factors influencing our current manoomin beds and investigate potential suitable new sites
- Work interdepartmentally and with outside agencies to complete habitat restoration and cultural revitalization projects within Reservation and Ceded Territory
- Continue participation in the Michigan Wild Rice Initiative and subcommittees
- Stay current with ongoing research about the impacts of genetic modification, sulfate toxicity, land use, and restoration

#### 5.3.5.2. Native Plants and Habitat

Beginning with a **DESCRIPTION**, the KBIC Plants program has a long history of adaptive land stewardship, being firmly established in 2010 with the construction of the KBIC greenhouse under the Zaagkii Project, a partnership with the U.S. Forest Service and the Cedar Tree

Institute. Native plants are critical to the health and wellbeing of many lives and livelihoods across Reservation lands and 1842 ceded territories.

Rights to gather plants by the KBIC are protected by the [Treaty of 1842](#). To engage in respectful relations, tribal members wishing to exercise their Treaty rights on or near other 1842 Reservation lands need to obtain approval from that specific Tribal Nation government. There is a memorandum of understanding (MOU) between the Keweenaw Bay Indian Community and the United States Forest Service to facilitate gathering within National Forest boundaries within the 1842 Treaty ceded territory. These pertinent rules and regulations are updated annually for the protection and sustained utilization of native plants.

Traditionally and contemporarily, gathering plants by the Ojibwa people sustains a range of everyday needs and seasonal purposes such as medicine, food, ceremony, pharmaceuticals, tools, construction, and other utilitarian purposes. Mindful of traditional teachings and practices, many Ojibwa people continue to harvest and use native plants and there is a strong movement towards regaining knowledge and practice. Further, practitioners of traditional medicine are currently active on the Reservation. There are traditional medicine gatherers as well as a Traditional Clinic to support the health and wellbeing needs of community members. Some non-native plant traditions have been adopted by KBIC members, including balsam trees and wreaths in the Christmas season, and other foods and medicines which originated from outside the KBIC homelands.

The **PROGRAMS/ACTIVITIES** provided by the Plants program include, the [Greenhouse](#), [Sand Point Brownfield Remediation and Habitat Restoration](#), Native Plant [Gathering](#), periodic [Ash Seed Collection](#), and [Manoomin \(Wild Rice\) Stewardship and Restoration](#). These focus areas aim to protect and promote KBIC treaty resources, food sovereignty, and medicines for all people. In each program, staff facilitate and support educational initiatives and outreach activities for KBIC and the public.

Guiding documents for the Plants program include this IRMP, the KBIC [Strategic Plan](#), [Wildlife Stewardship Plan](#) (2014), [2018-2028 Forest Stewardship Plan](#), the [Lake Superior Manoomin Cultural and Ecosystem Characterization Study](#) (2020), and food sovereignty program initiatives supported by the KBIC and their partners. The Plants program works internally with Wildlife, Forestry, Invasive Species, Environmental Response, KBOCC, and other KBIC committees (i.e., Cultural Committee) and government departmental programs (e.g., Traditional Clinic). Externally, the KBIC Plants program works in partnership with many others. These partnerships include state, regional, tribal and intertribal, federal, and binational organizations and sponsors.

The **PRIORITY CONCERNS** noted by the Plants program center on the health of our landscape which supports the wellbeing of all others. There are over 384 plant species recognized as being of great importance to the Anishinabe (Meeker, Elias and Heim 1993).

Relationships between those of the plant nation are complex and interwoven and thus careful consideration must be given of decisions that may be beneficial to some but not others. Some of our relationships with species are more widely known and a few of them have had specific care taken to preserve, protect, and restore them. Many of these are related to seasonal activities and traditions in our community.

The Great Lakes Ojibwa are physically and culturally tied to woodlands. We are often called the “cedar people” for the significance this plant has in our lives; Grandmother cedar is one of the four medicines for all people and cedar swamps are an important wildlife habitat. Balsam, pine, hemlock, and spruce are other species found in these transitional areas between water and land. With our rich deciduous forests holding sugar and red maple, sugar camps are another tradition held by our community. Other species found are aspen, poplar, oak, basswood, birch, ironwood, black cherry, American elm, and black ash. There is a large number of species residing within the understory, including spring ephemerals, fungi, berries, and grasses. These species are valued for medicinal, cultural, and social benefits for our community.

**A Focus on Climate Concerns:** The Plants program recognizes the current and expected changes due to climate are contributing to rapid seasonal and phenological shifts for many plants, insects, and habitat types which greatly affects fostering good relations between plants and people. Drier, hotter days with an increase in time between precipitation events does not favor some of our native species present on the landscape. Species of which we are currently on the southern range of, or those which are not drought tolerant may no longer be present. In absence of these species, those found further south might migrate north and fill in the ecological niche left behind. Loss of native species will negatively impact traditional uses of those plants by the community. Storms are predicted to occur less frequently, but occur with greater intensity, which could lead to erosion of riverine and coastline habitats. Another concern of climate change is the potential for native tree and flower pollination to be negatively impacted if climate change decouples the timing between flowering and insect pollination (Kling et al., 2003). A loss of various herbaceous, wetland, and forest vegetation will have a negative impact on wildlife species that depend on them.

Notable **ACCOMPLISHMENTS** of the Plants program include the capping and ongoing habitat restoration at the Sand Point Brownfield and Remediation & Habitat Restoration Site. Since 2012, and continuing into the present day, a 33.6 acre brown-field site on Sand Point has been restored with native wildlife plantings (Gagnon and Ravindran 2023). Yearly plantings of native species have created welcoming habitat for birds, insects, and small mammals. The planting of American beach grass along the shoreline has helped stabilize and protect the current soil cap. Another accomplishment includes the surveying of pollinators within the reservation, and the completion of a [Pollinator Protection Plan](#). A partnership with the USFS has provided an opportunity to aid in the restoration of forest openings to provide better habitat for native

pollinators on the Ottawa National Forest. Yearly, the Plants Program assists with Wild rice surveying and restoration.

The **OBJECTIVES** of the Plants program are to continue implementing, enhancing and/or strengthening current program initiatives, emphasizing native plant relations with the KBIC, in the following focus areas:

- [Greenhouse](#)
- [Sand Point Brownfield Remediation & Habitat Restoration](#)
- [Native Plant Gathering](#)
- Periodic [Ash Seed Collection](#)
- [Manoomin \(Wild Rice\) Stewardship and Restoration](#)
- Seed Orchard

**ACTIONS** specifically recommended by the Plants program are listed below:

- Work in partnership with others to focus on the adaptive stewardship needs in our community.
- Continue public outreach about the impacts of invasive species and the benefits of native species on the local environment and wildlife.
- Work interdepartmentally and with outside agencies to complete habitat restoration projects within and surrounding the reservation, including wild rice restoration.
- Provide and create known locations through plantings for the gathering of traditional medicines.
- Upkeep and expand upon the native plants seed orchard, to provide seeds for ongoing and future restoration projects.
- Continue native plantings at Sand Point to create habitat for pollinators and other wildlife.

#### 5.3.5.2. Pollinators

Beginning with a **DESCRIPTION**, the Pollinator Protection program comes in companionship with our native plant restoration work at Sand Point. As habitat for native plant populations grows, especially at our restoration sites, so too is the invitation for insects to take up residence once again on our lands. The kinship between plants and pollinators is inseparable. The flowers produce nourishment for the manidoons and the manidoons effectively transport pollen to ensure development of seed and fruits.

The insects, our Manidoosheg, *Little Spirits*, are among the residents on our lands who we know very little about. As we have worked to protect, restore and expand native plantings at the Sand Point Restoration Site and further diversify plantings at our Debweyendan Indigenous Gardens (DIGs), we have seen a great return of insects, in both diversity and numbers. A new Pollinator

Protection Plan was written following a season of surveys to begin a documentation of the pollinating insects (bees, wasps, flies, butterflies and moths) who make their home here. Funding for this project was awarded by BIA, through the Great Lakes Restoration Initiative. Initially the project emphasized an Invasive Species focus, as a fruit fly capable of damaging our dark fruits (strawberries, blueberries, raspberries, blackberries and more), had been newly detected in fruits at the garden and on private properties back in 2018. It was determined that a baseline of insects present on the Reservation should be known to better prepare us to receive teachings from the manidoosheg, and in turn we would be better able to respond to needs of native insects to protect and expand their habitat.

Establishing a program within NRD to protect pollinators has developed incrementally. In 2009, through special programs of the Cedar Tree Institute was The Zaagkii Project which included the Wings and Seeds environmental program for tribal youth learning to tend to native plants and their pollinators. This program underscored that “part of our emerging environmental consciousness is recognizing that pollination is an essential, critical ecological function for our survival”.

From 2017-2020 we participated in calls of the Tribal Pesticide Program Council (TPPC). The TPPC is a tribal technical resource, and program and policy development dialogue group, focused on pesticide issues and concerns. Within the TPPC is a subgroup, the Pollinator Protection Workgroup. The establishment of the Pollinator Protection workgroup is to take actions to protect pollinators, to develop guidelines or a template for a tribal pollinator protection plan, and to raise the visibility of the challenges that tribes face as they work to protect pollinators.

In order to develop a Pollinator Protection plan, we first needed to establish a baseline of what insects are present on reservation. In summer 2020, a 15-month contract was signed between KBIC and Jim Bess, a local insect ecologist, to conduct monthly insect surveys at both the Sand Point Restoration area and in the vicinity of the community garden. Dr. Bess, serving as a mentor to NRD staff and our college interns, did exceptional work in conducting the surveys. Over 300 species of moths were identified and 97 species of bees, many are rare and endangered species.

A [Pollinator protection plan](#) was written and presented to Council for review and in November 2023 the plan was approved. Surveys will continue and the monitoring will expand to include both pollinating insects and other insects at Sand Point, the DIGs and wetlands.

**PROGRAM/ACTIVITIES** are now guided by the Pollinator Protection Plan (2023). The Plan includes extensive information on the importance of pollinators to our economic, environmental and spiritual well-being. There is an informative section on the decline of insects over the past 50 years and ongoing threats to them. There is detailed information on pollinator identification. Based on the survey work, the report discusses the status of pollinators on our lands and follows with goals and recommendations for putting protections in place, including involving youth in enhancing pollinator habitat.

Certain host plants for rare insects are being sought out in wetland areas as well as comprehensive surveys continuing at Sand Point and the DIGs.

The beginnings of an insect collection, primarily bees and moths, is housed in the NRD offices in Pequaming.

**PRIORITY CONCERNS** include the loss of suitable habitat for pollinators, excessive use of nicotine-derived Imidacloprid pesticides, a broken alignment where insects who feed solely on a single plant species arrive at a time out of sync with the bloom time. There is aggressive advertising which advocates for the uses of several insecticides for agriculturalists and gardeners. For not knowing better, many harmful chemicals are being applied to plants and soils, indiscriminately destroying both nuisance and beneficial insects.

The incredible loss in insect numbers over the past 50 years is cause for great concern. With threatened bee populations, our dark fruits, blueberries, blackberries, saskatoons, and more, would not get pollinated and the loss of these native wild harvested foods would be an infringement on tribal food sovereignty.

Whereas most insects quietly go about their beneficial work of pollinating flowers, and give their lives to birds, reptiles and other beings, there are a few that arouse our concern –these being the spotted-wing fruit fly (damaging fruits), the emerald ash borer (killing off ash trees), and the rice worm (potentially reducing manoomin harvests). With this Plan and proposal for ongoing survey work, we hope to continue meaningful projects at securing habitat for insects and be aware that the actions we take will be respectful and in response to the lifeways of the insect community.

*Who will find peace with the lands? The future of humankind lies waiting for those who will come to understand their lives and take up their responsibilities to all living things. Who will listen to the trees, the animals and birds, the voices of the places of the land? As the long forgotten peoples of the respective continents rise and begin to reclaim their ancient heritage, they will discover the meaning of the lands of their ancestors. That is when the invaders of the North American continent will finally discover that for this land, God is red.” Vine Deloria*

Notable **ACCOMPLISHMENTS** include the writing, approval and adoption of a KBIC Pollinator Protection Plan. Every year since native plants have been planted at Sand Point, there are to be found increasing numbers of insects. This is also true of improved habitat at the DIGs, where a wildlife hedge row, surrounding native dark fruit tree/shrub plantings, and increased plant diversity in the Forest Recovery Site has attracted innumerable insects.

We have presented Lunch & Learns on pollinators, hosted bug events at local libraries for youth, invited the community to Moth Night at Sand Point, been awarded funding through the GLRI to

continue with insect surveys, conducted workshops at the DIGs on beneficial garden insects, enlisted local road commission employees to delay roadside mowing until after bloom time for milkweeds, and assured that pesticides and herbicides are not used along roadways.

**OBJECTIVES** of the Pollinator Protection Program are to support, honor and respect the mutually symbiotic relationship between thriving plant communities and their associated insects by maintaining, enhancing and restoring ecologically diverse networks of healthy habitat. Such protections and respectful interactions between people, land, plants and insects contribute to the overall health of each. To expand habitat conducive for the manidoons to recognize their home here.

We will continue with monitoring our insect populations, more effectively reach out to community, with an emphasis to serve youth, and deepen our kinship with the manidoons. Also, we can anticipate greater efficacy with our native plants restoration program. We hope to reawaken that knowledge of the important place the manidoons hold in the community. A collaboration with KBOCC may include offering a new course on the manidoons.

**ACTIONS** will include hosting education/outreach programs for the community to share information on the vitality and significance of insects in our community. We will continue to collaborate with local road commission staff to assure that native wildflower plantings along roadsides are not mowed down until after bloom time and also advocate to curb the use of herbicides and pesticides on lands adjacent to the reservation. More staff time can be dedicated to participating in and contributing to nation-wide programs, such as the Pollinator Partnership, Monarch Watch, and the Pollinator Protection workgroup associated with Tribal Pesticide Program Council (TPPC). Information from these national programs will be used for education and outreach with our tribal youth. There will be great value in rekindling our relationship with monarchs and milkweeds and then expanding these relationships to include the synergy of additional insect/plant reciprocities. We envision diversifying and increasing the number and variety of native plants that serve in our restoration sites. We can facilitate partnerships with NRCS, USDA, DNR (Federal, State and Tribal entities) along with private landowners to install or enhance pollinator habitat. Develop guidance materials on insect identification, highlighting the gifts they give and what we can do to expand and enhance habitat for them.

#### 5.3.5.3. Terrestrial Invasive Species

Beginning with a **DESCRIPTION**, the Terrestrial Invasive Species (TIS) program focuses on the plants, insects, and pathogens that were introduced to the area, either intentionally or unintentionally, and are considered (either federally listed, state listed, or tribe determined) exotic, non-native, noxious, or invasive. Due to the Upper Peninsula's immense forest coverage, lakes, and rivers, terrestrial invasive species inhabit the region.

KBIC defines invasive species as non-local beings that have the potential to cause harm to a native ecosystem and negatively impact tribal foods, medicines, and cultural practices. They are usually more aggressive than native species, causing them to overtake areas, stress key native species populations, reduce forage availability, disrupt food webs, and/or degrade habitat and water quality. Anishinaabe people use native species for food, ceremonies, and medicines as well as a range of utility items such as dyes, tools, construction, and basketry. As invasives increase their range into areas of traditionally native plants, this directly impacts the practices and traditions of the KBIC. In order to address, manage, and/or control the spread of invasive species, KBIC developed and adopted the Integrated Resource Management Plan. This plan reinforces the goals and objectives of the [TIS Management Plan](#) (TISMP 2018), emphasizing the safeguarding for future generations and restoration of culturally significant species in the KBIC homelands and ceded territory.

Specific and fundamental goals for addressing TIS are included in the TISMP. Adaptive management goals include: 1) Implement practices that prevent new TIS introductions and limit the spread of existing TIS populations, and 2) Mitigate or eliminate ecological, cultural, economic, and public health impacts of TIS ([TISMP 2018:17](#)).

The **PROGRAMS/ACTIVITIES** of the TIS program are primarily guided by the TISMP, which includes partnership guidance and actions for efforts that prevent the introduction, reduce the spread, and promote appropriate management of terrestrial invasive species populations within the KBIC Home Territory. Program activities aim to minimize the negative impacts caused by invasive species to natural aquatic and terrestrial ecosystems including relationships between native plants, fish and wildlife, forests, and human communities. Management and control activities include the utilization of various control methods such as manual/mechanical (pulling/digging, mowing, cutting, etc.), and to a lesser extent, utilize chemical (herbicides) and biological (insects, fungi) methodological approaches.

Terrestrial invasive species disperse widely across the landscape and administrative boundaries. The number of new invasives being introduced into local ecosystems continues to out-pace management and control activities and is too much for any one agency to manage alone. Thus, our programs work in conjunction with local, tribal and intertribal, federal, state, regional, and local authorities, plans and regulations, towards sharing management and control objectives. These programs engage in activities to protect native species in the diverse land cover types within KBIC lands. For example, the KBIC is a member of the Keweenaw Invasive Species Management Area (KISMA). In partnership with KISMA, the TIS program promotes the use and expansion of native aquatic and terrestrial beings, often to replace removed invasives. In doing so, an inventory has been created of both native and non-native species found on reservation lands to manage culturally significant plants and to create wildlife habitat through the restoration of native species to minimize adverse impacts posed by invasives.



The **PRIORITY CONCERNS**, highlighted by the TIS program, are focused on the numerous natural resource species, and the habitats that support them, which serve as essential food sources, medicinal supplies, and fulfill various everyday, ceremonial, and seasonal needs for KBIC members. Recognized concerns within the KBIC leadership, the Natural Resources Department, and the broader community involve challenges or threats concerning the state, survival, and effective management of native species, primarily arising from the widespread presence of invasive species. There have been long term and remaining concerns about the disappearance, availability, and location of native terrestrial beings on the L'Anse Reservation and ceded territory lands.

**A Focus on Climate Concerns:** The Invasive Species program is greatly concerned by current and expected climate related changes. Natural stresses due to climate change include more drought, more frequent heavy rain events, and a shift in temperatures. In particular, concerns include those that are posed by climate change to specific resources, how resources will be managed as a result, and how uses of specific resources directly contribute to climate changes. In general, climate change may provide an advantage for invasive species that are able to shift quickly into a new geographic range and/or tolerate a wider range of climatic conditions. Further, the spread of invasive species may also be favored by changes in land use patterns that increase habitat fragmentation (Dukes and Mooney, 1999). The expansion of non-native plants, fish, and wildlife will increase the stress on native species populations within Lake Superior, particularly in shallow near-shore regions and coastal wetlands (Kling et al., 2003). For example, the proliferation of *Phragmites australis* (common reed), an invasive plant that has spread very quickly across the lower Great Lakes region in recent years, will be favored by lower lake water levels and higher water temperatures that may result from climate change.

Notable **ACCOMPLISHMENTS** include internal and external partnerships for information sharing, participation in policy making and intergovernmental engagement as well as regional coalitions, cooperation in a number of restoration projects, collaboration in educational and outreach initiatives, and cooperative invasive species management and control across the landscape. More detailed information on accomplishments is included below.

- Providing information to be incorporated into large-scale reservation guidance documents on noxious and invasive plants, their importance, and current issues (e.g., AIS and TIS Management Plans, Wildlife Stewardship Plan, Land Use Management Plan, and the KBIC Strategic Plan).
- Policy making and inter-governmental participation, including engagement with the State of Michigan on Forest Plans, USFS Planning meetings, Voight Taskforce, and annual Forestry MOU meetings.
- Development and adoption of the Terrestrial Invasive Species Management Plan.
- Restoration efforts include 1) the Forest Recovery site, monitoring 5 acres for barberry and successfully removing the barberry infestation. 2) Monitoring and removing Purple

Loosestrife from the Lake Superior shoreline. 3) Keeping garlic mustard off the reservation. 4) Surveying for and preventing new infestations of invasive plants.

- Educational and outreach accomplishments include participation and support of community and youth workshops on invasive plants, their issues, and how to prevent their spread.
- Partnership projects include 1) Stewardship agreement with the USFS in the Ottawa National Forest to remove invasives such as glossy and common buckthorn, honeysuckles, garlic mustard, Japanese barberry, and purple loosestrife. 2) Membership with Keweenaw Invasive Species Management Area to more holistically control invasives, recognizing that invasive species observe no borders. This includes annual work days in Baraga County, specifically for buckthorn, garlic mustard, and Japanese knotweed, spotted knapweed, Eurasian water milfoil, purple loosestrife, and Japanese barberry. Additionally, these partnerships facilitate the mapping of wild parsnip, exotic honeysuckle, giant knotweed, and surveying for potential pathways of new invasive species spread. 3) Working with local marinas to help prevent/control the spread of Eurasian watermilfoil.

The **OBJECTIVES** of the TIS program are included in the [TISMP](#) (2018:17-25). This plan outlines specific objectives associated with, (1) education, (2) inspection and sanitation, (3) monitoring, (4) rapid response, (5) direct management, (6) laws and regulations, (7) coordination among agencies, (8) research, and (9) documentation of plan implementation.

**ACTIONS** specifically recommended by the TIS program, will continue to address the number of impacted and disturbed areas, primarily caused by human impacts, that require an active role in addressing invasives. This will ultimately enhance changes for the betterment of our environment within KBIC lands. By practicing both invasive species removal and native species restoration, we can facilitate progressive and healthy changes within the L'Anse Indian Reservation and adjacent lands, improving habitat quality as well as forage availability. Program actions will continue external and internal partnerships to facilitate networking, researching, and educational outreach events.

Additional recommended actions are included in the 2020-2025 [Hazard Mitigation Plan](#) (2020:137) for addressing and mitigating negative impacts from invasive species, of which are listed below.

- i. Educate the public about invasive species with emphasis on preventing new invasions and why this is important.
- ii. Inspection and sanitation of recreational and professional equipment that touches or encounters surface waters.

- iii. Monitor lakes and streams of high priority to KBIC in cooperation with other management agencies for the purpose of early detection of new populations and source waters.
- iv. Implement a rapid response plan that provides guidance to those who have discovered a new population of invasive species.
- v. Direct management (where possible) of existing populations of invasive species to prevent spread to other areas or bodies of water and minimize impacts.
- vi. Employ existing laws and regulations to minimize spread of invasive species.
- vii. Coordinate with other agencies and organizations regarding education, information, monitoring, and management to increase efficiency and economy in implementation of the plan.
- viii. Review new research findings on specific invasive species and participate in basic research as opportunities arise.
- ix. Conduct periodic review of local plans and their implementation and complete an analysis of progress and areas where adaptations are warranted.

#### 5.3.5.4. Wetlands

Beginning with a **DESCRIPTION**, the KBIC Wetlands program focuses on monitoring and assessing wetland ecosystems. The L'Anse Indian Reservation consists of approximately 4,700 acres of wetlands of various sizes and types including forested wetlands, wet meadows, submergent and emergent marshes, poor fens, northern shrub thickets, and bogs amongst other wetland types. Wetlands in particular are highly productive ecosystems that provide a number of gifts and services to us at no cost: naturally filter pollutants, leaving water we can safely drink, providing nursery habitat for fish, flood control during storm events or spring snow melt, capture CO<sub>2</sub> from the atmosphere and store more carbon than any other ecosystem on Earth, and providing habitat for rare and culturally significant plant species. In the Ojibwe language the words for bog (*mashkiig*), swamp (*waabashkiki*) and medicine (*mashkiki*) are similar in origin showing a connection between these wetland ecosystems and the location that many medicinal plants are found (KBIC Cultural Teachings; KBIC Wetland Use and Value Survey Report 2019).

The **ACTIVITIES** provided by the Wetlands program include ongoing monitoring and assessment of wetlands and vernal pools throughout the reservation. Wetland work at KBIC has been ongoing since 2006 through various projects and funding sources. The wetlands program completed a Wetland Program Plan in September 2022. Overall, the program aims to continue to grow and strengthen a comprehensive program to address KBIC wetlands' issues, primarily within the reservation but also, across the ceded territory.

The **PRIORITY CONCERNS** noted by the Wetlands program are specific to different wetland types, plant communities, and surrounding habitats of various wetlands, as well as concerns

across the aquatic and terrestrial system as a whole. The programs priority concerns are specifically, but not limited to, pollution and contamination, degradation to and changes to natural systems, invasive species, land use decisions and impacts and climate related changes.

**A Focus on Climate Concerns:** The Wetlands program is concerned by current and expected climate related changes as all changes greatly impact wetlands and the many lives that depend on healthy wetland systems. Current and forecasted impacts of climate change on wetland ecosystems include changes in wetland quantity and quality with shifts in seasonal weather patterns, increase in extreme weather events (both drought and flooding risk increases), loss of native plant and animal species, and an increase in non-native and invasive species.

Notable **ACCOMPLISHMENTS** by the Wetlands program are completing a Wetland Survey and Report following a baseline data collection project (the [Wetland Survey Report](#) 2018), hiring a full-time Wetland Specialist in 2021, the completion of a [KBIC Wetland Program Plan](#), and the increase in collaboration across department programs. Additionally, the program engaged in Wetland Acquisition; 303 total acres have been purchased for non-development conservation between 1998 and 2010. We intend to ensure that wetland stewardship on and around the L’Anse Indian Reservation is consistent with community values, other Department plans within the Tribe, and are protective of the land and resources for seven generations and beyond.

The **OBJECTIVES** of the Wetlands program include 5 and 10 year objectives to facilitate the development of a more comprehensive wetland program. This will include monitoring wetland health and maintaining the acres of wetlands through protection, preservation, and enhancement of wetland systems within the L’Anse Indian Reservation.

5-year Objectives:

- Establish and implement a wetlands monitoring program following KBIC’s Wetland Program Plan
- No net loss of wetlands within the L’Anse Indian Reservation
- Establish wetland boundaries as a foundation for future restoration, protection, conservation and possible permitting
- Implement strategies under the Wetland Monitoring Program Plan
- Secure long-term funding for wetland monitoring program
- Identify and collect information related to wetlands and rare, vulnerable, and culturally significant species that rely on wetlands
- Increase Community understanding of the importance of protecting and enhancing wetland resources

10-year Objectives:

- Review and update Wetland Monitoring Program Plan

- Continue to monitor KBIC's 28 wetland and 10 forested wetland sites on the L'Anse Indian Reservation; track data on wetland conditions, status and trends across these sites
- Increase partnerships with other wetland agencies and organizations

**ACTIONS** specifically recommended by the Wetlands program include the actions listed below.

- Delineate wetlands following ACOE protocols
- Monitor and assess the presence of vernal pools
- Conduct vegetation surveys and rapids assessments to monitor for change over time
- Research and incorporate methods to gauge the effects of climate change on local wetlands
- Research and incorporate methods to steward local wetlands and associated resources in regards to any potential climate change effects.
- Provide wetland focused education and outreach to the Community
- Monitor water quality in wetlands
- Inventory and monitor wetlands for invasive plant species

#### 5.3.5.5. Wildlife

Beginning with a **DESCRIPTION**, the Wildlife program is informed by the KBIC [Wildlife Stewardship Plan](#) (WSP) (2014). The vision of the Plan is “To support, honor, and respect mutual relationships between thriving native fish, wildlife, plant, and human communities by maintaining, enhancing, or restoring ecologically diverse networks of healthy wildlife populations and habitat.” This vision centers on habitat across the Reservation and within the 1842 ceded territory. Additionally, the program seeks to preserve, protect, and enhance rare, threatened, or endangered plants, fish, and wildlife populations and their habitats and ensure their continued existence for seven generations and beyond. The [Wildlife Stewardship Plan](#) (2014) Overall Wildlife and Habitat Goals (11-12) guide the Wildlife program's daily work and long term priorities:

- 1) To approach the implementation of the Wildlife Stewardship Plan as caretaker and nurturer (steward) of a mutually beneficial relationship between our wildlife, natural communities and our people, incorporating centuries of Anishinaabe knowledge, beliefs, and values.
- 2) To care for wildlife and habitat in an ecologically sound manner that allows for sustainable use of hunting, fishing, trapping, and gathering.
- 3) To restore degraded habitat and any declining or at-risk populations of wildlife, fish, or plants.
- 4) To enhance habitat conditions for expanding wildlife, fish, and plant populations.
- 5) To protect ecologically diverse, rare, and culturally important wildlife species and habitat against loss or degradation.

- 6) To preserve healthy, diverse conditions of streams, lakes, wetlands, fields, and forests for maximum sustainability of wildlife, fish, and plant populations for generations to come.

The **PROGRAMS/ACTIVITIES** provided by the Wildlife program aim to protect wildlife populations and habitat continuity while also providing opportunities for Tribal members to exercise Treaty harvesting rights. The program focuses on game and non-game species and wildlife habitat including, but not limited to, bald eagles, pine marten, fisher, white tailed deer, black bear, moose, and wolves. Overall, the program is informed by community member values and concerns, primarily through community and hunter surveys, as well as KBIC guiding documents, plans, and policies such as this IRMP, and the 2005 KBIC [Strategic Plan](#), [Wildlife Stewardship Plan](#) (2014), [Wolf Management Plan](#) (2013), 2018-2028 [Forest Stewardship Plan](#), KBIC Personnel Policy (2023), and the [Constitution and Bylaws of the KBIC](#) (1936).

The program's primary responsibilities include monitoring wildlife populations, grant writing, and collaboration with partners. The program conducts annual wildlife monitoring for bats, owls and other raptors, wolf tracking surveys, spring frog/toad call surveys, waterfowl surveys, and remote camera surveys. Primarily funded by external sponsors and grant monies, the program includes great effort on grant writing and reporting which also allows for flexibility in implementing the WSP and ensures sustainability of the program. Wildlife program staff works collaboratively with other NRD and KBIC programs as well as external partners. For example, the KBIC Land Stewardship group (NRD, Forestry, Fire, and Real Estate/Transportation) meets quarterly to discuss work plans and continued cooperative opportunities. Staff also meet with the KBIC Cultural Committee and others to seek guidance before proposing new projects to KBIC leadership. Some external partners include the U.S. Fish and Wildlife Service, Michigan Department of Natural Resources, U.S. Forest Service, other Indian Tribal Nations, Superior Watershed Partnership, and various Universities.

The **PRIORITY CONCERNS** noted by the Wildlife program center on many species, various kinds of habitats, and a range of human pressures. Further, there are often inadequate resources to fully address all issues, concerns, and opportunities related to wildlife and habitat within KBIC homelands. Wildlife and plants face many challenges including land use changes, habitat loss or fragmentation, competition from invasive non-native species, altered ecological processes, and a rapidly changing climate. At KBIC, stewardship of the land has fostered a responsibility to live respectfully with the environment as a relative rather than a resource, sustaining our relationships with the natural world. A crucial part of the Anishinaabe way of life is the sustainable harvest of plants and animals and maintaining a mutually beneficial relationship between our natural communities and our people. KBIC greatly values healthy forests and vibrant waters that benefit all species, including those of cultural, subsistence, and ecological significance, such as *Manoomin* (wild rice), *Waawaashkeshi* (White-tailed deer), and *Name* (Lake Sturgeon).

Upper Michigan has many unique habitats and thus is home to numerous endangered and special species. Identifying vulnerable species is supported by many sources (e.g., Michigan Tribal Climate Change Vulnerability Assessments List for plants and animals, Michigan Special Species List produced by the Endangered Species Program of the Michigan Department of Natural Resources, and the Michigan Natural Features Inventory). Also at risk are animal and plant species of Special Concern (SC). While not afforded legal protection under law, many SC species may be declining and/or experiencing relict populations. Should these species continue to decline, they would be recommended for Threatened or Endangered status. Anticipating the need for protection, prior to reaching at-risk and low population levels, would prevent the need to list them in the future. Currently, SC species include some amphibians, reptiles, fish, birds, mammals, insects, mussels, clams, and snails.

Sensitive, threatened, and endangered species are the most vulnerable and require strategies to safeguard their presence and resilience from impacts. Although native species are resilient to many environmental stresses, they are also currently threatened by increasing risks such as invasive species, climate change, natural disasters, and pollution. Non-native species of plants and animals can, and often do, out-compete native species.

Specific wildlife and habitat concerns due to human pressures are outlined below.

- Permanent, and often irreversible, land alteration
- Species-specific losses due to changes in critical habitat
- Loss of public land access for hunting and gathering
- Habitat loss and/or degradation, including the loss and/or degradation of wetlands
- Habitat connectivity for migration, immigration, and/or emigration
- Large tracts of monoculture and clearing
- Propagation of non-native species for fast growth (potentially invasive)
- Removal of wildlife habitat resources (snags, downed woody material)
- Potential over-harvesting
- Disproportionate sex ratios
- Limited registration of harvests that may aid in population monitoring, status, and trends
- Overharvest
- Wildlife disease
- Invasive species

**A Focus on Climate Concerns:** The Wildlife program recognizes that many species and habitats are already showing changes consistent with a warming climate, such as, changes in abundance, distribution, timing (of emergence or reproduction), spread of disease, and invasive species. There is increased potential for changes such as shifts in resident and migratory songbirds competing for resources, distributional shifts in fish, decline of pollinator species, establishment of forest pests and wildlife diseases with milder winter temperatures. A warmer climate will lead to increased stress in moose and other boreal species, which are already at their southernmost range in Michigan's Upper Peninsula. Contraction or expansion of some plant species' range and northward migration of some temperate forest species have also been observed, with some medicinal and food plants becoming increasingly difficult to find or are no longer found in historical ranges. Loss of biodiversity can impact culturally important native plants and animal species important to traditional foods, ceremonies, medicinal, cultural, and economic well-being.

Program staff also recognize additional climate related consequences such as the increase in wildfires here and abroad (impacting local air quality and adversely affecting those with respiratory disorders), and the changing geographic distribution and range for, and increase in, diseases and parasites for both humans and wildlife. These realities are exacerbated by the extended warmer seasons and the shorter, warmer winter seasons. Additional information on some of the specific wildlife-related concerns posed by climate change included below.

- Shift in distribution and range of species (e.g. moose, possum, ticks, birds)
- Loss of species not able to adapt to changes, more heat-related stress (e.g. moose, lynx, snowshoe hare)
- Increased competition from invasive species degrading habitat (e.g. purple loosestrife, spotted knapweed, Phragmites)
- Loss/change in habitat (e.g. loss of tree species, smaller wetlands, drier wetlands, loss of vernal pools, lower lake levels)
- Change in parasites and diseases with shifting ranges (e.g. Lyme disease, encephalitis, avian flu-virus, winter ticks, white-nose syndrome in bats)

Notable **ACCOMPLISHMENTS** by the Wildlife program include the continuation and growth of monitoring programs for many species and sustained funding (BIA) as well as community survey input. Additionally, baseline data for wetlands has been established and there is funding to continue this vital habitat program. Land acquisitions and a number of habitat assessments and improvements have also been accomplished. Finally, updates to existing strategic plans and regulations, and the development of new ones, have been completed. More detailed information about these accomplishments are below.

- Monitoring wildlife populations – Monitoring of wildlife in wetlands, uplands, and riparian areas was conducted from 2007 to present at a total 120 study locations;



waterfowl index surveys (three wetlands) and frog/toad call surveys (thirteen wetlands) are conducted annually since 1994 to present; Sandhill Crane counts conducted annually; Winter wolf track surveys began in 2013; Bat monitoring began in 2015.

- Tribal hunter and trapper surveys – Seven hunter surveys were conducted 1991 to 2009. A community wide comprehensive wildlife and natural resource survey was conducted in 2013.
- Wetland/waterfowl habitat creation and/or improvement – Waterfowl habitat improvement through planting of wild rice took place at fourteen wetlands that encompass 335 acres with a total of 17,430 lbs of rice planted between 1991 and 2012. Installation and monitoring of 40 total wood duck boxes were conducted from 1994 to 2012 at 6 wetlands encompassing 110 acres on the L’Anse Reservation.
- Wildlife disease monitoring – Chronic wasting disease surveillance in white-tailed deer was conducted by NRD during seven fall hunting seasons (2002, 2003, 2007-2011, 2023); Avian Influenza monitoring in waterfowl was conducted during three hunting seasons 2007-2009.
- Updating hunting and trapping regulations – Comments submitted in 2013 to committee revising Title 10 Hunting, Fishing, Trapping and Gathering Codes written in 2003. Additional revisions to Title 10 (Now Title 28) were completed 2022. Resolution KB-1861-2011 was passed in opposition to recreational moose harvest. Resolution KB-1902-2012 was passed in opposition to recreational wolf hunting.
- Created and Implemented a Wolf Management Plan (2013) to provide a course of action that will ensure the long-term survival of a self-sustaining, wild gray wolf (*Canis lupus*) population in the 1842 ceded territory in the western Upper Peninsula of Michigan.
- Wildlife Program enhancement – A Wildlife Stewardship Plan was developed in 2013 and approved by Tribal Council in 2014. This Plan is the guidance for the KBIC wildlife program into the future.
- Eagle Retention Permit acquired through USFWS and a repository established for eagles and other wildlife parts at NRD in 2022.

The **OBJECTIVES** of the Wildlife program are articulated in the [Wildlife Stewardship Plan](#) (2014:12-13) which include the four Overall Wildlife objectives below and strategies to achieve them. A range of objectives in the WSP are also associated with various species and habitat types. The Overall Wildlife objectives inform the Wildlife program’s work and priorities. Across the objectives, we aim to maintain and increase partnership and collaborations that benefit wildlife and habitat across the 1842 Treaty Territory.

- Increase knowledge of wildlife populations, health and habitat use within and around KBIC lands.
- Increase community awareness of cultural and ecological importance of wildlife on the land.

- Monitor wildlife harvest rates and adjust harvest quotas accordingly to provide proactive protection of sustainable game species populations.
- Minimize conflict between wildlife and people.

**ACTIONS** specifically recommended by the Wildlife program are to work together with partners, agencies, and landowners across ceded territory landscape. These collaborations work to protect and enhance biodiversity, advocate and support land uses (including bio-fuel collections) that minimize disruption and harm to wildlife and habitat communities, maintain healthy wildlife communities and responsiveness with harvesters, and continue diligent work for sensitive, threatened, and endangered species. Finally, program activities seek to increase engagement in climate change actions. All recommended actions require an increased reliance on sharing data, skills, and knowledges, including Traditional Ecological and Indigenous Knowledges (TEK, IK), across communities, agencies, and the region. More detailed information on these recommended actions can be found in the [Wildlife Stewardship Plan](#) (2014), and a select few are listed below.

- Continue to monitor for species and habitat diversity, and continue to expand population surveys for non-game and protected species.
- Coordinate with KBIC Forestry and Real Estate/Transportation offices to provide input on land purchases and protections based on cultural and native plant species, sensitive areas such as vernal pools and corridors, as well as older aged forests and conifer dominated habitat to maintain and/or increase habitat for species including but not limited to: waterfowl, frogs/toads, turtles, mammals, birds and bats.
- Coordinate with KBIC Forestry and BIA Foresters to encourage and plan for a diverse landscape of forest habitat types and ages that will enable the continued existence of a wide variety of wildlife (i.e. moose, wolf, pine marten, fisher, bear, bobcat, birds, amphibians, reptiles and bats).
- Continue to survey Tribal hunters and trappers about wildlife and harvesting practices.
- Verify presence/absence of threatened, endangered, or sensitive species on and around the KBIC reservations.
- Facilitate education and collaboration with community members and agency partners strengthening stewardship among all stakeholders.
- Monitor for wildlife diseases (i.e. chronic wasting disease, avian influenza, botulism, bovine tuberculosis, epizootic hemorrhagic disease, white nosed syndrome, etc.)
- Increase utilization of the [Tribal Climate Adaptation Menu](#) (TAM Team 2019).

## 5.4. Real Estate/Transportation

Beginning with a **DESCRIPTION**, the Real Estate/Transportation Department was created by the KBIC Tribal Council to strengthen Tribal sovereignty. At the direction of the KBIC Tribal Council, the Real Estate/Transportation Department will continue to acquire lands within the

L'Anse Indian Reservation for the purposes of strengthening tribal sovereignty; providing home ownership opportunities to tribal families; providing opportunities to tribal members to exercise their treaty rights; provide opportunities for tribal members to own and operate businesses; and to protect and preserve culturally and historically significant sites.

Importantly, Keweenaw Bay Indian Community, not unlike other North American Indian Tribes, lost nearly all the lands they once occupied. The Tribe was one of eighteen tribes to sign the Treaty with the Chippewa, 1842 (7 Stat. 591), ceding over 19 million acres across the Western Upper Peninsula of Michigan and Northern Wisconsin to the United States (ceded territory). As a result of the failed attempts by the United States (1849-1852) to remove the Lake Superior bands to lands west of the Mississippi, the Tribe as well as other bands, signed the Treaty with the Chippewa, 1854 (10 Stat. 1109) and again ceded over 10 million acres to the United States in Northern Minnesota, and reserving for itself the L'Anse Indian Reservation, its permanent homelands.

By Article 3 of the Treaty with the Chippewa, 1854, title to thousands of unsold lands within the exterior boundaries of the L'Anse Indian Reservation were allotted to individual Indians resulting in the continued decimation of the Tribe's lands base.

Between 1875 and 1930 over 680 allotments totaling approximately 44,610 acres were patented to individual Indians at L'Anse leaving nearly 80% of the Reservation unavailable to the Tribe.

Of the 44,610 acres allotted at L'Anse, only 7,776.61 (17%) remain today as a result of illegal taxation and questionable lands' sales.

Since 1842, the Tribe has given up or lost title to over 99.9% of its former territory.

Through the [Indian Reorganization Act of 1934](#), land consolidation efforts by the Tribe and Bureau of Indian Affairs (BIA), and through its own economic ventures, the Tribe has reacquired a title interest in 19,560 acres or about 1/3 of the total Reservation area. Of these acres, some is held in trust by the United States of America for the benefit of the Tribe and its members allotments.

The Tribe is the *fee* title owner of lands in Baraga, Houghton, and Marquette Counties; including being the successor in interest to the Ontonagon Indian Reservation, located in Ontonagon County in the Western U.P. and created and described by Executive Order of President Franklin Pierce in 1855; all are located in the western and central part of Michigan's Upper Peninsula.

The United States holds title in trust for the Tribe to approximately 166 acres located in Chocolay Township, Marquette County, Michigan which is the location of the Ojibwa II Casino and forty (40) low-income residential rental units owned and operated by the Tribe.

Since the advent of Indian Gaming and economic development on the L'Anse Indian Reservation, the Community has made land acquisition a priority, restoring over 5,300 fee acres within the Reservation boundaries back into tribal ownership while spending over \$300,000 of tribal funds to acquire undivided fractional interests in the L'Anse Allotments through various land consolidation efforts. Additionally, the Community was one of a handful of Tribes, chosen for its previous internal efforts, to develop, participate in, and implement the Indian Land Consolidation Pilot Project which was the result of multiple Congressional Acts and U.S. Supreme Court decisions. Although the Project has been defunct for over 15 years, the Community acquired through the Project over 8,500 fractional interests equivalent to over 4,400 acres and over \$4.3 million. The Cobell Settlement also provided for the acquisition of undivided fractional interests in allotments in an attempt to correct the flaws in the General Allotment Act (Dawes Act 1887). Although the L'Anse Indian Reservation was not allotted by the General Allotment Act, the Community was listed as one of many tribes scheduled to be included in the Program between 2018 and 2021. Unfortunately, the Community's pre-Cobell land consolidation efforts caused its ranking amongst allotted tribes eligible for the Program to fall so far down the list that the Community was never able to participate before it ended.

The **PROGRAMS/ACTIVITIES** provided by the Real Estate/Transportation Department are vast. Broadly, the department is active in the acquisition of land; leasing of land to KBIC members for single-family residential sites (home ownership opportunities) and recreational (deer camps) purposes. The Department is also responsible for the preparation and submission of fee to trust acquisitions, rights of way acquisition (e.g., natural gas pipeline, roads, etc.), property tax exemption filings, and resolution of local property tax issues related to the Tribe's and individual member's lands. Transportation related work includes, but may not necessarily be limited to, the construction and maintenance of tribal roads, as well as planning, policy, and ordinance development. Finally, and particularly with the KBIC Attorney's Office, the Department is engaged in research to gather necessary documentation specific to the range of the office's diverse responsibilities.

Decisions on the use of the Community's land are primarily made on a case by case basis. Currently, the Department facilitates KBIC land use and community building for many purposes. The Tribe grants leases for residential home sites to promote homeownership; recreational/seasonal home sites to promote strong families, cultural and traditional lifeways, and the exercise of treaty rights; while commercial leases to promote small business ownership, job creation and economic development. The Community has over the past several years through data collection and Community and professional input, informally devised a rough draft land use plan in the form of map. These maps identify lands suitable for the uses most desired by the Community members for the purposes identified herein as well as recognizing cultural, historic and environmentally significant areas. Additional lands are reserved for Community use in areas that promote economic development and job growth through the Tribe's services.

Guiding documents, policies, and partnerships are important for the Real Estate/Transportation Department. The most frequently used guiding document is the [Constitution and Bylaws of the KBIC](#) (1936). Others include the Long Range Transportation Plan (LRTP), Tribal Transportation Improvement Plan (TTIP, 3 year plan for construction), and the draft Land Use Plan which is currently not approved by KBIC due to a number of unresolved issues and unsatisfactory components. Internal partners of the Department include the Attorney's Office, and Forestry and the Natural Resources Departments, while external partners include the BIA Real Estate and Roads Divisions as well as the Baraga County Road Commission.

The **PRIORITY CONCERNS** noted by the Real Estate/Transportation Department center on land acquisition and management, and in doing so, sustainability of the Community, and its members, economy, food systems, landscapes, and transportation facilities.

**A Focus on Climate Concerns:** The Real Estate/Transportation Department recognizes the current and expected changes due to climate are contributing to many adverse impacts on the land, across water bodies, and Community members. The Department's concern is to acquire lands within the Reservation boundaries that ensure future generations can build a community that is sustainable and resilient to a changing climate subject to increased potential for extreme weather events.

The following observed changes directly impact KBIC.

- An influx of new residents to Baraga and surrounding counties increases demand for local services, and contributes to burdens to longtime residents for housing demands and costs as well as access to traditional lands.
- Elders have observed 3 decades of transformative changes in Lake Superior and other inland bodies impacting changes in fishing, specifically, for various species, seasons, water quality, and fishing methods.
- A substantial increase in the demand for biomass at all scales; this demand has negative impacts on KBIC members who rely on wood for heating.
- Substantial increases in major storm events with high winds and flooding events. For example, lake levels are changing, and waves at the Head of the Bay have washed debris to shorelines. Within reservation boundaries, roads are eligible for federal funding to address these kinds of natural disasters which funneled \$3-million ERFO to Baraga County Road Commission for flooding events. In the past decade, US-41 has had to close several times; Baraga County Road Commission has proposed alternative routes on account of these events. Finally, an increased number of large ships are taking shelter in the Bay related to major storm events.

As a result of observed changes, KBIC has initiated programs, policies, and actions to address climate change impacts. These include the following items below.

- CARE committee, particularly the good work on the Energy Plan, and the energy office responses to the increased energy demands and costs, such as the installation of solar arrays in 3 areas and support from the community.
- A shift to reusable materials (feast bundles) from disposal (cups, plates, etc.).
- An increase in the integration of energy efficient infrastructure into projects (e.g., street lighting, solar panels when resources allow).
- The enhanced food sovereignty movement to move toward greater food independence (harvesting and gardening); this also reduces food transportation emissions. (There are also discussions about the prior beef stock operations, between the 1970 and 80s when KBIC had buffalo, and the potential for a new operation.)

Notable **ACCOMPLISHMENTS** by the Real Estate/Transportation Department include, but may not necessarily be limited to, the expansion of gaming, housing and transportation facilities in Marquette County (Chocolay Township); the acquisition of thousands of undivided fractional interest (UFI) in the L'Anse allotments; and the ongoing development of a current and historical land use database.

The **OBJECTIVES** of the Real Estate/Transportation Department are to continue to maintain a supportive role across KBIC departments and programs for planning, development, and policy making. Specific 5- and 10-year objectives are listed below.

5 year objectives:

- Development and adoption of a land use plan consistent with the needs of the Community that takes into consideration the unique relationship the Community has with the natural world and its ever increasing susceptibility to the expanding human population.
- Continue updating of a current and historical land use database
- Development and adoption of land use ordinances, through the Tribal Council's legislative process

10-year objectives:

- Revisit efforts to develop and identify funding opportunities for a comprehensive GIS/GPS Program
- Consider issues of vulnerability and risk to inform land use planning and ensure that the community will be adaptable to the most likely effects of climate change

**ACTIONS** specifically recommended by the Real Estate/Transportation Department support the protection and acquisition of lands identified as culturally, historically, and/or environmentally significant. Specific recommended actions are as follows.

- Develop a comprehensive land use plan consistent with the needs of the Community that takes into consideration the unique relationship the Community has with the natural

world and its ever increasing susceptibility to the expanding human population as well as adverse impacts due to climate related changes; and

- Continued acquisition of land to facilitate home ownership, economic development and cultural and treaty guaranteed activities; and
- Promote education of non-Indian communities and organizations on the Community's unique history, cultural beliefs, sovereign status, and laws.
- The Community will continue to purchase lands on a case by case basis; however, the development of purchase plan can provide direction and goals to the Tribal Council and staff that are consistent with those activities identified by Tribal needs.

From the 2020-2025 KBIC [Hazard Mitigation Plan](#) (2020), the Department may also have a role in the following Action Items (3, 25-26).

**Action Item 3:** Drainage Improvements and Maintenance (2020:143) As an ongoing project in the Community, and throughout Baraga County, the Baraga County Road Commission has had an active role in upgrading roads and replacing inadequate culverts in response to previous problems and to mitigate future flood problems.

**Action Item 25:** Purchase Land for Landscape Connectivity and Establishing Wildlife Corridors (2020:152) Habitat fragmentation is a large threat to ecosystem biodiversity. Unconnected patches of habitat typically have lower levels of plant and wildlife biodiversity than habitats that are connected by corridors. To protect and increase biodiversity, KBIC plans to purchase land to create wildlife corridors to help maintain viable ecosystems as well as fish, wildlife and plant populations and facilitate the movement and adaptation of wildlife populations. Additionally, landscape connectivity gives the Tribe more flexibility when implementing land use and zoning regulations when jurisdiction is contiguous.

**Action Item 26:** Establish Conservation Easements (2020:153) A conservation easement is a voluntary agreement between landowners and either a land trust or government agency that protects the conservation values of a property. The kinds of use that is allowable is limited; no use can threaten land conservation. Types of land use that is allowable is determined through an agreement between the landowner and land trust. The landowner does retain the rights to own and use the land, sell it, and pass it on. KBIC aims to have discussions with private, state, federal, tribal, business, and conservation landowners on mutual benefits of easement.

## 5.5. Concluding Statements

Land stewardship will remain fundamental to the protection and restoration of 1842 and 1854 treaty resources and lands. In summary, KBIC land stewardship involves programs associated with natural resources, forestry, and real estate and transportation, and through partnerships across KBIC governments offices as well as external groups. Land stewardship responsibilities

by the Natural Resources and Forestry Departments as well as Real Estate/Transportation ensure the protection and restoration of treaty resources and seek to strengthen good Ojibwa relations within a changing environment in partnership with many other governments at local, state, regional, and federal scales. Overall, these entities will continue to strengthen their programs and partnerships for the benefit of current and future generations within the KBIC jurisdiction.

## 6. Protecting Health and Wellbeing, Safety, and Infrastructure

### 6.1. Overview

Protecting Health and Wellbeing, Safety, and Infrastructure necessitates integrated resource management and planning for the comprehensive and holistic protection for the Keweenaw Bay Indian Community's current and future generations and traditional and contemporary homelands. These departments and programs are implemented within the 1842 treaty ceded lands, for treaty resources, as well as the 1854 L'Anse Reservation and other KBIC jurisdictions.

Protecting Health and Wellbeing, Safety, and Infrastructure with and by the KBIC is a substantial component of the everyday lives and livelihoods of Community members and within KBIC territorial jurisdictions. To meet protective goals, KBIC departments, offices, and programs engage in partnerships with both internal and external agencies, groups, and organizations. The KBIC protective entities are as follows, outlined in alphabetical order, below.

- Child Support Services
- Committee for Alternative and Renewable Energy (CARE)
- Commodity Foods
- Fire and Emergency Management
- Health and Human Services
- Housing Department (formally the Ojibwa Housing Authority)
- Public Works
- Seniors and Elder Nutrition
- Social Services
- Tribal Police: Public Safety and Tribal Conservation
- Youth Programs

Protecting Health and Wellbeing, Safety, and Infrastructure obligations within and for the KBIC are vast, inclusive of protection for all ages, sexes, and genders and current priority needs. Overall, these entities contribute to empowering the autonomy of individuals and the community



as a whole to strengthen the Keweenaw Bay Indian Community for the benefit of current and future generations.

## 6.2. Child Support Services

Beginning with a **DESCRIPTION**, the Child Support Services department is committed to improving the lives of children, strengthening family responsibilities, ensuring the establishment of paternity when appropriate, minimizing financial disputes, holding parents accountable regarding supporting their children, maintaining an effective program to meet the needs of families, improving the welfare of children, and strengthening tribal sovereignty. Overall, our department strives to strengthen family responsibilities and values through quality service and cultural integrity.

Our children are our future. Children need the support of their families to thrive and be healthy and successful. They have the right to count on both of their parents for the emotional, spiritual, medical and financial support they deserve. Even when parents do not live together, parents have the moral and legal obligation to ensure the health, welfare and safety of their children is first priority. Overall, the Office of Child Support Services provides support for future generations.

The **PROGRAMS/ACTIVITIES** provided by Child Support Services are comprehensive in the support of the health and wellbeing of children. Our department provides paternity establishment and child support services to families where the child, mother, or father is a member of the KBIC or other federally recognized Tribe when at least one of the parties resides on the L'Anse Reservation. Child support orders are enforced through the department through Income Withholding. If payment is failed to be made other enforcement measures are taken. Also, a 12-week parenting course is provided by the Fatherhood and Motherhood is Sacred Program provided through Child Support Services.

The **PRIORITY CONCERNS** noted by Child Support Services is for the widespread acknowledgement and support of the following truth: Fatherhood and Motherhood is sacred. For those interested in learning more and/or sharing resources, see "Programs" on the Department [website](#) for information about parenting in a good way, parenting courses offered, and the 3 pillars of change: self worth, identity, and purpose.

Notable **ACCOMPLISHMENTS** include the growing and strengthening programs offered by KBIC Child Support Services.

The **OBJECTIVES** of Child Support Services include a focus on our goals, founded in our commitment to families while complying with Tribal Codes and Federal Regulations, specifically to accomplish our 5 objectives: Establish Paternity; Establish, Monitor, Modify and

Enforce Child Support Orders; Locate Custodial and Non-Custodial Parents; Provide Quality Customer Service; and Provide Customer and Community Education.

**ACTIONS** specifically recommended by Child Support Services are the integrated resource management programs provided across the KBIC and governmental offices to protect, restore, and sustain natural resources for future generations.

### 6.3. Committee for Alternative and Renewable Energy (CARE)

Beginning with a **DESCRIPTION**, the Committee for Alternative and Renewable Energy (CARE) was formed in 2008. While interest has existed within KBIC concerning the development of renewable energy and energy efficiency for some time, the first major initiatives were taken in 2008 through the formation of the CARE, and the completion of a strategic energy planning workshop. The CARE serves as an advisory committee to KBIC's governing body, the Tribal Council, regarding the development of alternative and renewable sources of energy. Parallel with emerging energy and environmental issues such as rising energy costs, environmental impacts, natural resource depletion, and climate change, are the increasingly important practices of sustainability, smart growth, and resource management and conservation. These issues and practices are of rising significance to KBIC whose intent is to provide a healthy and productive resource base to sustain the members of KBIC far into the future, as well as to enhance and perpetuate all of the traditional, cultural, and spiritual values which tie the members to the land.

CARE goals are to 1) Create alternative and self-sustainable clean energy system which preserves the environment, conserves our natural resources, and lowers energy costs; 2) Preserve and increase tribal self-sufficiency; 3) Minimize environmental impact; 4) Utilize local resources; 5) Create economic benefit through job creation and lower energy costs; and 6) Increase knowledge and collaboration associated with alternative and renewable energy for KBIC.

The **PROGRAMS/ACTIVITIES** provided by the Committee for Alternative and Renewable Energy support and guide overall committee goals. CARE is made up of representatives/advisors from the following KBIC departments and offices: Real Estate/Transportation, Natural Resources, Grants, Community Assistance Program (CAP), and Public Works; one (1) representative of the Cultural Committee; one (1) representative of the Tribal Council and one (1) representative from the Community at-large. There are also three (3) advisors to the Committee which include one (1) representative from each of the offices of the CEO, Natural Resources and Housing.

Specific documents, policies, and partnerships guide the CARE programs and activities. Guiding documents include this IRMP, the [Strategic Energy Plan](#) (2008), current [CARE by-laws and](#)

[amendments](#) (2021), Integrated Solid Waste Management Plan, and Waste Management Ordinance. Internal partners include the KBIC departments represented on the Committee; External Partners include, but may not necessarily be limited to, the Village the L'Anse, Superior Watershed Partnership, the State of Michigan, as well as the [Michigan Community and Anishinaabe Renewable Energy Sovereignty](#) (MICARES) and the [Midwest Tribal Energy Resources Association](#) (MTERA).

The **PRIORITY CONCERNS** noted by the Committee for Alternative and Renewable Energy (CARE) centers on energy efficiency and conservation, and energy sovereignty for the KBIC. Specific concerns include the need for more efforts on resilient housing (energy conservation/efficiency) and green infrastructure design considerations (see Energy Taskforce Report for more on specific needs). Finally, CARE is primarily concerned about enhancing transitions to alternative energy uses (e.g., wind turbines, solar farms), and carbon credit programs more widely.

**A Focus on Climate Concerns:** The Committee for Alternative and Renewable Energy (CARE) recognizes current and forecasted climate related changes are primarily due to the large-scale societal dependence on fossil fuels, a limited and decreasing resource, and its confounding impacts to climate change. Climate change impacts of concern, experienced and expected, include the increase in rapidly changing seasonal temperatures and norms, and extreme storm events, both of which contribute to water level extremes in aquatic systems from drought to water excess conditions. As a result, water extremes are resulting in shoreline erosion and infrastructure failure (culverts, roads, storm drains, and older housing). Finally, the concern for the increase in climate refugees (all life forms), exacerbate issues associated with pressures on natural systems, fragile infrastructure, and services, as well as economic systems.

Notable **ACCOMPLISHMENTS** by the Committee for Alternative and Renewable Energy (CARE) include renewable energy solar installations within our community, including the KBIC Health Center, New Day Treatment Center, and the Commodity Foods facility.

The **OBJECTIVES** of the Committee for Alternative and Renewable Energy (CARE) aim to achieve committee goals focused on KBIC energy sovereignty through the development and implementation of a comprehensive clean energy system for, and to protect, all reservation lands, facilities, and homes.

**ACTIONS** specifically recommended by the Committee for Alternative and Renewable Energy (CARE) from the 2020-2025 KBIC [Hazard Mitigation Plan](#) (2020) focus on KBIC energy audits/assessments within our community, detailed below in Action Item 16.

**Action Item 16:** Facility Assessments with Energy Audits (2020:148) Energy audits, or also known as an energy assessment, is a comprehensive analysis of a facility’s energy use, its health, and the safety of its occupants. KBIC would work with a local energy auditor to complete a comprehensive analysis of Tribal facilities to identify and resolve energy use, cost, or efficiency concerns. Audits can also identify and eliminate health and safety problems, such as air leaks, moisture issues, and insufficient insulation. Energy audits provide recommendations towards reducing energy use and costs. Additionally, audit findings will also guide future renewable opportunities for KBIC.

## 6.4. Commodity Foods

Beginning with a **DESCRIPTION**, the KBIC Commodity Foods program aims to provide community families with ample and needed healthy foods, and support the nutritional needs within our community.

The **PROGRAMS/ACTIVITIES** provided by Commodity Foods are specifically for low income households. Our program currently uses the income guidelines set forth by the USDA. Current guidance utilized by the Commodity Foods Program includes the KBIC Personnel Policy (2023) as well as guidelines provided by the USDA.

The **PRIORITY CONCERNS** noted by Commodity Foods are related to ensuring ample resources to meet community needs, and to a lesser but important extent, the periodic challenges related to dealing with difficult people in great need of our services, particularly those under the influence of drugs or alcohol.

**A Focus on Climate Concerns:** The Commodity Foods program recognizes the current and expected changes due to climate are contributing to the following concerns listed below for our community.

- High water levels, and loss and degradation of Lake Superior shorelines which are also resulting in plans for the rerouting of the highway US-41 at the Head of The Bay
- Logging practices, clear cutting and leaving the mess, loss of tree canopy for habitat of many animals, exacerbates impacts from climate related changes
- Rise in temperatures and lack of precipitation resulting in an increase of forest wildfires
- An increase of nonlocal people moving into the area as permanent residents; this increases the taxing burdens on local resources
- A potential future of decreased KBIC fishing activities and practices, due, in part, to a loss of culturally important species, and also, a loss of both fishing desires and knowledge
- Delaying responses to these issues have the strong potential to greatly and negatively impact our earth and the Ojibwa way of life.

Notable **ACCOMPLISHMENTS** of the Commodity Foods Program include many health, safety, and wellbeing improvements to the foods warehouse over the past ten years, including enclosed compressors to limit dust in the air, the removal and replacement of walls with mold damage, the installations of commercial grade air conditioners to keep it cool, and the current grocery store set up. This enhances autonomy, allowing people to shop and choose their own food items, eliminating the handling by others. Importantly, the commodity food program provides food products to customers much faster than that of the Michigan Department of Health and Human Services (DHHS) and with less paperwork. In collaboration with the USDA, our program also provides recipes and cookbooks, which supports sharing information on the importance of healthy food portions, in our community.

The **OBJECTIVES** of the Commodity Foods Program include the continuation and strengthening of current programmatic goals, specifically, to provide community families with ample and needed healthy foods, and to support the nutritional needs within our community.

**ACTIONS** specifically recommended for the Commodity Foods Program are continued enhancement of community member autonomy while participating in program services, and the increased planning, promotion, and integration with other departmental programs such as Health and Human Services and current Natural Resources education and outreach programs, including participation in community harvesting workshops and community garden initiatives.

## 6.5. Fire & Emergency Management

Beginning with a **DESCRIPTION**, the Fire and Emergency Management program (FEMD) is responsible for the preparedness, training, and coordination of emergency response and recovery efforts on the L'Anse Reservation and all aspects of Wildland Fire Management in cooperation with the U.S. Department of Interior (DOI) Bureau of Indian Affairs (BIA).

The **PROGRAMS/ACTIVITIES** provided by the Fire and Emergency Management program focus on the suppression, prevention and reduction of risks and hazards of wildfires through response, education, and hazardous fuels reduction activities. This includes participation in training, qualifications management, and working with cooperators to support the implementation of projects and suppression response both on and off tribal lands. The program also focuses on field work, and based on capacity, most field work are small scale projects. Some of these projects include managing brush, conducting prescribed fires, and mechanical work creating fire breaks. Small prescribed burns have taken place at Sand Point, the Ojibwa industrial park, and Zeba buffalo. These burns provide hazardous fuels reduction, promote ecosystem health and restore fire adapted and culturally significant plant species such as blue berry, red pine, and red oak. Fuels breaks have been constructed around our community's housing areas; additionally, work is currently focused on the implementation of a 5 person fuels crew to increase the program's fuels management capabilities.

Guiding documents and partnerships are important for the Fire and Emergency Management program. The primary guiding documents are the BIA-Tribal Cooperative Fire Management agreement, A23AC00015 for fire management activity and the Keweenaw Bay Indian Community Fire Management Plan, adopted in 2004. The program's internal partners include Forestry, particularly for the community's objectives for prescribed fire, hazardous fuels reduction, and ecosystem health and resiliency to climate change, and the Natural Resources Department for some of the crossover work. For example, our program can provide some of their mechanical needs such as addressing invasive species with a burn which helps restore native species. External partners include other federal, state, and local agencies for mutual aid suppression response and the need for additional expertise such those with natural resources background. Finally, the program has worked with WUPPDR for hazard mitigation planning, and currently, with BIA through the cooperative agreement.

The **PRIORITY CONCERNS** noted by the Fire and Emergency Management program are wildfires, structural fires, and severe winds. Other priorities are to direct more focus on fuels, fuels programs and management, and also monitoring, before and after treatments to gauge effectiveness, and post wildland fire occurrences to assess severity. Additionally, the program concerns include snowstorms and blizzards, shoreline flooding and erosion, and riverine and urban flooding.

**A Focus on Climate Concerns:** The Fire and Emergency Management program recognizes the current and expected changes due to climate are contributing to enhanced fire dangers. Specifically, the program is concerned by increased, prolonged droughts leading to increases in fire occurrence, range, and intensity. (Some fire adapted species include red oak and blueberries.) Drought is changing the distribution field moisture which is affecting many different plants and other species, and causes stress on many plants and trees.

Climate is also changing weather patterns which put the community at higher risk. These changes are related to drier summers and less precipitation moisture events, decreased snow events and snowpack, and extreme storm events and lightning strikes.

Related to changing climate and weather patterns, since 2000, fire occurrences have been increasing and fires are getting bigger. Large areas of the U.S. are experiencing severe and exceptional drought conditions. Contemporary fires burn hotter, and are much more difficult to extinguish.

Notable **ACCOMPLISHMENTS** by the Fire and Emergency Management program include participation in the development of the 2020-2025 KBIC [Hazard Mitigation Plan](#) (2020).

The **OBJECTIVES** of the Fire and Emergency Management program center on fire sovereignty for the KBIC and include the following items below.

- Develop a KBIC Fire Management Plan that is customized to KBIC landscape, cultural values, and with the assistance of the KBIC Natural Resources Department, focus on significant medicinal and cultural plants and species.
- Prioritize public safety and forest health, and the understanding of plants and medicines needs, which includes reintroducing fire to the landscape.
- Work towards reducing wildfires and their severity and adverse impacts, including suppression response capabilities, hazardous fuels reduction, project integration, and prescribed fires for culturally important plants and medicines.

**ACTIONS** specifically recommended by the Fire and Emergency Management program align with our responsibilities for the preparedness, training, and coordination of emergency response and recovery efforts on the L'Anse Reservation. From the 2020-2025 KBIC [Hazard Mitigation Plan](#) (2020), the program recommends the following Action Items as well as potential actions for several priority concerns of the program.

**Action Item 13: Seiche Early Warning System (2020:147)**

Storm surges, or seiches, that drive lake water inland over large areas occur when windstorms and differences in barometric pressure temporarily tilt the surface of a lake up at one end—in extreme cases by as much as eight feet. It is important to create a forecast and warning system to alert boaters and beachgoers about seiches as they develop across Lake Superior.

**Action Item 30: Improved Emergency Response, Equipment, and GIS (2020:154)**

Conduct ongoing reviews of response plans and programs to keep emergency contacts up to date, ensure critical facility information is current, and to identify and incorporate new and improved methods of warning and response. Continue development and maintenance of GIS resources. Adequacy of shelter facilities, response equipment, and training can be evaluated during ongoing reviews of response plans and updated as needed.

**Snowstorms and Blizzards:** Blizzards are expected to occur more frequently and with greater impact due to climate change. A serious event can cause power outages and limit emergency response. Potential Actions include:

- i. Improve resiliency for community facilities that are designated as shelters during emergencies by installing backup generators.
- ii. Plan for and maintain adequate road and debris clearing capabilities.
- iii. Identify specific at-risk populations that may be exceptionally vulnerable in the event of long-term power outages.
- iv. Organize outreach to vulnerable populations.
- v. Establish accessible heating centers throughout the community.

**Shoreline Flooding and Erosion:** While shoreline erosion is a major issue, there is a lack of legacy data that can be used for decision making and calculating the rate of erosion over time.

Potential Actions include:

- i. Use GIS to identify and map erosion hazard areas.
- ii. Develop and maintain a database to track community vulnerability to erosion.
- iii. Use GIS to identify concentrations of at-risk structures.
- iv. Use improved mapping to educate residents about unexpected risks.
- v. Use data to model future erosion potential based on rising lake levels.

**Riverine and Urban Flooding:** 1) Riverbanks and many areas with inadequate culverts and ditches are overburdened, resulting in certain degrees of flooding and washouts. The villages of L'Anse and Baraga are especially prone to flood events. Potential Actions include:

- i. Implement project to reduce stormwater and snow melt runoff by installing, rerouting, or increasing the capacity of the storm drainage system.
- ii. Increasing drainage or absorption capacities with detention and retention basins, relief drains, spillways, drain widening/dredging or rerouting, logjam and debris removal, and extra culverts in flood-prone areas.

2) Flooding risk on U.S. 41 due to high water levels on Lake Superior limits evacuation routes and cuts off the western Tribal population from the eastern, where critical and essential facilities are located. Potential Actions include:

- i. Elevate the road.
- ii. Install culvert to improve flow.
- iii. Establish Class A road to reroute traffic through when the road is blocked.

**Wildfires:** KBIC has an ongoing risk of wildfires due to the tremendous amount of forest cover in the Upper Peninsula and increasing hazard due to urban infringement in rural areas. Potential Actions include:

- i. Map and assess the community's vulnerability to wildfire through GIS mapping to facilitate analysis and planning decisions.
- ii. Revitalize and maintain cultural use of fire as a stewardship tool.
- iii. Use prescribed burns in marsh habitats to encourage young plant communities.
- iv. Establish fuel breaks to slow the spread of catastrophic fire.
- v. Identify people (tribes, elders, community members) who have knowledge and stories about fire practices.
- vi. Establish buffer zones around wild rice beds or other sensitive communities to prevent effects of disturbance.

**Structural Fires:** Due to an older housing stock, compact development in downtown areas, and the accumulation of debris around residential and non-residential structures, much of the



community is susceptible to fire. A Potential Action includes: Create defensible space (buffers) around residential and non-residential structures through a hazardous fuels reduction program.

**Severe Winds:** Severe wind events are concentrated on the Lake Superior shoreline, but they can also occur throughout the community, usually resulting in downed trees and extensive debris. A Potential Action includes: Survey cultural site locations ahead of time so when a disturbance occurs it is easier to act (by removing hazardous trees and debris) but be mindful about how this information is stored and shared.

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## 6.6. Health and Human Services

Beginning with a **DESCRIPTION**, the KBIC Department of Health and Human Services (DHHS) has grown substantially since the 1970s, when the Keweenaw Bay Indian Community was the first Tribe, nationally, to establish a tribally operated Health center, outside of the Indian Health Service (IHS). Currently, the DHHS goals are to build a strong healthy community with a well-designed and comprehensive public health approach by creating standard operating procedures for DHHS, reformulating processes to enhance staff capacity, and pursuing more traditional practices with staff and community. Their mission is to be a leader in Tribal Health and Human Services by using traditional, evidence based, and innovative strategies that contribute to building a strong, healthy community (KBIC Health System 2023).

Based on the Seven Grandfather teachings, Keweenaw Bay DHHS core values are reflective of the department's principles and beliefs, and describe how the department relates to its customers, services, and one another.

- Honesty: Always be honest with word and action – Gwayakwaadiziwin
- Respect: All of creation should be treated with respect – Minaadendamowin
- Wisdom: Given by the Creator to be used for the good of the people – Nibwaakaawin
- Truth: Speak the truth; do not deceive yourself or others - Debwewin

The **PROGRAMS/ACTIVITIES** provided by the Department of Health and Human Services include comprehensive health services to approximately 2,800 tribal members and descendants living in Baraga, Houghton, and Ontonagon Counties. As a public health department, the Keweenaw Bay DHHS is responsible for providing medical, dental, and behavioral health care services, including a pharmacy, as well as health promotion and disease prevention programs. DHHS also oversees the Community Health Department which includes the Maternal and Child Health (MCH) and Healthy Start programs. The Health Center also provides Medical Transportation Services, supports traditional and culturally-informed healing practices, and an after hours Crisis Center. The specific Department of Health and Human Services clinics and program areas listed below.

### Medical Clinic:

- The KBIC Health Clinic is designated as a Federally Qualified Health Center (FQHC), a federally funded nonprofit health clinic that serves medically underserved areas and populations. FQHCs provide primary care services regardless of clients' ability to pay.
- The KBIC Health Clinic welcomes Dr. Elton Li, a locum physician that will be providing services until the Clinic can employ another full time physician.

### Dental Clinic:

- KBIC Health Clinic has procured a full time dentist, Dr. David Stevens who will begin providing services on November 6, 2023. Dr. Halliday, the current locum dentist, will continue to provide coverage through December 29, 2023.
- KBIC Dental Clinic staff met with Patterson Dental and as a result, the entire dental area will be updated and remodeled.

Behavioral Health:

- Our Behavioral Health team will be moving to L'Anse, in the near future, to the clinic across from the L'Anse KBOCC campus which was purchased by the Health Clinic.
- The Behavioral Health team continues to grow, adding more providers to their telehealth services to meet the needs of our community.

Community Health/Health Promotions/Maternal and Children Health:

- Diabetes program - Indian Health Service is assisting in the set up for the Joslin Vision Network (JVN) Teleophthalmology program. Screening for diabetic eye disease will be provided at the clinic.
- A community health assessment is currently being developed and the assessment will be launched to the public in the spring of 2024. As part of this process, ongoing collaboration with the Michigan Inter-Tribal Council is taking place through meetings every 2 weeks.

The Department of Health and Human Services is guided by the Tribal Health Board, and works internally with Tribal Police, Court, and the Tribal Council. External partners include Baraga County Memorial Hospital, U.P. Health Portage, and U.P. Health Marquette. The DHHS is also partnered with the Department of Justice on a collaboration grant.

The **PRIORITY CONCERNS** noted by the Department of Health and Human Services include challenges related to the health and wellbeing, and underlying disparities, of many Native American communities across the United States as well as public health emergencies. Tribal public health departments face many challenges in their efforts to prevent chronic disease, and to protect and promote community health. Tribal communities face great health disparities and tribal health departments lack resources needed to address these issues. The health disparities experienced in Indian Country are often the areas of health that benefit the most from a public health approach. Chronic disease such as heart disease, diabetes, and chronic respiratory disease are some of the leading causes of death for our people. These chronic conditions can be prevented or treated with a well-designed and comprehensive public health approach.

Developing a plan to utilize resources to build tribal health department capacity and develop infrastructure benefits the health of the community. It is a proactive approach to improving the health status of our community. The DHHS is committed to developing a solid foundation, rich in public health capabilities to efficiently and effectively manage long term health needs of the community. A healthy Native community gets sick less frequently and spends less money on

health care; this means better economic productivity and improved quality of life for our community.

**A Focus on Climate Concerns:** The Department of Health and Human Services (DHHS) recognizes the current and expected changes due to climate affect the health and wellbeing of KBIC in numerous ways. What it means to be healthy for many Indigenous communities is directly connected to ecosystem health, and as a result, there are considerable environmental public health risks and burdens due to the destruction of the natural resources that comprise their homelands. Further, health and wellbeing is viewed as multi-dimensional, reflective of Ojibwa values, beliefs, and practices, including physical, cultural, social, mental, and spiritual health, as well as inter-related wellbeing both on familial and community levels.

Some observed and experienced changes by DHHS include the following concerns:

- A decrease in snow and an increase in ice during the winter season
- Dramatic climatic and extreme weather shifts, from hot and/or dry to cold and/or wet
- Increased shoreline erosion, which also is a contributor to the increased need for beach clean ups
- Increased beaver activity resulting in dammed Lake Superior waterways and changing water levels in other tributaries and terrestrial areas
- Loss of habitat for wildlife, resulting in increased wildlife closer to and in town, such as deer and turkeys
- Continued contamination of lakes and fish, as well as in and around the KBIC jurisdictional area.

Additionally, climate change can be a driver of disease migration, as well as exacerbate health effects resulting from the release of toxic air pollutants in vulnerable populations such as children, the elderly, and those with asthma or cardiovascular disease. Chronic diseases such as heart disease, diabetes, and chronic respiratory disease are among the leading causes of death for our people. Specific human health issues related to climate change include: foodborne diseases and nutrition; safe water and food security; waterborne diseases; heat related illnesses and mortality; mental health and stressors; vector borne diseases; weather related illnesses, injuries, and deaths; and the exacerbation of chronic diseases.

Notable **ACCOMPLISHMENTS** by the Department of Health and Human Services include the following list of items.

- The KBIC Health Clinic is now designated as a Federally Qualified Health Center (FQHC), and is in the process of becoming accredited.
- Developed Hazard Surveillance plan at BCMH to include remote workers, nursing and durable medical equipment, and IT.

The **OBJECTIVES** of the Department of Health and Human Services include both 5-year and 10-year objectives, listed below.

5-year Objectives:

- Create a DHHS Manual of Standard Operating Procedures, with policies, for DHHS for review and approval by the Tribal Health Board and Tribal Council to 1) assist in providing consistent services and programs to community members, 2) provide clear guidelines on the implementation of services and programs for DHHS employees, and 3) enhance DHHS organization and efficient use of resources.
- Create a DHHS Workforce Development Plan for review and approval by the Tribal Health Board and Tribal Council. The Plan will include a formal orientation process, annual performance reviews, and workforce assessment that will ensure staff qualifications and competence and a process for developing an employee professional development plan to maintain licensure.
- Create and implement an annual hazardous surveillance study
- Review and reformulate processes that enhance staff capacity
- Pursue more Traditional Practices with staff and community
- Implement a biannual collection of staff and patient surveys relating to the implementation and staff knowledge.

10-year Objectives:

- To be a leader in Tribal Health and Human Services by using traditional, evidence based, and innovative strategies that contribute to building a strong, healthy community.
- Our future tribal community will be actively engaged in promoting healthy living through participation in prevention activities, including traditional practices, managing chronic conditions, and expanding services.

**ACTIONS** specifically recommended by the Department of Health and Human Services, and included in the DHHS Agency Strategic Plan (2015), are listed below, followed by potential actions associated with Public Health Emergencies and Food Sovereignty, specifically from the 2020-2025 KBIC [Hazard Mitigation Plan](#) (2020).

- Continue **expansion assessment**, working with UP Engineers and Architects, and the Indian Health Services, to assess its current property for upgrading improvements or new construction.
- Resume **Safety Committee** meetings (in person), starting on 12/15/2023 (since the end of the pandemic) to address the needs of the Clinic, which includes staff training associated with assessed risks. Safety Committee goals are as follows, 1) Establish a Hazard Surveillance Plan for KBIC DHHS clients and staff; 2) Develop policies and procedures for the DHHS to move towards accreditation; 3) complete the community assessment; and 4) Update KBIC DHHS Strategic Plan.

- Develop a **Strategic Plan** in 2024.
- Develop a **Hazard Vulnerability Assessment** to determine the potential environmental hazards that may affect the KBIC and our ability to meet their medical needs, and to inform KBIC safety plans.
- Educate staff about **traditional practices and cultural sensitivity** to promote use in DHHS treatment practices and education programs. DHHS will continue to learn about and incorporate traditional practices in the delivery of health care services; we will enhance our knowledge of Ojibwa customs and traditions of the Keweenaw Bay Indian Community to inform our practices by utilizing language, traditional foods, and culturally acceptable behaviors so that we may demonstrate respect to the community we serve making them comfortable when receiving services.
- Anticipate the health effects of **climate change**, to assure that systems are in place to detect and track them, and to take steps to prepare for, respond to, and manage associated risks. This includes 1) identifying population groups at greatest risk for specific health threats, such as severe weather and heat waves that pose a particular risk to the young, the elderly, and the poor; and 2) communicating the health-related aspects of climate change, including risks and ways to reduce them, to the public, decision makers, and healthcare providers.
- Use **traditional, evidence based, and innovative strategies** that contribute to building a strong, healthy community interrelated with the health of the natural resources in this ecosystem.

**Public Health Emergencies** (KBIC [Hazard Mitigation Plan](#) 2020:111-116) Most public health emergencies, such as an influenza type pandemic, drug or substance abuse issue, or natural resource contamination, adversely impact or have the potential to adversely impact many people. Potential Actions include the following listed items.

1. Protect vulnerable individuals who are at higher risk for severe illnesses, particularly during potential future pandemics, to reduce rates of exposure.
2. Educate and empower individual responsibility to slow transmission of highly infectious illnesses.
3. Educate the public about the signs and symptoms of 1) illness and what to do if they become infected; and 2) drug/substance abuse, or know someone who is struggling with abuse, and how to seek support for recovery.
4. Establish a strategy between KBIC and other local agencies that address the local opioid epidemic by identifying potential causes and paths towards opioid misuse and overdose.
5. Stay informed on the monitoring of KBIC high priority lakes and streams with other agencies for contaminants or other pollutants that negatively impact water quality and public health.

6. Promote equitable community resilience projects that address potential public health impacts from climate change, such as increasing access to health care and reducing reliance on fossil fuels.

**Action Item 33: Food Sovereignty (2020:156)** Food sovereignty is the ability to feed the community and feed them well. It is a state of being in which a community can have a safe, culturally acceptable and nutritionally adequate diet through a sustainable food system that promotes community self-reliance and social justice. The local ecosystem is a rich and vast garden where foods and medicines are found throughout the forests and waters. Food sovereignty education and outreach initiatives are critical to restoring and strengthening the KBIC. Practices to restore and protect local environments, economies, and cultures are just some activities that can help strengthen not only food sovereignty within the KBIC, but within local communities as well.

## 6.7. Housing

Beginning with a **DESCRIPTION**, the Keweenaw Bay Indian Community (KBIC) Housing Department (formally known as the Ojibwa Housing Authority) was created by ordinance in 1965. The Department goals are to provide safe, affordable, and attractive housing opportunities in a safe, clean, and healthy environment to qualifying members of the KBIC and to develop programs geared towards homeownership for low and moderate-income families. Housing also encourages self-improvement of the community's low-income families, and additionally, provides employment opportunities.

The **PROGRAMS/ACTIVITIES** provided by the Housing Department are diverse and community wide, designated to help meet the Housing goals for the KBIC. The Department oversees all aspects of Housing and housing projects, and also participates with other departments for casino renovations, the golf course, and the Marijuana Dispensary. Housing also guides and oversees Tribal Council meetings.

Since 1965, Housing has developed a variety of programs designed to optimize community development and personal well-being of the tribal membership. The Subsidized Rental Program provides low-income families with attractive, affordable housing. Qualified individuals have access to a variety of single-family homes (2-4 bedrooms), duplexes (1 and 2 bedrooms), or apartments (1 bedroom) located on KBIC Marquette, Baraga, and L'Anse Reservation lands on a month-to-month lease. Another one of the programs available is the Elderly Rental Program which is designated to help eligible Indian elderly persons and elderly families have access to apartments on a month-to-month lease basis. In total, KBIC Housing operates 248 low-income tribal rental units in both Baraga and Zeba (Baraga County), and in Harvey (Marquette County). Additionally, Housing oversees the Seniors Complex building for elders 55 and older in Baraga. Also, a Market Rate Rental program has been developed to help alleviate the housing needs for

low to moderate income families; this program offers rentals in both L’Anse and Baraga for tribal members. In addition, three transitional units are available to tribal members participating in substance abuse and/or drug court programs.

Specific documents, policies, and partnerships guide Housing Department programs. Guiding documents and policies include the KBIC [Strategic Plan](#) (2005), as well as KBIC Personnel and Housing policies. The Housing Department partners with and across all KBIC Departments, and external partners, at many scales, include, the Villages of Baraga and L’Anse, local Enterprises and businesses, UPPCO, regional education partners such as Michigan Tech and Northern Michigan Universities, REA, and HUD and the Department of Interior.

The **PRIORITY CONCERNS** noted by the Housing Department include the following health, safety, and vulnerability items listed below.

- To assist elderly and disabled individuals maintain a quality standard of living and a positive home environment to make their home habitable
- To correct and/or prevent environmental defects that are hazardous to tenant health and safety

**A Focus on Climate Concerns:** The Housing Department recognizes the current and expected changes due to climate are contributing to an increase of Lake Superior shoreline erosion rates, changes in forest systems, longer and changed timing of season, overall warmer temperatures, increased rain precipitation events, and the severity of storms. Due to these changes, Housing is also observing less fish for consumption, deer moving into human areas and the loss of habitat for wildlife, adverse impacts to the viability of areas to grow *manoomin* (wild rice) due to more water, higher lake levels, difficulties for elders being able to stay cool, an increased demand for air conditioning, and an increase in heat stroke occurrences of both elders and older adults. Moreover, there are the problems of some roads being no longer passable for longer periods of time. All of these changes have resulted in the increased need to provide assistance and information to Tribal Members when a situation arises that causes, or may cause, imminent danger or threat to the health and safety of residents. These situations include severe storms, wildland fires, floods, drought or extended freezing and/or high temperatures that may be due to an increasing impact of climate change.

**ACCOMPLISHMENTS** noted by the Housing Department include Casino renovations and the implementation of the KBIC Drug Court. Additional accomplishments are listed below.

- The Emergency Assistance Program is available to tribal homeowners in Baraga, Marquette and Ontonagon counties. When imminent danger or threat to the health and safety of residents occurs, such as inoperative furnace or water heater, an applicant may be eligible for assistance. Each request is considered on a case-by-case basis.



- Approved housing policies that provide guidelines to assist low-income families with safe and affordable housing. Tribal housing offers a variety of single-family detached homes (2BR, 3BR, 4BR), duplexes (1BR, 2BR), and apartments (1BR) to qualified individuals on a month-to-month lease. Elderly apartments are available to eligible Indian elderly persons and elderly families on a month-to-month lease basis. Built in 1985, Superior View Complex houses twenty-five (25) (1BR) apartments in an enclosed, secure apartment building.
- Three transitional units are available to homeless tribal members who are either participating in Drug Court or in a substance abuse program. The goal is to work with the tribal members towards permanent housing within three to six months.
- Chore Service was established in 2012 to provide cleaning and chore services to our elderly, severely disabled, and chronically ill community members to make their homes more habitable and/or to correct and/or prevent environmental defects that are hazardous to their health and safety.

The **OBJECTIVES** of the Housing Department include overseeing and guiding KBIC departments in a good way, climate education, and the continued focus on protecting present landscapes and resources for future generations. Additional 5- and 10-year objectives are included below.

5-year Objectives:

- Implement mold remediation – prevention, removal, and mold remediation of black mold which has been identified in the low income rental units
- Improve rental units by using Housing’s modernization program to implement energy saving appliances to help tenants reduce utility costs and to improve the indoor air quality
- Develop housing for low to moderate income families/individuals on the reservation with emphasis on energy efficient home designs

10-year Objectives:

- Infrastructure improvements -- improve existing drainages within housing area, reduce fuel buildup around homes, and invest in energy efficient street lighting
- Homeownership program – create program to transition low to moderate families/individuals from renters to home ownership into energy efficient designed homes
- Improve existing housing units by replacing windows, doors, insulation and roofing with Energy Star products and materials

**ACTIONS** specifically recommended by Housing, in addition to the Housing Objectives above, include Action Item 7 from the 2020-2025 KBIC [Hazard Mitigation Plan](#) (2020), and additional priority recommendations listed below.

- Action Item 7: Sewer Infrastructure for Housing (2020:145) Installation of a sewer system in Harvey on the Marquette Reservation.
- Provide emergency assistance to tribal member homeowners living within the KBIC service areas of Baraga, Ontonagon, and Marquette, for health and safety related issues such as furnace, hot water heaters, and handicap accessibility. Emergency situations can occur from severe storms, floods, fires, or prolonged cold/heat temperatures that may be an increasing impact of climate change.
- Consider issues of vulnerability and risk to inform housing land use planning and ensure that the community will be adaptable to the most likely effects of climate change.
- Collaborate with the Real Estate/Transportation Department to consider residential leasing on allotments and trust lands so that it includes language and space for renewable energy and recognition of the impacts of a changing climate

## 6.8. Public Works

Beginning with a **DESCRIPTION**, Public Works is responsible for the everyday and season-specific maintenance and mechanics of government buildings and offices, transportation fleet, roads, parks, and some trail assistance within the landscape.

The **PROGRAMS/ACTIVITIES** provided by Public Works includes the assistance of KBIC across departments, programs, and landscape. Our skilled worker programs include positions such as 8 cleaning staff, 20 Maintenance, Roads and Fleet mechanics, an Electrician and a Plumber/HVAC expert. The Maintenance department is responsible for maintaining all tribal buildings (30+) on the reservation which also includes shoveling and plowing in winter seasons and cutting grass in the summer. Maintenance also takes care of electrical and HVAC for KBIC enterprises such as the Casinos in Baraga and Marquette.

Our primary guiding document is the KBIC Personnel Policy (2023). Public Works partner with local agencies such as the Village of Baraga and L'Anse, and Houghton County entities, such as providing materials and help in emergencies such as the Father's Day flood.

The **PRIORITY CONCERNS** noted by Public Works are, as a critical department to everyday government and some enterprise activities, the department continues to experience ongoing shortages in staff and high turnover rates; this may be related to pay rates. Public Works ensures they have a trained workforce, however, once trained, many staff go elsewhere to obtain better paying jobs.

Priority concerns for natural resources include the logging of timber, particularly the rate of clear cutting in and around the L'Anse Reservation area. Logging is also a concern for hunting due to landscape debris left from the clear cutting results in difficulties for deer travel and thus harvesting deer.

**A Focus on Climate Concerns:** Public Works recognizes changes due to climate are contributing to fluctuating water levels, and an increase in storms, forest fires and burn acreage.

Notable **ACCOMPLISHMENTS** by Public Works include Shoreline erosion mitigation at the Ojibwa campground, new electrical throughout the Ojibwa campground and Pow Wow Grounds, the Zeba Water Tower, and participation in the Indian Health Service Well and Septic Program. Additional accomplishments include a launch site and picnic site structure at Alligator II (Lizzies), and considerable work at Sand Point with the Natural Resources Department and other partners. Reclamation of the Sand Point property was addressed through EPA Brownfield Assessment (2001) and Cleanup funding (2003) resulting in the placement of a soil cap and vegetation on approximately 34 acres of the site as well as the creation and installation of a community walking trail.

The **OBJECTIVES** of Public Works includes the Marquette Sewer Project, maintenance for KBIC septic systems and wells beginning in the summer of 2022, as well as bringing KBIC buildings up to code through heater and boiler updates.

**ACTIONS** specifically recommended by Public Works are to increase capacity and training of the department's staff. From the 2020-2025 KBIC [Hazard Mitigation Plan](#) (2020), Public Works also recommends the following Action Items (10-11, 27, 32).

**Action Item 10:** Backup generators for Critical Facilities (2020:146) Some critical facilities do not have backup power which could cause a cascade effect if a disaster were to occur. Stabilizing these systems is essential to community resilience. More information can be added here after the public comment period.

**Action Item 11:** Drainage Database, Infrastructure, and Maintenance Improvements (2020:146) As an ongoing project in the county, the County Road Commission has had an active role in upgrading roads and replacing inadequate culverts in response to previous problems and to mitigate future problems. Keweenaw Bay Indian Community is working closely with tribal and non-tribal government agencies to work on this ongoing need. The Natural Resources Dept will also continue to maintain and upgrade databases as needed while monitoring beaver dam problems.

**Action Item 27:** Build Relationships with Regional Recycling Facilities to Reduce Overlap and Establish Composting (2020:153) Develop a sustainable program within KBIC and coordinate with regional facilities to provide for the best protection of the environment.

**Action Item 32:** Equipment needs for KBIC Solid Waste Facility (2020:155) Replace worn equipment to keep up with increased demands of waste disposal, especially related to COVID situation and increased household waste.

## 6.9. Seniors and Elder Nutrition

Beginning with a **DESCRIPTION**, the goal of the Seniors and Elder Nutrition Department is to ensure nutritional meals, five days a week, to tribal members and other tribal affiliated members 55 years of age or older that reside in Baraga County. This department was created from a Title VI Program and works through a Congregate Meal Service.

The **PROGRAMS/ACTIVITIES** by the Seniors and Elder Nutrition Department is to provide meals five days per week, Monday through Friday from 11:30-1:00 at the Ojibwa Senior Center. For those who are unable to leave their homes without great difficulty, due to illness or disability, access to the Home Delivered Meal Service is available by application. The Home Delivered Meal Authorization Form can be completed and certified by their healthcare provider so that they may participate in the delivery meal services.

The **PRIORITY CONCERNS** noted by the Seniors and Elder Nutrition Department center on the health and wellbeing of elders, the environment, and the waters. Specific priorities are listed below.

- Limited resources and funding opportunities for growing our own foods within the department and for elders growing vegetables at home. (Appears to be ample opportunities for food retail.)
- Waste generation of our food service programs, even though more sustainable, but expensive, options are available.
- Lake Superior waterfront pollution, and increasing resources to decrease pollution, focused on individual and community responsibility. (The 4th of July waste is noted as the highlight of these ongoing waste concerns.)

**A Focus on Climate Concerns:** The KBIC Seniors and Elder Nutrition Department has many climate concerns related to changing gardening and fire risk seasons, and changes in shoreline levels and water temperatures of Lake Superior. For example, the growing season seems to be a lot earlier with warmer weather earlier, but even so, many frosts still take place. The gardening season also experiences a lot of drought and lawns are dry and not green. This also increases concern for the risk of natural fires, especially from lightning. Changes in the shoreline are especially evident at Sand Point where the lighthouse inlet appears to stay wide

during the summer. The warming waters are affecting fishing as fishers know that warm waters lead to decreases in fish.

Notable **ACCOMPLISHMENTS** include the success of the Seniors and Elder Nutrition greenhouse and the transition to LED lightbulbs in the office building.

The **OBJECTIVES** of Seniors and Elder Nutrition are to improve and update maintenance issues for energy efficiency and transitions, including insulation, doors, and windows, and considering the incorporation of solar panels.

**ACTIONS** specifically recommended by Seniors and Elder Nutrition are listed below.

- Enhance department food sovereignty and food systems knowledge
- Increase our resources to grow Elder programs, including crossover programs with Youth
- Create and implement a meal program policy and guidance plan
- Increase communications within and across departments for environmental protection and planning (i.e., department head meetings) and
- Facilitate partnerships with other departments and programs for elders and seniors (e.g., Social Services, Baraga Land Service, Youth Programs such as Little Eagles and primary school ages)
- Implement more local and fresh fish, meats, and vegetables by developing a KBIC food code, restoring our community garden, and working with local farms, especially tribally owned ones. A food code allows our program to also accept donations from KBIC hunters and fishers.

## 6.10. Social Services

Beginning with a **DESCRIPTION**, Social Services supports the welfare, strengthening, and empowerment of family unity through advocacy, education, and guidance for both children and adults.

The **PROGRAMS/ACTIVITIES** provided by KBIC Social Services include a range of programs and activities, specifically within KBIC jurisdiction are, Prevention Services, Child Protective, Foster Care, and Reunification Services, including, Indian Child Welfare Act Case Services, as well as Elder and Adult Protective Services. Social Services also provides Juvenile Justice Services and Victim Services (all sexes) within the community. Currently, Social Services is developing a program specific to missing and murdered Indigenous women and girls

as well as other victims who remain missing. More information about these programs are included below.

- Prevention Services uses positive goal-oriented interventions to support families/individuals by strengthening family unity and empowering them towards self-sufficiency.
- Child Protective Services' goal is to ensure child safety through positive goal-oriented interventions to include advocacy, education, guidance, and support of families to strengthen and preserve family unity.
- Foster Care Services are provided which include assessment/home studies of KBIC child foster home licensing, as well as the education, support, advocacy, and case management services for children in out-of-home care and their families. Foster home licensing is also available and the department has the authority to establish standards and license foster family homes and child care institutions within the counties of Baraga, Iron, Houghton, Marquette, Ontonagon, Dickinson, Gogebic, and Keweenaw.
- Reunification Services are also provided to aid in the reunification of children in out-of-home care with their families.
- [Indian Child Welfare Act](#) (1978) Case Services are provided which may include attending state court hearings, giving recommendations, interventions, advocacy, support, and/or referrals for needed services for KBIC children in out-of-home care and their families who reside off the KBIC reservation.
- Elder/Adult Protective Services investigates allegations of abuse, neglect, and/or exploitation of elderly or adults with disabilities.
- Juvenile Justice Services provide Services Specialists to monitor youth during probation and work with families and youth to deter any further involvement with the legal system.

Specific documents, policies, and partnerships guide programs in Social Services. Guiding documents include this IRMP, the KBIC [Strategic Plan](#), KBIC Personnel Policies, and the Procurement policy. Internal partners are inclusive of all KBIC departments and KBOCC, working closely specifically with Tribal Court, Tribal Attorneys Office, Tribal Probation, and the Tribal Enrollment office. External partners include the Department of Justice, area schools, IHS, MDHHS, and the BIA.

The **PRIORITY CONCERN** noted by Social Services is often maintaining the diverse caseload while and when being short on staff.

**A Focus on Climate Concerns:** Social Services recognizes the current and expected changes due to climate are contributing to changes, and annual and seasonal variations in local weather and temperatures, as well as drastic changes and losses across the L'Anse Reservation.

Seasonal temperature changes are causing environmental changes such as the prevalence of different insects in the summers than previously known, and warmer waters in various seasons are resulting in less fish available for harvesting. In some winters, snow arrives and remains later, and the growing season has extended into the fall. Warmer summers are also of particular concern for elders and other vulnerable and at-risk community members such as the risk for heat stroke; increased temperatures also increase the need and demand for air conditioning, i.e., increased energy use which contributes to climate related changes.

The increase in the severity and length of storm events are also causing changes to the landscape and community, many of which have not been witnessed in the current generation's lifetimes. Wind storms are destroying tree landscapes for miles. The dramatic loss of Lake Superior shoreline and beaches are of particular concern as well as the unprecedented Father's Day flood event. The loss of shoreline increases the risk of further gas leaks from the BP gas station. Increased flooding events, as well as the Sand Point recent surge or seiche, have destroyed Sand Point trails (in a single storm event) and inundated the KBIC campground area with increased water levels and also brought increased debris, logs, and waters across the highway that connects L'Anse and Baraga. US-41 at the Head of the Bay is at great risk to shoreline changes and storm events. If this were to wash out it would make daily travel for people very difficult and longer.

The myriad of effects that the influx of newcomers have on our region are a great concern. In particular, property and land is becoming more scarce, food prices are going up, and there is increased pressure on natural resources.

Notable **ACCOMPLISHMENTS** by Social Services include the following listed items below.

- The initiation and continuation of the Domestic Violence Awareness Memorial community walks; in memory of Chelsey LaFernier, the walk has taken place annually since 2008.
- The development and successful implementation of the KBIC Adoption Policy.
- The development and continuation of the Foster Parents and Adoptee Parents Appreciation Night with an event dinner, guest speaker, and gifts shared in gratitude of their dedication to KBIC children.
- The initiation and continuation of the School Supplies for Children program. Supplies are purchased prior to the beginning of the school year, and distributed to ensure the education of KBIC children is supported.

The **OBJECTIVES** of the KBIC Social Services are to integrate, share and promote the 7 Grandfather teachings in all its work, including sustaining and enhancing educational initiatives, and providing the needed support for any and all victims in our Community.

**ACTIONS** specifically recommended by Social Services are included in Action Item 28 from the 2020-2025 KBIC [Hazard Mitigation Plan](#) (2020) and is detailed below.

**Action Item 28: Public Information / Education Program (2020:153-154)** Public information is the key to mitigating many of the potential hazards in Keweenaw Bay Indian Community. Several projects can help to educate the public on potential hazards and how to protect themselves from hazards. Recommended projects include preparing and gathering education materials on hazards affecting the Community and how people can help with mitigation. These materials should be organized and made available at government offices, schools, and other easily accessible public facilities as well as on the internet. Topics to focus on include safe open burning, community hazard awareness, preparedness, and resiliency, and invasive species.

## 6.11. Tribal Police: Public Safety and Tribal Conservation

Beginning with a **DESCRIPTION**, the KBIC Tribal Police have responsibilities to Public Safety and Tribal Conservation throughout its territorial jurisdiction.

The **PROGRAMS/ACTIVITIES** provided by Tribal Police are vast across the KBIC jurisdiction. In Public Safety, the department provides everyday Police Service to all Reservation Land, which includes Baraga, Marquette, and Ontonagon counties, facilitates and promotes community policing, and provides for the enforcement of Tribal and Federal laws within the exterior boundaries of the Reservation.

The Keweenaw Bay Tribal Conservation Department provides and enhances the regulation, compliance, and enforcement policies of Keweenaw Bay Indian Community. Specifically, Tribal Conservation enforces the Keweenaw Bay Indian Community's [Tribal Code of Law](#), and the Integrated Resource Management Plan (IRMP). The Conservation Department focuses on [Title Ten](#) (2008), which pertains to hunting, fishing, trapping and gathering regulations, specifically for the reserved rights and responsibilities included in the Treaty of 1842. The Mission of the department is to set and maintain new standards of excellence in Conservation through knowledge, enforcement, and training. Our goal is to protect and conserve the natural resources, environment, people, and property of our reservation boundaries and home territory as well as our traditional Anishinaabe lifeways.

Tribal Police programs and activities ensure the compliance, enforcement, and education of the KBIC [Tribal Code of Law](#), which includes a comprehensive set of ordinances, and [Title Ten: Hunting, Fishing, Trapping, and Gathering](#) (2008). Tribal Police partners and consults with many



KBIC government departments (e.g., Social Services, Tribal Court, Enrollment/Licensing, Natural Resources) and enterprise bodies (e.g., Ojibwa casinos). Tribal Police work with police and conservation entities at many scales, including local, state, intertribal (i.e., Great Lakes Indian Fish and Wildlife Commission Conservation), and federal offices (BIA, FBI). Currently, Tribal Police is developing a plan with and for collaborating partners, including Michigan State Police, Baraga Police Department, L'Anse Police Department, and the Baraga County Sheriff office.

The **PRIORITY CONCERNS** noted by Tribal Police is the (current and/or periodic) shortage of officers which leads to an understaffed Tribal Police department. Part of these concerns could be addressed by current explorations of providing a jail space at our facility to house offenders (up to 4) overnight. Additionally, there are concerns about overharvesting trees in the area in comparison to past decades.

**A Focus on Climate Concerns:** Tribal Police recognizes changes due to climate are contributing to changes across seasons which impact KBIC tribal members dependence on natural resources, and can threaten food systems, resources, culture and ways of life, and treaty rights. Rising air temperatures and severity of storms are expected to decrease snowfall and ice cover and increase rainfall during the winter months, leading to shifts in the timing and quantity of runoff, including increased flooding. Water quality will also be impacted, including increased sediment delivery from winter storms and higher summer water temperatures. Fish will be particularly susceptible to these changes to water quantity and quality because they rely on freshwater rivers and streams as spawning and rearing habitat and as migration corridors. Finally, increased insect outbreaks, wildfires, and changing species composition in forest and upland areas are other expected effects, posing challenges for adequate ecosystem health. These changes also significantly impact freshwater fisheries, as well as water supply for agriculture and municipal uses.

Notable **ACCOMPLISHMENTS** by Tribal Police include energy efficient transitions and conservation efforts within the department's building and garage area including energy efficient lights and an energy saving heat system unit. Additional accomplishments are listed below.

- Initiated and continued annual review of Tribal code and regulations to protect KBIC natural resources
- Established a Tribal Conservation District within the L'Anse Indian Reservation (2002)
- Developed and continued implementation of land use management ordinances

The **OBJECTIVES** of Tribal Police are to 1) Protect resources that are culturally, environmentally, or historically sensitive with consideration of potential threats from climate change impacts, 2) Ensure through regulation that Tribal resources are available for future

generations; and 3) Promote and preserve the identity and culture of the L'Anse Indian Reservation as the Tribe's permanent homeland. Additional 5-year and 10-year objectives, and are listed below.

5-year Objectives:

- Ongoing protection of all the Natural Resource of the KBIC, ensuring fair and equal application of the laws and regulations while protecting the membership, sovereignty, culture, and the traditions of the Tribe
- Enforcing conservation/natural resource laws, codes, and ordinances, and developing new environmental protection codes as needed
- Expanding land use management ordinances in conjunction with Tribal Council and the Land Use Management Plan within the Real Estate/Transportation Department

10-year Objectives:

- Expanding upon rules and regulations within the Conservation Enforcement Code in conjunction with the Natural Resources Department, Tribal Council, Tribal Attorneys, and Tribal Court
- Consideration and participation in planning for response to manmade and natural disasters to protect and conserve the natural resources, environment, people, and property of the KBIC reservation boundaries and home territory

**ACTIONS** specifically recommended by Tribal Police are focused on the department objectives noted above, potentially exploring options for streamlining permitting and regulatory processes, and the continuation of efforts to ensure the compliance, enforcement, and education of the KBIC [Tribal Code of Law](#), which includes a comprehensive set of ordinances, and [Title Ten: Hunting, Fishing, Trapping, and Gathering](#) (2008). Specifically, this includes the ongoing development, implementation, and enforcement of the codes listed below.

- Environmental Health
- Pesticide Control
- Water Quality
- Wetland Protection
- Solid Waste
- Lakeshore Protection and Sediment Erosion Control
- Underground and Above-Ground Storage Tank Rules and Regulations
- Air Quality
- Water and Sewer
- Land Use Permitting
- Fish, Wildlife, and Plants Conservation and Enforcement

## 6.12. Youth Programs

Beginning with a **DESCRIPTION**, KBIC Youth Programs are designated with the goal to support strong family values that create a caring community to nurture and support children and families with new and expanded tribal programs and services. Youth Programs also provide opportunities for tribal members to volunteer and assist each other and the community, and provide more family- and community-centered activities utilizing the Niiwin Akeaa Center facility in Baraga.

The **PROGRAMS/ACTIVITIES** provided by the [KBIC Youth Programs](#) have substantially grown and strengthened through recent years. Depending on the activity, children ages 0-17 who reside within Baraga and Marquette County and are enrolled with the Keweenaw Bay Indian Community, are eligible to be enrolled or have at least one parent who is enrolled are eligible for the Youth Programs. Many educational, cultural, and recreational activities are sponsored by the KBIC Youth Programs throughout the year that the youth in the area can participate in. Some examples of what the KBIC Youth Programs are responsible for holding are the annual KBIC Youth Halloween and Christmas parties, youth dances, youth basketball league, and much more. The objective is to continually improve the quality and expand the number of mentoring programs and services to Tribal Youth to increase their opportunities. For youth ages 10-17, there is the opportunity to be a part of the KBIC Youth Club. The club is involved in different community events and holds fundraisers for the club. By volunteering time and participating in fundraisers for a minimum of 20 hours youth are eligible to attend the annual Youth Club Summer Trip, which happens in August. Additionally, the KBIC [Youth Conservation Corps](#), with Superior Watershed Partnership established in 2010 by the late Todd L. Warner (former Natural Resources Director), provides youth with summer work placements, hands-on knowledge and experience, and skill building opportunities with Superior Watership Partnership, Natural Resources Department, Keweenaw Bay Ojibwa Community College, and numerous other KBIC government offices and departments. Finally, Youth programs expanded to include a young adult program as well as supporting year round youth positions in government offices.

Notable **ACCOMPLISHMENTS** of Youth Programs include enhanced funding and funding opportunities, and expanding educational and experiential programs for KBIC youth.

The **OBJECTIVES** of, and **ACTIONS** specifically recommended by, Youth Programs are to continue growing the Program which strengthens KBIC youth as the future generations of KBIC leaders, decision makers, and community members.

## 6.13. Concluding Statements

Protecting Health and Wellbeing, Safety, and Infrastructure will require a continued focus on integrated resource management and planning for the comprehensive and holistic protection for

the Keweenaw Bay Indian Community lands, waters, and people of all ages. As a substantial component of the everyday lives and livelihoods of Community priorities and members within KBIC territorial jurisdictions, and to continue meeting protective goals, KBIC departments, offices, and programs will continue and enhance partnerships with both internal and external agencies, groups, and organizations. Overall, obligations are vast, contributing to the empowerment and autonomy of individuals and the Community as a whole. Our commitment remains, specifically to strengthen the Keweenaw Bay Indian Community current and future generations.

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## 8. Appendices

### Appendix A: Maps of Relevance

- Drainage
- Landcover Types
- Soils
- Surficial Materials
- Topography
- Wetlands
- Location

### Appendix B: Climate Resiliency Plan Supplement

draft