



## *Keweenaw Bay Indian Community Wolf Management Plan*

**DRAFT**  
**V.5 November 13, 2012**



Photo taken of Ma'iingan by remote camera during wolf surveys funded with BIA Endangered Species Funds

## Table of Contents

|  |           |
|--|-----------|
| <b>1. Introduction</b>   |           |
| <b>1.1 Purpose.....</b>  | <b>1</b>  |
| <b>1.2 Cultural Significance.....</b>                          | <b>1</b>  |
| <b>1.3 Legal Status and Hunting Seasons.....</b>               | <b>2</b>  |
| <b>1.4 KBIC Status Against Wolf Hunting.....</b>               | <b>3</b>  |
| <b>2. Wolf Biology and Ecology</b>                             |           |
| <b>2.1 Description.....</b>                                    | <b>3</b>  |
| <b>2.2 Social Structure and Behavior.....</b>                  | <b>4</b>  |
| <b>2.3 Reproduction and Mortality.....</b>                     | <b>5</b>  |
| <b>2.4 Wolf Food Habits and Ecological Function.....</b>       | <b>6</b>  |
| <b>3. Wolves in Michigan</b>                                   |           |
| <b>3.1 History.....</b>  | <b>8</b>  |
| <b>3.2 Current Numbers in Michigan.....</b>                    | <b>9</b>  |
| <b>3.3 Wolf Monitoring on the KBIC L’Anse Reservation.....</b> | <b>9</b>  |
| <b>4. KBIC Community Input on Wolf Management.....</b>         | <b>11</b> |
| <b>5. Wolf Management</b>                                      |           |
| <b>5.1 Wolf Management Mission.....</b>                        | <b>12</b> |
| <b>5.2 Management Goals.....</b>                               | <b>12</b> |
| <b>5.3 Management Activities.....</b>                          | <b>12</b> |
| <b>1) Maintain Active Partnerships.....</b>                    | <b>12</b> |
| <b>2) Protect and Maintain Suitable Wolf Habitat.....</b>      | <b>13</b> |
| <b>3) Maintain Active Levels of Monitoring.....</b>            | <b>13</b> |
| <b>4) Provide Public Education.....</b>                        | <b>14</b> |
| <b>5) Minimize Wolf-related Conflicts with Community.....</b>  | <b>14</b> |
| <b>6. Plan Review.....</b>                                     | <b>15</b> |
| <b>7. Conclusion.....</b>                                      | <b>15</b> |
| <b>8. Works Cited.....</b>                                     | <b>15</b> |

# 1. INTRODUCTION

## 1.1 PURPOSE

The purpose of this plan is 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. It is written to encourage cooperation among agencies, communities, private and corporate landowners, special interest groups, and all Michigan residents. The Plan conforms to the provisions of the *Federal Eastern Timber Wolf Recovery Plan*, which includes Michigan (U.S. Fish and Wildlife Service 1992), *Michigan Gray Wolf Recovery and Management Plan* (Michigan DNR 1997), and the *Michigan Wolf Management Plan* (Michigan DNR 2008).

The U.S. Fish and Wildlife *Recovery Plan for the Eastern Timber Wolf* (1992) indicated that a population of at least 200 wolves would be large enough and genetically diverse enough to be self-sustaining. The 1997 *Michigan Wolf Recovery and Management Plan* adopted this as criterion for a recovered population in Michigan. When the winter population of wolves maintained a minimum level of 200 animals for 5 consecutive years, wolves could be removed from the State list of threatened and endangered species (MI DNR 2008).

Federal delisting took place on January 27, 2012 in which management authority over wolves in Michigan, Wisconsin and Minnesota was returned to State and Tribal Departments of Natural Resources. The federal endangered species act required that the U.S. Fish and Wildlife Service, as a part of the delisting process, be able to ensure that the species is not likely to return to the list.

The implementation of this management plan demonstrates Keweenaw Bay Indian Community's intent, to the extent of its authority, to protect the wolf from adverse effects that could lead to a need for its relisting as a threatened or endangered species. Cooperating federal and state agencies have additional legal mandates and responsibilities for wolf management and protection.

## 1.2 CULTURAL SIGNIFICANCE

KBIC Tribal community members have always been spiritually connected to the wolf. According to the Anishinaabe (Ojibwa First People) creation story, original man and his brother, Ma'iingan (Ojibwa name of the wolf), traveled together to name and visit all plants, animals, and places on earth. Later they were instructed by the Creator to walk their separate paths but to experience similar social pressure of being feared, respected and misunderstood. What happens to the Anishinaabe will happen to Ma'iingan by the people that would join them on earth (Benton-Banai 1988). As prophesized in this sacred history with the wolf, the support of tribal members remains essential to the long-term survival of wolves in the state.



### 1.3 LEGAL STATUS AND HUNTING SEASONS

Between 1974 and 2009 the wolf was listed as endangered under Michigan Law (Part 365, Endangered Species Protection, of the Natural Resource and Environmental Protection Act, 1994 PA 451) and until 2012 under the federal Endangered Species Act (Public Law 93-205) (ESA).

According to the U.S. Fish and Wildlife Service the western Great Lakes distinct population segment of gray wolf is recovered having maintained over 200 animals for over five consecutive years in each state (CITE). Current population estimates from 2011 State generated winter survey reports are 2,921 in Minnesota, 782 in Wisconsin, and 687 in Michigan. The gray wolf was removed from the Federal Endangered Species list on December 28, 2011 and management transferred to the States on January 27, 2012 for Minnesota, Wisconsin and Michigan. Upon delisting from endangered status, two laws went into effect in Michigan, Public Act 290 and Public Act 318 that allow private individuals to eliminate problem wolves. Lethal control may be used on private lands anywhere in the State by the landowner, lessee or occupant without a permit when a wolf or wolves are in the act of killing or wounding livestock (Public Act 290) or domestic dog (Public Act 318).

Soon after the delisting, Minnesota and Wisconsin proposed hunting seasons for wolf management purposes. Today wolves in Michigan are “non-game protected species” only allowed to be killed under Public Acts designed to reduce wolf conflicts. However, with recent introduction of House Bill 5834 in August 2012, regulated sport hunting is now being sought in Michigan.

Wisconsin originally allowed hunting at night with use of dogs to track or trail wolves after firearm deer season ends. The Vice President of the United Sportsmen of Wisconsin supported the measure, stating that by hunting with dogs, wolves would eventually grow afraid of dogs. The use of dogs for hunting wolves in Wisconsin has since been challenged by a variety of special interest groups and will no longer be allowed for the 2012 hunting and trapping season. See Table 1 for more comparisons between state wolf hunt regulations.

**Table 1. Proposed wolf hunt seasons and regulations by state.**

|                  | <b>Hunting Season Date(s)</b>   | <b>Trapping Season Date(s)</b>   | <b>No. of Wolves allowed to be harvested</b>              | <b>Fees</b>  |
|------------------|---|--|---|--|
| <b>Minnesota</b> | November 3, 2012 to January 31, 2012; will close earlier if harvest targets are reached – calls and meat bait allowed | November 24, 2012 to January 31, 2012; will close earlier if harvest targets are reached | Up to 400; using a lottery system of license applications | MN State Residents \$26 plus \$4 lottery fee; \$250 out of state license |
| <b>Wisconsin</b> | Oct. 15, 2012 to February 28, 2013; scent bait and calls  | Oct. 15, 2012 to February, 28 2013   | Up to 233; using a lottery system of license              | WI State Residents \$100; Out of State License \$500                     |

|                 |  |    |   |  |
|-----------------|--|----|---|--|
|                 | allowed; night hunting allowed starting Nov. 26                        |    | applications  |  |
| <b>Michigan</b> | H.B. 5834 introduced on August 15, 2012<br>Filed on September 11, 2012 | NA | Number undetermined; using a lottery system of license applications | Proposed fees – Residents \$100; Out of State License \$500 Plus \$4 application fee |

## 1.4 KBIC STATUS AGAINST WOLF HUNTING

The wolf remains protected under within the KBIC Tribal Code under Endangered Species and Protected Animals Tribal Code 10.531. Protected non-game status from the State of Michigan is still in effect but with proposed legislation HB 5834, the status of the wolf may soon be that of a game species and thus open for hunting and possibly trapping. A Resolution (KB-1902-2012) was passed by KBIC Tribal Council on November 1, 2012 (Appendix 1) to oppose House Bill 5834 and Senate Bill 1350 along with any changes that allows hunting and/or trapping of wolves in Michigan to preserve the ecological balance of predator-prey and protect the sanctity of Ma'iingan for the Anishinaabe.



In the event that legislation is approved for a wolf hunt, KBIC will designate no hunting on Tribal lands in L'Anse, Baraga, Marquette and Ontonagon locations. KBIC will also refuse to accept any state allocated wolf hunt licenses and not provide any Tribal wolf hunt permits to community members. These measures will help to protect wolves and maintain a strong culturally based stance against the killing of wolves.

## 2. WOLF BIOLOGY AND ECOLOGY

### 2.1 DESCRIPTION

The gray wolf (*Canis lupus*), known as Ma'iingan in Ojibwa, is Michigan's largest member of the Canidae, or dog family. Other native Michigan canids are the coyote (*Canis latrans*), red fox (*Vulpes vulpes*), and gray fox (*Urocyon cinereoargenteus*). Michigan's gray wolf is also known as the eastern timber wolf. Previously Michigan's wolves were included with the eastern timber wolf subspecies *Canis lupus lycaon* (Young and Goldman 1944). The latest genetic studies on wolves in the Great Lakes Region have shown that they have hybrid ancestry with gray wolves (*C. lupus*) and the smaller often reddish colored subspecies of eastern wolves (*Canis lupus lycaon*). Hybridization with coyotes (*C. latrans*) has also been detected although is rare (Fain et al. 2010, Wheeldon et al. 2010).

Wolves are large in comparison to coyotes, with body dimensions exceeding those of a fully

grown German shepherd or Alaskan malamute. Male wolves are slightly larger than females. Weights of adult gray wolves range from 60-115 pounds (27-52 kg) and average about 75 pounds (34 kg). Wolves are about six feet (1.8 m) long from nose to the end of the tail. Adults stand 30-34 inches (75-85 cm) tall at the shoulder. The feet of wolves are large, with tracks measuring 3 ½-4 inches (9-10 cm) wide and 4 ½- 5 inches (11-13 cm) long. Wolves have cheek tufts that make their faces appear wide and their heads large. Their tails are bushy and straight, not curled like most dogs.

Wolves are adapted for their role as the primary large mammal predator in cold and temperate climates. The dense under fur in their winter coats is protected by guard hairs that may be up to six inches (15 cm) long over the shoulder.

Wolves' skeletal and muscular structures make them well adapted to travel. They have tremendous stamina and often spend eight to ten hours a day on the move, primarily during early morning and evening. Even wolves on Isle Royale traveled an average of 31 miles (50 km) per day during the winter (Mech 1966).

## 2.2 SOCIAL STRUCTURE AND BEHAVIOR



Wolves are social animals and live in packs. The pack (two or more wolves traveling together, with evidence of breeding behavior) is the functional unit of wolf society. It is typically comprised of two lead or “alpha” animals, the current year’s pups, siblings from previous litters, and occasionally other wolves that may or may not be related to the alpha pair. The alpha male and female normally are the only animals that breed, even though other pack members may be physiologically capable of reproduction. The alpha animals are thought to lead in decisions such as when and where to hunt and when it is time to move, rest, or find seclusion. The alpha female is believed to select the den site. Pack size can range from two to 13 wolves but usually ranges from four to six (Mech and Frenzel 1971). During the 2010-2011 winter survey in Michigan, they estimated there were 131 packs with an average pack size of 5.2 (Brian Roell, MI DNR personal communication).

Much of the time that the pack spends together is used to reinforce the intricate dominance hierarchy within the pack through structured greetings and body posturing.

In addition to sight, wolves communicate extensively through the senses of smell and hearing. Scent marking is used to relay information among pack members and between packs. Wolves place scent marks on objects in their territories and are able to discriminate olfactory cues among

individual wolves. Wolves howl together as a pack, to separated pack members, and to other packs. Depending environmental conditions, wolves apparently can hear other wolves howling four to six miles (6-10 km) away (Asa and Mech 1995) Wolves howl in long, low tones without yapping. Howling between packs and scent marking along territory edges are principle means of spacing in wild wolf populations.

As a result of spacing mechanisms, packs live in territories that are actively marked and defended. Territory size depends upon the density of wolves and on the density and distribution of prey. Sizes of individual wolf pack territories reported from the Great Lakes area ranged from 30 to 260 square miles (80-670 km<sup>2</sup>) (Mech 1970, Mech and Hertel 1983) but generally range from 42 to 100 square miles (109-259 km<sup>2</sup>) in Wisconsin and Minnesota (Wydeven et al. 1995, Fuller 1995). Based on telemetry locations from 30 wolves in Michigan's Western Upper Peninsula for bio-year 2008, (April 15, 2007 – April 14, 2008), territory size has a mean of 173.2 km<sup>2</sup> (66.9 mi<sup>2</sup>) (Roell et al. 2010). Within their territory, wolves often travel up to 15 miles per day in search of prey.

Some young wolves leave the pack and move into new areas when they begin to mature at one to four years of age. New packs form when subordinate pack members disperse from the pack territory, find an animal of the opposite sex, claim and defend a territory, and eventually mate and produce offspring themselves. Wolves are capable of dispersing several hundred miles from home territories. One wolf moved over 500 miles (800 km) from Minnesota to Saskatchewan between January and October 1981 (Fritts 1983). A male wolf captured as a pup near Ely, Minnesota in August 1991 was recaptured in Iron County, Michigan, in June 1994 (Mech et al. 1995). In 2001 a wolf captured in Gogebic County was killed in Missouri, a straight-lione movement of 470 miles (Brian Roell, MI DNR personal communication).

Wolves occur in rather low densities wherever they are found. One wolf per 10 square miles (1 wolf/26 km<sup>2</sup>) is considered a high wolf density in the United States and is the current density estimate for Minnesota which has a total estimated 3,000 wolves statewide. In the Upper Peninsula of Michigan, wolves are found at a much lower density of 1 wolf per 20 square miles (1 wolf/52 km<sup>2</sup>) (Brian Roell, MI DNR personal communication).

### **2.3 REPRODUCTION AND MORTALITY**

Mating takes place in most often in February, dens are dug in March, and pups are born in mid-to late April (Peterson 1977, Fuller 1989). Litter sizes can range from one to nine pups, but usually number four to six (Mech 1970). Wolves are among the best examples in the animal world of population self-regulation. Packs in the Great Lakes region limit production of pups by the predominately the Alpha female allowing only the alpha pair to breed by aggressively preventing other females from being bred (Mech 1981). Pups are weaned at about nine weeks

and moved to a rendezvous site where pups will linger until they are large enough to travel with the pack. As the pups grow, they are fed partially digested food brought to the den or rendezvous site and regurgitated from the stomachs of returning adults. All pack members feed and care for the pups. This activity strengthens the social bonds of dependence among pack members (Witt 2003).

Up to 60% mortality may occur from disease and malnutrition during the period from birth to the time pups are able to travel with the rest of the pack at six to seven months of age. Mortality rates approximate 45% from six months to one year, and 20 percent between years one and two (Pimlott et al. 1969, Mech 1970, Mech and Frenzel 1971, Van Ballenberghe et al. 1975, Fritts and Mech 1981). Annual adult wolf mortality in Wisconsin averaged 39% during a period of decline, and 19% during a period of increase (Wydeven et al. 1995). Adults may live past 11 years, although most die much sooner (Mech 1988).

Wolves have very few predators that specifically hunt them, though pups may occasionally be taken by a bear (*Ursus americanus*) or other predator. Both moose (*Alces alces*) and white-tailed deer (*Odocoileus virginianus*) have injured or killed wolves while protecting themselves or young from attack (Nelson and Mech 1985, Mech and Nelson 1989). Other natural mortality factors include accidents, malnutrition, starvation, parasites, diseases, and fatal encounters during territorial disputes between packs.

Annual mortality estimates varied between 15% and 46% between 1999 and 2005 depending on the method of analysis (Huntzinger et al. 2005). From 1999 to 2012, illegal killing accounted for 41% of mortality for radio collared wolves and by adding collared wolf mortality caused by vehicle strikes, depredation control, and other human caused trauma, 65% of collared wolf mortality was directly related to human-induced causes (Brian Roell, MI DNR personal communication).

Effects of hunting on wolf populations has been negligible thus far due to low densities, large territories and wary behavior especially once a population has been hunted. For example, Idaho and Montana regularly increase lengths of annual hunting seasons in an attempt to reach target harvest quotas.

## 2.4 WOLF FOOD HABITS AND ECOLOGICAL FUNCTION

White-tailed deer particularly in winter, beaver (*Castor canadensis*), and small mammals are the primary prey species for gray wolves in Michigan (Huntzinger et al. 2004). Previous studies in the Upper Peninsula found that wolves ate shrews (*Soricidae* family), snowshoe hares (*Lepus americanus*), red squirrels (*Tamiasciurus hudsonicus*), mice (*Peromyscus spp.*), ruffed grouse (*Bonasa umbellus*), crayfish (*Cambaridae* family), and grass in addition to white-tailed deer



(Stebler 1944, 1951). Mandermack (1983) analyzed scats of Wisconsin wolves to determine the relative abundance of prey species in their diet. Overall, deer comprised 55% of the diet, beaver 16%, snowshoe hare 10%, and other small mammals and miscellaneous items 20%. He reported that beaver provide as much as 30% of a Wisconsin wolf's spring diet.

The wolf is a top predator in the ecological food chain. The primary prey for wolves locally is white-tailed deer. The affects of wolf predation on the overall deer population however is dependent on a variety of factors that complicate a generalized assessment that wolves always have a negative impact on deer populations. The ratio of wolf to deer is one factor to consider. Where there is high deer density and low wolf density, the effect on the deer population will be lower than if densities were reversed. Decreased fitness of the deer population caused by situations of disease or high stress during severely cold winters, over-browsed food supplies causing starvation, or shortened/poor growing seasons can make localized populations of deer more susceptible to predation by wolves.

It is a delicate balance of predator-prey further complicated by snow conditions and human induced habitat alteration particularly through logging in our local area of the Upper Peninsula. Generally speaking, logging mostly benefits the white-tailed deer by providing early stages of forest growth. In winter, a very critical season for Michigan's deer, logging provides downed tops of trees for food and cover. These winter logging areas often create "deer yards" or areas where deer concentrate in large numbers for extended periods of time to feed and avoid harsh wind chill conditions. These deer yards provide areas with high deer densities that wolves have been known to take advantage of and prey upon large numbers of deer (personal observation by Pamela Nankervis, KBIC Wildlife Biologist).

Ultimately, decades of studies have shown that top predators such as wolves typically keep deer numbers in check so that over-browsing and disease are less problematic for deer over the long term. Most deer killed by wolves are less fit by being very young, old, sickly, starved or injured. Wolves have been killed by healthy deer protecting themselves or their young (Mech 1981).

Another common misconception, often based on domestic animal predation by wolves, is that wolves kill without eating the prey. It may appear this way if wild deer killed by wolves are discovered partially eaten. However, wolves typically gorge themselves and then rest for 6-10 hours only to return later to finish feeding. Domestic animals killed by wolves are often moved or otherwise disturbed which dissuades wolves from returning to finish the carcass.

Ultimately, wolves play an important ecological role in maintaining the health of a deer population and offers indirect protection of adequate deer habitat from over-browsing.



### **3. WOLVES IN MICHIGAN**

#### **3.1 HISTORY**

The gray wolf has been part of Great Lakes fauna since the melting of the last glacier and as such is native to the land area we know as Michigan. Wolf history in Michigan is similar to that observed in the rest of the continental United States.

Wolves occupied all of what is now Michigan at the time of European settlement. Settlers brought their wolf prejudices with them (Lopez 1978). European werewolf mythology, fairy tales, and religious beliefs, along with views that wolves were incompatible with civilization, resulted in the persecution of wolves in Michigan.

Assisting the pattern of exploitation, the United States Congress passed a wolf bounty in 1817 in the Northwest Territories, which included what is now Michigan. A wolf bounty was the ninth law passed by the First Michigan Legislature in 1838. A wolf bounty continued until the period between 1922 and 1935, when a state trapper system was in effect. The bounty was reinstated in 1935 and repealed in 1960, only after wolves were nearly eliminated from the state. Michigan wolves were given complete legal protection in 1965.

By the time bounties were imposed in the 1800s, wolves were nearly gone from the southern Lower Peninsula and were absent from the entire Lower Peninsula by about 1935 (Stebler 1944). In the more sparsely settled Upper Peninsula, the decline was less rapid. In 1956, the population was estimated at 100 individuals in seven major areas in the Upper Peninsula (Arnold and Schofield 1956). The Michigan wolf population was estimated at six animals in the Upper Peninsula in 1973; sporadic breeding and occasional immigration of wolves from more secure populations in Ontario and Minnesota were postulated as the factors that maintained a small population of wolves in the Upper Peninsula (Hendrickson et al. 1975). It is likely that a few animals persisted in remote areas of the Upper Peninsula and that wolves were never extirpated from the state.

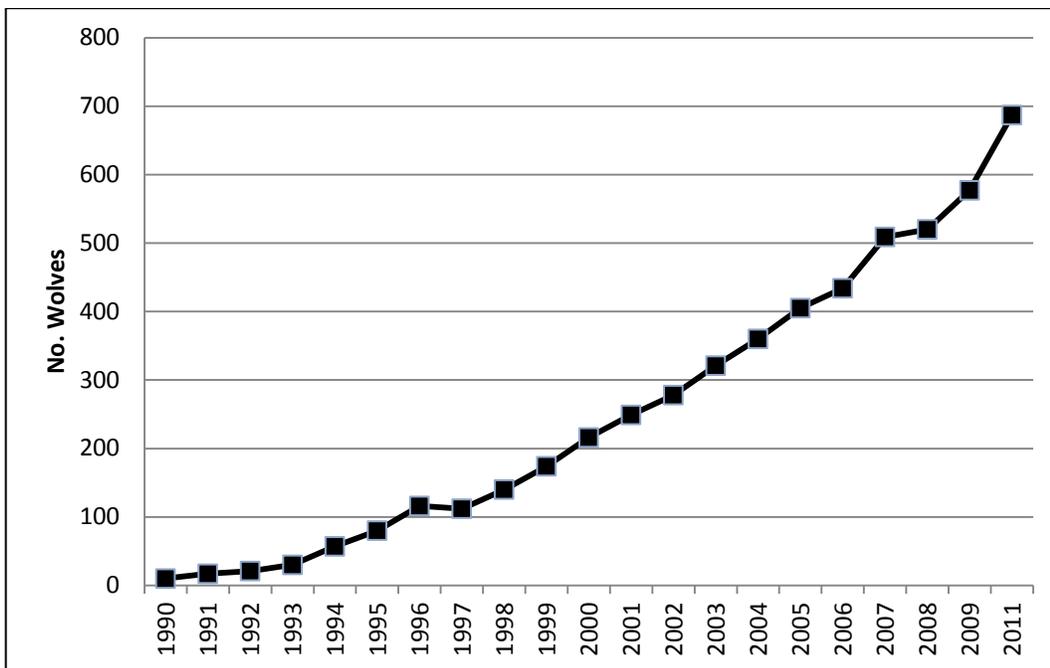
Only one wolf introduction was attempted in Michigan. All four of a pack of Minnesota wolves released in Marquette County in March 1974 died as a result of direct human activities between July and November 1974. These wolves did not reproduce and did not contribute to the current wolf population (Weise et al. 1975).

Beginning about 1973, the wolf population in Minnesota began to expand southward from its northern range in the state. In 1975, a pack of wolves occupied a territory in both Pine County, Minnesota, and Douglas County, Wisconsin (Thiel 1993). This signified the beginning of re-occupation of their former range in Wisconsin. Since 1975, the wolf population in Wisconsin has grown to approximately 832 animals (204 packs) occupying suitable habitat mostly in the northern counties. Wolves occupying the

west and central Upper Peninsula are likely descendants of immigrants from Wisconsin (Thiel 1988) and Minnesota (Mech et al. 1995). Wolves found in the eastern Upper Peninsula were likely a result of wolves crossing the ice from Ontario at Whitefish Bay, along the St. Mary's River, and near northern Lake Huron islands (Jensen et al. 1986) as well as dispersed individuals from the western Upper Peninsula.

### 3.2 CURRENT NUMBERS IN MICHIGAN

Wolf numbers in the Midwest are considered recovered with current population estimates from 2011 State generated winter survey reports at 2,921 in Minnesota, 782 in Wisconsin, and 687 in Michigan - a steady increase from only three wolves detected in 1989 (Figure 1) (Brian Roell, MI DNR personal communication).



**Figure 1. Number of wolves detected from annual winter track counts by MI Department of Natural Resources. The 2011 information was obtained through personal communication with Brian Roell, MI DNR.**

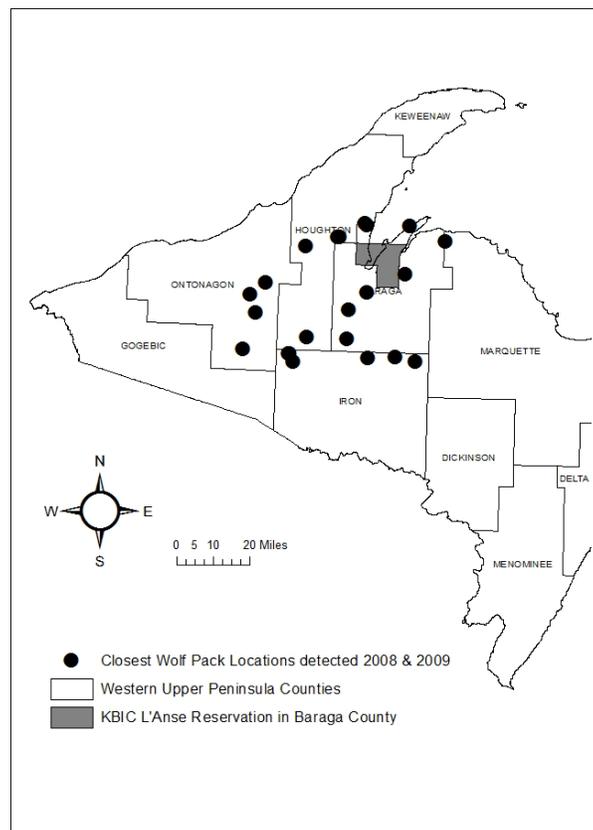
### 3.3 WOLF MONITORING ON KBIC RESERVATION

KBIC conducted wolf tracking and monitoring from 2007 through the present. Monitoring includes a total of 73 sites monitored with remote cameras (twelve active monitoring sites in 2012), four track routes patrolled during four winters (2008 through 2011), as well as opportunistic recording of wolf track/sign during routine field outings.

Thirty-two detections of wolf were recorded within the L'Anse Reservation boundaries during a wetland inventory of 28 wetland study sites on the L'Anse Reservation between 2007 and 2009 funded through the U.S. Fish and Wildlife Service. Remote cameras recorded 9 detections (in 4 of 28 study locations)

and 23 detections of track/sign such as scat, tracks and sightings from 13 of 28 wetland study areas. Updated camera equipment was purchased through BIA and ANA grants for inventory on upland and riparian areas where KBIC monitored 50 total study sites. There were a total of 36 wolf detections using remote cameras from 15 of the 50 upland/riparian study site locations (0.30 detection rate). Track and sign were also detected from 17 of the 50 study locations (0.34 detection rate).

From MI DNR data, it is possible that wolves from five different packs (Arnheim, Limestone, Baraga Plains, Alberta and Mount Curwood) may use the L’Anse Reservation; however, none reside wholly on Tribal ownership (Figure 2). From the monitoring data, KBIC NRD believes at least three separate wolf packs regularly use the L’Anse Reservation. In winter of 2011, three separate females in estrus were detected in three different areas on the L’Anse Reservation. The pattern of use detected through track and sign suggests that the packs, although overlapping in their ranges, appear to utilize three separate areas more exclusively. This information may be additionally confirmed with the radio collaring of more wolves on the L’Anse Reservation through cooperation with the MI DNR.



**Figure 2. Map showing wolf pack locations on and near the L’Anse Reservation according to winter wolf track and aerial monitoring of radio-collared wolves by the MI Department of Natural Resources. (Personal communication, Brian Roell)**

#### **4. KBIC COMMUNITY INPUT ON WOLF MANAGEMENT**

KBIC Natural Resource Department staff attended KBIC Natural Resource Committee meetings and Cultural Committee meetings to discuss wolf management options in 2009. A semi-annual hunter survey was administered to registered Tribal hunters in 2009 that included newly added wolf specific questions from previous surveys (KBIC 2010).



We asked respondents to choose one of four management options for wolves:

- KBIC should promote complete protection and not allow our Tribal members to take wolves for any reason on the Reservation.
- KBIC should promote protection, but allow the taking of wolves in the event that there is some negative impact to humans (i.e. livestock damage, pet killed, etc.).
- KBIC should promote limited harvest opportunity for Tribal members and work to provide control measures for wolf populations, if needed (i.e. limited hunting/trapping season).
- Other: (Please explain)

A total 208 Tribal members (95%) responded to this wolf management question. Some Tribal respondents felt that wolves warrant complete protection on the reservation (11%; n=23), limited taking of only negative impact animals was supported by 39% (n=82) respondents, and management of the population through limited hunting/trapping was supported by 47% (n=98), while 2% (n=5) felt that wolves should be removed entirely from the reservation.

Many respondents made wolf specific comments and approximately 57% of the wolf related comments were interpreted as being negative towards wolves. Negative comments ranged from concern over the predation on deer, to human safety, and increased encounters with wolves near urban areas. Roughly 31% of the wolf related comments were interpreted as being positive towards wolves. The remaining 12% of wolf related comments were interpreted as being neutral. Neutral comments regarded wolf sighting information such as numbers and locations.

Additional input will be solicited in a Tribal Community natural resource survey scheduled for 2013. Opinions and input regarding this plan will also be considered and incorporated in future updates to the KBIC Tribal Wolf Management Plan.

## **5. WOLF MANAGEMENT**

### **5.1 Wolf Management Mission**

The mission for KBIC is to maintain a healthy, self-sustaining population of wolves on and near Reservation boundaries thus preserving the cultural and ecological benefits for the next seven generations and beyond.

**5.2 Management Goals** set to achieve this mission are to:

- 1) Establish and maintain active partnerships to ensure the most effective management and monitoring protocols possible*
- 2) Protect and maintain suitable wolf habitat*
- 3) Maintain active levels of inventory and population monitoring*
- 4) Provide public education regarding wolf ecology and behavior*
- 5) Minimize wolf-related conflicts with Tribal Members and the general public*

**5.3 Activities to achieve goals**

- 1) Establish and maintain active partnerships to ensure effective management and monitoring*

Cooperating with other management partners (i.e. State and Federal agencies, Tribes, and Private Organizations) ensures that education, monitoring and management efforts are most widely distributed and effective. Wolf management occurs throughout North America at various levels where wolf populations are just beginning to re-establish (i.e. Washington State) to places where wolves are well established (i.e. Minnesota) with varying degrees of effectiveness and public approval. Utilizing partner contacts for information on methodology, educational resources and hands-on field assistance when necessary is the most affordable and effective way to approach wolf management.

Collaboration allows for sharing of information and resources that can greatly improve the effectiveness of a management strategy. An intensive collaborative monitoring program will be essential if/when the State allows a hunting season for wolves to ensure that the population does not decrease to numbers warranting the relisting to endangered species status.

**Activities KBIC will pursue towards active partnerships are to:**

- a) Support communication and exchange of information with management partners**
- b) Collaborate on wolf related public education, monitoring of wolves, and habitat conservation on a regional basis with management partners**
- c) Seek training for KBIC Conservation and Natural Resource Department staff in wolf conflict investigation and response**

- d) **Cooperate with management partners to respond to wolf conflicts on and near the Reservation.**

***2) Protect and maintain suitable wolf habitat***

Wolves occupy a broad range of habitat types. Suitability of an area to support wolves is related to available prey (mainly white-tailed deer) and avoidance of human caused mortality (Fuller 1995). **Therefore, through habitat management activities KBIC will:**

- a) **Ensure the survival of the main prey species (white-tailed deer) by protecting conifer –dominated wintering areas for white-tailed deer.**
- b) **Maintain areas of undisturbed habitat such as forested corridors that lead in and out of the Reservation to allow for dispersal of wolves where they can avoid human contact.**
- c) **Minimize disturbance at known active wolf den sites. Detection of den areas is rare, but if/when a known wolf den site is identified, potential disturbance caused by off-road vehicles or logging will be postponed until dens are no longer in use.**

***3) Maintain active levels of inventory and population monitoring***

Monitoring the wolf population ensures that changes in the number of wolves will not go unnoticed allowing management initiatives to be more pro-active. Monitoring presence on the L'Anse Reservation has been taking place since 2007 and will continue indefinitely as funding allows. **KBIC will continue to monitor using one or more of the following methods:**

- **Track/Sign survey: purposes of track surveys are to determine the number, distribution, breeding status and territories of wolves.**
- **Remote camera survey: purposes of camera surveys are (1) detect wolf presence and distribution, (2) detect wolf pups,**
- **Wolf howl surveys: purposes of howling surveys are (1) inferring pup presence, and an estimated minimum number of wolves within a pack, (2) searching for unmarked packs in areas where consistent reports of wolves have occurred, and (3) locating rendezvous areas.**
- **Radio telemetry survey: purposes of radio telemetry are to determine boundaries of wolf pack territories and habitat use, as well as check the health of captured individuals.**
- **Seek partnerships and funding for larger projects that include but are not limited to exploring interactions between wolves and people, exploring the dynamics of predator-prey relationships, and monitoring wolf health.**

#### ***4) Provide public education regarding wolf ecology and behavior***

KBIC seeks to educate Tribal Community members and the general public about wolves including their ecology, their history and cultural significance, and to dispel myths. Coordinating an education program in cooperation with other management partners can help to identify target audiences, identify information needs and help identify the most effective approaches to presenting non-biased facts about wolves that provide both cultural and ecological perspectives.

In order to increase awareness and understanding about wolves for Tribal members and the public, **KBIC will:**

- 1) Develop and distribute materials (i.e. pamphlets, posters etc.) that address the needs and interests of target audiences.**
- 2) Present wolf specific informational posters and presentations at a multitude of public venues (i.e. KBIC Kids Fishing Derby, KBIC Powwow, KBIC Environmental Fair etc.)**
- 3) When possible, invite public and media to participate in wolf-related projects and attend presentations.**
- 4) Provide wolf specific information on the KBIC Natural Resource Department website including links to partner wolf management organizations for additional facts and resources.**

#### ***5) Minimize wolf-related conflicts with Tribal Members and the general public***

Wolf related conflicts range in severity from perceived conflict (i.e. visual presence of a wolf) to actual aggressive or predatory behavior (i.e. witnessed predation of domestic animals on private property). Wolves are not likely to attack any person who does not deliberately incite aggression (i.e. by provoking or feeding). Education efforts that increase awareness and understanding will be the number one tool used to minimize wolf-human conflict. However, where actual threats are identified, the severity, immediacy and frequency of safety threats will guide management responses as similarly stated in the State of Michigan Wolf Plan. **The following activities will be pursued in the event of wolf-related conflict:**

- a) Non-lethal methods will be utilized where immediacy of the threat does not warrant more aggressive action. Non-lethal methods may include eliminating wolf attractants (i.e. carcasses, domestic pet food, supplemental feeding of deer, unsupervised pets etc.), scare devices (i.e. noise makers, lights, flagging), aversive devices (i.e. rubber bullets).**

- b) If non-lethal practices prove to be ineffective, are not expected to be effective, or are infeasible, lethal control may be necessary. KBIC will coordinate with and monitor other wolf management partners that perform lethal control methods as necessary to eliminate demonstrated threats to human safety.**

Because of the sacred cultural standing of Ma'iingan for the Anishinaabe, Tribal entities such as the KBIC Conservation Department and/or the Natural Resources Department will oversee any lethal control activities on the Reservation if warranted. KBIC will not actually perform lethal control instead we will coordinate with a partner agency such as the MI DNR or U.S. Fish and Wildlife Service to actually accomplish the lethal pursuit.

## **6. PLAN REVIEW AND MODIFICATION**

Over time and especially with the recent proposal to hunt wolves in Michigan, KBIC will utilize this plan within an “adaptive management” context. We intend to review and update the KBIC Wolf Management Plan every five years in response to changes in the wolf population, changes in attitudes, and as new information become available. If conditions that affect the wolf population in and around the Reservation change rapidly, review and modification of this management plan may be completed more often.

Wolf specific questions will continue to be included in the semi-annual KBIC Hunter Survey. A supplemental KBIC wolf summary will be included in the final hunter survey report that is provided to the Community to help track compliance and progress towards the implementation of this KBIC Wolf Management Plan.

## **7. CONCLUSION**

In conclusion, this document provides a foundation for future wolf related projects and initiatives for Keweenaw Bay Indian Community. It provides the basic framework for future monitoring, research and management of the local wolves, as well as providing a commitment to future partnerships with other management agencies at the Federal, State, Tribal and Private levels. KBIC will use science-based decisions in management of wolves on and around the Reservation. However, because of the special relationship that the Tribe has with wolves, it is imperative that science-based solutions do not conflict with cultural values. KBIC stands ready to ensure that the gray wolf (Ma'iingan) will exist here in the Upper Peninsula of Michigan for the next seven generations and beyond.

## **8. WORKS CITED**

Arnold, D.A. and R.D. Schofield. 1956. Status of Michigan timber wolves, 1954-1956. Report number 2079. MI Dept. of Conservation, Lansing, MI, USA.

- Asa, C. S. and L. D. Mech. 1995. A review of the sensory organs in wolves and their importance to life history. pp. 287-291 in L. D. Carbyn, S. H. Fritts, and D. R. Seip, eds. Ecology and Conservation of Wolves in a Changing World. Canadian Circumpolar Institute, Edmonton, Alberta, Occasional Publication 35, 620 pp.
- Fain, S. R., D. J. Straughan, and B. F. Taylor. 2010. Genetic outcomes of wolf recovery in the western Great Lakes states. *Conserv. Genet.* 11:1747-1765.
- Fritts, S. H. 1983. Record dispersal by a wolf from Minnesota. *Journal of Mammalogy* 64:166-167.
- Fritts, S.H. and L.D. Mech. 1981. Dynamics, movements, and feeding ecology of a newly protected wolf population in northwestern Minnesota. *Wildlife Monographs* 80.
- Fuller, T.K. 1989. Population dynamics of wolves in north-central Minnesota. *Wildlife Monographs* 105: 1-41.
- Fuller, T. K. 1995. Guidelines for gray wolf management in the northern Great Lakes region. International Wolf Center Technical Publication 271.
- Hendrickson, J., W. L. Robinson, and L. D. Mech. 1975. Status of the wolf in Michigan, 1973. *American Midland Naturalist* 94:226-232.
- Huntzinger, B. A., J. A. Vucetich, T. D. Drummer, and R. O. Peterson. 2005. Wolf recovery in Michigan, 2002-05 summary report. Michigan Technological University, Houghton, Michigan, USA.
- Huntzinger, B. A., J. A. Vucetich, L. Vucetich, T. D. Drummer, and R. O. Peterson. 2004. Wolf recovery in Michigan, 2004 annual report. Michigan Technological University, Houghton, Michigan, USA.
- Jensen, W. F., T. K. Fuller, and W. L. Robinson. 1986. Wolf, *Canis lupus*, distribution on the Ontario-Michigan border near Sault St. Marie. *The Canadian Field Naturalist* 100:363-366.
- Keweenaw Bay Indian Community. 2010. Results for 2009 Keweenaw Bay Tribal Wildlife Survey. Keweenaw Bay Indian Community, Natural Resources Department Report.
- Lopez, B. H. 1978. *Of wolves and men*. Charles Scribner's and Sons, New York, New York, USA.
- Mandernack, B. A. 1983. Food habits of Wisconsin timber wolves. Thesis, University of Wisconsin, Eau Claire, Wisconsin, USA.
- Mech, L. D. 1966. The wolves of Isle Royale. U. S. Department of Interior, Fauna of the

National Parks of the U. S. Fauna Series number 7.

Mech, L. D. 1970. The wolf, the ecology and behavior of an endangered species. Doubleday, New York, New York, USA.

Mech, L. D. 1988. Longevity in wild wolves. *Journal of Mammalogy* 69:197-198.

Mech, L. D. and L. D. Frenzel. 1971. Ecological studies of the timber wolf in northeastern Minnesota. United States Department of Agriculture Forest Service Research Paper NC-148. North Central Forest Experiment Station, St. Paul, Minnesota, USA.

Mech, L.D. 1981. *The Wolf: The Ecology and Behavior of an Endangered Species*. University of Minnesota Press, Minneapolis, MN. 384 pages.

Mech, L. D. and H. Hertel. 1983. An eight-year demography of a Minnesota wolf pack. *Acta Zoologica Fennica* 174:249-250.

Mech, L. D., S. H. Fritts, and D. Wagner. 1995. Minnesota wolf dispersal to Wisconsin and Michigan. *American Midland Naturalist* 133:368-370.

Mech, L. D. and M. E. Nelson. 1989. Evidence of prey-caused mortality in three wolves. *American Midland Naturalist* 123:207-208.

Michigan Department of Natural Resources. 1997. Michigan gray wolf recovery and management plan. Michigan Department of Natural Resources, Wildlife Division, Lansing, Michigan, USA.

Michigan Department of Natural Resources. 2008. Michigan Wolf Management Plan. Wildlife Division Report No. 3484.

Nelson, M. E. and L. D. Mech. 1985. Observations of a wolf killed by a deer. *Journal of Mammalogy* 66:187-188.

Nowak, R.M. 1995. Another look at wolf taxonomy. *In Ecology and Conservation of Wolves in a Changing World: Proceedings of the Second North American Symposium on Wolves*, Edmonton, Alta. 25-27 August 1992. *Edited by* L.N. Carbyn, S.H. Fritts, and D.R. Seip. Canadian Circumpolar Institute, University of Alberta, Edmonton. pp. 375-397.

Peterson, R. O. 1977. Wolf ecology and prey relationships on Isle Royale. United States National Park Service Science Monograph Series 11.

Pimlott, D. H., J. A. Shannon, and G. B. Kolenosky. 1969. The ecology of the timber wolf in Algonquin Provincial Park. Ontario Department of Lands and Forests Research Paper 87.

Roell, B. J., D. E. Beyer, P. E. Lederle, D. H. Lonsway and K. L. Sitar. 2010. Michigan wolf

management 2009 report. Michigan Department of Natural Resources and Environment. Wildlife Division Report No. 3511. 20 pp.

Stebler, A. M. 1944. The status of the wolf in Michigan. *Journal of Mammalogy* 25:37-43.

Stebler, A. M. 1951. The ecology of Michigan coyotes and wolves. Dissertation, University of Michigan, Ann Arbor, Michigan, USA.

Thiel, R. P. 1988. Dispersal of a Wisconsin wolf into Upper Michigan. *Jack-Pine Warbler* 66:143-147.

Thiel, R. P. 1993. The timber wolf in Wisconsin : the death and life of a majestic predator. University of Wisconsin Press, Madison, Wisconsin, USA.

Thiel, R. P. and J. H. Hammill. 1988. Wolf specimen records in Upper Michigan, 1960-1986. *Jack-Pine Warbler* 66:149-153.

U.S. Fish and Wildlife Service. 1992. Recovery plan for the eastern timber wolf. U.S. Fish and Wildlife Service, Twin Cities, Minnesota, USA.

Van Ballenberghe, V., A. W. Erickson, and D. Byman. 1975. Ecology of the timber wolf in northeastern Minnesota. *Wildlife Monographs* 43.

Weise, T. W., W. L. Robinson, R. A. Hook, and L. D. Mech. 1975. An experimental translocation of the eastern timber wolf. *Audubon Conservation Report* 5.

Wheeldon, T.J., B. R. Patterson, and B. N. White. 2010. Sympatric wolf and coyote populations of the Western Great Lakes region are reproductively isolated. *Mol. Ecol.* 19:4425-4440.

Whitt, C. 2003. *Wolves – Life in a Pack*. Barnes and Noble Books, New York, New York. 144 pages.

Wydeven, A. P., R. N. Schultz, and R. P. Thiel. 1995. Monitoring of a gray wolf (*Canis lupus*) population in Wisconsin, 1979-1991. Pages 147-156 in L. N. Carbyn, S. H. Fritts, and D. R. Seip, editors. *Ecology and conservation of wolves in a changing world*. Canadian Circumpolar Institute, Edmonton, Alberta, Canada.

Young, S. P., and E. A. Goldman. 1944. *The wolves of North America*. American Wildlife Institute, Washington, D.C., USA.

### **RECOMMENDED INTERNET RESOURCES**

- <http://www.dnr.state.mn.us/mammals/wolves/mgmt.html>

Video of Dr. David Mech as he answers wolf hunt questions for MN legislators

- <http://dnr.wi.gov/files/PDF/pubs/wm/WM0538.pdf>

2012 Regulations for wolf hunting in Wisconsin

- [http://files.dnr.state.mn.us/recreation/hunting/wolf/wolf\\_regs.pdf](http://files.dnr.state.mn.us/recreation/hunting/wolf/wolf_regs.pdf)

2012 Regulations for wolf hunting in Minnesota

- [http://www.legislature.mi.gov/\(S\(12ihaivam0magrbo0brgwcb4\)\)/mileg.aspx?page=Bills&status&objectname=2012-HB-5834](http://www.legislature.mi.gov/(S(12ihaivam0magrbo0brgwcb4))/mileg.aspx?page=Bills&status&objectname=2012-HB-5834)

HB5834 House Bill introduced to propose a wolf hunt in Michigan; includes status updates

Written by: Pamela Nankervis, KBIC Wildlife Biologist

Revised November 13, 2012

First Draft Approved by KBIC Tribal Council on November 1, 2012

# KEWEENAW BAY INDIAN COMMUNITY

---

Keweenaw Bay Tribal Center  
16429 Beartown Road  
Baraga, Michigan 49908  
Phone (906) 353-6623  
Fax (906) 353-7540

## 2012 TRIBAL COUNCIL

WARREN C. SWARTZ, JR, President  
ELIZABETH D. MAYO, Vice President  
SUSAN J. LAFERNIER, Secretary  
JERRY LEE CURTIS, Asst. Secretary  
TONI J. MINTON, Treasurer

ROBERT R.D. CURTIS, JR.  
FRED DAKOTA  
EDDY EDWARDS  
JEAN JOKINEN  
MICHAEL F. LAFERNIER, SR.  
CAROLE L. LAPOINTE  
ELIZABETH "CHIZ" MATTHEWS

## RESOLUTION KB-1902-2012

**WHEREAS:** The Keweenaw Bay Indian Community is a federally recognized Indian Tribe exercising inherent sovereign authority over its members and its territories, and the Keweenaw Bay Indian Community has a reservation created pursuant to the 1854 Treaty with the Chippewa, 10 Stat. 1109; and

**WHEREAS:** The Keweenaw Bay Indian Community is organized pursuant to the provisions of the Indian Reorganization Act of 1934, (48 Stat. 984 U.S.C. §476) with a Constitution and Bylaws duly approved by the Secretary of the United States Department of the Interior on December 17, 1936; and

**WHEREAS:** Article VI, Section 1 (a) of the Constitution imposes a duty on the Tribal Council to protect the health, security and general welfare of the Community; and

**WHEREAS:** legislation HB 5834 has been filed to designate the gray wolf as a game species and authorize the establishment of the first open season making it allowable to hunt gray wolf on an annual basis throughout the state, and

**WHEREAS:** the gray wolf is a species which has significant importance to the culture and way of life of the Keweenaw Bay Indian Community, and has only recently been reestablished in the State after suffering near-extinction through historical hunting and trapping pressure, and

**WHEREAS:** The Keweenaw Bay Indian Community believes the gray wolf is not an appropriate species to harvest for subsistence purposes, its numbers cannot withstand depletion by recreational hunting without danger of being relisted as threatened or endangered, and depleting numbers of wolves will upset the ecological balance between predator and prey, and

**WHEREAS:** Michigan law already contains adequate means by which depredation by a gray wolf to livestock and other animals can be remediated and problem wolves controlled.

**NOW THEREFORE BE IT RESOLVED THAT:** the Keweenaw Bay Indian Community Tribal Council formally states their opposition to HB 5834 and any change in the laws of the State of Michigan by which wolves are designated as a game species and a wolf hunting and/or trapping season is allowed.

(Resolution No. KB-1902-2012 Approved by KBIC Tribal Council on November 1, 2012)

**LAKE SUPERIOR BAND OF CHIPPEWA INDIANS**

**"Home of the Midnight Two-Step Championship"**

**RESOLUTION**

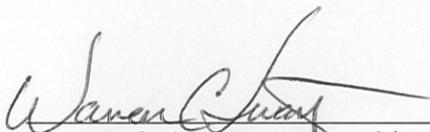
KB-1902-2012

Page 2 of 2

**CERTIFICATION**

We, Warren C. Swartz, Jr., President and Susan J. LaFerner, Secretary of the Keweenaw Bay Indian Community, do hereby certify that this Resolution No. KB-1902-2012 to be a true and exact copy as approved by the Tribal Council of the Keweenaw Bay Indian Community at a duly called meeting held on November 1, 2012 there being a quorum present, by a vote of: 6 In Favor, 1 Opposed, and 0 Abstentions, as follows:

|  |            |            |         |                    |
|--|------------|------------|---------|--------------------|
| Vice President, Elizabeth D. Mayo:                 | <u>AYE</u> | NAY        | ABSTAIN | NOT PRESENT        |
| Secretary, Susan J. LaFerner:                      | <u>AYE</u> | NAY        | ABSTAIN | NOT PRESENT        |
| Asst. Secretary, Jerry Lee Curtis:                 | AYE        | NAY        | ABSTAIN | <u>NOT PRESENT</u> |
| Treasurer, Toni J. Minton:                         | AYE        | NAY        | ABSTAIN | <u>NOT PRESENT</u> |
| Council Person, Robert R.D. Curtis, Jr.:           | <u>AYE</u> | NAY        | ABSTAIN | NOT PRESENT        |
| Council Person, Fred Dakota:                       | AYE        | NAY        | ABSTAIN | <u>NOT PRESENT</u> |
| Council Person, Eddy Edwards:                      | AYE        | NAY        | ABSTAIN | <u>NOT PRESENT</u> |
| Council Person, Jean Jokinen:                      | <u>AYE</u> | NAY        | ABSTAIN | NOT PRESENT        |
| Council Person, Michael F. LaFerner, Sr.:          | AYE        | <u>NAY</u> | ABSTAIN | NOT PRESENT        |
| Council Person, Carole L. LaPointe:                | <u>AYE</u> | NAY        | ABSTAIN | NOT PRESENT        |
| Council Person, Elizabeth "Chiz" Mathews:          | <u>AYE</u> | NAY        | ABSTAIN | NOT PRESENT        |
| President, Warren C. Swartz, Jr.:<br>(If Required) | AYE        | NAY        | ABSTAIN | NOT PRESENT        |

  
Warren C. Swartz, Jr., President

  
Susan J. LaFerner, Secretary