KEWEENAW BAY INDIAN COMMUNITY

2020 TRIBAL COUNCIL

WARREN C. SWARTZ, JR., President GARY F. LOONSFOOT, JR., Vice President KIM KLOPSTEIN, Secretary TONI J. MINTON, Assistant Secretary DOREEN G. BLAKER, Treasurer Keweenaw Bay Tribal Center 16429 Beartown Road Baraga, Michigan 49908 Phone (906) 353-6623 Fax (906) 353-7540

ROBERT "R.D." CURTIS, JR.
EDDY EDWARDS
DALE F. GOODREAU
RANDALL R. HAATAJA
SUSAN J. LAFERNIER
RODNEY LOONSFOOT
DON MESSER

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- 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 (Tribe) is organized pursuant to the provisions of the Indian Reorganization Act of 1934, 48 Stat. 984, 25 U.S.C. §5123, with a Constitution and Bylaws duly approved by the Secretary of the United States Department of the Interior (Secretary) on December 17, 1936; and
- whereas, the Keweenaw Bay Tribal Council (Tribal Council) is authorized under Article VI of the Keweenaw Bay Indian Community Constitution and Bylaws to regulate the uses and disposition of tribal property, to protect and preserve tribal property, wild life and natural resources of the Community, to cultivate Indian arts, crafts and culture, to administer charity, to protect the health, security, and the general welfare of the Keweenaw Bay Indian Community; and
- WHEREAS, on December 4, 2015, the Fixing America's Surface Transportation Act of 2015 (the "FAST Act" or "Highway Funding Act") was signed into law replacing MAP-21; and
- WHEREAS, the Tribal Transportation Program (TTP), established in 23 U.S.C. 202 to address the transportation needs of Tribal governments throughout the United States, is the largest program in the Office of Federal Lands Highway; and
- WHEREAS, the purpose of the TTP is to provide safe and adequate transportation and public road access to and within Indian reservations, Indian lands, and Alaska Native Village communities, and furthermore to contribute to the economic development, self-determination, and employment of Indians and Native Americans; and
- whereas, prior to distributing TTP funding to Tribes for a fiscal year, the Secretary may deduct up to 2% for Tribal safety projects, to be allocated to applicant tribal governments for projects eligible under the Highway Safety Improvement Program (23 U.S.C. 148(a)(4)), including transportation safety planning (23 U.S.C. 148(B)(xiii); and

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WHEREAS, in November of 2013, the Tribe received a grant award under Contract No. A13AP00033 for the purpose of developing a Tribal Transportation Safety Plan; and

WHEREAS, the Tribe's Real Estate/Transportation Department, with technical assistance and training from the Center for Rural and Tribal Resilience at Michigan Technological University, and input from the Tribal Council, the Tribe's Community Policing Committee, the Tribe's enrolled members, the general public through a Notice of Availability (NOA), the Michigan Department of Transportation (MDOT) Ishpeming Service Center, Baraga County Road Commission (BCRC), the Federal Highway Administration's Office of Tribal Transportation Safety Program, the U.S. Department of Interior's Bureau of Indian Affairs Tribal Transportation Program (Midwest Region), and the local Villages of L'Anse and Baraga (Michigan municipalities), has developed the Keweenaw Bay Indian Community Tribal Transportation Safety Management Plan (December 2019) pursuant to 23 U.S.C. 148(B)(xiii).

NOW THEREFORE BE IT RESOLVED that the Keweenaw Bay Tribal Council, in light of its duty to protect the health, security, and the general welfare of the Keweenaw Bay Indian Community, hereby adopts and approves the attached Keweenaw Bay Indian Community Tribal Transportation Safety Management Plan (December 2019) and requests the Bureau's acceptance of the same.

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CERTIFICATION

We, Warren C. Swartz, Jr., President and Doreen G. Blaker, Treasurer of the Keweenaw Bay Indian Community, do hereby certify that this Resolution No. KB-009-2020 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 March 19, 2020 there being a quorum present, by a vote of: ______ In Favor, _____ Opposed, and _____ Abstentions, as follows:

Vice President, Gary F. Loonsfoot, Jr.:	AYE NAY	ABSTAIN	NOT PRESENT
Secretary, Kim Klopstein:	AYE NAY	ABSTAIN	NOT PRESENT
Assistant Secretary, Toni J. Minton:	AYE NAY	ABSTAIN	NOT PRESENT
Treasurer, Doreen G. Blaker:	AYE NAY	ABSTAIN	NOT PRESENT
Councilperson, Robert R.D. Curtis, Jr.:	AYE NAY	ABSTAIN	NOT PRESENT
Councilperson, Eddy Edwards:	AYE NAY	ABSTAIN	NOT PRESENT
Councilperson, Dale F. Goodreau:	AYE NAY	ABSTAIN	NOT PRESENT
Councilperson, Randall R. Haataja:	AYE NAY	ABSTAIN	NOT PRESENT
Councilperson, Susan J. LaFernier:	AYE NAY	ABSTAIN	NOT PRESENT
Councilperson, Rodney Loonsfoot:	AYE NAY	ABSTAIN	NOT PRESENT
Councilperson, Don Messer:	AYENAY	ABSTAIN	NOT PRESENT
President, Warren C. Swartz, Jr.:	AYE NAY (If Required)	ABSTAIN	NOT PRESENT

Warren C. Swartz, Jr., President

Doreen G. Blaker, Treasurer









Keweenaw Bay Indian Community Transportation Safety Management Plan

December 2019

Prepared by the KBIC Planning Department with technical assistance and training from the Center for Rural and Tribal Resilience at Michigan Technological University

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Executive Summary

This study is supported by the Keweenaw Bay Indian Community's (KBIC) Tribal Council with a goal of identifying and addressing transportation-related safety concerns in areas where KBIC members live, work, and travel. The suggested focus areas of this plan are identified and prioritized based on public feedback, information about transportation incidents, and other data that can be objectively reviewed to arrive at similar conclusions regardless of the study's funding sources or experts involved.

Key findings of this report include concerns by the KBIC Tribal Council and tribal members about these transportation safety issues:

- Potential risks to pedestrians and drivers from high traffic volume and high speeds along the US41 corridor in and near the Village of Baraga
- Pedestrian safety throughout the study area
- Safe and convenient alternatives to travel by personal vehicle, including motorized and non-motorized alternatives
- Off-road vehicle and snowmobile use and interaction with on-road vehicles and pedestrians on and off the road
- 4-season road maintenance
- Speeding throughout the study area
- Distracted and impaired driving
- Cooperation with neighboring jurisdictions
- Adequate and accurate data to make informed decisions

The study area includes roads and other transportation facilities outside the KBIC's L'Anse Reservation (Reservation) boundaries, and many roads and facilities that may or may not be in the Tribe's National Tribal Transportation Facility Inventory (NTTFI) in areas on and off the Reservation lands. Some highly ranked safety concerns for tribal members will not be a high priority for the non-tribal owners of those facilities. It is imperative that all the jurisdictions included in the study area recognize and understand that the safety concerns of the KBIC Tribal Council are the areas of highest concern to KBIC members and their neighbors, and the KBIC Tribal Council has both the authority and responsibility to prioritize those concerns regardless of road ownership. This study and the results provide opportunity and resources for non-tribal road owners to cooperate with the KBIC on improving safety, even if the affected location is of low importance relative to other concerns within the non-tribal owners' inventories.

Historical Background to Tribal Transportation Safety Initiatives

This tribal transportation safety plan is prepared under the authority and funding of the Tribal Transportation Program's tribal safety set-aside described below:

On December 4, 2015, the Fixing America's Surface Transportation Act of 2015 (the "FAST Act" or "Highway Funding Act") was signed into law replacing MAP-21.

The Tribal Transportation Program (TTP) is the largest program in the Office of Federal Lands Highway. Established in 23 U.S.C. 202 to address the transportation needs of Tribal governments throughout the United States, the program is receiving \$465 million in FY 2016, with increases of \$10 million per year to \$505 million in FY 2020, as established in Public Law 114-94, Fixing America's Surface Transportation Act (the FAST Act). The purpose of the TTP is to provide safe and adequate transportation and public road access to and within Indian reservations, Indian lands, and Alaska Native Village communities. A prime objective of the TTP is to contribute to the economic development, self-determination, and employment of Indians and Native Americans.

The Tribal Transportation Program is funded by contract authority from the Highway Trust Fund and is subject to the overall Federal-aid obligation limitation. Funds are allocated among Tribes using a statutory formula based on tribal population, road mileage and average tribal shares of the former Tribal Transportation Allocation Methodology (TTAM) formula.

From https://flh.fhwa.dot.gov/programs/ttp/

Set-asides

Prior to distributing TTP funding to Tribes for a fiscal year, the Secretary may deduct (or, in the case of Tribal supplemental funding, must deduct) the following amounts:

- Program administration. Up to 5% (vs. 6% under MAP-21) for program administration, including funding for Tribal Technical Assistance Centers. Either the Secretary or the Secretary of the Interior may use these funds for program management and oversight and project-related administrative expenses. [FAST Act § 1118(1); 23 U.S.C. 202(a)(6)]
- Tribal planning. Up to 2% for transportation planning. [23 U.S.C. 202(c)]
- Tribal bridges. Up to 3% (vs. 2% under MAP-21) for a nationwide priority program for improving eligible deficient bridges. [FAST Act § 1118(2); 23 U.S.C. 202(d)]
- Tribal safety projects. Up to 2% for safety projects, to be allocated to applicant tribal governments for projects eligible under the Highway Safety Improvement Program (23 U.S.C. 148(a)(4)). [23 U.S.C. 202(e)]
- Tribal supplemental funding An amount of funding equal to \$82.5 million, plus 12.5% of the amount by which total TTP funding in a fiscal year exceeds \$275 million.

The FAST Act continues to distribute Tribal supplemental funding to Bureau of Indian Affairs regions based on the cumulative tribal shares in each region and then further distributes to Tribes within the region. [23 U.S.C. 202(b)(3)(C)]

From https://www.fhwa.dot.gov/fastact/factsheets/tribaltransportationfs.cfm

Keweenaw Bay Indian Community's Jurisdiction and Authority

The Keweenaw Bay Indian Community is a federally recognized Indian tribe exercising inherent sovereign authority over its members and territories. The Keweenaw Bay Indian Community is organized pursuant to the provisions of the Indian Reorganization Act of 1934 (48 Stat. 984), 25 U.S.C. §5123 as amended by the Act of June 5, 1935 (48 Stat. 378), with a Constitution and Bylaws duly approved by the Secretary of the United States Department of the Interior on December 17, 1936.

Under Article III of the Tribe's Constitution and Bylaws, the Keweenaw Bay Indian Community is governed by the Tribal Council, a twelve-member council elected by popular ballot, with six councilpersons representing the Zeba District and six representing the Assinins District (See Map I-A). From within its' own membership, the Tribal Council elects a President, Vice-President, Secretary, Assistant Secretary, and Treasurer.

Under Article VI of the Constitution and Bylaws hereinbefore named, the Tribal Council of the Keweenaw Bay Indian Community is authorized to protect the health, security, and the general welfare of the Keweenaw Bay Indian Community. The Tribal Council has the power to negotiate with the Federal, State, and local governments on behalf of the Community, and to advise and consult with the representatives of local, state, federal and other tribal governments of the United States on all matters affecting the affairs of the Keweenaw Bay Indian Community, therefore granting the Tribal Council the power and responsibility to approve, modify, rescind and/or enforce this Transportation Safety Management Plan.

The Tribe's Reservation, the L'Anse Indian Reservation, was created pursuant to the 1854 Treaty with the Chippewa, 10 Stat. 1109 and is located in the western part of Michigan's Upper Peninsula. The tribe owns lands in Baraga, Ontonagon, Houghton and Marquette Counties; however, the bulk of the Community owned land is situated in North central Baraga County along the South shores of Lake Superior's Keweenaw Bay.

Territories ceded by the Keweenaw Bay Indian Community to the United States Government pursuant to the 1842 Treaty with the Chippewa, in which the Tribe ceded lands in the Western Upper Peninsula of Michigan, retaining hunting, fishing and gathering rights, are located in Ontonagon, Houghton, Keweenaw, Marquette, Baraga, Dickinson, Menominee, Gogebic and Delta Counties. These lands and territory play an important role in many tribal members' lives, and members consistently exercise and depend on the retention of these rights. Therefore, the bounds of this plan and the interest in transportation safety for tribal members rightly extend well beyond reservation boundaries.

Special Geographic and Political Considerations

Geographically limiting this study to the L'Anse Reservation boundaries would not take into consideration the geographic and political extent of tribal member residences, tribal enterprises, and tribal member travel routes and destinations. Typical for tribes in Midwestern and

Eastern regions of the US, the KBIC tribal lands are interspersed with non-tribal lands, and tribally owned land and facilities are separated by other jurisdictions. The KBIC, state, and federal governments recognize ceded territories and the tribe's home territory within the ceded territory. The KBIC's home territory is shown in Figure 1 and includes all of Michigan's Baraga, Houghton, and Keweenaw counties, and parts of Iron, Ontonagon, Dickinson, Menominee, Delta, and Marquette counties. Many of the roads in the tribe's inventory are owned by non-tribal jurisdictions in the home territory.

Due to this complex geographic and political environment, this safety study extends beyond the geographic and political extent of the L'Anse Reservation. Because tribal membership is not identified in crash statistics, it would be difficult or impossible to narrow the scope to only those crashes involving tribal members. Furthermore, tribal roads are frequented by non-tribal members, so every safety concern must be addressed regardless of potential crash victim tribal membership status.

Data used in this study to substantiate safety concerns and recommended actions does consider road ownership and the affected transportation infrastructure's inclusion in tribal inventory. Therefore, some areas showing high concentrations of crashes may not be prioritized for mitigation and concern by KBIC, even though those areas may be traveled by tribal members. Likewise, areas with low crash rates relative to other areas within the study area may be of greater concern and higher priority for KBIC members due to the likelihood of those areas being frequented by tribal members.

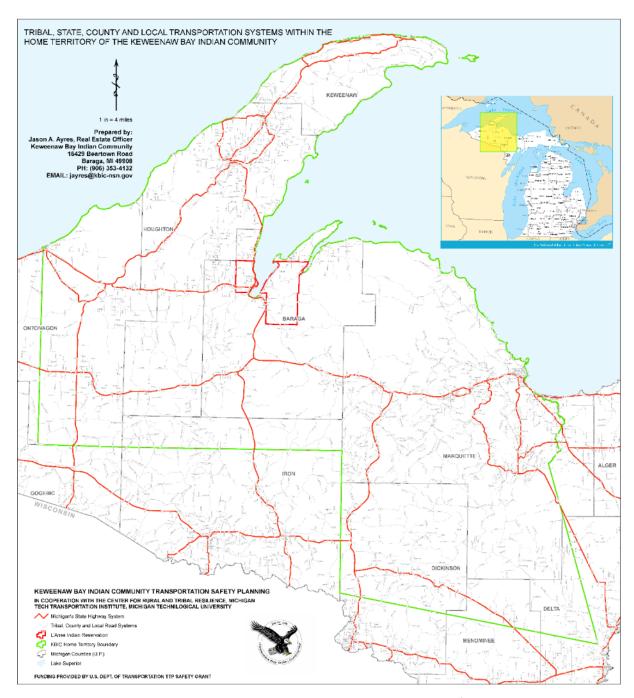


Figure 1: Keweenaw Bay Indian Community Home Territory and Safety Study Area

Demographics and Geography

Demographics, geography, and socio-economic conditions are known to strongly correlate with transportation safety outcomes. Rural, lower-income areas generally face higher rates of motor vehicle crashes (MVCs) with greater severity. The reasons for this include poorer road conditions, lower seatbelt and car seat use, older vehicles, increased impaired driving rates, less enforcement resources, and longer times for medical response and transport to definitive trauma

care. The L'Anse Indian Reservation experiences long harsh winters with snowfalls averaging 151 inches each year, which compounds the typical risks posed by rural roads such as large trees and other objects in the right of way, centerline crossing, animal/vehicle conflicts, and limited pedestrian facilities.

The Keweenaw Bay Indian Community (KBIC or Community) is located in Michigan's Upper Peninsula, consisting of fifteen rural counties scattered across 16,600 square miles in the northern mid-western United States. This area is considered higher risk than urban areas from a traffic safety perspective. This region of Michigan comprises 28% of the state's area, and is larger than nine states in the United States. The distances between the communities, a lack of highway infrastructure, unstable economies and a long harsh winter climate tend to create a sense of isolation among the residents of this remote region. Nearly 12% of these residents are Native Americans, living in and around Reservation lands of five Federally-recognized Indian Tribes that are scattered across the Upper Peninsula. KBIC is the second largest tribe, in terms of population, in the Upper Peninsula and is located on the L'Anse Indian Reservation, in the north central Upper Peninsula along Lake Superior's southern shore.

KBIC Enrollment Office data documents there are 3,604 members, with 1,036 currently residing within Reservation boundaries within Baraga County, or on Trust Lands located in Marquette County (January 2020). Baraga and Marquette figures include KBIC Tribal members residing both on and off Reservation and Trust property.

According to the most recent KBIC Enrollment Office data there are 231 Tribal members under the age of 16 with 1,115 between the ages of 16 and 64 and 220 over the age of 65 living in the five counties listed below. In other words, 1,566 Tribal members live in what is considered the KBIC service area – Baraga, Houghton, Marquette, Ontonagon and Keweenaw counties. The remaining members of the Tribe are either living in other Michigan counties or out of state.

Although the Native American population in Baraga County is high, the poverty rate for Native Americans in Baraga County is well above the state and national averages. Keweenaw Bay Ojibwa Housing Authority statistics show that the median income of Tribal members living in HUD subsidized housing is \$12,953.50, or 31.36% of the Michigan Non-Metro Median. KBIC has a Labor Force of 834, of which 36% are unemployed. [The Michigan Unemployment rate for January 2004 was 7.1%]. Even for those Tribal members who are employed, 23% still remain well below the poverty level. KBIC has 524 Tribal members under the age of 16, 848 between the ages of 16 and 64 and 89 over the age of 65.

The United States poverty level is slightly lower than KBIC, but, in every other category, KBIC is significantly disadvantaged. There are 21% of KBIC Tribal members on public assistance, the per capita income is nearly \$4,000 less that the national average and the number of single parent households is 15.3%, which is over five percent more than Baraga County's rate. The KBIC Tribal Employment Rights Office (TERO) certified the unemployment rate for KBIC in 2004 as 28%. Of those who are employed, 21% remain below poverty level.

Current Transportation Infrastructure

The Keweenaw Bay Indian Community owns only 9.7 miles of roads on the TTP system; however, snow and ice removal costs typically exceed that allocated to the tribe for all TTP maintenance activities by 10-15%. In 2006, the tribe opted to increase its maintenance allocation using TTP construction funding to try to eliminate some of the historic costs of maintaining outdated and obsolete maintenance equipment. Currently the tribe maintains less than 3.5 miles of road that is not virtually "new". Over the past several years the tribe has been fortunate enough to reconstruct several major residential streets within housing areas in both Baraga and Zeba. The Keweenaw Bay Indian Community has also been very fortunate to have an excellent relationship with the Baraga County Road Commission, providing the members of the tribe as well as non-Indian county residents with several cooperative projects that have rehabilitated several roads and bridges. Current transportation uses include local travel to and from residential and business/commercial areas, forestry related transportation activities, specifically transport of heavy materials, trucking and shipping activities, most traveling through the area, minimal rail activity limited to Celotex activities, and tourism related transportation, including snowmobile travel and water transportation activities. The complete tribal inventory is not included in this report to conserve paper, but is up-to-date and available from the KBIC Real Estate Office.

Transportation Safety Management Plan

Scope of Work

Keweenaw Bay Indian Community

Project Description and Introduction

This tribal transportation safety plan is the Keweenaw Bay Indian Community's first formal safety plan and continues the Tribe's efforts to improve transportation safety for all tribal members and visitors. This plan seeks to formalize and prioritize measures to improve safety for all modes of transportation on roads and other facilities used by tribal members and visitors. Because tribal interests span four counties in Michigan's central upper peninsula and tribal members commute between these locations for work, cultural, educational, social, and other purposes, this plan's area of concern goes beyond reservation boundaries and considers potential safety improvements on roads used by tribal members but owned by other jurisdictions. Some of these roads are currently in the Tribe's road inventory, while others may not be but are still considered to be important to ensuring the Tribe's social, economic, and cultural well-being.

This plan was prepared based on an on-site review of roads and roadway features, interviews with Department of Public Works (DPW), Planning Department, Tribal Police, tribal leadership, several tribal departments, local area fire and emergency medical services personnel, and a request for public comment on safety issues affecting the community (specific requests are addressed in the body of this plan). Crash and other incident data collected by tribal and other authorities helped complete the understanding of traffic safety measures and issues affecting tribal transportation safety.

The Keweenaw Bay Indian Community has very proactive and effective transportation and public safety infrastructure, policies, and personnel, and this is reflected in the overall good status of KBIC roads and a general high standard of maintenance and safety performance. Nevertheless, all communities will benefit from improved safety until the goal of zero fatalities and injuries due to motor vehicle crashes can be achieved. This plan will contribute to both a locally high safety performance as well as to state, regional, and national improvement in traffic safety.

As with all activities that impact the environment, implementation of the recommendations contained in this Plan should consider the latest technologies that not only address transportation safety but have the smallest ecological impacts and reduce the Community's carbon footprint.

Transportation Plan Requirements and deliverables:

As stated above, the strategic tribal transportation safety plan must meet U. S. DOT-Federal Highway Administration criterion as detailed in the recently released Tribal Transportation

Program Safety Funds funding opportunity FHWA-2013-0012 as the Tribe plans to apply for funding through this source for safety improvement project funds in subsequent years.

The development of the strategic tribal transportation safety plan must

- Be data driven (using the best available safety data).
- Identify transportation safety issues.
- Prioritize activities that will address the safety issues.
- Consider safety plans developed by other governments such as State Strategic Highway Safety Plans.
- Promote a strategic approach to addressing safety needs by including all safety stakeholders from many disciplines and entities such as legal departments, law enforcement, fire departments, emergency medical services, search & rescue, injury prevention, planning departments, transportation departments, and schools.

The Tribe met with safety partners who can assist in acquiring data, analyzing data, selecting emphasis areas, developing safety strategies, and implementing the final plan. Additional partners for future planning have also been identified.

The strategic tribal transportation safety plan should:

- Describe how and when the tribe intends to evaluate (monitor implementation) and revise the plan. The FHWA recommends plans to be updated no less frequently than every 5 years
- Estimate the cost of each strategy in the plan. 1
- Identify potential funding sources to implement the activities.²
- Designate champion departments or individuals who will be tasked with implementation of listed strategies.

¹ Costs associated with implementing recommendations in this safety plan are difficult to determine without the recommended road safety audits for the major emphasis areas. The cost of a road safety audit varies by project scope. Many of the recommendations are process improvements that can be accommodated within current budgets.

² Costs associated with process improvements can be accommodated in current budgets. Funding sources for projects that require RSAs will be determined as part of the RSA process. Funding sources for RSAs include the tribe's current TTP budget, competitive TTP safety grants, the Michigan Department of Transportation, the Federal Highway Administration, and partner agency resources.

Transportation Safety Management Plan

Keweenaw Bay Indian Community

June 2019

Section I. Mission

The Keweenaw Bay Indian Community is committed to reducing the number of transportation-related deaths and serious injuries on reservation roadways as well as roadways used by tribal members, and seeks to improve the overall safety of members, employees, and guests on tribal lands. The Keweenaw Bay Indian Community (KBIC) is developing a Transportation Safety Management Plan from the input of many individuals, from numerous departments' policies, and various agencies as part of an ongoing effort to make safety improvements and ensure the quality of tribal members' and reservation visitors' lives with the purpose of achieving a significant reduction in fatalities and serious injuries on all public and tribal roads.

Section II. Existing Programs and Policies

1. Community Policing Committee

KBIC has a Community Policing Committee (Committee) that discusses and helps develop strategies to address all public safety concerns, including transportation, general crime and citizen complaints, substance abuse, emergency preparedness, community resilience, and others. The Committee helps prioritize and assign responsibility for public safety concerns in coordination with tribal government and the public. The Committee may independently seek resources for implementation from external sources or coordinate with tribal government to request allocation from internal sources, but the Committee is not independently responsible for resolving safety concerns. The Real Estate/Transportation Department is responsible for transportation-related safety efforts and reports to the Committee on an as-needed basis.

2. Tribal Law Enforcement

Tribal Police have jurisdiction over members of federally recognized Indian Tribes within the exterior boundaries of the Reservation. Tribal Police wholly work with KBIC Tribal Court for civil and criminal matters that occur within the exterior boundaries of the L'Anse Indian Reservation, Ontonagon Reservation, and properties held in trust for the KBIC by the USA.

State traffic ordinances on the Reservation are enforced by the State and non-tribal local law enforcement agencies on non-Indians. State and local (non-Tribal) law enforcement agencies have no jurisdiction to enforce state and or local laws within the Reservation boundaries on members of federally recognized Indian tribes. Although Tribal Police may be asked to support State and local law enforcement agencies, and vice versa, no cross deputization agreements exist.

All tribal roads are subject only to tribal traffic ordinances.

3. Public Works

The KBIC Public Works Department is responsible for maintenance of tribal roads as well as utilities and tribal government facilities.

4. Youth Program

The KBIC Youth Program provides educational and cultural classes and activities to KBIC youth and can be a conduit for providing culturally relevant traffic safety information and education to tribal youth.

5. Fire and Emergency Management Department (FEMD)

The FEMD is responsible for the preparedness, training, and coordination of emergency response and recovery efforts for natural and anthropogenic hazards. FEMD has primary authority for disasters on tribal lands and may directly engage the Federal Emergency Management Agency (FEMA) independent of state emergency management authorities.

6. Natural Resources Department (KBIC NRD)

The Natural Resources Department provides guidance and assistance in the event of an emergency within the Natural Resources Department, the L'Anse Indian Reservation and ceded territories with the intention to assist KBIC officials and other emergency organizations to carry out the responsibility for the protection of life and the environment.

7. Real Estate/Transportation Department

The Real Estate/Transportation Department is responsible for administering and implementing the Tribe's transportation programs funded under the U.S. Dept. of Transportation (USDOT) Office Federal Lands Highway (FHWA) Tribal Transportation Program (TTP), including planning, maintenance and construction activities.

8. KBIC Health System - Donald A. LaPointe Health and Education Center

The KBIC Health System (Health Center) provides comprehensive health and education services to approximately 2,800 tribal members and descendants living in Baraga, Houghton, and Ontonagon Counties. The Health Center actively engages in promoting healthy living through participation in prevention activities, including traditional practices, managing chronic conditions, and expanding services. The Health Center is a critical member of the team to address all safety concerns of the Community.

Section III. Data Collection and Public Involvement Process

This safety plan is based on data collected from individual members of the public, government representatives, first responders, and law enforcement and reported to state and tribal agencies. Additional data sources include geographic information systems as well as federal, state, and tribal inventory data collection systems.

The safety planning process started with a kick-off meeting involving tribal and county agency and government representatives on May 24, 2019. Two public surveys and a public information booth provided further input.



Figure 2: Public Information Booth at the 41st Annual KBIC Maawanj'iding Pow Wow (July 26, 2019)

The Michigan Traffic Crash Facts web site and analysis tools provided data for the primary crash data analyses, with further aggregated data from the KBIC Tribal Police.

Potential gaps in data collection must be acknowledged, however they were not explicitly defined for this study. Refinement and improvement of data collection, sharing, and analysis processes is recommended as part of the safety improvements for several emphasis areas.

Data sources and analyses are further described in Section VI of this report.

Section IV. Safety Priorities and Enhancements

KBIC will address safety concerns identified through public surveys and interviews, discussion between elected/appointed officials, department staff, and concerned citizens, and analysis of available data. Mitigation and prevention measures will be identified based on best practices and community input.

Document Layout and Suggested Use

This document numbers emphasis areas sequentially with a year designation, e.g. "2019-01". The sequence reflects the importance at the time of publication, so safety concern 2019-01 is

the top concern in the 2019 safety plan. This provides for easier reference in future safety plan updates, continuity across plans in subsequent years, and reference to changing priorities in future plans.

Following each emphasis area, suggested mitigation measures are listed with reference to the concern. Some mitigation measures will address multiple concerns. Document users should seek to address emphasis areas in the order of appearance in this document, however some emphasis areas will require more resources than others and can only be addressed as resources become available. When an emphasis area is set aside due to project duration or resource needs, the ranking does not change, however lower ranked priorities may end up being addressed before the top-listed areas of greatest concern. Addressing any emphasis area, even those listed lowest in the list, will contribute to overall safety improvements for the Tribe while building support for those higher priority concerns that require additional time and resources to complete.

2019 Transportation Safety Emphasis Areas

2019-01: High speeds on the US41 corridor from Pines to State Park

2019-02: High speeds on US41 near State Park

US41 highway passes many businesses and government buildings within the Village of Baraga. The posted limit is 55MPH through the corridor and for many miles north and south of the corridor. Figure 3 shows the US41 corridor area of concern.

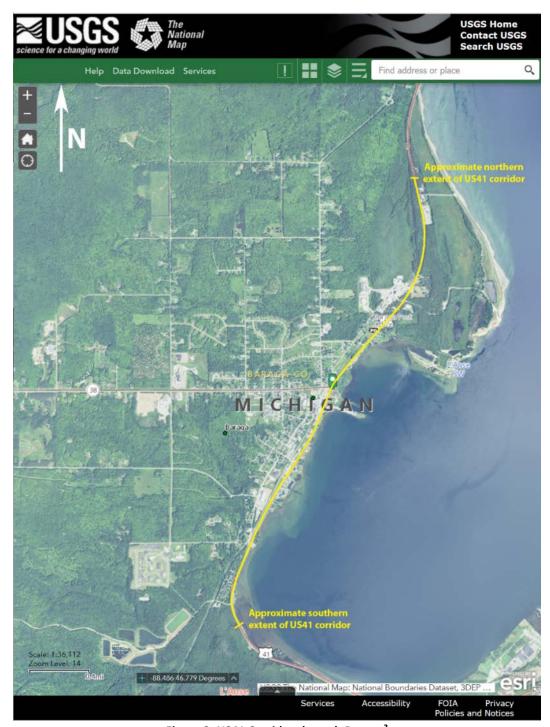


Figure 3: US41 Corridor through Baraga³

Community members describe difficulty entering and leaving the roadway and an unsafe feeling due to prevailing traffic speeds. Pedestrians have no protected crossing or adjacent walkways.

³ USGS et al., "The National Map - Advanced Viewer, Orthoimagery," The National Map, 2019, https://viewer.nationalmap.gov/advanced-viewer/.

The US41/M38 (Michigan Ave) T-intersection (Figure 4) is controlled with a flashing yellow (both US41 directions) and stop sign (the flashing red light visible while approaching the intersection from the west on M38 is a warning device; east-bound M38 – this is the M38 origination point so westbound traffic enters only from US41 with a left or right turn). Left and right turns onto M38 are made from delineated turning lanes. Left turns onto US41 from M38 (eastbound M38 to northbound US41) are from a delineated turn lane that terminates at US41, and right turns (eastbound M38 to southbound US41) are from a single right lane that terminates at US41. Additionally, M38 immediately crosses a railroad grade and begins a steep incline as it travels west from the US41 intersection, potentially slowing acceleration for westbound traffic and increasing stopping distances for eastbound traffic approaching the intersection. The intersection experiences above-average crash rates and injury severity for this section of the corridor. (Figure 5). Although left and right turn lanes on US41 do help to reduce rear end crashes by allowing turning vehicles refuge out of the through traffic lanes, respondents (roadway users) surveyed for this Plan clearly indicate a "unsafe" feeling utilizing the corridor and the US41/M38 intersection.



Figure 4: US41/M38 Intersection⁴

 $^{^4}$ USGS et al., "The National Map - Advanced Viewer, World Imagery," The National Map, 2019, https://viewer.nationalmap.gov/advanced-viewer/.

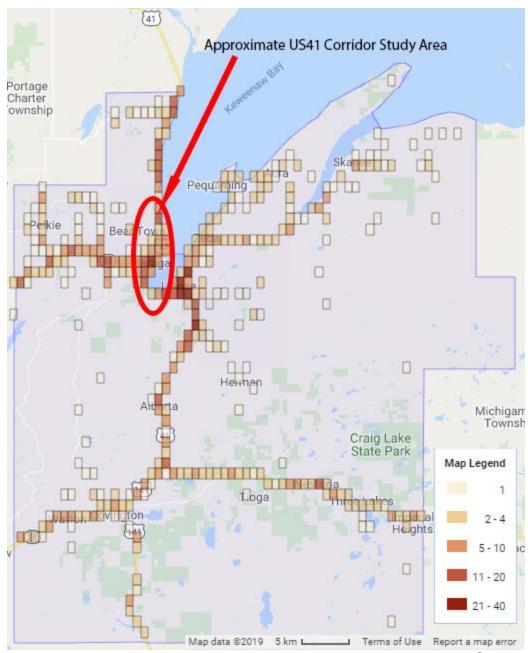


Figure 5: Crash Concentrations in Baraga County 2014-18 (all crash severities)5

A basic data review of the approximate US41 corridor study area for 2014-18 identified 97 crashes with four A-severity (incapacitating), two B-severity (minor), ten C-severity (possible injury) and zero K-severity (fatal) crashes (Figure 6 and Figure 7). Three areas where possible/confirmed injury crashes are concentrated are near the KBIC-owned Pines Convenience Center at the north end of the study area, near the US41/M38 intersection in the center of the study area, and near the Baraga State Park/ at the southern end of the study area (Figure 7). Note that

⁵ University of Michigan, "Data Query Tool: Map," Michigan Traffic Crash Facts, 2019, https://www.michigantrafficcrashfacts.org/querytool/map#q1;0;2018,2017,2016,2015,2014;07;0,49:1,2,3,4,5,9.

other areas of high crash concentrations shown in *Figure 5: Crash Concentrations in Baraga County 2014-18 (all crash* severities) are not studied for this emphasis area, however these areas are in the KBIC Home Territory and may include crashes involving KBIC members.

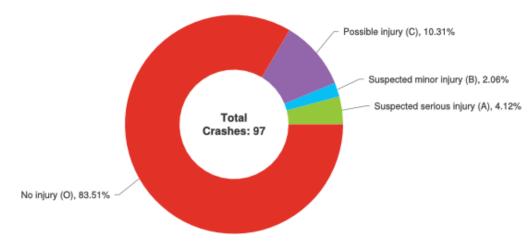


Figure 6: Distribution of Crash Severity for US41 Corridor Study Area 2014-18 (only crashes on US41 and intersections within US41 corridor boundary area are shown)⁶

⁶ University of Michigan, "Data Query Tool: Chart," Michigan Traffic Crash Facts, 2019, https://www.michigantrafficcrashfacts.org/querytool/chart/.

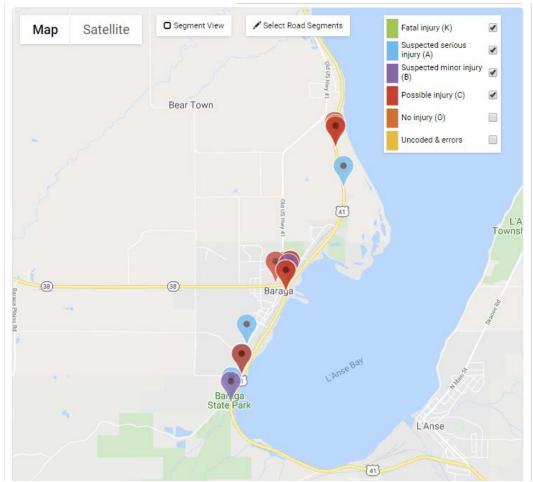


Figure 7: Possible/Confirmed Injury Crashes 2014-18 on US41 Corridor near Baraga (only crashes on US41 and intersections within US41 corridor boundary area are shown)⁷

A second T-intersection south of Baraga near the Baraga State Park at South Superior Avenue approaches US41 from the northwest. Traffic control is maintained with a stop sign for traffic turning onto US41 from S. Superior Ave. Northbound US41 traffic can turn left onto S. Superior from the travel lane and a delineated bypass lane allows northbound US41 traffic to pass left-turning traffic on the right. Southbound US41 traffic can turn right from a delineated turn lane. Several additional minor collectors intersect with US41 with no signaling or dedicated turn lanes and traffic control provided by stop signs for vehicles entering US41.

A delineated center left-turn lane begins approximately 1500ft north of the S. Superior Ave intersection on US41 and continues until the M38 intersection.

The corridor experiences heavy truck traffic, including heavily loaded log trucks accelerating from and decelerating onto M38 (Michigan log trucks are permitted a maximum width

⁷ University of Michigan, "Michigan Traffic Crash Facts Data Query Tool: Map Area Selection," 2019, https://www.michigantrafficcrashfacts.org/querytool/area#q1;0;2018,2017,2016,2015,2014;;

of 108 inches and 164,000 pounds GVW, and therefore have extended acceleration and braking times due to the heavy loads).

The corridor has many businesses and several government offices and residences on both sides of US41. Access to all business, offices, and residences are by individual driveways directly from US41.

Recommendation:

Roadways in the US41 corridor are under multiple jurisdictions, including federal, state, county, village, and tribal, which adds to the political, geographic, and engineering complexity of any solution recommended for this area of concern. Effective resolutions to this area of concern will require studies beyond the scope of this plan, however typical solutions to congestion, speeding, access, and pedestrian safety include many of the countermeasures listed below. Because of the complexity of this corridor, all countermeasures should only be considered as part of a formal road safety audit (RSA).

Site-specific Considerations and Recommendations for US41 Corridor

The recommendation for addressing safety concerns in the US41 corridor is two-step: A formal RSA with expertise from all jurisdictions will help objectively evaluate the many safety solutions available for areas like these. An RSA will also help identify potential partners, resources, and responsible agencies. The second step is implementation of recommendations from the RSA.

An RSA for rural roadways where speed, congestion, and pedestrian safety area a concern should consider items such as (but not necessarily limited to):

- Traffic calming: Visual measures such as community boundary markers, landscaping, roadway marking, and signing can provide a sense of a non-highway driving environment for most drivers. When drivers approach an area with visual cues common in residential or congested business area, they tend to reduce speeds and pay greater attention to their surroundings, achieving many of the goals of engineered countermeasures at relatively low cost and with little disruption to traffic.
- Lighting: The region has short days with frequent inclement weather for half of the
 year. Reviewing roadway lighting to provide improved nighttime visibility is a
 proven safety measure for drivers and pedestrians. Lighting also helps contribute
 to traffic calming by providing a sense of a populated space and a psychological
 roadway narrowing both day and night.
- Engineered roadway modifications: Many engineered modifications can contribute to lower speeds and/or improved safety for pedestrians and motorists. This corridor already has dedicated turn lanes and a center lane, however turning movements which cross oncoming travel lanes, such as those that occur from a center lane, can

contribute to crashes with high severity, especially in areas with high speeds and no signalized intersections.

This corridor may benefit from a roundabout, which provides improved turning safety, throughput, and pedestrian safety relative to signalized intersections and turning lanes. The T-intersection at M-38 and US-41 is the type of intersection which can be particularly effective in a roundabout configuration, with or without bypass lanes. Roundabouts are becoming increasingly common and popular in this region, reducing local public resistance to a nationally uncommon intersection design. Regional transportation departments and contractors also have recent experience with roundabout planning, construction, and maintenance, contributing to an improved management and user experience. Roundabouts and all other engineered roadway modifications are capital intensive and require significant planning and coordination with multiple jurisdictions, which can be identified and addressed in a RSA and subsequent project planning. No agency should immediately discard projects which require significant capital or political investments, instead they should conduct appropriate studies to identify resources required and systematically evaluate all options for overcoming barriers to the best possible safety solutions.

- Speed controls/behavior modifications: A formal speed study based on prevailing speeds was undertaken in this area and no recommendation to change speeds could be made based on that study. However, speed limits are not necessarily the best or only way to improve driver and pedestrian safety: Ideally, drivers should reduce their speeds voluntarily, which most drivers tend to do when facing natural or engineered traffic calming roadway features. Recommendations to change speed limits can also be based on factors such as congestion, access, and others. A formal RSA can help identify factors other than prevailing speeds that might lead to changes in speed limits and/or make recommendations to influence drivers to voluntarily reduce speeds and improve attention.
- Enforcement: Law enforcement presence can improve speed limit compliance, and regular enforcement of existing codes is an effective deterrence even without constant law enforcement presence. Increased law enforcement presence may also help identify and address impaired and distracted driving problems. Political and law enforcement leadership must consider possible negative outcomes from increased enforcement, such as a perception of intimidation or unequal enforcement. Primary law enforcement of US41 falls under state police jurisdiction, which has limited resources in this rural area, so increasing law enforcement activities requires coordination with local and tribal law enforcement. Combined enforcement can also help overcome perceptions of discriminatory enforcement and improve interoperability in crises.

• Pedestrian safety: Providing pedestrians with dedicated walking facilities such as sidewalks and paths can significantly reduce the likelihood of pedestrian crashes. Signalized crosswalks, such as HAWK (High-Intensity Activated crossWalk) beacons, can provide pedestrians with greater crossing safety by assigning right-of-way to traffic, however all crosswalks should be combined with traffic calming. Engineered changes to the roadway design may provide opportunities for a median, which offers pedestrians an island where they only need to cross one or two lanes of traffic moving in the same direction. KBIC is planning a multi-use trail which will cross US41, so pedestrian crossing facilities should be integrated into this project: A formal pre-construction RSA will help identify optimal strategies for ensuring safe crossings.

<u>Implementation:</u> The roadways providing access to and from the US41 corridor are owned and maintained by multiple agencies, so a collaborative effort is required. Leadership in tribal safety initiatives should be led by a safety committee with involvement from internal and external groups. The Tribal Real Estate/Transportation Department and DPW will be responsible for specific KBIC-funded activities and may have primary-owner responsibility for specific sections of the corridor and neighboring real estate. RSAs are multi-agency efforts that can be led by a KBIC safety committee.

2019-03: Establish and maintain regular data collection, reporting, and analysis

Data collection is a critical component in identifying and responding to safety improvement needs. The Tribe does collect crucial violation and crash data, but regular analysis is not conducted. The State of Michigan also collects and analyzes data, but the statewide system is not regularly used by KBIC staff to identify safety concerns. The total number of serious and fatal crashes in the entire KBIC Home Territory averaged 64.8 per year for the last five years, a number which could be reasonably evaluated on an individual basis to determine patterns in contributing factors that can be addressed. This process could be further optimized using freely available crash analysis tools provided by the Michigan Department of Transportation.

Recommendations

To improve data collection and analysis, KBIC representatives can undertake the following activities:

- Learn to use the state and county crash mapping systems and regularly analyze data to help identify traffic safety concerns on and near tribal lands
- Contribute Tribal crash data to the statewide system on a regular basis
- Train Tribal Police officers to improve data collection practices and provide richer data for improved crash and violation analyses.

- Cross reference EMS and police data to generate a better understanding of trafficrelated injuries, fatalities, and near-misses.
- Analyze traffic patterns and tribal member trip data to determine if the crash evaluation area captures all roads where tribal members are likely to travel on a regular basis. Reevaluate the study area on a regular basis to capture changes to trip and travel trends.
- Analyze all crashes in the evaluation area on a regular basis to determine whether they
 involve tribal members or the affected persons have used roads in the tribal inventory.
 For those crashes involving tribal roads or members, each crash should be evaluated to
 determine whether a road safety audit is warranted under guidelines developed by
 KBIC staff.
- Identify clusters of crashes and review reported causes to help identify opportunities for enforcement, engineering, and education improvements. For crashes with injuries, review emergency response and patient care to identify opportunities for improvements in EMS and fire response, training, response modes, equipment, and planning.

<u>Implementation:</u> Tribal Police are primarily responsible for all data collection and contribution to statewide systems. EMS is responsible for reporting medical information related to traffic incidents. Public Works and the Real Estate/Transportation Department should coordinate with police and EMS to analyze and understand violation and crash trends, and identify opportunities for safety improvements that address these trends. The Community Policing Committee can serve as a conduit between the public and safety concerns identified by data analysis.

2019-04: School zone speeding and other violations

2019-05: Speeding on local roads

Citizens are concerned about speeding on residential streets and specifically identify concerns about speeding near schools and playgrounds. KBIC has installed seasonal speed humps to calm traffic in residential areas (Figure 8), and nearby residents report satisfaction with the results. Winter weather requires speed hump removal in the winter, however drivers may continue slower driving even after these traffic calming devices are removed, and fewer residents are outdoors during the winter.



Figure 8: Example of seasonal speed humps in residential areas

A review of residential areas identified several locations where children play in the street, including placing basketball hoops on the edges of roadways (Figure 9).



Figure 9: Example of children using roadway for play

Recommendations

Traffic calming techniques mentioned elsewhere in this plan can be applied to residential streets and may provide speed reductions year-round. An RSA can identify specific trouble spots and mitigation, and ongoing planning for pedestrian facilities and playgrounds in residential areas will help reduce pedestrian/vehicle conflicts in the future.

Site-specific Considerations and Recommendations for Reducing Speeding

Children playing in the streets may point to lack of pedestrian facilities and playgrounds as well as a need for educating children about the dangers of playing in roadways. Youth groups, health fairs, and schools can help with education, and community planners can advocate for adequate pedestrian and play areas in and near residential areas.

These areas are already marked and designed for low-speed driving, so targeted enforcement and education can improve compliance. The current roadway design does not discourage speeding, but traffic calming features such as road diets, side striping, and roadside vegetation design can help encourage lower speeds.

<u>Implementation:</u> Tribal DPW is responsible for maintenance and construction of recommended improvements for tribal roads, and tribal law enforcement should take a leadership role in enforcing traffic codes. The existing Community Policing Committee can coordinate the many stakeholders and activities related to improving residential areas.

2019-06: Impaired driving

2019-07: Distracted Driving

Distracted driving is considered similarly dangerous to impaired driving⁸, and distracted walking has been shown to reduce pedestrian attention to their surroundings, which, especially when combined with distracted driving, may be one of the significant causes of recently increasing numbers of killed and injured pedestrians in the United States. It is difficult to evaluate distracted driving and walking without an observational study or a change in the data collection procedures for crash investigations, which is beyond the scope of this plan.

Recommendations

Distracted driving and walking, impaired driving, and reckless driving can be reduced with targeted enforcement and education, and mitigated with modern road and pedestrian facility design. Improved emergency response can improve patient outcomes when injuries do occur.

⁸ Sumie Leung et al., "A Comparison of the Effect of Mobile Phone Use and Alcohol Consumption on Driving Simulation Performance," *Traffic Injury Prevention* 13, no. 6 (November 1, 2012): 566–74, https://doi.org/10.1080/15389588.2012.683118.

Site-specific Considerations and Recommendations for Reducing Impaired and Distracted Driving

Local law enforcement should review citation, crash, citizen complaints, and observational data to identify impaired and distracted driving/walking locations of concern. With identification of specific areas, targeted enforcement and education can help reduce many behavioral issues. Providing pedestrians with dedicated walking paths and lanes, convenient and well-engineered crossings, and alternatives to walking can have reduce overall traffic/pedestrian conflicts regardless of driver or pedestrian behavior (also see 2019-08: Non-motorized/pedestrian/off-road motorized conflicts, 2019-09: Insufficient sidewalks and other pedestrian facilities/non-motorized users on roads, 2019-19: Insufficient non-personal vehicle transportation modes, and 2019-21: Access for individuals with disabilities and Pedestrian Safety).

<u>Implementation:</u> Impaired and distracted driving are offences under law enforcement jurisdiction. Multiple law enforcement agencies are responsible for roads in the KBIC home territory, with tribal law enforcement as the primary enforcement agency for tribal roads and tribal members. RSAs are multi-agency efforts that can be led by the KBIC Community Policing Committee.

2019-08: Non-motorized/pedestrian/off-road motorized conflicts

2019-09: Insufficient sidewalks and other pedestrian facilities/non-motorized users on roads

Not all KBIC roadways have dedicated non-motorized alternative facilities. Citizens are concerned about children and other non-motorized users in the roadway. Sidewalks, trails, and dedicated non-motorized lanes provide for safer alternatives to using roads for non-motorized transport.

Non-motorized and off-road vehicle facilities require enforcement, education, signing, and controls to limit conflicts between motorized off-road and non-motorized users. ATVs/UTVs are not licensed for roadway use in Michigan, however all Upper Peninsula counties allow ATV/UTV use on the shoulders of most roads, and many of the multi-use trails and forest roads in KBIC's home territory are open to ATV/UTV use. Off-road vehicle use on roads, trails, and paths is common in rural areas like the KBIC home territory, even when use of these vehicles is legally prohibited on those facilities. For rural residents, off-road vehicles may be preferred to licensed on-road motor vehicles because of their lower cost and ease of use across the varied terrain and road conditions of the area (the overall cost of ownership of off-road vehicles may be lower for some users because they do not license or insure these vehicles). Off-road vehicles are also often used as alternatives when the driver is unable or unwilling to legally drive a motorized on-road vehicle.

Recommendations

Many potential conflicts with ATV/UTVs and other off-road vehicles may be related to driver behavior: Many off-road vehicle drivers may not complying be with local rules. Enforcement and education can improve operator compliance with existing rules, however the widespread use of ATV/UTVs in rural areas may also be related to lack of alternative transportation and appropriate facilities and rules that make off-road vehicle use safer. Planning for and developing protected pedestrian facilities such as marked/signaled crosswalks, pedestrian lanes, sidewalks, and paths can help reduce conflicts between non-motorized and motorized users and may also reduce reliance on motorized transportation.

Site-specific Considerations and Recommendations for Reducing ATV/UTV Conflicts and Improving Operator Safety

A survey and observational study can provide data for determining when, why, and how off-road vehicles conflict with each other and with pedestrians and on-road vehicles. This study could be performed as part of a road safety audit (RSA) specifically for off-road and pedestrian users. KBIC is planning a trail system to provide protected pedestrian travel between areas on and near the KBIC reservation, and the designers should expect that ATV/UTV operators will use these trails even in areas where they are prohibited. A pre-construction RSA can help identify possible conflicts for this trail as well as for other new pedestrian facilities and provide potential mitigation plans to help prevent future conflicts.

Specific problem areas for pedestrians can be expected wherever pedestrians might cross major roads such as US41 or M38, however only one specific location was identified from public feedback: Children crossing M38 anywhere between the intersection with Main Street to the east and McGillan Street to the west. These crossings may be related to the location of Baraga High School on the south side of M38 and a residential area on the north side of M38. A marked school crossing exists at Lyon St, however crossings in this area are complicated by the four-lane width of M38 at this location (three travel lanes plus a parking lane), the previously mentioned steep hill and truck traffic, many access points, and potential visual trap of the descending road as it approaches intersections and crossings. Options to consider are a road diet or other technologies such as a raised crosswalk, signalized crossing zones, speed reductions during school commute times, traffic calming, and enforcement presence during school commute times. Any mitigation should be evaluated as part of a pedestrian RSA.

<u>Implementation:</u> Multiple law enforcement agencies are responsible for roads and road users in the KBIC home territory, with tribal law enforcement as the primary enforcement agency for tribal roads and tribal members. RSAs are multi-agency efforts that can be led by the KBIC safety committee.

2019-10: Insufficient lighting

Citizens expressed concerns about inadequate lighting on residential streets. Roadway lighting increases safety year-round.

Recommendations

Overhead lighting along any street can improve pedestrian safety, however KBIC's home territory is far too large and involves too many jurisdictions for widespread use. Selective overhead lighting may provide adequate safety improvements.

Site-specific Considerations and Recommendations for Overhead Lighting

Areas frequented by pedestrians can gain the greatest safety improvements from overhead lighting. The previously mentioned pedestrian RSA can identify the best locations and types of lighting for improving safety. Community planners can consider residential area street lighting as part of the regular planning process and draw on the pedestrian RSA to narrow the scope of residential lighting projects.

<u>Implementation:</u> Lighting installation and maintenance will be the responsibility of the respective local agencies. RSAs are multi-agency efforts that can be led by the KBIC safety committee.

2019-11: Winter Parking

2019-12: Limited visibility due to winter & summer maintenance

2019-13: Waste/obstructions in the right-of-way

2019-14: Winter maintenance

Prompt and adequate winter maintenance is critical in the entire KBIC home territory and ranks high among citizen concerns. KBIC maintenance crews provide both local road snow clearing and private drive snow clearing. In addition to clearing roadways and driveways in a timely manner, maintenance crews must ensure that snow banks are pushed back and/or removed to maintain good sight distances year-round.

Year-round maintenance includes mowing, tree trimming, and removing debris, waste, and objects from the right of way. These activities ensure safe escape and recovery from the roadway and maintain sight lines.

Recommendations

Winter maintenance occupies much of the DPW's resources for road maintenance and is difficult to predict and plan for due to fluctuations in winter precipitation frequency and amount. Historical data can help improve planning, and training in best practices can provide improved

efficiency and effectiveness. All of the recommendations for emphasis areas 2019-24:, 2019-25:, and 2019-26: can help improve maintenance during all seasons.

<u>Implementation:</u> Public Works is responsible for roadway maintenance. The public and other departments are responsible for reporting concerns to public works staff.

2019-15: Signage – Reservation, BIA, and Tribal road sign maintenance

Road signs used according to principles found in the Manual for Uniform Traffic Control Devices (MUTCD) provide road users with clear instructions on roadway use. Road sign maintenance is an ongoing process to account for damage, changing traffic conditions, and to address traffic safety concerns.

Recommendations

KBIC can ensure proper sign use through the following activities:

- Implement an asset management system to inventory and track signs. (KBIC and neighboring counties have access to an asset management system, *RoadSoft*, with training and licensing at no-cost to agencies or users. *RoadSoft* includes a sign module that supports inventory, condition, and work-order processes, and some signs for roads in the tribal inventory will already be maintained by external road-owning agencies using this system.)
- Replace all regulatory traffic signs to meet retro-reflectivity standards in place at the time of replacement.
- Replace all street name signs.
- Add/replace 911 signs to all buildings
- Maintain road sign inventory with installation date, engineering information, status, and repair orders
- Assess signs and repair or replace on an ongoing basis and conduct at least one network-wide assessment per year.
- Remove signs that are no longer required
- Incorporate work order activation based on reports from the public and public safety
- Establish clear sign installation guidelines or ordinances based on MUTCD guidance to avoid excessive signing or installations that do not address relevant road user needs

<u>Implementation:</u> Public Works is responsible for maintenance in the right-of-way of tribal roads and all sign installations, maintenance, and removal.

2019-16: Insufficient traffic controls

2019-17: Insufficient regulatory and warning signs

2019-18: Difficulty making turns from busy streets/conflicts with turning vehicles

Citizen concerns identified several areas where traffic controls may help drivers safely enter and leave roadways or navigate intersections, however the proper use of regulatory and traffic controls should be according to MUTCD and engineering standards to avoid creating unintentional conflicts and safety concerns. Ensuring adequate and appropriate regulatory and warning signs in good condition can improve motorized and non-motorized safety.

Recommendations

Citizen complaints should be logged for review on a regular basis, and when recurring complaints identify specific locations where drivers have difficulty navigating intersections or other roadway features, those locations should be reviewed to ensure that existing traffic controls are properly installed, maintained, and complied with. Lacking obvious maintenance or compliance problems, an RSA should identify appropriate solutions.

<u>Implementation:</u> Public Works is responsible for maintenance in the right-of-way of tribal roads. RSAs are multi-agency efforts that can be led by the KBIC safety committee.

2019-19: Insufficient non-personal vehicle transportation modes

Alternatives to privately-owned vehicles provide all citizens with reliable, safe, and environmentally conscious transportation. The lack of alternative transportation modes may be contributing to pedestrian and off-road vehicle traffic volumes with related safety concerns for pedestrians and off-road vehicle users, which is addressed elsewhere in this report.

Recommendations

The overall tribal transportation planning process should evaluate transit and ride-share opportunities for tribal members. A transit plan can further focus efforts to provide safe and reliable non-personal transportation and help identify resources to expand transit services.

<u>Implementation:</u> Transit planning should be undertaken by a group with representatives from transportation services and groups who can benefit from transit services. The Real Estate/Transportation Department or designated committee can take a leadership role in developing a transit plan.

2019-20: Traffic Calming

Traffic calming measures help reduce speeding in residential areas by helping drivers recognize excessive speed and respond appropriately. Roadway features, enforcement, and

education work together to ensure drivers are self-regulating their speeds. Traffic calming is also discussed for these specific safety concerns: 2019-01:, 2019-02:, 2019-04:, 2019-05:.

Recommendations

- Coordinate focused enforcement with residents to address speeding complaints
- Continue regular patrols and speed enforcement to deter speeding
- Utilize mobile and/or speed-reactive signing to address problem areas or short-term changes in congestion or traffic routing
- Develop and deliver public service announcement/information campaigns to inform residents and guests about speeding concerns and enforcement initiatives
- Coordinate speed enforcement activities with local, regional, and statewide awareness and enforcement campaigns to amplify tribal efforts.

<u>Implementation:</u> Public Works will coordinate with tribal law enforcement to identify and address public complaints and planned/unplanned traffic changes. Law enforcement is responsible for identifying and addressing specific violations in accordance with tribal and non-tribal codes and regulations and within available resources.

2019-21: Access for individuals with disabilities and Pedestrian Safety

Pedestrian safety is improved by providing safe access along, across, and near roadways. Properly designed and maintained pedestrian facilities encourage pedestrians to use them and maintain safety for differing abilities, ages, and mobility choices. Pedestrian facilities also improve overall community health by promoting walking, jogging, biking, and other non-motorized transportation, and by bringing residents and guests closer to each other as they move about the community.

Recommendations

KBIC will encourage non-motorized mobility and safety with the following activities:

- Review all cross-curbs construction at all pedestrian crosswalks to make sure adequate
 and reasonable access for the safe and convenient movement of individuals with
 disabilities, including those in wheelchairs, have been provided.
- Maintain crosswalk inventory and ensure compliance with ADA and other regulations
- Ensure marking and signing are maintained and appropriate to help pedestrians and motorists recognize and respect non-motorized facilities
- Review crosswalks and sidewalks on an annual basis to verify accessibility and conduct regular maintenance

- Include pedestrian facilities in all transportation planning
- Establish a workgroup or committee from residents and tribal agency representatives with a focus on improving non-motorized mobility and to develop community-wide walkability plans

<u>Implementation:</u> Public Works is responsible for crosswalk maintenance, construction, and planning.

2019-22: Impacts on infrastructure and maintenance from climate change/extreme weather events

2019-23: Coordinate Emergency Planning and Transportation Planning and Improve Access

Emergency response is a critical component in the overall traffic safety effort and is one of the four pillars of traffic safety. Public safety services provide enforcement, education, and response to both vehicular and non-vehicular incidents using public and private roadways, and those roadways should provide prompt, safe access to all residents and buildings when emergencies occur.

Recommendations

- Coordinate transportation and community planning with the Community's existing programs and policies and include, when applicable, non-tribal agencies such as the Baraga County Emergency Management, other local and state non-tribal law enforcement agencies, MDOT, etc., to ensure appropriate access and alternatives for prompt, safe response of all current and planned emergency response equipment.
- Implement and maintain traffic and non-traffic incident planning that includes DPW as a key partner in ensuring access to all community areas, improve responder safety, and to provide for access to DPW heavy equipment when needed in emergencies
- Include traffic control and access information in after-action report reviews, and convey concerns to DPW as needed
- Conduct traffic incident management and incident command training and exercises in coordination with public safety and DPW
- Prepare and maintain a community risk assessment to identify access and evacuation plans and required resources to respond to anticipated natural and anthropogenic emergency events

<u>Implementation:</u> The Real Estate/Transportation Department is responsible for community and transportation planning. The DPW is responsible for heavy equipment and DPW personnel. Public safety is responsible for emergency response and planning and emergency

response equipment and personnel. Coordination between these departments should be formalized in inter-office memoranda and/or incident planning documents.

2019-24: Maintain clear zones

Brush removal and sight line maintenance are ongoing activities. Maintaining clear zones near all roadways provides drivers and pedestrians with adequate views of hazards and conflicts with time to react. Clear zones also provide for safe evasion, recovery, and landing areas for all roadway users, improves access for emergency response, and limits wildfire establishment and growth.

Recommendations

Clear zone maintenance can be improved and maintained through the following activities:

- Conduct four-season evaluations of clear zones to ensure natural growth, snow accumulation, and items left in the right-of-way do not interfere with motorized and non-motorized user sight lines
- Maintain clear zones to ensure they are free of crash hazards, which may include, but not necessarily be limited to, fixed objects, trees over 4" in diameter, mailboxes, fences with top rail, etc.
- Review tribal ordinances to ensure that rights-of-way are not used inappropriately and that roadside activity does not lead to blockage or hazards

Implementation: Public Works is responsible for maintenance in the right-of-way of tribal roads.

2019-25: Road condition

2019-26: Monitor road conditions and promptly address maintenance needs

Citizens are concerned with roadway conditions resulting from delayed maintenance and reconstruction (road conditions related to winter maintenance is a separate area of concern covered in 2019-11 through 2019-14:). Poor roadway conditions may contribute to crash frequency and severity⁹ as well as impeding emergency response.

Recommendations

Road maintenance processes and long-term road conditions can be significantly improved by implementing asset management best practices. Asset management helps predict maintenance

⁹ Sikai Chen, Tariq Usman Saeed, and Samuel Labi, "Impact of Road-Surface Condition on Rural Highway Safety: A Multivariate Random Parameters Negative Binomial Approach," *Analytic Methods in Accident Research* 16 (December 1, 2017): 75–89, https://doi.org/10.1016/j.amar.2017.09.001.

costs and plan for maintenance and reconstruction activities. KBIC and neighboring counties have access to an asset management system, *RoadSoft*, with training and licensing at no-cost to agencies or users. The *RoadSoft* platform also provides tools specifically designed for identifying and addressing safety concerns. Many of the roads in the KBIC inventory will already be managed using *RoadSoft* by the non-tribal road-owning agencies, so adoption of this system would be significantly simplified and accelerated relative to agencies with no inventory preloaded into the system.

Site-specific Considerations and Recommendations for Maintenance and Road Conditions

Four-season, proactive maintenance ensures that roads perform according to design. Identifying, prioritizing, and completing maintenance needs based on both departmental activities and in response to changing conditions identified by others will help keep the community roads as safe as possible. Strategies that can help improve maintenance include:

- Centrally log reported maintenance needs and prioritize according to impacts on safety
- Respond to citizen reports promptly to demonstrate the DPW's value to the community
- Report to the community on maintenance activities, challenges, and costs
- Identify recurring maintenance problems and plan for modifications to reduce these recurrences
- Plan for and adequately fund maintenance in response to extreme weather events
- Establish priority maintenance corridors to ensure access and safe movement of emergency responders and critical-need citizens during inclement weather.
- Enter into mutual-aid agreements to ensure continuity of service when local resources are overextended or unavailable
- Establish cooperative agreements to provide consistent levels of service across all jurisdictions
- Leverage resources of neighboring jurisdictions through contract or agreement to improve maintenance on tribal roads

<u>Implementation:</u> Public Works is responsible for roadway maintenance. The public and other departments are responsible for reporting concerns to public works staff.

2019-27: Plan and construct multi-use trail between campground and community

KBIC has constructed parts of, and is planning additional sections, of a multiuse trail to provide safer movement of pedestrians and other non-motorized modes between residential, business, government, and tourist areas.

Recommendations

The planning and construction of the multi-use trail is outside the scope of this plan, however pre- and post-construction RSAs should be conducted to avoid and mitigate unintended safety concerns.

Implementation: RSAs are multi-agency efforts that can be led by the KBIC Community Committee.

2019-28: Tribal traffic code development/enforcement

2019-29: Coordinate Tribal and non-Tribal Public Safety

Tribal police provide traffic code enforcement, emergency response, and education to tribal and non-tribal roadway users. Coordination with statewide systems will help KBIC public and government understand local driver performance relative to similarly sized communities in the region and help roadway users meet local driving code expectations. KBIC public safety can improve traffic regulation through the following measures:

- Conduct regular inter-department training and exercises to keep tribal public safety and external agencies at similar levels of knowledge and expertise and to help build a cooperative environment through peer-to-peer engagement
- Establish, review, and maintain memoranda of understanding to ensure cooperative enforcement and mutual assistance
- Actively evaluate crash reports to identify behavioral and technical contributors to crashes, and address these through formal safety planning
- Contribute to statewide statistics through careful data collection and submission, which can help identify local trends as well as contribute to an overall nationwide understanding of traffic safety concerns

<u>Implementation:</u> KBIC public safety is responsible for enforcing traffic codes according to tribal law. Tribal courts are responsible for adjudicating violations in accordance with tribal law. Improvements to roads in response to traffic incidents are the responsibility of KBIC DPW.

2019-30: Impacts of economic development on congestion and speeding

2019-31: Conduct Road Safety Audits as a part of regular planning and maintenance

Road safety audits (RSAs) provide governments and citizens with an objective evaluation of safety at specific locations and should be conducted for all projects that can be expected to affect motorized or non-motorized traffic patterns.

Recommendations

Integrating RSAs into the regular planning and maintenance process will ensure that the most effective measures will address safety concerns, and when used in pre-construction and planning, can help prevent safety issues:

- Integrate RSAs into the planning process for all projects
- Conduct RSAs when safety improvements are requested or planned
- Use data collected from tribal and non-tribal sources to support RSA decisions
- Provide ongoing training on RSA processes to DPW, public safety, and concerned citizens

<u>Implementation:</u> Public safety shall be a partner and contributor to the RSA process, and the public shall be invited to participate. RSAs are multi-agency efforts that can be led by the KBIC Community Policing Committee.

2019-32: Engage the public in all decision making and build a culture of safety among youth

Encouraging a culture of safety in all citizens helps to proactively address traffic safety and overall community health. Tribal youth who become accustomed to unsafe behavior are more likely to continue that behavior into adulthood ¹⁰, however many successful strategies are available for addressing risky driving behavior among youth ¹¹. Engaging the public in decision making addresses citizens' concerns and demonstrates a willingness by the government and government employees to make decisions that are in the public interest.

Recommendations

Public engagement will be encouraged and fostered through these activities:

- Request public participation and feedback during planning and implementation of all transportation projects, and act on those requests
- Report to the public on the successes and failures of improvement efforts, and when failures occur, report on measures to prevent or mitigate these failures in the future
- Actively encourage youth to participate in traffic safety improvements and associated activities and recruit them to participate in safety improvements on a volunteer and employment basis

¹⁰ C. Raymond Bingham, Jean T. Shope, and Trivellore Raghunathan, "Patterns of Traffic Offenses from Adolescent Licensure into Early Young Adulthood," *Journal of Adolescent Health* 39, no. 1 (July 1, 2006): 35–42, https://doi.org/10.1016/j.jadohealth.2005.10.002.

¹¹ P. Juarez et al., "A Conceptual Framework for Reducing Risky Teen Driving Behaviors among Minority Youth," *Injury Prevention* 12, no. suppl 1 (June 1, 2006): i49–55, https://doi.org/10.1136/ip.2006.012872.

 Provide all season safe driving and preparedness educational opportunities to the public and youth

<u>Implementation:</u> Public safety and the Office of Planning and Development are partners in engaging the public and youth in traffic safety improvements. The entire community is responsible for demonstrating safe behavior to youth and instilling a culture of safety in their everyday lives. The KBIC Community Policing Committee already involves youth group leaders and should continue to actively engage youth individually and through group activities.

2019-33: Maintain and Support a Traffic Safety Management Team

A team with responsibility for identifying and addressing the community's safety concerns is critical to traffic safety improvement efforts. Traffic safety concerns are currently addressed by the Community Policing Committee, law enforcement, DPW, and Real Estate/Transportation Department.

Recommendations

The existing Community Policing Committee can be strengthened through these efforts:

- Identify individuals with specific responsibilities related to traffic safety, and establish these responsibilities as required job duties.
- Report safety improvement activities and results to management, government, and the public
- Co-author all decisions related to safety improvements
- Provide specific authority and adequate resources to maintain a safety management team
- Provide responsible departments with authority and resources to address safety concerns
- Oversight of the management and update of the Tribal Transportation Safety Plan
- Meet regularly with state/county/local officials to address transportation safety
- Report regularly to the Tribal Council on activities related to transportation safety

<u>Implementation:</u> Tribal government is responsible for authorizing a safety management team and providing adequate resources for the team to accomplish its goals. Each department, in cooperation with the team, is responsible for defining roles and responsibilities and identifying the individuals who will become responsible for team activities. The public is responsible for supporting the team's activities through political and financial support, and for adopting the measures recommended by the team.

2019-34: Water Safety

KBIC members regularly use Lake Superior and inland waterways for subsistence, recreation, transportation, agriculture, commercial and sport fishing, and cultural activities year-round. Individual members of the public expressed concern about water safety, although no quantified data were available within the scope of this plan to establish specific risks. Lake Superior and area waters rarely rise above 60F, and activities during most of the year expose members to frigid air and water temperatures where in-water survival may be fewer than 10 minutes. Strong Lake Superior storms can quickly surprise and overcome near- and off-shore watercraft and even persons walking near the shoreline.

Recommendations

Water safety awareness and training should be encouraged among youth and adults for all near- and on-water activities. Integrating water safety training into youth groups and cultural activities can help raise awareness and establish water safety as a high priority for all members. When activities are organized or coordinated with tribal groups, leadership by example can help increase use of personal flotation devices among all participants. Michigan Department of Natural Resources and the United States Coast Guard provide safety information, training, and inspections upon request. Tribal and area first responders should be trained in ice and cold-water rescue.

<u>Implementation:</u> Water safety is an individual responsibility that can be reinforced through schools, youth groups, organized activity leadership, and law enforcement. Adults can further reinforce the importance of PFD use and safe boating through their own safe behaviors. The Community Policing Committee can make recommendations to integrate and support water safety training and awareness among the public and first responders.

Conclusion

This safety plan is intended to identify specific traffic safety concerns from multiple data sources, including crash reports, citizen feedback, engineering analyses, and observational studies. The results of this data analysis provided the listing of safety concerns and their ranking in this document.

As with most communities, the predominant safety concerns of the KBIC relate to driver and pedestrian behavior, specifically, speeding and other willful or unintentional non-compliance with existing traffic codes. Addressing behavioral safety issues is best addressed by developing a community-wide understanding and acknowledgement of the risks related to unsafe driving and road use. Many of the recommendations in this plan are therefore intentionally general and are intended to help the reader develop an understanding of how a culture of safety can be built and maintained throughout the Tribe and neighboring communities.

The area of greatest concern, specifically, the US41 corridor, will require road safety audits with multi-jurisdictional cooperation to identify the specific measures that can and will be

implemented to improve safety. Past efforts by individual agencies have led to disagreements on the most effective and appropriate safety improvements, resulting in distraction from the goal of improving traffic safety for all road users. Tribal, state, and federal agencies are required by statute to follow effective evaluation and planning processes to improve traffic safety, and the RSA process is the standard by which traffic safety improvements are identified and implemented. A well-planned and executed RSA can overcome resistance to change and open possibilities for cooperative traffic safety improvements for all citizens.

Section V. Data Sources and Analyses

The crash statistics shown here were used to identify trends and focus areas for this report. They are included for reference, however crash analyses for specific emphasis areas are also embedded in the report. Note that these crash statistics may not include reports for crashes involving tribal members on tribal lands, and a recommendation to review reports by tribal police is included as emphasis areas 2019-28:, 2019-29:, and 0 in this study.

Additional data collected from the meetings, surveys, and public comment shown here were analyzed and provided the basis for emphasis areas included in this report.

Table 1: Crashes by Severity in Michigan's Upper Peninsula Counties 2014-18¹ (Counties wholly or partially within KBIC Home Territory are highlighted)

County	Fatal injury (K)	Suspected serious injury (A)	Suspected minor injury (B)	Possible injury (C)	No injury (O)	Total
Alger	5	67	57	91	1,202	1,422
Baraga	4	30	40	94	1,332	1,500
Chippewa	19	99	195	364	3,933	4,610
Delta	19	95	219	475	5,432	6,240
Dickinson	9	58	161	337	3,724	4,289
Gogebic	9	39	46	127	951	1,172
Houghton	10	88	156	419	3,974	4,647
Iron	6	31	57	136	2,104	2,334
Keweenaw	1	21	21	23	320	386
Luce	8	34	34	55	725	856
Mackinac	10	63	89	129	2,309	2,600
Marquette	22	116	340	921	7,464	8,863
Menominee	10	71	131	233	1,626	2,071
Ontonagon	5	31	37	63	1,285	1,421
Schoolcraft	5	31	49	85	1,398	1,568
Total Crash Count	142	874	1,632	3,552	37,779	43,979

¹ University of Michigan, "Data Query Tool: Table," Michigan Traffic Crash Facts, 2019, https://www.michigantrafficcrashfacts.org/querytool/table/0#q1;0;2018,2017,2016,2015,2014;s2;

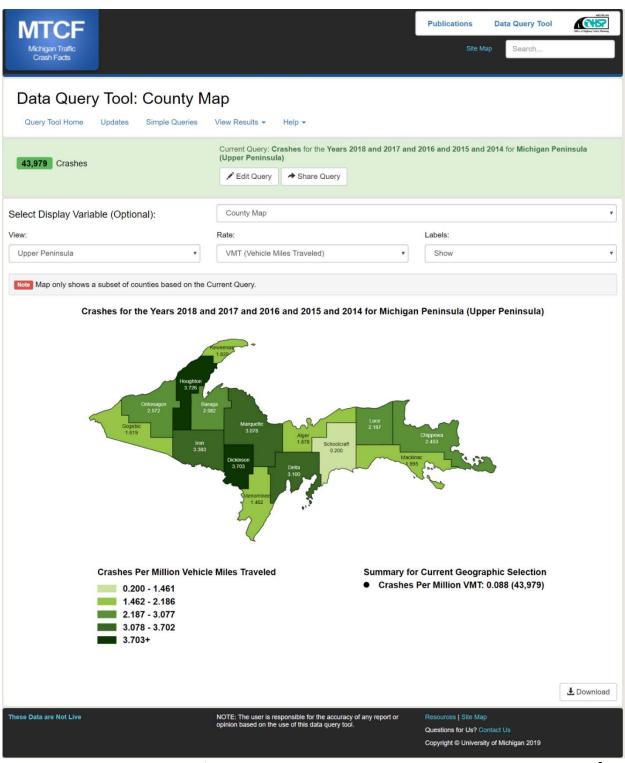


Figure 1: All Crashes in Michigan's Upper Peninsula Counties per Million Vehicle Miles Traveled 2014-182

² University of Michigan, "Data Query Tool: County Map," Michigan Traffic Crash Facts, 2019, https://www.michigantrafficcrashfacts.org/querytool/county#q1;0;2018,2017,2016,2015,2014;s2;

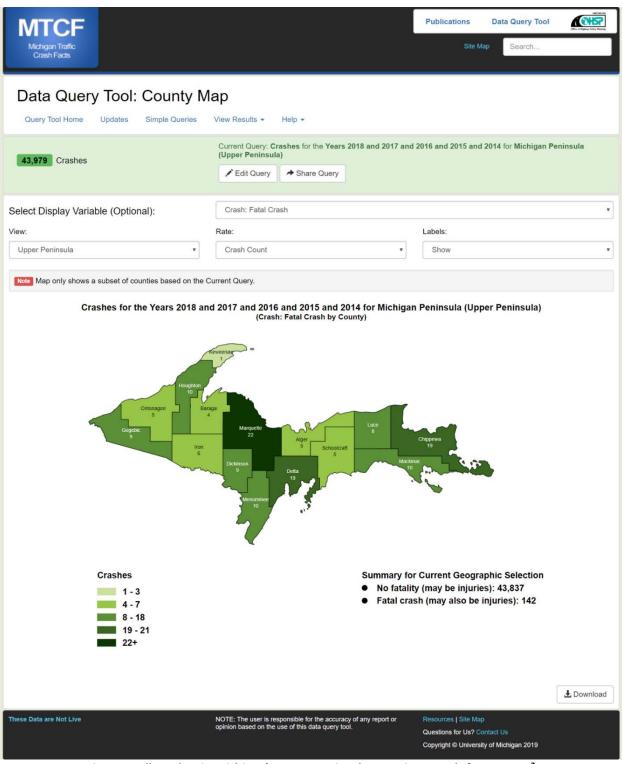


Figure 2: All Crashes in Michigan's Upper Peninsula Counties - Totals for 2014-18³

³ University of Michigan.

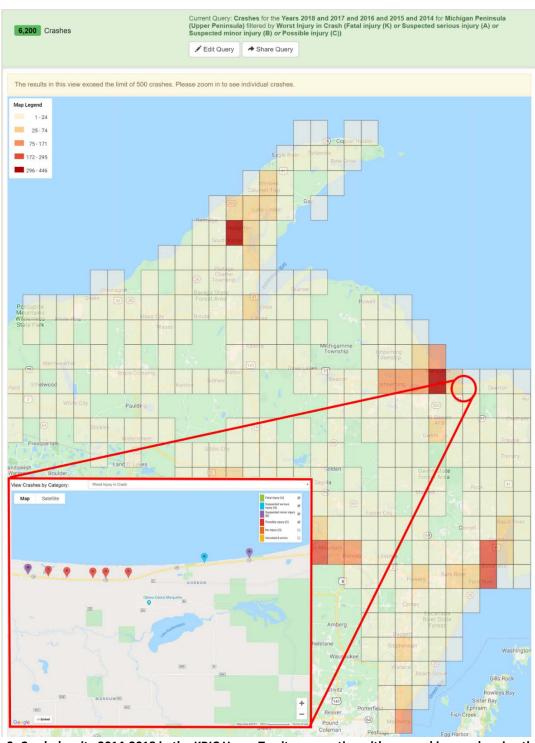


Figure 3: Crash density 2014-2018 in the KBIC Home Territory counties with zoomed image showing the area around KBIC residential and commercial properties near the City of Marquette (other KBIC tribal lands are not highlighted on this map).⁴

⁴ University of Michigan.

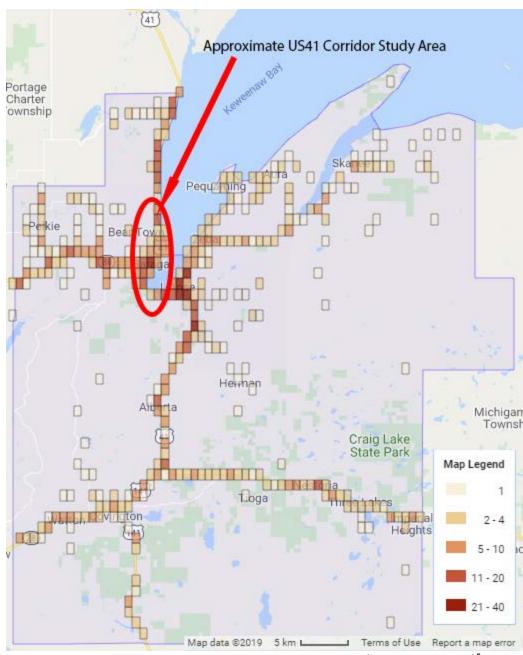


Figure 4: Crash Concentrations in Baraga County 2014-18 (all crash severities)⁵

⁵ University of Michigan, "MTCF," 2019.

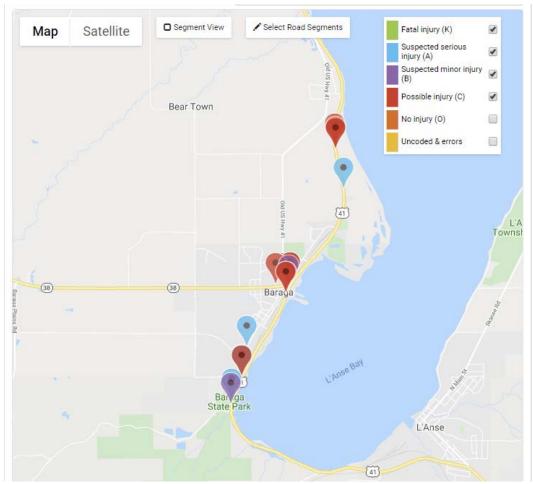


Figure 5: Possible/Confirmed Injury Crashes 2014-18 on US41 Corridor near Baraga (only crashes on US41 and intersections within US41 corridor boundary area are shown)⁶

⁶ University of Michigan, "MTCF," 2019.

May 24, 2019 @ 10:30 A.M. KBIC Tribal Center 1st Floor Conference Room Tribal Transportation Safety Plan Kick-off Meeting

NAME	ORGANIZATION/CONTACT INFO
Jason Lyres	LBIC 353-4132 Jayres @ Llbic-nsn.gov
John Velat	MTV 4872804 JLVELATEMIN.EVOU
Dugnellisegan	14BTPD dvane@ lebic-1sn.gov
Bb La Face	Village of L'Aare 524-6116 Manaque lauxeni. or KBIC Public Work
Adan Friisvall	
Doveen Blaker	Africalla Kbic-nsn.gov. KBic Housing Dept.
Doug MIVIS	Haraga CRC 906524-7270 Amills @ baraga county mads. org
Egabad - Ohis Sunde	Amills@barayacountymads.org 353-6623 +cchaiseKAC-NSN.60V
Sal	KBIC Sarah 6 kbic-nsngov
Jara	
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On November 19, 2018 the Keweenaw Bay Indian Community (KBIC) distrubuted its annual General Welfare Assistance Payment which provides the greatest opportunity for individual Departments of the KBIC to meet with a large number of KBIC Tribal Members in a single sitting. The KBIC Realty/Roads Department in response to the referenced grant agreement drafted a short transportation safety survey to encourage members to identify transportation safety issues important to the L'Anse Indian Reseration. That survey can be found at the end of these compiled results. Although there were 885 checks cut to be distrubited we are unable to determine the actual number of members that showed up for the distrubition. The KBIC Realty/Roads Department was able to collect 71 (8%) surveys. The results of that survey are as follows:

Respondents were asked if they were concerned with transportation safety on the L'Anse Indian Reservation (LIR)?

Yes 62 No 9*

* 4 of the 9 identified specific concerns although they responded "No" to the question. Those concerns are included in the data below.

Resposndents, who answered "Yes", were then asked to explain their concerns OR to choose from general categories. The specific concerns identified are listed below:

Turning lanes

Speeding

Not a stop light at major intersections; Rush hours are crazy Wish we had some sort of transportation - sometimes if you don't have a car

speed limit by headstart should be lowered

Pot holes, rough roads

Speed bumps; slow signs

Need speed bumps

High speeds

No sidewalks

Young children on road; winter time plowing

Just cleaning elderly yards and proches

General Category Concerns - Transportation Safety Cocnerns on the LIR

Speed Limits	54	76%
Lack of Sidewalks	44	62%
Lack of Signals	7	10%
Lack of Lighting	54	76%
Road Conditions	19	27%
Other:	8	11%

Signage on Haataja RD L'Anse, and others

Speed bumps in Baraga

Page 1 of 3

General Category Concerns - Transportation Safety Cocnerns on the LIR (continued)

Other (continued):

Speed bumps

Speed bumps needed

Plowing

Speed bumps in trailer park

speed bumps, signage

Signage

Respondents were then asked if there were specific streets, roads and or highways OR categories (listed below) that concerned them the most when considering transportation safety

Yes 47 No 15*

(*13 of the 15 stating there were no particular streets, roads and or highways that concerned them identified either specific concerns or categories; their responses are included in the results below)

Respondents indentified the following streets, roads and or highways as transportation safety concerns:

All

Zeba

By schools and daycares

Coming out of Zeba Hall

US 41 and M-38

By Zeba Hall

Lighting near Whirligig Rd; sidewalks, speed bumps on Zeba Rd

ΑII

Zeba, Dakota, Marksman

Zeba Rd

Skanee, Haataja, Zeba, Marksman

Zeba, Marksman, Dakota, Trailer Park Rds

Haataja, Dakota, Zeba, Marksman, Skanee

Dakota Rd, Zeba Rd, Marksman

Dakota, Zeba, Marksman

Trailer Park Rds, all of Zeba

Marksman, Dakota, Elm, Spruce

All

All

Mission

General Infrastructure Categories of Transportation Safety

 Residential Streets
 46
 65%

 Highways M-38 and US 41
 25
 35%

Page 2 of 3

General Infrastructure Categories of Transportation Safety (continued)

 Gravel Roads
 7
 10%

 Other:
 4
 6%

Cars not stopping for schools buses

Speed

By schools/daycares

Old 41

Respondents were then given the opportunity to express transportation concerns not already addressed in the survey; those results are as follows:

No one obeys the laws employee speeding; employee snow removal before elders snow removal

Survey and Survey Results Prepared by: Jason A. Ayres, Real Estate/Roads Officer Keweenaw Bay Indian Community 16429 Beartown Road Baraga, MI 49908 PH: (906) 353-4132 EMAIL: jayres@kbic-nsn.gov 2018 Transportation Safety Survey - KBIC Roads Department Are you concerned about transportation safety issues on the L'Anse Indian Reservation? If yes, please explain your concerns, or choose from one of the below listed that best identifies your concerns: ___ OR _____ Speed Limits _____ Lack of Sidewalks _____ Lack of Signals _____ Lack of Lighting Road Conditions Other (Please explain) Are there particular streets and or roads that concern you the most regarding transportation safety on the L'Anse Indian Reservation? _____ Yes _____ No If yes, please identify those streets, roads and or highways that concern you the most when considering transportation safety, or choose from the general categories listed below: OR _____ Residential Streets _____ Highways M-38 and US 41 _____ Gravel Roads Other (Please explain): Additional concerns you have regarding transportation safety that are not addressed above may be described here: _____ Miigwech for taking the time to complete this survey!

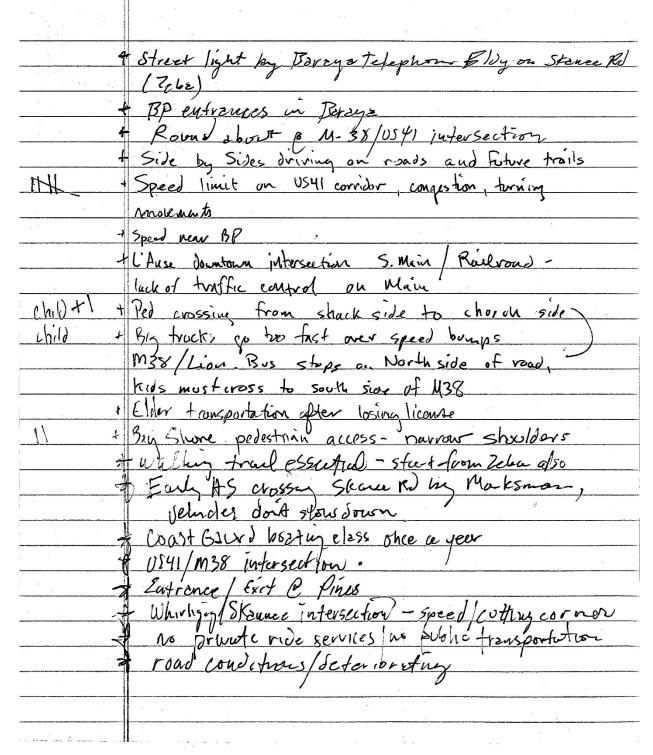


Figure 6: Public Input from 41st Annual KBIC Maawanj'iding Pow Wow (July 26, 2019) Information Booth (17 named and many unnamed individuals provided input)