

NORTHERN CHEYENNE TRIBE

2015 TRIBAL TRANSPORTATION SAFETY PLAN



Developed through the
Northern Cheyenne
Transportation Department

Prepared by KLJ

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EXECUTIVE SUMMARY

From 1996 to 2012, there were 40 fatalities and more than 125 injuries in traffic crashes on the Northern Cheyenne Reservation. In an effort to reduce the number of deaths and injuries and improve the overall safety of the transportation system on the Reservation, the Northern Cheyenne Tribe developed a Transportation Safety Management Plan (TSMP) in 2008. The original plan identified a number of strategies to reduce these terrible events, including establishing a Safe On All Roads (SOAR) safety committee, upgrading to a new crash data collection and reporting system, implement a primary seat belt ordinance with fine structure, initiate a transit program, hold seat belt clinics by a certified restraint technician, conduct safety checkpoints, MDT completed a safety review of the state system and bus routes, and installation of pedestrian crossings. Progress has been shown as overall crashes, injuries and deaths due to traffic crashes are down on the Reservation, but are still too high. The following is a summary of crash data results recorded between 1996 and 2012:

Figure 1	
Summary of Crash Events between 1996 and 2012	
Total Crashes	283
Single Motor Vehicle Crashes	193
Multiple Motor Vehicle Crashes	90
On Highway 212	216
On Highway 39	19
Month Exhibiting Most Crashes	November (36)
Day Exhibiting Most Crashes	Wednesday (52)
Age Group with Highest Crash Frequency	25-34 (88)
Crashes by Male Drivers	268
Greatest Crash Contributing Factor	Careless/Distracted Driving (66)
Most Harmful Crash Event	Collision with Another Vehicle (168)
Weather Condition During Most Crashes	Clear (139)
Light Condition During Most Crashes	Daylight (145)
Road Condition During Most Crashes	Dry (187)
Crashes with Injuries	127
Single Motor Vehicle Crashes	77
Multiple Motor Vehicle Crashes	50
On Highway 212	96
On Highway 39	10
Most Harmful Event	Collision with Another Vehicle (168)
Weather Condition During Most Crashes	*Not Available
Light Condition During Most Crashes	*Not Available
Road Condition During Most Crashes	*Not Available
Crashes with Fatalities	40
Single Motor Vehicle Crashes	31
Multiple Motor Vehicle Crashes	9
On Highway 212	19
On Highway 39	7
Most Harmful Event	Overturn (21)
Weather Condition During Most Crashes	Clear (23)
Light Condition During Most Crashes	Dark (27)
Road Condition During Most Crashes	Dry (31)



In 2014 the Northern Cheyenne Tribe undertook efforts to update the initial plan. This update culminated with a meeting where Tribal, city, county, state, federal, enforcement and interested parties came together to review existing data, ongoing safety efforts and to identify new or continuing strategies to improve transportation safety for the Reservation communities. These strategies were prioritized around the 4Es (Education, Enforcement, Emergency response and Engineering) of safety. The 4Es are outlined below. Note that enforcement and emergency response have been combined and safety planning/other strategy has been included.

Education

- Participate in a Mock Crash Event with Multiple Casualties
- Establish a Youth Drivers Education Program
- Continue and Expand the Reservation-Wide Transportation Education Program

Enforcement/EMS

- Develop a Livestock Ordinance
- Establish a Tribal DUI Task Force
- Implement a 24/7 Impaired Driving Program
- Participate in Advance Roadside Sobriety Training

Engineering

- Perform Road Safety Audits on Bureau of Indian Affairs (BIA), Tribal and County Roadways
- Develop Safety Project for Ashland Curve
- Develop Multi-Use Separated Paths
- Assess School Bus Stop Locations

Safety Planning/Other

- Improve Crash Data Collection and Sharing



BACKGROUND

The Northern Cheyenne Reservation encompasses 444,000 acres (694 square miles) of land in southeast Montana and sits in Bighorn and Rosebud Counties. The Reservation's western boundary is the Crow Reservation and the eastern boundary is the Tongue River. As of March 2013, the Reservation was home to about 4,939 of the 10,050 enrolled Tribal members.

Currently, the main uses of land in the area are for agriculture and ranching. Coal and coal-bed methane deposits can be found on the Reservation, but have not been developed. With over 550 BIA and Tribal road miles, the heavily traveled US Highway 212 corridor and other state highways that cross the Reservation, the safety of the Tribal transportation system is an important factor for visitors and residents. The table below shows the Annual Average Daily Travel (AADT) and daily commercial traffic for locations along the US Highway 212 corridor crossing the Reservation and at Lame Deer. The average of the Montana Department of Transportation's (MDT) AADT traffic counts at the eastern and western boundaries of the Reservation reflect that more than 720,000 vehicles travel across the Reservation using the US Highway 212 corridor each year and more than 20 percent of traffic is commercial use.

Location	2013 AADT	2013 Commercial
Busby (Hwy 212 count west of Busby)	2,150	414
Lame Deer (Hwy 212 just west of Lame Deer)	3,520	498
Lame Deer (Hwy 39 count just north of Lame Deer)	4,480	52
Lame Deer (Hwy 212 just east of Lame Deer)	2,760	458
Ashland (Hwy 212 just west of Ashland)	1,810	458

Available data has indicated that injury and fatality crash rates on reservations are higher than the rest of the United States. Federal programs are available to help resolve traffic-related crashes and provide safer reservation transportation routes for Tribal members and the traveling public. The Federal Highway Administration (FHWA) created the Tribal Transportation Program Safety Funds (TTPSF) aimed at addressing safety issues and needs of Tribal governments for transportation and access on reservations. Each year, two percent of available Tribal Transportation Program funds (\$450,000,000) are awarded for safety improvements through a competitive application program. The funds are awarded in four categories to complete improvements that prevent and reduce injuries and fatalities resulting from traffic-related crashes. The four categories and their respective funding goals are as follows:

Strategy	Funding %
Safety Planning	40%
Engineering	30%
Enforcement/EMS	20%
Education	10%



FHWA has emphasized the development of a Tribal Transportation Safety Management Plan (TSMP) as a first step in implementing a comprehensive safety program. This is clearly seen in the funding emphasis on safety planning and the ranking criteria that requires any safety project application be linked to a transportation safety plan.

A Tribal TSMP is a community-based, multi-disciplinary approach to identify transportation safety issues and potential implementation strategies with the goal of improving transportation safety on Tribal Lands. FHWA describes them as:

“Tribal Transportation Safety Plans are a tool used to identify and address transportation risk factors that have a potential of leading to serious injury or death. Safety Plans also organize the efforts of a variety of entities to more effectively reduce risk and can cover multiple transportation modes (roads, maritime, trails, air travel and others). Safety plans may lead to implementation of a project or program, renewed efforts in an existing program, or further study of a roadway section (using an engineering study or Road Safety Audit).

A Tribal Safety Plan should not be developed with a focus on any one funding source. Instead, a Tribal Safety Plan should demonstrate the safety concerns in a community and the strategies that will be explored to implement the plan. To the greatest extent possible, concerns demonstrated by a safety plan should be selected based on incident history (data). Data allows funding entities to understand needs and may even compel the funding of the community's needs. Safety Plans can provide a forum for utilizing data sets that are not otherwise considered by funding agencies, such as public testimony, when formal crash data does not exist.”

The benefits of developing safety plans has been well-documented and include the opportunity to leverage resources, work toward a common goal, consider all road users and have reduced deaths and injuries in Tribal and other communities.

In 2008 the Reservation developed a TSMP committed to “reduce the number of deaths and serious injuries and improve the overall safety of the transportation on the Northern Cheyenne Reservation (2008 TSMP).” The effort focused on outlining the existing transportation safety programs and policies on the Reservation and to identify strategies, issues, procedures and projects that if implemented, would reduce fatal and injury crashes. The plan was developed by a group of Tribal, state and federal safety professionals, and other interested parties from the Northern Cheyenne Reservation community. The 2008 plan identified a number of existing programs, but highlighted the following:

- The Tribe, in association with MDT has developed a Safe on All Roads (SOAR) focus group to identify transportation issues on the Reservation and identify potential candidates for a local coordinator.
- The Tribal enforcement office has a Cisco electronic crash records system.
- The Tribe has a Primary Seat belt Ordinance that includes a \$25 fine.
- The Tribe has recently initiated a Transit Program.
- The Tribe has a certified restraint technician and they are doing seat belt clinics with scheduled community events.
- The Tribe has initiated safety checkpoints.



In an effort to further enhance safety efforts and save lives, the following items were identified as a priority for expansion or initiation within the Northern Cheyenne Tribe over the first three to five years of the 2008 TSMP:

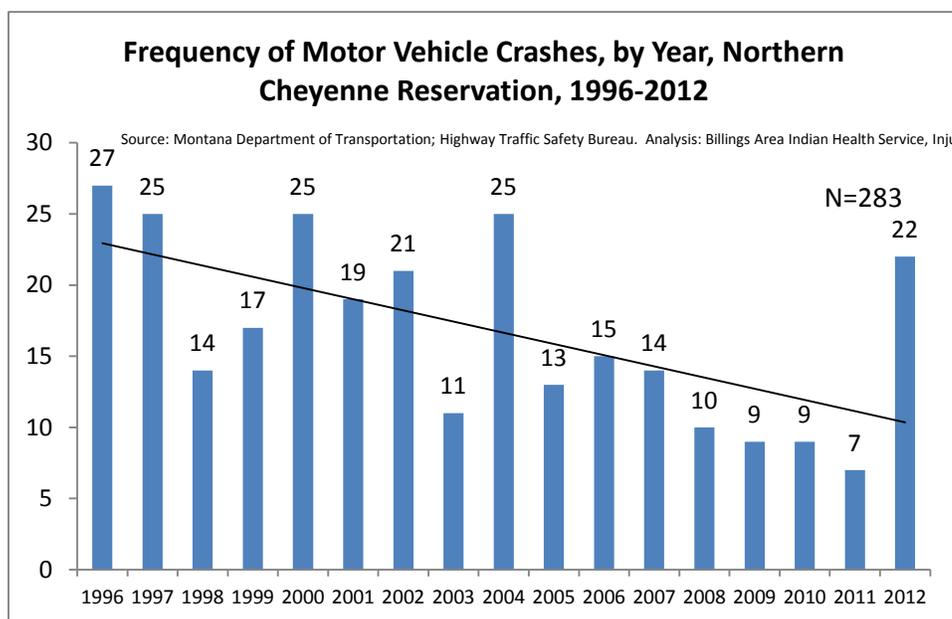
- Expand the safety committee
- Implement 2006 Engineering Study recommendations
- Secure funding for child seats
- Fill the SOAR coordinator position
- Develop a sample Tribal traffic code for Council review
- Relocate street vendors from Cheyenne Avenue
- Install new sidewalks to the Lane Deer High School

While the 2008 TSMP plan was a good start for the Northern Cheyenne Tribe and current data shows that the majority of years following implementation showcased a decrease in crashes, injuries and fatalities, the plan was not heavily data-driven and needs an update to reflect present-day conditions. To assist with the update, the Northern Cheyenne Reservation Tribal Transportation Program (TTP) applied and received funding from FHWA TTP Safety Funding.

DATA ANALYSIS

In order to develop a TSMP, available crash data is analyzed and utilized in the identification of issues and development of strategies. Data is also an important resource as Tribes apply for federal and state safety funding, as many, if not all of the funding agencies request data to support the grant application. Available crash data shown in this plan was provided by MDT to the Billings Area Indian Health Services. The data was analyzed to identify contributing factors to deaths and injuries on the Reservation.

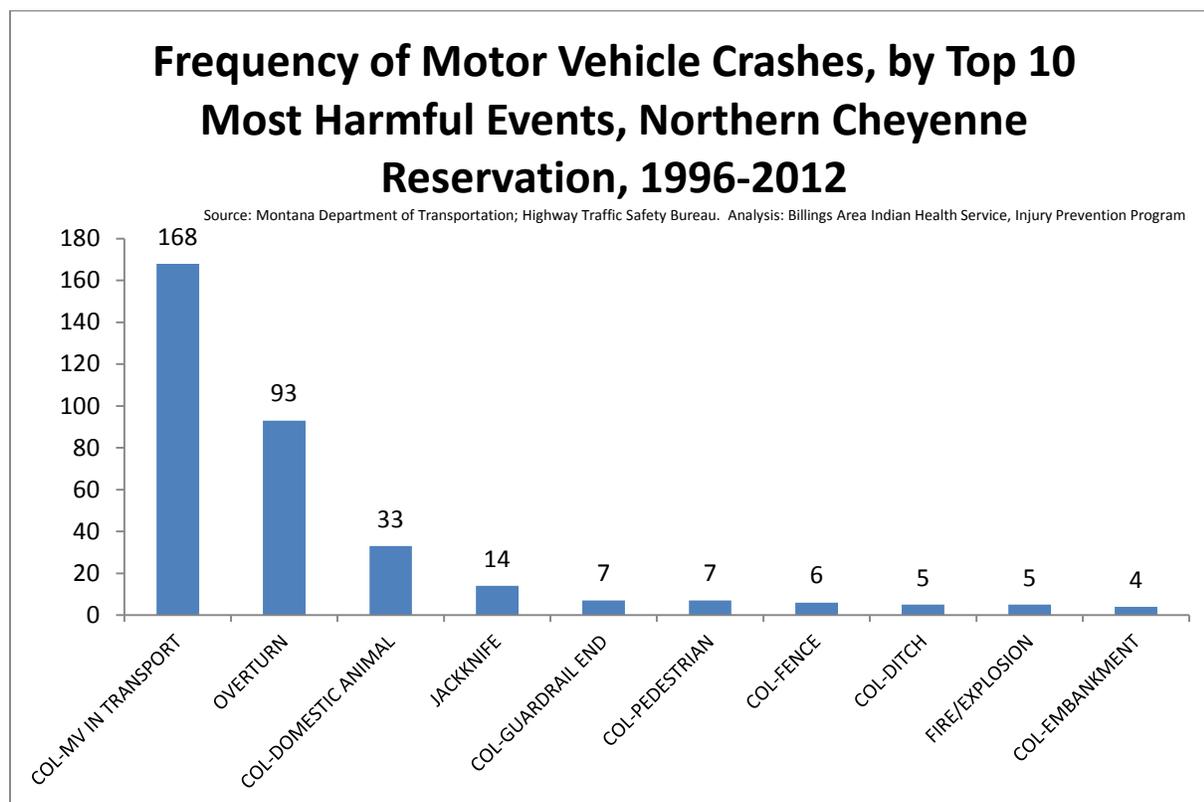
TOTAL CRASHES



From 1996 until 2012, there were more than 283 crashes on the Northern Cheyenne Reservation according to MDT data. The chart to the left shows the overall trend is in a downward direction, with the last year of available data indicating an increase in crashes. Data also showed that the crashes overwhelmingly involved male drivers ages 25-34, with most crashes having occurred during clear, daylight hours and on dry roadways.



The total number of crashes shown in the previous graph have been separated into the 10 most common causes of most harmful events. Of the top 10 most harmful reoccurring events shown, more than 70 percent of events occurred in three categories. The categories are collisions with other moving vehicles, single vehicle overturning crashes and collisions with wild animals. Jackknifed semi-trucks with trailers, roadway and roadside crashes with fixed objects, collisions with pedestrians, roadway features and fire/explosion all show up in the data, but as can be seen below, these are significantly lower than the top three issues.

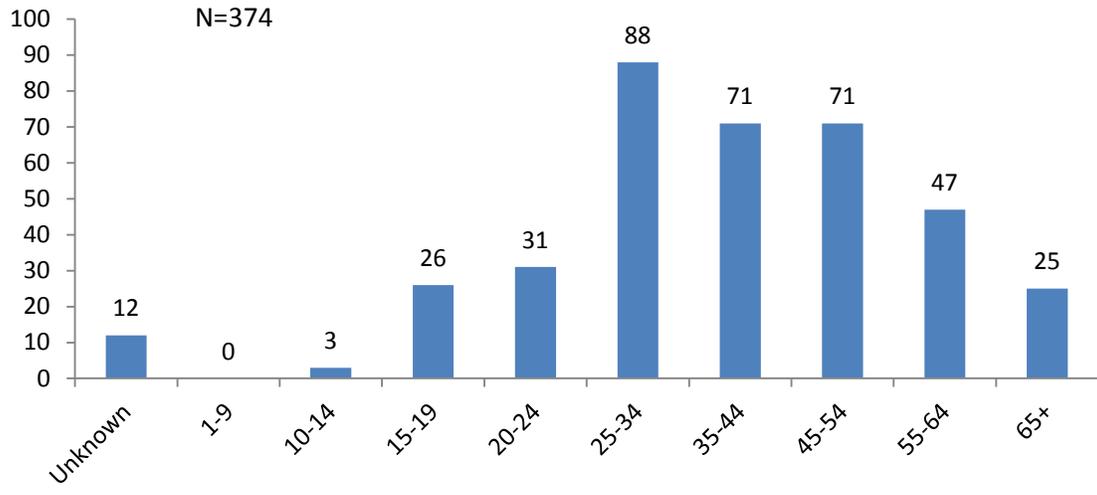


As has been seen in many Tribal and non-Tribal communities, drivers between the ages of 15 and 44 are involved in the majority of crashes. Of the crashes occurring on the Reservation, the largest proportion of crashes are occurring in the 25-34 year old age group, at nearly 25 percent of all crashes. This is followed by an equal number of crashes for the 35-44 and 45-54 age groups. The number of crashes in these categories are most likely driven by the high number of crashes reported on the state highway system and little or no data being available from the BIA police. Data from other Tribal communities has shown that when this data is included, there is an increase in younger driver crashes. Data shows that education or training targeting these age groups may contribute to reducing crashes. Additional educational or training opportunities targeting the 15-19 and 55-64 age groups may also contribute to reducing crashes.



Frequency of Motor Vehicle Crashes, by Driver Age Group, Northern Cheyenne Reservation, 1996-2012

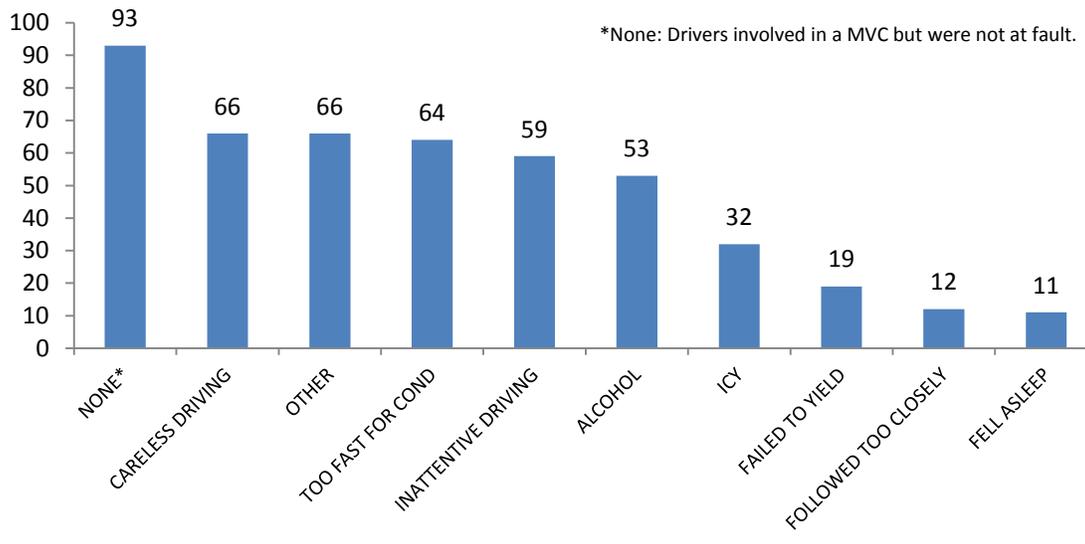
Source: Montana Department of Transportation; Highway Traffic Safety Bureau. Analysis: Billings Area Indian Health Service, Injury Prevention Program



Available data indicates that the leading crash contributing circumstances are careless driving, other and too fast for conditions. Inattentive driving and alcohol involved crashes also were identified in a significant number of crashes. Again, this data is predominantly from the state highway system and crash causes on the BIA routes may vary from these.

Frequency of Overall Motor Vehicle Crashes, by Top 10 Contributing Circumstances, Northern Cheyenne Reservation, 1996-2012

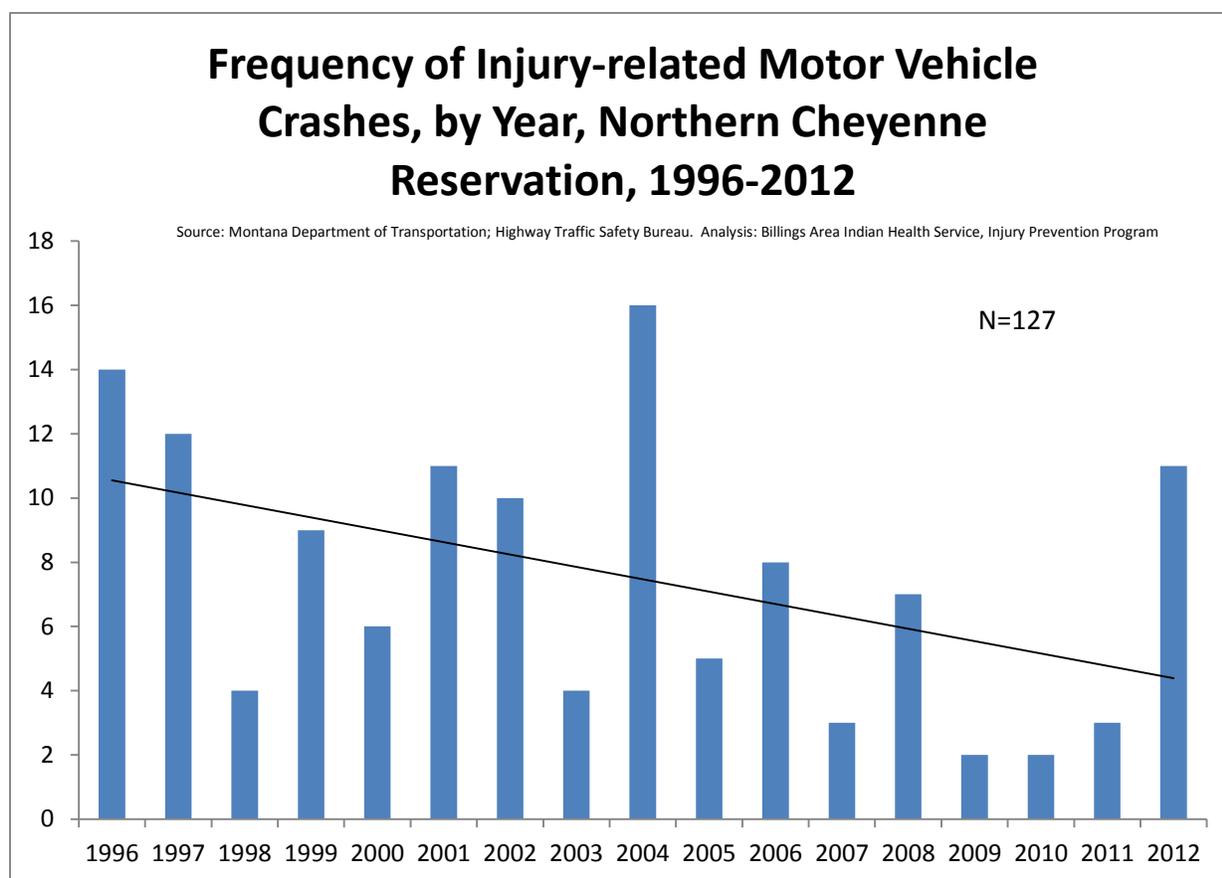
Source: Montana Department of Transportation; Highway Traffic Safety Bureau. Analysis: Billings Area Indian Health Service, Injury Prevention Program





INJURY CRASHES

The graph below includes injury crashes for the Reservation between 1996 and 2012. The downward trend in the number of injuries indicates currently injuries are going down, but as can be seen there is high variability from year to year. One year there will be few reported injuries, and the following year there will be a large increase. While the downward trend indicates movement in a positive direction and is encouraging, it still needs to be noted that in the analysis period from 1996 to 2012 there were 127 injury crashes on the Reservation.

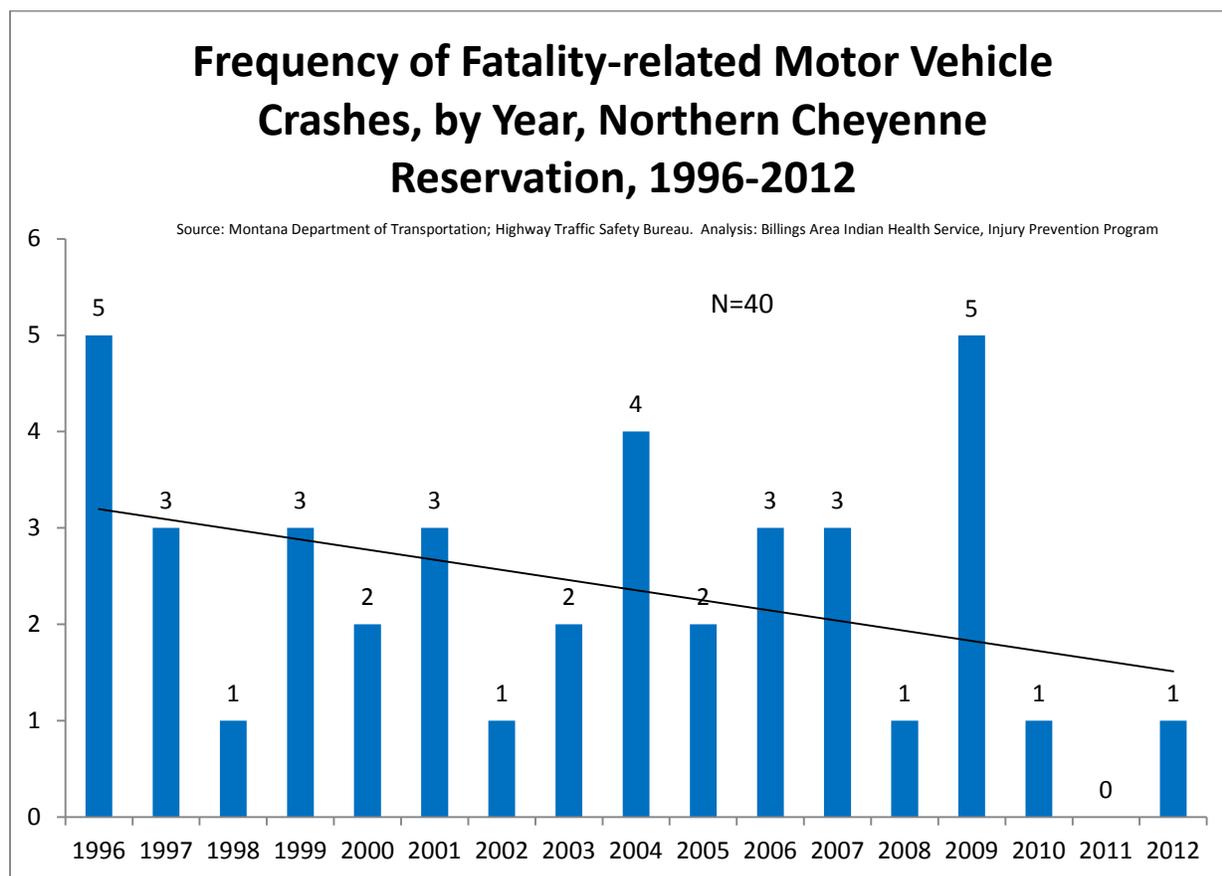


Data provided does not distinguish between Tribal or non-Tribal members. The majority (75 percent) of injury-related crashes occurred on Highway 212, were single-motor vehicle crashes (60 percent) and occurred during April, August and September. Male drivers, age group 25-34 were the highest involved in injury-related crashes at 18 percent. Further breakdown of crash data indicates that injury-related crashes occur between Tuesday and Saturday, with the highest numbers on Fridays (16 percent) and Saturdays (18 percent).



FATAL CRASHES

From 1996 to 2012 there were 40 fatalities related to occupants in automobile crashes on the Northern Cheyenne Reservation.



While the graph of the number by year shows a generally downward trend, this is still a significant number. While the number of fatalities is inconsistent, the low numbers in 2008 through 2012 (except 2009) are a source for optimism that the safety programs that have been implemented are having an effect.

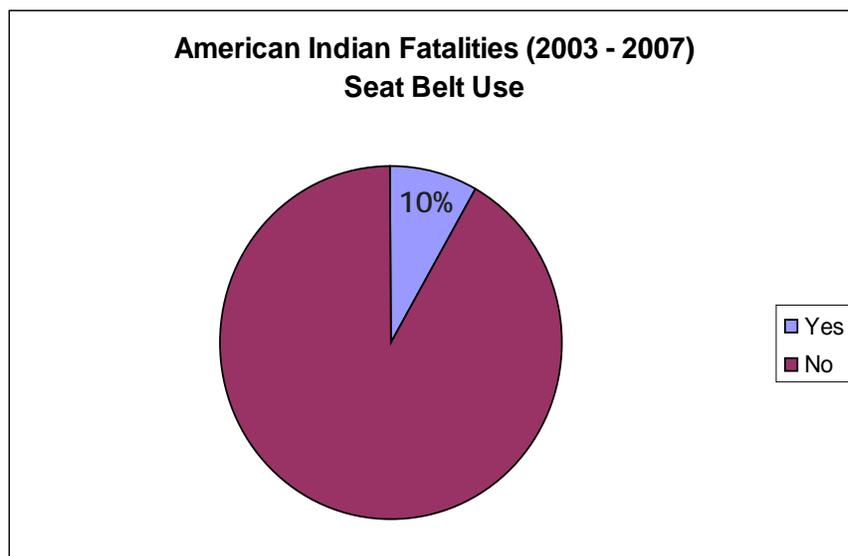
Further data analysis indicates the majority of fatality-related crashes are single motor vehicle crashes, occurring on Highway 212, and during July, August, November and December. The majority of the fatality-related crashes occurred on Wednesdays (27 percent). Data also showed that the crashes were overwhelmingly male drivers ages 20-44, with crashes that occurred during clear, daylight hours and on dry roadways.

Although the data does not outline contributing circumstances, crash data infers that overturning vehicles and collisions with another vehicle crashes are the overwhelming cause of fatal crashes. These two harmful events combine for more than 90 percent of all crash events.



SEAT BELT DATA

No specific seat belt data from current observations was available during the development of the Tribal transportation safety plan. MDT data for the period from 2003 to 2007 is shown in the chart. This data is for all Native American fatalities state-wide and not just those on the seven reservations. The data shows that lack of seat belt use on all reservations is a significant



issue in 9 out of every 10 Native American crash fatalities. Additionally, more recent data compiled by MDT in 2011 shows that nearly 40 percent of injury crashes in the state involving Native Americans did not utilize proper restraints. For a future update to this plan, seat belt surveys should be conducted to gather more current and location specific data for the Northern Cheyenne Reservation.

2015 TRIBAL TRANSPORTATION SAFETY MANAGEMENT PLAN

This 2015 Plan was developed using available data and personal knowledge and expertise of the participants that attended the planning meeting. The group included city, county, state, federal and Tribal safety representatives from engineering, enforcement, education, emergency disaster services and the school systems. A list of participants for both meetings is included in Attachment B.

The planning group reviewed the 2008 Plan and available crash data and utilized it as a basis to develop a list of issues that are currently affecting transportation safety on the Northern Cheyenne Reservation. The group then identified the programs that currently exist on the Reservation and identified additional strategies that need to be implemented to address these safety issues. The next three sections document these discussions and the outcomes.



ISSUES CAUSING CRASHES ON THE NORTHERN CHEYENNE RESERVATION

The crash data analysis, combined with the committee observations, identify a number of transportation safety issues causing crashes, increasing crash severity or restricting complete data analysis. Many of these issues were identified in 2008 and include:

- Crashes with fixed objects
- Commercial vehicle crashes
- Pedestrian crashes
- Single vehicle crashes
- Overturning crashes
- Impaired driving
- Younger drivers
- Speeding
- Inattentive drivers
- Icy roads
- Lack of seat belt use
- Animal crashes
- Lack of availability of BIA crash data

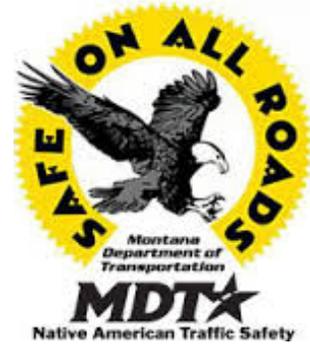
The group identified a number of other transportation safety issues based upon personal experience that are causing crashes, increasing crash severity or are otherwise creating transportation safety concerns in the local communities. These include:

- Lack of drivers education for youth
- Lack of a Tribal Traffic Code
- No Traffic Safety Officer
- Lack of cell coverage in the area
- Advance warning for school bus stops
- Road maintenance



EXISTING SAFETY PROGRAMS ON THE NORTHERN CHEYENNE RESERVATION

The Northern Cheyenne Tribe has implemented or is working on a number of safety projects and programs to address transportation safety issues on the Reservation. The list is not all inclusive, but documents the programs that the group participating in the development of the safety plan were aware of.



- The SOAR program is established and a program coordinator is in place
- The Tribe has a Primary Seat Belt Ordinance that includes a \$25 fine
- Presentations have been made in the school system
- The Tribe has an established Transit Program
- The Tribe has a certified restraint technician doing seat belt clinics with scheduled community events



- Tribal Police have enforced the seat belt ordinance
- The Tribe has provided child seats in the past
- The Tribe has held child seat safety classes
- The Tribe has utilized Community Transportation Enhancement Program (CTEP) funding for sidewalks and paths

IMPLEMENTATION STRATEGIES

The plan's main goal is to use a multi-disciplinary approach to identify safety strategies for implementation that can address the transportation safety issues on the Northern Cheyenne Reservation. The strategies are intended to be implemented over the next several years and each have a Strategy Champion and Funding Opportunities identified. The strategies were developed as a comprehensive approach to safety, including engineering, enforcement, education and emergency management opportunities.



Education Strategies

- **Participate in a Mock Crash Event with Multiple Casualties**

Government agencies at all levels have used mock events to increase publicity of a program and to test and improve emergency response to an incident. This activity would utilize a mock traffic crash on the Northern Cheyenne Reservation. The Northern Cheyenne Disaster and Emergency Services (DES)



is required to annually complete a test of the emergency response system to local events. With the number of large commercial vehicles that traverse the Reservation, it was determined that a crash involving a truck and a school bus would be an event that could require multiple agency response. The DES, transportation and school system would partner to hold this mock crash event that would be designed and completed with the help of the youth in the community. The event would allow for the sharing of traffic safety information with the students, as well as an opportunity to test and improve emergency response to such a major event. The funding would be used to develop informational materials to be used in the community, for emergency response costs to participate and to video tape and take digital images of the event. The video and images would then be used to develop posters and other safety promotional items to be used in the community.

Strategy Champion: Tribal SOAR Coordinator, Northern Cheyenne DES Coordinator, Lame Deer High School.

Funding Opportunity: TTP Safety Funding and BIA Indian Highway Safety Program (IHSP) Funding.



- **Establish a Youth Drivers Education Program**

During the development of the Northern Cheyenne Tribal Safety Plan, there was discussion about driver education programs for younger drivers. These programs have changed over the years from one that was provided through the school system to one where participants are required to pay for the classes and behind the wheel training. This has resulted in many community youth not taking classes due to the inability to pay for this service. Crash data that was analyzed for the Reservation does not show that crashes involving younger drivers as the highest in numbers, but with the fewer number of younger licensed drivers and the high traffic volumes on US 212, they are still high in rate, particularly when looking at fatal crashes. This has also been an issue with other Montana Tribes where they have discussed requiring completion of a driver's education program as a graduation requirement. Coordination needs to occur with the Montana Office of Public Instruction (OPI) and Tribal schools to establish a program to meet the needs of the Tribal community.

Strategy Champion: Tribal SOAR Coordinator, MDT SOAR Coordinator.

Funding Opportunity: MT OPI Funds, TTP Safety Funding and BIA IHSP Funding.

- **Continue and Expand the Reservation-Wide Transportation Education Program**



The Northern Cheyenne Tribe have a SOAR Coordinator who works with law enforcement, schools and other interested parties on the Reservation to provide education on transportation safety, particularly to younger drivers on behavioral issues such as seat belt use, texting and driving, impaired driving and child restraint. With the high rate of crashes, this has been an important program in reducing crashes.

This project would use and build on national safety campaign themes on impaired driving, seat belt use, texting and driving and other transportation safety issues, by using local leaders, or other easily recognizable individuals from the Tribal community to promote these safety themes. Many safety campaigns across the country have shown a greater rate of success when they are made culturally relevant to the Tribal audience and utilize local talent to deliver the safety message. The SOAR Program has received funding for items in the past, but funding is not sufficient for larger items such as Public Service Announcements



(PSA), Arrive Alive Programs, billboards using local artistry, banners, videos, Tribal safety posters and other safety education materials that would be used in education programs, during Pow Wows and at other community events.

Strategy Champion: Northern Cheyenne Transportation Program and Tribal SOAR Coordinator.

Funding Opportunity: TTP Safety Funding, BIA IHSP Funding.

Enforcement/EMS Strategies

- **Develop a Cross Jurisdictional Agreement**

With the staffing challenges faced by all enforcement agencies, many Tribes, states and local jurisdictions have entered into cross jurisdictional agreements to expand their enforcement abilities. In the past the Northern Cheyenne have explored the use of a cross jurisdictional agreement, but currently none is in place. Positive benefits of such an agreement should be presented to the Tribal Council and



determine whether they are open to such an opportunity. It may be desirable to invite Tribal Council and/or Tribal law enforcement from other Montana Reservations where cross jurisdictional agreements are in place to discuss the benefits and some of the challenges that they have experienced.

Strategy Champion: Northern Cheyenne Law Enforcement

Funding Opportunity: None required



- **Develop a Livestock Ordinance**

With the rural nature of much of the land on the Northern Cheyenne Reservation and the large amount of open range, crashes with domestic livestock are the third leading cause of crashes. Many animals, including horses that get loose, wander along the roadway corridors grazing or moving from field to field. Other Tribes in Montana have had similar issues and have implemented Tribal ordinances that allow the Tribal government to remove the animals and hold them until the proper owner comes to retrieve them. Animals not claimed are then auctioned off by the Tribe. The Blackfeet Tribe have a comprehensive approach including such an ordinance and an aggressive fencing program that could be utilized to address the issue.

Strategy Champion: Tribal SOAR Coordinator Tribal Council.

Funding Opportunity: None Required.

- **Establish a Tribal DUI Task Force**

Many Tribes across the high line in Montana, including Fort Belknap, Fort Peck, Blackfeet and Rocky Boys are forming a multi-Tribe DUI and Drug Task Force to combat the high levels of impaired driving crashes and deaths occurring on all Reservations in the area. The Northern Cheyenne independently or with The Crow Tribe, with their high number of fatalities and high rate of impaired driving could establish a similar program. Historically, enforcement agencies have been one of the main partners in these groups and while they continue to play an important role, several other Tribal partners including transportation, EMS, SOAR and Indian Health Service should consider actively participating.

Strategy Champions: Northern Cheyenne Law Enforcement, Northern Cheyenne Transportation Program, EMS, Indian Health Service and Northern Cheyenne SOAR Coordinator.

Funding Opportunity: Depending on specific activities the task force chooses to pursue, TTP Safety Funds, BIA IHSP Funding or MDT National Highway Traffic Safety Administration (NHTSA) Funding may be applicable.



- **Implement a 24/7 Impaired Driving Program**



Several Tribes in Montana have expressed an interest in acquiring and using a distracted driving simulator that could be used with youth in the Tribal communities. This system allows participants to use the simulator to experience what situations, such as texting and driving or driving while impaired, feel like from a driver's perspective. Sessions could be set up or equipment could be purchased and used jointly

by Tribes across Montana at community events and school activities. Groups such as Unite at: <http://arrivealivetour.com/unite/> have the necessary equipment and expertise. The Blackfeet Tribe and MDT SOAR Program will take the lead in researching this opportunity and applying for safety funds. The expected cost of this system is approximately \$10,000.00.

In addition to the impaired driving simulator, the Northern Cheyenne Tribe would like to expand on this effort and work with BIA Law Enforcement and the Tribal Court System to work with DUI offenders to provide additional training, support, counseling and monitoring to assist in reducing the number of repeat offenders. This two-pronged approach of training and intervention could help in reducing distracted and impaired driving crashes.

Strategy Champion: Tribal SOAR Coordinator, MDT SOAR Coordinator, Northern Cheyenne Law Enforcement and Northern Cheyenne Courts.

Funding Opportunity: TTP Safety Funding or BIA IHSP Funding

- **Participate in Advance Roadside Sobriety Training**

The BIA Law Enforcement personnel are all graduates of a law enforcement academy and have training in many areas of enforcement, impaired driver recognition and crash reporting, but they do not have the Advanced Roadside Sobriety Training. This series of courses would enhance their ability to identify drug and alcohol impaired drivers and the ability to make roadside interventions. While this training is available through the State of Montana, it would be desirable to hold it on or near the Reservation so all enforcement personnel could attend.



Strategy Champion: Tribal SOAR Coordinator, MDT SOAR Coordinator, Northern Cheyenne Law Enforcement and Montana Highway Patrol.

Funding Opportunity: TTP Safety Funding and BIA IHSP Funding.

Engineering

- Perform Road Safety Audits on BIA, Tribal and County Roads



Road Safety Audits (RSA) have been an important tool for many Tribes and one that the Northern Cheyenne Transportation Department have utilized for several years. RSAs provide an opportunity to bring traffic and safety expertise to help in assessing the safety concerns of routes where there are high numbers of severe crashes, or where they have specific

concerns. With the completion of an RSA by the MDT on US 212, the safety performance and needs of that route have been assessed and are currently being implemented. These safety audits now need to expand to the BIA and Tribal Roadway network. The goal of the RSAs is to identify safety issues and then develop transportation safety improvements that may include signing, lighting, striping, pathways, intersection improvements and other activities to address them.

Strategy Champion: Northern Cheyenne Transportation Program.

Funding Opportunity: TTP Safety Funding or utilize Crow Tribe RSA Coordinator.



- Develop Safety Project for Ashland Curve

BIA Route 11, US 212 and Rabbit Town Road intersect approximately one mile west of Ashland at a location where US 212 eastbound has a steep grade and a sharp horizontal curve, as shown in the picture below. The terrain in this location is also very steep, which creates an intersection with limited sight distance and limiting opportunities for adjusting the highway. Traffic, particularly large trucks, often have difficulty negotiating the curve when headed eastbound due to high speeds that are gained on the grade. This curve is currently being reviewed as part of a safety project on US 212 by MDT with signing and striping improvements pending. However, the intersection location could be improved by locating the intersection further to the east, allowing for better sight distance. This could also allow for other options on US 212, such as tall concrete barriers that are not currently an option due to the proximity of the intersection.



Strategy Champion: Northern Cheyenne Transportation Program and MDT

Funding Opportunity: TTP Safety Funding or MDT HSIP Funding.



- Develop Multi-Use Separated Paths



There are locations within the Northern Cheyenne Reservation where there is pedestrian/bike traffic, and the Tribe has identified a need for a separated pathway. The locations include to Lame Deer High School and along US 212 in Busby. MDT crash data identified seven pedestrian injuries and six pedestrian fatalities over the analysis period, so these are a major crash cause on the Reservation. Many of these injuries and fatalities have occurred in the

Busby area. Multi-use pathways allow for separation of pedestrians from vehicle traffic.



Lighting should be considered along urban or other pathways as appropriate to increase pedestrian visibility, provide for traffic calming and increase security. Solar powered and/or LED lighting could be used to reduce the cost for providing power and the need for continual power usage. An example of a solar powered lighting system is shown and several companies produce such systems.

Two priority locations have been identified where separated pathways would be beneficial to creating safer pedestrian and bicycling opportunities. These include:



- **Lame Deer High School**

This pathway would be located just south of Lame Deer, MT and connect the Lame Deer Junior High and High School with the multi-use pathway that is currently under construction. The pathway would address the needs of pedestrians, bicyclists and other non-motorized transportation users by connecting the existing multi-use path adjacent to BIA Route 4 with the Lame Deer Junior High and High School facility via BIA Route 4028, otherwise known as the Lame Deer School Access Road. The proposed path would extend the length of BIA Route 4028 from the intersection with BIA Route 4 (shown in yellow below) to the sidewalks at Lame Deer School, a distance of .48 miles. This would result in a new lighted off-road path that also connects to the existing path to form continuous pedestrian and bike access from the town of Lame Deer to the Junior High/High School facility. The pathway and lighting would cost an estimated \$485,000, including design and construction.



Strategy Champion: Northern Cheyenne Transportation Program and Lame Deer High School.

Funding Opportunity: TTP Safety Funding, TTP Funding or MDT Transportation Alternatives Funding.



- **Busby Pathway**

This pathway located in Busby, MT would start at the post office on the east end of town and run along the north side of US 212 through the residential community. The pathway would then cross US 212 and run on the south side of the highway and terminate at the Trading Post. As previously mentioned, there have been a significant number of pedestrian injuries and fatalities in Busby and foot traffic is frequently seen on the roadway. This project is currently being designed as shown in the image below. The path would provide safe pedestrian and bike access throughout town and include pedestrian-activated flashers for the crossing. The pathway would be 1.0 miles long and cost an estimated \$450,000, including design and construction. Lighting for the pathway is being provided by MDT as a result of RSA recommendations.



Strategy Champion: Northern Cheyenne Transportation Program and MDT.

Funding Opportunity: TTP Safety Funding, TTP Funding or MDT Transportation Alternatives Funding.



- **Assess School Bus Stop Locations**

There are multiple school bus transportation programs that currently pick up and drop off students on state, BIA, Tribal and county roads each day. As part of recent TTP projects, the Tribe has begun to develop school bus turnouts within Tribal Housing in an effort to get the buses off of major roadways, particularly US 212. There continue to be many isolated locations where buses stop for small group or individual pickups. These stops within the Reservation should be reviewed for sight distance and other safety issues to determine if advance signing is appropriate.

Strategy Champion: Northern Cheyenne Transportation Program, MDT and School Districts.

Funding Opportunity: TTP Safety Funding or TTP Funding.

Safety Planning/Other

- **Improve Crash Data Collection and Sharing**

As was discussed in the data section of this plan, the statistical data that is presented relies almost solely upon crash data from the State of Montana and includes very minimal Northern Cheyenne Police crash data. One of the main reasons for this is that the Tribal Law Enforcement currently do not have an electronic records system in place that is capable of sharing all or partial data. In the past the CISCO Crash Records System was in use, but the license and support have since lapsed. There are a number of crash records systems available, but the Montana Highway Patrol (MHP) has recently implemented a new system that includes a web-based interface for city, county and Tribal governments. Many Tribes have started using electronic crash record systems and many of the most successful implementation have been where the program and forms used are supported by the state and they are able to provide training and support. The Northern Cheyenne Law Enforcement should work with MHP to review the system and hardware and software requirements for Tribal implementation.

Strategy Champions: Northern Cheyenne Law Enforcement and MHP.

Funding Opportunities: MHP has indicated there is no cost for use of the system and training, if hardware or other costs are identified, TTP Safety Funding or BIA IHSP Funds should be applied for.

NORTHERN CHEYENNE TRIBE

2015 TRIBAL TRANSPORTATION SAFETY PLAN

ATTACHMENT A

TRIBAL TRANSPORTATION SAFETY PLAN MEETING AGENDA





ATTACHMENT A

Northern Cheyenne Tribal Safety Plan, October 7, 2014

Agenda

- 10:00 a.m. Welcome and Introductions
- 10:15 a.m. Background and Overview
- Discussion of Tribal Safety Plans, including need for
 - Review of 2008 Northern Cheyenne Safety Plan
 - Presentation of Crash and Safety Data
 - Questions and Discussion of Data
- 11:00 a.m. Northern Cheyenne Tribe existing safety approaches (this is any practice the Tribe is utilizing to address transportation safety i.e. education to public, crash reporting/processes, EMS or engineering projects)
- 11:30 a.m. Development of Activities for updated Northern Cheyenne Tribal Transportation Safety Plan:
- Identification/Discussion of Safety issues and concerns
 - Safety approaches to include
 - Safety approaches to develop
 - Integration with other safety plans
- 12:00 Lunch
- 1:00 p.m. Finalize Development of Safety Activities to include in Plan
- Sort by 4E's
 - Identification of Implementation Steps
 - Identification of Champions for Specific Elements
 - Identification of Potential Funding Sources
- 2:30 p.m. Questions/Discussion of Process or other Items
- 3:00 p.m. Wrap up and/or Site Visit to any Locations

NORTHERN CHEYENNE TRIBE

2015 TRIBAL TRANSPORTATION SAFETY PLAN

ATTACHMENT B

TRIBAL TRANSPORTATION SAFETY PLAN MEETING PARTICIPANTS





ATTACHMENT B

NORTHERN CHEYENNE TRIBE TRANSPORTATION SAFETY PLAN

October 7, 2014 Meeting Participants

Name	Representing	Phone Number	Email Address
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Rynalea Pena	N Cheyenne Head Start Transportation Manager	477-6346x21	

NORTHERN CHEYENNE TRIBE

2015 TRIBAL TRANSPORTATION SAFETY PLAN

ATTACHMENT C

CRASH MAPS



The Northern Cheyenne Tribe Motor Vehicle Crash Site Identification Project

1996-2012

Fatal, Injury, and Property Damage-related Motor Vehicle Crashes



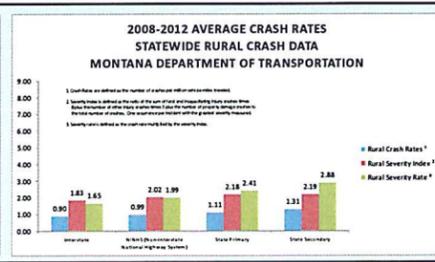
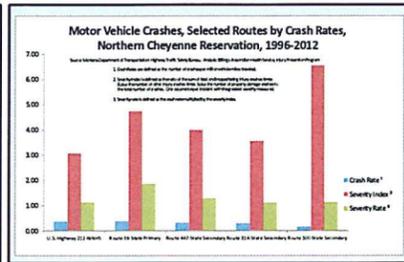
IHS Injury Prevention
Advocacy, Outreach and Results



This map was created by Darcy Merchant, MPH, REHS, Staff Sanitarian, Billings Area Indian Health Service, Division of Environmental Health Services, Injury Prevention Program, 2014

Legend

Town	Road	Injury MVC
Reservation Boundary	Unpaved Road	Property Damage MVC
County Boundary	Fatal MVC	Fatal & Injury MVC



This map was developed by the Indian Health Service, Division of Environmental Health Services, Injury Prevention program to illustrate severe Motor Vehicle Crashes (MVCs) for the Northern Cheyenne Tribe of Montana.

Data was compiled from the Montana Department of Transportation for years 1996-2012. This dataset is from Montana Highway Patrol's response to severe motor vehicle crashes on the Northern Cheyenne reservation. No tribal law enforcement crash data was available.

The Northern Cheyenne Tribe Motor Vehicle Crash Site Identification Project 1996-2012

Fatal and Injury-related Motor Vehicle Crashes



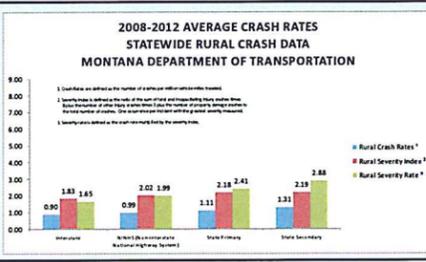
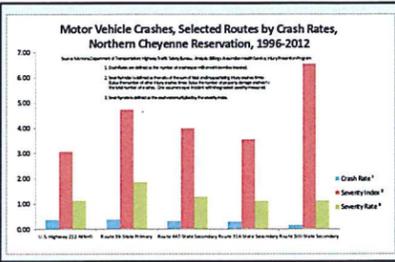

IHS Injury Prevention
 Advocacy, Outreach and Results



This map was created by Darcy Merchant, MPH, REHS, Staff Sanitarian, Billings Area Indian Health Service, Division of Environmental Health Services, Injury Prevention Program, 2014

Legend

- ★ Town
- Reservation Boundary
- County Boundary
- Road
- - - Unpaved Road
- Fatal & Injury MVC



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Data was compiled from the Montana Department of Transportation for years 1996-2012. This dataset is from Montana Highway Patrol's response to severe motor vehicle crashes on the Northern Cheyenne reservation. No tribal law enforcement crash data was available.

The Northern Cheyenne Tribe Motor Vehicle Crash Site Identification Project 1996-2012

Fatality-related Motor Vehicle Crashes



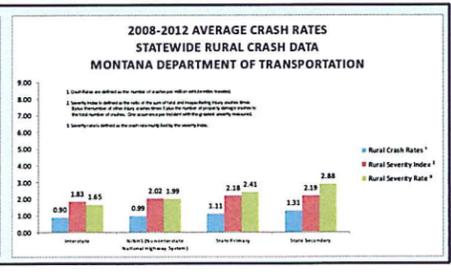
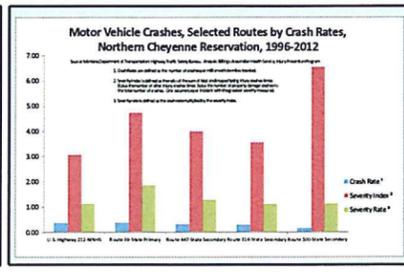
IIHS Injury Prevention
Advocacy, Outreach and Results



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Legend

- ★ Town
- Reservation Boundary
- County Boundary
- Road
- Unpaved Road
- Fatal MVC



This map was developed by the Indian Health Service, Division of Environmental Health Services, Injury Prevention program to illustrate severe Motor Vehicle Crashes (MVCs) for the Northern Cheyenne Tribe of Montana.

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