

ALASKA STRATEGIC HIGHWAY SAFETY PLAN



Vision: Everyone Counts: zero deaths and injuries on Alaska's surface transportation system.

Mission: Improve the safety of everyone through a proactive leadership structure and focus resources on the most effective solutions using evidence-based engineering, enforcement, education, and emergency response initiatives.

Goal: Reduce the rate of fatalities and major injuries by one third over the next 10 years.



State of Alaska

Strategic Highway Safety Plan

September 2007

Leo von Scheben, Commissioner

Alaska Department of Transportation and Public Facilities

This plan fulfills a new federal requirement that each state undertake a strategic plan to address highway safety, which is focused on the broadest spectrum of strategies and measures to address documented highway safety concerns. Further this plan is a component of the Statewide Long-Range Transportation Plan, also mandated by federal requirements. In meeting this federal mandate, we have pursued this task with energy and renewed emphasis. The reason is simple: too many Alaskans will be injured or die if we simply continue the status quo. We estimate between 750 and 1,000 persons will die on Alaska roads and highways in the next decade absent intervention. Many more will be injured including serious debilitating injuries. Our goal is simple: we wish to see the rate of highway deaths and injuries drop by at least one-third over the coming decade. This is a stretch goal, as history has shown that highway accidents are all too common, and derive from many causes. But other nations and states have shown that the rate of death and injury can be reduced, if strong leadership and strategies are deployed. For additional information or questions, contact:

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Adopted 2007 SHSP Becomes Component of Statewide Transportation Plan

This SHSP draws its authority from AS 44.42.050 and 23 USC 148 and is a component of the Alaska Statewide Long-Range Transportation Plan as defined in CFR 450.214 (d). In accordance with 17 AAC 05.150, I am proud to hereby approve and adopt the September 2007 Strategic Highway Safety Plan, as a component of the Alaska Statewide Long-Range Transportation Plan.

Adopted: _____

Leo von Scheben

Date: 9/28/2007

Alaska Strategic Highway Safety Plan



prepared by

Alaska Department of Transportation & Public Facilities
in a United Effort by Local, State, Federal, and Tribal Agencies to Save More Lives

with support from

Cambridge Systematics, Inc.
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Acronym Guide

Alaska Department of Transportation and Public Facilities (DOT&PF)
Alaska Highway Safety Office (AHSO)
Alaska Highway System (AHS)
Alaska Traffic Records Coordinating Committee (ATRCC)
Alaska Uniform Table of Offenses (AUTO)
Alcohol Beverage Commission (ABC)
All Terrain Vehicles (ATV)
American Association of State Highway and Transportation Officials (AASHTO)
Blood Alcohol Concentration (BAC)
Driving Under the Influence (DUI)
Department of Transportation (DOT)
Division of Measurement Standards and Commercial Vehicle Enforcement (MSCVE)
Fatality Analysis Reporting System (FARS)
Federal Highway Administration (FHWA)
Federal Motor Carrier Safety Administration (FMCSA)
Governors Highway Safety Association's (GHSA)
Graduated Drivers Licensing (GDL)
Highway Safety Improvement Program (HSIP)
Long-range Transportation Plan (LRTP)
Memorandum of Understanding (MOU)
Metropolitan Planning Organization (MPO)
Mobile Data Terminal (MDT)
National Cooperative Highway Research Program (NCHRP)
National Highway Systems (NHS)
National Highway Traffic Safety Administration (NHTSA)
Off-highway Vehicle (OHV)
Run-off-road (ROR)
Safe, Accountable, Flexible, and Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU)
Safe Routes to Schools (SRTS)
Strategic Highway Safety Plan (SHSP)
Traffic and Criminal Software (TraCS)
Uniform Offenses Citation Table (UOCT)
Vehicle Miles Traveled (VMT)

Executive Summary

People are dying on Alaska's roadways. From 2001-2005, 449 people were killed: 92 were under the age of 21; 57 were nonmotorists; 250 were unbelted; and alcohol was a factor in more than 40 percent of those fatal crashes as was speed. During this same period 2,920 people sustained major injury and another 31,592 people suffered some form of injury in a total of 71,113 total crashes on Alaska's roadways. In July 2007, during development of this plan, Alaska experienced its deadliest month in over a decade with 18 lives lost. If significant improvements are not made, nearly 1,000 people may die on Alaska's surface transportation system over the next 10 years. This would result in an economic cost to the State of nearly \$5 billion. These crashes are unacceptable, unaffordable, and most often avoidable.

In addition to facing driver behavior, infrastructure, law enforcement, and emergency response challenges, the State also must address how its own institutional structure is impacting transportation safety. For example, national research has found that every successful highway safety program has an influential individual or group of individuals to prove the impetus for the safety planning effort: Alaska does not have a safety "champion" at this time. Another challenge is the agencies responsible for transportation safety are not all housed under the same division, nor do they share the same mission. For example, currently the Division of Motor Vehicles is located within a state agency that does not have safety in its mission. Legislation has proven to be a powerful tool and a significant barrier to improving transportation safety throughout the United States and in other countries; however many of Alaska's traffic laws have not been updated since the beginning of statehood. Alaskans are unique in their dependence upon off-highway vehicles, but data reveal crashes involving these vehicles are on the rise. No one agency, however, has oversight of the use, training, or environment in which these vehicles are operated. Additionally, like in many other states, improvements in roadway safety will require increased human and financial resources.

Nationally the number of traffic fatalities has remained essentially unchanged over the past decade. Safety improvement requires progress toward reducing the crash experience of drivers, passengers, and other more vulnerable road users. The major focus and most visible commitment to transportation safety in the United States over the past two decades has been on vehicle crash worthiness and driver behavior; yet, the effectiveness of those strategies appears to have plateaued in terms of reducing the *number* of crashes, injuries, and fatalities. In 2003, former U.S. Secretary of Transportation Norman Mineta issued a "Call to Quarters" and set a national goal of reducing fatalities to a rate of 1.0 per 100 million vehicle miles traveled (VMT) by 2008.

In July 2005, Congress reauthorized the highway bill, and in August the Safe, Accountable, Flexible, Efficient Transportation Equity Act – A Legacy for Users

(SAFETEA-LU) was signed into law. Section 148 of the highway bill provides guidance and funding for the Highway Safety Improvement Program (HSIP). To obligate HSIP funds, states must:

- Develop and implement a Strategic Highway Safety Plan (SHSP);
- Produce a program of projects or strategies;
- Evaluate the plan on a regular basis; and
- Submit an annual report to the Secretary (see Appendix A for further details).

“The care of human life and happiness ... is the first and only legitimate object of good government.”

–Thomas Jefferson

The Act codifies the American Association of State Highway and Transportation Officials’ (AASHTO) recommendation that all states develop a SHSP. This Act calls for state departments of transportation (DOT) to work collaboratively with multiple safety stakeholders to develop the SHSP. The plans are to be based on problems identified on all public roads. States are required to establish a system that identifies hazardous locations, sections, and elements “using such criteria as the State determines to be appropriate, establish the relative severity of those locations, in terms of accidents, injuries, deaths, traffic volume levels, and other relevant data.” SAFETEA-LU also requires the DOTs to submit to the U.S. Secretary of Transportation an annual report describing not less than five percent of locations exhibiting the most severe safety needs, with an assessment of potential remedies for the identified hazardous locations, estimated costs associated with remedies, and impediments to implementation other than cost.

The *Alaska Strategic Highway Safety Plan* was developed by the Alaska Department of Transportation & Public Facilities (DOT&PF), Division of Program Development with multiple Federal, state, local, and tribal safety planning partners. The SHSP was developed to make Alaska’s highways safer for all users. The authors of the *Alaska Strategic Highway Safety Plan* share a common goal to **reduce the rate of fatalities and major injuries by one-third over the next 10 years** and a vision of **zero deaths and injuries on Alaska’s surface transportation system**. Achieving that goal will require strong leadership, targeting resources at the areas with the greatest opportunity for improvement, and a combination of bold strategies spanning all safety-related disciplines. Therefore, the mission of the *Alaska Strategic Highway Safety Plan* is to **improve the safety of everyone through a proactive leadership structure and to focus resources on the most effective solutions using evidence-based engineering, enforcement, education, and emergency response initiatives**.

With this vision, mission, and goal in mind, the *Alaska Strategic Highway Safety Plan* was written to address the State’s most severe surface transportation system problems, including impaired and aggressive driving; crashes involving young drivers, unlicensed or suspended drivers, motorcycle operators, pedestrians, and bicyclists; and lane departure and intersection-related crashes. Additional issues identified as unique or imperative to improving the crash problem in Alaska also are addressed in the SHSP, including improving the State’s traffic records; reducing crashes involving moose; and reducing crashes involving off-highway vehicles, a major mode of transportation for many

Alaskans. These issues are described in detail in Section 1.0 of this plan. Section 2.0 describes the planning process adopted by the Alaska DOT&PF. The State's plan for mitigating its most significant crash problems is provided as Section 3.0, and the State's plan for implementing the SHSP is described in Section 4.0. Several appendices also are incorporated in this plan.

1.0 Roadway Safety in Alaska

The Alaska Department of Transportation and Public Facilities (DOT&PF) is committed to reducing traffic-related death and injury. As part of its efforts to make Alaska's roadways safer, the Alaska DOT&PF invited safety stakeholders from around the State to help it develop a comprehensive, strategic plan for saving lives and reducing severe injuries. In development of the *Alaska Strategic Highway Safety Plan* (SHSP), the Department reviewed state crash data related to many of the emphasis areas listed in the American Association of State Highway and Transportation Officials' (AASHTO) *SHSP*.¹ The Alaska DOT&PF along with its planning partners (see Section 2.0), examined several years of fatal and major injury data and compared state and national trends. Although several roadway safety issues were identified, including distracted driving, safety belt use, and others (as documented in the Alaska DOT&PF's *Safety Status Technical Report*), the Alaska SHSP focuses on the areas of greatest need and potential for improvement over the life of this plan. This section presents and describes a variety of statistics that illustrate the traffic safety issues to be addressed through implementation of the Alaska SHSP.

It is important to note that further analysis may be needed during implementation of this plan. The following information was developed through analysis of multiple data sources, including:

- Alaska Dataport – Alaska DOT&PF;
- Fatality Analysis Reporting System (FARS) - National Highway Traffic Safety Administration (NHTSA);
- Alaska Department of Labor and Workforce Development (population data);
- Alaska Court System; and
- Alaska Trauma Registry.

Data is generally presented for a five-year period to show current trends. It is important to note that the State population and annual number of fatalities in Alaska are relatively low compared to the national average. As such, one fatality can significantly impact a rate or percentage. Interpretation of increases and decreases in rates or percentages, particularly from one year to the next, must be carefully examined. Therefore, raw numbers, rates, and percentages are provided in this report.

¹ AASHTO. *Strategic Highway Safety Plan – A Comprehensive Plan to Substantially Reduce Vehicle-Related Fatalities and Injuries on the Nation's Highways*, originally published in 1997, latest update from February 2005, available at www.transportation.org.

■ 1.1 Fatal and Major Injury Crashes in Alaska

Over the past five years, there have been fluctuations in the number of fatal and major injury crashes in Alaska. Table 1.1 shows a peak in the number of fatalities and fatal crashes was exhibited in 2004. This table also shows that the number of major injuries was at a peak in 2002-2003. A remarkable reduction in the number of fatalities was achieved in 2005, and preliminary data for 2006 indicates that this reduction has been maintained.

Table 1.1 Fatal and Major Injury Crashes and Rates^a

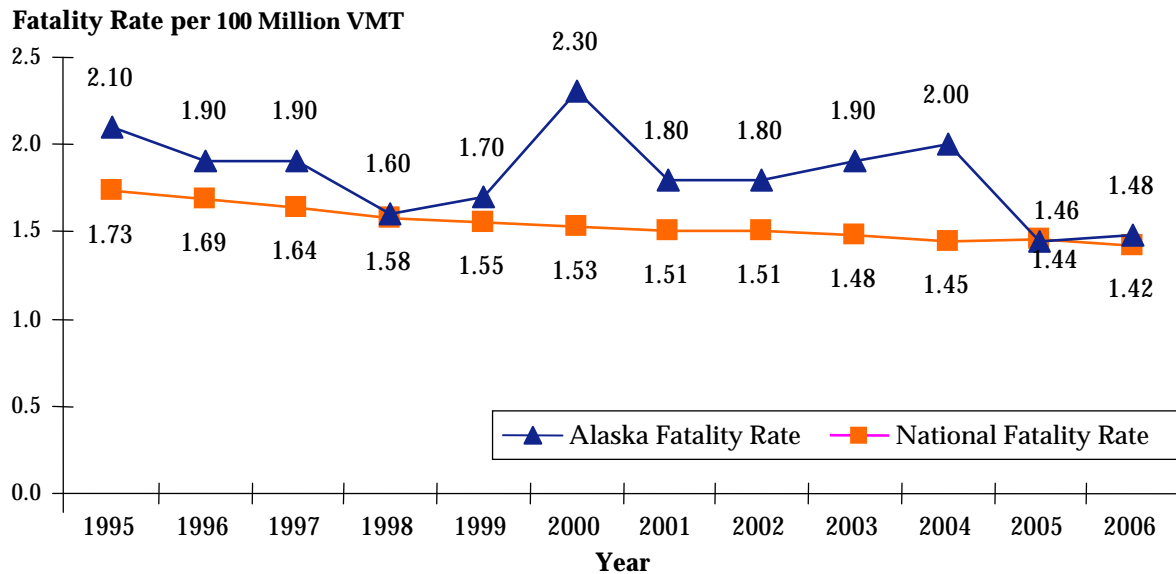
	2001	2002	2003	2004	2005	2006
Alaska Fatalities	89	89	98	101	72	74
Alaska Fatal Crashes	80	78	87	96	65	71
Alaska Fatality Rate [(per 100 million (M) vehicle miles traveled (VMT)]	1.80	1.80	1.90	2.00	1.44	1.48
National Fatality Rate (per 100M VMT)	1.51	1.51	1.48	1.45	1.46	1.42
Alaska Major Injuries	433	664	655	584	581	N/A
Alaska Fatalities and Major Injuries	522	753	753	685	653	N/A
Alaska Fatal and Major Injury Crashes	444	623	621	569	533	N/A
Alaska Fatal and Major Injury Rate (per 100M VMT)	11.1	15.4	15.3	13.7	13.0	N/A
Fatal and Serious Injury Rate (per 100K Population)	82.6	117.5	116.4	104.0	98.7	N/A

Source: FARS, Alaska Dataport.

^a When available, fatality data for 2006 is shown. A complete data set was not available prior to publication.

Figure 1.1 illustrates a general decline in the traffic fatality rate (per 100 million vehicle miles traveled (VMT)) in Alaska between 1995 and 2006. The decline was consistent with the decline in the national rate, although the State generally exceeded the national average with the exception of 2005.

Figure 1.1 Fatality Rate
Alaska Compared to U.S. Average



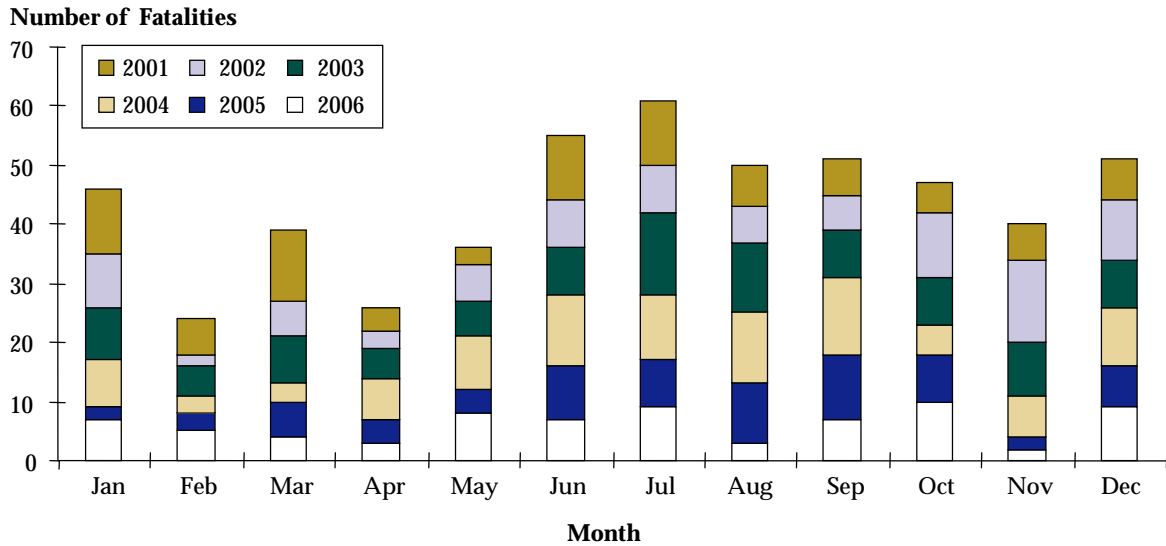
Source: FARS.

Figure 1.2 shows temporal trends in the number of traffic fatalities in Alaska. Two peaks are exhibited in this figure, one during the summer and one during the winter. The summer peak could be attributed to an increase in the number of trips made on Alaskan highways by both Alaskans and tourists. The peak in the winter could be attributed to dangerous driving conditions presented by winter weather.

From 2001 to 2005, there were more traffic collisions in the winter than in any other season. During this period, there were 48 percent more collisions in January, February, and December (23,131 collisions) than in the summer months of June, July, and August (15,578 collisions). Conversely, there were 32 percent fewer fatalities in January, February, and December (100 fatalities) than in the summer months (147 fatalities). While it is understood that more miles are driven in the summer months, meaning that there are more collisions in the winter on a per mile driven basis, these collision figures do indicate that a collision in the summer months is at least twice as likely to result in a fatality. Speeding may be a factor as it was a contributing factor in 49 of the fatal summer traffic collisions over the past five years. On the other hand, speed was a factor in only 36 fatal collisions for the winter months during that period.

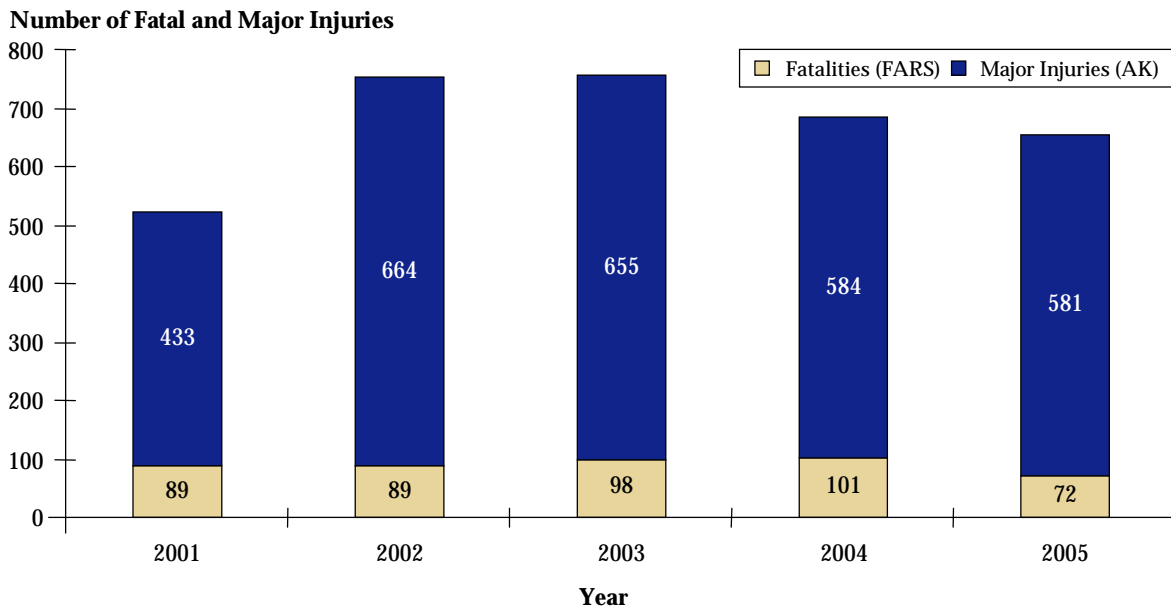
Figure 1.3 shows a comparison between the number of fatalities and the number of major injuries for each of the years from 2001 to 2005. The combined number of both fatal and major injuries was down in 2004 and 2005.

Figure 1.2 Fatalities by Month
2001 to 2006



Source: Alaska Dataport.

Figure 1.3 Alaska Fatal and Major Injuries



Source: FARS and Alaska Dataport.

Table 1.2 shows that while approximately two-thirds of crashes in Alaska occurred on non-Alaska Highway System (AHS) and non-National Highway System (NHS) roadways, only two-fifths of fatalities and slightly less than half of combined fatalities and major injuries incurred on non-AHS and non-NHS roadways over the past five years. This indicates that crashes on AHS and NHS roadways had a slightly greater likelihood of resulting in a fatality.

Table 1.2 Percent of Fatal and Major Injuries on Non-AHS and Non-NHS Roadways

	2001	2002	2003	2004	2005
Percent of Total Crashes on Non-AHS and Non-NHS Roadways	63.3%	63.0%	64.2%	64.6%	64.6%
Percent of Fatalities on Non-AHS and Non-NHS Roadways	32.6%	41.6%	45.0%	43.0%	43.2%
Percent of Fatal and Major Injuries on Non-AHS and Non-NHS Roadways	48.1%	50.6%	46.1%	49.4%	48.5%

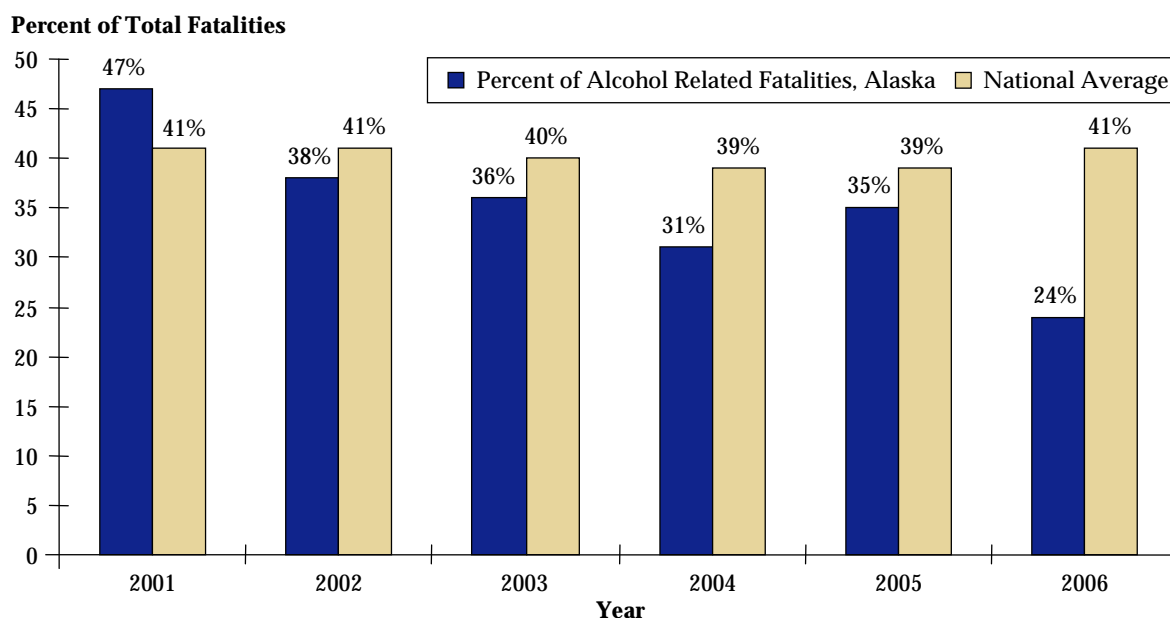
Source: Alaska Dataport.

■ 1.2 Drivers

Alcohol Impaired Driving

Figure 1.4 shows from 2001 to 2006 there was a general decline in alcohol-related traffic fatalities as a proportion of all fatalities. Although statistics for 2005 showed an increase in the alcohol-related share of fatalities, a conclusion cannot be made to determine whether this was an isolated occurrence or signaled a new trend. The large reduction in the number of total fatalities in 2005 was a factor that contributed to a large increase in the alcohol-related share of fatal crashes. Figure 1.4 also shows Alaska's alcohol-related traffic fatality rate has fluctuated around the national average. Data supplied by the Alaska Highway Safety Office (AHSO) indicate that in 2006, alcohol-related traffic fatalities represented a significantly lower percentage of all fatalities than in previous years, and is considerably lower than the national average.

Table 1.3 shows nearly 35 percent of all alcohol-related fatalities (26) in Alaska in 2005 resulted from crashes in which the highest blood alcohol concentration (BAC) level was at or above the legal limit of 0.08 (9). Table 1.3 also includes statistics on major injuries. Since the numbers are larger, the rates fluctuate less than fatality rates. There were over 100 major injuries as a result of alcohol-related crashes each year, however, the proportion of all major injuries that are alcohol-related has declined since 2001.

Figure 1.4 Alcohol-Related Fatalities as Percent of Total Fatalities

Source: Alaska Dataport and FARS for National Average.

Table 1.3 Alcohol-Related Fatalities and Major Injuries

	2001	2002	2003	2004	2005
Alcohol-Related Fatalities	42	34	34	30	26 ^a
Alcohol-Related Fatalities as a Percent of All Fatalities	47%	38%	36%	31%	35%
Alcohol-Related Major Injuries	109	150	114	107	106
Alcohol-Related Major Injuries as a Percent of All Major Injuries	25%	23%	17%	18%	18%
Alcohol-Related Fatalities and Major Injuries	150	184	148	137	132
Alcohol-Related Fatalities and Major Injuries as a Percent of All Fatalities and Major Injuries	29%	24%	20%	20%	20%
Number of Fatalities where the Highest BAC in the Crash was 0.08+	27	22	12	8	9
Percent of All Traffic Fatalities where BAC was 0.08+	30%	25%	12%	8%	12%
Number of Major Injuries where the Highest BAC in the Crash was 0.08+	41	71	53	34	45
Percent of All Major Injuries where BAC was 0.08+	9%	11%	8%	6%	8%

Source: Alaska Dataport.

^a Four of these crashes are pending because while the incident report indicates that alcohol was involved, there currently is no substantiating evidence. If those four cases are dropped, the percent of alcohol-related fatalities would drop to 30 percent in 2005.

Table 1.4 shows that the majority of alcohol-related crashes involved at least one driver who was over the legal limit of 0.08 BAC. Further research is necessary to determine the proportion of those over the legal limit with very high BACs. Alaska law provides enhanced penalties for offenders over 0.16 and 0.24. However, there is a sense that the stiffer penalties are not routinely applied. Research shows persons with high BACs are more likely to be involved in a crash, and it also shows that enhanced penalties for high BACs is an effective countermeasure.

Table 1.4 Percent of Impaired Driving Crashes Under and Over 0.08 BAC

	2001	2002	2003	2004	2005
Under 0.08 BAC	21%	33%	39%	19%	28%
Over 0.08 BAC	79%	64%	61%	81%	72%

Source: Alaska Court System.

Table 1.5 shows the number of “Driving Under the Influence” (DUI) citations issued from 2000 to 2006. The number of citations is shown to be greatest in 2004 and 2005. As shown in Table 1.6, there is extreme variability in the rate of DUI arrests by geographic location. Alaska, like many other states, is faced with a shortage of troopers and police officers. Many officers are retiring and the positions are difficult to fill due to low pay and a number of other factors.

Table 1.5 DUI Citations

	2000	2001	2002	2003	2004	2005	2006
Approximate Number of Citations Across Alaska	5,452	5,249	5,528	5,637	5,917	6,114	5,318

Source: Alaska Court System.

Table 1.6 identifies 2006 DUI arrests by city/area and rate per population.

Table 1.6 2006 DUI Arrests by Area and Rate per Population

City/Area	Total Population	DUI Arrests	Arrests per Population
Aleutian Chain	3,845	3	1 in 1,282
Anchorage	260,283	1,390	1 in 187
Angoon	572	1	
Aniak	572	6	1 in 95
Bethel	5,471	118	1 in 46
Big Lake	2,635	2	1 in 1,317
Cantwell	222	9	1 in 25
Cold Bay	88	1	
Cooper Landing	369	7	1 in 52
Cordova	2,454	13	1 in 189
Craig	1,397	25	1 in 56
Delta Junction	840	8	1 in 105
Dillingham	2,466	43	1 in 57
Emmonak	767	2	1 in 383
Fairbanks	82,840	798	1 in 103
Fort Yukon	595	3	1 in 198
Galena	675	6	1 in 112
Girdwood	2,000	45	1 in 44
Glennallen	554	24	1 in 23
Haines	1,811	4	1 in 452
Healy	1,000	5	1 in 200
Homer	3,946	88	1 in 45
Hoonah	860	2	1 in 430
Houston	1,202	13	1 in 92
Iliamna	102	8	1 in 13
Juneau	30,711	238	1 in 129
Kake	710	1	
Kenai	6,942	99	1 in 70
Ketchikan	7,922	147	1 in 54
King Cove	792	1	
King Salmon	442	1	
Klawock	854	6	1 in 142
Kodiak	6,334	84	1 in 75
Kotzebue	3,082	41	1 in 75
McGrath	401	1	
Metlakatla	1,375	1	
Nenana	402	5	1 in 80
Ninilchik	772	2	1 in 386
Nome	3,505	45	1 in 78

Table 1.6 2006 DUI Arrests by Area and Rate per Population (continued)

City/Area	Total Population	DUI Arrests	Arrests per Population
North Pole	1,570	59	1 in 26
Northway	107	5	1 in 21
Palmer	4,533	146	1 in 31
Petersburg	3,224	15	1 in 215
Seldova	144	1	
Seward	2,830	62	1 in 46
Sitka	8,835	105	1 in 84
Skagway	862	3	1 in 287
Soldotna	3,759	89	1 in 42
St. Marys	500	3	1 in 167
St. Paul	532	1	
Talkeetna	772	21	1 in 37
Tananna	4,993	2	1 in 2,497
Togiak	809	1	
Tok	1,393	25	1 in 56
Unalakleet	747	5	1 in 149
Unalaska	4,283	46	1 in 93
Valdez	4,036	44	1 in 91
Wasilla	5,469	73	1 in 75
Whittier	182	1	
Wrangell	2,308	22	1 in 105
Yakutat	680	4	1 in 170

Source: Alaska Court System.

According to the data in Table 1.7, less than 11 percent of DUI charges were dismissed by prosecutors in 2006. While this is not an area of major concern, it still bears looking into to determine whether there is a need for law enforcement or prosecutor training, insufficient prosecutorial resources, etc.

In Alaska, refusing a blood alcohol test is a somewhat common practice because it is well known that the U.S. and Alaska Constitutions protect offenders from self incrimination. The courts interpret convictions on refusals as a violation of that provision. As shown in Table 1.8 a large number of refusals occur in Alaska, and the prosecutors most often dismiss those cases.

Table 1.7 Disposition of DUI Charges

	Anchorage		Fairbanks		Palmer	
	2005	2006	2005	2006	2005	2006
Acquitted	3	3	12	11	0	0
Convicted	1,470	1,456	634	756	781	737
Dismissed by Prosecutor ^a	96	95	70	80	69	68
Dismissed by Court ^b	4	4	4	8	13	10
Total	1,573	1,558	720	855	863	815

Source: Alaska Court System.

Table 1.8 Disposition of Refusal Charges

	Anchorage		Fairbanks		Palmer	
	2005	2006	2005	2006	2005	2006
Acquitted	1	0	2	1	0	0
Convicted	33	34	42	38	16	24
Dismissed by Prosecutor ^a	163	152	76	77	93	94
Dismissed by Court ^b	0	0	1	4	3	1
Total	197	186	121	120	112	119

Source: Alaska Court System.

^a “Dismissed by Prosecutor” includes charges with the following disposition codes:

- Dismissed by Prosecutor (CrR43(a));
- Dismissed After Deferred Prosecution; and
- Compiled or Charging Document Not Filed.

^b “Dismissed by Court” includes charges with the following disposition codes:

- Charges Dismissed-Furtherance of Justice (CrR43(c));
- Charges Dismissed by Court – CrR 45 – Speedy Trial;
- Probable Cause Not Found. Charge Dismissed; and
- No True Bill.

The refusal problem is further documented in Table 1.9. It shows data from the seven courts that have converted to CourtView, Alaska’s new trial court case management system. Collectively, these courts account for 63 percent of the court system’s criminal case filings. The table also shows the proportion of felony DUIs to all DUIs and the proportion of felony refusals to all refusals. A first and second DUI conviction, within 15 years of the previous conviction, is considered a misdemeanor. A third DUI conviction, within 10 years of the previous one, is considered a felony DUI conviction. All sentences include mandatory compliance with recommendations based on an alcohol assessment.

- **First Offense** – Seventy two consecutive hours jail time, a minimum fine of \$1,500, driver’s license revocation for 90 days, 5-day alcohol education class.
- **Second Offense** – Twenty days jail time, a minimum fine of \$3,000, driver’s license revocation of 1 year, 30-day outpatient treatment.
- **Third Offense** – Between 60 and 120 days jail time, a minimum fine of between \$5,000 and \$10,000, driver’s license revocation for at least 3 years, 30-day inpatient treatment.
- **Fourth Offense** – Between 120 and 240 days jail time, a minimum fine of between \$5,000 and \$10,000, driver’s license revocation for least 5 years, 30- to 90-day inpatient treatment.
- **Fifth Offense** – Between 240 and 360 days jail time, a minimum fine of between \$6,000 and \$10,000, driver’s license revocation for life, 30- to 90- day inpatient treatment.

Table 1.9 DUI and Refusal Charges
*CourtView Courts Only**

	2004				2005				2006			
	DUI	Felony DUI	Refusal	Felony Refusal	DUI	Felony DUI	Refusal	Felony Refusal	DUI	Felony DUI	Refusal	Felony Refusal
Anchorage	1,524	124	173	27	1,485	144	172	30	1,414	117	156	24
Barrow	46	1	6	0	39	0	8	0	53	1	9	0
Fairbanks	835	54	142	6	685	82	97	16	815	98	109	21
Kotzebue	77	1	15	0	65	0	5	0	47	1	5	0
Nome	66	0	3	0	47	0	3	0	55	2	8	0
Palmer	867	73	126	15	777	72	95	17	717	61	89	14
Unalakleet	17	0	0	0	7	0	0	0	2	0	0	0
Total	3,432	253	465	48	3,105	298	380	63	3,103	280	376	59

Source: Alaska Court System.

Note: The seven courts using CourtView include Anchorage, Barrow, Fairbanks, Kotzebue, Nome, Palmer, and Unalakleet.

Speeding and Aggressive Driving

Aggressive driving is not a new practice in the United States, but it is a growing phenomenon. It is difficult to calculate the size of the problem in Alaska because the behavior is not defined in law. This behavior usually involves speeding as well as other factors, e.g., following too closely, improper lane change, etc.

Figure 1.5 shows a decline in the percent of fatalities resulting from speeding crashes in Alaska, however, this percentage was consistently several points higher than the national average.

Figure 1.5 Speeding-Related Fatalities as Percent of Total Fatalities

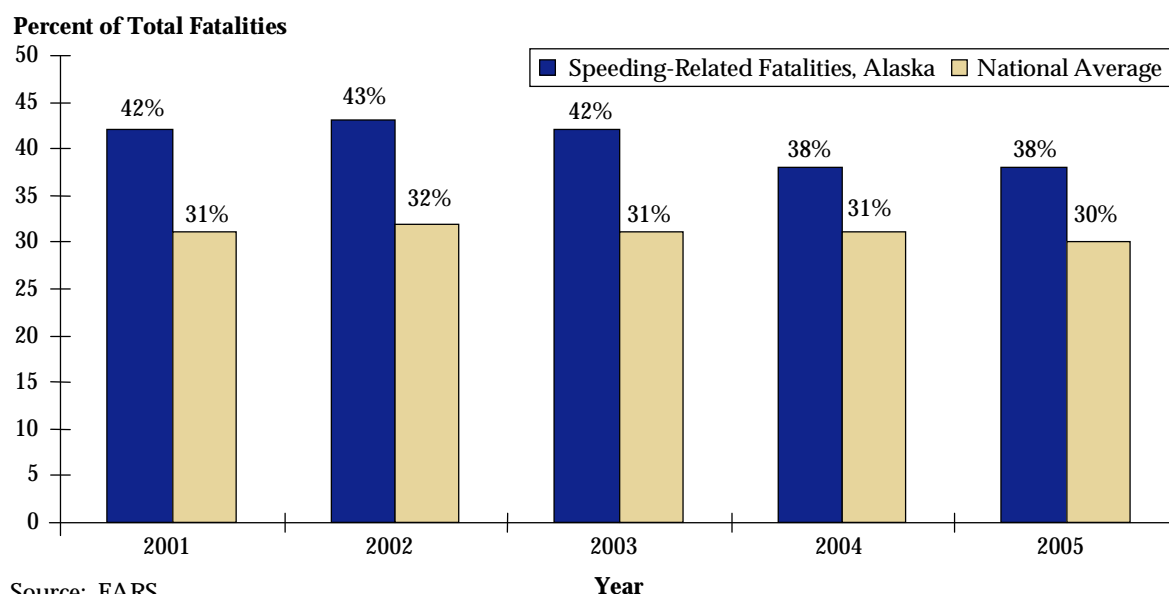


Table 1.10 presents statistics related to fatalities and major injuries in speeding-related crashes. The number of major injuries involving speeding has increased over the past five years and represented approximately one-quarter of all major injuries. Further investigation with input from law enforcement would be useful on current practice with respect to issuing citations for speeding. Some officers and departments allow a “tolerance” for driving over the posted speed limit. Also, it is unclear whether people are cited specifically for exceeding the posted speed limit, speeding too fast for conditions, etc.

Table 1.10 Fatalities and Major Injuries Involving Speeding

	2001	2002	2003	2004	2005
Speeding Fatalities	37	38	41	38	27
Speeding Fatalities as a Percent of All Fatalities	42%	43%	42%	38%	38%
Speeding Major Injuries	136	193	148	157	157
Speeding Major Injuries as a Percent of All Major Injuries	31%	29%	23%	27%	27%
Speeding Fatalities and Major Injuries	173	231	189	195	184
Speeding Fatalities and Major Injuries as a Percent of All Fatalities and Major Injuries	33%	31%	25%	28%	28%

Source: FARS, Alaska Dataport.

Speeding is often the most egregious factor in aggressive driving crashes but examination of other citation categories illuminates the issue further. Table 1.11 shows the number of serious injury crashes where at least one driver was cited for either disregarding a traffic signal or reckless driving.

Table 1.11 Serious Injury Crashes by Aggressive Driving Category

	2000	2001	2002	2003	2004	2005
Disregarded Traffic Signal	15	17	34	32	27	26
Reckless Driving	66	87	100	112	97	91

Source: Alaska Dataport.

Young Drivers

Alaska, like every other state, faces a problem with young driver crashes. These drivers are less likely to recognize and adjust for hazards on the road because in general, they lack experience, and they lack the maturity necessary for good judgment. Hence, they have a lower belt use rate than other segments of the population, and they often drive too fast or are impaired.

Table 1.12 clearly shows that young drivers (age 16 to 20 years) were overrepresented in fatal and major injury crashes in Alaska. Approximately five percent of Alaskan drivers were classified as young drivers in 2005; however, the percentage of fatal and major injuries involving young drivers was 15 percent and 29 percent respectively. The

proportion of fatalities and major injuries from crashes involving young drivers remained relatively consistent over the past five years.

The effects of crashes involving young drivers could be even worse if not for the fact that young drivers are generally better able to survive a crash compared to older drivers.

Table 1.12 Fatalities and Major Injuries Involving Drivers Age 16 to 20

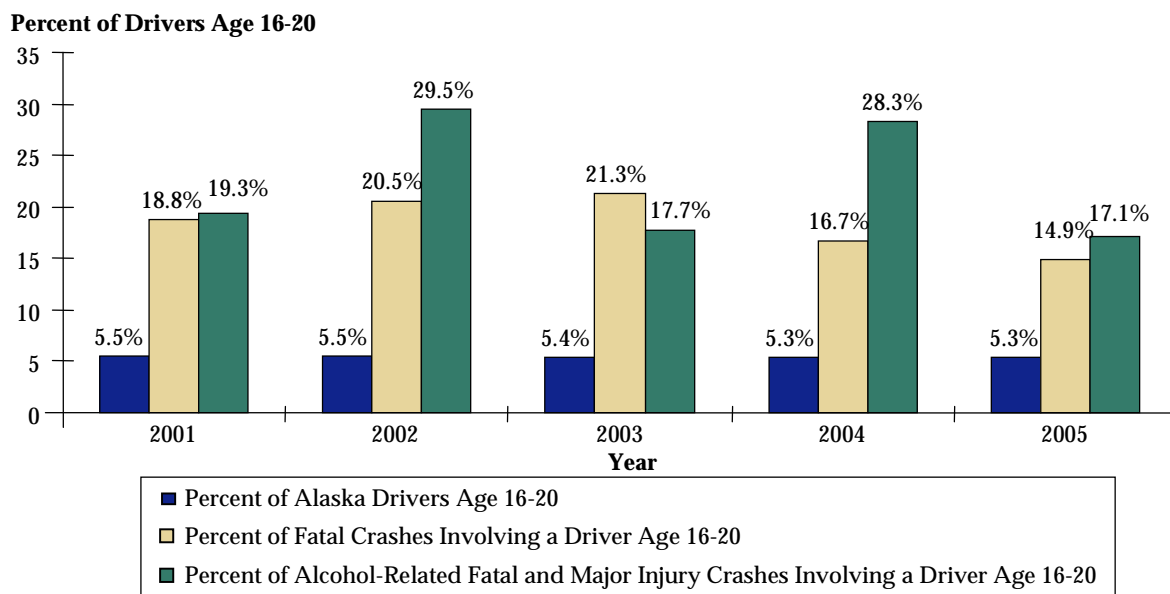
	2001	2002	2003	2004	2005
Percent of Alaska's Licensed Drivers Age 16 to 20 (number of licensed drivers as listed in Federal Highway Administration (FHWA) table by state population from Alaska Department of Labor)	5.5%	5.5%	5.4%	5.3%	5.3%
Fatalities Involving Driver Age 16 to 20	19	18	20	18	11
Percent of Total Fatalities	21%	20%	20%	18%	15%
Major Injuries Involving Driver Age 16 to 20	125	235	175	177	168
Percent of Total Major Injuries	29%	35%	27%	30%	29%
Fatalities and Major Injuries Involving Driver Age 16 to 20	144	253	195	195	179
Percent of All Fatalities and Major Injuries Involving Driver Age 16 to 20	28%	34%	26%	28%	27%

Source: Alaska Dataport.

Furthermore, as shown in Figure 1.6, when the analysis includes alcohol as a factor in young driver crashes, the overrepresentation becomes even more dramatic. For example, in 2005 5.3 percent of Alaska's population was in the 16 to 20 age group, but 14.9 percent of the fatal crashes involved youth. Even more astonishing, 17.1 percent of fatal and major injury crashes involved a young driver who was impaired by alcohol. This occurs despite the fact that it is illegal for persons under 21 years to drink alcohol in every state.

Figure 1.6 Drivers Age 16-20

Percent of Alaska Drivers, Percent of Fatal Crash Involvement, and Percent of Drivers Involved in Alcohol-Related Fatal and Major Injury Crashes

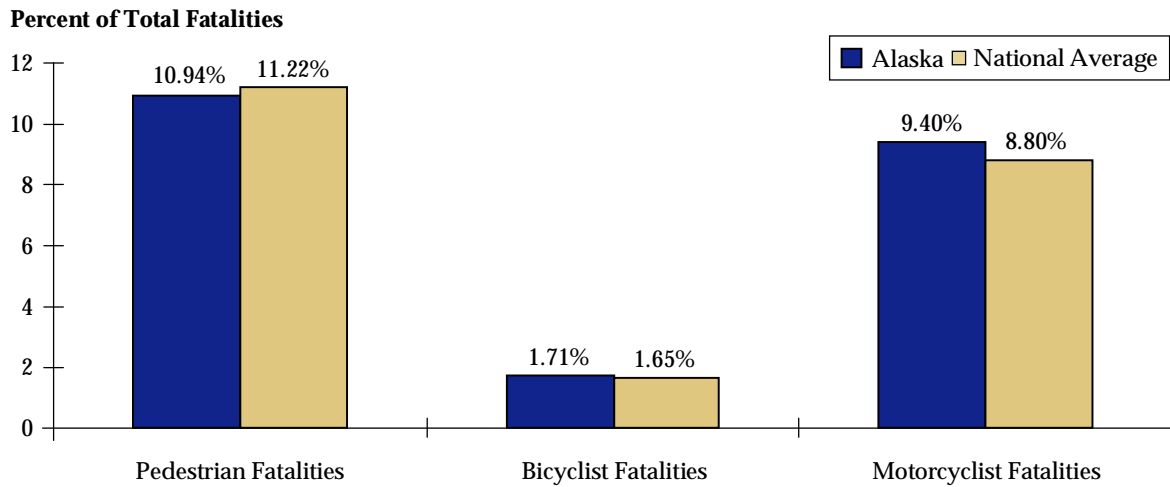


Source: Alaska Dataport.

■ 1.3 Special Users

For the purpose of this plan, special users include pedestrians, bicyclists, and motorcyclists. All of these users of the transportation system are more vulnerable in crashes than occupants of other vehicle types. With fewer people than other states and fewer warm months, Alaska generally has lower pedestrian, bicycle, and motorcycle activity; and it might be expected that the percentages for these categories are lower than the national average. Figure 1.7 illustrates, however, that Alaska's pedestrian, bicycle, and motorcycle fatalities do mirror (and in some cases exceed) the national average.

Figure 1.7 Special Users as Percent of Total Fatalities
2001-2005



Pedestrians

Figure 1.8 shows that pedestrian fatalities in Alaska generally represented a lower proportion of all fatalities when compared to national averages. As there are few pedestrian fatalities in Alaska annually, large fluctuations in the pedestrian proportion of all fatalities are expected, as exemplified in 2002.

Figure 1.8 Pedestrian Fatalities as Percent of Total Fatalities

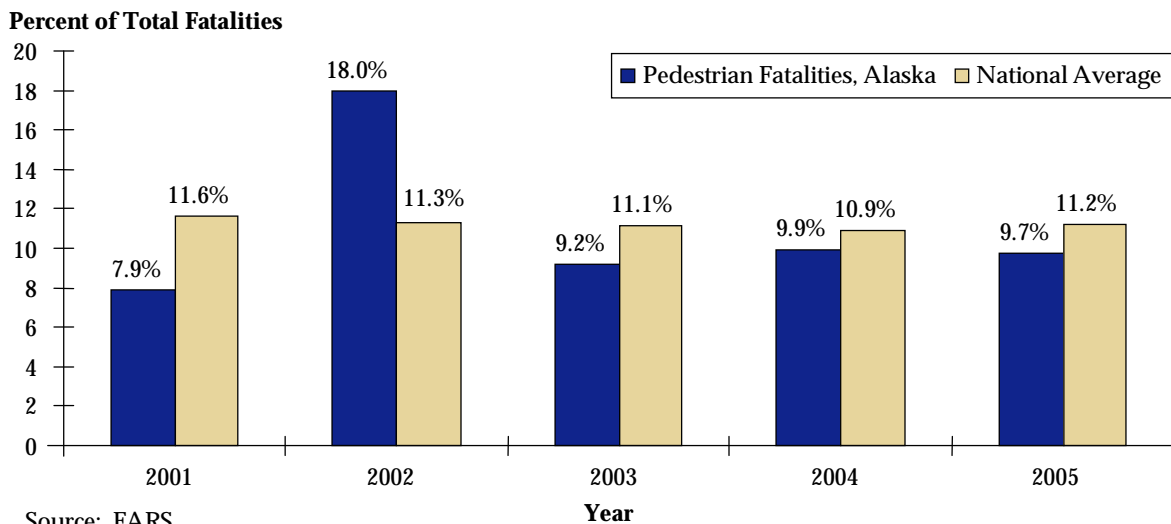


Table 1.13 shows approximately six to eight percent of all fatalities and major injuries involved pedestrians. Data analysis provided by the Alaska DOT&PF revealed crashes involving pedestrians most often occurred at “drive time,” 3:00 p.m. through 7:00 p.m., on dry roads and in daylight, although the most severe pedestrian crashes tend to be at night. The vehicle direction most often noted in pedestrian-related crashes was straight ahead and a significant number of pedestrian crashes occurred at “not a junction,” indicating improper crossing (midblock) or violating rights-of-way. Alcohol was a factor in more than 20 percent of Alaska’s pedestrian-vehicle crashes. Data suggest the pedestrian crash problem is most significant in the Anchorage/Mat-Su area.

Table 1.13 Fatalities and Major Injuries Involving Pedestrians

	2001	2002	2003	2004	2005
Crashes Involving Pedestrians	179	179	165	172	134
Pedestrian-Involved Fatalities	7	16	9	10	7
Pedestrian-Involved Fatalities as a Percent of All Fatalities	8%	18%	9%	10%	10%
Pedestrian-Involved Major Injuries All Crashes	29	42	48	33	37
Pedestrian-Involved Major Injuries All Crashes as a Percent of All Major Injuries	7%	6%	7%	6%	6%
Pedestrian-Involved Fatalities and Major Injuries	36	58	57	43	44
Pedestrian-Involved Fatalities and Major Injuries All Crashes as a Percent of All Fatalities and Major Injuries	7%	8%	8%	6%	7%

Source: National Center for Statistics and Analysis (NCSA)/NHTSA, Alaska Dataport.

Additional data for Anchorage obtained from Alaska DOT&PF show that in the period between 2000 and 2004, a larger number of pedestrian crashes in Anchorage occurred during the afternoon, with one-third of crashes between 3:00 p.m. and 7:00 p.m. Drivers age 19 to 25 represented the largest group involved in pedestrian crashes (18 percent).

Bicyclists

There have been fewer than five cyclist fatalities in each of the past five data years, ranging from zero in 2002 to four in 2003. Few cycling fatalities result in fluctuations in the percentage of all fatalities that involve a bicycle, as shown in Figure 1.9.

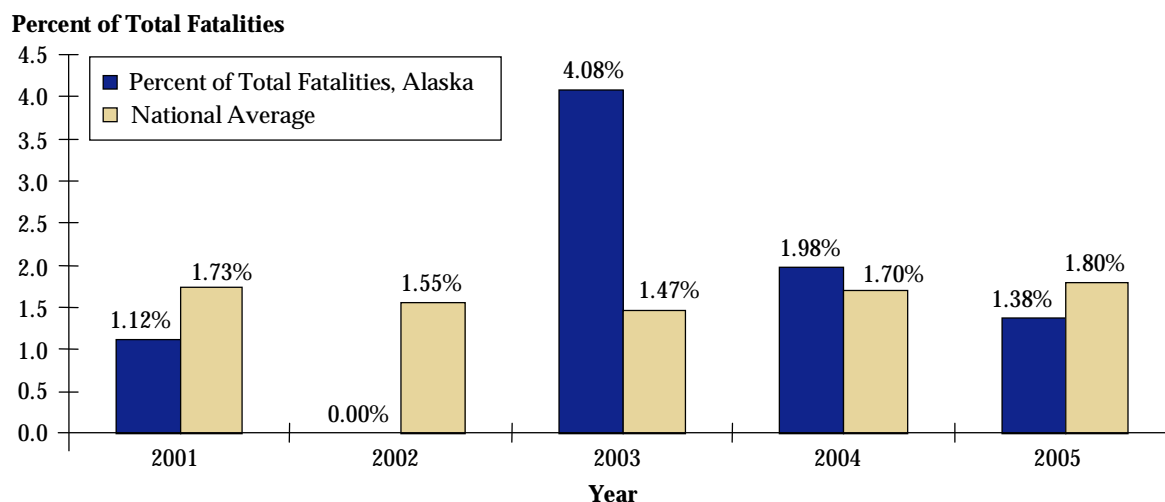
Figure 1.9 Bicyclist Fatalities as Percent of Total Fatalities

Table 1.14 shows approximately four percent of all fatalities or major injuries involved a bicycle.

Table 1.14 Fatalities and Major Injuries Involving Bicycles

	2001	2002	2003	2004	2005
Bicycle-Involved Fatalities	1	0	4	2	1
Bicycle-Involved Fatalities as a Percent of All Fatalities	1%	0%	4%	2%	1%
Bicycle-Involved Major Injuries All Crashes	18	24	24	23	22
Bicycle-Involved Major Injuries All Crashes as a Percent of All Major Injuries	4%	4%	4%	4%	4%
Bicycle-Involved Fatalities and Major Injuries	19	24	28	25	23
Bicycle-Involved Fatalities and Major Injuries All Crashes as a Percent of All Fatalities and Major Injuries	4%	3%	4%	4%	4%

Source: NCSA/NHTSA, Alaska Dataport.

Data analysis provided by Alaska DOT&PF indicates crashes involving bicyclists affect younger age groups (6 to 25) in higher number than middle or older age groups, and men are much more often involved in crashes than females. These crashes tend to occur mostly between 3:00 p.m. and 9:00 p.m. in summer months in daylight. As shown in Table 1.15, when bicycle crashes occur, vehicles are usually making right turning movements (followed by driving straight). These crashes mostly occur at four-way, driveway, or T-

intersections, although some do occur where there is “not a junction.” Data suggest the bicycle crash problem in Alaska is most significant in the Anchorage/Mat-Su area.



Additional data for Anchorage show that in the period between 2000 and 2004, over 55 percent of bicycle crashes involved a rider 25 years of age or younger, and almost half (46 percent) occurred between 3:00 p.m. and 7:00 p.m. Drivers age 19 to 25 represented the largest group involved in bicycle crashes. Of the crashes that involved a vehicle, 39 percent involved a right turn made by the vehicle driver. Intersection crashes are of significance; crashes at four-way intersections and T-intersections far outnumbered those at driveways and other locations.

Table 1.15 Vehicle Driver Pre-Crash Action, Bicycle Crashes
2002-2004

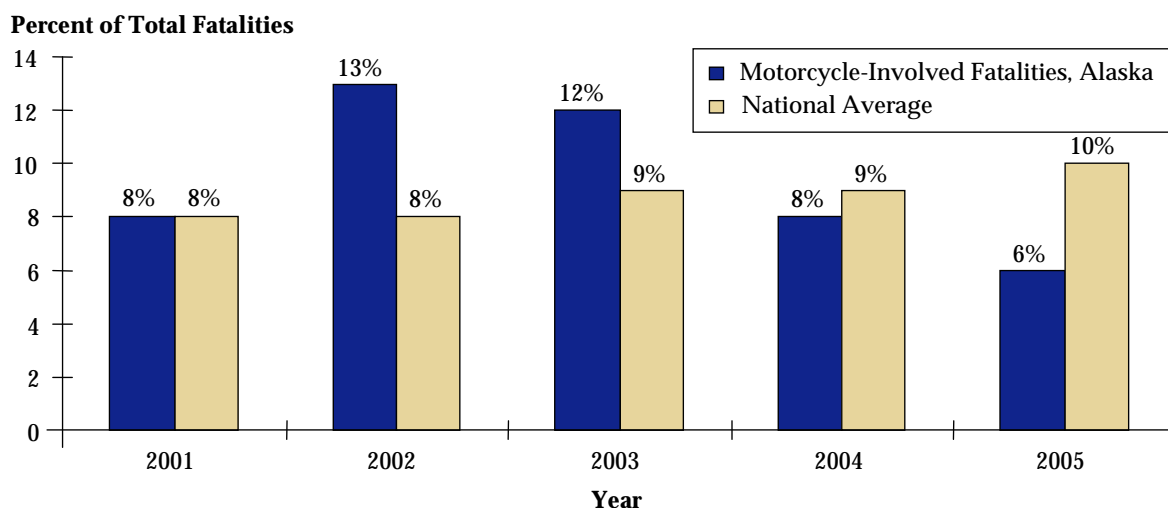
Vehicle Driver Pre-Crash Action	Number of Occurrences	Percent
Avoiding Objects in Road	7	1.0%
Backing	11	1.6%
Changing Lanes	2	0.3%
Entering Traffic Lane	28	4.0%
Merging	1	0.1%
Other	5	0.7%
Out of Control	1	0.1%
Parked	7	1.0%
Passing	1	0.1%
Skidding	12	1.7%
Slowing	26	3.7%
Starting in Traffic	52	7.4%
Stopped	19	2.7%
Straight Ahead	171	24.4%
Turning Left	57	8.1%
Turning Right	273	39.0%
Unknown	27	3.9%
Grand Total	700	100%

Source: Alaska Dataport.

Motorcycles

A shorter warm season in Alaska limits the use of motorcycles: nevertheless, motorcycle fatalities do occur. Based on data from the Alaska Injury Prevention Center for the five-year period between 2000 and 2004, Alaska was the seventh-highest state in terms of the motorcycle fatality rate per 100,000 population, and was 37 percent higher than the national average. Between 2001 and 2005, there were 43 fatalities as a result of motorcycle collisions. Figure 1.10 and Table 1.16 show some fluctuation in motorcycle crash rates as the raw number of fatalities from motorcycle-involved crashes was small. Overall, approximately six to eight percent of motorcycle-involved crashes resulted in a fatality or major injury. From 2001 to 2005, motorcycles represented three percent of the State's registered vehicles, but motorcycle occupants made up 11 percent of all occupant fatalities.

Figure 1.10 Motorcycle-Involved Fatalities as Percent of Total Fatalities



Source: NCSA/NHTSA.

Table 1.16 Fatalities and Major Injuries Involving Motorcycles

	2001	2002	2003	2004	2005
Motorcycle-Involved Fatalities	7	12	12	8	4
Motorcycle-Involved Fatalities as a Percent of All Fatalities	8%	13%	12%	8%	6%
Motorcycle-Involved Major Injuries All Crashes	36	35	45	34	44
Motorcycle-Involved Major Injuries All Crashes as a Percent of All Major Injuries	8%	5%	7%	6%	8%
Motorcycle-Involved Fatalities and Major Injuries	43	48	57	42	48
Motorcycle-Involved Fatalities and Major Injuries All Crashes as a Percent of All Fatalities and Major Injuries	8%	6%	8%	6%	7%

Source: NCSA/NHTSA, Alaska Dataport.

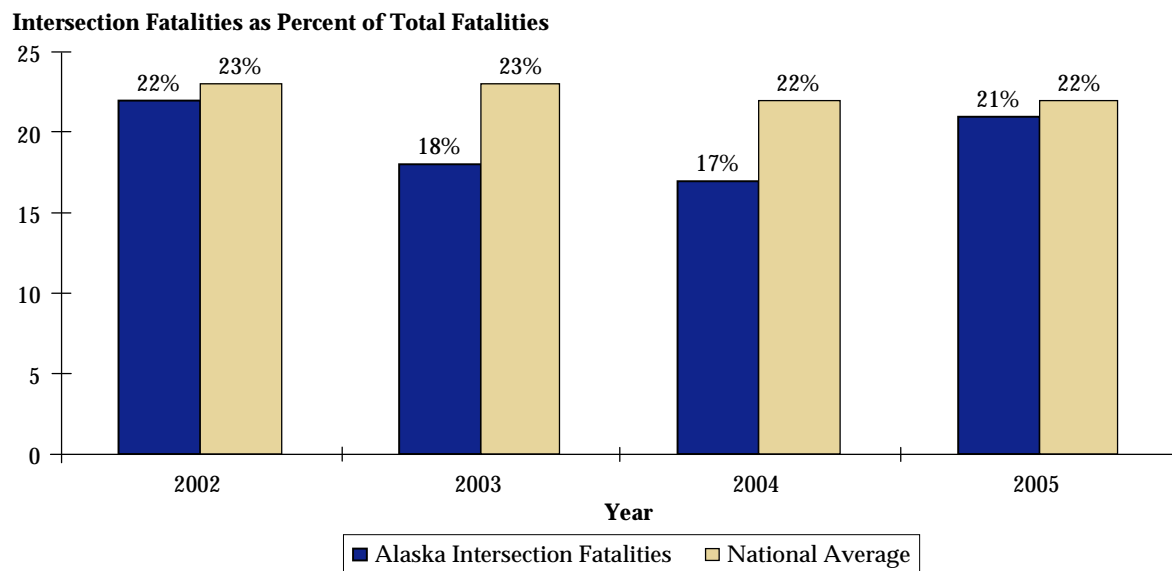
Additional analysis of motorcycle crashes in Alaska indicate that run-off-road (most often occurring on grades, curves, or both) is the most severe type of motorcycle crash (representing over 50 percent of fatal crashes); young riders age 20 to 24 years are most often involved in these crashes; most motorcycle crashes occur between May and September in daylight; and the leading causes of crashes involving motorcycles include unsafe speed, driver inexperience, and driver inattention. In more than 60 percent of the fatal motorcycle crashes, the motorcyclists was not wearing a helmet. Data also indicate that the motorcycle crash problem is most significant in Anchorage and outside city limits in the Mat-Su, Kenai Peninsula, and Fairbanks North Star boroughs. Alcohol and drugs were a factor in 11 percent of all motorcycle crashes and 33 percent of all motorcycle fatal crashes.

■ 1.4 Highways

Intersection Crashes

Figure 1.11 illustrates intersection fatalities, as a percent of all fatalities, have remained relatively steady from 2001 to 2005.

Figure 1.11 Intersection Fatalities as Percent of Total Fatalities



Source: Alaska data-Alaska Dataport/National data-FARS.

Table 1.17 shows fatal and major injury statistics for intersection crashes. When combined together, a fatality and/or major injury occurred in approximately 40 percent of intersection crashes. Most intersection crashes occurred in urban areas; more than half in Anchorage Municipality alone.

Table 1.17 Intersection Fatalities and Major Injuries

	2001	2002	2003	2004	2005
Intersection Fatalities	N/A	20	18	17	15
Intersection Fatalities as Percent of Total Fatalities	N/A	22%	18%	17%	21%
Intersection Major Injuries	N/A	292	267	237	248
Total Intersection Fatalities and Major Injuries	N/A	312	285	254	263
Intersection Fatalities and Major Injuries as Percent of All Fatalities and Major Injuries	N/A	41%	38%	37%	40%

Source: Alaska Dataport.

Lane Departures²

Head-On Crashes

Table 1.18 shows between 2001 and 2005 there was a slight decline in the number of fatalities and major injuries from head-on crashes, despite a slight increase in 2002. The percent of total fatalities and major injuries resulting from head-on crashes also declined during the same timeframe. Table 1.18 also shows that Alaska has had a higher proportion of fatalities resulting from head-on collisions when compared to the national average. This could be attributed to the fact that Alaska has fewer divided highways than other states. Alaska has approximately 100 miles of four-lane divided highway or less than one percent of all Federal, state, and local roads in the State.³

² Lane departure crashes include both head-on and run-off-road crashes.

³ Alaska with 104 miles of divided highway and a population of 0.663 million, results in a ratio of 157 miles of divided highway per million persons. The United States with 120,855 miles of divided highway and a population of 296.5 million, results in a ratio of 408 miles of divided highway per million persons. (<http://www.fhwa.dot.gov/policy/ohim/hs05/htm/hm55.htm>).

Table 1.18 Head-On Crash Fatalities as Percent of Total Fatalities

	2001	2002	2003	2004	2005
Head-On Fatalities	18	22	17	17	11
Percent of Total Fatalities	20.2%	24.7%	17.0%	17.0%	14.9%
Percent of Total Fatalities (National Average)	15.7%	11.4%	12.0%	12.3%	11.5%
Head-On Major Injuries	45	65	49	34	40
Percent of Total Major Injuries	10.4%	9.8%	7.5%	5.8%	6.9%
Head-On Fatalities and Major Injuries	63	87	66	51	51
Percent of Total Fatalities and Major Injuries	12.1%	11.6%	8.8%	7.4%	7.8%

Source: Alaska Dataport, FARS.

The number of fatalities and major injuries resulting from head-on crashes is greater in the larger population areas of the State where more miles are driven. Table 1.19 shows the top boroughs where these collisions occur. These four boroughs represent about 90 percent of all the head-on fatalities and major injuries in the State.

Table 1.19 Number and Percentage of Head-On Fatalities and Major Injuries by Top Four Boroughs
2001 to 2005

Head-On Fatalities (Number/Percent of All Head-On Fatalities)	Head-On Major Injuries (Number/Percent of All Head-On Major Injuries)
1. Matanuska-Susitna Borough (25/29.4%)	1. Anchorage Municipality (78/33.5%)
2. Kenai Peninsula Borough (25/29.4%)	2. Matanuska-Susitna Borough (62/26.6%)
3. Anchorage Municipality (17/20.0%)	3. Kenai Peninsula Borough (42/18.0%)
4. Fairbanks North Star Borough (10/11.8%)	4. Fairbanks North Star Borough (26/11.2%)

Source: Alaska Dataport.

Run-Off-Road Crashes

Run-off-road crashes result in approximately 40 percent of national traffic fatalities (FHWA). Alaska consistently exceeds the national average, with run-off-road crash fatalities representing over half of all fatalities in most years, as shown in Table 1.20. These crashes also result in 40 to 50 percent of major injuries.

Table 1.20 Run-Off-Road Fatalities as Percent of Total Fatalities

	2001	2002	2003	2004	2005
Run-Off-Road Fatalities	42	48	59	54	43
Percent of Total Fatalities	47.2%	53.9%	59.0%	54.0%	58.1%
Run-Off-Road Major Injuries	219	261	293	231	243
Percent of Total Major Injuries	50.6%	39.3%	44.6%	39.6%	41.7%
Run-Off-Road Fatalities and Major Injuries	261	309	352	285	286
Percent of Total Fatalities and Major Injuries	50.0%	41.0%	46.7%	41.6%	43.8%

Source: Alaska Dataport.

The number of fatalities and major injuries resulting from run-off-road crashes are greatest in the larger population areas of the State where more miles are driven. Table 1.21 shows the top boroughs where these collisions occur.

Table 1.21 Number and Percentage of Run-Off-Road Fatalities and Major Injuries by Top Four Boroughs
2001 to 2005

Run-Off-Road Fatalities (Number/Percent of All Run-Off-Road Fatalities)	Run-Off-Road Major Injuries (Number/Percent of All Run-Off-Road Major Injuries)
1. Anchorage Municipality (77/31.3%)	1. Anchorage Municipality (524/42.0%)
2. Matanuska-Susitna Borough (40/16.3%)	2. Matanuska-Susitna Borough (227/18.2%)
3. Kenai Peninsula Borough (37/15.0%)	3. Kenai Peninsula Borough (141/11.3%)
4. Fairbanks North Star Borough (22/8.9%)	4. Fairbanks North Star Borough (125/10.0%)

Source: Alaska Dataport.

Table 1.22 shows that the number of run-off-road crashes was greater along straight highway segments than on curved highway segments.

Table 1.22 Number and Percentage of Run-Off-Road Fatalities and Major Injuries by Roadway Curvature
2001 to 2005

	Number of Fatalities	Percent of All Fatalities	Number of Major Injuries	Percent of All Major Injuries
Curve	113	45.9%	470	37.7%
Straight	127	51.6%	747	59.9%
Unknown	6	2.4%	30	2.4%

Source: Alaska Dataport.

■ 1.5 Other Safety Issues

Crashes Involving Animals

A large number of crashes involving animals, mainly moose, occur in Alaska. The size of a moose may result in major damage to vehicles and may lead to human and moose fatalities. Table 1.23 shows that there are hundreds of moose and other animal crashes each year, representing approximately four to seven percent of all crashes in the State; however, fewer than two percent result in a fatality or major injury. Table 1.24 shows most crashes with moose occur in urban boroughs.

Table 1.23 Crashes Involving Moose and Other Animals as Percent of Total Fatalities and Total Crashes

	2001	2002	2003	2004	2005
Fatalities in Crashes Involving Moose and Other Animals	3	1	3	2	1
Percent of Total Fatalities	3.4%	1.1%	3.0%	2.0%	1.4%
Major Injuries in Crashes Involving Moose and Other Animals	3	10	16	8	10
Percent of Total Major Injuries	0.7%	1.3%	2.1%	1.2%	1.5%
Number of Crashes Involving Moose	785	557	812	830	680
Number of Crashes with Other Animals	44	54	79	98	76
Moose and Other Animal Crashes as Percent of Total Crashes	5.4%	4.6%	6.0%	6.3%	5.8%
Fatalities and Major Injuries as Percent of Moose and Other Animal Crashes	0.7%	1.8%	2.1%	1.1%	1.5%

Source: Alaska Dataport.

Table 1.24 Number and Percentage of Crashes with Moose and Fatal Crashes Involving Moose for Top Boroughs
2001 to 2005

Crashes with Moose (Number/Percent of All Crashes in Borough)	Number of Fatalities Resulting from Moose and Animals
1. Kenai Peninsula Borough (1,015/18.3%)	1. Kenai Peninsula Borough (2)
2. Matanuska-Susitna Borough (902/11.8%)	2. Matanuska-Susitna Borough (2)
3. Anchorage Municipality (871/2.1%)	3. Anchorage Municipality (2)
4. Fairbanks North Star Borough (592/6.8%)	4. Southeast Fairbanks Census Area (1)
5. Southeast Fairbanks Census Area (135/24.5%)	5. Bethel Census Area (1)

Source: Alaska Dataport.

Improving Traffic Records

Data was recognized as an imperative tool for identifying, analyzing, and mitigating crash problems. Issues regarding the availability, timeliness, accuracy, and completeness of crash data span all the problem areas. At the inception of this planning process, several stakeholders already were involved in the Alaska Traffic Records Coordinating Committee (ATRCC). Participants agreed that efforts to address data issues should not be duplicated. Additionally, the goal of the ATRCC was directly related to that of the SHSP: *to improve motor vehicle crash data in order to reduce crashes and injuries on Alaska's roadways*. During the spring of 2007, the State participated in a Traffic Records Assessment, and the ATRCC prepared the State's first application for the 23 U.S.C. 408 State Traffic Safety Information System Improvement Grant. The application contains the State's 2000 Strategic Plan for Traffic Records (and related Assessment Report); the 2007 plan update; goals and performance-based measures for improving traffic records; and other information required for the application. The application requests funding for projects, voted on by the ATRCC, that will improve the quality and timeliness of the State's traffic records information. These projects are described in Section 3.0 of this plan.

Crashes Involving Off-Highway Vehicles

A number of crashes in Alaska involve off-highway vehicles (OHVs), namely snow machines and all-terrain vehicles (ATVs). Table 1.25 shows that each year there are approximately 80 crashes on the State highway system that involve OHVs, representing approximately one-seventh of all crashes in the State. Table 1.26 shows that most crashes with OHVs occur in urban boroughs. These tables do not include OHV crashes that occurred on nonpublic roadways. The number of crashes, fatalities, and major injuries would be higher if these crashes were to be taken into account.

Table 1.25 Reported Crashes Involving Off-Highway Vehicles as Percent of Total Fatalities and Total Crashes

	2001	2002	2003	2004	2005
Fatalities in Crashes Involving Off-Highway Vehicles	6	6	9	6	6
Percent of Total Fatalities	6.7%	6.7%	9.2%	5.9%	8.3%
Major Injuries in Crashes Involving Off-Highway Vehicles	19	23	14	16	14
Percent of Total Major Injuries	4.4%	3.5%	2.1%	2.7%	2.4%
Number of Crashes Involving Off-Highway Vehicles	87	78	81	83	72
Off-Highway Vehicle Crashes as Percent of Total Crashes	19.6%	12.5%	13.0%	14.6%	13.5%

Source: Alaska Dataport.

**Table 1.26 Number and Percentage of Crashes with Off-Highway Vehicles for Top Boroughs
2001 to 2005**

Crashes with Off-Highway Vehicles (Number/Percent of All Crashes with Off-Highway Vehicle)
1. Matanuska-Susitna Borough (86/21.4%)
2. Fairbanks North Star Borough (68/17.0%)
3. Anchorage Municipality (60/15.0%)
4. Kenai Peninsula Borough (53/13.2%)
5. North Slope Borough (29/7.2%)

Source: Alaska Dataport.

Table 1.27 shows that the majority of crashes involving OHVs involve more than one vehicle.

Table 1.27 Number of Vehicles Involved in Crashes Involving Off-Highway Vehicles

	2001	2002	2003	2004	2005
Single Off-Highway Vehicle Crash	28	19	20	17	20
Percent of All Off-Highway Vehicle Crashes involving Single Off-Highway Vehicle	32.2%	24.4%	24.7%	20.5%	27.8%
Multiple Vehicle Crash with All Vehicle Types	59	59	61	66	52
Percent of All Off-Highway Vehicle Crashes involving Multiple Vehicles	67.8%	75.6%	75.3%	79.5%	72.2%

Source: Alaska Dataport.

There are two distinct seasons for the use of OHVs, one is for ATVs and the other is for snow machines. Table 1.28 shows snow machines contribute a large proportion of OHV crashes, as the number of crashes is higher during the winter months than in other periods during the year. Another peak in OHV crashes is during the summer in conjunction with the rise in ATV use.

**Table 1.28 Number of Crashes Involving Off-Highway Vehicles by Month
2001 to 2005**

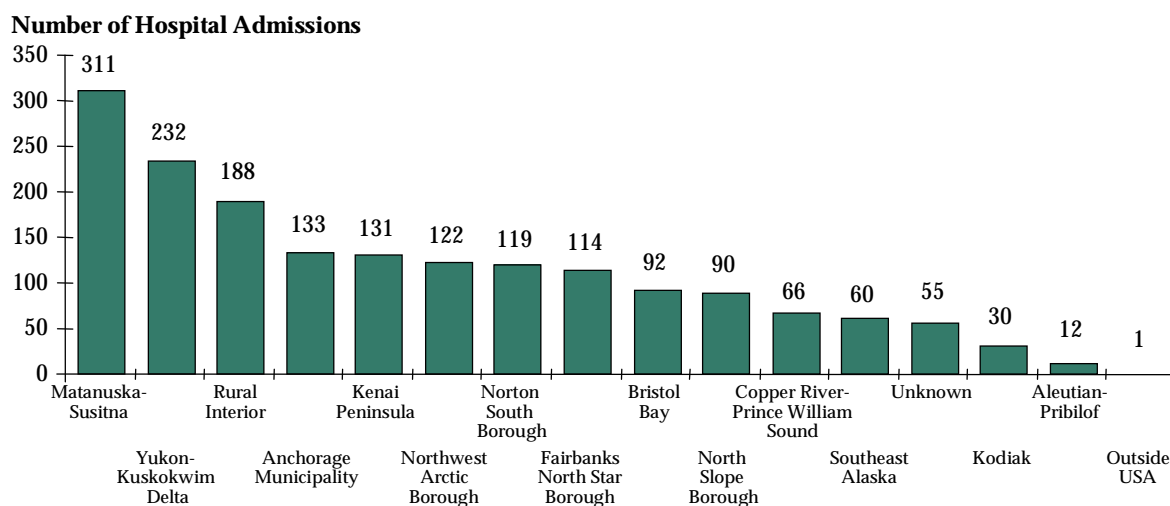
	Number of Crashes	Percent of All Off-Highway Vehicle Crashes
January	48	12.0%
February	49	12.2%
March	29	7.2%
April	16	4.0%
May	23	5.7%
June	35	8.7%
July	33	8.2%
August	44	11.0%
September	21	5.2%
October	28	7.0%
November	25	6.2%
December	50	12.5%

Source: Alaska Dataport.

The number of hospital admissions as a result of OHV crashes is just as great in urban areas as in rural areas. Fifty-four percent of hospital admissions were in rural areas, while 43 percent were from urban areas. Three percent of admissions were not classified as urban or rural. Figure 1.12 shows the Matanuska-Susitna Borough had the greatest number of hospital admissions (311 admissions) out of any borough statewide. The regions with the second and third greatest number of hospital admissions are rural – the Yukon-Kuskokwim Delta and the rural interior. It should be noted that hospital admissions data from the Alaska Trauma Registry does not distinguish whether or not the injury or crash occurred within the highway right-of-way. Therefore, there are more crash and injury data available through the Trauma Registry as it includes no right-of-way crash information that are not captured in the Alaska Dataport.



Figure 1.12 Number of Hospital Admissions Caused by Off-Highway Vehicle Crashes in Alaska by Region 2000 to 2004



Source: Alaska Trauma Registry.

2.0 Alaska's Strategic Planning Process

■ 2.1 Planning Approach and Partners

The Alaska DOT&PF, Division of Program Development is leading the State's effort to develop and implement the SHSP. A successful SHSP, however, cannot be developed or implemented solely by one agency. Collaboration, cooperation, and communication are key elements of the safety planning process to produce a meaningful, successful SHSP. The planning process in Alaska involved gaining executive-level stakeholder commitment and staff-level involvement in the identification of a shared goal, a cohesive vision, specific emphasis areas, and implementation strategies using a data-driven decision-making process. It also involved capturing the ideas and input of Alaskans from across the State. To achieve this, a broad stakeholder list was developed that included more than 100 safety, engineering, and planning practitioners. The Alaska DOT&PF held planning meetings around the State, in Juneau, Anchorage, Fairbanks, and Wasilla to enable participation by all interested parties. A web site was created to announce meeting dates; post project information such as draft reports for review and comment by stakeholders; and provide links to pertinent planning information such as the AASHTO guidance on implementation of a SHSP.

Also to support this process, the Alaska DOT&PF established Leadership and Working Groups. The **Leadership Group** was asked to provide oversight and permit staff from their agencies to participate in the day-to-day planning activities. Following approval of the plan, this Group will need to address issues related to dedication of resources and funding for implementation of the SHSP. The following agencies were invited to participate in Alaska's SHSP Leadership Group:

- AARP Alaska;
- ABATE/Alaska Motorcycle Advisory Board;
- Alaska Auto Dealers Association;
- Alaska DOT&PF Regions;
- Alaska Injury Prevention Center (AIPC);
- Alaska Moose Federation;
- Alaska Trucking Association;
- Anchorage Police Department;
- City of North Pole;
- Community and Safety Advocates;
- Department of Public Safety (DPS);
- Division of Motor Vehicles (DMV);

- Department of Health and Social Services (DHSS), Injury Prevention and Emergency Medical Services Section;
- FHWA, Alaska Division Office;
- Federal Motor Carrier Safety Administration (FMCSA), Division Office;
- GIS Database;
- Kluane International Bike Relay;
- Matanuska-Susitna Borough;
- Northwest and Alaska Tribal Technical Assistance Program (TTAP);
- NHTSA, Pacific Northwest Region; and
- State Farm

The **Working Group** is a multidisciplinary team of senior-level staff with extensive experience and expertise in safety, transportation, and strategic planning. The Working Group was tasked with driving the development of the SHSP and reviewing data, existing plans and programs, current safety research, and potential safety countermeasures. Members of the Working Group also served as leaders of emphasis area teams and as liaisons between the full stakeholder group and the Leadership Group. These members worked closely together to ensure that a collaborative and comprehensive planning process was followed in Alaska. Representatives from many of the agencies noted above as well as the following agencies were invited to participate on the Working Group:



- Alaska Association of Chiefs of Police;
- Alaska Court System;
- Alaska DPS:
 - Alaska State Troopers; and
 - Department of Public Safety Academy;
- Alaska DOT & PF:
 - Division of Program Development;
 - Division of Design and Engineering Services;
 - Highway Safety Office;
- Northern, Central, and Southeast Regions;
- Statewide Maintenance and Operations; and
- Measurement Standards and Commercial Vehicle Enforcement (MSCVE);
- Alaska Department of Administration:
 - DMV;
- Alaska Motorcycle Dealers Association;
- Alaska Peace Officers Association (defensive driving course);

- Alaska Railroad Corporation;
- Alaska State Medical Association;
- Alzheimer’s Resource Agency of Alaska;
- American Occupational Therapy Association;
- Anchorage Metropolitan Area Transportation Study (AMATS);
- Bureau of Indian Affairs, Alaska;
- Catholic Community Services;
- Cities of Valdez and North Pole;
- Co-chairs of Transportation and Judiciary Legislative Committees;
- Craig Community Association;
- Denali Commission;
- Department of Education;
- Department of Health and Social Services:
 - EMS Unit, Injury Prevention Unit; and
 - Alcohol Safety Action Program;
- Fairbanks Metropolitan Area Transportation System (FMATS) Policy Board;
- Federal Motor Carrier Safety Administration – Alaska Division;
- Healthy Kids, Healthy Communities;
- Operation Lifesaver;
- Safe Kids;
- Seward Police Department;
- Single Track Advocates;
- U.S. Coast Guard; and
- USDA Forest Service.

The Leadership and Working Groups reviewed statewide crash data and reached consensus on the leading issues, or emphasis areas, to be addressed in the Alaska SHSP. This ensured the buy-in and collaboration needed to prioritize and implement strategies. Stakeholders were then asked to volunteer to serve on **Emphasis Area Teams** to help identify strategies to mitigate the State's key highway safety problems. (Emphasis Area Team members are identified in Appendix B.) In Alaska, however, members of both the Leadership and Working Groups worked together continuously to develop the statewide plan. Working side-by-side, the executive- and staff-level safety practitioners created a truly transparent planning process, while maximizing the expertise and experience of multiple Alaskans. Team Leaders were assigned to each emphasis area to help guide the planning process, and team meetings were held in person and via teleconference over several months. The Emphasis Area Teams conducted additional data analysis related to each emphasis area, identified existing strategies, and evaluated strategies for their potential effectiveness in Alaska. Their work culminated in detailed Emphasis Area Action Plans (provided in Appendix C) containing multidisciplinary strategies to save lives and reduce major injuries in Alaska. To the extent feasible, each Emphasis Area Action Plan focuses on the following:



- A strategic program of strategies or projects with applicability for all jurisdictions and agencies responsible for transportation safety;
- A full range of relevant strategies, from low-cost and easy-to-implement to more costly measures, as well as implementation responsibilities;
- A timeframe for development and implementation of each action, whether short-, mid-, or long-term; and
- The performance benefits expected from the adoption of the strategies (where known).

The State's current planning documents were reviewed and considered during development of the SHSP. Several strategies included in the Alaska SHSP, therefore, may be expansions or modified versions of strategies or programs already identified in the State's long-range transportation plan (LRTP) and statewide transportation improvement program (STIP), metropolitan planning organizations (MPO) plans and programs, or the State's Highway Safety Plan.

■ 2.2 Planning Schedule

The schedule followed by the Alaska DOT&PF and its planning partners is described in Table 2.1.

Table 2.1 Alaska SHSP Planning Schedule

Month	Activities and Milestones Reached
October 2006- December 2006	<p>Alaska DOT&PF retains a team of consultants to facilitate development of the State's SHSP. The Department develops a broad list of stakeholders for participation. The project team begins analyzing crash data, reviewing existing plans and programs, and conducting stakeholder interviews. Letters of invitation are sent requesting volunteers to serve on the Leadership and Working Groups. A kickoff safety summit is planned for January 2007. Letters of invitation to the kickoff event are sent to all stakeholders.</p>
January 2007	<p>The January Kickoff Meetings with the Leadership and Working Groups take place in Juneau on January 29 and 30. The Leadership Committee reviews high-level summary data and recommends the following issues be considered when developing the SHSP: data issues; pedestrians/bicyclists/Safe Routes To School (SRTS); aggressive drivers; enhancing licensing standards/requirements; crashes at intersections; lane departures; distracted drivers; work zone safety; funding methodology/transparency for traffic safety projects; impaired driving; and land use planning for safety.</p> <p>The Working Group meets the following day. The Working Group identifies additional stakeholders to be invited and agrees to narrow the focus of the SHSP to address the most significant problems and opportunities for making the biggest impact on traffic safety in Alaska. The Working Group identifies three main emphasis areas with specific focus areas within each:</p> <ol style="list-style-type: none"> 1. Driver Behavior (impaired, young, aggressive, and unlicensed/suspended/revoked drivers); 2. Special Users of the Transportation System (pedestrians, bicyclists, and motorcyclists); and 3. Highways (lane departure and intersection related crashes). <p>Cambridge Systematics presents a draft safety status technical report to the groups for review and comment.</p> <p>Crash data was recognized as a key issue related to all the emphasis areas. When the SHSP planning process began, several stakeholders were already involved in the ATRCC. Participants agreed that efforts to address data issues should not be duplicated, and therefore, data issues will be addressed by the ATRCC.</p>

Table 2.1 Alaska SHSP Planning Schedule (continued)

Month	Activities and Milestones Reached
February-March 2007	<p>Emphasis Area Teams are formed to focus on the three problem areas. Meetings of the Emphasis Area Teams are held by teleconference and face-to-face at state facilities. The consultant team is available by phone for those meetings to help facilitate discussion and share lessons learned from other states and the latest research in highway safety. Each team identifies additional data analysis needs. This analysis is conducted by members of the teams who work with the data on a regular basis. Their knowledge of the data and the State's dataport prove incredibly valuable to the overall process. Teams refine the scope of their emphasis areas (see Section 3.0), begin to prioritize safety problems, and begin discussion of potential strategies. The next meeting of the Leadership and Working Group is planned for April.</p>
April 2007	<p>At the Leadership and Working Group meeting held in Anchorage on April 18 and 19, participants set the framework of the safety plan by developing a vision, mission, and goal for the Alaska SHSP:</p> <p>Emphasis Area Teams meet separately to review data, discuss current/existing strategies, and identify potential strategies to include in the Alaska SHSP. The teams report their progress to the full stakeholder group following the breakouts.</p>
May 2007	<p>Emphasis Area Teams continue to identify potential strategies to be included in their action plans.</p>
June 2007	<p>The Leadership and Working Groups meet in Fairbanks June 19 and 20. The focus of this meeting is to enable face-to-face meetings of the Emphasis Area Teams to refine their list of strategies and begin developing individual action plans for each strategy.</p> <p>HDR presented a White Paper to the Highway Emphasis Area Team on the improvements in crash trends in Anchorage since the addition of a traffic unit.</p> <p>Cambridge Systematics presents a draft white paper on the institutional issues facing highway safety in Alaska. Input for this paper was gathered during stakeholder interviews, open discussions of the Leadership and Working Groups, and a review of the organizational structure of the agencies involved in highway safety. Participants are encouraged to provide feedback on the white paper.</p>

Table 2.1 Alaska SHSP Planning Schedule (continued)

Month	Activities and Milestones Reached
June 2007 (continued)	Also at the June meeting, participants identify the need to address crashes involving OHVs, such as snow machines and ATVs. The AHSO began collecting data regarding these crashes. Because OHVs are an important part of the transportation network in Alaska and many Alaskans rely on ATVs and snow machines for work, basic transportation, and recreation, the planning participants agreed to take a closer look at this problem. The Alaska DOT&PF asked HDR Alaska to develop a white paper that investigates and documents crash data related to OHVs in Alaska.
July- August 2007	Emphasis Area Teams prepare their final draft strategy action plans. The Consultant Team begins development of the draft SHSP and prepares the OHVs white paper.
September 2007	<p>The Draft Alaska SHSP, final Institutional Cohesion White Paper, and OHV analysis are presented to stakeholders at a meeting in Wasilla on September 11 and 12. Participants revise the SHSP goal and develop two strategies to begin to address crashes involving OHVs.</p> <p>The Alaska DOT&PF presents the draft plan to legislative aides at a meeting in Anchorage on September 12.</p> <p>The Final Alaska SHSP is produced and signed by the Governor (or her designee).</p> <p>The Alaska SHSP is submitted to the FHWA Division Office prior to October 1, 2007.</p>

3.0 Alaska's Plan for Improving Highway Safety

■ 3.1 Framework of the Plan

The authors of the *Alaska Strategic Highway Safety Plan* share a common goal to **reduce the rate of fatalities and major injuries by one-third over the next 10 years**. This is an aggressive goal that will require bold action. They debated whether to include a vision that seemed attainable during the life of the plan or one that truly captured their hope for the people and visitors of Alaska. This was a difficult decision as there are multiple factors involved in every crash: human behavior being the most difficult factor to predict or control. They opted, however, for an optimistic vision committing to the idea that any loss of life or injury sustained due to a traffic crash is an unacceptable and for the most part avoidable tragedy. Their vision is: **Everyone Counts: zero deaths and injuries on Alaska's surface transportation system**.

Great care was taken to determine how that vision could be achieved. The authors wanted the mission statement to reflect how they intended to pursue that vision. They agreed that it would take strong leadership, targeting resources at the areas with the greatest opportunity for improvement, and a combination of strategies spanning all safety-related disciplines. They agreed on a mission to **improve the safety of everyone through a proactive leadership structure and to focus resources on the most effective solutions using evidence-based engineering, enforcement, education, and emergency response initiatives**.

With this vision, mission, and goal in mind, the Leadership and Working Groups identified emphasis areas and formed the Emphasis Area Teams which evaluated and selected strategies for reducing fatalities and major injuries in Alaska.

■ 3.2 Emphasis Areas

Three primary references were used to select the emphasis areas: data analysis and review (see Section 1.0 for the problem identification); discussion among the planning participants; and review of the AASHTO SHSP. The three primary emphasis areas are driver behavior, special users of the transportation system, and highways. Each emphasis area addresses multiple problems areas, including:

1. **Driver Behavior** – Crashes involving impaired driving, speed and aggressive driving, young drivers, and unlicensed/suspended/revoked drivers;
2. **Special Users of the Transportation System** – Crashes involving pedestrians, motorcyclists, and bicyclists; and
3. **Highways** – Lane departure crashes, crashes at intersections, and crashes involving moose.

Two additional issues were discussed in great detail, although not designated as separate emphasis areas: 1) data; and 2) OHVs. **Data** was recognized as an imperative tool for identifying, analyzing, and mitigating crash problems. Issues regarding the availability, timeliness, accuracy, and completeness of crash data span all the problem areas. At the inception of this planning process, several stakeholders already were involved in the ATRCC. Participants agreed that efforts to address data issues should not be duplicated. Additionally, the goal of the ATRCC was directly related to that of the SHSP: *to improve motor vehicle crash data in order to reduce crashes and injuries on Alaska's roadways*. During the spring of 2007, the State participated in a Traffic Records Assessment, and the ATRCC prepared the State's first application for the 23 U.S.C. 408 State Traffic Safety Information System Improvement Grant. The application contains the State's 2000 Strategic Plan for Traffic Records (and related Assessment Report); the 2007 plan update; goals- and performance-based measures for improving traffic records; and other information required for the application. The application requests funding for five projects voted on by the ATRCC. These projects, or strategies for improving traffic records in Alaska, include:

- **SEARHC Youth First Responders** – The Youth First Responders is a pilot program for students ages 14 to 18 who are learning about health careers by training to earn their Emergency Trauma Technician and Emergency Medical Technician certificates. Students are trained in preparation of Patient Care Report forms. When they ride along on the ambulance, a Patient Care Report form is prepared for each call. These data will be submitted to the State EMS Office, a member of the ATRCC, through its web-based EMS data collection system. EMS personnel enter patient care information into a run report which will be collected and transmitted to the State Section of Injury Prevention and EMS. These data are part of the Alaska Trauma Registry and the FARS.
- **Uniform Citation Table** – An enhanced, centrally administered Alaska Uniform Table of Offenses (AUTO) would contain all traffic and criminal offenses defined in statutes, regulations, and local ordinances, including important attributes agreed upon by the agencies that create, process, and use traffic and criminal record data. AUTO would be updated as soon as changes in law are known. Subscribing agencies would be able to immediately and automatically update their own databases each time the centrally managed table is changed. All agencies capturing and exchanging data about traffic and criminal offenses would validate offenses against the same table. Agencies' internal offense tables would contain all attributes agreed upon as necessary to maintain complete and accurate traffic records, such as offense effective date ranges.

The court will hire a consultant to interview stakeholders individually and during project team meetings to identify and prioritize table enhancement needs. The consultant will analyze alternatives and convene a steering group to obtain consensus on an approach. The consultant will write specifications for the new/enhanced AUTO based on the agreed upon approach. The specifications will address software and business processes to maintain, update, distribute, and effectively use the table statewide. Upon approval of the specifications by the project steering committee, the consultant will implement changes to the current Uniform Offenses Citation Table (UOCT) Access database/programs and/or assist agencies in implementing changes to their tables/systems as needed, depending upon the approach agreed upon by the steering committee. The consultant also may recommend and assist agencies in implementing new procedures for updating, publishing, and subscribing to the table.

The consultant will write a final report, including recommendations for ongoing table maintenance and any follow-up projects or activities needed to make traffic and criminal records complete, accurate, and timely in terms of offense information.

- **Data Entry Clerks** – This project seeks funding to create two full-time data entry clerk positions at the Department of Motor Vehicles. One position will be used to enter crash data on driving records. The other position will enter citation data for traffic infractions and misdemeanor/felony DUIs. Currently, law enforcement officers are responsible for entry of crash and citation data into a state database, but due to other responsibilities, data entry is occasionally overlooked which can result in inaccurate, incomplete, or untimely data.
- **Mobile Data Terminals (MDT) Laptops for Troopers** – Troopers manually collect data in the field for multiple uses relating to traffic law enforcement and DMV records. These data are then transferred to various forms, sometimes several times. This duplication of effort can lead to errors and delays in the completion of reports or notifications. Errors in communication of the request from the trooper and return of the information from the dispatcher can lead to incorrect data being entered on to these reports.

The purchase of MDTs for the sergeants and troopers stationed along the “highway corridor” will allow Alaska State Troopers to improve the accurate, complete, and timely submission of crash report and traffic citations. Driver and vehicle information inaccuracies may be reported to the DMV quicker improving their data. Additionally, as other technology comes on-line to share data, these MDTs will enhance that data sharing.

- **TraCS DUI Pilot Project** – In 2004, the MSCVE received funding from the FMCSA to implement electronic transfer of citation data. For that project, a core development committee was formed and selected Traffic and Criminal Software (TraCS) as the mechanism to meet Alaska’s needs. That committee went on to develop a pilot program for the electronic transfer of traffic citations with TraCS. In 2005, FMCSA awarded additional funds to expand the use of electronic citations and to implement a TraCS electronic crash report. The latter project was cofunded by AHSO.

Using TraCS, a law enforcement officer will complete a customized, computer-based, DUI template that will automatically fill all corresponding fields in supporting or supplemental documents. Once the report is complete, data captured during the DUI processing will connect, through an electronic data exchange system, with corresponding fields in any participating end-user database. The data exchange server will link participating law enforcement agencies, the Alaska State Crime Laboratory, and the DMV. If the pilot is successful, the project could be expanded to transfer data between other end-users. The goal of this project is to make DUI arrest processing more efficient by taking advantage of enhanced computer functionality.

The goal of this project is to produce records associated with an impaired driving arrest (DUI) more efficiently by standardizing the documents, reducing data entry redundancy and inaccuracy, and speeding record distribution through electronic data transfer. Document automation should decrease DUI processing time and increase available patrol time for law enforcement officers. Automation should increase end-user record accuracy and decrease the time delay between arrest and actual computer entry of the license revocation.

Off-highway vehicles (OHV), such as snow machines and ATVs, are an important part of the transportation network in Alaska. Many Alaskans rely on ATVs and snow machines for work, basic transportation, and recreation. During development of the SHSP emphasis areas, crashes involving OHVs were discussed as warranting analysis. Although the teams chose not to include OHVs within one of the key emphasis areas, planning participants recognized that this mode of travel has Alaska-specific uses and accident patterns and should therefore be considered in the State's highway safety planning process.

Snow machines and ATVs are allowed within the state road ROW, but not on the road surface itself. Data collected by state agencies show that crashes and injuries are occurring within and outside the highway ROW. Crash and injury data analysis is a key element in identifying problems and developing strategies to help reduce the number of crashes and injuries involving these vehicles. The Alaska DOT&PF, therefore, directed the project consultant team to develop a white paper and present OHV crash and injury data, primarily for ATVs and snow machines, and examine variables such as *age, gender, month, alcohol-involvement, and geographic location of crash or injury*. This paper is provided as Appendix D. Further analysis and action by the SHSP planning participants will be necessary to identify and program countermeasures for reducing OHV-related crashes.

"The definition of insanity is doing the same thing over and over and expecting different results."

-Benjamin Franklin

■ 3.3 Strategies

Existing Strategies and Safety Initiatives

It should be noted that Alaska has made great progress toward improving transportation safety in recent years and currently is involved in numerous safety initiatives. The primary seat belt law became effective in 2006, and the State's safety belt use rate rose from 63 percent in 2001 to 83 percent in 2006. In 2006, the State passed legislation enabling the creation of Highway Safety Corridors. The Highway Safety Corridor Program is designed to target road segments with the highest frequency of severe and fatal crashes in the State. The State also recently began participating in the national Safe Routes to Schools program. This program helps communities address concerns in the area near elementary and middle schools. The program is intended to encourage a healthy lifestyle, and the educational activities make it fun for kids to learn how to travel safely to school. Also, the Alaska DPS expanded upon their efforts to reduce speeding and aggressive driving through the use of mock cars and the development of an Aerial Enforcement Program. The DPS also is developing a Highway Law Enforcement Program which focuses on multiple areas of public safety on the highways – DUI, traffic, warrants, etc. In 2007, the AHSO and Division of Statewide Planning participated in a traffic records assessment to determine the support that the State of Alaska's traffic records system supplies regarding the identification of traffic safety problems.

SHSP Strategies

Strategies for each emphasis area were selected through research and evaluation and by reviewing the documented history of what has worked in Alaska. Some strategies, particularly those related to engineering, have been proven effective through national or state-conducted research and have documented crash reduction factors. Several other strategies, however, relate to behavioral issues which have not yet been studied thoroughly enough to determine their levels of effectiveness. When developing the action plans for each emphasis area, the teams consulted four documents for determining levels of effectiveness, including:



When developing the action plans for each emphasis area, the teams consulted four documents for determining levels of effectiveness, including:

- Alaska's Highway Safety Improvement Program Handbook (<http://dot.alaska.gov/stwddes/dcstraffic/hsip.shtml#>);
- Transportation Research Board's Research Results Digest 299, Crash Reduction Factors for Traffic Engineering and Intelligent Transportation System Improvements: State-of-Knowledge Report (http://onlinepubs.trb.org/onlinepubs/nchrp/nchrp_rrd_299.pdf);

- National Cooperative Highway Research Program (NCHRP) Report 500 Series – *Guidance for the Implementation of the AASHTO Strategic Highway Safety Plan* (<http://safety.transportation.org/guides.aspx>); and
- Governors Highway Safety Association’s (GHSA) *Countermeasures That Work: A Highway Safety Countermeasure Guide for State Highway Safety Offices* (<http://www.ghsa.org/html/publications/index.html>).

Tables 3.1 to 3.3 provide the name of the strategies adopted by each Emphasis Area Team to reduce fatalities and major injuries on Alaskan roadways. The Emphasis Area Teams identified strategies they believe will have the greatest impact on safety in Alaska. Implementation of these strategies, however, will not be easy. Obstacles to implementation may include the need for legislative change; lack of public support; or lack of funding. Therefore, in many instances, the action plans developed by the teams include steps to identify additional partners or lead agencies, funding, and staff resources. Despite the challenges, it is anticipated that these needs may be able to be met during the lifetime of the plan.

Each strategy is identified by an alpha-numeric code for referencing purposes. These numbers do not represent priorities. Some strategies cut across problem areas and will likely improve more than one type of crash problem or effect more than one user of the transportation system. The Alaska Emphasis Area Teams identified some strategies as being Tier II strategies. These strategies may be addressed through this plan eventually, but may need additional study or resources to implement. The action plans provide a description of each strategy and identify the steps necessary for implementation. The action plans are provided as Appendix C.

Table 3.1 Driver Behavior Emphasis Area Strategies

I.D. Number	Strategy
Strategies for Reducing Crashes Involving Impaired Driving	
AL.1	<ul style="list-style-type: none"> AHSO and ASAP will structure and conduct a statewide alcohol assessment in FY 08
AL.2	<ul style="list-style-type: none"> Gain support for establishing a Governor's Road Safety Advisory Commission
AL.3	<ul style="list-style-type: none"> Continue to develop a DUI tracking system
AL.4	<ul style="list-style-type: none"> Study the issue of expanding the DUI vehicle impoundment to all communities
AL.5	<ul style="list-style-type: none"> Implement, track progress, and evaluate the effectiveness of the new driver licensing act which requires that drivers convicted of DUI carry a marked license during sentencing, probation, and/or parole
AL.6	<ul style="list-style-type: none"> Identify methods for reducing the number of blood test refusals – Tier II
AL.7	<ul style="list-style-type: none"> Strengthen Alcohol Beverage Commission (ABC) enforcement – Tier II
AL.8	<ul style="list-style-type: none"> Outreach to Health Care Professionals
Strategies for Reducing Crashes Involving Speed and Aggressive Driving	
AG.1	<ul style="list-style-type: none"> Consult with Department of Law regarding legislation defining aggressive driving
AG.2	<ul style="list-style-type: none"> Consult with Department of Law regarding possible implementation and evaluation of an aggressive driving law
AG.3	<ul style="list-style-type: none"> Traffic School
Strategies for Reducing Crashes Involving Young Drivers	
YD.1	<ul style="list-style-type: none"> Graduated driver license (GDL) law enforcement
YD.2	<ul style="list-style-type: none"> Study issues involved with legislative exemptions for young drivers in rural Alaska
YD.3	<ul style="list-style-type: none"> Educate the public and elected officials on the most recent research regarding effective GDL elements
YD.4	<ul style="list-style-type: none"> Driver Education Study
YD.5	<ul style="list-style-type: none"> Facilitate parental supervision of learners and intermediate drivers and encourage selection of safer vehicles for young drivers
Strategies for Reducing Crashes Involving Unlicensed/Revoked/Suspended Drivers	
USR.1	<ul style="list-style-type: none"> Develop an electronic employer notification process

Table 3.2 Special Users Emphasis Area Strategies

I.D. Number	Strategy
Strategies for Reducing Crashes Involving Pedestrians and Bicyclists	
SU.1	<ul style="list-style-type: none"> Public education and outreach to motorists to raise their awareness of pedestrian and bicyclist safety needs
SU.2	<ul style="list-style-type: none"> Preserve the right-of-way for pedestrians and bicyclists during snow events
SU.3	<ul style="list-style-type: none"> Collect pedestrian and bicycle use data
Strategies for Reducing Crashes Involving Pedestrians	
SP.1	<ul style="list-style-type: none"> Identify and implement appropriate engineering strategies to address high-crash locations involving pedestrians
SP.2	<ul style="list-style-type: none"> Public education and outreach for pedestrians
SP.3	<ul style="list-style-type: none"> Improve visibility of pedestrians
SP.4	<ul style="list-style-type: none"> Expand the Safe Routes to School Program in Alaskan communities
SP.5	<ul style="list-style-type: none"> Implement targeted crosswalk enforcement
Strategies for Reducing Crashes Involving Bicyclists	
SB.1	<ul style="list-style-type: none"> Identify and implement appropriate engineering strategies to address high-crash locations involving bicyclists
SB.2	<ul style="list-style-type: none"> Public education and outreach for bicyclists
SB.3	<ul style="list-style-type: none"> Increase bicycle helmet use
SB.4	<ul style="list-style-type: none"> Expand section of Alaska's Drivers Manual to include more detailed information about bicycle and pedestrian safety
Strategies for Reducing Crashes Involving Motorcyclists	
SM.1	<ul style="list-style-type: none"> Encourage motorcycle operators and passengers to use protective equipment through a communication campaign
SM.2	<ul style="list-style-type: none"> Encourage driver training as part of new motorcycle endorsement licenses
SM.3	<ul style="list-style-type: none"> Establish an incentive program for motorcycle riders who complete training at various stages of their riding career
Strategies for Reducing Crashes Involving Off-Highway Vehicles (OHV)	
SU-OHV.1	<ul style="list-style-type: none"> Establish multiagency task force to address OHV safety
SU-OHV.2	<ul style="list-style-type: none"> Through a public outreach campaign, increase OHV safety awareness

Note: The Special Users Emphasis Area Team also identified the need to lend their expertise and understanding of crashes involving pedestrians, bicyclists, and motorcyclists to the Driver Behavior and Highway Emphasis Area Teams as they implement strategies related to impaired driving and infrastructure issues.

Table 3.3 Highway Emphasis Area Strategies

I.D. Number	Strategy
General Strategies	
HG.1	• Preserving Alaska’s main road corridors
HG.2	• Explicit consideration of safety in DOT&PF highway design
HG.3	• Implement Highway Safety Corridor Program
Strategies for Reducing Run-off-road Crashes	
HR.1	• Shoulder rumble strips
HR.2	• Curve delineation
HR.3	• Widen shoulders on rural two-lane highways
Strategies for Reducing Head-on Crashes	
HH.1	• Centerline rumble strips
HH.2	• Install passing lanes
HH.3	• Headlights on at all times
HH.4	• Install cable rail in medians of divided highways
Strategies for Reducing Intersection Crashes	
HI.1	• Develop a comprehensive Access Management Policy
HI.2	• Single-lane roundabouts
HI.3	• Red light running countermeasures
HI.4	• Pedestrian countdown timers
Strategies for Reducing Crashes Involving Moose	
HM.1	• Get moose away from roads by managing adjacent habitat
HM.2	• Get moose away from roads by managing roadside moose browse
HM.3	• Provide safer wildlife crossings through roadway improvements
HM.4	• Create winter connectivity snow trails and diversionary tree cutting to encourage moose to stay away from road surfaces

4.0 SHSP Implementation Process

The *Alaska Strategic Highway Safety Plan* was developed by the Alaska DOT&PF, Division of Program Development and its partner agencies (noted in Section 2.0). Implementation of the SHSP will rely even more heavily upon those partnerships and the collaboration of Alaska's safety practitioners, as several emphasis area strategies will need to be carried out by other agencies or divisions. Therefore, a core group of planning organizations, transportation agencies, traffic engineering, enforcement organizations, emergency responders, and the Governor's Representative for Highway Safety will meet regularly to ensure coordination among the State's various safety plans and programs. The State's crash data will continue to be analyzed annually. As a living document, the SHSP will be updated as needed, and at a minimum, it will be reviewed in conjunction with the updates to Alaska's statewide transportation improvement plan.

■ 4.1 Oversight of the SHSP

As outlined in SAFETEA-LU, the Alaska DOT&PF assumes responsibility for development as well as implementation, evaluation, and oversight of the SHSP. On an annual basis, the Alaska DOT&PF will conduct crash data analysis to determine changes in trends and identify emerging safety issues. The Alaska DOT&PF also will incorporate the implementation of the Alaska SHSP as a job function for one (or more) individuals within the Department. This will provide the dedication of staff time needed to execute this plan and keep the Department accountable for the successful implementation of the plan. This person also will serve as a liaison between the Alaska DOT&PF and its planning partners.

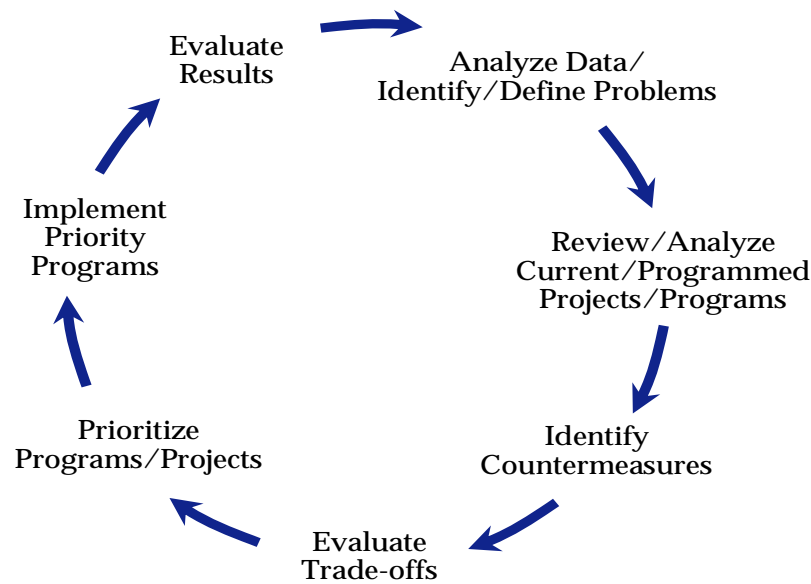
The Department will continue to manage this effort as an inclusive process and seek the input and collaboration of the State's safety stakeholders. As noted in Section 2.0, the Alaska DOT&PF established a management structure that includes a Leadership Group and a Working Group. During implementation, the responsibilities of each group will be as follows:

- Leadership Group Responsibilities
 - Leadership Group member agencies will develop and execute a Memorandum of Understanding (MOU) confirming their commitment to safety planning and identifying what their agency can contribute to this process.
 - Meet quarterly to review progress towards the shared SHSP goals and provide updates on agency-specific safety initiatives.

- Appoint staff member(s) to the SHSP Working Group and dedicate staff expertise to further progress towards the shared SHSP goals.
- Consider the SHSP when developing or updating individual agency plans and budgets.
- Working Group Responsibilities
 - Keep their superiors, specifically members of the Leadership Group, informed on current safety projects, safety-related initiatives, legislative proposals, and research. They will be responsible for keeping safety on their agency's agenda.
 - Work together to update or refine the Emphasis Area Action Plans as needed.
 - Will be the primary staff responsible for implementing individual SHSP strategies established in the Action Plans.
 - Meet monthly and/or in advance of any Leadership Group Meeting as needed.

■ 4.2 Safety Program Management in Alaska

As part of the SHSP project, the Alaska DOT&PF commissioned a white paper to document the institutional arrangements in Alaska relative to transportation safety planning. The *Institutional Cohesion in Highway Safety Planning and Programming* white paper is provided as Appendix E of the SHSP. As noted in the paper, the development and management of traffic safety programs should be a systematic process with the goal of reducing the number and severity of traffic crashes. This data-driven process should ensure all opportunities to improve highway safety are identified through data analysis, research, and experience. Effective countermeasures should be selected to specifically address the problems and issues identified. Tradeoff analysis should be used to prioritize the countermeasures according to cost and effectiveness, and outcomes should be tracked and measured using performance measures. The evaluation results should be used to facilitate identification and implementation of the most effective highway safety strategies and programs. The following graphic illustrates the process of safety planning.



Research shows that every successful program has an influential individual or group of individuals to provide the impetus for the safety planning process. Sometimes this individual or group is a champion not only because of their interest in safety, but also because of the position they hold in the institutional structure. During stakeholder interviews and open discussions at the SHSP planning meetings, participants proposed that traffic safety in Alaska needed the additional support of the highest level of state government, the Governor. The States of Michigan and Washington have been very successful in their safety planning efforts, in part because they have the support and leadership of their governors. These models are described in *Institutional Cohesion in Road Safety Planning and Programming* white paper. One of the first steps in implementation of the Alaska SHSP will be to examine the possibility of forming a governor's commission for traffic safety. For effective collaboration, Alaska needs a strong institutional structure and linkage among the safety planning participants. An overarching safety commission, such as in Michigan and Washington, is one way to provide that strong formal structure and linkage. Establishment of such a commission could greatly impact how the Alaska SHSP and other statewide safety planning efforts are executed.

The commission would consist of the Governor, Alaska DOT&PF, Division of Motor Vehicles, Department of Public Safety, Department of Health and Social Services, Alaska Injury Prevention Center, Governor's Representative for Highway Safety, the Anchorage and Fairbanks MPOs, local police departments, tribal representatives, court system, and other agencies as necessary. The commission would meet on a regular basis and be staffed by the AHSO. The primary mission of commission would be to coordinate implementation of the SHSP, conduct safety discussions, and communicate safety issues to the broader community. The SHSP contains an action plan for working with the Governor's Office to gain support and establishment of this commission.

■ 4.3 Funding of the Alaska SHSP

Based on current projections, infrastructure safety funding from FHWA may or may not increase in Alaska over the next five fiscal years. Therefore, it will be critical to maximize the use of available resources.

Appendix A

SAFETEA-LU Requirements

Appendix A – SAFETEA-LU Requirements

Requirements of the Safe, Accountable, Flexible, Efficient Transportation Equity Act – A Legacy for Users

In July 2005, Congress reauthorized the highway bill, and in August the Safe, Accountable, Flexible, Efficient Transportation Equity Act – A Legacy for Users (SAFETEA-LU) was signed into law. Section 148 of the highway bill provides guidance and funding for the Highway Safety Improvement Program (HSIP). To obligate HSIP funds, states must:

- Develop and implement a SHSP;
- Produce a program of projects or strategies;
- Evaluate the plan on a regular basis; and
- Submit an annual report to the Secretary.

The Act codifies AASHTO's recommendation that all states develop a SHSP. This Act calls for state departments of transportation (DOT) to work collaboratively with multiple safety stakeholders to develop the SHSP. The plans are to be based on problems identified on all public roads. States are required to establish a system that identifies hazardous locations, sections, and elements "using such criteria as the State determines to be appropriate, establish the relative severity of those locations, in terms of accidents, injuries, deaths, traffic volume levels, and other relevant data."

SAFETEA-LU also requires the Alaska DOT&PF to submit to the U.S. Secretary of Transportation an annual report, which, among other requirements must include a description of not less than five percent of locations exhibiting the most severe safety needs, with an assessment of potential remedies for the identified hazardous locations, estimated costs associated with remedies, and impediments to implementation other than cost. The reports must be made available to the public through the Alaska DOT&PF's web site.

Planning Partners

Section 148 makes it clear that the Alaska DOT&PF is expected to lead this effort and provides a list of required partners which include:

- State Highway Safety Office;
- Regional transportation planning organizations and metropolitan planning organizations;
- Major modes of transportation;
- State and local traffic enforcement officials;
- State persons responsible for administering the Federal rail-grade crossing program;
- Operation Lifesaver;
- State Motor Carrier Safety Assistance Program (MCSAP) administrators;
- State motor vehicle administrators; and
- Major state and local stakeholders.

Specific Requirements of the Strategic Highway Safety Plan

SAFETEA-LU establishes a clear set of process and content requirements for the SHSP as described below:

- Use different types of crash data;
- Establish a crash data system with the ability to perform problem identification and countermeasure analysis on all public roads;
- Advance the State's capabilities for traffic records data collection, analysis, and integration with other sources of safety data and include information on all public roads;
- Address engineering, management, operation, education, enforcement, and emergency medical services elements;
- Identify hazardous locations, sections, and elements and establish criteria that indicate relative crash severity of these locations;
- Adopt strategic and performance-based goals that address the broad spectrum of safety improvements (including behavioral improvements), focus resources on the areas of greatest need, and coordinate with other highway safety programs;
- Consider the results of state, regional, and local transportation and highway safety planning processes;
- Set priorities for corrective action on high-hazard locations, segments, and elements;
- Identify opportunities for preventing the development of new hazardous locations;
- Establish an evaluation process to assess the results achieved by the highway safety improvement projects;

- Produce a program of projects that is consistent with the statewide transportation improvement program (STIP); and
- Obtain approval by the Governor or the appropriate state agency.

Eligible Funding Categories

Section 1401 of SAFETEA-LU amended Section 148 of Title 23 U.S.C. creates a new HSIP as a “core” FHWA program with separate funding, replacing the Hazard Elimination Program in 23 U.S.C. Section 152, effective October 1, 2005. The purpose of the HSIP as stated in Section 148(b)(2) is to reduce traffic fatalities and serious injuries on public roads. States may be allowed some flexibility in how safety funds are used. As per Federal guidance and Section 148 (e):

Flexible Funding for States with a Strategic Highway Safety Plan:

(1) In general. To further the implementation of a state strategic highway safety plan, a state may use up to 10 percent of the amount of funds apportioned to the State under section 104(b)(5) for a fiscal year to carry out safety projects under any other section as provided in the state strategic highway safety plan if the State certifies that

(A) the State has met needs in the State relating to railway-highway crossings; and

(B) the State has met the State’s infrastructure safety needs relating to highway safety improvement projects.

(2) Other transportation and highway safety plans. Nothing in this subsection requires a state to revise any state process, plan, or program in effect on the date of enactment of this section.

Based on approval of the states’ SHSP and the certifications requested under Section 148 (e), the following types of projects may be eligible for funding:

- Intersection safety improvements;
- Pavement and shoulder widening (including addition of a passing lane);
- Installation of rumble strips or other warning devices as long as they do not affect the mobility of bicyclists;
- Pedestrians and the disabled;
- Installation of skid-resistant surfaces at an intersection or to other high-crash locations;
- An improvement for bicycles or pedestrian safety or the safety of the disabled;

- Elimination of hazards at railroad grade crossings (including grade separations);
- Construction of a rail-highway grade crossing feature (including the installation of protective devices);
- Traffic enforcement activity at a rail-highway grade crossing;
- Construction of traffic calming features;
- Elimination of a roadside obstacle;
- Improvement of highway signage or pavement markings;
- Installation of a priority control system at signalized intersections for emergency vehicles;
- Installation of traffic control or other warning devices at high-crash locations;
- Safety conscious planning;
- Improvements in the collection and analysis of crash data;
- Planning emergency communications;
- Work zone operational improvements or traffic enforcement activities;
- Guardrail installation;
- Barriers and crash attenuators;
- Structures or other measures to eliminate or reduce accidents involving wildlife;
- Installation and maintenance of signs at pedestrian/bicycle crossings and in school zones;
- Signage and construction of pedestrian/bicycle crossings and at school zones;
- Construction and operational improvements on high-risk rural roads; and
- Improvement projects on any public roadway or publicly owned bicycle or pedestrian pathway or trail.

Reporting Requirements

Sections 148 (g) and 152 (g) of Title 23 U.S.C. require each state to submit to the Secretary a HSIP report. The State is required to submit the report to the FHWA Division Office on or before August 31. This report will include the reporting requirements of §148 (g) as described below along with the requirements of the Hazard Elimination Program §152 (g) and the High-Risk Rural Roads Program (HRRRP).

Section 1401 of SAFETEA-LU includes the following reporting requirements for the HSIP under 23 U.S.C. §148 (g):

A state shall submit to the Secretary a report that:

- A. Describes progress being made to implement highway safety improvement projects under this section;
- B. Assesses the effectiveness of those improvements; and
- C. Describes the extent to which the improvements funded under this section contribute to the goals of:
 - i. Reducing the number of fatalities on roadways;
 - ii. Reducing the number of roadway-related injuries;
 - iii. Reducing the occurrences of roadway-related crashes;
 - iv. Mitigating the consequences of roadway-related crashes; and
 - v. Reducing the occurrences of crashes at railway-highway crossings.

In addition to the above stated requirements and based upon FHWA's guidance, the annual report to the Secretary also will:

- Describe the progress that has been made in implementing HSIP projects;
- Demonstrate the effectiveness of the HSIP in terms of general highway safety trends; overall effectiveness of the HSIP; and a summary of the effectiveness of the HRRRP;
- Describe at least five percent of most hazardous locations and assessment of potential remedies, costs and impediments to correcting hazards;
- Use data to evaluate the effectiveness of HSIP-funded projects for the purpose of specific safety goals, including benefit/cost analysis of such projects; and
- Report on the HRRRP portion of the HSIP by describing program implementation, methodologies used to identify HRRR locations; and project assessments.

Appendix B

Strategic Planning Participants

Appendix B – Strategic Planning Participants

Tables B.1 to B.3 identify the people who participated as members of the Alaska SHSP Emphasis Area Teams. Many of these same people also participated as members of the Leadership or Working Group. The Alaska DOT&PF greatly appreciates the support and dedication of these talented safety practitioners.

Table B.1 Driver Behavior Emphasis Area Team Membership

Name	Agency	Email
Cindy Cashen, Team Leader	Alaska Highway Safety Office	cindy.cashen@alaska.gov
Nancy Reeder, Team Leader	Anchorage Police Department	NReeder@ci.anchorage.ak.us
Colleen Ackiss	Alaska DOT&PF	colleen.ackiss@alaska.gov
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Tim Bundy	Injury Prevention and EMS Section, Division of Public Health	Timothy_Bundy@health.state.ak.us
Jon Cook	Alaska Auto Dealers Association	joncook@auroramotors.com,
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Michael Folkerts	U.S. Coast Guard	Michael.R.Folkerts@uscg.mil
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Christine Johnson	Alaska Court System	cjohnson@courts.state.ak.us
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Diane Schenker	Alaska Court System	dschenker@courts.state.ak.us
Steve Soenksen	Alaska DOT&PF, Division of Program Development	steve.soenksen@alaska.gov
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Ron Taylor	Alcohol Safety Action Program (ASAP)	Ronald_taylor@health.state.ak.us
Chris Thomas	Alaska Highway Safety Office	Chris.thomas@alaska.gov
Aves Thompson	Alaska Trucking Association	aves@aktrucks.org
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Table B.2 Special Users Emphasis Area Team Membership

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Jeff Jeffers	Alaska DOT&PF	Jeff.jeffers@alaska.gov
Ron Martindale	Alaska DOT&PF, Central Region	Ron.Martindale@alaska.gov
Dan McCrummen (invited 7/2007)	Juneau ABATE Chapter	Dan_mccrummen@admin.state.ak.us
Patty Owen	school health	Patty_owen@health.state.ak.us
Shelley Owens	Department Health & SS, Injury Prevention and EMS, EMS Unit	Shelley_owens@health.state.ak.us
Lt. Nancy Reeder	Anchorage Police Department	NReeder@ci.anchorage.ak.us
Ron Perkins	Alaska Injury Prevention Center	asc1@alaska.net
Brad Sworts	Matanuska-Susitna Borough	bsworts@matsugov.us
Sam Thomas	Craig Community Association	crabbay13@hotmail.com
Robert Welton	Kluane International Bike Relay	robert_welton@fishgame.state.ak.us
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Table B.3 Highway Emphasis Area Team Membership

Name	Agency	E-mail
Cpt. Hans Brinke, Team Leader	Alaska DPS	Hans_Brinke@dps.state.ak.us
Kurt Smith, Team Leader	Alaska DOT&PF	kurt.smith@alaska.gov
Ethan Birkholz	Alaska DOT&PF, Northern Region	ethan.birkholz@alaska.gov
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Al Fletcher	FHWA	al.fletcher@fhwa.dot.gov
Russell Johnson	Alaska DOT&PF Northern/Interior	russ.johnson@alaska.gov
Bob Kniefel	Municipality of Anchorage (MUNI)	kniefelre@muni.org
Frank McQueary	GIS Database	fmcqueary@myeterra.com
Carolyn Morehouse	Alaska DOT&PF, Southeast Region	Carolyn.morehouse@alaska.gov
Murph O'Brien	Matanuska-Susitna Borough	Murph.O'Brien@matsugov.us
Gary Olson	Alaska Moose Federation	golson@growmoremoose.org
Jeff Ottesen	Alaska DOT&PF	Jeff.ottesen@alaska.gov
Shelley Owens	Department Health & SS, Injury Prevention and EMS, EMS Unit	shelley_owens@health.state.ak.us
Nancy Reeder	Anchorage Police Department	Nreeder@ci.anchorage.ak.us
Brad Sworts	Matanuska-Susitna Borough	bsworts@matsugov.us
Chris Thomas	Alaska Highway Safety Office	chris.thomas@alaska.gov
Scott Thomas	Alaska DOT&PF, Central Region	scott.thomas@alaska.gov
Aves Thompson	Alaska Trucking Association	aves@aktrucks.org

Appendix C

Emphasis Area Action Plans

*Driver Behavior Emphasis Area
Action Plans*

AL.1 ALCOHOL ASSESSMENT

DESCRIPTION: The Alaska Highway Safety Office (AHSO) will coordinate a FFY08 statewide alcohol assessment, including a focus on social services, e.g., treatment, rehabilitation, etc. Following the assessment, the Driver Behavior Emphasis Area Team will examine the results and update the SHSP.

RESPONSIBLE AGENCY:

Lead Agency: AHSO

Contact Name, Title: Cindy Cashen, Highway Safety Office Administrator

Phone: (907) 465-4374

E-mail: Cindy.Cashen@alaska.gov

NECESSARY PARTNERS:

- Alcohol Safety Action Program (ASAP).
- Department of Health and Social Services-Division of Behavioral Health and Division of Juvenile Justice.
- National Highway Traffic Safety Administration (NHTSA) Regional Office.
- ASP and local law enforcement.
- TRCC.

DATA ANALYSIS NEEDS OR AVAILABLE RESOURCES:

- NHTSA Guidelines.
- Alaska 1999 Alcohol Assessment Report, DHSS alcohol-related publications, Alaska Criminal Justice Council (ACJC) Annual Report recommendations.
- Determine what 1999 Assessment recommendations have been met and what remain.
- Compare with other state Assessments.

EXPECTED EFFECTIVENESS/OUTCOME:

An Assessment Report with recommendations for the Strategic Highway Safety Plan and its members.

Narrative: Based on action steps described below, this strategy also would include a DUI law review. NHTSA's *Countermeasures That Work* notes an effectiveness of "likely" with a "medium" cost to implement.

Baseline: Average number of lives lost and major injuries sustained due to this problem over the past five years: 166 fatalities/586 major injuries due to alcohol-related crashes.

- Number of recommendations implemented.
- Reduction in serious crashes due to impaired driving; measurement – three years before and after crash.
- Number of courts using the implemented strategies in sentencing.

FUNDING AND RESOURCE REQUIREMENTS:

AHSO-section 402.

Estimated Cost to Implement: \$30,000 for out-of-state Assessment Team to conduct statewide interviews and prepare a report.

ACTION STEPS AND TIMELINE:		
ACTION STEP	RESPONSIBLE AGENCY	TIMELINE/DUE DATE
Address the need for an impaired driving assessment in the FFY 2008 Highway Safety Plan.	AHSO	9/1/07
Hold an RFP for an event coordinator.	AHSO	October 2007
Coordinate a meeting with DHSS & SHSP Driver Behavior members and develop a plan of action, including possible assessment team members, the expertise and expectations of the assessment team, and agency team leaders who will provide follow up to the assessment.	AHSO	November 2007
Coordinate with NHTSA to ensure their assistance and support.	AHSO	November 2007
Conduct the assessment.	AHSO	January-March 2008
Use the assessment to document the current process for conducting DUI screening and treatment recommendations.	ASAP	March 2008
Identify effective alcohol dependency screening tools and brief intervention strategies.	ASAP	March 2008
Publicize the results especially to public health and health care officials and practitioners in the SHSP Annual Report, the AHSO Annual Evaluation Report, and other venues.	AHSO & DHSS	January 2008 Annual Reports
Use the assessment to review procedures for felony and misdemeanor DUI screening.	ASAP	March 2008
Consider a combined screening process for all DUI offenders.	ASAP & Department of Corrections	March 2008
Identify a method for implementing the process statewide, e.g., legislation, training, etc.	AHSO and Department of H&SS	March 2008
Deliver the assessment report to the Governor.	AHSO	March 2008
Revise the SHSP as needed to address issues and recommendations identified through the assessment.	AHSO	December
Develop an implementation plan based on the assessment recommendations.	AHSO/consultant	Within 3 months of the assessment
Implement the plan.	AHSO/partner agencies/consultant	FY 2008-2011
Document implementation successes/challenges and evaluate results.	AHSO/consultant	May 2008 and beyond

MEASUREMENT AND EVALUATION**STRATEGY PERFORMANCE MEASURES:**

- Publication of the Assessment Report.
- Number of strategies implemented.

Before and after counts of implemented strategies. (This will depend on the final strategies listed in the implementation plan. Some impact measures may be feasible.)

EVALUATION:

- Number of strategies implemented.
- Strength of the collaboration among AHSO, DPS, ACOP, DOC, DOT&PF, and DHSS addressing impaired driving issues.

AL.2 GOVERNOR'S ROAD SAFETY ADVISORY COMMISSION

DESCRIPTION: Approach the Governor to gain support for establishing a Governor's Road Safety Advisory Commission which would in part address impaired driving issues.

RESPONSIBLE AGENCY:

Lead Agency: AHSO

Contact Name, Title: Cindy Cashen, Highway Safety Office Administrator

Phone: (907) 465-4374

E-mail: Cindy.Cashen@alaska.gov

NECESSARY PARTNERS:

- DOT&PF Leadership.
- Governor's Office.
- DPS.
- ACOP.
- Division of Motor Vehicles.
- NHTSA Regional Office.
- FHWA.
- FMCSA.
- Public and private sector.

DATA ANALYSIS NEEDS OR AVAILABLE RESOURCES:

The Safety Status Technical Report provides the basic crash data. The Institutional Report demonstrates the need for increased coordination and collaboration among agencies, as well as the need for clearly defined leadership.

Resources will be needed to support and facilitate the Commission. Perhaps one of the agencies (e.g., AHSO) could be assigned the duty.

EXPECTED EFFECTIVENESS/OUTCOME:

States such as Washington and Michigan have established executive-level leadership commissions. These states have experienced a reduction in fatalities, injuries, and crashes. It is difficult to measure the effectiveness of the commissions; however, it is clear from many case studies that leadership is a key issue for making progress.

FUNDING AND RESOURCE REQUIREMENTS:

Narrative: For two meetings to request and construct a committee.

Estimated Cost to Implement: \$ 5,000

ACTION STEPS AND TIMELINE:

ACTION STEP	RESPONSIBLE AGENCY	TIMELINE/DUE DATE
Work with ADOT&PF leadership to identify a method for establishing the GRSAC, e.g., executive order, memorandum of understanding, state law, etc.	AHSO	November 2007
Gain the support of partner agencies, e.g., the State Patrol, local law enforcement, SHSP Driver Behavior members.	AHSO	November 2007
Seek a meeting with the Governor to ask for support for a GRSAC and explain the benefits.	AHSO	November/2007
Conduct follow-up as advised by the Governor.	AHSO	May 2008-last day of leg session

MEASUREMENT AND EVALUATION
STRATEGY PERFORMANCE MEASURES: Committee is created by Governor Palin.
EVALUATION: Annual reports to the Governor on the GRSAC's accomplishments.

AL.3 DUI TRACKING SYSTEM

DESCRIPTION: Continue to develop a comprehensive DUI tracking system to ensure screening and treatment take place, and feedback is provided throughout the enforcement system, e.g., law enforcement, prosecutors, judges, and probation officers.

RESPONSIBLE AGENCY:

Lead Agency: Department of Health and Social Services – Alcohol Safety Action Program (ASAP)

Contact Name, Title: Ronald F. Taylor, Program Coordinator

Phone: (907) 264-0735

E-mail: Ronald.taylor@alaska.gov

NECESSARY PARTNERS:

- Department of Corrections-Probation Office.
- Department of H&SS-Division of Behavioral Health and Division of Juvenile Justice.
- Alaska Court System.
- Division of Motor Vehicles.
- Alaska Traffic Records Coordinating Committee.

DATA ANALYSIS NEEDS OR AVAILABLE RESOURCES:

Data needs to be collected and linked from the following agencies: ASAP, DOC, DJJ, SAMSHA, Alaska Court System, DMV.

EXPECTED EFFECTIVENESS/OUTCOME:

There are monitoring gaps in the current system that allow experienced offenders to avoid treatment which increases the likelihood of their reoffending. This project will allow us to develop a collective system of tracking which will increase the number of offenders who are monitored by the various entities involved. Two recent recidivism reports (Alaska Judicial Council and a Legislative Audit conducted on various justice programs statewide that included offenders involved with DOC, ASAP, and DJJ as well as those involved with therapeutic courts) will substantiate the use of this strategy. A third report generated by the Alaska Judicial Council covered a preliminary analysis of data already collected by some of the above entities; however, DJJ and DMV were not included in this analysis.

Average number of lives lost and major injuries sustained due to this problem over the past five years: 166 fatalities/586 major injuries due to alcohol-related crashes.

FUNDING AND RESOURCE REQUIREMENTS:

Narrative: Each agency involved in this collaborative process will need to identify the data needed and potential sources for collecting that data. Additional funding will be needed to link systems and store data for retrieval. Based on the needs identified in this process, funding options will be developed from Federal, state, and other private foundation funds as possible sources.

Estimated Cost to Implement: \$100,000. A detailed cost analysis will be developed based on the Alaska Judicial Council's 2006 report, "Therapeutic Justice Statewide Database."

ACTION STEPS AND TIMELINE:		
Action Step	RESPONSIBLE AGENCY	TIMELINE/DUE DATE
Identify the NHTSA pilot states that received funding for developing a DUI tracking system to identify good practice.	DHSS/AHSO	
Request NHTSA to sponsor a peer exchange on the development of DUI tracking systems.	DHSS/AHSO	
Review the elements of the Traffic Records Strategic Plan.	DHSS	10/15/07
Meet with the Traffic Records Coordinating Committee to determine if additional representation is required for developing and implementing a DUI tracking system.	DHSS	10/15/07
Identify and address any deficiencies in the TRCC membership and the Traffic Records Strategic Plan.	DHSS	10/15/07
Identify pilot site(s).	DHSS, ACS, DMV & DOC	10/15/07
Submit funding recommendations to the TRCC after a cost analysis has been completed.	DHSS, ACS, DMV & DOC	12/31/07
Conduct staff training prior to implementation of pilot.	DHSS, ACS, DMV & DOC	6/30/08
Regularly monitor progress in developing a comprehensive DUI tracking system.	DHSS, ACS, DMV & DOC	Quarterly reports 6/30/08
Evaluate success of DUI tracking system and develop a funding strategy to sustain expansion to further sites statewide.	TRCC and DHSS, ACS, DMV & DOC	6/30/08
MEASUREMENT AND EVALUATION		
STRATEGY PERFORMANCE MEASURES:		
Implementation of the pilot program.		
Number of recidivists before and after the two-year pilot test.		
Three-year before and after study of DUI-related offenses and crashes in the pilot test areas.		
EVALUATION:		
A process evaluation will be conducted on implementation of the pilot test phase to identify effective practices and techniques. An impact study will examine before and after data on DUI citations, convictions, recidivism, and crashes in the pilot test areas.		

AL.4 STUDY THE ISSUE OF EXPANDING DUI VEHICLE IMPOUNDMENT/IMMOBILIZATION**DESCRIPTION:** Study the issue of expanding the DUI vehicle impoundment to all communities.**RESPONSIBLE AGENCY:**

Lead Agency: AHSO

Contact Name, Title: Cindy Cashen

Phone: (907) 465-4374

E-mail: cindy.cashen@alaska.gov

NECESSARY PARTNERS:

- Department of Law.
- Court System.
- DPS-Village Police Safety Officers and Alaska State Troopers.
- Alaska Chiefs of Police Association (ACOP) and Local law enforcement agencies.
- Department of Corrections.

DATA ANALYSIS NEEDS OR AVAILABLE RESOURCES:

Case studies of vehicle impoundment experiences in Anchorage, Juneau, and Fairbanks to develop guidelines and determine costs, training needs, etc.

EXPECTED EFFECTIVENESS/OUTCOME: Increased impaired driving sanctions in Alaska.

Narrative: NHTSA Countermeasures That Work: Effectiveness – Varies; Cost – Varies; NCHRP Report 500 Volume 16: Effectiveness – Proven; Cost – Moderate.

Average number of lives lost and major injuries sustained due to this problem over the past five years: 166 fatalities/586 major injuries due to alcohol-related crashes.

FUNDING AND RESOURCE REQUIREMENTS:*Narrative:*

Estimated Cost to Implement: \$ 10,000.00

ACTION STEPS AND TIMELINE:

ACTION STEP	RESPONSIBLE AGENCY	TIMELINE/DUE DATE
Review and document existing vehicle impoundment programs to identify data needs and other resources.	AHSO	FFY08
Meet with partners to study the possibility of expanding DUI vehicle impoundment and develop potential strategies for implementation of vehicle impoundment and/or immobilization.	AHSO	FFY08
Develop community guidelines for vehicle impoundment.	AHSO	FFY08
Develop and offer training, consultation, and equipment to enforcement agencies to encourage DUI impoundment.	DPS/ACOP	FFY08

MEASUREMENT AND EVALUATION**STRATEGY PERFORMANCE MEASURES:**

Number of communities that implement the program.

Number of vehicles impounded.

Percentage of convicted DUI offenders with impounded vehicles.

Recidivism rates by community and statewide.

Number of DUI-related fatalities and serious injuries.

EVALUATION:

Determination of potential effectiveness of expanding DUI vehicle impoundment in all communities. If implemented, follow-up study after one year to determine the number of communities that have successfully implemented the program. "Success" will be determined when convicted offenders' vehicles are immobilized as a part of their sentences, and by the level of community acceptance of the practice (public survey). Three-year follow-up to determine if the program appears to have an affect on the number of DUI offenders in the communities, if there has been any affect on repeat offenses, and if there has been any reduction in the number of alcohol-related crashes.

AL.5 NEW LAW RE MARKED LICENSES

DESCRIPTION: Develop a program to implement, track progress, and evaluate the effectiveness of the new driver licensing act which requires that drivers convicted of DUI carry a marked license during sentencing, probation, and/or parole. The “mark” is intended to hinder offenders from purchasing alcohol beverages. It includes a fine for a person with a marked license who enters or remains on the premises of licensed alcohol distribution establishments.

RESPONSIBLE AGENCY: Lead Agencies: DMV

Contact Name, Title: Kerry Hennings

Phone: (907) 269-3771

E-mail: Kerry.Hennings@doa.state.ak.us

NECESSARY PARTNERS:

- Department of Corrections.
- ASAP.
- AHSO.
- Law Enforcement.
- Court System.
- CHARR.
- Legislature.
- ABC-Alcohol Beverage Control Office.
- Restaurants, bars, and package stores.

DATA ANALYSIS NEEDS OR AVAILABLE RESOURCES:

We know of no currently existing data to show how many repeat offenders continue to purchase and consume alcohol in or near licensed establishments. General data on repeat offenders might be useful.

EXPECTED EFFECTIVENESS/OUTCOME:

Narrative: Prevention of alcohol purchase and use by DUI offenders on probation.

FUNDING AND RESOURCE REQUIREMENTS:

Narrative: Media kits and enforcement (e.g., law enforcement, prosecutors, judges, and probation officers) training on the new law will be required. Owners and servers in licensed establishments also must be trained on the elements of the new law.

Estimated Cost to Implement: \$10,000.00

ACTION STEPS AND TIMELINE:		
ACTION STEP	RESPONSIBLE AGENCY	TIMELINE/DUE DATE
Work with the partners to determine practices for implementing the law.	DMV	FFY08
Develop a public information campaign to ensure the public, law enforcement, package stores, judges, et al are aware of the law.	DMV	FFY08
Design an evaluation protocol for tracking and measuring progress and impact.	DMV	FFY08
Develop an action plan to enhance the legislation to include penalties for both the buyer and the purveyor of alcohol.	DMV/AHSO	FFY08
MEASUREMENT AND EVALUATION		
STRATEGY PERFORMANCE MEASURES: Number of DUI convictions. Number of marked licenses issued. Number of citations for law violations. Number of repeat offenders (before and after).		
EVALUATION: Analyze judicial dispositions for DUI convictions to see if the marked license is being required. Assess the degree to which employees in licensed establishments are aware of and are enforcing the law.		

AL.6 BAC TEST REFUSALS

DESCRIPTION: Identify methods for reducing the number of BAC test refusals.

RESPONSIBLE AGENCY:

Lead Agency: AHSO

Contact Name, Title: Cindy Cashen, Highway Safety Office Administrator

Phone: (907) 465-4374

E-mail: Cindy.Cashen@alaska.gov

NECESSARY PARTNERS:

- Legislature.
- Department of Public Safety.
- NHTSA Regional and Office of Chief Counsel.
- Court System.
- Department of Law.
- Alaska Chief of Police Association.

DATA ANALYSIS NEEDS OR AVAILABLE RESOURCES:

Preliminary data analysis in the SHSP shows that refusals may be a problem in Alaska. Further data analysis and interviews/discussions with the Department of Public Safety, Department of Law, and the Court System as to how the enforcement system addresses refusals need to be conducted to further illuminate the issue.

EXPECTED EFFECTIVENESS/OUTCOME:

Alaska has a per se law which means that at a certain BAC level, the offender is presumed to be in violation of the law; hence, convictions are much easier to obtain with BAC evidence. A reduction in refusals will result in increased convictions.

Increase of BAC data with impaired driving charges and decrease of refusal charges.

NHTSA Countermeasures That Work: Effectiveness of BAC test refusal penalties – Proven-refusals; Cost – Low. NCHRP Report 500, Volume 16: Effectiveness of establishing stronger penalties for BAC test refusal than for test failure: Effectiveness – Tried; Cost – Low.

AAA Jan 2003: “Unlicensed to Kill-The Sequel” study.

FUNDING AND RESOURCE REQUIREMENTS:

Narrative Legal research.

Estimated Cost to Implement: \$5,000

ACTION STEPS AND TIMELINE:		
ACTION STEP	RESPONSIBLE AGENCY	TIMELINE/DUE DATE
Review the best practice in other states for addressing refusals to identify methods for overcoming the 5 th Amendment issue in Alaska.	AHSO	FFY08
Draft legislation and/or a constitutional amendment to address the refusal problem.	AHSO	FFY08
Identify and consider the implementation of other strategies for reducing refusals.	AHSO	FFY09
MEASUREMENT AND EVALUATION		
STRATEGY PERFORMANCE MEASURES: Number of refusals. Number of prosecutions and convictions.		
EVALUATION: <ul style="list-style-type: none"> • Number of refusals before and after change in the law and practice. • Number of successful prosecutions and convictions before and after change in the law and practice. 		

AL.7 ABC ENFORCEMENT

DESCRIPTION: Strengthen ABC enforcement by establishing a collaborative relationship among ABC, AHSO, ASP, and local police departments together with strengthened legislative requirements for server training and other alcohol purveyor practices.

RESPONSIBLE AGENCY:

Lead Agency: AHSO

Contact Name, Title: Cindy Cashen, Highway Safety Office Administrator

Phone: (907) 465-4374

E-mail: Cindy.Cashen@alaska.gov

NECESSARY PARTNERS:

- ABC.
- DMV.
- ASAP.
- Alaska Association of Chiefs of Police (ACOP) and local law enforcement agencies.
- Alaska State Troopers.
- CHARR.
- Legislature.

DATA ANALYSIS NEEDS OR AVAILABLE RESOURCES:

Data on compliance checks and outcomes.

Legal analysis – current laws and gaps.

Research to identify best practices in other states.

EXPECTED EFFECTIVENESS/OUTCOME:

Increased, consistent compliance checks conducted on all licensed establishments; increased enforcement of ABC regulations; increased purveyor and server training on the responsible service and use of alcohol.

Narrative: NHTSA Countermeasures That Work: Effectiveness for responsible beverage service – Likely; Cost – Medium. NCHRP Report 500, Volume 16: Effectiveness – Require responsible beverage service policies for alcohol servers and retailers – Proven; Cost – Moderate.

Oregon passed a law in 1985 requiring all new applicants for beverage service permits to successfully complete a state-approved server training course; existing service permit holders were given five years to complete training. Three years following implementation of the law, single-vehicle nighttime injury crashes – a commonly used proxy measure for alcohol-related crashes – decreased by 23 percent. (NCHRP, Report 500, Volume 16, page V-12.)

Due to our longer winter hours of darkness and longer daylight summer hours, Alaska will need to consider single-vehicle injury crashes during particular seasonal hours.

Average number of lives lost and major injuries sustained due to this problem over the past five years: 166 fatalities/586 major injuries due to alcohol-related crashes.

FUNDING AND RESOURCE REQUIREMENTS:

Narrative:

Estimated Cost to Implement: \$ 0

ACTION STEPS AND TIMELINE:		
ACTION STEP	RESPONSIBLE AGENCY	TIMELINE/DUE DATE
Conduct research to identify legislative and programmatic needs.	AHSO	FFY08
Identify the process necessary for increasing enforcement capabilities with respect to establishments who violate good practice.	DPS/Licensees	FFY08
Work with the ABC Board and the Legislature to identify personnel and legislative needs to effectively enforce the law.	DPS	FFY08
Encourage input from the law enforcement community to the ABC Board to identify establishments in violation of the law and good practice.	DPS	FFY08
Develop a pilot program to reward establishments with good practices, e.g., consistent license checks, server training, and refusal to sell to intoxicated patrons.	DPS/AHSO	FFY08
MEASUREMENT AND EVALUATION		
STRATEGY PERFORMANCE MEASURES: <ul style="list-style-type: none"> • Change in the ABC Board's business capabilities and processes; increased compliance checks. • Number of compliance checks. • Number of servers and purveyors trained. • Number of establishments in compliance. 		
EVALUATION: Analyze the business process changes in the ABC Board together with the number of compliance checks, citations, and convictions.		

AL.8 OUTREACH TO HEALTH CARE PROFESSIONALS

DESCRIPTION Provide training and public information materials, e.g., posters, for health care professionals. Engage this community in the SHSP implementation process as a partner.

RESPONSIBLE AGENCY:

Lead Agency: Department of H&SS-Injury Prevention

Contact Name, Title: Tim Bundy Chief, Emergency Medical Services

Phone: (907) 465-8635 E-mail: timothy.bundy@health.state.ak.us

NECESSARY PARTNERS:

- Muni of Anchorage-Public Health Department.
- Alaska Medical Association.
- Alaska School Activities Association.
- Alaska School District.
- Department of Education.

DATA ANALYSIS NEEDS OR AVAILABLE RESOURCES:

The medical/health care community is in a strategic position to influence behavior, but it currently is an untapped resource. By working with the community, we hope to increase our outreach. At the same time, we hope to gain their support which will result in an increase in BAC testing and alcohol-dependency assessments.

EXPECTED EFFECTIVENESS/OUTCOME:

- Increase outreach and the delivery of messages focused on alcohol dependency and impaired driving.
- Increase the number of BAC tests on patients involved in collisions.
- Increase the number of alcohol assessments provided to clients by ER medical staff.

Research note: Health care professionals are often unaware of the number of deaths and injuries that could be prevented through effective impaired driving enforcement, screening, and treatment programs. Reaching out to and informing the health care community should result in increased screening and treatment as well as prevention messages. Although, according to NHTSA, public information, and education programs that only raise awareness of an issue has been shown to have little long-term effect on behavior, the same summary of research says that such programs can be effective when carefully targeted, especially if the information is new knowledge. Both criteria are met in this case.

FUNDING AND RESOURCE REQUIREMENTS:

Narrative: Public Information materials and training.

Estimated Cost to Implement: \$10,000 (AHSO fed funds).

ACTION STEPS AND TIMELINE:		
ACTION STEP	RESPONSIBLE AGENCY	TIMELINE/DUE DATE
Develop an agreement with the State Public Health Division and Municipal of ANC Public Health Department to identify the subjects and delivery mechanisms for informing their students and patients regarding safe driving practices.	DHSS-EMS	January 2008
Create education and training packets for the health care profession. Include a “resource guide” on programs available to improve driving behavior, e.g., defensive driving, etc.	DHSS-EMS	March 2008
Disseminate the materials through the mail, conferences, meetings, speeches, and other venues.	DHSS-EMS	May 2008
Develop a database of persons receiving the information.	DHSS-EMS	January 2008
Follow-up with recipients to determine the degree to which the materials are being used and identify best practices.	DHSS-EMS	January 2008
Publish best practices to gain more advocates.	AHSO and DHSS	FFY09
MEASUREMENT AND EVALUATION		
STRATEGY PERFORMANCE MEASURES:		
<ul style="list-style-type: none"> • The number of health care professionals reached with the messages. • The number of BAC tests on patients involved in collisions. • The number of alcohol assessments provided to clients by ER medical staff. 		
EVALUATION:		
<ul style="list-style-type: none"> • Before and after surveys with health care groups to test knowledge gained and self reported behavior change. • Long term: Increased convictions due to more complete BAC testing and reduction in repeat offenders due to screening and treatment. 		

AG.1 CONSULT WITH THE DEPARTMENT OF LAW REGARDING LEGISLATION DEFINING AGGRESSIVE DRIVING

DESCRIPTION: Consult with the Department of Law Regarding legislation defining aggressive driving.

RESPONSIBLE AGENCY: AHSO

Contact Name, Title: Cindy Cashen, Highway Safety Office Administrator

Phone: (907) 465-4374

E-mail: Cindy.Cashen@alaska.gov

NECESSARY PARTNERS:

- Department of Law.
- DOT&PF Leg Liaison.
- Legislator sponsors.
- Law Enforcement agencies, occupant protection agencies, medical community.
- DMV.
- Insurance agencies.

DATA ANALYSIS NEEDS OR AVAILABLE RESOURCES:

Available: Fatalities from speeding, erratic driving-FARS, injuries, and collisions from speeding and erratic driving-HAS, citations for speeding, erratic driving-AST, other state reports.

Needs: Multiple citation records-Court System, license suspension from speeding or points-DMV, Insurance agency statistics.

EXPECTED EFFECTIVENESS/OUTCOME:

Reduction in collisions, fatalities and injuries from speeding and aggressive driving

Narrative: NHTSA Countermeasures That Work: Effectiveness of aggressive driving laws – Unknown (no studies of the effects of aggressive laws at this time); Cost – Low.

Average number of lives lost and major injuries sustained due to this problem over the past five years: 181 fatalities involving speed/791 major injuries involving speed; 487 major injury crashes involving “reckless driving” and 136 major injury crashes involving disregard for traffic signal.

FUNDING AND RESOURCE REQUIREMENTS:

Narrative: The cost to conduct research, consult legal services, and draft legislation.

Estimated Cost to Implement: \$5,000

ACTION STEPS AND TIMELINE:

ACTION STEP	RESPONSIBLE AGENCY	TIMELINE/DUE DATE
Work with the Department of Law to examine if definition of aggressive driving would be constitutional in Alaska	AHSO	FFY08
Research aggressive driving laws in other states.	ASHO	FFY08
Request Support from Governor Palin through Leg Liaison.	AHSO	FFY08
Craft legislation from Department of Law Liaison.	AHSO	FFY08

Meet with legislative sponsor.	AHSO	FFY08
Support bill through process.	AHSO	FFY08
MEASUREMENT AND EVALUATION		
STRATEGY PERFORMANCE MEASURES: Passage of the law.		
EVALUATION: The action plan will have been successfully implemented when the law is passed.		

AG.2 CONSULT WITH DEPARTMENT OF LAW REGARDING POSSIBLE IMPLEMENTATION AND EVALUATION OF AN AGGRESSIVE DRIVING LAW

DESCRIPTION: Consult with Department of Law regarding possible implementation and evaluation of an aggressive driving law. If found constitutional and if law passed, implement and evaluate the outcomes/effectiveness of the new aggressive driving law.

RESPONSIBLE AGENCY:

Lead Agency: AHSO

Contact Name, Title: Cindy Cashen, Highway Safety Office Administrator

Phone: (907) 465-4374

E-mail: Cindy.Cashen@alaska.gov

NECESSARY PARTNERS:

- Department of Public Safety.
- Alaska Chiefs of Police.
- Local law enforcement agencies.
- Prosecutors and courts.

DATA ANALYSIS NEEDS OR AVAILABLE RESOURCES:

Available: Fatalities from speeding, erratic driving-FARS, injuries, and collisions from speeding and erratic driving-HAS, citations for speeding, erratic driving-AST.

Needs: Multiple citation records-Court System, license suspension from speeding or points-DMV, Insurance agency statistics.

NHTSA National Aggressive Driving Action Guide:

<http://www.nhtsa.dot.gov/people/injury/enforce/DOT%20Aggress%20Action/guide.htm#I.%20Statutory%20Strategies>

1. ***Adopt the Model Statute developed by the Implementation Team to enact or improve states' reckless driving statutes, including aggressive driving under "Reckless Driving: Aggravated Reckless Driving."***
The model is as follows:
 - a. A person who operates any motor vehicle with a willful or wanton disregard for the safety of persons or property commits the offense of reckless driving. "Willful or wanton" means the deliberate, conscious indifference to the safety of persons or property. Proof of evil or malicious intent is not an element of reckless driving.
 - b. Upon the trial of any civil or criminal action or proceeding stemming from acts alleged to have been committed by any person operating a motor vehicle, proof that in the course of a continuous driving episode, such person committed three moving violations, either alone or in combination with one another, shall give rise to an inference that the vehicle was being operated with a willful and wanton disregard for the safety of persons or property. Such inference shall not be conclusive, but shall be considered along with all other evidence in determining whether a violation occurred (see sidebar below).
 - c. All persons convicted of reckless driving shall be guilty of a misdemeanor, except as provided under subsection (d), which follows.
 - d. All persons convicted of committing a violation of subsection (a) above shall be guilty of aggravated reckless driving if the violation results in injury or permanent disability or disfigurement of another person. Aggravated reckless driving is a felony.

EXPECTED EFFECTIVENESS/OUTCOME:

Increased citations and a reduction in collisions, fatalities and injuries from speeding and other aggressive driving behaviors.

Narrative: NHTSA Countermeasures That Work: Effectiveness of aggressive driving laws – Unknown (no studies of the effects of aggressive laws at this time); Cost – Low.

Average number of lives lost and major injuries sustained due to this problem over the past five years: 181 fatalities and 791 major injuries involving speed; 487 major injury crashes involving “reckless driving”; and 136 major injury crashes involving disregard for traffic signal.

FUNDING AND RESOURCE REQUIREMENTS:

Narrative: Media and enforcement activities already exist through the AHSO ASTEP plans and Safe Driver media campaign; however, the media will have to be developed and law enforcement throughout the states will have to be informed on the elements of the law and methods of enforcement. The prosecutors and judges also will need to be educated on the new law and encouraged to fully enforce the provisions.

Estimated Cost to Implement: \$10,000

ACTION STEPS AND TIMELINE:

ACTION STEP	RESPONSIBLE AGENCY	TIMELINE/DUE DATE
Revise the crash report form, and train law enforcement on its implementation.	AHSO-Law Enforcement Liaison program	FFY08
Educate judges, prosecutors, legislators on aggressive driving and include the NHTSA “localized Speed” multimedia Campaign through radio, TV, and print messages.	AHSO-Traffic Safety Resource Prosecutor program	FFY08
Develop and implement a highly visible enforcement campaign connected to the corridor campaign targeting aggressive driving.	AHSO, AST and DOT&PF Central Region	FFY08
Evaluate the effectiveness of the implementation strategies.	AHSO	FFY09

MEASUREMENT AND EVALUATION**STRATEGY PERFORMANCE MEASURES:**

Number of citations issued for violation of the new law.

Number of fatal, and serious injury crashes involving aggressive driving as defined by the new law.

EVALUATION:

Before and after surveys to determine the amount of aggressive driving on the corridors used in the enforcement campaign. Track the number of citations issued for violation of the new law. Conduct a before and after study of fatalities, serious injuries, and crashes associated with aggressive driving behavior.

AG.3 TRAFFIC SCHOOL

DESCRIPTION: Driver improvement, sometimes known as traffic school, draws two very different audiences: 1) those who are ordered by the court to take traffic school as a result of traffic law violations; and 2) those who voluntarily attend to reduce points, take advantage of an insurance reduction; or to update driving schools and knowledge of the rules of the road. Traffic school is used as a diversion and usually results in a dismissal; hence, no conviction or penalties for failure to abide by traffic laws. The result is a missed opportunity to change driver behavior through the imposition of more serious penalties and less enforcement. Law enforcement has little incentive to enforce traffic laws when there are no consequences following their work.

RESPONSIBLE AGENCY:

Lead Agency: Alaska Highway Safety Office

Contact Name, Title: Contact Name, Title: Cindy Cashen, Highway Safety Office Administrator

Phone: (907) 465-4374

E-mail: Cindy.Cashen@alaska.gov

NECESSARY PARTNERS:

- Judges.
- Prosecutors.
- DMV/ASP.
- Local law enforcement agencies.
- Division of Insurance.
- DPS.
- Alaska Safety Council.
- AAA.
- AARP.
- Legislature (possible).

DATA ANALYSIS NEEDS OR AVAILABLE RESOURCES:

Research Needs: Thorough review of the research literature on the effectiveness of traffic school and how other states address the issue; review of judicial practice in Alaska regarding traffic school; survey of judges to determine their knowledge regarding effectiveness of traffic school, the reasons for issuing deferrals to traffic school, and their attitudes toward stricter options.

EXPECTED EFFECTIVENESS/OUTCOME:

The expected outcome is a higher standard regarding convictions and sanctions, more consistency, a monitoring protocol to enhance the effectiveness of traffic school, increased traffic law enforcement, and reduced traffic law violations.

Narrative: NCHRP Report 500 Volume 1: Effectiveness of educating and imposing sanctions against repeat offenders – Experimental; Cost – Low.

FUNDING AND RESOURCE REQUIREMENTS:

Narrative: Conduct the studies necessary to fully illuminate current practice, alternative approaches, and expected effectiveness.

Estimated Cost to Implement: \$ 20,000 (\$10,000-AHSO and \$10,000 DMV)

ACTION STEPS AND TIMELINE:		
ACTION STEP	RESPONSIBLE AGENCY	TIMELINE/DUE DATE
Coordinate with DMV and put out an RFP for a consultant to study the current traffic school/driver improvement system in Alaska and identify best practice from the research literature and professionals engaged in the business.	AHSO	FFY08
AHSO and DMV to meet with partners, including state and local law enforcement, judges, prosecutors, traffic school/driver improvement providers, and others to discuss the study results and develop better options in practice and law for dealing with traffic offenders.	AHSO/DMV	FFY08
Convene a forum of the Driver Behavior group and others to reach consensus on next steps.	AHSO	Summer of FFY08
Report findings to the legislature and the judiciary.	AHSO/DMV	Summer of FFY08
Implement the consensus agreement through education, training, and/or a change in the law and track progress.	AHSO/DMV	FFY08
MEASUREMENT AND EVALUATION		
STRATEGY PERFORMANCE MEASURES:		
<ul style="list-style-type: none"> Number of convictions with and without traffic school before and after consensus agreement is implemented. Number of voluntary participants in driver improvement schools. 		
EVALUATION:		
The first step is to identify and evaluate change in enforcement, judicial, and citizen behavior before and after the study and forum results are implemented. After full implementation and with some amount of experience, track a sample of offenders to determine if there has been any effect on recidivism and survey a sample of voluntary students to determine if their driving practices have been altered.		

YD.1 GRADUATED DRIVER LICENSE LAW ENFORCEMENT

DESCRIPTION: Work with law enforcement to identify and implement effective methods for enforcing the graduated driver license (GDL) law and other provisions restricting teenage drinking.

RESPONSIBLE AGENCY:

Lead Agency: AHSO-Law Enforcement Liaison (LEL) program

Contact Name, Title: Cindy Cashen, Highway Safety Office Administrator

Phone: (907) 465-4374

E-mail: Cindy.Cashen@alaska.gov

NECESSARY PARTNERS:

- DPS-Alaska State Troopers.
- Local Law Enforcement.
- Office of the Governor.
- Legislature.
- Alaska School Activities Association.

DATA ANALYSIS NEEDS OR AVAILABLE RESOURCES:

- Survey and interviews with law enforcement to determine knowledge of GDL and current practice in GDL enforcement .
- Research to identify best practices in GDL enforcement.

EXPECTED EFFECTIVENESS/OUTCOME:

Research show conclusively that 1) GDLs reduce fatalities and injuries among young drivers and 2) high-visibility enforcement of traffic laws results in crash reductions. Highly visible, continuing, and comprehensive enforcement of GDL and laws that prevent underage drinking will reduce the number of young driver crashes.

NCHRP 500 series: Experimental.

Countermeasures That Work: Effectiveness – Proven, Cost – Medium.

*Number of lives lost and major injuries sustained due to this problem over the past five years: 86 fatalities and 880 major injuries involving drivers age 16-20; **Data to be clarified.***

FUNDING AND RESOURCE REQUIREMENTS:

Narrative: There is a need to conduct the surveys/interviews, do the research, develop program materials, e.g., tip sheets, roll call materials, and get on the agenda at judicial conferences, etc.

Estimated Cost to Implement: \$50,000

ACTION STEPS AND TIMELINE:		
ACTION STEP	RESPONSIBLE AGENCY	TIMELINE/DUE DATE
Conduct a survey and interviews with law enforcement to determine their current level of knowledge regarding the elements of the GDL and underage drinking laws and identify current practice with respect to GDL and underage drinking law enforcement.	AHSO-LEL	November-December 2007
Conduct research to determine best practices in GDL and underage drinking law enforcement in Alaska and other states.	AHSO-LEL-TRSP	November 2007-April 2008
Develop and implement an education and training program for law enforcement on the provisions of graduated driver licensing, zero tolerance, minor consuming, and safety belt laws and effective enforcement methods.	AHSO-LEL	May 2008
Deliver the training module also to judges, magistrates, and school officials.	AHSO-LEL & TSRP	May 2008
Develop, implement, and evaluate a pilot young driver enforcement program.	AHSO-LEL & TSRP	May 2008
MEASUREMENT AND EVALUATION		
STRATEGY PERFORMANCE MEASURES: Number of law enforcement officers trained. Number of GDL and underage drinking violation citations. Number of citations resulting in convictions and analysis of consequences. Number of fatal and serious injury crashes involving young drivers.		
EVALUATION: Analysis of business process change in police departments, ASP, and the courts, e.g., citations, convictions, license suspensions, etc. Impact on the number of fatal and serious injury crashes.		

YD.2 STUDY ISSUES INVOLVED WITH LEGISLATIVE EXEMPTIONS FOR YOUNG DRIVERS IN RURAL ALASKA

DESCRIPTION: Study the issues involved with legislative exemptions for young drivers in rural Alaska, with **an emphasis on young drivers**, in rural Alaska, such as Sec. 28.15.057. Restrictions on driver's license issued to a person under 18 be more than just young drivers all restricted license holders with an emphasis on young drivers. (a) Except as provided under AS 28.15.051, a person who is at least 16 years of age but not yet 18 years of age may not be issued a driver's license unless the person has:

(1) been licensed under an instruction permit issued under AS 28.15.051 or under the law of another state with substantially similar requirements for at least six months;

(2) held a valid provisional driver's license issued under AS 28.15.055 for at least six months; and

(3) not been convicted of violating a traffic law, or been convicted of violating AS 04.16.050 (c), during the six months before applying for a driver's license; in this paragraph, "traffic law" has the meaning given to "traffic laws" in AS 28.15.261.

(b) A person authorized to drive a motor vehicle under a provisional driver's license issued under AS 28.15.055 may not

(1) operate a motor vehicle that is carrying any passengers;

(a) except a passenger who is a parent, legal guardian, sibling, or a person at least 21 years of age; or

(b) unless at least one of the passengers is a parent, legal guardian, or person at least 21 years of age;

or

(2) operate a motor vehicle between the hours of 1:00 a.m. and 5:00 a.m., except when the person is

(a) accompanied by a parent, legal guardian, or a person at least 21 years of age who is licensed to drive the type or class of vehicle being used; or

(b) driving to or from the person's place of employment or within the scope of the person's employment and the driving is along the most direct available route.

(c) This section does not apply to restricted licenses issued to persons to operate motor vehicles in areas of the state off-the-road system when operating motor vehicles in those areas.

(d) A person who violates this section is guilty of an infraction.

RESPONSIBLE AGENCY: Lead Agencies: DMV

Contact Name, Title: Kerry Hennings

Phone: (907) 269-3771

E-mail: Kerry.Hennings@doa.state.ak.us

NECESSARY PARTNERS:

- Senator Kookesh and staff.
- Office of the Governor.
- Department of Public Safety.

DATA ANALYSIS NEEDS OR AVAILABLE RESOURCES:

- Determine the number of provisional license holders that are restricted to off-highway operation.
- Determine the number of these drivers who have been involved in crashes.
- Determine the number of those crashes where provisional restrictions may have prevented a crash.
- Determine crashes where passengers (not meeting the statutory guideline) may have affected driving behavior, preventing injury, or potential injury.
- Compare these data with provisional license holders that are restricted to hours of operation and passenger limitations.

EXPECTED EFFECTIVENESS/OUTCOME:

Research clearly shows that the younger people start driving, the more likely they are to be involved in crashes. Research in Iowa showed that young people under 16 who are allowed to drive to and from school have a seriously elevated crash risk. Iowa Minor School License (MSL) holders who are allowed to drive only to school along the most direct route, crash at a rate of 44.4 per 1,000 drivers. On the other hand, the crash rate of Instruction Permit holders is just 7.0 per 1,000 drivers.

Average number of lives lost and major injuries sustained in off-road crashes involving drivers younger than 16 over the past five years: declined over past five years per AHSO.

FUNDING AND RESOURCE REQUIREMENTS:

Narrative: Project will require data analysis, research, and meetings which can be conducted by staff in conjunction with other research and analysis functions and travel-funded meetings.

Estimated Cost to Implement: 0

ACTION STEPS AND TIMELINE:

ACTION STEP	RESPONSIBLE AGENCY	TIMELINE/DUE DATE
Meet with Senator Kookesh's representative to discuss rural teen driver issues.	AHSO-DMV	FFY08
Analyze hospital emergency room data to identify the size of the problem, e.g., how many drivers younger than 16 are involved in the off-road system crashes?		
Develop an understanding of the exemptions and where possible consider alternatives.	AHSO-DMV	FFY08
Inform law enforcement and rental car companies about the exemptions.	AHSO-DMV	FFY08
Develop a system for tracking teen driver traffic offenses.	ATRCC	FFY08

MEASUREMENT AND EVALUATION**STRATEGY PERFORMANCE MEASURES:**

Compare the crash data of provisional license holders that are restricted to off highway operation with "highway" provisional license holders, including the hours of operation and passenger limitations.

EVALUATION:

Action will be successful when a GDL-type policy exists affecting teens in areas of the state off-the-road system.

YD.3 EFFECTIVE GRADUATED DRIVER LICENSING ELEMENTS

DESCRIPTION Educate the public and elected officials on the most recent research regarding effective legislation that protects young drivers.

RESPONSIBLE AGENCY:

Lead Agency: AHSO

Contact Name, Title: Cindy Cashen, Highway Safety Office Administrator

Phone: (907) 465-2446

E-mail: Cindy.Cashen@alaska.gov

NECESSARY PARTNERS:

- Public officials.
- Legislature.
- Media outlets.
- American Red Cross.

DATA ANALYSIS NEEDS OR AVAILABLE RESOURCES:

Available: Citation records, license records-DMV, fatality data-FARS, collision data-HAS.

Need: Injury-related data from AIPC or DHSS.

EXPECTED EFFECTIVENESS/OUTCOME:

Narrative: The expected outcome is an upgraded GDL law that includes provisions strengthening the current curfew and reducing distractions by banning the use of cell phones until full licensure. Research shows that earlier curfews are effective and preliminary research supports limiting cell phone use.

Average number of lives lost and major injuries sustained due to this problem over the past five years: 86 fatalities and 880 major injuries involving driver age 16-20.

With full implementation of this and other related action plans, we expect a 10 percent reduction in young driver fatalities, major injuries, and crashes within three years of implementation.

FUNDING AND RESOURCE REQUIREMENTS:

Funding is needed to produce fact sheets and provide support for briefings.

Estimated Cost to Implement: \$2,500.00

ACTION STEPS AND TIMELINE:		
ACTION STEP	RESPONSIBLE AGENCY	TIMELINE/DUE DATE
Review the research and develop a presentation, white paper, etc. on model components of the most effective GDL laws.	AHSO	May 2008
Conduct a study of teen crashes: time-of-day and day-of-week.	AHSO	May 2008
Develop a step-by-step process for incorporating effective practices into Alaska's GDL: <ul style="list-style-type: none"> • Conduct research on distracted driving; specifically on the relationship between cell phone use and crash risk. • Conduct research to demonstrate the number of crashes involving young drivers between 1:00 a.m. (current curfew) 10:00 p.m. (suggested curfew). 	AHSO	May 2008
Reach out to law enforcement, the legislature, schools, and the media on study results.	AHSO-AK Strategic Enforcement Partnership	May 2008
Draft language to amend the GDL to begin nighttime driving restrictions at 10:00 p.m. and end at 6:00 a.m. and to ban cell phone use until full licensure.		
Use the results of the study to encourage schools to reinstitute closed lunch hours.	AHSO agencies	May 2008
Encourage the schools to delay high school start times (before 8:30 a.m.) based on scientific research on the sleep needs of teens.	AHSO agencies	May 2008
Work with Juvenile Justice to establish a policy that young drivers stopped for aggressive driving behavior must go to Youth Courts for sentencing.	AHSO	May 2008
MEASUREMENT AND EVALUATION		
STRATEGY PERFORMANCE MEASURES:		
Fatal and serious injury crashes involving young drivers during curfew hours and when using a cell phone.		
EVALUATION:		
Analyze the number of crashes before and after the law changes involving young drivers during curfew hours (10:00 p.m.-6:00 a.m.) and when using cell phones.		

YD.4 DRIVER EDUCATION STUDY

DESCRIPTION: Coordinate a statewide driver's education study to review and evaluate the quality, quantity, and accessibility of driver education in Alaska.

RESPONSIBLE AGENCY:

Lead Agency: Department of Education

Contact Name, Title: TBD

Phone: TBD

E-mail: TBD

NECESSARY PARTNERS:

- Department of Education.
- DMV.
- Division of Insurance.
- DPS.
- Alaska Commission on Aging.
- AAA.
- Legislature.

DATA ANALYSIS NEEDS OR AVAILABLE RESOURCES:

Resource: Study of current practice in terms of driver education standards and monitoring; study of best practices and effectiveness of driver education, e.g., classroom, on-line, behind the wheel, etc.; identify options and alternatives for ensuring young drivers have access to quality driver education opportunities in Alaska.

EXPECTED EFFECTIVENESS/OUTCOME:

Make high-quality driver education affordable, accessible, and available to all new drivers in Alaska.

Narrative: Generally the literature does not support driver education as an effective countermeasure; yet, the road safety community in Alaska believes this is an important step in learning to drive responsibly and safely.

Average number of lives lost and major injuries sustained due to this problem over the past five years: N/A

FUNDING AND RESOURCE REQUIREMENTS:

Narrative: Conduct a professional study of the current driver education system and identify best practices for teaching new drivers in other states and countries.

Estimated Cost to Implement: \$ 20,000 (\$10,000-AHSO and \$10,000 DMV)

ACTION STEPS AND TIMELINE:		
ACTION STEP	RESPONSIBLE AGENCY	TIMELINE/DUE DATE
Coordinate with DMV and put out an RFP for a consultant to study the quality, availability, affordability, and accessibility of driver education in Alaska.	AHSO	FFY08
SHSP Driver Behavior Group will determine next steps based on Drivers Education Study Report.	AHSO	Summer of FFY08
Report findings to the schools, communities, and the legislature.	AHSO/DMV	Summer of FFY08
Work with the Governor's Office, the legislature, communities, and schools to develop a system where all new drivers have access to driver education.	AHSO/DMV	FFY08
If the study results show the need for legislation and the partner agencies support it, work with the legislature to pass a law requiring driver education prior to licensing.	AHSO/DMV	FFY08
Develop a detailed action plan for implementing, tracking, and evaluating the results of the action agreed to by the Driver Behavior Group.	AHSO/DMV	FFY09
MEASUREMENT AND EVALUATION		
STRATEGY PERFORMANCE MEASURES:		
Implementation of the Drivers Education Study Report recommendations and the follow on action plan devised by the Driver Behavior emphasis area team; before and after count of the numbers of citizens who participate in a driver education program.		
EVALUATION:		
Effectiveness will be evaluated by the number of new drivers, especially young drivers, who have access to high-quality, affordable driver education.		

YD.5 FACILITATE PARENTAL SUPERVISION OF LEARNERS AND INTERMEDIATE DRIVERS AND ENCOURAGE SELECTION OF SAFER VEHICLES FOR YOUNG DRIVERS

DESCRIPTION Facilitate parental supervision of learners and intermediate drivers and encourage safer selection of vehicle equipment for young drivers.

RESPONSIBLE AGENCY: Dept of H&SS-Injury Prevention

Contact Name, Title: Tim Bundy Chief, Emergency Medical Services

Phone: (907) 465-8635

E-mail: timothy.bundy@health.state.ak.us

NECESSARY PARTNERS:

- Muni of Anchorage-Public Health Department.
- AHSO.
- Alaska Medical Association.
- Alaska Auto Dealers Association (and National Association).
- Alaska School Activities Association (ASAA).
- Division of Motor Vehicles.
- Division of Insurance.
- Local insurance agencies.

DATA ANALYSIS NEEDS OR AVAILABLE RESOURCES:

1) State Farm Injury Prevention: An Executive Summary of the Expert Panel Supplement.

2) NCHRP Project 17-18(3) Young Driver Guide Objective XX.1C.

Alaska Auto Dealers Association (Jon Cook Leg. Director).

Reference data and other resources from the Alaska Drivers Education Study (see Strategy #AG 4).

EXPECTED EFFECTIVENESS/OUTCOME:

Provide an effective highway safety tool for a high-risk population at a local level. Increase local ownership.

Narrative: NHTSA Countermeasures That Work: Effectiveness of parental role in teaching and managing young drivers – Varies, Cost – Low; Effectiveness of GDL and Zero Tolerance Laws (“Parents are in the best position to enforce GDL requirements,” pages 6-19) – Likely, cost – Medium.

Average number of lives lost and major injuries sustained due to this problem over the past five years: 86 fatalities involving driver age 16-20/880 major injuries involving driver age 16-20.

Estimated number of lives saved and major injuries prevented in one year following implementation: 10 percent reduction in teen driving crashes, fatalities, and injuries after full year of implementation.

FUNDING AND RESOURCE REQUIREMENTS:

Narrative: Initial cost for basic materials and targeted (parents of teens) media campaign.

Estimated Cost to Implement: \$ 50,000 (\$10,000 from AHSO FFY08 DHSS grant proposal and \$40,000 local match from state, local agencies, and businesses).

ACTION STEPS AND TIMELINE:		
ACTION STEP	RESPONSIBLE AGENCY	TIMELINE/DUE DATE
Coordinate a stakeholder meeting. Include Governor's Liaison, Russ Kelly and Leg Liaison, Chris Clark.	DHSS	FFY08
Define effective tools for a complete packet of information regarding driving schools, monitoring equipment, vehicle safety information and other available technology, laws, regulations, factoids, tips, resources, etc. for parents of teen drivers.	DHSS	FFY08
Create and make readily available for parents AND teen drivers.	DHSS	FFY08
Implement a regular publicity campaign regarding parent packet.	DHSS	FFY08
Survey for awareness level of parent packet.	AST	FFY08
Work with the insurance industry to develop training on how to identify vehicle safety factors.	AHSO	
Work with auto dealers and encourage them to point out vehicle safety factors when teens and their parents are shopping for cars.	AHSO	
Work with insurance industry to understand and/or promote higher insurance rates for older, unsafe vehicles (without airbags, etc.)	DOI	
Work with auto manufacturers to promote safe driving and safe vehicles through presentations or training in local schools.	AHSO	
MEASUREMENT AND EVALUATION		
STRATEGY PERFORMANCE MEASURES:		
A survey by AST CIOT can include questions regarding the level of awareness of the parent packet.		
EVALUATION:		
By the number of Parent Packets provided to the public. <i>And how will you share lessons learned?</i> The SHSP Annual Report and the AHSO Annual Evaluation Report.		

URS.1 ELECTRONIC EMPLOYER NOTIFICATION

DESCRIPTION: Develop an electronic employer notification process for commercial vehicle fleet drivers who have failed a pre-employment alcohol or drug test or have been convicted on DUI charges and other driving infractions, e.g., speeding, reckless driving, etc.

RESPONSIBLE AGENCY:

Lead Agency: Commercial Driving Enforcement

Contact Name, Title: Dan Breeden

Phone: (907) 364-1210

E-mail: Dan.Breeden@dot.state.ak.us

NECESSARY PARTNERS:

- AHSO.
- DMV.
- Alaska Department of Labor.
- Alaska Division of Licensing.
- States that have previously implemented employer notification systems (Wisconsin, Arkansas, California, Illinois, Michigan, New York, Nebraska, North Carolina, Oregon, Virginia).

DATA ANALYSIS NEEDS OR AVAILABLE RESOURCES:

See FMCSA *Driver Violation Notification Service Feasibility Study*.

(<http://www.fmcsa.dot.gov/facts-research/research-technology/report/dvn-finalreport.htm>) California Highway Patrol ENS, <http://law.onecle.com/california/vehicle/1808.1.html>

EXPECTED EFFECTIVENESS/OUTCOME:

- Improve driver safety by developing conscientious company drivers. Employees drive more carefully when they know they are being monitored, reducing accidents and improving safer driving – on and off the job.
- Driver monitoring ensures that only qualified drivers are behind the wheel of company-owned vehicles, protecting employees and the communities they serve.
(http://www.samba.biz/pages/features_benefits.htm)

NHTSA Countermeasures That Work: Effectiveness of DWI offense sanctions – Varies, cost – Varies.

Average number of lives lost and major injuries sustained due to this problem over the past five years:

Estimated number of lives saved and major injuries prevented in one year following implementation:

FUNDING AND RESOURCE REQUIREMENTS:

AHSO-408.

Estimated Cost to Implement: TBD.

ACTION STEPS AND TIMELINE:		
ACTION STEP	RESPONSIBLE AGENCY	TIMELINE/DUE DATE
PHASE 1: Develop a Feasibility plan and identify funding through a consulting agency.	CDVE	FFY08
Research these programs in other states, e.g., New York, and consider developing a program to implement employer pull notices.	CDVE	FFY08
Approach the partner agencies and companies to line up support and get their input and buy in.	CDVE	FFY08
Develop an implementation methodology and cost estimate.	CDVE	FFY08
PHASE II: Commercial Trucking Notification implementation.	CDVE	FFY09
PHASE III: Private businesses, agencies and state and local government implementation.	CDVE	FFY10
MEASUREMENT AND EVALUATION		
STRATEGY PERFORMANCE MEASURES: Number of unsafe drivers identified. Outcomes regarding drivers identified, i.e., counseling, training, termination, etc. Number of businesses, including state and local government, who participate.		
EVALUATION: Number of companies participating and follow up with identified unsafe drivers. Establishment of a self-sufficient program within a private or nonprofit agency. Agency reports to CDVE.		

Special User Emphasis Area Action Plans

SU.1 PUBLIC EDUCATION AND OUTREACH TO MOTORISTS TO RAISE THEIR AWARENESS OF PEDESTRIAN AND BICYCLE SAFETY NEEDS

DESCRIPTION: Raise driver awareness of sharing the road safely with pedestrians and bicyclists.

- Encourage driver awareness of pedestrians and crossings through education, airing via drive-time radio spots and bus signs. Alert drivers to areas of high pedestrian traffic and encourage them to acknowledge pedestrian right-of-way.
- Raise awareness of pedestrians in unexpected locations/mid-block crossings.
- Encourage driver awareness of bicycles through education, using afternoon drive-time radio spots, bus signs, and other media outlets. Target months of April and May (with periodic campaign through September) to make drivers aware of returning cyclists.
- Alert drivers to how vehicle turning movements, particularly right turn on red, can affect bicyclists.
- Alert drivers to the areas of greatest risk for bicyclists (i.e., urban minor arterials and local roads) and pedestrians.

RESPONSIBLE AGENCY:

Lead Agency: Department of Transportation and Public Facilities

Contact Name, Title: TBD

Phone: TBD

E-mail: TBD

NECESSARY PARTNERS:

- State Bicycle and Pedestrian Coordinator and Safe Routes to School Coordinator.
- Alaska Highway Safety Office.
- Department of Health and Social Services.
- Radio, television, and print media outlets.
- Schools/student writers, etc. and professional writers.
- State and local law enforcement.
- Division of Motor Vehicles.
- AAA.
- Trucking and busing industry representatives.
- SOA media production – Public Safety, Governor's Office.
- Municipality of Anchorage.
- University marketing, sociology, public relations, drama, transportation programs.

DATA ANALYSIS NEEDS OR AVAILABLE RESOURCES:

Accurate crash data (before/during/after campaign samples); Travel use data for bicyclists and pedestrians; DMV's Knowledge, Belief, Opinion survey.

EXPECTED EFFECTIVENESS/OUTCOME:

Narrative: Informing drivers, pedestrians, and bicyclists of the rules of the road, potential areas of conflict, and broadening motoring public's understanding of right-of-way. NHTSA's Countermeasures That Work: Effectiveness of *Share the Road* awareness programs – Unknown; Cost – Medium; Effectiveness of driver training – Unknown, Cost – Low. NCHRP Report 500, Volume 10, Effectiveness of provide education, outreach, and training – Proven.

Average number of lives lost and major injuries sustained due to this problem over the past five years: 232 pedestrian fatalities and major injuries and 124 bicyclist fatalities and major injuries.

Estimated number of lives saved and major injuries prevented in one year following implementation: Unknown.

FUNDING AND RESOURCE REQUIREMENTS:

Narrative: Staff resources and funding for development, production, and airing of public service announcements and print media efforts are not available at this time. Estimated Cost to Implement: AHSO experience indicates that \$100,000 will provide targeted television audience coverage at one to two times per week for six to eight weeks statewide, per year per spot.

AHSO 2005 Annual report indicates that print ads and radio spots ran for about \$300 and \$10 each, respectively (bonus ads not counted). Escalating at four percent to 2008 (1.04^3) brings the estimates to about \$340 each for print and \$11.25 each for radio spots.

Estimated Annual Broadcast Cost

Television: 3 selected spots in statewide markets	\$ 300,000
Print: 20 selected ads in statewide markets	\$ 8,500
Radio: 3,500 selected spots in statewide markets	\$ 39,375
Rounded-up Total	\$ 350,000

AHSO has found that Public Service Announcements (PSA) are not productive. PSAs are non-revenue producing for media, and so are often run at times that are less likely to reach a targeted audience.

AHSO also recommends identifying free or “shared media” that are available through NHTSA or state agencies for at least the first year to gauge success of the approach before embarking on custom produced spots.

ACTION STEPS AND TIMELINE:

Action Step	RESPONSIBLE AGENCY	TIMELINE/DUE DATE
Identify lead agency/person to implement this strategy.	DOT&PF	Fall 2007
Identify potential funding sources (note: this may not become available in 2008).	DOT&PF	Fall 2007
Identify target audience (are there specific driver types most frequently involved in bicycle and pedestrian crashes or repeat offenders?) University sociology/marketing/public relations.		Fall 2007
Consult (possibly partner) with the Municipality of Anchorage (MOA) regarding their efforts on this issue.		Fall 2007-Winter 2008
Review currently available curriculum/educational campaigns (AARP, AAA, NHTSA, other states). Investigate Shared Media, materials developed by others available for free or low-cost use.		Fall 2007-Winter 2008
Establish working relationship with necessary partners.		Fall 2008
Create preliminary scope for training/education – draw on University sociology/marketing/public relations expertise.		Fall 2008-Winter 2009
Identify media outlets and outreach methods.		TBD
Recruit participation of high school students, university drama departments, crash victims (?)		TBD

Use data to tailor messages to appropriate audience at targeted locations.		TBD
Air ads during targeted hours and run print ads on selected days of week and/or times of year.		TBD
MEASUREMENT AND EVALUATION		
STRATEGY PERFORMANCE MEASURES: <ul style="list-style-type: none"> • Overall number of crashes involving bicyclists and pedestrians. • Before/during/after data around campaign periods. 		
EVALUATION: This will include analyzing the reduction in crashes involving bicyclists and pedestrians attributed to driver error.		

SU.2 PRESERVE RIGHT-OF-WAY FOR PEDESTRIANS AND BICYCLISTS DURING SNOW EVENTS

DESCRIPTION: Establish statewide policy to preserve the right-of-way for pedestrians and bicyclists when conducting snow removal activities. Aim to clear sidewalks and bicycle trails within 72 hours of snow events. Research pedestrian/driver actions/interactions during and after snow events.

RESPONSIBLE AGENCY:

Lead Agency: Alaska Department of Transportation and Public Facilities, Maintenance

Contact Name, Title: Frank Richards, Statewide Maintenance Engineer

Phone: (907) 465-3900

E-mail: frank.richards@alaska.gov

NECESSARY PARTNERS:

- State of Alaska, Statewide Maintenance Engineer.
- Municipality of Anchorage.
- Cities of Fairbanks, Juneau.
- Traffic Data Department.
- Military Partners.
- School districts (travel plans).

DATA ANALYSIS NEEDS OR AVAILABLE RESOURCES:

Need to identify locations of greatest need and winter crash locations. Evaluate pedestrian, bicycle, and driver interactions during and after snow events to determine safety needs.

EXPECTED EFFECTIVENESS/OUTCOME:

Narrative: Success would indicate zero fatal and major injury crashes involving pedestrians and bicyclists in winter weather. Reduce number of complaints received by DOT&PF. NHTSA's Countermeasures That Work: Effectiveness of pedestrian safety zones – Proven, Cost – High.

Average number of lives lost and major injuries sustained due to this problem over the past five years: 60 snow-related pedestrian fatalities and major injuries from 2001-2005 (15 fatalities and 45 major injuries).

Estimate number of lives saved and major injuries prevented in one year following implementation: Three lives saved, nine major injuries prevented.

FUNDING AND RESOURCE REQUIREMENTS:

Narrative: Sidewalk crews (Fairbanks has three-person crew and one bobcat and pickup plow; Juneau has a nine-person crew following storm. Juneau contracts out in high snow years. Municipality of Anchorage clears the snow in Anchorage.) in urban areas to conduct snow removal in a timely manner following snow event.

Estimated Cost to Implement: \$Estimate based on current sidewalk snow removal activities in Northern Region = \$80,000.

ACTION STEPS AND TIMELINE:		
Action Step	RESPONSIBLE AGENCY	TIMELINE/DUE DATE
Compile current pedestrian and bicycle behaviors – need AWP-specific funding.	DOT&PF – Traffic Data Collection	Winter 2007/2008 funding-7/2007
Establish sidewalk policy to preserve ROW for pedestrians and bicyclists.	Statewide Maintenance Engineer	Winter 2007/2008
Partner with City of Anchorage, Fairbanks, and Juneau to raise awareness of user needs.	Statewide Maintenance Engineer	Fall 2007
Evaluate success by compiling pedestrian and bicycle winter crash data (using both HAS and hospitalization data) – need AWP-specific funding.	State of Alaska Traffic Data Collectors	Winter 2008/2009 and ongoing – securing funding in 2007
Request increased budgets for sidewalk and bicycle path maintenance crews.	State-level, cities, and school districts	Fall 2007
Develop priority list of pedestrian and bicyclist travel routes in each region and target snow removal activities along those routes.	Obtain route information from cities	
MEASUREMENT AND EVALUATION		
STRATEGY PERFORMANCE MEASURES: <ul style="list-style-type: none"> • Reduction in winter pedestrian fatal and major injury crashes. • Reduction in winter bicyclist fatal and major injury crashes. • Monitor use of travel routes before and after implementation of snow removal initiative. • Reduction in snow removal complaints received by the DOT&PF districts. 		
EVALUATION: Compare the number of pedestrian-related crashes during ice or snow periods both before and after the strategy has been implemented.		
<i>Additional Information:</i> Southeast Region – In the past, the southeast region hired a non-permanent employee every year for sidewalk maintenance. This year, the position will be a permanent, seasonal position. Their primary duty will be to clear the sidewalks and bicycle paths after snow events. They have a pickup with a plow. If the snow gets too heavy, they have to use a loader and move the snow. Estimates are \$40,000 for the employee plus equipment and \$20,000 a season for the loader and personnel. Their priority is the highway, and with heavy snows it can take three to four days before they get to the sidewalks. They have been trying for the last several years to put more emphasis on clearing the sidewalks since they have received both public and legislative complaints. There was an incident several years ago involving a boy killed while riding his bicycle. This was in the summer, but forcing pedestrians and bicyclists into the streets in the winter is now very unpopular. The sidewalk of the Douglas Bridge is so narrow that they are unable to get a truck on it to plow it. Central Region – A lot of the town work is done through a TORA (Transfer of Responsibility Agreement) with the municipality. With 1,700 lane miles to clear, the sidewalks are viewed as lower priority. Adequate equipment, manpower, and funds all contribute to the response time on the sidewalks. Complaints are high. The Muni has a dedicated sidewalk crew and equipment.		

Northern Region – The northern region has a list of all the sidewalks that we do winter maintenance on and they are set up in order of priority like our roads. We have two operators assigned to sidewalks in the winter. They can plow all the sidewalks in two shifts. After going over them to get them plowed, they go back over them to do a more detailed cleanup. There is a lot of hand work that is needed around pedestrian crossings, stairs, and bridges.

SU.3 COLLECT PEDESTRIAN AND BICYCLE USE DATA

DESCRIPTION: Improve/expand data collection (and analysis) of pedestrian and bicycle use. Establish base line counts in major urban areas (based on crash priority locations – Anchorage/Mat-Su, Fairbanks, and Juneau). Develop priority list of high pedestrian crash locations/road types.

Once baseline data is collected, this strategy also could include the collection of data on bicyclist and pedestrian perceived and known safety risks (i.e., in an effort to collect data that can be used to identify and implement preventative measures before crashes occur). Revise the U.S. DOT's Bikeability and Walkability Checklists (adding map of Alaskan metropolitan areas) and conduct survey of cyclists and pedestrians along well-traveled routes and trails and at community events, schools, and possibly through community employers.

RESPONSIBLE AGENCY:

Lead Agency: Alaska Department of Transportation and Public Facilities

Contact Name, Title: Bob Laurie, State Bicycle and Pedestrian Coordinator

Phone: (907) 465-6989

E-mail: bob.laurie@alaska.gov

NECESSARY PARTNERS:

- Municipalities (MOA collects counts on some trails).
- Transit agencies (at bus stop locations).
- District offices (could this be done more cost-effective through a partnership with the university?)

DATA ANALYSIS NEEDS OR AVAILABLE RESOURCES:

DOT&PF routinely collects motor vehicle counts on all classes of roads except for limited number of trails in Anchorage; no counts are collected for pedestrians or bicyclists. Knowing where pedestrians and bicyclists are in what numbers will be helpful to determine user needs and problem areas, serve as a base for data analysis, and enable better distribution of state resources to these populations and their infrastructure needs.

EXPECTED EFFECTIVENESS/OUTCOME:

Narrative:

The availability of pedestrian and bicycle count data will help in the analysis of problem areas and identify whether or not these users are overrepresented in specific crash types.

Average number of lives lost and major injuries sustained due to this problem over the past five years: 52 pedestrian and 8 bicyclist deaths.

Estimated number of lives saved and major injuries prevented in one year following implementation: Unknown. Subject to outreach program particularly with respect to impaired pedestrians.

FUNDING AND RESOURCE REQUIREMENTS:

Narrative: Add resources to AWP Travel Inventory tasks to complete counts.

Request funding to conduct research to try more effecting counting technologies (est. \$75,000).

Estimated Cost to Implement: \$50,000 to collect data in population centers.

ACTION STEPS AND TIMELINE:		
Action Step	RESPONSIBLE AGENCY	TIMELINE/DUE DATE
Request programming of funding for Annual Work Program (AWP) Travel Inventory tasks. Approximately \$25,000 Central; \$12,500 Northern; and \$12,500 Southeast.	DOT&PF	July 9, 2007
Incorporate into TI work plan.	DOT&PF	September 2007
Research pedestrian and bicycle count methodologies used in other jurisdictions (Madison, Wisconsin; APBP Program, Vermont) (possibly make this a Technology Transfer project).	DOT&PF	October/November 2007
Develop priority list of locations to conduct counts, timeline (winter and summer).	DOT&PF	December 2007/January 2008
Determine available/best technology to conduct counts.	DOT&PF	December 2007/January 2008
Conduct user counts in all urban areas.	DOT&PF Divisions	January and July 2008
Determine best location for storage of users count data – ensure compatibility with other data systems.	DOT&PF	December 2007/January 2008
Associate counts with applicable, pre-planned projects.	DOT&PF	Ongoing
MEASUREMENT AND EVALUATION		
STRATEGY PERFORMANCE MEASURES:		
Progress measured by number of count locations, quality of data collected, and compatibility with current Alaska data systems.		
EVALUATION:		
Overall improvement to pedestrian and bicyclist use and crash data.		

SP.1 IDENTIFY AND IMPLEMENT APPROPRIATE ENGINEERING STRATEGIES TO ADDRESS HIGH-CRASH PEDESTRIAN LOCATIONS

DESCRIPTION: Apply appropriate engineering strategies (such as those contained in the 2004 FHWA PEDSAFE guide) to address specific pedestrian-related high-crash locations as identified in DOT&PF crash databases. Tailor mitigation strategies to crash patterns. (For example, banning right turn on red movements, developing pedestrian refuge islands, etc.) This strategy could include:

- Encourage the proper use of crosswalks by installing countdown timer pedestrian signal heads at select locations.
- In high pedestrian crash locations, where applicable, ban motor vehicle right turn on red movement and/or consider moving crosswalk to one car length behind the stop line.
- Where applicable (first step is to determine need/locations through data analysis and possible road safety audit (RSA)), improve sight distance to make pedestrians more visible to motor vehicle drivers.
- Improve lighting/increase visibility of pedestrians at selected locations.
 - Addresses problem that most severe crashes involving pedestrians occur in winter months and during hours of darkness.
- At applicable locations, construct pedestrian refuge islands (specifically on large/multilane roads).
 - Improve safety of pedestrians crossing large streets mid-block and highways.

RESPONSIBLE AGENCY:

Lead Agency: Alaska Department of Transportation and Public Facilities

Contact Name, Title: Bob Laurie, State Bicycle and Pedestrian Coordinator and State Traffic Engineer

Phone: (907) 465-6989

E-mail: bob.laurie@alaska.gov

NECESSARY PARTNERS:

- State Traffic Engineer/Highway Safety Improvement Program.
- Borough and local governments; those responsible for pedestrian facilities and roadway designs.
- MPOs.
- State Pedestrian Coordinator and Safe Routes to School Coordinator.
- Pedestrian advocates.
- Hospital and EMS partners.
- Other design professionals involved in state or local design projects.
- Municipality of Anchorage.

DATA ANALYSIS NEEDS OR AVAILABLE RESOURCES:

Need pedestrian count data to determine exposure; Crash data involving pedestrians; Hospitalization data for pedestrian-related crashes off the highway system (bicycle paths, trails, etc.).

EXPECTED EFFECTIVENESS/OUTCOME:

Narrative: Research potential effectiveness of strategies in PEDSAFE. We expect that adoption of proven pedestrian safety strategies, including countdown timers, pedestrian refuge islands, proper crosswalk locations, sight distance enhancements, improved pedestrian lighting, right turn on red restrictions, etc. will reduce the number of fatal and major injury crashes involving pedestrians statewide.

NHTSA's Countermeasures That Work: Effectiveness of reduced speed limits – Proven, Cost – Low; Effectiveness of conspicuity enhancement – Likely, Cost – Low; Effectiveness of pedestrian safety zones – Proven, Cost – High. NCHRP Report 500, Volume 10 – Effectiveness of providing sidewalks/walkways and curb ramps – Proven, Effectiveness of construct pedestrian refuge islands – Proven, Effectiveness of implement lighting/crosswalk illumination measures – Proven, Effectiveness of signals to alert motorists that pedestrians are crossing – Tried and Experimental. For more information see NCHRP Report 500, Volume 10.

Average number of lives lost and major injuries sustained due to this problem over the past five years: 52 fatalities; 180 major injuries.

Estimated number of lives saved and major injuries prevented in one year following implementation: Assume reduction factor for all strategies of 25-30 percent could result in two fewer fatalities and six to seven fewer major injuries.

FUNDING AND RESOURCE REQUIREMENTS:

Narrative: All design projects should include funding for pedestrian-related improvements (HSIP in Central Region, for example, is nominating pedestrian-related projects).

Estimated Cost to Implement: \$ Unknown. HSIP component approximately \$2M/year; funding should be percentage of all roadway improvements.

ACTION STEPS AND TIMELINE:

Action Step	RESPONSIBLE AGENCY	TIMELINE/DUE DATE
Accumulate necessary crash data to determine high-crash locations and crash circumstances.	DOT&PF with MPOs	6 months from plan approval
Identify crash patterns associated with pedestrian-vehicle crashes which could be mitigated through engineering-based solutions.	DOT&PF, MPOs, engineering consultants working for government agencies	1 year
Identify mitigation strategies for high pedestrian crash locations, with specific mitigation strategies at specific locations.	Same as above	1 year
Identify opportunities to incorporate mitigation strategies into ongoing projects.	DOT&PF and MPOs	Ongoing
Where no major projects are planned or no funding is available, identify HSIP or other similar projects and funding to address high-crash locations.	DOT&PF and MPOs	Ongoing
Incorporate pedestrian safety improvements into new or ongoing projects.	DOT&PF and MPOs	Ongoing
Insure that pedestrian crash mitigation strategies are being appropriately developed as part of roadway and pedestrian facility design..	DOT&PF and MPOs	As projects come on line
Program projects for pedestrian safety-related improvements and see them through implementation and construction	DOT&PF and MPOs	As projects come on line

Conduct evaluation/obtain feedback for completed strategies to determine effectiveness.	DOT&PF and MPOs and pedestrian advocate groups	As projects come on line
Provide results of effective mitigation strategies to interested individuals, groups, state agencies to promote effective strategies through future improvements.	DOT&PF and MPOs	2-3 years following analysis of “after” data
Promote pedestrian planning scoping in preliminary – early design phase – planning level.	DOT&PF	Ongoing
MEASUREMENT AND EVALUATION		
STRATEGY PERFORMANCE MEASURES: Progress will be measured by the number of pedestrian/ vehicle crashes reduced through selected engineering mitigation strategies. Specific crash reduction factors will be determined for specific crash types and mitigations to determine most effective strategies for Alaska.		
EVALUATION: DOT&PF will evaluate the crash reductions that have occurred as a result of the selected mitigation strategies. DOT&PF will develop a report comparing results/success with national reported success rates/reduction factors.		

SP.2 PUBLIC EDUCATION AND OUTREACH FOR PEDESTRIANS

DESCRIPTION: Raise awareness of road safely issues for pedestrians.

- Encourage driver awareness of pedestrians and crossings through education, airing via drive-time radio spots and bus signs. Alert drivers to areas of high pedestrian traffic and encourage them to acknowledge pedestrian right-of-way.
- Raise awareness of pedestrian issues and concerns for travel routes and crossings. Educate pedestrians on risks inherent in mid-block crossings, high-risk roads, times of day, etc. Raise pedestrian awareness of driver limitations.
- Encourage pedestrian awareness of safe behaviors. This would include high-visibility clothing, times of day for safe pedestrian access, crossing at intersections, etc.
- Alert drivers to how vehicle turning movements, particularly right turn on red, can affect pedestrians.

RESPONSIBLE AGENCY:

Lead Agency: Alaska Department of Transportation and Public Facilities

Contact Name, Title: Bob Laurie, State Bicycle and Pedestrian Coordinator

Phone: (907) 465-6989

E-mail: bob.laurie@alaska.gov

NECESSARY PARTNERS:

- Alaska Highway Safety Office.
- Safe Routes to Schools Program.
- FHWA, Office of Safety.
- State of Alaska, Department of Administration, Division of Motor Vehicles.
- Local school districts.
- Law Enforcement Agencies.
- State of Alaska, DOT&PF.
- Alaska news media.
- Community nonprofit groups interested in pedestrian and bicycle safety.
- Municipality of Anchorage.

DATA ANALYSIS NEEDS OR AVAILABLE RESOURCES:

Accurate crash data (before/during/after campaign samples), travel use data for pedestrians and bicyclists. DMV's knowledge, belief, opinion survey.

EXPECTED EFFECTIVENESS/OUTCOME:

Narrative: Informing drivers, pedestrians, and bicyclists of the rules of the road, potential areas of conflict, and broadening the motoring public's understanding of the right-of-way.

NHTSA's Countermeasures That Work: Effectiveness of Safe Routes to Schools for Pedestrians – Likely, Cost – Low; Effectiveness of elementary school pedestrian training – Proven, Cost – Low; Effectiveness of child school bus training – Likely, Cost – Low; Effectiveness of communications and outreach for impaired pedestrians – Uncertain, Cost – Medium. NCHRP Report 500, Volume 10 – Effectiveness of provide education, outreach, and training – Proven, Effectiveness of implement enforcement campaigns – Tried.

Average number of lives lost and major injuries sustained due to this problem over the past five years: 52 pedestrian fatalities and 180 major injuries.

Estimated number of lives saved and major injuries prevented in one year following implementation: Unknown.

FUNDING AND RESOURCE REQUIREMENTS:

Narrative: Staff resources and funding for development, production, and airing of public service announcements and print media efforts are not available at this time. Estimated Cost to Implement: AHSO experience indicates that \$100,000 will provide targeted television audience coverage at one to two times per week for six to eight weeks statewide, per year per spot. Need to identify free or “shared media” that are available through NHTSA or state agencies for at least the first year to gauge success of the approach before embarking on custom produced spots.

ACTION STEPS AND TIMELINE:

Action Step	RESPONSIBLE AGENCY	TIMELINE/DUE DATE
Review applicable state and other laws related to pedestrians and bicyclists.	DOT&PF, DPS LAW	
Consider recommendations for legislation to clarify or support needed safety laws.	Governors office, legislature	
Identify lead agency/person to implement this strategy.	DOT&PF	Fall 2007
Identify target audience (are there specific driver types most frequently involved in bicycle and pedestrian crashes or repeat offenders?) University sociology/marketing/public relations.	DOT&PF	Fall 2007
Consult (possibly partner) with the Municipality of Anchorage (MOA) regarding their efforts on this issue.	DOT&PF, MOA	Fall 2007-Winter 2008
Review currently available curriculum/educational campaigns (AARP, AAA, NHTSA, other states).		
Investigate Shared Media, materials developed by others available for free or low-cost use.		
Identify funding source(s).	DOT&PF	
Establish working relationship with necessary partners.		
Create preliminary scope for training/education – draw on University sociology/marketing/public relations expertise.		
Identify media outlets and outreach methods.		
Recruit participation of high school students, university drama departments, and possibly crash victims.		
Use data to tailor messages to appropriate audience at targeted locations.		
Air ads during targeted hours and run print ads on selected days of week and/or times of day.		

MEASUREMENT AND EVALUATION**STRATEGY PERFORMANCE MEASURES:**

- Overall number of crashes involving bicyclists and pedestrians.
- Before/during/after data around campaign periods.

EVALUATION:

This will include analyzing the reduction in crashes involving bicyclists and pedestrians attributed to driver error.

SP.3 IMPROVE VISIBILITY OF PEDESTRIANS

DESCRIPTION: Alaska pedestrians encounter many perils. The AIPC retro-reflective program provides reflectorized accessories such as caps for the homeless and public inebriates, zipper pulls, backpack tags, clothing, knitted hats, shoe stickers, etc. to make pedestrians more visible to motorists. Pedestrians wearing retro-reflective materials can be seen at 10 times the distance of someone wearing dark clothing.

RESPONSIBLE AGENCY:

Lead Agency: Alaska Injury Prevention Center

Contact Name, Title: Ron Perkins, Exec. Director

Phone: (907) 929-3941 E-mail: asc1@alaska.net

NECESSARY PARTNERS:

- Municipality of Anchorage (MOA).
- DHSS.

DATA ANALYSIS NEEDS OR AVAILABLE RESOURCES:

The MOA and DOT&PF already have developed pin maps of pedestrian crash locations, ages of victims, alcohol involvement, and other factors. AIPC has been contracted by the MOA to conduct research and public education on pedestrian injury prevention. Before and after observational surveys of retro-reflective use by pedestrians needs to be duplicated since it has been four to five years since the last were done.

EXPECTED EFFECTIVENESS/OUTCOME:

Narrative: Increasing pedestrian visibility should have a positive effect on reducing crashes involving pedestrians. Pedestrian reflectorization programs by AIPC in the past have shown a 48 percent decrease in Anchorage nighttime injury hospitalizations from 1994-1998. Future projects will need to show levels of reflectorization use and crash data before and after the project to compare results.

NHTSA's Countermeasures That Work: Effectiveness of conspicuity enhancement – Likely, Cost – Low; Effectiveness of communications and outreach for impaired pedestrians – Uncertain, Cost – Medium; Effectiveness of pedestrian “sweeper” patrols – Unknown, Cost – Medium. NCHRP Report 500, Volume 10 – Effectiveness of improve reflectorization/conspicuity of pedestrians – Tried, Effectiveness of implement lighting/crosswalk illumination measures – Proven.

Average number of lives lost and major injuries sustained due to this problem over the past five years: Presently unknown, estimate at least 20 lives lost over the last five years. There were 458 pedestrian injury hospitalizations in the five-year period of 2000-2004, 203 of them occurring during the dark winter months of October-March.

Estimated number of lives saved and major injuries prevented in one year following implementation: 50; however, it may take a couple of years before the hospitalization data are entered.

FUNDING AND RESOURCE REQUIREMENTS:

Narrative: The MOA has secured a grant which will contribute nearly \$100,000 toward pedestrian and bicycle safety issues and promotions.

Estimated Cost to Implement: \$0. No additional funding is necessary at this point.

ACTION STEPS AND TIMELINE:		
Action Step	RESPONSIBLE AGENCY	TIMELINE/DUE DATE
Identify data sources and needs.	AIPC	September 2007
Compile data and develop strategies.	AIPC, MOA	October 2007
Begin pre-surveys, observational.	AIPC	October 2007
Begin distribution of materials through schools and sleep-off centers.	AIPC	November 2007
Develop public awareness campaigns.	AIPC	November 2007
Evaluate program effectiveness. Post – surveys, etc.	AIPC	December 2008
MEASUREMENT AND EVALUATION		
STRATEGY PERFORMANCE MEASURES: <ul style="list-style-type: none"> • Number of reflectorized items distributed and number of people contacted. • Pre and post observational surveys to show reflective clothing use. • Pre and post hospitalization and crash data comparisons from Alaska Trauma Registry and police reports. 		
EVALUATION: <p>Success will be measured by process objectives of reflectorized products distribute and worn, and by outcome objectives of the number of injury crashes or hospitalizations prevented.</p>		

SP.4 EXPAND THE SAFE ROUTES TO SCHOOLS PROGRAM IN ALASKAN COMMUNITIES

DESCRIPTION: Raise awareness and participation of Alaskan Communities in the Safe Routes to Schools (SRTS) Program. Identify and access additional funding for improvements.

RESPONSIBLE AGENCY:

Lead Agency: Alaska Department of Transportation and Public Facilities, SRTS Program

Contact Name, Title: Steven Soenksen, Coordinator

Phone: (907) 465-4069

E-mail: steve.soenksen@alaska.gov

NECESSARY PARTNERS:

- State Bicycle and Pedestrian Coordinator.
- DOE, H&SS.
- LTAP.
- TTAP.

DATA ANALYSIS NEEDS OR AVAILABLE RESOURCES:**EXPECTED EFFECTIVENESS/OUTCOME:**

Narrative: The SRTS Program is just beginning in Alaska. This program helps communities address concerns in the area near elementary and middle schools. The program areas include consideration of walking routes children may take one mile from schools for walking and two miles for biking. The program is intended to encourage a healthy lifestyle and education of safety messages. Activities make it fun for kids to learn how to travel safely to school.

NHTSA's Countermeasures That Work: Effectiveness of Safe Routes to Schools for Pedestrians – Likely, Cost – Low/SRTS for Bicyclists – Unknown; Cost – Low; Effectiveness of elementary school pedestrian training – Proven, Cost – Low; Effectiveness of child school bus training – Likely, Cost – Low; Effectiveness of reduced speed limits – Proven, Cost – Low; Effectiveness of conspicuity enhancement – Likely, Cost – Low. NCHRP Report 500, Volume 10 – Effectiveness of provide education, outreach, and training – Proven, Effectiveness of provide school route improvements – Tried.

Average number of lives lost and major injuries sustained due to this problem over the past five years: 52 pedestrian fatalities (2001-2005) and 180 major injuries.

Estimated number of lives saved and major injuries prevented in one year following implementation: N/A

FUNDING AND RESOURCE REQUIREMENTS:

Narrative: Federal funding is available for initial program guidelines. The program can/should be expanded to provide funding to address critical needs throughout Alaska for children's safety and education. Walking or biking to school is important to support children's learning on a variety of levels. The physical activity develops better circulation and respiratory systems. Better coordination between state agencies is needed to ensure that school districts have information and program resources available. As the grant program is developed, identify funding possibilities to cover infrastructure and non-infrastructure needs to be sure Alaskan kids get a good education in pedestrian and bike safety and know how to find safe routes for their travel needs.

Estimated Cost to Implement: \$1-3 million per year depending on funding availability and grant needs.

ACTION STEPS AND TIMELINE:		
Action Step	RESPONSIBLE AGENCY	TIMELINE/DUE DATE
Develop SRTS Program and Grant funding.	DOT&PF	October 30, 2007
Training for SRTS – Anchorage-statewide.	DOT&PF	November 2, 2007
Increase outreach to Alaska Communities and agencies.	DOT&PF	Ongoing
Support Walk to School Day and Bike to School Activities.	DOT&PF	October 3, 2007 and beyond
Continuation of education, encouragement, funding and infrastructure support.	DOT&PF	Ongoing
MEASUREMENT AND EVALUATION		
STRATEGY PERFORMANCE MEASURES:		
EVALUATION: SRTS has evaluation measures as written in Federal guidance documents and developed by the National Center for Safe Routes to School.		

SP.5 IMPLEMENT TARGETED CROSSWALK ENFORCEMENT

DESCRIPTION: Implement targeted crosswalk enforcement (“crosswalk stings”) with accompanied media campaign in areas of high pedestrian-vehicle conflict and high pedestrian traffic. Repeat sporadically to maintain driver awareness.

RESPONSIBLE AGENCY:

Lead Agency: Alaska Department of Transportation and Public Facilities, Division of Program Development

Contact Name, Title: Bob Laurie, Bicycle/Pedestrian Coordinator; Steve Soenksen, Safe Routes to School Coordinator

Phone: (907) 465-6989; (907) 465-4069 E-mail: Bob.Laurie@alaska.gov; Steve.Soenksen@alaska.gov

NECESSARY PARTNERS:

- Alaska Highway Safety Office.
- State and local police agencies: Alaska State Troopers, Anchorage Police Department, other local police departments.
- State and local media outlets.
- DOT&PF/police agency public information offices.
- Municipality of Anchorage.

DATA ANALYSIS NEEDS OR AVAILABLE RESOURCES:

Crash/conflict analysis to identify “problem” crossings; user counts to use as base to measure rate of conflict. Review reports from other states/localities to flesh-out program.

EXPECTED EFFECTIVENESS/OUTCOME:

Narrative: Implementation of this strategy should result in a greater awareness and compliance by motorists of existing state and local crosswalk and speed laws and reduced fatalities and injuries by pedestrians. Secondly, it may result in greater compliance by pedestrians in crosswalk laws (if they see motorists yield to them, they’ll be more likely to use crosswalks). A key component of this program is publicity through media. Washington State saw an improvement by motorists yielding to pedestrians from 49 percent to 74 percent in targeted locations, and from 40 percent to 65 percent in control locations within the same community.

NHTSA’s Countermeasures That Work: Effectiveness of targeted enforcement – Varies (most effective when it is highly visible and publicized), Cost – Medium. NCHRP Report 500, Volume 10 – Effectiveness of implement enforcement campaigns – Tried.

Average number of lives lost and major injuries sustained due to this problem over the past five years: Pedestrians 2001-2005: 51 fatalities (total) and 187 major injuries (total).

Estimated number of lives saved and major injuries prevented in one year following implementation: Unable to quantify.

FUNDING AND RESOURCE REQUIREMENTS:

Narrative:

Estimated Cost to Implement: \$30,000 first year (with training); \$20,000 subsequent years.

ACTION STEPS AND TIMELINE:		
Action Step	RESPONSIBLE AGENCY	TIMELINE/DUE DATE
Identify target/problem crossings based on crash statistics or complaint frequency.	Law enforcement agencies/ DOT&PF	3 months
Develop enforcement resources: crosswalk law and driver/pedestrian warning “tickets”.	DOT&PF, AHSO	4 months
Publicize upcoming enforcement actions.	Law enforcement agencies/AHSO/ DOT &PF PIOs	One week prior to enforcement action
Train law enforcement officers to use enforcement action – (Possible trainers: Dan Burden/John Moffat).	AHSO/Law enforcement agencies	One week
Conduct targeted crosswalk enforcement actions.	Law enforcement agencies	One week each location
Conduct pre-, during-, and post-event surveys.	DOT&PF, AHSO, Law enforcement agencies	
Meet discuss with media editors and directors best way to achieve recurring coverage of subsequent events.	DOT&PF, AHSO, Law enforcement agencies	
MEASUREMENT AND EVALUATION		
STRATEGY PERFORMANCE MEASURES:		
“Step Out Surveys” – Conduct before, during, and after surveys to count how many motorists yield to pedestrians in crosswalks – both in subject crosswalks (“sting” locations) and elsewhere. “Yield” includes those who come to complete stop for pedestrians and those who slow enough to allow pedestrian to cross safely.		
EVALUATION:		
Success can be measured by increased compliance both at targeted locations and in other locations served by the media involved. Report results to media, on DOT&PF, AHSO, Law Enforcement web sites; to community council, PTA, etc. newsletters.		

SB.1 IDENTIFY AND IMPLEMENT APPROPRIATE ENGINEERING STRATEGIES TO ADDRESS HIGH-CRASH LOCATIONS INVOLVING BICYCLISTS

DESCRIPTION: Apply appropriate engineering strategies to address specific bicycle-related high-crash locations as identified in DOT&PF crash databases. Tailor mitigation strategies to crash patterns. (For example, banning right turn on red movements at intersections, improving bicycle path-roadway interface points, etc.) This strategy could include:

- Design future intersections/consider design elements to accommodate safe bicycle and motorist interaction and turning movements. Consider designs which require the cyclist to maintain a steady, predictable route along their course of travel.
- In high bicyclist-crash locations, where applicable, ban motor vehicle right turn on red movement.
- Improve lighting/increase visibility of bicyclists at selected locations.

RESPONSIBLE AGENCY:

Lead Agency: Alaska Department of Transportation and Public Facilities

Contact Name, Title: Bob Laurie, State Bicycle and Pedestrian Coordinator; and State Traffic Engineer

Phone: (907) 465-6989

E-mail: Bob.Laurie@alaska.gov

NECESSARY PARTNERS:

- Borough and local governments; those responsible for bicyclists facilities and roadway designs.
- MPOs.
- State Bicycle Coordinator and Safe Routes to School Coordinator.
- Bicycle advocacy groups and bicycle shops.
- Hospital and EMS partners.
- Other design professionals involved in state or local design projects.
- Municipality of Anchorage.

DATA ANALYSIS NEEDS OR AVAILABLE RESOURCES:

Need bicyclist count/use data to determine exposure.

Crash data involving bicyclists.

Hospitalization data for bicyclist-related crashes off the highway system (bicycle paths, trails, etc.).

EXPECTED EFFECTIVENESS/OUTCOME:

Narrative: Further research on potential effectiveness of engineering strategies will be necessary. We expect that adoption of proven bicyclist safety strategies, including improved lighting, and right turn on red restrictions, etc. will reduce the number of fatal and major injury crashes involving bicyclists statewide. NHTSA's Countermeasures That Work: Effectiveness of active bicycle lighting – Likely; Cost – Medium; Effectiveness of rider conspicuity – Likely, Cost – Low. NCHRP Report 500: Effectiveness of implement traffic calming techniques – Proven; restrict right turn on red movements – Experimental; accommodate bicyclists through roundabouts – Tried; improve visibility at intersections – Tried; provide safe roadway facilities for parallel travel – Tried; provide bicycle-tolerable rumble strips – Tried (See Report for additional details and strategies).

Average number of lives lost and major injuries sustained due to this problem over the past five years: Eight fatalities; 111 major injuries.

Estimated number of lives saved and major injuries prevented in one year following implementation: Assume reduction factor for all strategies of 25-30 percent could result in one fewer fatality and five fewer major injuries.

FUNDING AND RESOURCE REQUIREMENTS:

Narrative: All design projects should include funding for bicyclist-related improvements.

Estimated Cost to Implement: \$ Unknown. HSIP component approximately \$2M/year; funding should be percentage of all roadway improvements.

ACTION STEPS AND TIMELINE:

Action Step	Responsible Agency	Timeline/Due Date
Accumulate necessary crash data to determine high-crash locations and crash circumstances.	DOT&PF with MPOs	6 months from plan approval
Identify crash patterns associated with bicyclist-vehicle crashes which could be mitigated through engineering-based solutions.	DOT&PF, MPOs, engineering consultants working for government agencies	1 year
Identify mitigation strategies for high bicyclist crash locations, with tailored mitigation strategies at specific locations.	Same as above	1 year
Identify opportunities to incorporate mitigation strategies into ongoing projects.	DOT&PF and MPOs	Ongoing
Where no major projects are planned or no funding is available, identify HSIP or other similar projects and funding to address high-crash locations.	DOT&PF and MPOs	Ongoing
Incorporate bicyclist safety improvements into new or ongoing projects.	DOT&PF and MPOs	Ongoing
Insure that bicyclist crash mitigation strategies are being appropriately developed as part of roadway and bicycle facility design. Standards and recommendations for safe bicycle facility design are contained in numerous documents, including the AASHTO Bike Guide and other resources linked through the FHWA Office of Safety web site.	DOT&PF and MPOS	As projects come on line
Program projects for bicyclist safety-related improvements and see them through implementation and construction.	DOT&PF and MPOS	As projects come on line
Conduct evaluation/obtain feedback for completed strategies to determine effectiveness.	DOT&PF and MPOS and bicycle advocacy groups	As projects come on line

Provide results of effective mitigation strategies to interested individuals, groups, state agencies to promote effective strategies through future improvements.	DOT&PF and MPOS	2-3 years following analysis of “after” data
Promote bicycle planning scoping in preliminary – early design phase – planning level.	DOT&PF	Ongoing
MEASUREMENT AND EVALUATION		
STRATEGY PERFORMANCE MEASURES: Progress will be measured by the number of bicyclist/vehicle crashes reduced through selected engineering mitigation strategies. Specific crash reduction factors will be determined for specific crash types and mitigations to determine most effective strategies for Alaska.		
EVALUATION: DOT&PF will evaluate the crash reductions that have occurred as a result of the selected mitigation strategies. DOT&PF will develop a report comparing results/success with national reported success rates/reduction factors.		

SB.2 PUBLIC EDUCATION AND OUTREACH PROGRAMS FOR BICYCLISTS

DESCRIPTION: Develop and implement a public education and outreach program for bicyclists and motorists.

In nearly three-quarters of 1995 bicycle fatalities, investigation indicated that an error or some other factor related to the cyclist's behavior was involved (AASHTO). A large percentage of fatalities and injuries involve persons between the ages of 6 and 25. (DOT&PF) A targeted education program should increase cyclists' understanding rules of the road. This in turn should reduce bicycle-vehicle accidents.

RESPONSIBLE AGENCY:

Lead Agency: Alaska Department of Transportation and Public Facilities, Alaska Highway Safety Office

Contact Name, Title: Bob Laurie, State Bicycle and Pedestrian Coordinator

Phone: (907) 465-6989

E-mail: bob.laurie@alaska.gov

NECESSARY PARTNERS:

- Local school districts.
- Statewide Commission on Transportation Safety, Reporting to the Governor.
- Law Enforcement Agencies.
- Alaska Highway Safety Office.
- State of Alaska, DOT&PF Public Information Officers.
- Safe Routes to Schools Program.
- Alaska news media.
- FHWA, Office of Safety.
- Community nonprofit groups interested in bicycle safety.
- State of Alaska, Department of Administration, Division of Motor Vehicles.
- Municipality of Anchorage.

DATA ANALYSIS NEEDS OR AVAILABLE RESOURCES:

Survey of percentage of children and adults who commute to school or work by mode.

Total types of accidents and high-crash locations.

Number of bicycle-car crashes caused by cyclist error and associated injuries.

Number of bicycle-car accidents caused by driver error and associated injuries.

Survey of cyclist and motorist understanding of applicable right-of-way laws, before and after.

EXPECTED EFFECTIVENESS/OUTCOME:

Increasing bicyclists and driver awareness of applicable laws and safe practices should lead to safer behaviors by both parties. NCHRP Report 500, Effectiveness of improve enforcement of bicycle-related laws – Tried; provide bicyclist education – Tried.

Average number of lives lost and major injuries sustained due to this problem over the past five years: 119 bicyclist fatalities and major injuries.

Estimated number of lives saved and major injuries prevented in one year following implementation: Over half of vehicle-bicycle crashes occur at intersections. Education programs targeted at bicyclists and drivers describing what each user should be looking out for in intersections could save over 20 percent of vehicle-bicycle crashes occurring at these intersections resulting in 20 fewer major injuries to cyclists in a five-year period.

FUNDING AND RESOURCE REQUIREMENTS:

Narrative: Funding needs will support identification of data needs, developing data, focus on issues, and analysis.

Estimated Cost to Implement: \$100,000 per year Potential funding sources: Annual Work Program – ATIP, partial funding from AHSO, SRTS, and CMAQ.

ACTION STEPS AND TIMELINE:

Action Step	RESPONSIBLE AGENCY	TIMELINE/DUE DATE
Perform surveys of the percent of students and adults who use the bicycle to commute to work or school. Consider using automated traffic counting technology. See Madison Wisconsin bicycle/pedestrian count methods.	DOT&PF, Alaska Highway Data office.	3 months
Perform social marketing analysis to identify methods of effective communication to target audiences, by age group and type of use.	DOT&PF, Alaska Highway Data office.	3 months
Identify and partner with individuals or agencies willing to take the lead on school outreach and education.	DOT&PF, Safe Routes to School Program	2 months
Identify bicycle-related laws and best practices.	DOT&PF, Alaska Highway Data office.	3 months
Develop and implement public information campaigns targeted to increasing driver awareness of bicyclist best practices and related traffic laws.	DOT&PF, Alaska Highway Data office.	12 months
Develop and implement public information campaign for school children. Target the months of April and May for bicycle education strategies.	DOT&PF, Safe Routes to School Program	12 months
Develop and implement a public information program for all cyclists.	DOT&PF, Bicycle Pedestrian Coordinator	12 months
Support and expand bicycle outreach events such as bicycle rodeos, fairs, etc. Provide helmet disbursement funds.	DOT&PF, Alaska Highway Data office.	3 months

MEASUREMENT AND EVALUATION**STRATEGY PERFORMANCE MEASURES:**

Ultimate success will be achieved when increased cyclist and motorist awareness of laws and safe practices leads to a significant decrease in bicycle-car crashes. Measure success in terms of reduced number of bicycle-vehicle crashes, fatalities, and injuries. Crash data also must be measured against miles traveled by bicycle. Baseline studies of bicycle use will be required to measure success.

- Measure bicycle-vehicle crashes in total, and crashes where cyclist behavior is a determining factor. This will help evaluate bicyclist education effectiveness.
- Measure bicycle-vehicle crashes where driver behavior is a determining factor. This will help measure driver awareness program's effectiveness.
- Increased outreach should increase bicycle use for going to work or school. Use before and after surveys and bicycle traffic counts to estimate changes that result from the program.

EVALUATION: (measures and evaluation seem to overlap, so included all above).

SB.3 INCREASE BICYCLE HELMET USE

DESCRIPTION: Implement an educational media, local legislative, and enforcement campaign to encourage the use of bicycle helmets.

- Building on the work being completed by the Alaska Injury Prevention Center's (AIPC) project with the Municipality of Anchorage, develop an educational program to inform bicyclists of the benefits of helmet use. Improve bicyclists' understanding of existing bicycle helmet laws and utilization of distribution programs.
- Develop statewide expansion of "Providence Hospital Helmet Distribution" and other methods of distributing and/or educating cyclists about the importance of wearing a helmet (incentive programs, Safe Kids, fire departments, etc.).
- In Juneau, police have bicycle helmets in their vehicles. When they see a young person without a helmet, they can either cite them or give them a free helmet. Expand this program statewide. Identify incentive programs.

RESPONSIBLE AGENCY:

Lead Agency: Alaska Injury Prevention Center

Contact Name, Title: Ron Perkins, Executive Director

Phone: (907) 929-3941 E-mail: asc1@alaska.net

NECESSARY PARTNERS:

- Municipality of Anchorage.
- Local governments.
- DOT&PF.
- Alaska Highway Safety Office.
- Media.
- School districts.
- Law enforcement.
- Fire departments.
- Hospitals.

DATA ANALYSIS NEEDS OR AVAILABLE RESOURCES:

HAS dataport statistics regarding crashes involving unhelmeted bicyclists and hospitalization data.

Resource – NCHRP Report 500 Draft Volume, Guide for Reducing Crashes Involving Bicyclists.

EXPECTED EFFECTIVENESS/OUTCOME:

Narrative: Increase in helmet use; reduction of fatal and major injury crashes involving unhelmeted bicyclists. NHTSA's Countermeasures That Work: Effectiveness of bicycle helmet promotions with education – Likely; Cost – High; Effectiveness of bike fairs, bike rodeos – Unknown, Cost – Low; Effectiveness of bicycle education in schools – Unknown, Cost – Medium. NCHRP Report 500, Effectiveness of increase use of bicycle helmets – Proven.

Average number of lives lost and major injuries sustained due to this problem over the past five years: Eight bicyclist fatalities.

Estimated number of lives saved and major injuries prevented in one year following implementation: Three of the eight cyclist fatalities reported not using safety equipment at the time of the crash. 43 major injury bicycle crashes also reported no helmet used with only 6 specifically reporting that a helmet was used. It is estimated that at least one life could be saved and 14 major injuries prevented through the use of bike helmets.

FUNDING AND RESOURCE REQUIREMENTS:

Narrative: AIPC will serve as champion under contract with MOA.

Estimated Cost to Implement: Labor efforts to develop policy change and work with stakeholders.

ACTION STEPS AND TIMELINE:

Action Step	Responsible Agency	Timeline/Due Date
Create a one- to two-page fact sheet on bicycle and unhelmeted bicyclist crashes in Alaska and research regarding effectiveness of helmet use.	DOT&PF with AIPC	Summer 2008
Consult with the Municipality of Anchorage (MOA) regarding their current efforts to develop a bicycle safety and sharing the road fact sheet.	AIPC	Summer 2008
Distribute fact sheet to targeted populations and locations with high bicycle traffic.	AIPC	Summer 2008
Develop specific helmet use educational messages and implement media campaign.	AIPC	Fall 2008
Assemble Alaskan city laws regarding bicycle helmet laws.	AIPC	Fall 2008
Work with local governments who are interested in enacting local legislation regarding bicycle helmet use.	Alaska Injury Prevention	Winter 2008/2009
Implement Juneau-style helmet/citation rules (Program?) statewide.	Cities, local police and law enforcement, schools, Alaska Injury Prevention	Spring 2008 (prior to the start of the next riding season)
Develop and fund a helmet distribution mechanism for rural communities.	Alaska Injury Prevention	Summer 2008? Could this begin right away?
Identify sustainable funding source to support long-term implementation of helmet distribution program in all participating communities.		

MEASUREMENT AND EVALUATION

STRATEGY PERFORMANCE MEASURES:

- Number of cities that enact local legislation in support of bicycle helmet use.
- Number of citizens reached by media campaign.
- Number of helmet distributed annually within each participating jurisdiction.

EVALUATION:

- Observed rates of helmet use.
- Ratio of number of bicycle-related injury hospitalizations/helmeted bicycle-related hospitalizations.

SB.4 EXPAND SECTION OF ALASKA'S DRIVERS MANUAL TO INCLUDE MORE INFORMATION ABOUT BICYCLE AND PEDESTRIAN SAFETY

DESCRIPTION: Expand section of Alaska's Drivers Manual to include more detailed information about bicycle and pedestrian safety and sharing the road with bicycles and pedestrians. Incorporate questions regarding bicycle and pedestrian safety in the state driver licensing exam.

RESPONSIBLE AGENCY:

Lead Agency: Division of Motor Vehicles

Contact Name, Title: Kerry Hennings, Driver Licensing Manager

Phone: (907) 269-3771 E-mail: kerry.hennings@alaska.gov

NECESSARY PARTNERS:

- Alaska Department of Transportation and Public Facilities, Division of Program Development; Bob Laurie, Bicycle/Pedestrian Coordinator; (907) 465-6989; bob.laurie@alaska.gov.

DATA ANALYSIS NEEDS OR AVAILABLE RESOURCES:

To be determined during project; possible exemplary manuals/exams from other states, national models, and input from State Bicycle/Pedestrian Coordinators and Association of Pedestrian and Bicycle Professionals list serves.

EXPECTED EFFECTIVENESS/OUTCOME:

Narrative: The 2006 Alaska Drivers Manual includes two short paragraphs about driving on roads with bicyclists. Judging from recurring letters to newspaper editors throughout the State, many motorists mistakenly believe that bicyclists do not have the right to use the road or shoulder. Clarifying the rights and responsibilities of motor vehicle drivers and bicyclists in the drivers' manual and licensing exam is one step of a public outreach effort needed to improve the safety of bicyclists on Alaska's roadways. NHTSA's Countermeasures That Work: Effectiveness of bicycle safety in driver education – Unknown; Cost – Low.

Average number of lives lost and major injuries sustained due to this problem over the past five years: Bicyclists 2001-2005: 8 fatalities (total) and 116 major injuries (total).

Estimated number of lives saved and major injuries prevented in one year following implementation: Unable to quantify.

FUNDING AND RESOURCE REQUIREMENTS:

Narrative: The primary expenses expected to this effort are the staff time to research, coordinate, and write the narratives for the manual and exam, and likely could be absorbed within existing budgets. There may be some additional costs if specialized graphics are needed.

Estimated Cost to Implement: Less than \$5,000 in staff time.

ACTION STEPS AND TIMELINE:		
Action Step	Responsible Agency	Timeline/Due Date
Conduct review of Alaska's legislation relevant to bicycle and pedestrian safety.	DOT&PF	TBD
Research bicycle/pedestrian discussions and exam questions in other states' driver's manuals. Query State Bicycle/Pedestrian Coordinators for exemplary manuals/exams. Research any national model drivers' manuals, NHTSA proposals, etc.	DOT&PF	Six weeks
Review Alaska's manual for bicycle/pedestrian issues. Upon cursory review, there may be opportunity to incorporate appropriate discussion in several areas, not just in a single section or page.	DOT&PF	Three weeks
Draft language for inclusion in manual/exam. Coordinate with DMV. Allow time for AG review if any points unclear or in dispute.	DOT&PF/DMV	Six weeks
Obtain/Draft graphics if needed.	DOT&PF/DMV	Four weeks
Incorporate into drivers' manual/exam.	DMV	
MEASUREMENT AND EVALUATION		
STRATEGY PERFORMANCE MEASURES:		
If DMV exam process allows, track correct/incorrect scores of bicycle/pedestrian-related questions. Over time, we would expect scores on these questions to improve. Over time, another measure will be reduction in bicycle and pedestrian crashes.		
EVALUATION:		
If DMV exam process allows, track scoring of bicycle/pedestrian questions by applicants. Periodically revise/update drivers' manual language as needed.		

SM.1 ENCOURAGE MOTORCYCLE OPERATORS AND PASSENGERS TO USE PROTECTIVE EQUIPMENT THROUGH AN EDUCATIONAL CAMPAIGN

DESCRIPTION: Encourage motorcycle operators and passengers to use the protective equipment through a comprehensive educational outreach campaign:

- Motorcycle helmets that meet the Federal helmet standard.
- Proper clothing, including gloves, boots, long pants, and a durable long-sleeved jacket.
- Eye and face protection.
- Additionally, each passenger should have a seat and footrest.

(NHTSA Highway Safety Program Guideline No. # Motorcycle Safety)

PROPOSED RESPONSIBLE AGENCY:

Proposed Lead Agency: Reach out to the Alaska Motorcycle Safety Advisory Committee (AMSAC) for support as leader of this strategy.

Contact Name, Title: TBD

Phone: TBD

E-mail: TBD

NECESSARY PARTNERS:

- State of Alaska, Governor.
- State of Alaska, Legislature.
- Motorcycle community.
- Alaska Highway Safety Office.
- DMV.
- State and Local Law Enforcement.
- Municipalities.
- DOT&PF.
- Insurance agencies.
- Alaska Injury Prevention Center.
- Hospitals/ER or Doctor offices.

DATA ANALYSIS NEEDS OR AVAILABLE RESOURCES:

Data regarding fatal and major injury crashes involving motorcyclists and helmet use are available through HAS, the Fatality Analysis Reporting System (FARS), and the Alaska Injury Prevention Center 2007 motorcycle helmet observational survey.

EXPECTED EFFECTIVENESS/OUTCOME:

Narrative: Increase in use of Federally approved motorcycle safety equipment.

Like safety belts, helmet use has been proven to be effective in reducing the number and severity of crashes involving motorcycles. According to the National Highway Traffic Safety Administration's (NHTSA) 2006 Motorcycle Safety Program Plan, "Decades of research has consistently shown that helmets are the most effective piece of safety gear for motorcycle riders. Helmets are estimated to be 37 percent effective in preventing fatal injuries to motorcyclists."

Average number of lives lost and major injuries sustained due to this problem over the past five years: 28 unhelmeted fatalities.

Estimated number of lives saved and major injuries prevented in one year following implementation: Approximately eight to nine over five years/two lives per year.

FUNDING AND RESOURCE REQUIREMENTS:

Narrative: Greatest need initially will be to identify a champion/sponsor to lead this initiative. First steps will be to review data available, identify any additional data needs, and make recommendations to carry out this strategy.

Estimated Cost to Implement: Staff labor efforts and hiring of PR agency to develop or expand the existing motorcycle safety campaign. To be determined.

ACTION STEPS AND TIMELINE:

Action Step	Responsible Agency	Timeline/Due Date
Confirm lead agency.		
Conduct analysis of crash and hospitalization data involving motorcycle riders. Create a one- to two-page fact sheet on motorcycle crashes in Alaska and research regarding effectiveness of various safety equipment.	Potentially AMSAC	TBD
Organize and educate a coalition of parties that would be favorable to this safety effort, including DOT&PF, AHSO, DMV, Injury Prevention, victims' families, military partners, etc.	Potentially AMSAC	TBD
Continually educate the legislature and the public about the number of lives being lost and major injuries sustained in motorcycle crashes as well as the increase in motorcycle endorsements in Alaska.		Ongoing

MEASUREMENT AND EVALUATION**STRATEGY PERFORMANCE MEASURES:**

- Fewer fatal and serious injury crashes involving unprotected motorcycle operators.

EVALUATION:

- TBD based on mission and plan of the AMSAC.

SM.2 ENCOURAGE DRIVER TRAINING AS PART OF NEW MOTORCYCLE ENDORSEMENT LICENSES**DESCRIPTION:**

- Encourage requirement for motorcyclists to pass testing (written and road test); or
- Encourage motorcyclists to have a recognized certificate of training (up to two years old), **unless** the applicant holds a current Alaska motorcycle endorsement obtained with required testing.
- Encourage motorcycle rider training throughout riders' careers for those with an Alaska Motorcycle License.

RESPONSIBLE AGENCY:

Lead Agency: TBD

Contact Name, Title: TBD

Phone: TBD

E-mail: TBD

NECESSARY PARTNERS:

- State of Alaska, Governor.
- State of Alaska, Legislature.
- Victims' families and advocates.
- Motorcycle community.
- Municipalities.
- DOT&PF.
- Alaska Highway Safety Office.
- Insurance agencies.
- Alaska Injury Prevention.
- Hospitals/ER or Doctor offices.

DATA ANALYSIS NEEDS OR AVAILABLE RESOURCES:

Data regarding fatal and major injury crashes involving motorcyclists and helmet use are available through HAS. Should analyze Alaska's motorcycle crash problem prior to and following repeal of helmet law, but with consideration of increased registrations.

EXPECTED EFFECTIVENESS/OUTCOME:

Narrative:

Average number of lives lost and major injuries sustained due to this problem over the past five years: 28 unhelmeted fatalities.

Estimated number of lives saved and major injuries prevented in one year following implementation: Approximately eight to nine over five years/two lives per year.

FUNDING AND RESOURCE REQUIREMENTS:

Narrative:

Estimated Cost to Implement:

ACTION STEPS AND TIMELINE:		
Action Step	Responsible Agency	Timeline/Due Date
Identify lead agency.		
Convene group of interested stakeholders to discuss motorcycle rider training in Alaska.		
Identify existing motorcycle rider training programs in Alaska.		
MEASUREMENT AND EVALUATION		
STRATEGY PERFORMANCE MEASURES:		
EVALUATION:		

SM.3 ESTABLISH AN INCENTIVE PROGRAM FOR MOTORCYCLE RIDERS WHO COMPLETE TRAINING AT VARIOUS STAGES OF THEIR RIDING CAREER

DESCRIPTION: Work with Division of Insurance to approach insurance companies to establish an incentive program for motorcycle riders who complete training at various stages of their riding career.

PROPOSED RESPONSIBLE AGENCY:

Proposed Lead Agency/Organization: Alaska Motorcycle Safety Advisory Council (AMSAC)

Contact Name, Title: TBD

Phone: TBD

E-mail: TBD

NECESSARY PARTNERS:

- State of Alaska, Governor.
- State of Alaska, Legislature.
- Alaska Highway Safety Office.
- Motorcycle community.
- Municipalities.
- DOT&PF.
- Insurance agencies.
- Alaska Injury Prevention.
- Hospitals/ER or Doctor offices.
- DMV.
- State and local law enforcement.

DATA ANALYSIS NEEDS OR AVAILABLE RESOURCES:

Data regarding fatal and major injury crashes involving motorcyclists and helmet use are available through HAS. Should analyze Alaska's motorcycle crash problem prior to and following repeal of helmet law, but with consideration of increased registrations.

EXPECTED EFFECTIVENESS/OUTCOME:

Narrative:

Average number of lives lost and major injuries sustained due to this problem over the past five years: 28 unhelmeted fatalities.

Estimated number of lives saved and major injuries prevented in one year following implementation: Approximately eight to nine over five years/two lives per year.

FUNDING AND RESOURCE REQUIREMENTS:

Narrative:

Estimated Cost to Implement:

ACTION STEPS AND TIMELINE:

Action Step	Responsible Agency	Timeline/Due Date
Identify lead agency		

MEASUREMENT AND EVALUATION

STRATEGY PERFORMANCE MEASURES:

EVALUATION:

SU-OHV.1 ESTABLISH MULTIAGENCY TASK FORCE TO ADDRESS OFF-HIGHWAY VEHICLE (OHV) SAFETY

DESCRIPTION: No one state or public agency has purview over off-highway vehicle (OHV) use or training in Alaska. Crashes involving ATVs and snow machines were identified as a significant safety issue for Alaska during the 2003 Safety Conscious Planning Summit. Strategies to mitigate fatal and major injury crashes involving these vehicles; however, will need to be tailored to Alaska's two user groups: 1) recreational users; and 2) those who rely on OHVs as a mode of transportation. At this time, statewide legislation or regulation of the use of these vehicles would likely prove contentious and distract from the overall purpose of trying to improve the safety of all riders on all public and off-highway routes. The purpose of the multiagency task force would be to further examine this problem and the data available related to this problem; identify potential solutions or strategies that can be implemented at the local level, study what has been done and what has worked in other states and communities that have significant OHV use, implement effective strategies, and raise the overall visibility of this issue with the public, local governments, and the legislature.

PROPOSED RESPONSIBLE AGENCY:

Proposed Lead Agency: Alaska Native Tribal Health Consortium

Contact Name, Title: Helen Stafford, Injury Prevention Program Manager

Phone: (907) 729-3513 E-mail: hbstafford@anthc.org

NECESSARY PARTNERS:

- Dealer Associations.
- TTAP and LTAP.
- Department of Natural Resources, Division of Parks and Outdoor Recreation [within this division is the Snowmobile Trails Program, which provides grant funds for trail easement acquisition, development and maintenance of trails and trail-related facilities for snowmobile use, but also provides funds for snowmobile safety and educational programs. Within this branch of DNR, there is a SnowTRAC Committee, which consists of nine members from across the State. Apparently, the primary purpose of this committee is to advise the Director of Parks and Outdoor Recreation on funding for eligible grant projects under the Snowmobile Trail Grant. The program is funded through legislative authorization to receive funds from snowmobile point-of-sale registration in support of snowmobile trail development and maintenance as well as, safety and education programs.]
- Local governments and regional chambers.
- Alaska Injury Prevention Center.
- Alaska Department of Transportation.
- DHSS.
- Department of Fish and Game.
- Local emergency response representatives.
- Department of Public Safety.
- Department of Commerce, Community, and Economic Development.

DATA ANALYSIS NEEDS OR AVAILABLE RESOURCES:

Hospitalizations from crashes involving ATV and snow machine use (along with helmet use in those crashes).

Alaska SHSP – Appendix D Off-Highway Vehicle Crash and Injury Data White Paper.

EXPECTED EFFECTIVENESS/OUTCOME:

Narrative: Greater collaboration among agencies and organizations (public and private) with an interest in OHV use in Alaska. One product of the task force may be a strategic plan specifically addressing the needs of OHV users.

Number of lives lost and major injuries sustained due to this problem over the past five years occurring within the highway right-of-way: 33 fatalities and 86 major injuries.

Estimate number of lives saved and major injuries prevented in one year following implementation:

FUNDING AND RESOURCE REQUIREMENTS:

Narrative:

Estimated Cost to Implement:

ACTION STEPS AND TIMELINE:

Action Step	RESPONSIBLE AGENCY	TIMELINE/DUE DATE
Establish Task Force Membership.		
Review any existing legislation or local ordinances related to the use of OHVs.		
Participate in local government discussions regarding this topic.		

MEASUREMENT AND EVALUATION**STRATEGY PERFORMANCE MEASURES:**

Formation of multiagency task force (possibly with a charter?) that regularly meets to discuss and address safety issues regarding the use of OHVs in Alaska.

EVALUATION:

SU-OHV.2 THROUGH A PUBLIC OUTREACH CAMPAIGN, INCREASE OFF-HIGHWAY VEHICLE (OHV) SAFETY AWARENESS BY EDUCATING THE PUBLIC ON THE DANGERS OF OHVs

DESCRIPTION:

1. Educate both children and adults about the dangers associated with OHVs use.
2. Coordinate local and statewide efforts regarding public outreach related to OHV use to ensure consistency among messages and maximize resources.
3. Inform the public using relatable and reachable methods and mediums.
 - Provide PSAs or advertisements on the radio, television, and cable channels in both rural and urban communities to increase awareness.
4. Target awareness campaigns to rural and/or urban Alaskan audiences.
 - OHVs are being used for different purposes in rural and urban areas, resulting in different safety concerns and different preventive measures.
5. Produce a video/DVD focusing on Alaska ATV and snow machine use and safety.
 - The video needs to be specific to Alaska and include uses and safety concerns specific to rural communities.
 - The message should address high-risk behaviors, the importance of safety such as helmet use, and a listing of the current ATV/snow machine laws and ordinances.
6. Provide information to the public to help change society's perception that helmet wearing is 'uncool'.
 - Encourage adults riders to wear helmets.
 - OHV safety programs could learn from successful programs that have increased adult rider helmet use for motorcycles. If kids see that adults think it's not 'cool' to wear a helmet, then kids won't wear a helmet either.
7. Work with manufacturers to provide improved, realistic safety training opportunities and venues.
 - Manufacturers sometimes offer free safety courses as part of the rebate for the purchase of an OHV. However, these trainings oftentimes occur only at the dealership in urban areas, and are not offered in rural areas. Additionally, only a small number of people actually attend these courses.

PROPOSED RESPONSIBLE AGENCY:

Proposed Lead Agency: Alaska Highway Safety Office, Safe Communities

Contact Name, Title: Cindy Cashen, Administrator

Phone: (907) 465-4374

E-mail: Cindy.Cashen@alaska.gov

NECESSARY PARTNERS:

- | | |
|--|---|
| <ul style="list-style-type: none"> • Dealer Associations. • TTAP and LTAP. • Distance learning centers of university. • Regional training centers. | <ul style="list-style-type: none"> • Local health aides and community health service organizations. • Department of Commerce, Community, and Economic Development. • Alaska Injury Prevention Center. • Department of Public Safety. • Alaska Native Tribal Health Consortium. |
|--|---|

DATA ANALYSIS NEEDS OR AVAILABLE RESOURCES:

Hospitalizations from crashes involving ATV and snow machine use (along with helmet use in those crashes).

Alaska SHSP – Appendix D Off-Highway Vehicle Crash and Injury Data White Paper.

EXPECTED EFFECTIVENESS/OUTCOME:

Narrative:

Number of lives lost and major injuries sustained due to this problem over the past five years occurring within the highway right-of-way: 33 fatalities and 86 major injuries.

Estimate number of lives saved and major injuries prevented in one year following implementation:

FUNDING AND RESOURCE REQUIREMENTS:

Narrative:

Estimated Cost to Implement:

ACTION STEPS AND TIMELINE:

Action Step	RESPONSIBLE AGENCY	TIMELINE/DUE DATE
Conduct detailed analysis regarding number of fatalities and injuries (using hospitalizations) on and off public right-of-way; determine characteristics of those being injured.		
Focus educational efforts in areas of greatest hospitalizations (Mat-Su, etc.) as well as those who visit those areas for recreational use.		
Use simulators to pre-test driving skills (so parents can help identify child's abilities and needs).		
Conduct research regarding effectiveness of various types of safety gear when using ATVs and snow machines.		

MEASUREMENT AND EVALUATION**STRATEGY PERFORMANCE MEASURES:**

Reduction crashes involving ATVs and snow machines.

Reduction in crashes involving young operators of these machines.

EVALUATION:

Highway Emphasis Area Action Plans

HG.1 PRESERVING ALASKA'S MAIN ROAD CORRIDORS – TIER ONE

DESCRIPTION: Freeways are by far the safest type of major roadway, as well as being the most capacious. For a variety of reasons, not the least of which is the fact that Alaska was excluded from road design requirements of the Federal 1956 Interstate Act, Alaska has not preserved the right-of-way and access that will be necessary to construct future freeways on most of its major corridors. This action plan is intended to preserve the ability to construct freeways on Alaska's Major Corridors in the future, thereby eliminating more than half the future fatalities on the corridors. It consists of a Policy and a Plan. For more information, see the separate paper "Preserving Alaska's Main Roads."

POLICY: Enact a DOT&PF policy requiring: 1) as soon as possible, acquire right-of-way and access rights necessary to convert "Major Corridors" (see list below) to freeways; 2) do not sell or give away right-of-way or breaks in controlled access on Major Corridors; 3) wherever feasible, plan to use existing road alignments, rather than bypasses for future freeways; and 4) when bypasses are necessary, purchase full control of access along the bypass before it is constructed.

PLAN: Complete plans for the Major Corridors identifying current right-of-way, future right-of-way needed for freeway construction, future interchange locations, how to transition between the current road and a future freeway, and the priority order in which the Major Corridors below, or segments thereof, should be preserved.

Major Corridors:

- | | |
|------------------------|---------------------------------------|
| 1. Parks Highway; | 7. Tok Cutoff; |
| 2. Glenn Highway; | 8. Steese Highway (Fairbanks to Fox); |
| 3. Richardson Highway; | 9. Knik Goose Bay Road; |
| 4. Seward Highway; | 10. Kenai Spur Road; |
| 5. Sterling Highway; | 11. Talkeetna Spur Road; |
| 6. Alaska Highway; | 12. Glacier Highway/Juneau Access; |
| | 13. Dalton Highway. |

RESPONSIBLE AGENCY:

Lead Agency: Alaska Department of Transportation and Public Facilities

Contact Name, Title: Jeff Ottesen, Director, Program Development Division

Phone: (907) 465-6971 E-mail: jeff.ottesen@alaska.gov

NECESSARY PARTNERS:

- | | |
|-------------------------------------|---|
| • Legislature. | • University of Alaska Land Management. |
| • DOT&PF Program Development. | • Local Governments. |
| • FHWA. | • Native Corporations. |
| • Municipal Planning Organizations. | • BLM/BIA/Forest Service/NPS. |
| • DNR. | |

DATA ANALYSIS NEEDS OR AVAILABLE RESOURCES:

Collect property ownership records, maps, plats. Parks Highway Visioning Document 2007.

EXPECTED EFFECTIVENESS/OUTCOME:

Narrative: To reduce fatal and major injury run-off-road, head-on, and intersection crashes.

Average number of lives lost and major injuries sustained due to this problem over the past five years: This needs to be determined through research.

Estimated number of lives saved and major injuries prevented in one year following implementation: This is a long-term project. In the long term, it would be highly effective in saving lives (freeways have less than half the fatal crashes experienced by other road types). However, safety benefits will be proportional to the scope of implementation.

FUNDING AND RESOURCE REQUIREMENTS:

Narrative: Creative financing will likely be needed to aggressively pursue this goal. It is difficult to use Federal funds to advance-purchase right-of-way.

Estimated Cost to Implement: \$ Very High, but it would be much less expensive to address it soon than to address it in the future when the problem becomes acute.

ACTION STEPS AND TIMELINE

ACTION STEP	RESPONSIBLE AGENCY	TIMELINE/DUE DATE
Enact Policy.	DOT&PF	2008
Enhance ROW property management.	DOT&PF	2009
Integrate Corridor Visions into State's Long-Range Transportation Plan.	DOT&PF	2010
Fund Corridor studies for individual corridors as part of STIP.	DOT&PF	2010
Fund ROW Acquisition ASAP, consider creative financing options.	DOT&PF	2015

MEASUREMENT AND EVALUATION**STRATEGY PERFORMANCE MEASURES:**

Corridor miles preserved.

EVALUATION:

Before/after crash study results to be published in a report.

HG.2 EXPLICIT CONSIDERATION OF SAFETY IN DOT&PF HIGHWAY DESIGN – TIER ONE

DESCRIPTION: This action plan recommends that a safety sign-off be included as a process step for all DOT&PF highway projects. The safety sign-off would be included in the Design Study Report (DSR) as part of the Design Approval process. The current guidance for the Traffic Analysis and Safety Improvements sections of the DSR would be revised to include analysis necessary to address safety concerns. The sign-off would be accomplished through the DSR preparer's signature and professional seal, the Engineering Manager's and Design Group Chief's concurrence signatures, and the Regional Preconstruction Engineer's approval signature.

At a basic level, the Traffic Analysis and Safety Improvements sections of the DSR should include the following statements:

1. The Regional Traffic and Safety Engineer has been consulted regarding potential safety improvements on the projects.
2. Crash frequency and severity have been considered for each major design alternative and were considered in selecting the preferred alternative, as appropriate.
3. Cost-effective safety solutions have been included in the design.

JUSTIFICATION: Moving people and goods is DOT&PF's main mission. Doing this efficiently and safely are DOT/PF's main measures of performance. The goal of this strategy is to bring DOT&PF practice into conformance with its performance measures by ensuring safety is explicitly considered as part of every project.

Ezra Hauer, Ph.D., Professor Emeritus in Civil Engineering with the University of Toronto has earned international renown, including the highest honor bestowed by the Transportation Research Board, the Roy W. Crum Award, for his work in highway safety. Addressing the importance of orienting agencies to better address highway safety, he has written: "Within these... organizations [DOT, Police, DMV], one has to establish procedures, functions, positions, and career paths so that the explicit and quantitative consideration of road safety consequences becomes an integral part of the organization's activities."

This proposed action is intended to take steps toward that goal as it applies to the DOT&PF project development process.

The plan recommends consultation with Regional Traffic and Safety Engineers because it is important to give personnel who correct existing safety problems through the HSIP the opportunity to prevent similar problems in new projects. In addition to the safety benefit of doing so, it is much cheaper to design safety countermeasures into projects than to retrofit them in later. Also, Regional Traffic and Safety Engineer are the department's main point of contact for safety complaints from the public and other agencies. That information also needs to be considered in project design.

RESPONSIBLE AGENCY:

Lead Agency: Alaska Department of Transportation and Public Facilities

Contact Name, Title: Mark Neidhold, Chief, Design and Construction Standards

Phone: (907) 465-6948

E-mail: Mark.Neidhold@alaska.gov

NECESSARY PARTNERS:

- DOT&PF HQ and Regional Offices.

DATA ANALYSIS NEEDS OR AVAILABLE RESOURCES:

Project-specific crash histories and statewide average crash rates for intersections and road segments of all types.

EXPECTED EFFECTIVENESS/OUTCOME:

Narrative: To effectively consider safety on all projects, and to reduce fatal and major injury crashes.

Average number of lives lost and major injuries sustained due to this problem over the past five years: N/A

Estimated number of lives saved and major injuries prevented in one year following implementation: N/A

FUNDING AND RESOURCE REQUIREMENTS:

Narrative: Funding would come from the parent design projects.

Estimated Cost to Implement: \$1,500-\$4,500 per project.

ACTION STEPS AND TIMELINE

ACTION STEP	RESPONSIBLE AGENCY	TIMELINE/DUE DATE
Draft revision to Chapters 4 and 11 of the Alaska Highway Preconstruction Manual.	DOT&PF Statewide D&ES	September 2007
Update draft based on regional and FHWA review and comments. Secure FHWA approval for revised process.	DOT&PF D&ES and Regions, and FHWA	February 2008

MEASUREMENT AND EVALUATION**STRATEGY PERFORMANCE MEASURES:**

Implementation of revised project development procedures.

EVALUATION:

Identify safety improvements included as part of the revised process that would otherwise not have been constructed. Revised project development process as published in the Alaska Highway Preconstruction Manual will share the information statewide.

HG.3 IMPLEMENT HIGHWAY SAFETY CORRIDORS – TIER I

DESCRIPTION: The Alaska Legislature passed SB 261, which enables the creation of Highway Safety Corridors, in May of 2006. Since then, two safety corridors have been created, one on the Seward Highway, another on the Parks. This action plan proposes additional efforts to identify other potential safety corridors and to target existing and new corridors with enhanced enforcement and supplemental engineering safety improvements.

The Highway Safety Corridor Program is designed to target road segments with the highest frequency of severe and fatal crashes in the State. This concept has been effectively demonstrated in other states as a rural highway program targeting head-on and run-off-road collisions. Engineering, Education, Enforcement, and Emergency Services resources are brought to bear on a problem road in order to change driver behavior and reduce crashes in the short term. In the long term, highway projects may be planned to eliminate crash problems.

RESPONSIBLE AGENCY:

Lead Agency: Department of Transportation and Public Facilities, Alaska Highway Safety Office

Contact Name, Title: Cindy Cashen, Administrator

Phone: (907) 465-4374 E-mail: Cindy.Cashen@alaska.gov

NECESSARY PARTNERS:

- Authorities: Alaska State Troopers; DOT/PF Chief Engineer's Office, M&O, Traffic and Safety, ITS Div.
- Local Governments, Local Police Departments, EMS Providers.
- Local Media outlets.

DATA ANALYSIS NEEDS OR AVAILABLE RESOURCES:

Available Resources: Alaska Traffic Manual (on Safety Corridor existing crash risk analysis and eligibility); Safety Corridors authorized in Alaska per Statute AS 19.10.075 passed May 2006, authorizing double fines to be returned to safety programs.

Oregon has the oldest and most complete model program in the country. Typically high-congestion corridors are high-crash corridors, 10 to 20 miles in length between most destinations. These are often two-lane roads that are well overcapacity. Head-on collisions are common and take the lives of innocent victims. Oregon has been the most successful of the states in eliminating or significantly reducing these crashes in the interim while waiting to fund and undertake more significant highway projects. They have eliminated fatalities on routes and their success has enabled them to decommission some corridors.

Several more states also have implemented this program, but to a lesser extent in terms of targeting severe crashes or applying resources beyond signing. One state has targeted freeways which do not have a severe crash problem. They are missing higher crash risk roadways. Another state has designated so many hundred-mile-long corridors that focusing resources and increasing driver awareness becomes questionable. Signs alone do not create a successful corridor. Increased public attention through education, enforcement, spot engineering, and EMS improvements are required in order to achieve results. Ohio does offer a thorough and detailed enforcement plan that actively targets reckless, intimidating, aggressive, and impaired drivers.

EXPECTED EFFECTIVENESS/OUTCOME:

Narrative: The goal is to reduce or eliminate severe and fatal crashes on existing rural roads by convincing motorists to ease up and take less chances on their drive.

Average number of lives lost and major injuries sustained due to this problem over the past five years: Varies with corridor. Typically 10 fatalities or 2 per year, and 25 major injuries or 5 per year.

Estimated number of lives saved and major injuries prevented in one year following implementation: Per Corridor: Two fatalities per year, four major injuries per year, a 50 to 80 percent reduction factor estimated based on initial performance of two existing Alaska Safety Corridors.

FUNDING AND RESOURCE REQUIREMENTS:

Narrative: DOT&PF Safety Corridor Signing, striping, rumble strips and roadside improvements: (\$15,000 minimum to \$2,000,000 with enhancements).

AHSO Highway Safety Office Education Programming: (\$50,000 minimum to \$500,000 saturation) Collect double fines from existing corridors to improve corridors.

DPS Alaska State Troopers, Local Enforcement (\$0 rotating forces to \$300,000 increased forces) Double Fines may be available to sustain efforts.

Estimated Cost to Implement: \$65,000 minimum to \$2.8 million maximized.

ACTION STEPS AND TIMELINE

Action Step	Responsible Agency	Timeline/Due Date
Analyze eligibility per Alaska Traffic Manual. Produce Safety Corridor Study of top candidates.	DOT&PF	October 2007; Completed in Central Region for Parks, Seward Highways. Sterling Highway highest volume, crash segments.
Draft Implementation Plans for Engineering, Enforcement, and Education. Consult with EMS. Estimate funding goals per corridor.	DOT&PF, AHSO, DPS	October 2007; Completed for Seward, Parks Corridors. Two corridors designated in 2006. Sterling Highway under analysis.
Approve Implementation Plans, authorize funding, and set implementation start dates.		Performance reviews conducted April 2007.
Seek added funding as needed. Implement full complement of safety measures.		Permanent road redesigns underway for the Parks, Seward Highways. No projects are scheduled for the Sterling Highway area of concern at this time.
Review performance annually. Redirect fines collected as available to improve safety. Update implementation plans as needed to improve performance.		
Implement permanent road project upgrades to reduce crashes, improve capacity. Decommission corridor once successful crash reductions have been achieved.		

MEASUREMENT AND EVALUATION**STRATEGY PERFORMANCE MEASURES:**

Significant reduction of severe and fatal crashes per year until such time as a major road project can improve the roadways in question. Engineering, Education, and Enforcement investments of added resources will be tracked for evaluation of performance.

EVALUATION:

Severe crashes eliminated, benefit/cost of interim Safety Corridor Improvements.

HR.1 SHOULDER RUMBLE STRIPS – TIER ONE

DESCRIPTION: Around 40 people die in Alaska each year in run-off-road crashes. At location where shoulder rumble strips are installed, data indicate shoulder rumble strips will eliminate 30 to 50 percent of these crashes (during snow free months – reduction factor when roads are snow covered is not known), if installed in areas currently without rumble strips. (Note that this does not mean that 20 lives will be saved, as many roads do not meet the criteria for rumble strips).

This plan recommends installation and maintenance of rumble strips on all state highways that meet rumble strip installation criteria. Three steps need to be taken:

1. The three DOT&PF regions need to create a list of roads within their region that meet the criteria for rumble strip installation in the Chief Engineer's Directive dated 5/30/2001.
2. Rumble Strips on Individual Projects. On the roads identified above, require milled rumble strips on all projects that construct a new paved surface, including reconstruction, resurfacing, and other project types.
3. Areawide Rumble Strip Projects. In addition, consider areawide milled rumble strip projects to fill in any substantial gaps in your region's existing rumble strip coverage. This work is eligible for HSIP funding.

RESPONSIBLE AGENCY:

Lead Agency: Alaska Department of Transportation and Public Facilities (DOT&PF)

Contact Name, Title: Kurt Smith, State Traffic and Safety Engineer

Phone: (907) 465-6963

E-mail: Kurt.Smith@alaska.gov

NECESSARY PARTNERS:

- DOT&PF Headquarters and Regional Offices.
- FHWA.

DATA ANALYSIS NEEDS OR AVAILABLE RESOURCES:

Inventory roads to determine whether rumble strip criteria are met. Identify what type of environmental document is needed.

EXPECTED EFFECTIVENESS/OUTCOME:

Narrative: To eliminate fatal and major injury crashes on high-speed rural roads – estimated number yet to be determined.

Average number of lives lost and major injuries sustained due to this problem over the past five years: Approximately 40 lives lost per year (all roads).

Estimated number of lives saved and major injuries prevented in one year following implementation: Need to inventory roads that qualify for shoulder rumble strips, and what proportion of those roads have shoulder rumble strips before we can estimate this.

FUNDING AND RESOURCE REQUIREMENTS:

Narrative: Funding for large area rumble strip projects is available through the HSIP. Funding for rumble strips on individual projects would come from the fund sources used by those projects.

Estimated Cost to Implement: \$3,000 per shoulder mile (includes all project costs).

ACTION STEPS AND TIMELINE

ACTION STEP	RESPONSIBLE AGENCY	TIMELINE/DUE DATE
Each region prepares a map of roads to receive rumble strips.	DOT&PF	August 2007
Regionwide rumble strip projects in Central and Northern.	DOT&PF	2008
Require rumble strips to be installed on individual projects where appropriate.	DOT&PF	Ongoing

MEASUREMENT AND EVALUATION
STRATEGY PERFORMANCE MEASURES: Measured crash reductions for run-off-road.
EVALUATION: Actual crash reduction factors for areawide projects will be evaluated after project completion. Results will be published in the HSIP Annual Report in the year of evaluation.

HR.2 CURVE DELINEATION – TIER ONE

DESCRIPTION: Prioritize and upgrade curve delineation on the rural NHS Highway System. Crash data demonstrates higher concentrations of severe and fatal crashes in curves on the high-speed rural highways. Since 2000, curves which have historically not been a problem for over 30 years have seen a rising increase in crashes. As a majority of rural roadways have been upgraded to current AASHTO geometric standards, older segments, and shallow curves 5 to 10 mph under the speed limit have demonstrated increasing crash problems. Signing and delineation on the oldest portions may be 30 years old in cases or even missing, lacking size, reflectivity, and consistency with more modern signing. Upgrading signing and delineation on older curves should increase motorist awareness and reduce crashes.

RESPONSIBLE AGENCY:

Lead Agency: Alaska Department of Transportation and Public Facilities

Contact Name, Title: Kurt Smith, State Traffic and Safety Engineer

Phone: (907) 465-6963

E-mail: Kurt.Smith@alaska.gov

NECESSARY PARTNERS:

- Authorities: DOT&PF Traffic Engineers.
- Installers: DOT&PF M&O by staff or through contract.

DATA ANALYSIS NEEDS OR AVAILABLE RESOURCES:

Available: 2001-2005 severe crash plots and tables for Central Region along Rural NHS Highways. 2001-2005 Statewide fatal and major injury plots by the Alaska Highway Safety Office. Data demonstrates higher-crash rates on older segments with sharper reduced speed curves exist.

EXPECTED EFFECTIVENESS/OUTCOME:

Narrative: Conspicuous warning signing combined with flashing beacons and chevrons on more severe curves have demonstrated 75 percent crash reductions at the Ninilchik River southbound on the Sterling Highway. A similar delineation project is underway at MP 168 Bluff Road and MP 52 Gwin's Curve on the Sterling Highway using HSIP Funds. This project will delineate many more curves and roadsides until a more permanent roadway upgrade can be achieved.

Average number of lives lost and major injuries sustained due to this problem over the past five years: An average of 236 fatalities and 1,240 major injuries occur on rural roads due to run-off-road crashes each year, for a total of 1,476 severe crashes. Of these, 583 severe crashes occur in curves. Many fatalities (113) and major injuries (470) occur in curves. Reduced speed curves primarily exist on older alignments that have not been upgraded to current standards.

Estimated number of lives saved and major injuries prevented in one year following implementation: Five lives and 18 severe injuries (~20 percent reduction assumed).

FUNDING AND RESOURCE REQUIREMENTS:

Narrative: This work is HSIP eligible as funding becomes available. Sites of concern include approximately 50 miles of the Glenn Highway, 75 miles of the Seward Highway, 50 miles of the Sterling Highway, 100 miles of the Parks Highway, and 100 miles of the Richardson Highway. Estimated total older alignment is 375 miles.

Estimated Cost to Implement: \$ 3,750,000 (\$100,000 per mile, including extensive design time, some electrical systems, and ITS potential devices).

ACTION STEPS AND TIMELINE		
ACTION STEP	RESPONSIBLE AGENCY	TIMELINE/DUE DATE
Map severe rural crashes on curves.	DOT&PF	2008
Assemble centerline maps and mileposts.	DOT&PF	2008
Field inventory existing signing, delineation, power sources, available delineator supports.	DOT&PF	2008
Field test curves, sight distance, site features.	DOT&PF	2008
Draft plans for bid. Get permits certification.	DOT&PF	2008
Bid and build project.	DOT&PF	2008
MEASUREMENT AND EVALUATION		
STRATEGY PERFORMANCE MEASURES:		
Significant fatal reduction in curves over five years. Significant reduction in major injuries as well.		
EVALUATION:		
HSIP Post project evaluation report, feeds back into crash reduction factors for HSIP Handbook and available tools for rural high-speed curve crashes.		

HR.3 WIDEN SHOULDERS ON RURAL TWO-LANE HIGHWAYS – TIER ONE

DESCRIPTION: Prioritize and widen shoulders on remaining segments of narrow rural roadways where cost-beneficial from a safety standpoint. Target single vehicle run-off-road (ROR) crashes, number one severe crash category in Alaska.

RESPONSIBLE AGENCY:

Lead Agency: Alaska Department of Transportation and Public Facilities (DOT&PF)

Contact Name, Title: Kurt Smith, State Traffic and Safety Engineer

Phone: (907) 465-6963

E-mail: Kurt.Smith@alaska.gov

NECESSARY PARTNERS:

- FHWA.

DATA ANALYSIS NEEDS OR AVAILABLE RESOURCES:

Available: 2001-2005 severe crash plots and tables for Central Region along Rural NHS Highways. 2001-2005 statewide fatal and major injury plots by the Alaska Highway Safety Office. Data is needed to demonstrate how little remaining roadway has little or no shoulders. Estimates are as follows: approximately 50 miles of the Glenn Highway, 75 miles of the Seward Highway, 50 miles of the Sterling Highway, 100 miles of the Parks Highway, and 100 miles of the Richardson Highway. Estimated total older alignment is 375 miles. Many miles of non-NHS roads also fall in this category and would increase mileage by an additional 300 miles.

EXPECTED EFFECTIVENESS/OUTCOME:

Narrative: Of over 5,000 miles of state roads to be maintained, research shows that single-vehicle ROR crashes are the highest total category for severe crashes. Widening for shoulders up to eight feet in width offers an opportunity for motorists to correct when they stray from vehicle lanes, minimizes edge drop offs, and provides more opportunity for emergency parking and nonmotorized uses.

Average number of lives lost and major injuries sustained due to this problem over the past five years: Over five years, 236 fatalities and 1,240 major injuries occur on rural roads due to ROR crashes, for a total of 1,476 severe crashes. Of these, 250 severe crashes are estimated to occur on road segments which do not have widened shoulders. Over half of these occur on curves on roads with little or no shoulders. Fatal crashes appear evenly distributed on curves as on tangent segments on roads without significant shoulders.

Estimated number of lives saved and major injuries prevented in one year following four-foot shoulder widening on all 375 miles of rural NHS with little or no shoulders: Four fatalities, 18 major injury crashes per year. Use crash reduction factors from TRB Special Report 214, Design Safer Roads.

FUNDING AND RESOURCE REQUIREMENTS:

Narrative: There are an estimated 675 miles of roads with little or no shoulder. The cost of shoulder widening is about equal to the cost of a single lane of construction, or \$600,000 per mile.

Estimated Cost to Implement on 375 miles: \$ 225 million +180 million = \$405 million. Most of this length would be reconstructed, with shoulder widening, when major reconstruction projects happen. However, high-crash segments that are cost beneficial from a safety standpoint may be eligible for HSIP funding before then.

ACTION STEPS AND TIMELINE

ACTION STEP	RESPONSIBLE AGENCY	TIMELINE/DUE DATE
Identify high-crash segments on roads with little or no shoulders.	DOT&PF Regional Offices	2007
Analyze benefit/cost to determine eligibility under the HSIP process.	DOT&PF Regional Offices	2007-2008
If HSIP funding is secured, design, permit, and construct	DOT&PF Regional Offices	2007-2008

MEASUREMENT AND EVALUATION
STRATEGY PERFORMANCE MEASURES: Reduction in severe crashes following shoulder construction.
EVALUATION: Post construction crash reduction once a three- to five-year period of data is available. Results will be published in the HSIP Annual Report.

HH.1 CENTERLINE RUMBLE STRIPS – TIER ONE

DESCRIPTION: Approximately 15 people die in Alaska each year in head-on crashes. Data indicate centerline rumble strips could eliminate 12-50 percent of these crashes in locations where installed.

This plan recommends installation and maintenance of centerline rumble strips on high-speed rural roads where there is a history of head-on collisions. A policy will be needed on rumble strip dimensions and whether to only install them in no-passing zones.

RESPONSIBLE AGENCY:

Lead Agency: Alaska Department of Transportation and Public Facilities

Contact Name, Title: Kurt Smith, State Traffic and Safety Engineer

Phone: (907) 465-6963

E-mail: Kurt.Smith@alaska.gov

NECESSARY PARTNERS:

- DOT&PF Headquarters and Regional Offices.
- Federal Highway Administration.

DATA ANALYSIS NEEDS OR AVAILABLE RESOURCES:

Inventory roads to determine where CLRS may be effective. Crash analysis to identify hot spots and segments with history of head-on collisions.

EXPECTED EFFECTIVENESS/OUTCOME:

Narrative: To eliminate fatal and major injury crashes on high-speed rural roads – estimated number yet to be determined.

Average number of lives lost and major injuries sustained due to this problem over the past five years: Approximately 15 per year.

Estimated number of lives saved and major injuries prevented in one year following implementation: Need to inventory roads that qualify for centerline rumble strips before we can estimate this.

FUNDING AND RESOURCE REQUIREMENTS:

Narrative: Funding for centerline rumble strip projects is available through the HSIP where cost-beneficial.

Estimated Cost to Implement: \$3,750 per centerline mile (includes all project costs).

ACTION STEPS AND TIMELINE

ACTION STEP	RESPONSIBLE AGENCY	TIMELINE/DUE DATE
Centerline Rumble Strip Policy	DOT&PF State Traffic and Safety Engineers	June 2008
Identify high-crash sites susceptible to correction by CLRS. Propose HSIP projects.	DOT&PF Regional Traffic and Safety Engineers	2008-2009
Fund cost-beneficial HSIP projects.	DOT&PF State Traffic and Safety Engineer	

MEASUREMENT AND EVALUATION

STRATEGY PERFORMANCE MEASURES:

Reducing head-on crashes.

EVALUATION:

12-15 percent reduction in fatalities from head-on crashes using before/after crash studies. If funded under the HSIP, post project effectiveness analysis will be published in the HSIP Annual Report.

HH.2 INSTALL PASSING LANES TO REDUCE HEAD-ON COLLISIONS –TIER ONE

DESCRIPTION: Strategically site passing lanes every 5 to 10 miles to optimize their benefits and usage. Strive for uphill passing lanes and a balance of opportunities in both directions of travel. Review severe crash clusters and data for evidence of areas where passing opportunities are “bottlenecked” and lanes are needed. Do not use short truck lanes on highways where passing lanes are expected.

Install passing lanes where they will provide the most passing opportunities and crash reduction. Note that passing lanes add little or no capacity. Past practice has been to site passing lanes on a project by project, rather than a systemwide basis. Over time, centerline passing availability has been reduced by increasing development, turn lanes, intersection conflicts, and most of all – increasing opposing traffic levels. The net effect is to nearly eliminate passing opportunities (even if skip striping is still present) as traffic increases the demand for passing. Instead of optimizing placement for performance, new passing lanes have been sited to minimize impacts to a project’s limits, bridge work, or earth work, etc. This results in many cases of passing lanes being in only one direction for over 20 miles, or having all lanes are within a few miles of each other and then none are present for over 10 miles. Many passing lanes were more economically placed on level or downhill grades. The tradeoff is this creates a difficult and less desirable passing opportunity as this enables slower vehicles speed up. Uphill lanes stand the best chance to pass slow vehicles at reasonable and prudent speeds. The result is poor level of service and location for one direction of travel. This is evident from increasing driver demand to pass in downhill directions, to pass on curves, and pass on double yellow lines, all in passing lanes areas for the opposing direction.

Poor driving choices under congestion and lack of gaps in opposing traffic cause head-on collisions and fatalities, often involving innocent victims in the second vehicle. Passing-lane frequency currently is sporadic and not consistently spaced or sited on grades. They should be located according to best practices for optimum performance.

RESPONSIBLE AGENCY:

Lead Agency: Alaska Department of Transportation and Public Facilities

Contact Name, Title: TBD Phone: TBD E-mail: TBD

NECESSARY PARTNERS:

- EMS Responders.
- DPS State Troopers.
- Alaska Highway Safety Office.
- DOT&PF Traffic and Safety.
- M&O.
- Bridge Design.

DATA ANALYSIS NEEDS OR AVAILABLE RESOURCES:

Need mapping, inventory of rural NHS system topography, grades, and existing passing lanes, direction.

EXPECTED EFFECTIVENESS/OUTCOME:

Narrative: The goal is to create a master plan for passing lanes and then construct the most beneficial ones. The need for passing should be categorized at four levels: 1) traditional opposing lane passing zones at low volumes; 2) alternating three-lane passing sections at intermediate volumes with less need for centerline passing, 10-mile passing zone spacing; 3) up to 5-mile passing zone spacing; and 4) in some cases four-lane highways with medians at high volumes. Categorization should be based upon factors such as seasonal ADT, percent time spent following, head-on crash history, and access conflicts per mile.

Average number of lives lost and major injuries sustained due to this problem over the past five years: 85 fatalities and 242 major injuries (rural head-on collisions checked for miscoding as angles. As many as 20 percent of rural angles are head-ons).

Estimated number of lives saved and major injuries prevented in one year following implementation: 5 fatalities and 15 major injuries per year (at 30 percent reduction).

FUNDING AND RESOURCE REQUIREMENTS:

Narrative: Federal and state funding to identify opportunities to fill in a 10-mile passing-lane spacing initially, with a strategy for up to 5-mile passing-lane spacing in busier segments. Ultimately, passing lanes will result in both directions in the most congested segments, creating a four-lane, barrier or median separated highway. Total mileage eligible for passing lanes: Parks (350), Glenn (250), Sterling (200), Seward (120), Richardson (400) = 1,320 miles of which about half of the Glenn and Parks are eligible due to volumes, very little of the Richardson. Thus, mileage for passing lanes = 645 miles. Quantity of one mile or longer passing lanes are about 65 sites minimum, 120 maximum. Passing lanes in place ~ 30 sites to date. Final quantity is likely to result in two directional passing lanes, or four-lane highways, along approximately 50 miles of roadway.

Estimated Cost to Implement: \$ 80 million (10-mile spacing), \$200 million (5-mile spacing, some 4 lanes). (This is the cost of passing lanes only, sometimes side by side in each direction. It is not the cost to create continuous divided highways/freeways or interchanges).

ACTION STEPS AND TIMELINE

ACTION STEP	RESPONSIBLE AGENCY	TIMELINE/DUE DATE
Inventory existing passing lanes.	DOT&PF	2008
Map existing topography, grade along highways at Recon level, and traffic volumes.	DOT&PF	2009
Identify the best opportunities for passing-lane locations.	DOT&PF	2009
Create route-specific priority list. Consider prioritized list in development of project schedules, limits, and budgets in STIP Development. Submit passing lanes that are safety cost-beneficial for possible HSIP funding.	DOT&PF	Ongoing

MEASUREMENT AND EVALUATION**STRATEGY PERFORMANCE MEASURES:**

Passing-Lane spacing achieved.

EVALUATION:

1. Improved consistency of passing opportunities per mile in both directions; 2) lower-speed passing-lane operations; and 3) reduced head-on collisions.

HH.3 HEADLIGHTS ON AT ALL TIMES – TIER ONE

DESCRIPTION: Around 15 people die in Alaska each year in head-on crashes. National data indicate headlights-on signing and enforcement could eliminate 7 to 15 percent of these crashes.

This plan recommends changing state law to require headlights on at all times. If this is not done, we can still post signs that will make headlights mandatory on particular sections of road. 13 AAC 04.010 gives the signs the authority of law.

RESPONSIBLE AGENCY:

Lead Agency: Alaska Department of Transportation and Public Facilities, Alaska Highway Safety Office (AHSO)

Contact Name, Title: Cindy Cashen, Highway Safety Office Administrator

Phone: (907) 465-4374

E-mail: Cindy.Cashen@alaska.gov

NECESSARY PARTNERS:

- Governor's Alaska Highway Safety Office.
- DOT&PF Headquarters and Regional Offices.
- Legislature.
- Media.
- AG's Office.
- State Troopers/Local Police.
- National Insurance Institute.
- NHTSA.

DATA ANALYSIS NEEDS OR AVAILABLE RESOURCES:

Create a statewide map of head-on collisions, insurance report, photos, past country/state success stories.

EXPECTED EFFECTIVENESS/OUTCOME:

Narrative: To eliminate fatal and major injury crashes – estimate number yet to be determined.

Average number of lives lost and major injuries sustained due to this problem over the past five years: Approximately 15 per year.

Estimated number of lives saved and major injuries prevented in one year following implementation: One.

FUNDING AND RESOURCE REQUIREMENTS:

Narrative: Funding for AHSO to cover legal costs – approximately \$10K. If signs are posted, approximately \$1,000 per sign.

Estimated Cost to Implement: \$ TBD

ACTION STEPS AND TIMELINE

ACTION STEP	RESPONSIBLE AGENCY	TIMELINE/DUE DATE
Collect data and success stories in a draft packet for the legislature.	AHSO	December 2007
Collaborate with partners to develop a legislative information/lobby plan.	AHSO	December 2007
Pass Legislation.	Legislature	May 2008
If successful, install signs in high-crash areas. (This could happen earlier.)		

MEASUREMENT AND EVALUATION

STRATEGY PERFORMANCE MEASURES: Reduction in head-on collisions.

EVALUATION:

Reduction in head-on collisions as indicated by before/after crash studies.

HH.4 INSTALL CABLE RAIL IN MEDIANS OF DIVIDED HIGHWAYS – TIER TWO

DESCRIPTION:

1. Adopt the 2006 Update (Chapter 6, Median Barriers) to the Roadside Design Guide.
2. Where beneficial from a safety standpoint, install cable rail in shallow medians to prevent median crossovers into opposing lanes and multi-vehicle collisions.

These types of crashes occur rarely on Alaska's divided highways. However, they are typically fatal and of significant public concern when they occur. Benefit/cost analysis requires taking into account the very severe consequences of this crash type. Newer divided highways are using shallower median ditches which could mean an increased potential for median crossover crashes.

This is shown as a Tier Two strategy because of the high cost of implementation. This could change if we find less expensive methods.

RESPONSIBLE AGENCY:

Lead Agency: Alaska Department of Transportation and Public Facilities

Contact Name, Title: Kurt Smith, State Traffic and Safety Engineer

Phone: (907) 465-6963

E-mail: Kurt.Smith@alaska.gov

NECESSARY PARTNERS:

DATA ANALYSIS NEEDS OR AVAILABLE RESOURCES:

Need to identify divided highways with shallow medians where crossover crashes are possible. Estimated candidates not requiring earthwork totals 34 miles: C Street (3 miles), Glacier Highway (10 miles), Minnesota Drive (3 miles), Richardson Highway (10 miles), Mitchell Expressway (5 miles), Parks Highway (3 miles). Estimated length of divided highway requiring median flattening is 40 miles: Glenn Highway (35 miles), Seward Highway (5 miles).

Newer freeways and expressways use 6:1/6:1 vee ditches. These traversable medians increase the potential for errant motorists to cross over the full width of the median and strike an opposing vehicle. Cable median barriers are a low cost means to prevent this type of severe collision. Older freeways use 4:1/4:1 vee ditches that are less traversable. These medians require ditch fill in and drainage structures before being ready for cable rail (this needs to be verified).

EXPECTED EFFECTIVENESS/OUTCOME:

Narrative: Cable rail is anticipated to help eliminate nearly all median crossover collisions.

Average number of lives lost and major injuries sustained due to this problem over the past five years: Two fatalities every five years, typically fatal, 0-1 severe injury crashes. These are rare events, but sensational when they occur.

Estimated number of lives saved and major injuries prevented in one year following implementation: Two lives saved per five years.

FUNDING AND RESOURCE REQUIREMENTS:

Narrative: Federal or state funding. Benefit cost/analysis recommended.

Estimated Cost to Implement: \$2,500,000 for shallow median freeways, \$15,000,000 to convert deeper medians and drainage inlets on older freeways so that cable rail can be installed. Total cost \$17,500,000. At these costs, this work is not likely to be cost-beneficial.

ACTION STEPS AND TIMELINE		
ACTION STEP	RESPONSIBLE AGENCY	TIMELINE/DUE DATE
Identify high-crossover crash locations on major divided highways.	DOT&PF	2008
Analyze safety benefit/cost ration and eligibility for HSIP funding of potential improvement sites. Research ways to reduce costs.	DOT&PF	2008
If HSIP funding is secured, design, permit, and construct.		
MEASUREMENT AND EVALUATION		
STRATEGY PERFORMANCE MEASURES:		
Reduction in head-on severe crashes.		
EVALUATION:		
Post project evaluation. If done under the HSIP, results will be published in the HSIP Annual Report.		

HI.1 DOT&PF ACCESS MANAGEMENT POLICY

DESCRIPTION: Create an access management policy for the DOT&PF. This could be done in conjunction with updating the LRTP.

Access management consists mainly of limiting access points from the road side, installing medians to limit turning traffic, maintaining adequate setbacks between driveways and intersections and, where appropriate, building freeways. This strategy action plan focuses on areas other than freeways. The “Preserving Alaska’s Main Roads” action plan focuses on freeways.

Good access management has been proven to reduce accidents substantially – up to 50 percent and more.

RESPONSIBLE AGENCY:

Lead Agency: Alaska Department of Transportation and Public Facilities (DOT&PF)

Contact Name, Title: Gary Hogins, Chief Engineer

Phone: (907) 465-6958

E-mail: gary.hogins@alaska.gov

NECESSARY PARTNERS:

- DOT&PF HQ and Region Offices.
- Federal Highway Administration.
- Municipalities.
- Railroad.

DATA ANALYSIS NEEDS OR AVAILABLE RESOURCES: Inventory of access points; study access management plans and policies from other states.

EXPECTED EFFECTIVENESS/OUTCOME:

Narrative: Elimination of fatal and major injury crashes on urban street networks.

Average number of lives lost and major injuries sustained due to this problem over the past five years: Research needed to quantify this.

Estimated number of lives saved and major injuries prevented in one year following implementation: No lives saved or major injuries eliminated in one year (it will take more than one year to create and implement an access management policy). After installation, substantially fewer urban crashes.

FUNDING AND RESOURCE REQUIREMENTS:

Narrative: Cost to create policy, cost to implement results.

Estimated Cost to Implement: \$10,000 for analysis; Policy?, Implementation?

ACTION STEPS AND TIMELINE

ACTION STEP	RESPONSIBLE AGENCY	TIMELINE/DUE DATE
Hire consultant to create Access Management Policy	DOT&PF	2008
Finalize policy	DOT&PF	Spring 2008

MEASUREMENT AND EVALUATION

STRATEGY PERFORMANCE MEASURES: First, time to completion of the Access Management Policy. After implementation, results could be measured with before/after studies.

EVALUATION:

Before/after crash studies on urban streets modified in accordance with the policy. If constructed with HSIP funding, before/after results will be published in the HSIP Annual Report after enough time has passed to get sufficient “after” data.

HI.2 SINGLE-LANE ROUNDABOUTS – TIER ONE

DESCRIPTION: Promote the use of single-lane roundabouts (SLR) at intersections that would otherwise be signalized. Fund single-lane roundabouts under the HSIP when cost-beneficial. Single-lane roundabouts greatly improve safety, reduce delay, reduce power consumption, and look better when compared to traffic signals.

SLRs could be promoted by adding text to Section 450.5.2, Design Study Report, of the DOT&PF Preconstruction Manual similar to the following:

“Single-Lane Roundabout analysis should be conducted at all locations where traffic signal installation is being considered. If a single-lane roundabout will not be installed, provide an explanation of why it is not an appropriate solution.”

The Insurance Institute for Highway Safety determined that roundabouts reduce fatalities by 90 percent, injuries by 76 percent, and all crashes by 39 percent at intersections. This makes SLRs one of the best tools in our safety toolkit. 30-40 percent reduction in pedestrians and 10 percent bicycles crashes.

RESPONSIBLE AGENCY:

Lead Agency: Alaska Department of Transportation and Public Facilities

Contact Name, Title: Kurt Smith, State Traffic and Safety Engineer

Phone: (907) 465-6963

E-mail: Kurt.Smith@alaska.gov

NECESSARY PARTNERS:

- DOT&PF HQ and Regions.
- Local communities.

DATA ANALYSIS NEEDS OR AVAILABLE RESOURCES:

On a case by case basis, each DOT&PF region needs to determine whether roundabouts are feasible safety solutions at intersections within their region that would otherwise be signalized.

EXPECTED EFFECTIVENESS/OUTCOME:

Narrative: Reduction of fatal and major injury crashes at intersections.

Average number of lives lost and major injuries sustained due to this problem over the past five years: On the average, about 17 lives are lost each year at intersections. There are around 250 intersection crashes that result in major injuries each year.

Estimated number of lives saved and major injuries prevented in one year following implementation: Life saving in future years will depend on the number of roundabouts built and the crash history at the roundabout locations.

FUNDING AND RESOURCE REQUIREMENTS:

Narrative: The HSIP will fund cost-beneficial roundabouts. Many roundabouts are funded with non-HSIP funds.

Estimated Cost to Implement: \$0.5 to 0.75 million per roundabout. Depends on how many roundabouts are built.

ACTION STEPS AND TIMELINE

ACTION STEP	RESPONSIBLE AGENCY	TIMELINE/DUE DATE
Draft policy for roundabout first.	DOT&PF	October 2007
Get Regional Concurrence.	DOT&PF	October 2007
Construct SLRs using HSIP funds, where safety cost-beneficial, and other funds where appropriate.		

MEASUREMENT AND EVALUATION
STRATEGY PERFORMANCE MEASURES: Before/after crash studies at individual roundabouts.
EVALUATION: Before/after crash studies at individual roundabouts. If constructed with HSIP funding, before/after results will be published in the HSIP Annual Report after enough time has passed to get sufficient “after” data.

HI.3 RED LIGHT RUNNING COUNTERMEASURES – TIER ONE**DESCRIPTION:**

1. Install Red Light Confirmation Lights at five to eight traffic signals in Anchorage (this project currently is underway). These will reduce the number of police officers required to enforce red lights.
2. Provide a public education campaign about red light confirmation lights before, during, and after the project.
3. Provide enforcement.
4. Educate prosecutors and judges to ensure they will accept citations based on the use of red light confirmation lights and are able to overcome an assault on the validity of the technology by defense attorneys.
5. Improve data on red light running by creating an exclusive red light running field in the police crash report form (we currently do not have reliable data on red light running).
6. Compare the fines and penalties for red light running in Alaska to those in other states. Evaluate whether current fines and penalties are sufficient to achieve the desired behavior modification.
7. Study the magnitude of the red light violation problem in Anchorage. Do this by installing video cameras that record vehicles violating run lights. Determine the number of violations, how far into the red the violations occur (indicating the severity of potential collisions), and other pertinent data. Pay particular attention to intersections with red light confirmation lights with the intent of determining their effectiveness. Depending on the results, consider:
 - a. If red light confirmation lights are effective, install more of them at appropriate locations.
 - b. Enhanced education and enforcement campaigns targeting red light running.
 - c. Automated enforcement using red light cameras. This may require legislation (legal analysis of that question is underway). In addition, it would require extensive outreach to the public and local government to overcome the bad will generated by Anchorage's photo radar program.

Angle collisions are Alaska's third highest category of severe injury and fatalities. Forty percent of these are severe and fatal angle collisions in urban areas at signals, many involving red light violations. Like rural head-on collisions, angle collisions affect innocent drivers and passengers. It is a high-profile public concern each time a crash occurs.

RESPONSIBLE AGENCY:

Lead Agency: Alaska Department of Transportation and Public Facilities (DOT&PF)/Anchorage Police Department

Contact Name, Title: Lt. Nancy Reeder, APD Traffic Unit Supervisor

Phone: (907) 786-2634

E-mail: NReeder@ci.anchorage.ak.us

NECESSARY PARTNERS:

- State, Municipal Traffic Engineers.
- Law Enforcement.
- Municipalities, Cities, Boroughs.
- Alaska Highway Safety Office.
- Legislators.
- Judges, Attorneys.
- Public Outreach, Nonprofits.

DATA ANALYSIS NEEDS OR AVAILABLE RESOURCES:**Data Needs:**

1. Frequency of red light violations.
2. Potential severity of red light violations (how many seconds into the red violations occur).
3. Better red light violation data from police reports (currently red light violation data is unreliable).

Data Available:

1. Crash reduction factors for red light enforcement, education, and confirmation lights are not available.
2. Several studies have been done on red light camera effectiveness. One of the best studies, Safety Evaluation of Red Light Cameras, FHWA HRT-05-048, concludes red light cameras reduce crash costs 9 percent when looking at all crashes and 14 percent when looking at injury crashes. Based on this, a crash **cost** reduction factor of 10 percent is reasonable.

EXPECTED EFFECTIVENESS/OUTCOME:

Narrative: The goal is to reduce severe crashes at signalized intersections. We don't know how effective red light confirmation lights, enforcement, and education would be. We estimate the effectiveness of red light cameras at 10 Anchorage intersections as follows.

Average number of lives lost and major injuries sustained due to this problem over the past five years: Approximately 700 collisions are coded as "angles" resulting in severe injury statewide over five years. Of these, approximately 300 are as "angles" at Alaska's 400+ traffic signals. Of these, 23 or more are fatal. While the peak-hour incidence of observed red light running is high, the actual number of severe "angle" collisions appears low. This may be mostly due to trailing vehicles ("sneakers") in the few seconds after the end of a cycle before side street motorists start-up, well into all-red phasing. Fewer vehicles run the red light long after the all-red phase. Recorded data is unreliable as many red light running crashes are not all coded as angle and many are not assigned a violation. Instead, national data suggests a higher incidence, or three-quarters of all angle collisions may be severe. Using Anchorage crash counts at the 5 worst intersections, there are about 20 to 30 crashes per year at each intersection. The number of crashes at the 10 worst intersections is thus estimated to be 150 severe injuries, while fatalities vary randomly from none to one or two in a given year.

Estimated number of lives saved and major injuries prevented in one year following implementation: At 10 locations, using a 10 percent reduction factor: 15 major injuries per year, fatalities unpredicted, due to a small data source. NCHRP Report 500 says this is a proven strategy with a crash reduction factor of about 10 percent.

FUNDING AND RESOURCE REQUIREMENTS:*Narrative:*

Red Light Confirmation Lights: Has been funded with HSIP funds. Will be installed by MOA personnel.

Enforcement: APD plans to use the RLCL for enforcement.

Education: Of the public as well as judges and prosecutors.

Add red light running field to police form.

Evaluate appropriateness of red light running fines in Alaska.

Video Research Project.

Red Light Cameras: If research justifies and politics allow, install red light cameras at 10 intersections in Anchorage. Estimated Cost to Implement: \$ 1,000,000 to install, \$ 10,000/year to maintain. Operation costs are dependent upon enforcement. Costs are expected to be offset by ticket revenues.

ACTION STEPS AND TIMELINE		
ACTION STEP	RESPONSIBLE AGENCY	TIMELINE/DUE DATE
Install Red Light Confirmation Lights.	DOT&PF, MOA	2008
Increase enforcement effort using red light enforcement lights.	APD	
Education campaign for public, judges, prosecutors.	AHSO	
Add red light running filed to police crash report form.	Alaska State Troopers	
Video Research Project.	DOT&PF	
Enact legislation, if needed.		
If research justifies, install red light cameras.		
MEASUREMENT AND EVALUATION		
STRATEGY PERFORMANCE MEASURES:		
<ol style="list-style-type: none"> 1. Reduction in severe crashes at signalized intersections. 2. Willingness of judges and lawmakers to enforce citations. 		
EVALUATION:		
<ol style="list-style-type: none"> 1. Reduction in severe crashes at signalized intersections. 2. Post project evaluation of severe crash reduction at signalized intersections, to be published in the HSIP Annual Report if done with HSIP funding. 		

HI.4 PEDESTRIAN COUNTDOWN TIMERS – TIER ONE

DESCRIPTION: Install pedestrian countdown timers (PCT) at all traffic signals that have pedestrian indications in Alaska.

San Francisco did a study that indicates PCTs reduce pedestrian accidents at signalized intersections by about 25 percent.

RESPONSIBLE AGENCY:

Lead Agency: Alaska Department of Transportation and Public Facilities

Contact Name, Title: Kurt Smith, State Traffic and Safety Engineer

Phone: (907) 465-6963

E-mail: Kurt.Smith@alaska.gov

NECESSARY PARTNERS:

- DOT&PF HQ and Regions.
- FHWA.
- Local Communities.

DATA ANALYSIS NEEDS OR AVAILABLE RESOURCES:

Pedestrian crash data at intersections.

EXPECTED EFFECTIVENESS/OUTCOME:

Narrative: Reduction of fatal and major injury pedestrian crashes at intersections.

Average number of lives lost and major injuries sustained due to this problem over the past five years: Research needed – how many pedestrians fatalities and majors are there at intersections in Alaska?

Estimated number of lives saved and major injuries prevented in one year following implementation: After installation, 25 percent fewer pedestrian fatalities and major injuries at intersections with PCTs.

FUNDING AND RESOURCE REQUIREMENTS:

Narrative: The HSIP will fund cost-beneficial PCT projects if funds are available.

Estimated Cost to Implement: \$approximately 20K per intersection.

ACTION STEPS AND TIMELINE

ACTION STEP	RESPONSIBLE AGENCY	TIMELINE/DUE DATE
Propose regionwide projects for HISP funding.	DOT&PF Regional Traffic and Safety Sections	September 2007
Create CDT Specification, Issue director requiring CDTs on new DOT&PF projects	DOT&PF HQ D&CS	By end of 2007
Design, permit, and construct-funded projects.	DOT&PF regions	By end of 2009

MEASUREMENT AND EVALUATION**STRATEGY PERFORMANCE MEASURES:**

Before/after crash studies at PCT-equipped intersections.

EVALUATION:

Before/after crash studies at PCT-equipped intersections. If constructed with HSIP funding, before/after results will be published in the HSIP Annual Report after enough time has passed to get sufficient “after” data.

HM.1 GET MOOSE AWAY FROM ROADS BY MANAGING ADJACENT HABITAT – TIER ONE

DESCRIPTION: Create off-highway moose-feeding areas adjacent to the 100 miles of Alaska roads that have the highest frequency of moose collisions. Coordinate habitat efforts with removal of roadside moose browse (HM.2). Establish winter and summer trails to off-highway moose-feeding areas (see HM.4).

When necessary, permits and approvals are obtained, the Alaska Moose Federation is willing to acquire funding for this work and perform it.

This project has been designated a TIER ONE project with the understanding that funding for it will not reduce funding for other highway safety or maintenance activities. If this changes, and it does need to compete for funding, prioritization of this work will be based on expected reduction in major and fatal injuries as well as cost of the work.

RESPONSIBLE AGENCY:

Lead Agency: Alaska Department of Fish and Game (ADF&G), Alaska Department of Natural Resources (DNR)

Contact Name, Title: Gary Olson, Alaska Moose Federation

Phone: (907) 336-6673

E-mail: golson@growmoremoose.org

NECESSARY PARTNERS:

- Authorities: ADF&G, DNR Division of Forestry, USFWS Refuge.
- USDA Dept. of Agriculture NCRS; Alaska Moose Federation; SAGA.
- Adj. forest owners: Boroughs – Mat-Su, Kenai; DNR Division of Forestry, USFWS Refuge.

DATA ANALYSIS NEEDS OR AVAILABLE RESOURCES:

1995 Statewide Moose-Vehicle Crashes on Alaska's Rural Roads; 2006 Addendum to Anchorage Urban Roads; 2007 Update to Central Region Roads, Urban and Rural (pending December 2007).

EXPECTED EFFECTIVENESS/OUTCOME:

Narrative: Of over 5,000 miles of state roads to be maintained, research shows that moose-vehicle collisions are concentrated at their highest levels on only 150 miles. Typical crash areas are lowland areas, river crossings, and migration corridors with willow browse close in to the roadway which attracts moose into conflict with vehicles during winters. A habitat management plan which addresses winter habitat, migration, browse, forestry practices, and fire management is expected to have a direct impact on reducing crashes and maintaining wildlife populations. Efforts at coordinating with adjacent highway crash areas have been limited to the Glenn Highway Freeway north of Anchorage, the Abbot Loop Extension, and one-time efforts on the Parks Highway.

Average number of lives lost and major injuries sustained due to this problem over the past five years: 1.5 fatalities and 8 major injuries.

Estimated number of lives saved and major injuries prevented in one year following implementation: Two major injuries, fatalities difficult to predict.

FUNDING AND RESOURCE REQUIREMENTS:

Narrative: Map habitat areas relative to roadside crash areas. Establish connectivity, migration corridors. Potential sources, state funding, Federal funds. Coordinate habitat management plans. DOT&PF will identify high moose-crash areas. Other resource agencies will have to develop or approve plans. Funding to be provided from non-DOT&PF sources.

Estimated Cost to Implement: \$ Unknown. Funding to be provided from non-DOT&PF sources.

ACTION STEPS AND TIMELINE		
ACTION STEP	RESPONSIBLE AGENCY	TIMELINE/DUE DATE
Inventory potential moose browse sites, land use, ownership.	ADF&G	March 2008
Complete report, management plan, estimate costs to implement.	ADF&G	May 2008
Seek funding for management plan implementation.	ADF&G	May 2008
MEASUREMENT AND EVALUATION		
STRATEGY PERFORMANCE MEASURES:		
Moose-vehicle crash reduction over a three- to five-year period, in selected corridors.		
EVALUATION:		
Human crash reduction benefit versus cost to implement roadside browse management.		

HM.2 GET MOOSE AWAY FROM ROADS BY MANAGING ROADSIDE MOOSE BROWSE – TIER ONE

DESCRIPTION: Remove moose browse along approximately 150 miles of high moose-crash highways using an Integrated Vegetation Management approach that may include mechanical means, hand clearing, weed killers, or biological means. Remove browse frequently enough to prevent regrowth. Coordinate roadside browse removal efforts with off-site moose browse and wintering areas (HM.1).

The Alaska Moose Federation will support this work through fund-raising and possibly performing some of the clearing and grubbing. Necessary permits from other agencies will be obtained by the DOTPF. Entities performing work in state highway right-of-way would need to get appropriate permits from DOTPF.

RESPONSIBLE AGENCY:

Lead Agency: Alaska Department of Transportation and Public Facilities (DOT&PF)

Contact Name, Title: Larry Johnson, Integrated Vegetation Manager

Phone: E-mail: larry.johnson@alaska.gov

NECESSARY PARTNERS:

- ADF&G; Alaska State Troopers; DOT/PF Hwy Safety Office, M&O, Traffic and Safety.
- USDA Department of Agriculture NCRS; Alaska Moose Federation; SAGA.
- Boroughs – Mat-Su, Kenai; DNR Division of Forestry, USFWS Refuge.

DATA ANALYSIS NEEDS OR AVAILABLE RESOURCES:

1995 Statewide Moose-Vehicle Crashes on Alaska's Rural Roads; 2006 Addendum to Anchorage Urban Roads; 2007 Update to Central Region Roads, Urban and Rural (pending July 2007).

EXPECTED EFFECTIVENESS/OUTCOME:

Narrative: Of over 5,000 miles of state roads to be maintained, research shows that moose-vehicle collisions are concentrated in about 150 miles. Typical crash areas are lowland areas, river crossings, and migration corridors with willow browse. Remove targeted browse in accordance with an integrated roadside vegetation management plan to effectively reduce crashes. Effectiveness of browse removal has been measured in limited cases in Alaska; on Knik-Goose Bay Road and Kalifornsky Beach Road. Initial data from July 2007 summaries shows that moose-vehicle collisions along these corridors were reduced. Browse has been removed on the Sterling Highway and Kalifornsky Beach Road in the past but without follow-up study.

Average number of lives lost and major injuries sustained due to this problem over the past five years: 1.5 fatalities and 8 major injuries (0.25 percent fatal, and 1.1 percent major injury).

Estimated number of lives saved and major injuries prevented in one year following implementation: Two major injuries (fatalities too low to predict) at 30 percent reduction factor estimated.

FUNDING AND RESOURCE REQUIREMENTS:

Narrative: \$ 1,500,000 (\$10,000/mi*150 mi). The Alaska Moose Federation will raise funds to cover a major portion of these costs. DOT&PF may be able to contribute some operational funds for cutting brush but does not have enough funds to complete this plan.

ACTION STEPS AND TIMELINE		
ACTION STEP	RESPONSIBLE AGENCY	TIMELINE/DUE DATE
Seek \$1,500,000 in Funding.	Alaska Moose Federation will lead with support from DOT/PF, ADF&G, DNR, USDA, Municipalities and Boroughs	October 2007
Create management plan. Design contract and list sites. Get environmental permits.	DOT&PF M&O, Traffic and Safety	May 2008
Bid and administer Contract.	DOT&PF M&O	July 2008
Remove browse in accordance with integrated management plan.	Contractor/DOT&PF M&O	May 2011
MEASUREMENT AND EVALUATION		
STRATEGY PERFORMANCE MEASURES:		
Reduction in fatalities and major injuries resulting from moose-vehicle crashes over a three- to five-year period in selected corridors.		
EVALUATION:		
Human crash reduction benefit versus cost to implement roadside browse management.		

HM.3 PROVIDE SAFER WILDLIFE CROSSINGS THROUGH ROADWAY IMPROVEMENTS –TIER ONE

DESCRIPTION: The goal of this plan is to construct safety improvements at moose/highway crossings where those improvements are demonstrated to be cost-beneficial and/or when non-DOTPF funding can be obtained. In addition, improvements identified here should be considered for inclusion in major construction projects that impact the site of the proposed improvement. The accompanying spreadsheet documents the 21 most significant concentrations of moose-vehicle collisions at rural and urban locations in the State. The six locations shown under Funding and Resource Requirements (following) are Alaska's best candidates for moose crossing safety improvements.

Cost-beneficial projects may be eligible for HSIP funding. All projects the DOTPF approves are eligible for non-DOTPF funding.

A research project to evaluate the cost-effectiveness, operation, and maintenance requirements of a fence/active moose waring/electromat crossing should be considered.

RESPONSIBLE AGENCY:

Lead Agency: Alaska Department of Transportation and Public Facilities

Contact Name, Title: TBD Phone: TBD E-mail: TBD

NECESSARY PARTNERS:

- Authorities: DOT&PF Highway Safety Office, M&O, Traffic and Safety.
- Grants/workers: USDA Department of Agriculture NCRS; Alaska Moose Federation; SAGA.
- Adj. forest owners: Boroughs – Mat-Su, Kenai; DNR Division of Forestry, USFWS Refuge.

DATA ANALYSIS NEEDS OR AVAILABLE RESOURCES:

Available: 1995 Statewide Moose-Vehicle Crashes on Alaska's Rural Roads; 2006 Addendum to Anchorage Urban Roads; 2007 Update to Central Region Roads, Urban and Rural (pending December 2007).

Target Sites List (See attached list of Rural, Urban sites, based on available resources). Segment lengths vary with winter seasons, fire and browse changes, habitat, land use development, and wildlife mortality. Updates to crash analysis on a 10-year minimum cycle will assist in keeping these top target site lists up to date.

Projects should update data on a project by project basis to refine crash segment length and solutions analysis.

EXPECTED EFFECTIVENESS/OUTCOME:

Narrative: The goal is to eliminate moose-vehicle collisions at the worst locations in the State. Past experience along the Glenn Highway freeway north of Anchorage shows significant reductions of 80 percent are achievable. Collisions are concentrated to key locations where busy highways cross moose habitat. Of over 5,000 miles of state roads to be maintained, research shows that moose-vehicle collisions are concentrated on 10 rural segments over 50 miles long, and 11 urban segments, 17 miles total. This is a more manageable total. Many top candidates are complicated by a high number of driveways and public access, adjacent development. Because access is not restricted on these sites, fencing and restrictive solutions may not be as feasible as in controlled corridors or areas where roadside land is publicly owned (and therefore, has few access points). There are six highway segments in the top moose-vehicle collision corridors that more easily lend themselves to highway crossing controls and restrictions.

Average number of lives lost and major injuries sustained due to this problem over the past five years: one fatality and six major injuries

Estimated number of lives saved and major injuries prevented in one year following implementation: Five major injuries, fatals difficult to predict (this assumes all sites are treated – if not, reductions will be proportionally less).

FUNDING AND RESOURCE REQUIREMENTS:*Narrative:*

Other substantial public funding source, private funding sources, nonprofit contributions are available to target and promote wildlife, habitat, and tourism in Alaska. Projects will be more cost-effective with partnership funding.

Top 6 Candidate segments (preliminary review has resulted in the following project locations, scopes, and estimated costs):

Sterling Highway: Skilak Lake Wildlife Refuge Area, E Fork Moose R. Fencing, At-Grade Warning, Electromat Devices two-lane road.

Glenn Highway: Palmer Hay Flats, already lighted. Fencing, overpass/underpass east of Rabbit Slough area, \$10,000,000.

Glenn Highway: Muldoon Road to Eagle River. Close gaps in fencing with electromats, moose overpasses north of Hiland in cut section, \$10,000,000.

O'Malley Road: MP 0.5 to Elmore Road Fencing, Underpass where topography allows at sag. \$1,000,000.

Minnesota Drive: Raspberry Road to International Airport Road Fencing. Already lighted. \$300,000.

West Dowling Road: Laurel Street to Abbott Loop Extension. Fencing, Overpass, Underpass where topography favors, other users also. \$3,000,000.

Estimated Cost to Implement: \$ 2.5 to 10 million per site; \$26,500,000 total (see above).

ACTION STEPS AND TIMELINE:

Action Step	Responsible Agency	Timeline/Due Date
Step 2 Scope potential projects, estimate safety benefit cost, determine whether eligible for HSIP funding.	Regional traffic sections	October 2007
Seek \$2.5 million minimum in funding contributions/ why not amount needed to do projects?	DOT&PF Research Branch, University with PPP Partnerships	Summer 2008
Program Design/Build projects.	DOT&PF Regional and Design and Construction	

MEASUREMENT AND EVALUATION**STRATEGY PERFORMANCE MEASURES:**

Reduction in fatalities and major injuries resulting from moose-vehicle crashes over a three- to five-year period in selected corridors.

EVALUATION:

Human crash reduction benefit versus cost to implement crossing mitigation systems.

HM.4 CREATE WINTER CONNECTIVITY SNOW TRAILS AND DIVERSIONARY TREE CUTTING TO ENCOURAGE MOOSE TO STAY AWAY FROM ROAD SURFACES - TIER ONE

DESCRIPTION: Create moose trails following heavy snows (three feet + standing snow) to lead moose away from roads. This will provide moose access, where it would otherwise be blocked by snow, to existing browse areas as well as the new browse areas to be created under HM.2. The plan also includes falling additional trees to provide easily accessible moose browse, thereby keeping moose from returning to road corridors. Establish trespass authorization and approval to fall birch, willow and other browse species. When this authorization is obtained, the Alaska Moose Federation is willing to acquire funding for this work and perform it.

This work needs to be coordinated with habitat enhancement (HM.2).

This project has been designated a TIER ONE project with the understanding that funding for it will not reduce funding for other highway safety or maintenance activities. If this changes, and it does need to compete for funding, prioritization of this work will be based on expected reduction in major and fatal injuries as well as cost of the work.

RESPONSIBLE AGENCY:

Lead Agency: ADF&G, DNR

Lead Nonprofit: Alaska Moose Federation – Contact: Gary Olson

Contact Name, Title: TBD Phone: E-mail:

NECESSARY PARTNERS:

- Grant/Workers; Alaska Moose Federation, local municipalities, private industry, Alaska Native Corporations.
- DOT&PF Headquarters and Regional Offices, Alaska State Troopers, Adjacent land owners.

DATA ANALYSIS NEEDS OR AVAILABLE RESOURCES:

1995 Statewide Moose-Vehicle Crashes on Alaska's Rural Roads; 2006 Addendum to Anchorage Urban Roads; 2007 Update to Central Region Roads, Urban and Rural (pending July 2007)

EXPECTED EFFECTIVENESS/OUTCOME:

Narrative: Reduction in severe moose-vehicle crashes. Do not know of research on effectiveness.

Average number of lives lost and major injuries sustained due to this problem over the past five years:
Average number of lives lost and major injuries sustained due to this problem over the past five years: 1.5 fatalities + 8 major injuries (.25 percent fatal, and 0.1 percent major injury).

Estimated number of lives saved and major injuries prevented in one year following implementation:
Unknown.

FUNDING AND RESOURCE REQUIREMENTS:

Narrative: Unknown. Funding needs would vary by year. Little or no funding would be needed in light years. Funding to come from non-DOTPF sources.

Major private funding potential once permits and approvals are obtained.

Estimated Cost to Implement: \$ Unknown.

ACTION STEPS AND TIMELINE:		
Action Step	Responsible Agency	Timeline/Due Date
Seek initial \$500,000 in funding.	Alaska Moose Federation	October 2007
Inventory sites, land use, ownership.	ADF&G, DNR	March 2008
Complete report, management plan, estimate costs to implement.	DPS, ADF&G, DNR	May 2008
Seek funding for management plan.	DPS, ADF&G, DNR	May 2008
MEASUREMENT AND EVALUATION		
STRATEGY PERFORMANCE MEASURES:		
Reduction of severe moose-vehicle crashes during heavy snow winters.		
EVALUATION:		
Reduction in fatal and major injuries resulting from moose-vehicle crashes. Before-after crash analysis will be done although it will probably be hard to separate out the results of this action plan from the other moose action plans.		

Appendix D

*Off-Highway Vehicle Crash and Injury Data
White Paper*

**Alaska Strategic Highway Safety Plan
Off-Highway Vehicle Crash and Injury Data White Paper**



Prepared for:
Cambridge Systematics, Inc
Alaska Department of Transportation & Public Facilities

Prepared by:
HDR Alaska, Inc.
2525 C Street, Suite 305
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August 30, 2007

Background

The Alaska Department of Transportation and Public Facilities (ADOT&PF) is currently developing a strategic highway safety plan that will comply with recent federal SAFETEA-LU requirements (23 U.S.C. § 148). All states are required to establish a plan “with the ultimate goal of reducing the number of highway fatalities and serious injuries on all public roads. The plan should adopt strategic and performance goals that address traffic safety, including behavioral and infrastructure problems and opportunities on all public roads.”

As part of the strategic highway safety planning efforts in Alaska, three emphasis area teams were established to review and analyze existing data, develop goals and performance measures, and identify strategies for reducing fatalities and major injuries within their emphasis areas. The three emphasis areas are: (1) driver behavior, (2) special users, and (3) highways. The driver behavior team’s focus is on young, impaired, and aggressive drivers. The special users team’s focus is on pedestrians, bicyclists, and motorcyclists. The highway team is addressing the three highest crash type categories in Alaska, which are run-off-road, head-on, and intersection crashes.

In the early development of the emphasis area teams, off highway vehicles (OHV), such as snow machines and all terrain vehicles (ATVs), were discussed as warranting analysis, though the teams chose to not include OHVs within one of the key emphasis areas. OHVs are an important part of the transportation network in Alaska. Many Alaskans rely on ATVs and snow machines for work, basic transportation, and recreation. As part of the planning efforts for Alaska’s highway safety plan, this white paper investigates and documents crash data related to OHVs in Alaska. While OHVs are not being studied within an emphasis area, this transportation mode has Alaska-specific uses and crash patterns and should therefore be considered in the state’s highway safety planning process.

Introduction

ATVs and snow machines are common forms of transportation, especially in rural Alaska where quite often they are the main or only modes of transportation. These OHVs are often used as work vehicles and vehicles that provide general mobility. While most ATV and snow machine travel occurs off the road, these vehicles also travel within the road rights-of-way (ROW). Snow machines and ATVs are allowed within the State road ROW, but not on the road surface itself. Data collected by state agencies show that crashes and injuries are occurring within and outside the highway ROW. Crash and injury data analysis is a key element in identifying problems and developing strategies to help reduce

the number of crashes and injuries caused by this vehicle type. This paper presents OHV crash and injury data, primarily for ATVs and snow machines, and examines variables such as *age, gender, month, alcohol-involvement, and geographic location* of crash or injury.

Data Sources & Assumptions

The crash data discussed in this paper was obtained from two main sources – the Alaska DOT&PF’s Highway Dataport and the Alaska Trauma Registry.

ADOT&PF has a data warehouse – the Highway Analysis System– that provides information on the roadway network, traffic data, and crashes. A Highway Dataport was created as a portal that allows internal ADOT&PF users to query data from this warehouse. Maintained by ADOT&PF, the Highway Dataport tracks *OHV crashes that have occurred within the highway ROW*. ADOT&PF receives all law enforcement and driver vehicle crash reports from the Alaska Division of Motor Vehicles. The Dataport does not track OHV crashes and injuries that occur *outside* of the highway ROW. Department staff remove crashes that do not occur on public roadways.¹ To obtain OHV crash data occurring off the roadway, which is where most of OHV travel occurs, data was obtained from the Alaska Trauma Registry.

The Alaska Trauma Registry is a computerized information system maintained by the Alaska Department of Health and Social Service (ADH&SS), Division of Public Health section. The registry includes a *detailed record of all injuries in the state among persons admitted to a hospital or declared dead in the emergency department*. The data in the registry are collected from medical record files by hospital staff. All hospitals in Alaska report injury admissions to the Trauma Registry.

The data from ADOT&PF’s Highway Dataport focuses on the *driver*, whereas the data from ADH&SS’s Trauma Registry focuses on the *person injured*, which most often than not is the driver, though there are exceptions. The Trauma Registry also includes pedestrians that have been hit by OHVs even if they were not a passenger of the vehicle, meaning the person injured could have been standing on a trail and was hit by an ATV. Or two people could be riding on a snow machine, one gets off and then gets hit, or a snow machine could be going along a frozen lake, the ice gives way and an injury results. For fatalities, the Trauma Registry only reports fatalities for people that were first admitted to a hospital

¹ Transportation Research Board. January 2007. *Integrating Roadway, Traffic, and Crash Data*. Transportation Research Circular. Number E-C111. As accessed 7-17-07: <http://onlinepubs.trb.org/onlinepubs/circulars/ec111.pdf>.

and subsequently died, so therefore not all fatalities are included. This means The Highway Dataport does not track ATVs and snow machine crashes separately, so crash data for OHVs all fall into one category. It is assumed the Highway Dataport OHV category is for ATVs and snow machines; there is a separate category for dog sleds, another Alaskan form of off-road transportation. The Trauma Registry separately categorizes ATVs and snow machines along with ‘pedestrians’ and ‘other,’ which means the injury was not listed or specified.

The data obtained from the Trauma Registry for this paper is for all hospital admissions² where *an injury occurred and an OHV was involved*. The Trauma Registry breaks the OHV down by vehicle type, such as snow machine or ATV; the Dataport does not break the data down by vehicle type. Whereas the data from the Highway Dataport is only for crashes occurring *within* the road ROW, the Trauma Registry data does not distinguish whether the injury or crash occurred in or outside of the highway ROW. Therefore, there are more crash and injury data available through the Trauma Registry. For instance, for the five year period between 2001 and 2005, the total *number of OHV crashes occurring within the highway ROW* recorded in the Highway Dataport is 401 crashes. According to the Trauma Registry, the total *number of hospital admissions due to OHV crashes* is 1,756 over the five-year period between 2000 and 2004. It is possible there is some overlap in the data.³ Both sets of data are presented in this paper. Data from the Highway Dataport are for the five years between 2001 and 2005, whereas the data obtained from the Trauma Registry are for the five years between 2000 and 2004. Data from 2005 through the present are not yet available.

Crash and Injury Data Summary

Unless otherwise specified, trends and analysis mentioned in this section are typically for the five-year period, either between 2001 and 2005 if the Highway Dataport crash data are used, or between 2000 and 2004 if the Alaska Trauma Registry hospital admissions/injury data are used.

² The Alaska Trauma Registry defines a hospital admission as a person being in the hospital at least 24 hours or more.

³ The data overlap would include all driver injuries that occurred within the highway ROW and were then admitted to a hospital, and all driver fatalities within the ROW that were first admitted to a hospital and then died. It would appear the only way to figure out the size of the overlap would be to examine all the records in one or the other database for these attributes.

Over the five year-periods:

- The number of roadway ROW OHV crashes annually has slightly decreased.
- The number of hospital admissions due to OHVs has continued to increase.
- The number of hospital admissions due to OHVs is relatively the same between ATV and snow machine use.

Age

- The 24 years and younger age group accounts for more than 50% of both OHV crashes and hospital admissions caused by OHV crashes.
- Younger people (under 14 years old) are two times as likely to be injured by ATVs as snow machines. Alternatively, adults between the ages of 25 and 54 are more likely to be injured by snow machines than ATVs. Those between the age of 15 and 24 years of age are likely to be injured evenly between ATVs and snow machines.
- Almost 50% of all OHV crashes involved drivers 20 years old and younger.

Gender

- Males are more than three times as likely as females to be the drivers of OHVs involved in crashes.

Month

- OHV crashes occur more often during the winter months than summer months. The top four months for OHV crashes (in order) are December, February, January, and August.
- Hospital admissions occur more often during the late winter/ early spring than other times of the year.

Alcohol-Involvement

- One-third of all fatalities in Alaska caused by OHVs were alcohol-related.

Geographic Location

- OHV crashes resulting in hospital admissions occur more often in rural areas than in urban areas.
- A greater number of OHV crashes occur in urban areas than rural areas.
- The top four boroughs for number of OHV crashes are the Matanuska Susitna Borough, the Fairbanks North Star Borough, the Municipality of Anchorage, and the Kenai Peninsula Borough.
- The rural areas experiencing the greatest number of OHV crashes are (in order) the North Slope Borough, Bethel Census Area, and the Yukon-Koyukuk Census Area.

Crash and Injury Data – Overview

OHV Crashes

Between 2001 and 2005, the total number of OHV crashes, fatalities, and major injuries occurring within the highway ROW was 401 over the five years. The five-year trend shows a slight decrease annually. Over the five-year period, the number of fatalities/fatal crashes has remained steady at 6, with a spike in 2003 of 9.

Figure 1. Off-Highway Vehicle Crashes, Fatalities, and Major Injuries Occurring in Alaska within the Highway Right-of-Way, 2001-2005

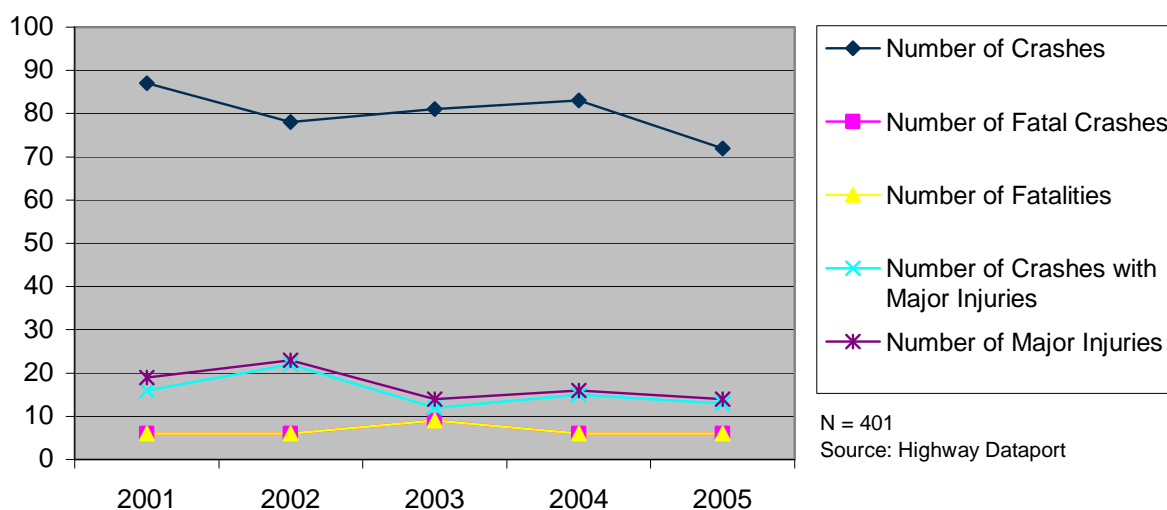


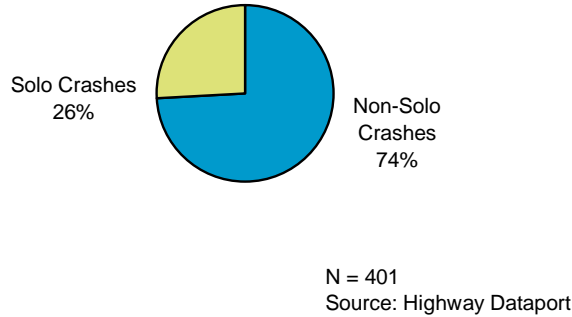
Table 1. Off-Highway Vehicle Crashes, Fatalities, and Major Injuries Occurring in Alaska within the Highway Right-of-Way, 2001-2005

	2001	2002	2003	2004	2005
Number of Crashes	87	78	81	83	72
Number of Fatal Crashes	6	6	9	6	6
Number of Fatalities	6	6	9	6	6
Number of Crashes with Major Injuries	16	22	12	15	13
Number of Major Injuries	19	23	14	16	14

Source: Highway Dataport

Three-quarters of all OHV crashes have more than one person involved in the crash.

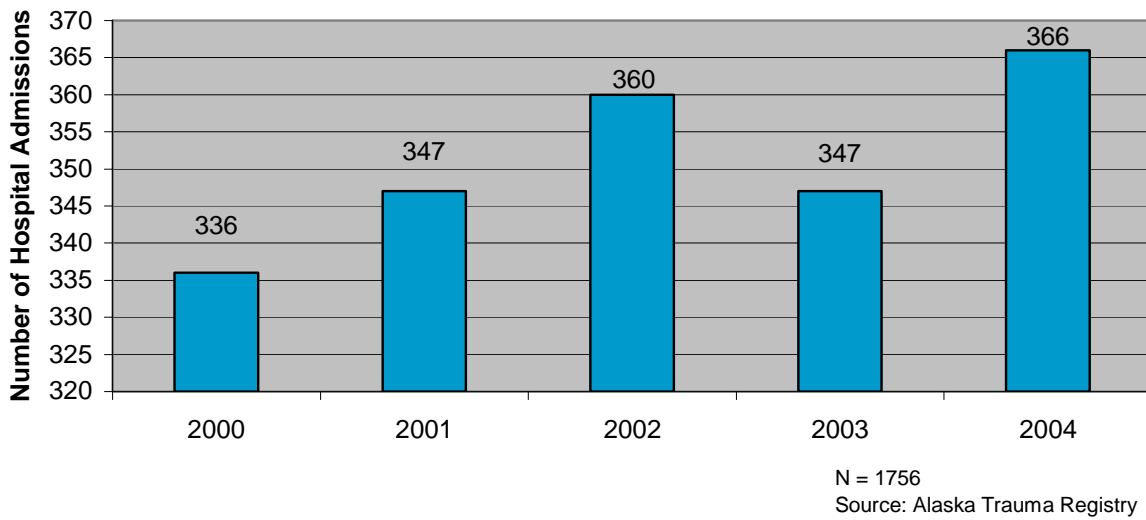
Figure 2. Off-Highway Vehicle Solo and Non-Solo Crashes Occurring in Alaska within the Highway Right-of-Way, 2001-2005



OHV Injuries

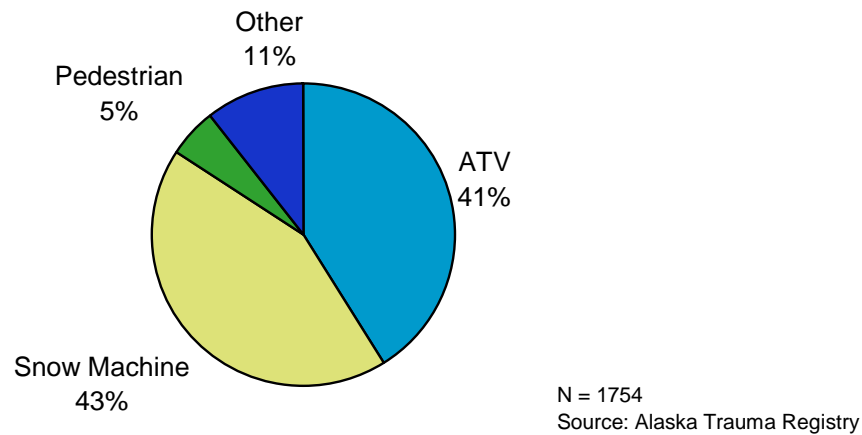
Between 2000 and 2004, 1,756 people were admitted to a hospital in Alaska due to an OHV accident. Hospital admissions have increased over the five-year period, with the exception of a drop in 2003.

Figure 3. Hospital Admissions in Alaska Caused by Off-Highway Vehicle Crashes, by Year, 2000-2004



Between 2000-2004, the number of hospital admissions in Alaska over the five year period was fairly evenly split between ATVs and snow machines (41% and 43% respectively)

Figure 4. Percentage of Hospital Admissions in Alaska caused by Off-Highway Vehicles based on Type, 2000-2004



Crash and Injury Data – Age

OHV Crashes

OHV Crashes occur within all age groups, with an obvious decrease as age increases. Young drivers under the age of 24 are involved in more than half (56%) of all OHV crashes. Approximately 46% of all OHV crashes involved drivers age 20 and younger. Approximately 27% of all OHV crashes involved drivers age 16 and younger.

Table 2. Age of Driver Involved in Off-Highway Vehicle Crashes Occurring in Alaska within the Highway Right-of-Way, 2001-2005

	2001	2002	2003	2004	2005	2001-2005
< 16	27	22	22	24	14	109
16-20	20	17	16	16	11	80
21-24	7	9	6	9	9	40
25-34	8	9	10	9	7	43
35-44	6	8	6	5	10	35
45-54	3	7	6	10	5	31
55-64	5	3	4	5	6	23
65-74	1	2	0	1	0	4
>74	0	0	0	2	0	2
Unknown	15	5	15	8	11	54
<i>Total</i>	<i>92</i>	<i>82</i>	<i>85</i>	<i>89</i>	<i>73</i>	<i>421</i>

Source: Highway Dataport

Figure 5. Percent by Age of Off-Highway Vehicle Drivers in Alaska Involved in Crashes Occurring within the Highway Right-of-Way, 2001-2005

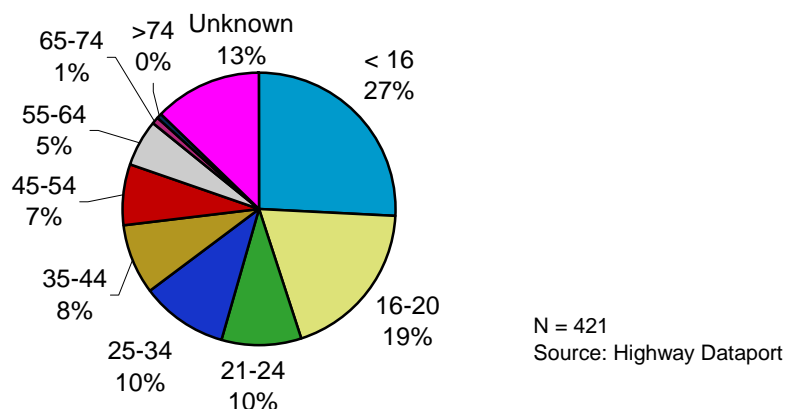
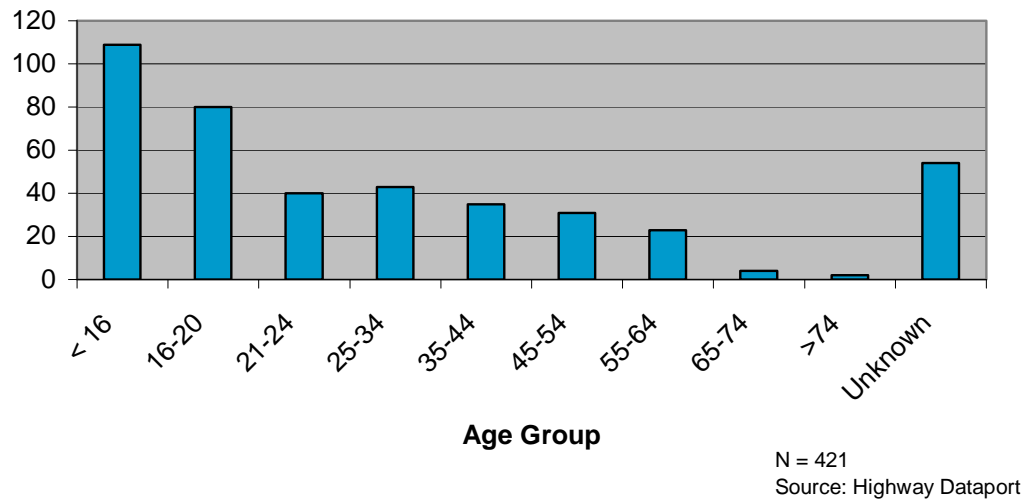


Figure 6. Number of Off-Highway Vehicle Drivers by Age in Alaska Involved in Crashes Occurring within the Highway Right-of-Way, 2001-2005



OHV Injuries

Those 15 to 24 years of age experience the greatest number of hospital admissions. Approximately one-third (32%) of all hospital admissions were from the 15 to 24 age group. Approximately half of all hospital admissions are for those 24 and younger (51%).

Those under the age of 14 are twice as likely to be injured due to ATVs rather than snow machines. Alternatively, those between 25 and 54 are more likely to be injured by snow machines than ATVs. Those over 55 years of age are likely to be injured evenly by ATVs and snow machines.

Figure 7. Hospital Admissions in Alaska Caused by Off-Highway Vehicle Crashes, by Age, 2000-2004

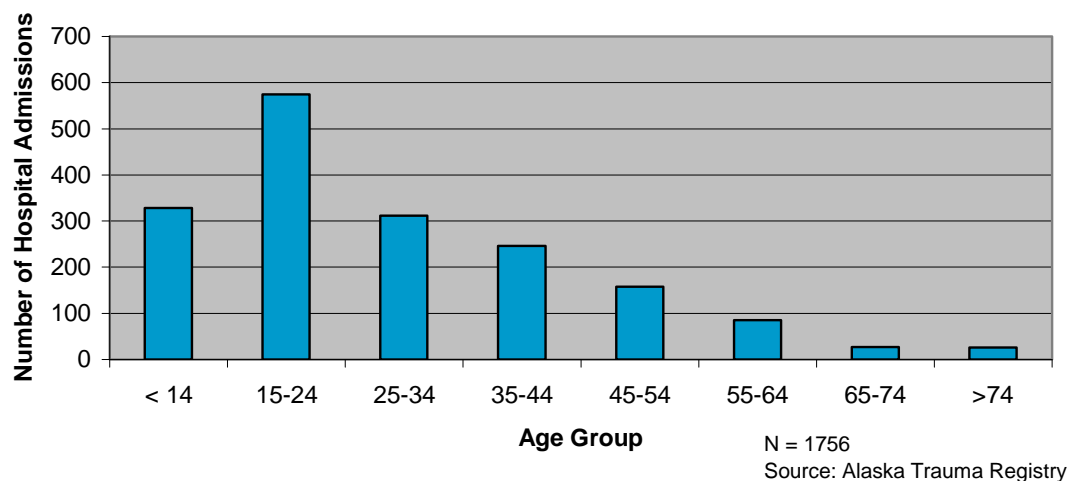


Figure 8. Percentage of Hospital Admissions in Alaska Caused by Off-Highway Vehicle Crashes, by Age, 2000-2004

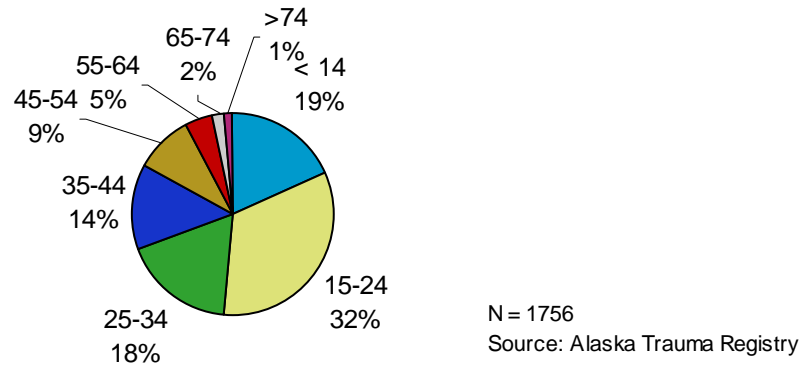


Table 3. Number of Hospital Admissions in Alaska caused by Off-Highway Vehicle Crashes, by Age and Injury Type, 2000-2004

	ATV	Snow Machine	Pedestrian	Other	Totals
< 14	170	79	40	37	326
15-24	244	243	15	72	574
25-34	97	167	10	38	312
35-44	92	120	6	28	246
45-54	60	82	11	5	158
55-64	38	40	4	3	85
65-74	13	13	1	0	27
>74	9	11	4	2	26
<i>Total</i>	<i>723</i>	<i>755</i>	<i>91</i>	<i>185</i>	<i>1754*</i>

*Note: Number is 1754. There are two missing cases in the under 14 age group.

Source: Alaska Trauma Registry

Crash and Injury Data – Gender

OHV Crashes

Males are more than three times as likely as females to be the drivers of OHVs involved in crashes

Figure 9. Percent by Gender of Off-Highway Vehicle Drivers in Alaska Involved in Crashes Occurring within the Highway Right-of-Way, 2001-2005

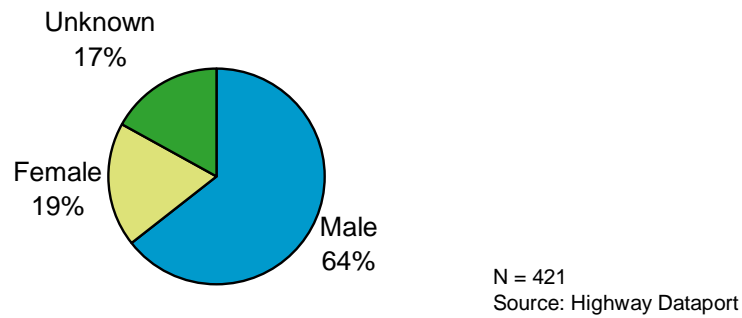


Table 4. Number of Drivers by Gender of Off-Highway Vehicles in Alaska Involved in Crashes Occurring within the Highway Right-of-Way, 2001-2005

	2001	2002	2003	2004	2005	2001-2005
Male	67	54	47	56	47	271
Female	17	17	17	11	17	79
Unknown	8	11	21	22	9	71
<i>Total</i>						<i>421</i>

Source: Highway Dataport

OHV Injuries

Men are three times as likely as women to be admitted to the hospital due to an OHV crash. Women are more likely to be hospitalized from ATV crashes than snow machine crashes. However, men are more likely to be hospitalized from snow machine crashes than ATV crashes.

Figure 10. Percentage of Hospital Admissions in Alaska Caused by Off-Highway Vehicle Crashes, by Gender, 2000-2004

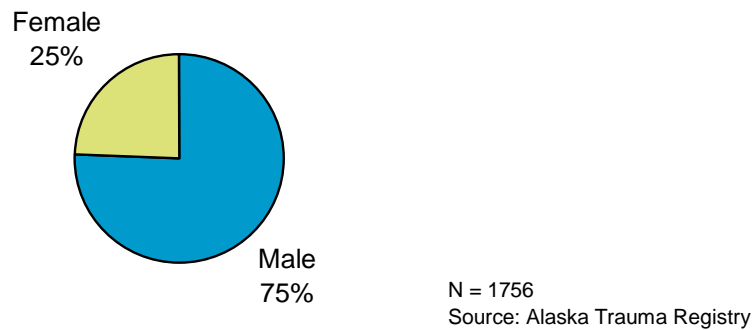
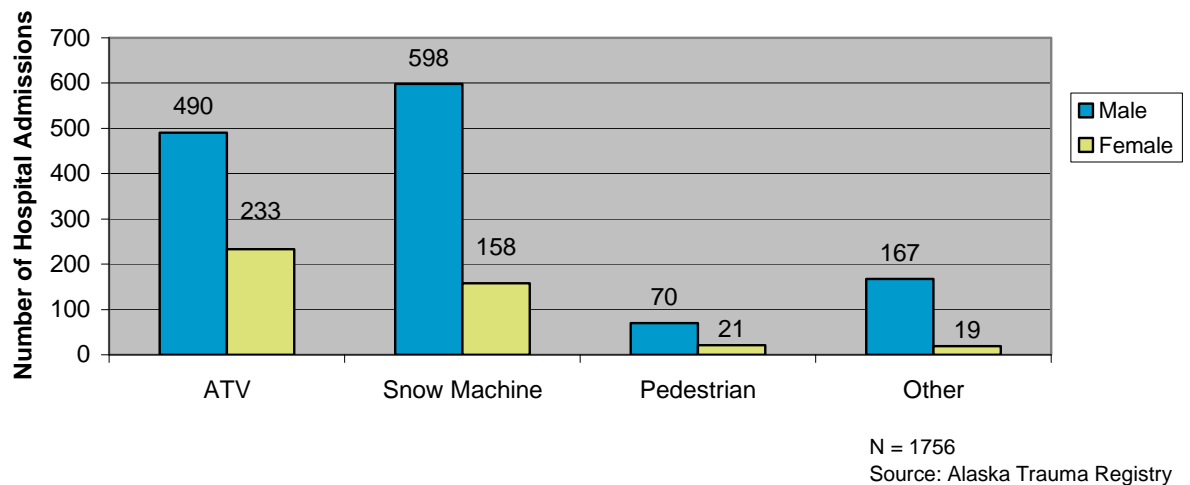


Figure 11. Hospital Admissions in Alaska Caused by Off-Highway Vehicle Crashes, by Gender and Vehicle Type, 2000-2004



Crash and Injury Data –Month

OHV Crashes

Winter months tend to have the highest number of OHV crashes. The top four months are December, February, January, and August.

Figure 12. Number of Off-Highway Vehicle Crashes in Alaska by Month, 2001-2005

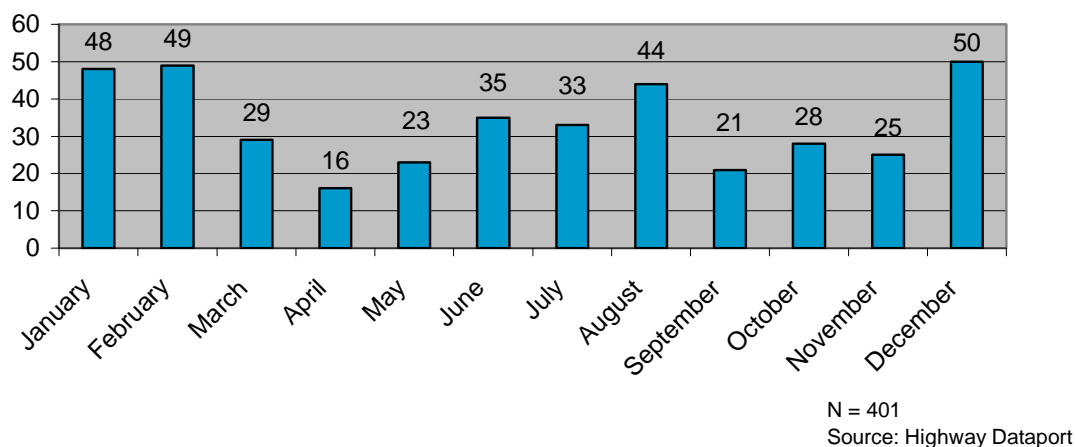


Table 5. Number of Off-Highway Vehicle Crashes Occurring within the Highway Right-of-Way in Alaska by Month, 2001-2005

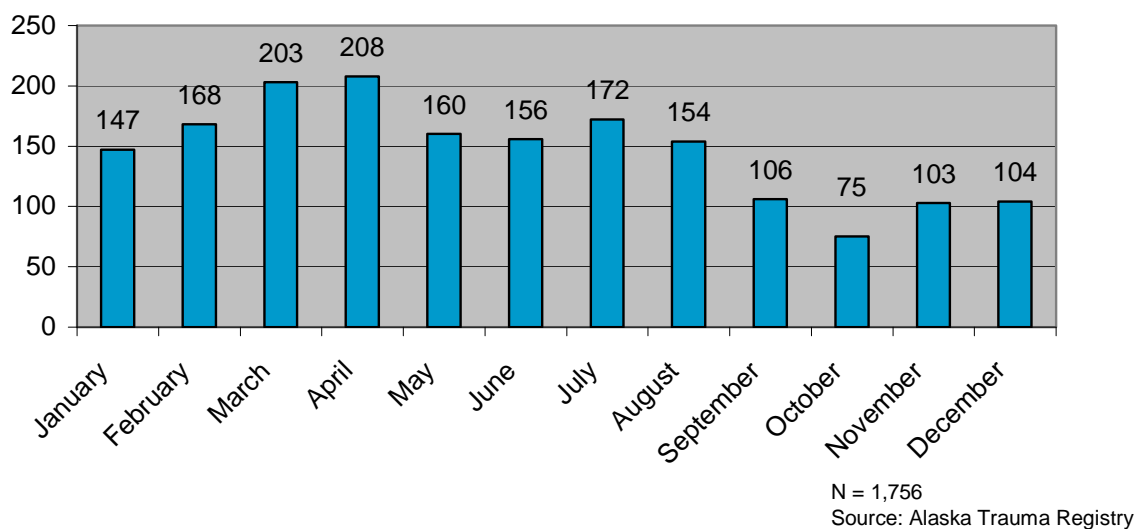
	2001	2002	2003	2004	2005
January	17	8	6	5	12
February	18	11	6	9	5
March	7	8	5	4	5
April	4	2	3	4	3
May	6	5	5	4	3
June	6	9	9	8	3
July	3	5	11	8	6
August	8	10	7	10	9
September	4	3	5	5	4
October	4	8	5	9	2
November	3	4	7	5	6
December	7	5	12	12	14

Source: Highway Dataport

OHV Injuries

The late winter/spring months tend to have the highest number of hospital admissions. The top four months are April, March, February, and July.

Figure 13. Number of Hospital Admissions Caused by Off-Highway Vehicle Crashes in Alaska by Month, 2000-2004



Crash and Injury Data – Alcohol involvement

OHV Injuries

One-fourth of all *non-fatal* hospital admissions in Alaska caused by OHVs were alcohol-related.

Figure 14. Number of Hospital Admissions (Non-Fatal) in Alaska Caused by Off-Highway Vehicle Crashes in which Alcohol is a Factor, 2000-2004

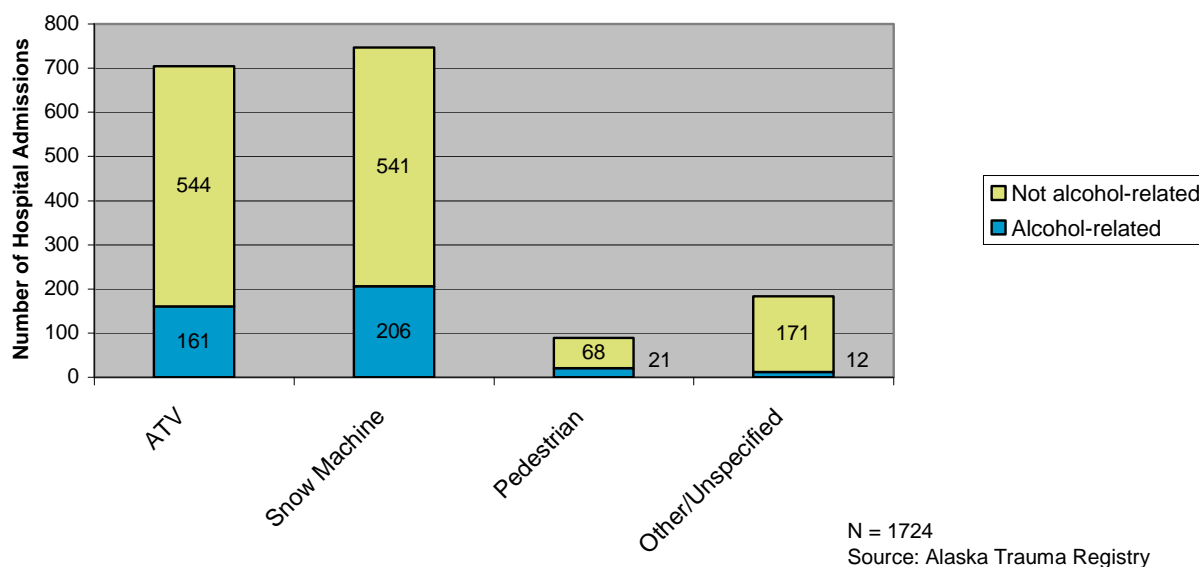
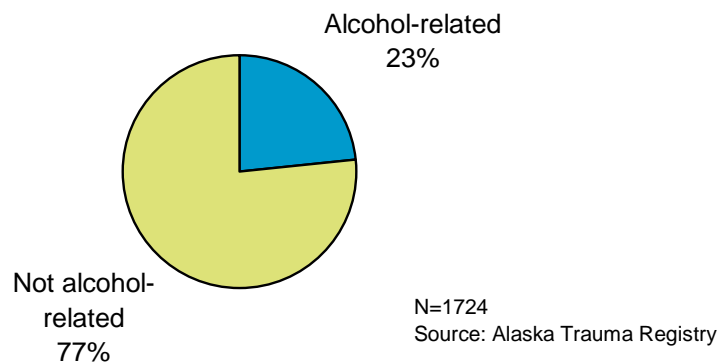


Figure 15. Percentage of Hospital Admissions (Non-Fatal) in Alaska Caused by Off-Highway Vehicle Crashes in which Alcohol is a Factor, 2000-2004



One-third of all *fatalities* in Alaska caused by OHVs were alcohol-related; of the nine fatalities, five were snow machines, four were ATVs, one pedestrian, and one unspecified.

Figure 16. Number of Hospital Admissions in Alaska Caused by Off-Highway Vehicle Crashes (Resulting in a Fatality) in which Alcohol is a Factor, 2000-2004

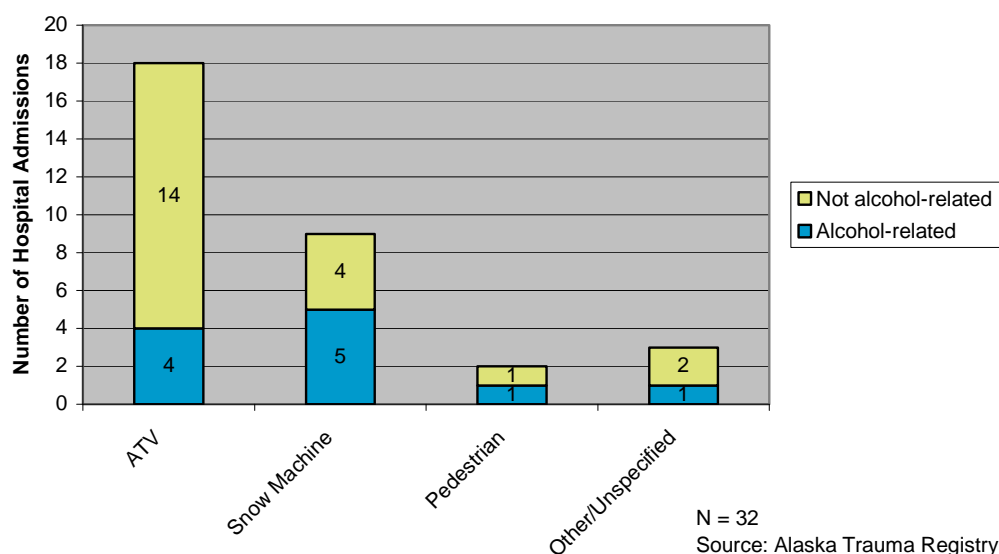
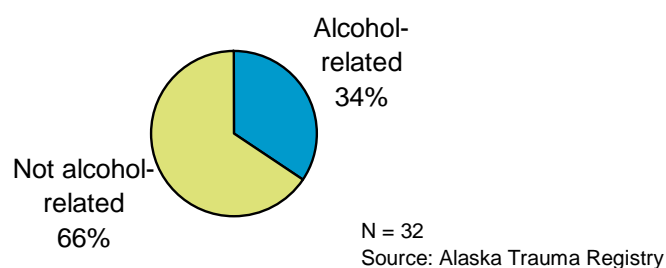


Figure 17. Percentage of Hospital Admissions in Alaska Caused by Off-Highway Vehicle Crashes (Resulting in a Fatality) in which Alcohol is a Factor, 2000-2004



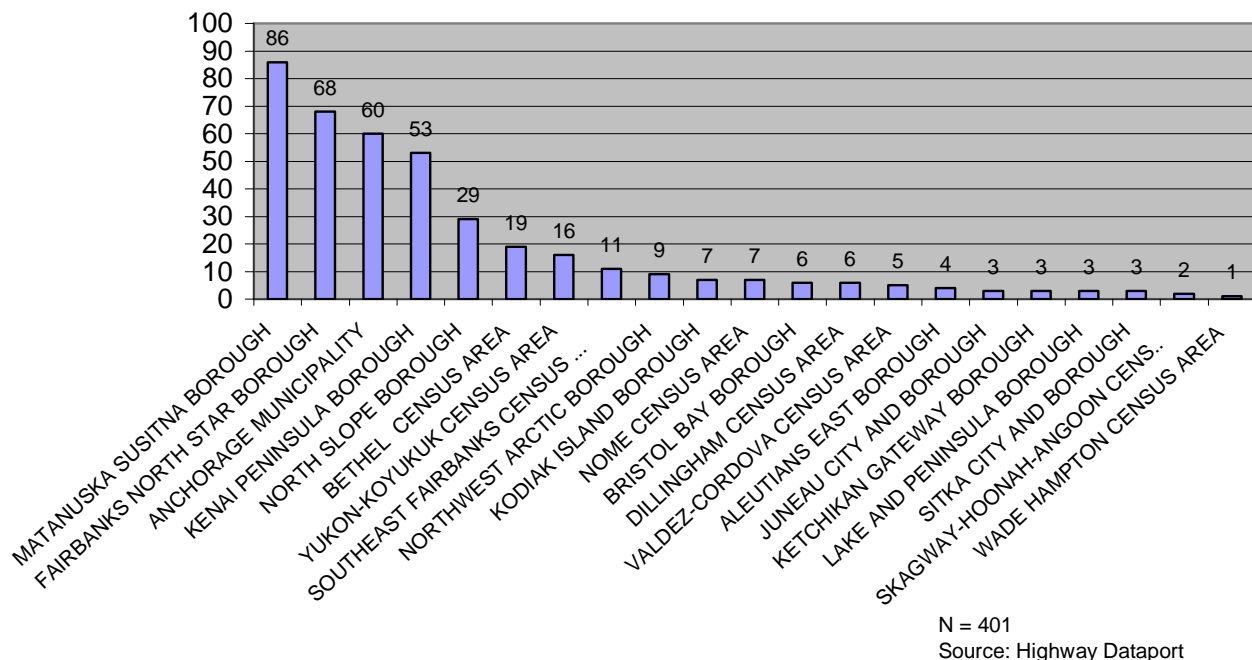
Crash and Injury Data – Geographic Location

OHV Crashes

The top four Boroughs experiencing the highest number of OHV crashes are (in order) Matanuska-Susitna Borough, Fairbanks North Star Borough, Municipality of Anchorage, and the Kenai Peninsula.

Six boroughs/areas did not have any DOT-Dataport reported OHV Crashes – Aleutians West Census Area, Denali Borough, Haines Borough, Prince of Wales – Outer Ketchikan Census Area, Wrangell-Petersburg Census Area, and Yakutat City and Borough.

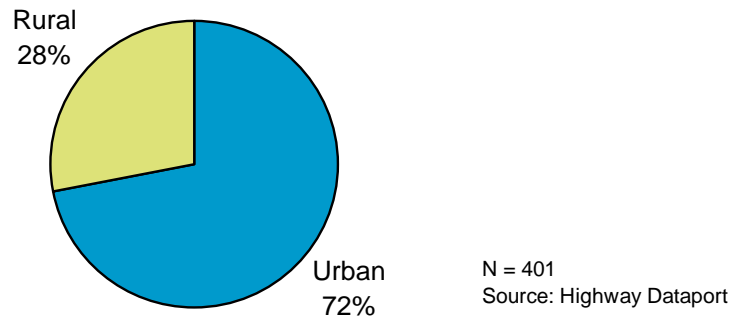
Figure 18. Number of Off-Highway Vehicle Crashes in Alaska Occurring within the Highway Right-of-Way by Borough, 2001-2005



Most of the OHV crashes are occurring in urban areas. The rural boroughs experiencing the greatest number of OHV crashes are (in order) North Slope Borough, Bethel Census Area, and the Yukon-Koyukuk Census Area. It's important to note that the rural and urban divide is somewhat approximate, when considering geographic location. The Matanuska-Susitna Borough, for instance, experiences the greatest number of OHV crashes but is composed of both rural and urban areas; it is classified as urban due to its connection to the Highway System. Urban areas are generally classified as being on the 'Highway system,' meaning these areas can be driven to, whereas rural areas are not

accessible by the highway system. The more populated regions along the Alaska Marine Highway system are classified as urban.

Figure 19. Percentage of Off-Highway Vehicle Crashes in Alaska by Geographic Location, 2001-2005



OHV Injuries

The number of hospital admissions is just as great in urban areas as in rural areas. The Matanuska-Susitna Borough had the greatest number of hospital admissions (311 admissions) out of any borough statewide. The regions with the second and third greatest number of hospital admissions are rural – the Yukon-Kuskokwim Delta and the rural interior.

Figure 20. Number of Hospital Admissions in Alaska Caused by Off-Highway Vehicle Crashes, based on Geographic Location and Vehicle Type, 2000-2004

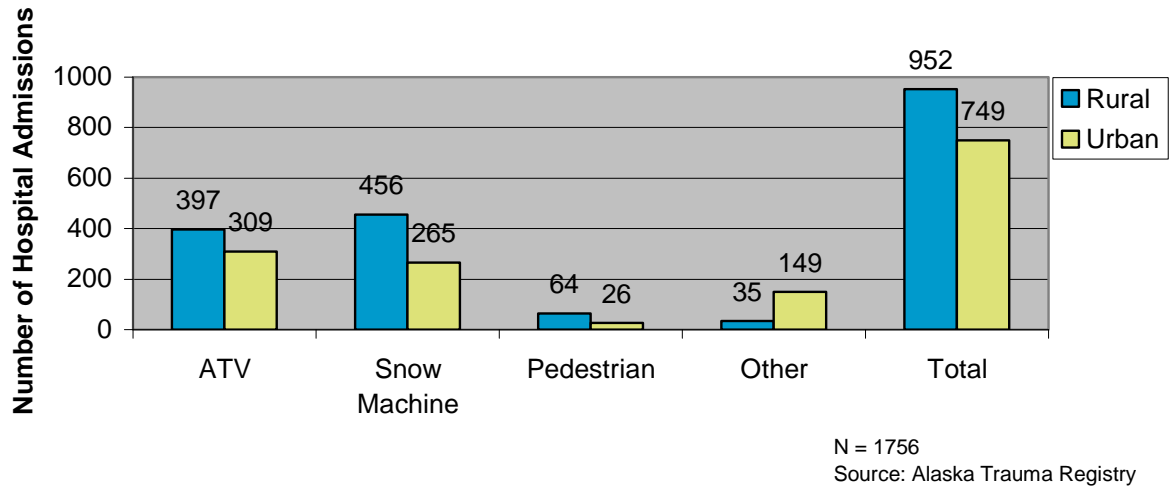


Figure 21. Percentage of Hospital Admissions in Alaska Caused by Off-Highway Vehicle Crashes, based on Geographic Location, 2000-2004

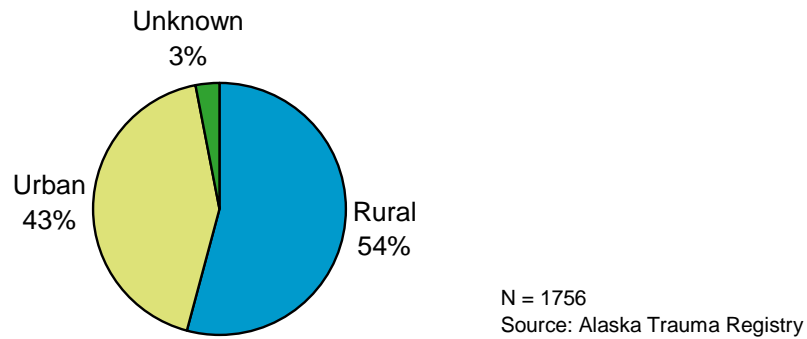
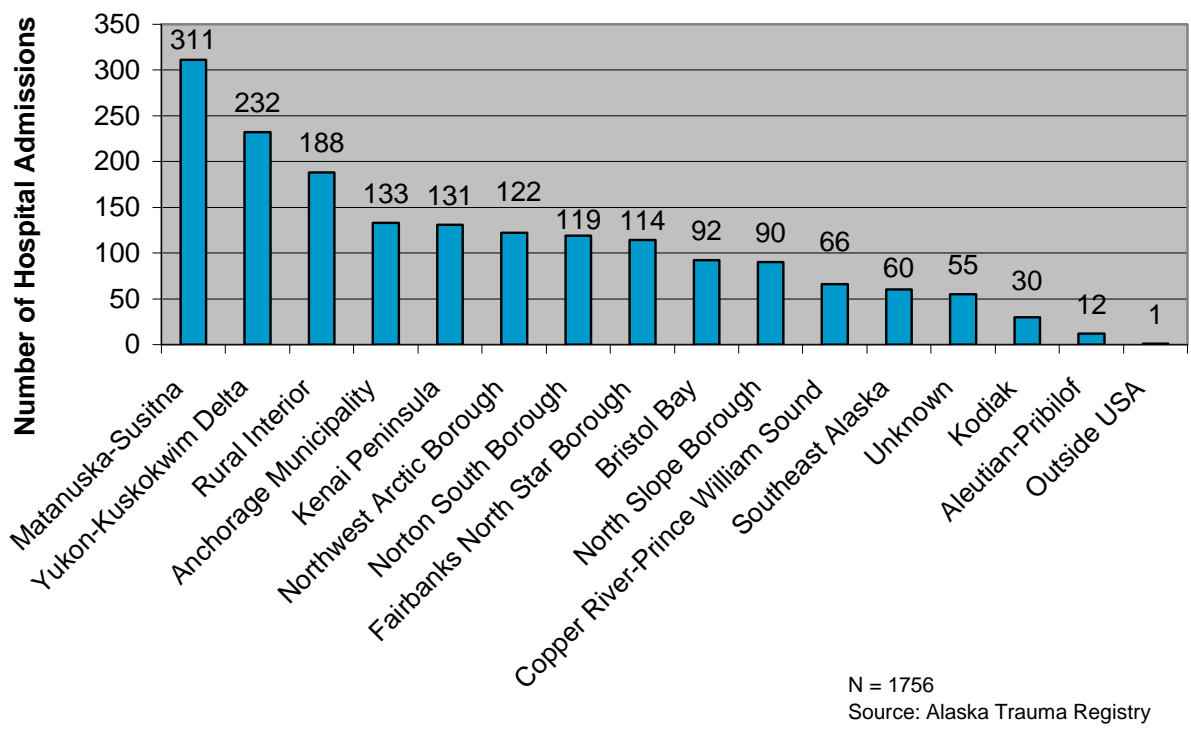


Figure 22. Number of Hospital Admissions Caused by Off-Highway Vehicle Crashes in Alaska by Region, 2000-2004



Moving Forward – Future Considerations

General Problem Statements Based on Collected Data

Five-year data extracted from the Alaska Trauma Registry and Highway Dataport (for the years 2000-2004 and 2001-2005 respectively) indicate the following trends:

- **Age:** While all riders were affected, younger riders under the age of 24 account for more than 50% of both OHV crashes and hospital admissions.
Broken down into smaller age groups:
 - Youth under 16 account for one-fourth (27%) of OHV crashes occurring within the highway ROW, whereas young adults (16-20 years old) account for 19%.
 - The greatest number of hospital admissions (caused by an OHV crash) – nearly one-third of all hospital admissions (32%) – occurs in the 15-24 age group.
 - *See Figures 5 and 8.*
- **Gender:** Males are three times more likely to be involved in OHV crashes occurring within the highway ROW than females. *See Figure 9 and Table 4.*
- **Vehicle Type:** More people are admitted to the hospital due to snow machine crashes than ATV crashes. Young people (24 and under) are twice as likely to be injured by using ATVs as by snow machines, whereas adults (ages 25-54) are more likely to be injured using snow machines. *See Figure 11 and Table 3.*
- **Time of Year:** Winter months tend to have the highest number of OHV crashes occurring in the highway ROW, and the late winter/early spring months tend to have the highest number of hospital admissions due to an OHV crash. *See Figures 12 and 13 and Table 5.*
- **Alcohol:** Alcohol was a factor in one-third of all OHV crashes involving a fatality. *See Figures 17.*

Existing Safety Programs and Strategies

Several existing safety campaigns can be looked at as successful models for safety programming. The following documents successful existing safety campaigns for OHVs and other safety measures.

Click It or Ticket: The Click it or Ticket campaign raised awareness and profiled the importance of wearing seatbelts. It became a state law to buckle up, and most importantly, the law was enforced. Alaska now has a primary safety belt enforcement law for children under age 16 and secondary enforcement for those aged 16 and over. Something similar might be done on helmets for OHV users.

Kids Don't Float: The Kids Don't Float campaign is an example of another successful safety campaign in Alaska. Statewide legislation was passed about six years ago that requires children 13 years and younger to wear a personal flotation device. In addition to the legislation, statewide efforts include enforcement and the Kids Don't Float program. The Kids Don't Float program makes safety equipment available and provides education through high-school students teaching youth. The U.S. Coast Guard and harbor masters enforce use of the safety equipment. As a result of this campaign, the number of drowning deaths for kids has decreased. The campaign is sponsored by a number of agencies, including the Coast Guard, Alaska Department of Health and Social Services, Alaska Safe Kids, and the Office of Boating Safety.

Kenai Peninsula Safe Kids Coalition Avalanche Awareness Class: The Kenai Peninsula Safe Kids Coalition has sponsored youth snow machine safety events, including an avalanche awareness class held in February 2002. Approximately 500 children, youth, parents and caregivers attended this course. The program aims to teach safe snow machine riding to children and teens. Each youth must be accompanied by a caregiver, so adults are educated as well as the kids. The program uses multimedia, such as videos, lectures and displays, emphasizing hands-on demonstrations of skills and one-on-one instruction.

Alaska Native Tribal Health Consortium (ANTHC) Snow Machine Injury Prevention: ANTHC has had some success with programming to prevent injury by promoting snow machine helmet usage. ANTHC uses a three-prong approach:

1. Education: ANTHC uses a snow machine booklet produced by the State to educate the public. According to ANTHC staff, it's useful from a recreational standpoint (such as for those that use vehicles for recreational purposes), but not good for rural communities where OHVs are used primarily for work and transportation purposes rather than recreational uses.

2. Environmental Changes: Some of the successful environmental changes include making improvements to the road, putting up stop signs, cutting down brush, and installing lighting.
3. Enforcement: According to ANTHC staff, the key to successful enforcement is the Village Council's commitment to establish an ordinance or policy and to follow through with enforcement by the Village Safety Officer.

Norton Sound Youth ATV Project Survey: Another method to determine safety needs is to survey OHV user behavior. A 47-question ATV risk behavior survey was administered to 136 youth in four communities in northwest Alaska, as part of the Norton Sound Youth ATV Project in 2005. The purpose of the project was (1) to explore attitudes, knowledge, and practices of 10 to 18-year-old Alaska Native youth ATV users, and (2) to identify factors associated with high-risk ATV practices that could lead to behavior change in the target audience. Parents and community leaders were interviewed as part of the project. Some of the findings included the following:

- Behavior modeling: 84% of respondents stated that their parent/guardian does not wear an ATV helmet.
- Likelihood of wearing an ATV helmet: More than 95% of youth participants claim to not wear an ATV helmet. 83% percent of respondents stated that if they had a 'cool looking' ATV helmet they would wear it.
- ATV safety course participation and perceived value: 21% of respondents have participated in an ATV safety course compared with 79% who have not. 75% felt that an ATV safety course would make them a safer ATV driver.
- ATV laws: Approximately 75% of youth participants stated they were familiar with ATV ordinances in their communities. 100% of youth living in small villages also stated that ATV ordinances in their communities were not enforced.
- Role of the Village Public Safety Officer: Parents unanimously felt the VPSO at the village level needs to play a more visible role in promoting ATV safety.

Bristol Bay Area Health Corporation (BBAHC) Safety Programming: BBAHC has conducted a number of strategies to prevent injury from OHV crashes. BBAHC offers helmet safety classes to local communities. The classes are requested by village councils and schools, and most often are delivered in school during the day as part of the curriculum, usually during PE classes. BBAHC sends instructors from their Injury Prevention program to put on the classes. BBAHC has found that when discussing injury statistics in the community, it is important to talk to the community about how much it costs for the Native

corporations or hospitals to send someone with a head injury to a hospital in Anchorage for treatment. When these costs are considered against the cost of a helmet and enforcement, community members seem to hear the message. Additionally, BBAHC works with helmet dealers to provide helmets at a reasonable cost to the community. Finally, the Bristol Bay Native Association lawyer wrote a sample resolution for villages to pass requiring the use of helmets; this works well if there's a village public safety officer. Many villages have adopted and passed the resolution. Where villages do not have safety officers, BBAHC is working with parents and village Wellness Committee members to encourage them to take responsibility and enforce proper riding and helmet use. This seems to be effective.

Lessons Learned from Existing Programs

Results from existing programs point to the necessity of both education and enforcement, in addition to providing safety equipment. Correspondence with State personnel and ANTHC indicates that merely handing out helmets to people without education or enforcement programs does not work. ANTHC said they have given away thousands of helmets and "there is no evidence that the helmets are being used."

Additionally, parents think their kids are knowledgeable or experienced enough to be driving OHVs, but quite often they over-estimate their children's ability. Educating both parents and kids is important.

Enforcement needs to happen over the long-term. For instance, right after someone gets injured or dies in a community, there is often increased awareness and more enforcement. However, after awhile, the awareness and enforcement intensity decreases.

Finally, more study is needed to determine why OHV operators and kids aren't using safety equipment. ANTHC cites a major need to conduct more focus groups with youths to determine what would encourage kids to wear helmets.

Suggested Strategies

Based on discussions with agency personnel, the following presents problem statements and suggested strategies:

Problem Statement: There are a number of local and statewide organizations and government offices that are conducting programs to increase safety among OHV users. A number of these programs and efforts could be coordinated but are not currently.

Suggested Strategy: Coordinate public outreach efforts and resources among local and statewide organizations and government offices.

1. Establish a stakeholder group to more efficiently and effectively disseminate information, share information, and eliminate redundancy in efforts and resources. For example, Gordon Glaser from the State's Injury Prevention & Emergency Medical Services Safe Kids program is interested in partnering with the State's Highway Safety Office and using their logo and support for additional air time for upcoming Public Service Announcements (PSAs) and advertisements.
2. Other possible partnerships could be between government agencies and manufacturers/dealers, or involving schools in the OHV safety education efforts.

Problem Statement: The public lacks knowledge and awareness of the dangers of OHVs.

Suggested Strategy: Increase safety awareness by educating the public on the dangers of OHVs through a public outreach campaign.

1. Educate both children and adults about the dangers associated with OHVs use.
2. Inform the public using relatable and reachable methods and mediums.
 - Provide PSAs or advertisements on the radio, television, and cable channels in both rural and urban communities to increase awareness.
3. Target awareness campaigns to rural and/or urban Alaskan audiences.
 - OHVs are being used for different purposes in rural and urban areas, resulting in different safety concerns and different preventive measures.
4. Produce a video/DVD focusing on Alaska ATV and snow machine use and safety.
 - The video needs to be specific to Alaska and include uses and safety concerns specific to rural communities.
 - The message should address high-risk behaviors, the importance of safety such as helmet use, and a listing of the current ATV/snow machine laws and ordinances.
5. Provide information to the public to help change society's perception that helmet wearing is 'uncool'.
 - Encourage adults riders to wear helmets
 - OHV safety programs could learn from successful programs that have increased adult rider helmet use for motorcycles. If kids see

that adults think it's not 'cool' to wear a helmet, then kids won't wear a helmet either.

6. Work with manufacturers to provide improved, realistic safety training opportunities and venues.
 - Manufacturers sometimes offer free safety courses as part of the rebate for the purchase of an OHV. However, these trainings oftentimes occur only at the dealership in urban areas, and are not offered in rural areas. Additionally, only a small number of people actually attend these courses.

Problem Statement: No statewide legislation requires OHV drivers and passengers to wear helmets.

Suggested Strategy: Re-visit the need to pass statewide legislation enacting a helmet law for all drivers and passengers on OHVs.

1. Inventory existing ordinances with the intent on assisting communities to upgrade these ordinances or create new ordinances to better reflect safety needs of the region.
2. Determine if stakeholder consensus exists to pursue statewide safety legislation.

If consensus exists to pursue statewide legislation:

3. Consider the scope of the proposed legislation.
 - One idea is to focus on pursuing statewide legislation requiring helmets for riders 18 and under.
 - Another idea it to focus on pursuing statewide legislation requiring helmets for all riders.
4. Study successful models.
 - Alaska law mandates that car passengers use a primary safety device (seatbelt) and a helmet would be a comparable primary safety device.
 - Personal floatation device legislation and campaign with Kids Don't Float.
5. Identify a political champion.
 - Achieving statewide legislation for OHV safety measures has proved difficult for the stakeholders on their own. Perhaps a strong, rural champion for this issue would be able to help move legislation forward.
6. Identify next steps.

If consensus does not exist to pursue statewide legislation:

7. Encourage local cities or boroughs to establish their own local helmet laws. It may be more realistic and easier to create and enforce helmet laws on a local level than on a statewide level.

Problem Statement: The data suggest that youth 14 and under lack either the physical or mental maturity (or both) to drive ATVs and snow machines.

Suggested Strategy: Establish a minimum driving age for ATV and snow machine drivers.

- This responds to the fact that about 20 percent of the hospital admissions resulting from OHV crashes are children aged 14 and under.

Problem Statement: Educating the public and legislation alone do not work; enforcement is needed.

Suggested Strategy: In rural communities, encourage the Village Council's commitment to establish an ordinance/policy and to follow through with enforcement by the Village Safety Officer.

- Even if legislation is passed, there needs to be commitment from the villages or local government to enforce the law.

Problem Statement: Further community studies and surveys are needed to determine young riders' behavior, such as usage of helmets and reasons why.

1. This would produce better data on social factors as to why people are not wearing helmets. In turn, this data will suggest further strategies to encourage helmet use.
2. Conduct focus groups to target audience attitudes and behaviors as well as those of parents and tribal leaders once an intervention has been implemented.

Suggested Strategy: Include helmet/OHV questions on Alaska DH&SS's Behavioral Risk Factor survey to determine whether or not families require their kids to wear helmets and protective gear, and why.

References & Additional Resources

Data from the Alaska Trauma Registry was obtained from Dr. Tariq Ali of the Department of Health and Social Services, Injury Prevention and Emergency Medical Services division and data from the Highway dataport was supplied by Eric Tang at Cambridge Systematics, Inc.

Comments were solicited from select people from the Special Users and Driver Behavior Emphasis Area groups regarding OHV crash and injury data, and possible problems and solutions. Thank you to the following people who responded and/or who provided additional information:

- Shelley Owens, AK Division of Public Health, Injury Prevention & EMS
- Tim Bundy, AK Division of Public Health, Injury Prevention & EMS
- Gordon Glacier, AK Division of Public Health, Children's Programs
- Helen Stanford, ANTHC, Tribal Injury Prevention
- Karen Lawfer, AK Division of Public Health, Injury Prevention & EMS, Injury Prevention
- Dr. Tariq Ali, AK Division of Public Health, Injury Prevention & EMS, Alaska Trauma Registry
- Ryan Hill, formerly with ANTHC, Tribal Injury Prevention, now with the National Institute of Occupational Safety and Health
- Mark Clark, Bristol Bay Area Health Corporation, Injury Prevention

Other Online Resources

Peninsula Clarion February 2, 2007– Kids' safety is all that matters Editorial
http://www.peninsulaclarion.com/stories/020207/oped_0202ope001.shtml

Alaska Department of Health and Social Services, Division of Injury Prevention and Emergency Medical Services:

Alaska Trauma Registry Website

http://www.hss.state.ak.us/dph/ipems/injury_prevention/trauma.htm

Brain Injury Prevention

http://www.hss.state.ak.us/dph/ipems/injury_prevention/helmetSafety/default.htm

Kenai Peninsula Safe Kids Coalition 2002 Snowmachine Safety Event day/
Avalanche Awareness class.

http://www.hss.state.ak.us/dph/ipems/injury_prevention/snowmachine.htm

Snow machine and ATV helmet safety event - Pre- and Post-Tests

http://www.hss.state.ak.us/dph/ipems/injury_prevention/helmetSafety/atv/program.htm

Appendix E

*Institutional Cohesion in Highway Safety Planning
and Programming White Paper*

Institutional Cohesion in Highway Safety Planning and Programming

final report

prepared for

Alaska Department of Transportation and Public Facilities

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Institutional Cohesion in Highway Safety Planning and Programming

■ **Introduction**

This white paper documents the institutional arrangements in Alaska relative to safety planning. Alaska is similar to many other states in that their safety institutional arrangements involve many different agencies and groups with varying mandates and missions. Providing a collaborative and coordinated approach to transportation safety planning is a very real challenge. A comprehensive data-driven safety program includes a range of strategies and actions. The many different agencies and groups responsible for safety-related programs and efforts must coordinate their activities and exchange information to produce effective safety programs.

The Federal Highway Administration's (FHWA) preliminary guideline published in October 2005, *Strategic Highway Safety Plans: A Champions' Guide to Saving Lives (Interim Guidance to Supplement SAFETEA-LU Requirements)*, provides a step-by-step process for developing a Strategic Highway Safety Plan (SHSP). It lists the organizations that need to be involved and calls for a data driven and broadly collaborative process.

The white paper provides a review of the current organizational arrangements, responsibilities, communications paths, and data flows among and between the many organizations and parties involved in highway safety. It reviews the current research to understand how other states are organized to conduct safety planning and analysis. Also, the paper reviews the flow of information needed to help ensure decisions are made in full knowledge of known safety issues and countermeasure effectiveness. The paper also includes a set of selected institutional recommendations.

■ **Safety Planning Process**

To be effective, a core group must be involved in the transportation safety planning process to ensure incorporation of effective safety considerations. This core group will likely include the planning organizations, transportation agencies, traffic engineering, enforcement organizations, emergency responders, and the Governor's Highway Safety Representative. This is clearly the case in Alaska and representatives of the following organizations meet regularly:

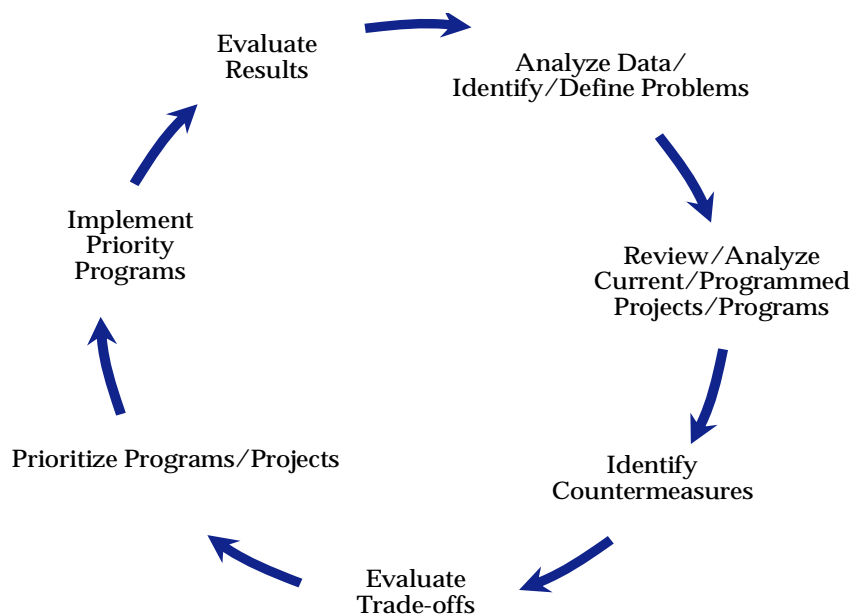
- Department of Transportation and Public Facilities (DOT&PF):
 - Division of Measurement Standards and Commercial Vehicle Enforcement;
 - Division of Statewide Design and Engineering Services;
 - Division of Program Development (includes planning);

- Alaska Highway Safety Office;
- Office of Transportation Management and Security; and
- DOT&PF Regional Offices.
- Department of Administration/Division of Motor Vehicles;
- Alaska Court System;
- Department of Health and Social services; and
- Department of Public Safety.

One of the key characteristics of effective comprehensive safety programs at the state level has been the successful collaboration of many different participants. Such success partly rests on understanding what role each participant plays in the broader perspective of transportation safety.

The development and management of traffic safety programs should be a systematic process with the goal of reducing the number and severity of traffic crashes. This data-driven process should ensure all opportunities to improve highway safety are identified through data analysis, research, and experience. Effective countermeasures should be selected to specifically address the problems and issues identified. Tradeoff analysis should be used to prioritize the countermeasures according to cost and effectiveness and outcomes should be tracked and measured using performance measures. The evaluation results should be used to facilitate identification and implementation of the most effective highway safety strategies and programs. The following figure illustrates the process of safety planning.

Figure 1. Safety Planning Process



■ Roles and Responsibilities

A number of agencies are involved in highway safety planning and programming in Alaska. The lead agency is the AKDOT&PF, including its various divisions and regions which are shown in an organizational chart in Appendix A. However, other agencies play a very important role, including the law enforcement, motor vehicle licensing and registration, metropolitan transportation planners, engineers and advocacy groups, and the public health community. The following is a brief summary of those agencies and their responsibilities.

AKDOT&PF

The AKDOT&PF mission is “to provide for the movement of people and goods and the delivery of state services.” Additionally, in the *Missions and Measures* by which various components of the agency are annually evaluated, there are several specific safety goals established. For example, the agency’s overall goal is to reduce highway fatalities by two percent each year, as measured against 100 million miles of travel (See <http://www.gov.state.ak.us/omb/results/view.php?p=157>). Entities responsible for road safety include:

- **The Division of Program Development** is responsible for the development of the statewide Long-Range Transportation Plan (LRTP) and cooperates in the development of the Metropolitan Planning Organizations (MPO) LRTPs. In Alaska, MPO plans are developed for Anchorage and Fairbanks. According to SAFETEA-LU planning regulations, the LRTP planning process must “increase the safety of the transportation system for motorized and nonmotorized users” and “should be consistent with the Strategic Highway Safety Plan.” Furthermore, the “long-range statewide transportation plan should include a safety element that incorporates or summarizes the priorities, goals, countermeasures, or projects contained in the SHSP.” Safety agencies are to be involved in the State’s consultation process in developing the long-range plan. The MPO plans also must be consistent with the State SHSP.
 - The Division maintains the statewide roadway, traffic, and crash data in a legacy transportation database to support this mission. It is responsible for integrating road centerline, attribute, and business data in a data warehouse and geographic information system (GIS) environment. The newly deployed spatial geodatabase and GIS application integrates the roadway, traffic, and vehicle crash data through geodatabase fields, external tables, and external databases.
 - The division also includes the Safe Routes to School Coordinator who implements the SAFETEA-LU requirement for the SRTS program. The goal of the program is to increase the number of children safely walking and biking to school. The Bike and Pedestrian Coordinator is included in the Division to coordinate bicycle and pedestrian activities across the State (including safety measures).
 - Another area related to safety managed by this division is the operations of both the Road Weather Information System (RWIS) and the Highway Information

System known as 511. Both are ITS programs (Intelligent Transportation Systems) which aid safety through the timely delivery of information to both managers of the highway system and highway users.

- **The Alaska Highway Safety Office (AHSO)**, within the Division of Program Development, enhances the health and well being of the people of Alaska by promoting data driven programs which save lives and prevent injuries on Alaska's highways. AHSO coordinates strategic traffic enforcement partnerships, statewide targeted media campaigns, traffic data pilot programs, EMS communication optimization, and the integration of public health strategies. The office is home to the Fatality Analysis Reporting System (FARS) analyst who collects and maintains fatal crash reports and statistics on every aspect of a fatal crash on Alaska's roads and highways. The office now tracks off-road fatalities, including snow machines and ATV's at the direction of the Governor's Representative. The collaborative outreach efforts with state and local agencies, public and private businesses, and organizations over the past two years has resurrected the three traffic record committees and created new partnerships. A Child Booster Seat Coalition holds teleconferences during legislative sessions and the Motorcycle local chapters and businesses are meeting with representatives from AHSO, DMV, and the Anchorage Police Department about education and other safety concerns. AHSO grants Federal funding to programs which have met certain criteria requirements based on NHTSA and GHSA suggested guidelines. State and local traffic violations and court adjudication are studied alongside crash reports in order to successfully identify high crash locations/areas and crash contributing factors. AHSO also uses Injury Surveillance System (ISS) data in its Highway Safety Plan development process to identify populations at risk, determine costs of injuries, develop projects, and measure the impact of highway safety projects and programs. Using ISS data gives additional or more accurate data on response times, crash outcome/severity, and the effect of protective gear on outcome.
- **The State Traffic and Safety Engineer in AKDOT&PF, Division of Statewide Design and Engineering Services** is responsible for the development and implementation of the Highway Safety Improvement Program (HSIP). The HSIP is data driven with funds targeted towards reducing the number and severity of crashes or to decrease the potential for crashes. Regional Traffic and Safety Engineers are located in Alaska DOT&PF's three regions: Northern (Fairbanks), Central (Anchorage), and Southeast (Juneau). They identify potential project locations by the number and severity of crashes. Generally, projects are ranked by analyzing the benefit – cost of making specific safety-related improvements using estimated crash reduction factors and improvement costs. The most cost-effective proposed projects are submitted to the State Traffic and Safety Engineer at the ADOT&PF Headquarters (HQ Traffic) for approval and transmittal to FHWA for their approval. When FHWA approval is received, State Traffic and Safety personnel select the most cost-effective approved projects to be funded with available HSIP funding. Regional personnel manage the design and construction of HSIP projects while state personnel manage statewide HSIP funding. When three years of post-project crash data becomes available, follow-up studies are conducted to determine the effectiveness of completed projects and the HSIP. The regional traffic and safety engineers are instrumental in identifying needed safety improvements and evaluating their effectiveness over time.

- **The Division of Measurement Standards and Commercial Vehicle Enforcement** is responsible for the inspection of trucks and buses and the enforcement of commercial vehicle laws within the State of Alaska and the administration of the Motor Carrier Safety Assistance Program (MCSAP). The division annually develops a Commercial Vehicle Safety Plan which establishes the annual crash reduction goal along with the actions needed for implementation. The mission statement of the division is to “Enhance motoring public safety and protect public infrastructure and assure market-place confidence and equitable trade.” The division continues to work to meet or exceed the Federal goal of crash reduction of 1.65 fatalities per 100 million truck vehicle miles traveled. The Alaska annual rate of CMV-related fatalities has decreased over the past nine years and is regularly below the national average. Additional information about the division’s safety plan can be found at (http://www.dot.state.ak.us/mscve/webdocs/FFY07CVSP_FINAL.pdf).
- **The Transportation Management and Security Section** coordinates operations, including fleet management, highway and aviation maintenance, operator training, safety, emergency management, security, and provides oversight of those areas for the Commissioner and Deputies. Transportation Management and Security Section (TM&SS) also coordinates major maintenance projects and determines priority of statewide maintenance projects. This section develops policies, procedures, and standards for Maintenance and Operations (M&O) activities statewide to ensure uniform maintenance practices, and provide technical guidance to regional offices. The coordination of the employee workplace safety program, including oversight of accident investigation, reporting, and avoidance programs, and the deployment and integration of the departments Safety Manual also is handled by this section. TM&SS is responsible for coordinating Federally mandated security at state airports, terminals, tunnels and other transportation infrastructure. This section also participates with Federal, military and other state agencies during emergencies and statewide security issues.

Key Agencies

Other key state agencies that have a legislative responsibility in safety planning include the following:

- **The Division of Motor Vehicles, Department of Administration (DMV/DOA)** is responsible for maintaining and operating the motor vehicle and driver licensing systems. DMV receives police and driver reported crashes in order to capture information needed to determine financial responsibility and insurance status. The crash reports are then forwarded to AKDOT&PF. DMV monitors driver safety through driver improvement programs based on behavior, medical, mental, and physical conditions.
- **The Alaska Department of Health and Social Services (DH&SS)** is the lead agency for injury programs in the State. The Division of Public Health within the DH&SS contains organizational units responsible for epidemiology, injury prevention and

EMS, the State Medical Examiner, and vital statistics. The Division of Juvenile Justice manages the Alaska Youth Courts which guides first-time youth offenders through the restorative justice process. The Division of Behavioral Health oversees the Alcohol Safety Action Program (ASAP) which monitors youth and adult alcohol and other drug-related offenders.

- **The Alaska Injury Prevention Center – Anchorage (AIPC)** includes ISS experts that are members of Public Health Plan, Strategic Highway Safety Plan, and Traffic Records Coordinating Committees; they assist local Safe Communities projects and regularly provide data to the FARS analyst. AIPC produces the annual National Occupant Protection Use Survey (NOPUS) in addition to other traffic safety-related studies.
- **The Division of Alaska State Troopers (AST)** is located within the Department of Public Safety. The AST is charged with statewide law enforcement, prevention of crime, pursuit and apprehension of offenders, service of civil and criminal process, prisoner transportation, central communications, and search and rescue. One of the core missions of the AST is to enhance public safety through highway traffic enforcement and education. The Department Crime Lab partners with the Washington State Toxicology Lab to analyze the states alcohol and drug tests. They testify as expert witnesses in court cases and coordinate the State Drug Recognition Expert program (DRE). The growing DRE program trains specific state and local law enforcement officers to detect drug impaired drivers and enhances their ability to detect drivers under the influence of alcohol.

Other agencies and groups involved in highway safety in Alaska include:

- Local and tribal officials responsible for highway maintenance;
- State officials and representatives of Operation Lifesaver responsible for railway-highway crossings;
- Local law enforcement agencies responsible for traffic enforcement, crash reports, school resources, and public education;
- State and local youth organizations;
- Metropolitan planning organizations (MPO) responsible for setting regional planning priorities:
 - Anchorage Metropolitan Area Transportation Solutions (AMATS); and
 - Fairbanks Metropolitan Area Transportation Solutions (FMATS).
- Highway user groups, including the Alaska Trucking Association (ATA);
- Alaska Traffic Records Coordinating Committee (ATRCC) responsible for overseeing effective integration of highway safety databases;

- Motorcycle user groups;
- Other major state, local, tribal, and nonprofit stakeholders;
- Other relevant leadership and program working groups; and
- Courts, prosecutors, and corrections. There are four levels of courts in the Alaska Court System – Supreme Court, Courts of Appeals, Superior Court, and District Court. Traffic citations are processed through either a District Court or a Magistrate, depending on the location of the violation and the workload of the respective court. Magistrates do not have to be lawyers.

■ **Safety Data Collection and Management**

An effective strategic highway safety planning process needs to be data driven to identify and understand the State's crashes and safety issues. Accurate, timely, and reliable data also are needed to identify effective countermeasures and be able to measure performance over time. Therefore, this section briefly reviews the data flow among safety agencies.

Staff in the Highway Database Section, Division of Program Development is responsible for providing a database of reported motor vehicle traffic crashes on public roads. Motor vehicle crash information is first recorded on a crash report form by the AST, local police officers, or the crash victims. Law enforcement agencies and participants forward the reports to Driver Services, Division of Motor Vehicles (DMV), the FARS analyst, and the Alaska Department of Administration. DMV forwards a copy of each crash report to the AKDOT&PF Division of Program Development, Highway Database Section and the FARS analyst.

AKDOT&PF has started several initiatives for electronically submitting crash and citation data that will increase accuracy, timeliness, and efficiency. The driver vehicle crash report is web-enabled through the State of Alaska *myAlaska* services Report a Vehicle Accident (<https://myalaska.state.ak.us/home/app>). The police crash report form will be made web enabled over the next two years.

To improve the reporting of citation and crash information to the DOT and other agencies, the Alaska DOT&PF, Division of Measurement Standards and Commercial Vehicle Enforcement has implemented Traffic and Criminal Software (TraCS), an application software that combines laptop computers, one or more PCs in a central office, and data communications to provide officers with all of the functionality necessary to record and retrieve incident information wherever and whenever an incident occurs.

The TraCS software was developed in response to the need for a well-designed information management tool for field officers that would simplify the data collection process and ease the administrative burden on officers. The TraCS software will speed up the issuing of traffic citations, increase officer safety, increase citation data quality, and reduce administrative costs associated with citation data entry for DOT&PF.

The original goal of this project was that once the system was fully functional, TraCS electronic forms (crash, citations, etc.) would be offered to other law enforcement agencies free of charge. A TraCS Steering Committee has been formed to oversee TraCS implementation in Alaska. This committee includes agency personnel from Alaska DOT&PF, Alaska Court System, Division of Motor Vehicles, Department of Public Safety, Alaska State Troopers, Alaska Railroad, and Anchorage Police Department. The Steering Committee intends to expand TraCS to agencies outside the Anchorage area during 2008.

This effort really consists of three discrete *pilot* projects:

1. Citations
2. Crash
3. DUI Package

The citations pilot is nearly fully deployed by DOT&PF. The TraCS Steering Committee is working with the Alaska State Troopers to develop a statewide uniform misdemeanor citation form. Completion of the development of this form would enable all law enforcement agencies to use TraCS for citation issuance *should they choose to do so*.

The crash pilot project began in early summer of 2007. A 90-day field test is planned utilizing Anchorage Police Department, Alaska State Troopers, and Juneau Police Department during the winter and spring of 2008. Following the field test, an evaluation will be conducted prior to a decision to operationally deploy an electronic crash form using TraCS.

A project manager within the Division of Motor Vehicles has been selected for the DUI Package pilot project. An application for funding has been approved and an RFP is being prepared to secure expert assistance in developing and evaluating this pilot project. The project is expected to be executed and completed during 2008.

The Alaska State Troopers have announced that they would like to deploy TraCS pending completion and evaluation of the crash pilot project.

■ Data Sharing

AKDOT&PF has a legacy mainframe data base, the Highway Analysis System (HAS), that provides information on the roadway network, traffic data, and crashes. The Highway Data Port (HDP) was created as a portal that allows internal AKDOT&PF users to query data from HAS. The HDP was created to:

- Establish a framework for accessing transportation data outside the legacy mainframe menu-driven environment; and
- Meet the business needs of frequently requested transportation datasets.

The HDP contains vehicle crash records, basic bridge locations, speed study stations, weigh-in-motion (WIM) data, and in the near future, average annual daily traffic (AADT). Other data sets will be added to meet safety analysis requirements. The HDP will be the gateway for an enterprise geographic information system and highway digital imaging. Crash records, bridges, and roadway characteristics are retrievable by route or by geographic area (census areas, boroughs, and first class cities). HAS extracts periodically populate the HDP. A public version of HDP will be deployed in 2008. In addition to utilizing HAS, the Intersection Magic software program is employed as an analytical tool for analyzing crash factors at urban intersections.

The statewide FARS Office was established in 1974 to gather fatal crash data and make a record of every aspect of that data for future analytical purposes. Since its establishment, FARS has become the State's first response center for highway fatality data as FARS keeps track of up to the minute data on every aspect of a fatal crash.

Alaska's Multi-Agency Justice Integration Consortium (MAJIC) was established to help agencies more efficiently share complete, accurate, timely information to enhance the performance of the criminal justice system as a whole. MAJIC meets once a month and is comprised of representatives from 18 organizations across the State.

The Traffic Records Assessment interviews, discussed in the next section, revealed that relatively few individuals in the AKDOT&PF have thorough knowledge and understanding of the vehicle crash analysis section of the HAS. These individuals have many years of experience and may be retiring in the next five years. Other AKDOT&PF regional engineers rely on these individuals to provide the necessary information and data extracts to assist in potential project identification and analysis. As is true in many states, there is an obvious need to properly train other engineers and information technology personnel on the AKDOT&PF data system and the use of analytical tools.

The AKDOT&PF is working to make the HDP accessible to users outside the agency. While these data currently are being made available on CD-ROM, when requested, the goal is to have it accessible over the Internet in 2008.

■ **Traffic Records Assessment**

In November, 2006, the Alaska Traffic Records Coordinating Committee (ATRCC), under AKDOT&PF, carefully selected a five-member team of outside traffic record professionals to conduct a statewide traffic records assessment. This is an initiative paid for by the State with Federal funds. After receiving approval from the National Highway Traffic Safety Administration (NHTSA), the Assessment Team, possessing expertise in each of the major components of a state traffic records system, conducted the Assessment on May 7-11, 2007 in Anchorage. They assessed the support that the State of Alaska's traffic records system provides for the identification of traffic safety problems, and the evaluation of implemented countermeasures to reduce and eliminate fatal, injury, and property damage crashes. The assessment reviewed the status of traffic records system and, although not

the main purpose of the study, made some recommendations related to the SHSP. The major recommendations concerning the SHSP from the draft assessment report follow:

Key Assessment Recommendations

- Pursue executive-level support at the highest possible levels of state government and across agencies in support of the implementation of the SHSP and the Traffic Records Strategic Plan (TRSP).
- Integrate the planning process and organization units for the SHSP and the TRSP and the Healthy Alaska 2010 public health plan, and ensure that these processes consider the requirement of operating plans such as the HSIP, MCSAP plan, the HSP, the State EMS plan and other related plans.
- Identify high-level champions who have the authority to assign resources and responsibility for achievement of strategic plan objectives, and develop a timeline and reporting mechanism for progress toward achieving those objectives.
- In both the SHSP and the TRSP require periodic reviews and updates of system needs and resources, and include a process for periodic updating of plan objectives supporting strategies and timelines.
- In both the SHSP and the TRSP, identify a strategy to conduct a detailed system inventory of all core data systems, with complete data dictionaries, data element and definitions, data quality indicators, and collection and management processes, documenting their compliance with national standards and best practices.
- In both the SHSP and the TRSP, identify a strategy to address data quality assessments, requirements, protocols, analysis, and publications. Establish a series of standard reports for identified target audiences such as policy-makers and funding agencies.
- Within the TRSP, develop a strategy for law enforcement data automation, transmission and access/sharing that supports both SHSP and TRSP objectives. This strategy will identify the logical data flow of an automated system, necessary strategic resources, and the progression of improvements to system completion.
- Within the TRSP, develop a strategy for training personnel in data collection, analysis, and use that support both SHSP and TRSP objectives. A training and human resource strategy should be a component of both the SHSP and TRSP plans.

■ **Alaska Safety Planning Issues**

Most of the institutional issues identified in state safety planning relate to organizational structure and the decision-making process. Common issues involve whether there is

sufficient collaboration among safety agencies, and whether safety functions are located in the correct agency such as whether the Highway Safety Office is located where it can be most effective.

Organization and Collaboration

The operation of the AHSO is consistent with research that indicates in most states, the executive level is led primarily by the Department of Transportation (DOT) and the Highway Safety Office (HSO). They provide overall guidance and leadership to the safety planning effort and collaborate with other agencies, including the DPS, DMV, Motor Carrier Safety Assistance Program (MCSAP), state agencies providing policy leadership in health, education, and emergency medical services (EMS), and other safety stakeholders. A recent survey indicates in most states (57 percent), the Governor's Representative for Highway Safety is located in either the DOT or the DPS. The following table indicates the breakdown.

Table 1. Agency Breakdown

Agency	Governor's Representative	Highway Safety Coordinator
Bureau/Department of Highway Safety	1	3
Department of Economic and Community Affairs	1	1
Department of Homeland Security	1	–
Department of Motor Vehicles	2	3
Department of Transportation	18	17
Department of Transportation Combined with Other Agencies	2	–
Department of Public Safety	14	12
Department of Public Works	2	1
Governor's Office or Agency	7	6
Highway Administration	1	1
Highway Safety Office	3	3
Office of Facilities Management	1	1
Law Enforcement	1	–
Traffic Safety Commission	2	1
Total	56	49

The traffic records assessment, described above, noted that there appears to be little or no executive-level (agency heads and upper management) strategic coordination of public health and safety initiatives, at least in the transportation arena, although there have been numerous stand-alone projects. The safety program planning process is not strategic; i.e., an environmental scan has not been performed, nor have short- and long-term strategies with performance measures been identified.

The AHSO director is involved in the planning process and is integrating the SHSP with the Highway Safety Plan (HSP). It is not apparent whether the operational plans of other organizations with transportation safety missions will be integrated into the SHSP. The

SHSP could serve as a catalyst for coordinating the safety plans of MCSAP, HSP, Healthy Alaska 2010, the State EMS Plan, Transportation Improvement Programs (TIP), and the Department of Health and Social Services State Alcohol Treatment Assessment, etc.

It is important that the State executive level, which includes the organizational leadership of the agencies and groups, strengthen their involvement in comprehensive safety planning. It is important to have this level of decision-making involved because agency leaders provide overall guidance, budget approval, and resource allocation to those who implement the policies and plans. As it currently stands, the safety planning and programming staff who implement programs also identify needed partners informally, and ask them to participate in further planning; the enlarged group then identifies additional needed partners.

Alaska is not unique in terms of organizational structure issues. Every state organizes itself differently in how it addresses highway safety planning. In some cases, the Governor's Representative for Highway Safety is located within the State DOT, and in other cases the position is located in public safety, state police, governor's office, or motor vehicles. With strong institutional structures to link the different stakeholders together (e.g., to establish standard operating procedures and decision-making structures that assure collaborative efforts), it should not matter where the different units are located. However, it is interesting to note that in two of the four states recognized for safety leadership by AASHTO; a very strong overarching safety commission exists that is viewed as a credible and influential source of policy guidance and direction (Washington and Michigan). The states differ with respect to organizational structures. In Iowa, Louisiana, Michigan, Ohio, and Washington the behavioral and infrastructure safety responsibilities reside in separate agencies, most often the DOT and the DPS. However, in about a third of the states, including Missouri, both functional responsibilities are housed within the DOT. For effective collaboration, what is needed are strong institutional structures and linkages among the safety planning participants. An overarching safety commission, such as in Michigan and Washington, is one way to provide that strong formal structure and linkage. Other ways might include having a safety charter or memoranda of understanding among the key safety agencies (Louisiana and Ohio).

Having the Highway Safety Office located in the Division of Program Development is effective for Alaska. Based on the SHSP interviews, there is expanding communication and coordination between the AHSO and other safety agencies. For example, in implementing the Safety Corridors program, there has been positive collaboration between the Governor's Representative, the Central Region Traffic Safety Engineer, and the Alaska State Trooper Headquarters Captain. Also, one of the strengths of locating the AHSO within the division responsible for planning and programming of transportation improvements is that safety planning can be integrated into the long-range planning, programming, project implementation, and funding. In other words, this organizational structure has the potential to promote mainstreaming safety into the transportation planning process. Another supporting factor for this organizational structure, although not the paramount one, is that it helps meet the SAFETEA-LU requirements of integrating safety considerations into the long-range planning process and providing consistency

with the SHSP. It also helps to ensure coordination and consistency with the MPO plans in Anchorage and Fairbanks which must include safety elements.

The Michigan and Washington examples are described below in somewhat more detail.

Michigan

Michigan has been one of the most engaged states in road safety planning at all levels of government. The Governor's Traffic Safety Advisory Commission (GTSAC) was established in the 1940s and recodified in May 2002 to provide leadership in identification of state and local traffic safety issues and promote recommended strategies to address them. The GTSAC consists of the Governor (or a designee), the Directors of Education, State DMV, State Police, and Transportation, the Governor's Office of Highway Safety Planning (the designated Governor's Representative for Highway Safety), the Office of Services to Aging, and three representatives from county, city, and township governments. Two of the three local representatives represent police departments. The collaborative characteristics of safety planning in Michigan now occur primarily through the GTSAC, although as noted by Michigan officials, the many informal interactions that happen among the involved agencies, especially between MDOT and OHSP, really serve as the foundation for an effective process. The role of the GTSAC and the strong safety advocacy of high-level managers in MDOT have fostered collaborative efforts among the safety stakeholders in the State. There are no memoranda of understanding among safety stakeholders since the GTSAC is responsible for achieving support for the State's safety strategy.

Washington

In Washington, safety planning is collaborative with the Washington Traffic Safety Commission (WTSC) providing overall coordination. Members of the commission include the departments of Transportation, Licensing, Health, Local and Human Services, Public Schools, the State Patrol, representatives from cities and counties, and a representative from the judiciary. The Governor chairs the WTSC and is actively engaged in the policy setting and programmatic directions of the Commission. The highway safety office staffs WTSC and provides day-to-day management and operations.

Within the DOT, safety has been primarily the responsibility of the traffic operations and design units, although the planning division has been aggressively incorporating safety into recent updates of the statewide transportation plan. A highway safety issues group (HSIG), co chaired by the heads of traffic operations and design, has been established within the DOT to make strategic recommendations on safety policies and programs as well as providing feedback after projects are implemented. Both the HSIG and the Secretary are major safety champions.

The primary means of conducting safety-related discussions and communicating safety issues to a broader community is through the institutional mechanism of the WTSC. Memoranda of understanding and other types of agreements are the means used to establish the structure and responsibilities of those involved. Within WSDOT, the HSIG uses a charter to provide written guidance on the roles and responsibilities of the HSIG members with respect to safety issues.

Alaska Model

According to the Traffic Records Assessment, executive-level leadership exists in the health care arena. By a February 2007 Administrative Order, the Governor established an Alaska Health Care Strategic Planning Council to develop a statewide plan to identify short- and long-term strategies that address access, cost, and quality of health care, and to develop an action plan. The process will be strategic, beginning with an environmental scan and proceeding to short- and long-term strategic plans that promote integration across delivery systems. The process should establish performance measures and accountability that can be monitored by policy-makers. The Council could provide a model for the Alaska highway safety organizations. This type of leadership in the Alaska health care area is very similar to the types executive leadership in highway safety described in other states above.

Additional Collaboration

- Other ideas on collaboration would be to investigate the possibility of collaboration with the University of Alaska to conduct appropriate highway safety research, investigate pedestrian/bike issues in Alaska communities, or other appropriate collaboration similar to relationships in other states. A number of state DOTs collaborate with their universities on safety issues particularly involving assistance in dealing with data needs and storage (Iowa, Wisconsin).
- In the interview process, improved coordination was suggested between the enforcement and the judicial community. Sometimes citations are dismissed because the judicial system does not fully understand the law supporting the infraction. This communication will be improved when the Department of Law hires Traffic Safety Resource Prosecutors to help train other prosecutors on judicial and enforcement issues related to highway safety.

Safety Champion

Research shows that every successful program has an influential individual or group of individuals to provide the impetus for the safety planning effort. Sometimes, this individual or group is a champion not only because of their interest in safety, but also because of the position they hold in the institutional structure. Each of these groups has emphasized safety concerns in their institutional decision-making processes, and has strongly influenced how others pursue safety goals.

According to NCHRP 8-36(57) safety champions may vary by organization but they seem to have some common characteristics, including:

- Holds a position of influence or leadership within an organization involved in transportation and safety;
- Is able to get others to collaborate;

- Has the ability to understand and communicate the “big picture”;
- Is able to articulate the reasons for collaboration;
- Has resources to support collaboration;
- Has developed a support structure for collaboration; and
- Is respected, trusted, and viewed as credible by other collaboration partners.

In some states such as Washington and Ohio, the Governor or the Secretary of Transportation is the safety champion.

■ **Division of Motor Vehicles**

One issue that has been raised is the possibility of organizationally moving the Division of Motor Vehicles from the Department of Administration to the Department of Transportation and Public Facilities or alternatively to the Department of Public Safety, where it once resided. The intent of this recommendation is to strengthen the State focus on safety. The rationale is that the move might encourage and allow the DMV to focus more closely on safety issues and to integrate more effectively with other highway safety undertakings. Currently, the function of DMV is oriented largely to customer service for registrations and driver licenses. The merger also would allow a better link in providing crash data directly to the data section in the AKDOT & PF.

Ten years ago, the Division of Motor Vehicles was moved to the Alaska Department of Administration from the Alaska Department of Public Safety. The main activities of DMV are issuing vehicle registrations and titles, examining and licensing drivers, administering financial responsibility, mandatory insurance, driver improvement programs, conducting administrative reviews under “drunk driver” laws, and providing records management for all functions. The Division also is responsible for the administration of the safety responsibility law, driver improvement point system, and the collection of motor vehicle registration taxes. Truly, it is intended that DMV have a transportation safety function among its responsibilities. Yet it currently resides in a state department with no other role in highway safety.

One of the advantages of moving DMV to DOT&PF expressed by those interviewed as part of the SHSP is that it would reduce the duplication of resources and activities. There are times when educational efforts on the same topic are developed and publicized by both agencies separately. Another advantage of a merger is that it would allow resources to be combined and provide a more powerful highway safety message. It also would maximize the use of Federal safety funds and other highway funds in addressing highway safety. In addition to being more cost-effective, a merger might raise the importance and visibility of the highway safety function in the DMV. Currently, DMV does not include safety as part of their mission statement which is probably because they have so many administrative responsibilities. Research has found that programs benefit from having

safety agencies integrated into one department or by providing an overarching commission or memorandum of understanding to promote more effective collaboration.

In July 1997, the Division of Measurement Standards and Commercial Vehicle Enforcement was created in the AKDOT&PF by combining staff, functions, and responsibilities of groups formerly in the Departments of Commerce, Public Safety, and Transportation. Division staff increased from 4 to 35 full-time equivalent employees statewide. This merger resulted in a significant increase in cohesion and coordination on commercial vehicle issues within Alaska. For example, since the merger, the use of weigh-in-motion sensors and electronic transponders has been implemented, in part, with Federal highway funding from the AKDOT&PF. Several data sharing initiatives also were achieved. It is unlikely this same degree of cooperation and progress would have been realized had the division remained in a separate agency with little highway safety focus. This is an example of institutional change that can lead to very positive outcomes. The same might be possible with DMV.

Another reason for the move would be to streamline delivery of the crash reports. Crash reports are submitted to DMV by law enforcement or crash victims where the DMV then checks for proof of insurance and attempts to determine “at fault” before sending it on the Division of Program Development, AKDOT&PF. Typically AKDOT&PF does not receive the crash reports until 60 to 90 days after the crash event. Integrating DMV with the AKDOT&PF would allow increased attention to this delay in transfer, improve the link to HAS and perhaps speed the conversion to an electronic data collection procedure.

In addition to the safety crash records being used in the SHSP, DMV crash, registration and licensed drivers data also are used in the Long-Range Transportation Planning (LRTP) process conducted by the AKDOT&PF as required by Federal law. The LRTP must include a long-range safety element and, at least, 20-year forecasts. Crash reports are used in the LRTP safety element and registrations and licensed drivers are used as part of the basis in developing 20-year travel forecasts. These forecasts are critical in determining priorities and ultimately highway design decisions. A merger would allow for further collaboration in these efforts.

■ Off-Highway Vehicle Issues

One issue area that surfaced as a significant concern during the SHSP committee meetings was the safety record of ATVs and snow machines. Currently, requirements for driver licenses and registrations are less restrictive in rural areas on the use of motor vehicles, including snow machines and ATVs that are used “off-system.” These snow machines and ATVs are considered off-highway vehicles (OHV). One of reasons for this issue is because it is difficult to provide driver education, training, testing and licensing in rural areas of Alaska. Also, the transportation systems (mainly roads) are temporary and without signage or markings. There also are exemptions for Commercial Driver’s Licenses (CDLs) in rural areas. In addition, rural families rely on younger family members (less than 16 years of age) to use these vehicles to make necessary trips for food supplies and other purposes.

These younger family members would not normally be licensed drivers. These exemptions seem to be a growing safety problem.

There were approximately 1,700 crashes and hospital admissions related to off-highway vehicles (OHVs) in Alaska over the last five years and hospital admissions are on the rise. The 24 and younger age group accounts for more than 50 percent of both OHV crashes and hospital admissions caused by OHV crashes. People under 14 years of age are two times as likely to be injured by ATV's as snow machines. Males are more than three times as likely as females to be the drivers of OHVs involved in crashes. One-third of all fatalities in Alaska caused by OHVs were alcohol-related. A greater number of OHV crashes occur in urban areas, but crashes resulting in hospital admissions occur more often in rural areas. More details and additional information on OHV crashes can be found in a separate report prepared at the request of the highway emphasis area group, *Alaska Strategic Highway Safety Plan, Off-Highway Vehicle Crash and Injury Data White Paper, July, 2007*.

Despite the OHV safety dilemma, ATVs and snow machines are the major mode of travel on Alaska's rural roads and trails. Recommendations should consider increased funding for OHVs safety education programs that target the unique transportation system in rural Alaska. This might include safety education teams that visit rural areas that have OHV users, training in the use of GPS technology, trail markings on remote trail systems in areas of the State without roads. The AK Department of Health and Social Services does offer a one-day program of training and hands-on demonstrations about snow machine riding by children and teens in local communities. Industry might also be asked to improve user safety by providing training and education, limiting the sale of large or high-powered machines to riders over the age of 16, and encouraging riders to wear a helmet to prevent head injuries. Consideration should be given to increased regulation of younger users of ATVs and snow machines. It may be difficult to administer and enforce increased regulations in remote areas Alaska but other rural states have regulations on age, registration, helmet use, parental guidance, etc. A State Senator who also is a Native Leader and highway safety advocate wants rural education for young drivers.

This area of concern about OHV and their young drivers is addressed with countermeasures in the Driver Behavior Action Plans and the Special User Action Plans. One recommendation is to establish a task force or team on the issues to increase public awareness, further analyze the issues and suggest strategies to address the issue.

■ Long-Range Transportation Plan

The AKDOT&PF currently is updating the State's Long-Range Transportation Plan (LRTP). This effort is being lead by the Division of Program Management. This plan will analyze the transportation issues facing Alaska in all modes over the next 20 years or more. It will describe the needs and recommended policies for maintaining and improving the transportation system in Alaska. The plan will consider the interrelationships between the long-term transportation infrastructure needs and other social, economic, and environmental goals. Among the considerations will be highway safety.

As a link to highway safety, the LRTP must include a long-range safety element and reference to the main strategies produced as part of the SHSP. SHSP strategies such as providing passing lanes, additional lanes, rumble strips, bicycle and pedestrian improvements, etc., should be consistent and supported in the infrastructure policies recommended in the LRTP.

Another issue related to long-range planning and safety is the lack of data on pedestrian and bicycle facilities and use. It is difficult to determine the extent of the safety problem with pedestrians and bicycles until the exposure rates for these modes are known. Also, information is needed on the condition and extent of the facilities in both areas. More detail on the extent of these problems and proposed strategies are contained in the Special Users section of the SHSP.

■ **Legislative Foundation for Highway Safety**

Alaska's statutes that govern highway safety may be due for a wholesale review and update. Follow-up activities to implement the SHSP should include a comprehensive review of highway safety legislation in the State. The SHSP data analysis and stakeholder outreach have identified areas where the State's laws could be strengthened by including new legislation addressing: refusals to take BAC tests; aggressive driving; red light running at traffic signals; exemptions for young drivers in rural Alaska; training of ATV operators; and the testing of motorcycle drivers. Improvements to strengthen the GDL could be legislated too, such as banning cell phone use until the driver is fully licensed and removing the rural exemptions to state law that limit the hours when new drivers may operate a motor vehicle. New legislation to establish a Governor's Road Safety Advisory Commission (GRSAC), responsible for implementing the SHSP and recommending highway safety programs in Alaska, would be beneficial. Similar commissions have been set up in Michigan and Washington and have been very effective. Alternatives to legislation establishing a GTSAC would be the issuance of an executive order creating the commission or a Memorandum of Understanding (MOU) between the various safety agencies with agreement on responsibilities in implementing the SHSP. The need for these changes and new legislation are well documented and justified within the emphasis area analysis and the action plans

■ **Human and Financial Resources**

During the study, members of the leadership and working committees have expressed the need for added resources. Growing demands for new safety programs and new Federal safety requirements have increased the need for staff resources. For example, new programs such as the Safety Corridors have meant overtime for many personnel – especially enforcement. If programs such as this are continued and expanded additional funding and staff will be necessary. Data improvements identified in the traffic record assessment included the increasing need for more trained staff. An example would be the development and implementation of programs such as TraCs. Implementing new

countermeasures such as cable barriers, passing lanes, single-lane roundabouts, bicycle and pedestrian facilities, and new driver behavior programs will require additional funding.

■ Findings

1. The plan is to deploy a public version of the HDP in 2008.
2. TraCS is being pilot tested before full deployment in 2008.
3. The TRCC has developed a strategic plan to coordinate and improve the flow of safety data. Its implementation will be coordinated with the SHSP.
4. For effective collaboration, what is needed is strong institutional structures and linkages among the safety participants.
5. An overarching safety commission is one way to provide that strong formal structure and linkage.
6. Having the Safety Office located in the AKDOT&PF, Division of Program Development works effectively.
7. Improved coordination was suggested between the enforcement and judicial communities.
8. The University of Alaska could be approached to assist in conducting highway safety research as is done in other states.
9. National research has found that every successful highway safety program has an influential individual or group of individuals to provide the impetus for the safety planning effort.
10. DMV could raise its level of safety emphasis if located in a state agency with a safety mission.
11. The number of hospital admissions related to OHV crashes are on the rise. Younger age groups account for most of those hospital admissions.
12. Alaska is updating its LRTP and which will be linked to the SHSP goals and countermeasures.
13. Follow-up activities to implement the SHSP should include a comprehensive review of highway safety legislation in Alaska.
14. Increased human and financial resources may be needed to successfully increase the emphasis on highway safety in Alaska.

■ Recommendations

1. Each agency should establish **common goals, mission statements, and safety targets**; and incorporate them consistently into their priorities. Some of the main state safety agencies do not have safety listed in their mission statement.
2. Identify, train, and support **safety champions**. Research has found that states with safety champions have a great deal more success at developing and implementing highway safety measures. Inherent in this recommendation is to seek out replacements for current champions that may soon retire.
3. Establish a high-level **executive council such as the Governor's Road Safety Advisory Commission (GRSAC)** with state and local participation that meets periodically and works collaboratively to identify problems, solutions, and resources, coordinate efforts, and improve accountability. The AHSO would provide the staff support and coordination for the GRSAC. This recommendation is included in the Driver Behavior action plans.
4. Engage the **leadership** of other organizations in structured opportunities to motivate them to adopt a safety orientation in their planning and investment strategies.
5. Consider the **relocation of DMV into a state department** with a major role in highway safety (either DPS or DOT&PF). The DMV is an integral part of the highway safety team, but is essentially removed from the two most significant state departments with a highway safety focus. Currently, DMV does not have safety as part of its agency mission.
6. **Establish TraCS** (or similar software) as a statewide accident reporting requirement to both ensure uniformity of data from all involved agencies and reduce the time-frame between accidents and the data being available to help guide highway safety improvements and related strategies.
7. **Establish a Multi-agency Task Force or study team to analyze the OHV safety issue**, examine the OHV data, and identify strategies that could be implemented at the State and local level. This analysis should include evaluating what strategies have worked in other states and local communities. The team should increase the visibility of this issue with the public, local government, and the legislature and recommend strategies that will improve OHV safety in Alaska.
8. **Link the SHSP with the LRTP**. The LRTP should include a long-range safety element and reference to the main strategies produced as part of the SHSP.
9. **Establish a multiagency task force** to conduct a comprehensive review of state safety legislation and identify areas that need to be revised and added. Legislative suggestion that come from the emphasis area strategies serve as a place to start.

10. Consider the need for **additional human and financial resources** to provide more trained staff and funding for continuing existing programs and implementation of new countermeasures.

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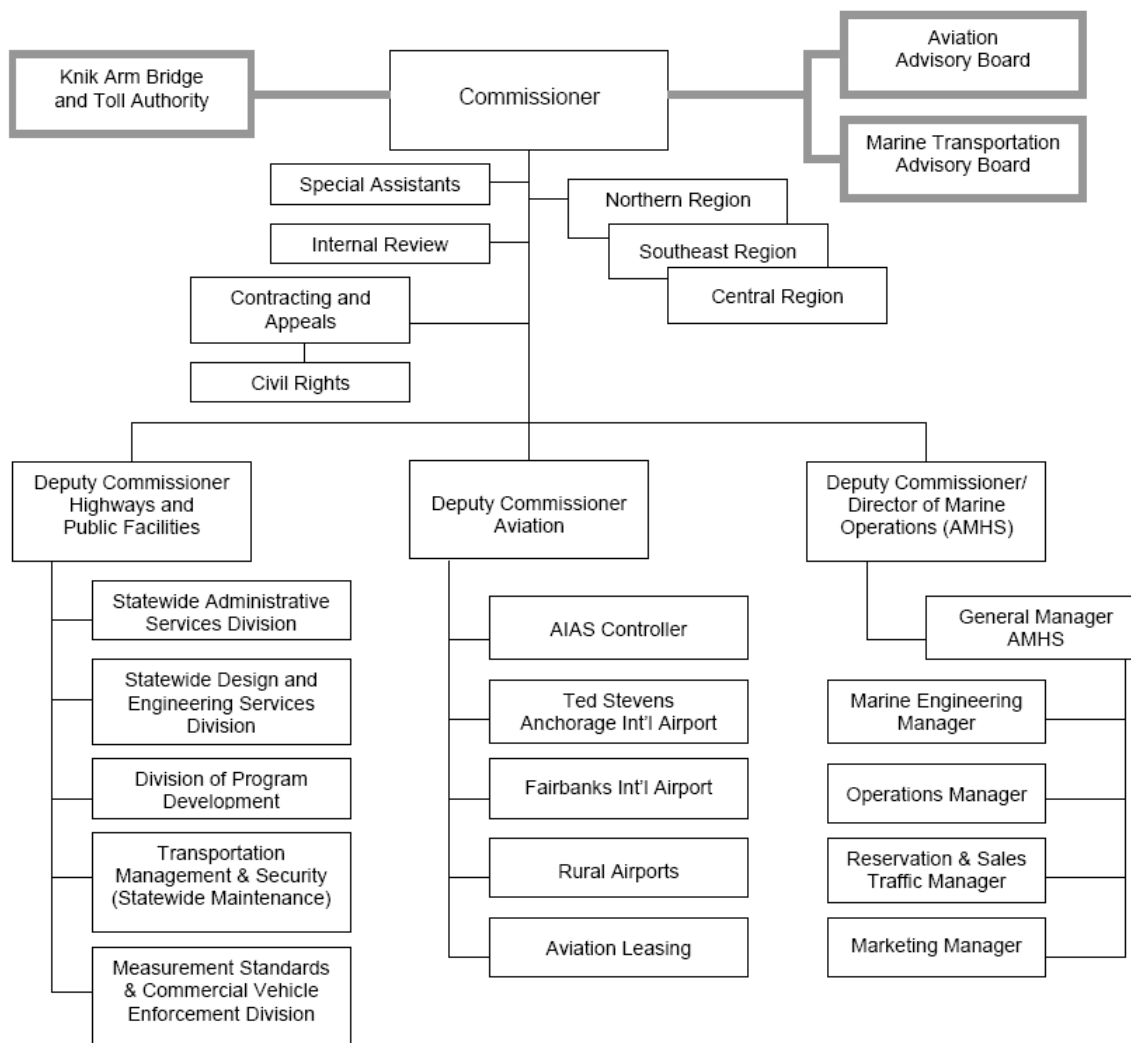
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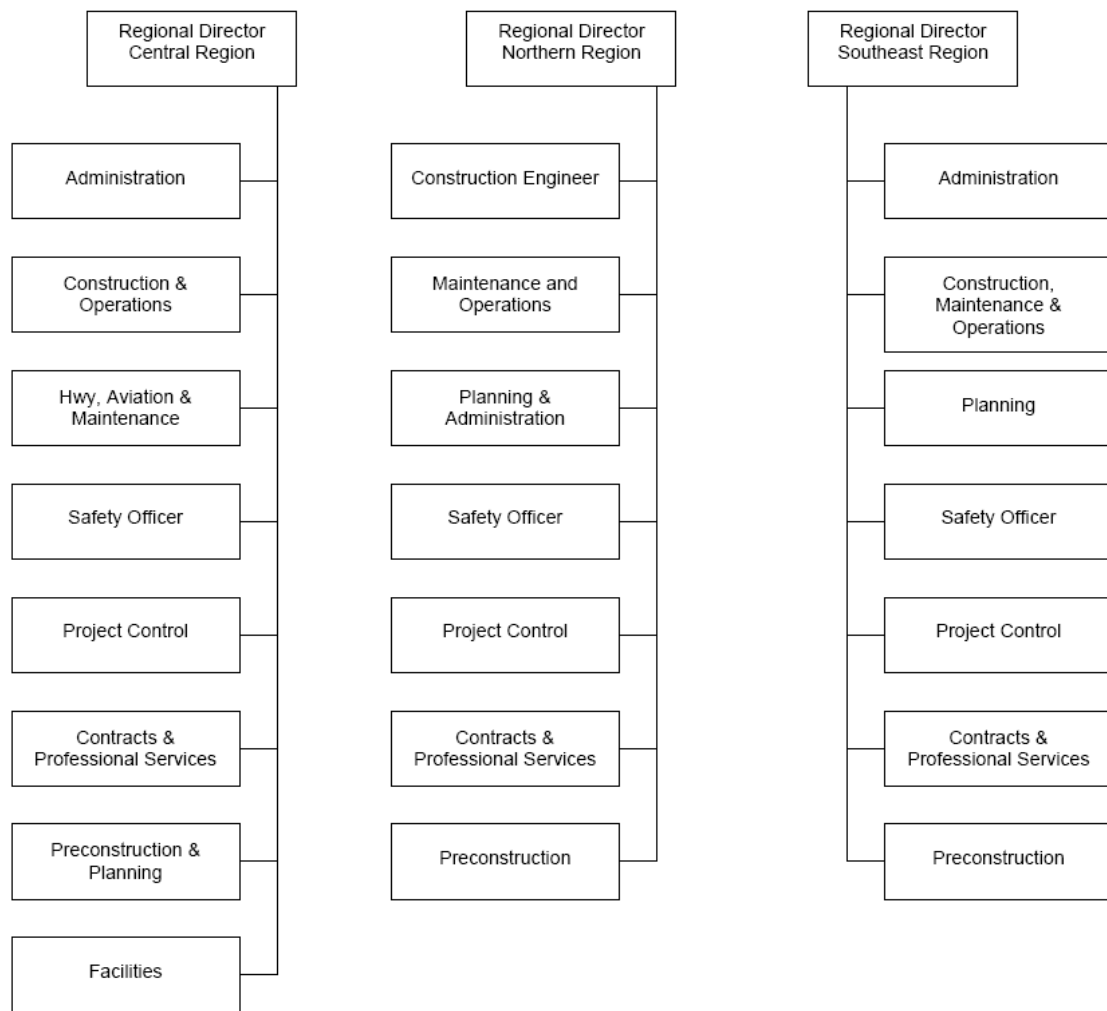
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■ Appendix A

AKDOT&PF Organization Overview





Appendix F

*Municipality of Anchorage Crash and Fatality Data
White Paper*

Alaska Strategic Highway Safety Plan

Municipality of Anchorage Crash and Fatality Data

Prepared for:

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August 30, 2007

Introduction

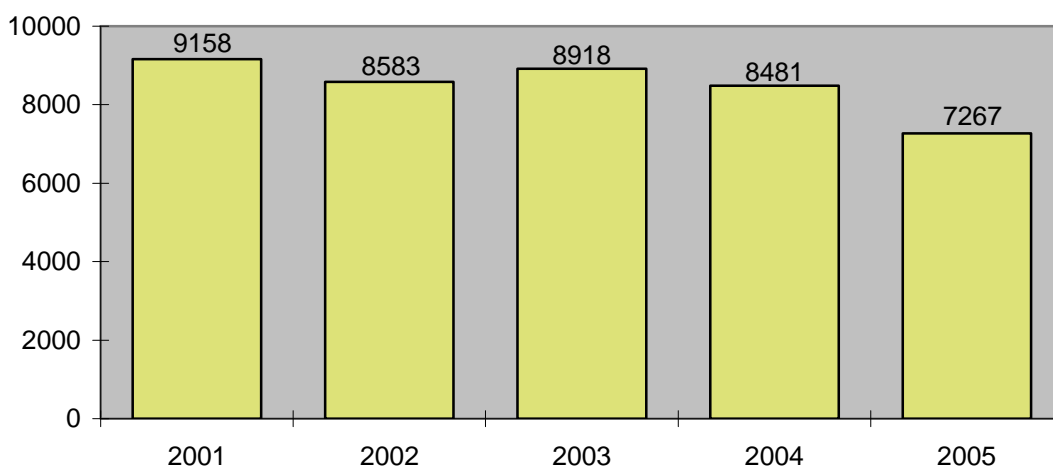
The Municipality of Anchorage (MOA) has seen a general decrease in the number of collisions and fatalities since 2001. During this time, the Anchorage Police Department (APD) has undertaken specific efforts to make roads safer in the city. This paper presents a brief summary of MOA crash data and highlights several of the APD's safety efforts. The purpose of this paper is to look at what the APD has done and identify achievements that may be applied on a state-wide level, as part of the planning effort for the Alaska Strategic Highway Safety Plan.

The data presented in this paper was obtained from two main sources – the Alaska Department of Transportation and Public Facilities (ADOT&PF) Highway Data port and discussions with APD Lieutenant Nancy Reeder.

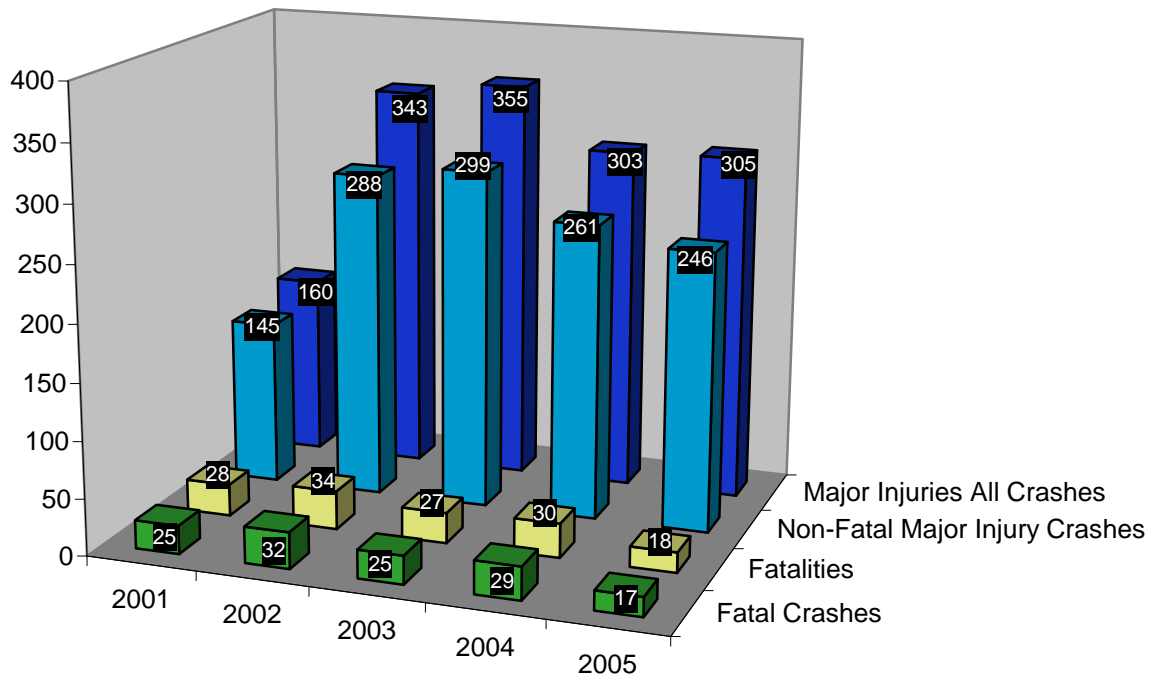
Municipality of Anchorage Crash and Fatality Data

Crash numbers extracted from the ADOT&PF Highway Data Port show the number of crashes and fatalities in the MOA have generally been on the decline since 2001. *See Figure 1.* Across the board, the number of crashes, fatal crashes, fatalities, non-fatal major injury crashes, and major injuries all crashes have decreased. *See Figure 2.*

Figure 1. Total Crashes, Municipality of Anchorage, 2001-2005



Source: ADOT&PF, Highway Data Port.

Figure 2. Crashes and Fatalities, Municipality of Anchorage, 2001-2005

Source: ADOT&PF, Highway Data Port.

Note: Major injury data in 2001 data may be in error or reported differently than in subsequent years.

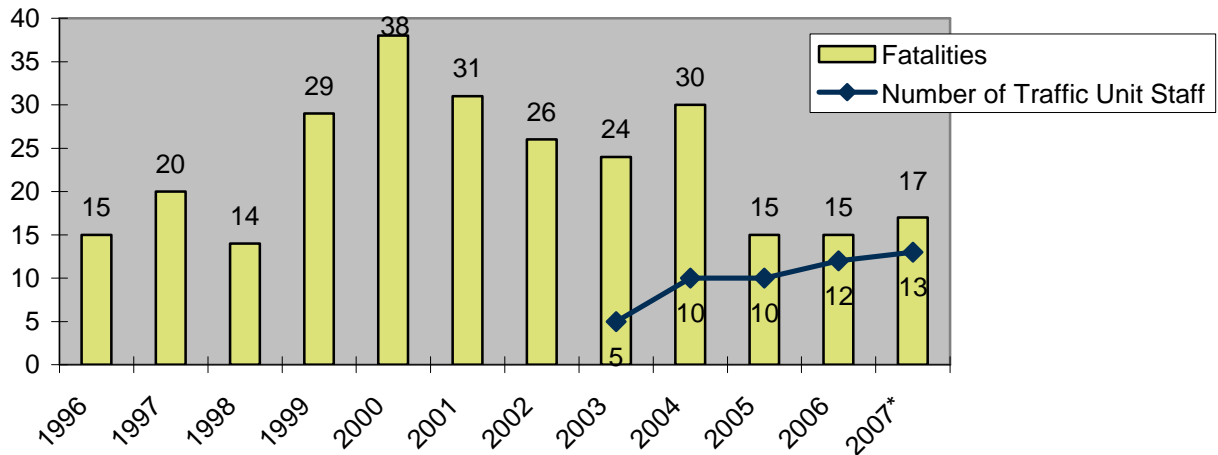
The general trends between 2001 and 2005 indicate the following:

1. The number of **crashes** decreased. (see figure 1)
 - **9,158** in 2001 compared to **7,267** in 2005
 - A decrease of ~2,000 crashes or ~20% reduction
2. The number of **fatal crashes** generally decreased. (see figure 2)
 - **25** in 2001 compared to **17** in 2005
 - A decrease of 8 fatal crashes or ~30% reduction
 - There were slight 'bumps' in the decreasing trend for the years 2002 and 2004.
3. The number of **fatalities** generally decreased. (see figure 2)
 - **28** in 2001 compared to **18** in 2005
 - A decrease in 10 fatalities or ~40% reduction
 - There were slight 'bumps' in the decreasing trend for the years 2002 and 2004.

4. The number of **non-fatal major injury crashes** generally decreased.
 - For the 2001 major injury data, there are far fewer of these injuries than in the years between 2002 and 2005; this may be a result of how these injuries were classified and recorded.
 - **268** in 2002 compared to **246** in 2005
 - A decrease of 22 crashes or ~10% reduction
5. The number of **major injuries** all crashes has generally decreased.
 - For the 2001 major injury data, there are far fewer of these injuries than in the years between 2002 and 2005; this may be a result of how these injuries were classified and recorded.
 - **343** in 2002 compared to **305** in 2005
 - There was a slight increase in major injuries from 2004 to 2005.
 - A decrease of 38 crashes or ~11% reduction
6. Fatalities and fatal crashes peaked in 2002.
7. Non-fatal major injury crashes and major injury crashes peaked in 2003.

The MOA re-instated the APD Traffic Unit in 2003, as detailed later in this paper. Figure 3 depicts the number of fatalities between 1996 and 2007, as recorded by the MOA. The number of traffic unit staff is also displayed. Crash and fatality data is sometimes reported differently by ADOT&PF and the MOA, so there may be slight differences in the number of crashes and fatalities reported. For instance, figure 2 depicts 18 fatalities occurred in 2005, according to the Highway Data Port, whereas the MOA reported only 15 fatalities for 2005 (*figure 3*). According to APD staff, the MOA includes incidents that occur on a person's property, such as a children being hit by a car backing up in a driveway. On the other hand, ADOT&PF does not count these incidents because they did not occur in the road right-of-way.

Figure 3. Fatalities & Number of Traffic Unit Staff, Municipality of Anchorage, 1996-2007*



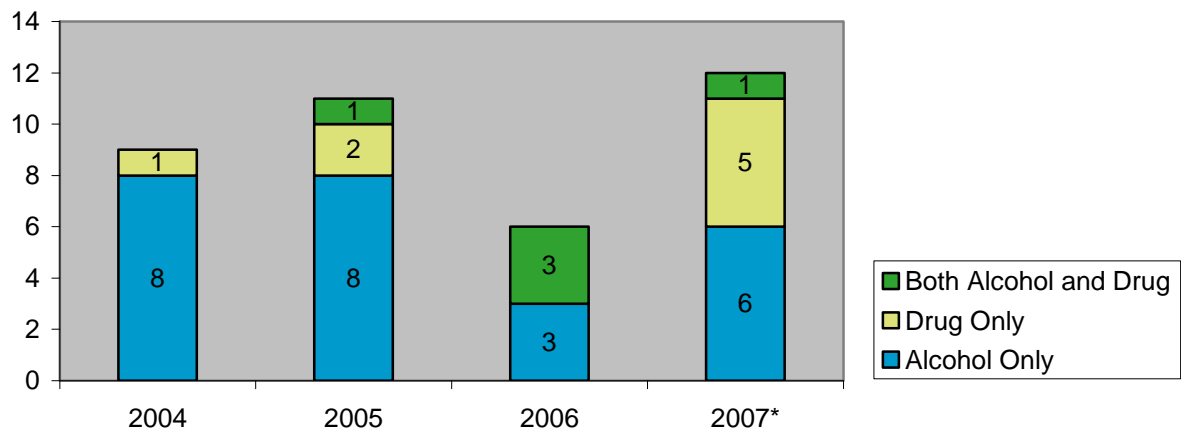
* As of August 29, 2007.

Source: APD Lieutenant Nancy Reeder, August 2007.

Note: The Traffic Unit was staffed with only 5 people for the first half of 2004.

Figure 4 depicts the number of fatalities in which the person was impaired by alcohol, drugs, or both. The number of fatalities involving drug or alcohol impairment varies considerably depending upon which year. In 2004, 9 of the 30 fatalities involved impairment (30%). In 2006, 6 of the 15 fatalities involved impairment (40%). In 2005 and so far in 2007, more than 70% of the fatalities involved impairment.

Figure 4. Number of Fatalities Involving Drug or Alcohol Impairment, Municipality of Anchorage, 1996-2007*



Source: APD Lieutenant Nancy Reeder, August 2007.

* As of August 29, 2007.

Recent Safety Efforts

Violations such as impaired driving, running red lights and stop signs, failure to yield and speeding continue to contribute to the high collision rates within the MOA. The APD has undertaken a number of steps which has coincided with the decrease of fatalities and major injuries. The following list highlights recent APD activities:

Traffic Unit Re-instated: In July 2003, Mark Begich became mayor, and four months later, in November, the Traffic Unit of the APD was reinstated. Five officers were transferred from the Patrol Unit to the Traffic Unit during the latter part of that month. Fatalities and fatal crashes in the MOA had peaked the year before, in 2002 (*figure 2*).

Traffic Unit Staff Increased: In 2004, the number of fatalities increased by 6 from the year before, which represents a 25% increase. It is important to keep in mind that due to the small population base in the MOA, in comparison to cities with a larger population base, just a couple of incidents can greatly impact the percentage. The Traffic Unit operated with only five officers in the first half of 2004, which was the first full year the Traffic Unit was re-instated. In May 2004, five more officers were transferred into the Traffic Unit.

Red Light Violation Awareness Efforts: In late 2004, signs were placed at five intersections in Anchorage where red light violations caused the greatest number of collisions.

- The five intersections are: Tudor Road & Lake Otis Parkway; Dimond Boulevard & Old Seward Highway; Northern Lights Boulevard & New Seward Highway; Benson Boulevard & New Seward Highway; and 36th Avenue & New Seward Highway.
- According to APD Lieutenant Nancy Reeder, the signs have not made a difference in the number of crashes at the intersections.

Traffic Unit Staff Increased: In 2005, the Traffic Unit was staffed at ten officers for the entire twelve month period. The number of fatalities from 2004 to 2005 dropped 50%, from 30 to 15.

Grant Money Received for Targeted Enforcement: In July 2005, APD received a large grant for sustained driving under the influence (DUI) enforcement. The APD was the only agency in Alaska that received permission to work every weekend of the grant period, which was originally scheduled to end in April 2006. APD received continued grant funding, which included hours for sustained seat belt enforcement and DUI enforcement.

Aerial Enforcement: The APD conducted aerial enforcement for the first time in July 2007. The effort lasted for the week of July 4th. Over a six day period, staff worked more than 150 hours. Of the nearly 300 citations, 130 were for speeding. Aerial enforcement takes considerable staff time.

Strategic Planning

The APD recently undertook a strategic planning effort at the end of 2006. According to this effort, APD attributes the decrease in fatal collisions to “high visibility traffic enforcement, education and availability of grant funding for targeted enforcement.” The following summarizes some of APD’s strategic plans:

1. As of August 2007, there are 13 officers assigned to the Traffic Unit. These officers concentrate on **specialty projects** that pose safety concerns within the Municipality, such as **red light violations** and **speed enforcement**.
2. According to Lieutenant Nancy Reeder, a fully staffed **Traffic Unit would employ 20 people**. The APD would like to have the Traffic Unit fully staffed by June 2008. Once the Traffic Unit is at full strength, it is anticipated the twenty officers will be divided among specific and targeted tasks such as impaired driving enforcement, traffic law enforcement and collision investigation.
3. **Red light confirmation bulbs** have been discussed as a step to solve the problem of red light violators in Anchorage. In October 2006, both the state and municipal traffic engineering departments secured funding to begin this project. The project entails using light bulbs hard-wired into the traffic signals. These bulbs are activated when the traffic signals turn red, and can be seen on all four opposing sides of the intersection. This allows a single patrol vehicle, rather than two vehicles, to police the intersection.
4. The APD’s strategic planning effort suggests through **positive education and enforcement**, aggressive and irresponsible behavior of drivers will continue to change. Increased targeted enforcement has coincided with the decrease in collisions and fatalities in 2005 and 2006.
5. A continued partnership with the Alaska State Highway Safety Office and the National Highway Traffic Safety Administration has enabled the APD to obtain federal grants that allow **proactive traffic enforcement on an overtime-only basis**. According to the APD, **the continuation of these grants has been instrumental with an on-going, solid proactive Traffic Law Enforcement Team**.
6. **DUI enforcement** is a priority for the APD and is specifically targeted by the Traffic Unit.

7. The Traffic Unit will continue its efforts in **collision reduction, impaired driving offenses, aggressive driving behaviors and education** throughout 2007.
8. From 2004 to 2005, officers assigned to the Traffic Unit **increased citation production** by 37%. According to APD Lieutenant Nancy Reeder, between 2005 and 2006, 68% of the written citations came from the Traffic Unit.

Preliminary Conclusions

Simply looking at the trend, as the number of Traffic Unit staff has increased since 2003, the number of fatalities has generally decreased. According to APD Lieutenant Nancy Reeder, the key element is having staff dedicated primarily to traffic.

Correlation between re-instating the Traffic Unit (number of Traffic Unit staff) and a decrease in the number of traffic fatalities was tested using a Pearson's Correlation test¹. A slight negative correlation between fatalities and number of traffic unit officers was found ($R = -0.479$), suggesting that the more Traffic Unit officers results in fewer fatalities. However, only five years of data (since the Traffic Unit was re-instated) were used in the analysis and other variables that may affect the number of fatalities in a given year (such as weather conditions or alcohol impairment), were not considered. Also, the study did not control for other safety initiatives implemented about the same time such as .08 BAC, GDL, etc. While the data are very encouraging, it is nonetheless difficult to draw any strong conclusions at this point. The general decrease in the number of fatalities due to Traffic Unit staff or other means such as public education, increased awareness, targeted enforcement, additional grant funding, or aerial enforcement awareness requires further study.

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¹ A Pearson's correlation test measures the strength of the linear relationship between two variables. A Pearson's Correlation Coefficient is usually signified by r (rho), and can take on the values from -1.0 to 1.0. Where -1.0 is a perfect negative (inverse) correlation, 0.0 is no correlation, and 1.0 is a perfect positive correlation. In this case, $R = -0.479$, which means there is a slight inverse correlation.



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