MT Traffic Safety Problem Identification Overview

2011 Data

MONTANA
MDT
DEPARTMENT OF TRANSPORTATION

MDT State Highway Traffic Safety

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http://www.mdt.mt.gov/publications/data stats.shtml

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Statewide Summary

CHSP VISION:

All highway users in Montana arrive safely at their destinations.

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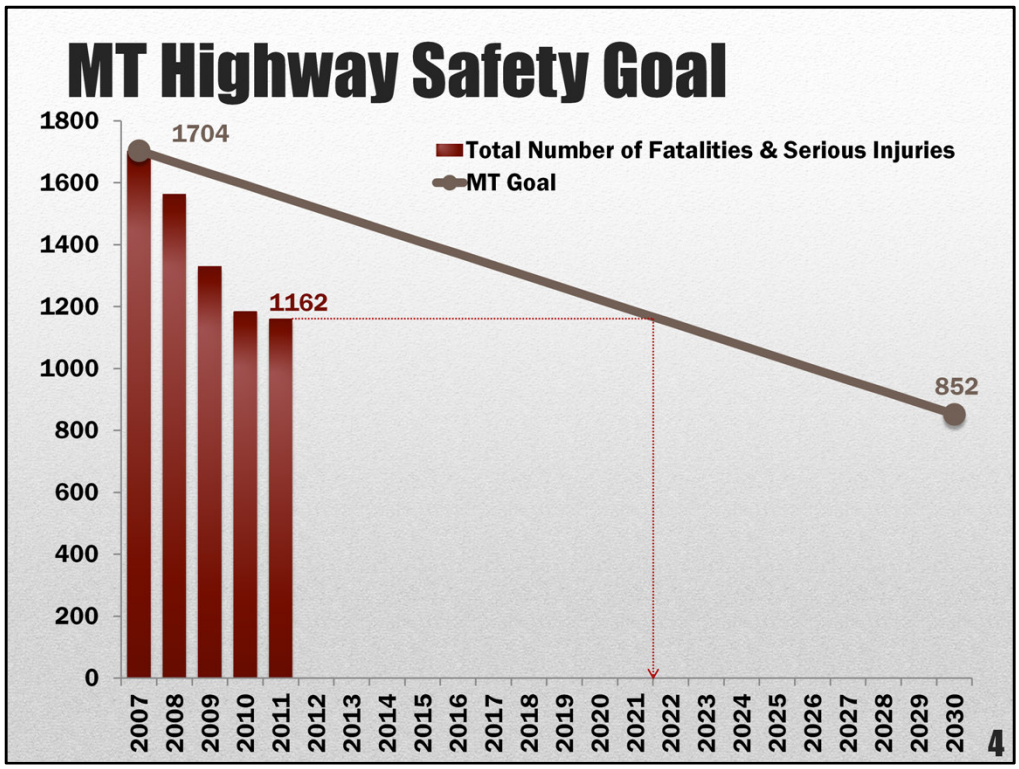


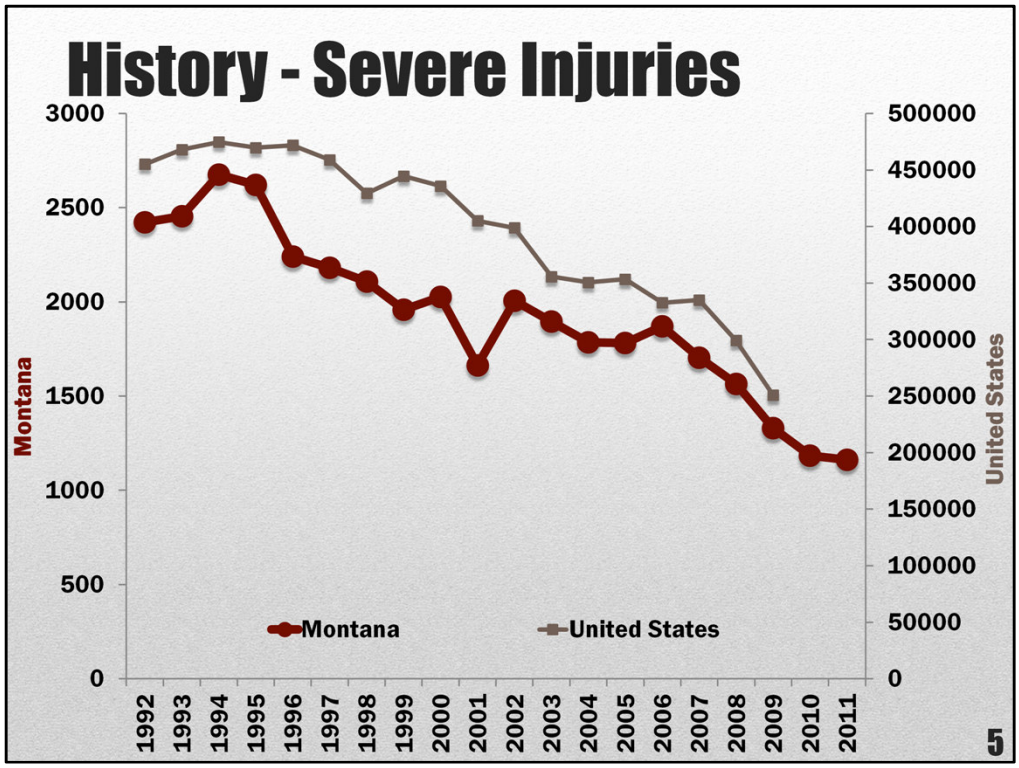
WHY IS EVERYONE HERE TODAY? WHAT IS OUR GOAL?

At the CHSP Annual Meeting in 2009, all the traffic safety stakeholders present agreed that the long-range highway safety goal for MT would be to cut the number of fatalities and serious/incapacitating injuries in half, with a baseline of 1,704 (2007 data).

The brown line is a linear depiction of how the total number of fatalities and serious injuries would need to decrease between 2007 and 2030 in order to meet our goal.

The red bars are the actual number of fatalities and serious injuries that occurred on MT highways in the last four years. These numbers are dramatically lower than our goal trend line. If we continue the current ten-year trend we should meet this goal well before 2030.

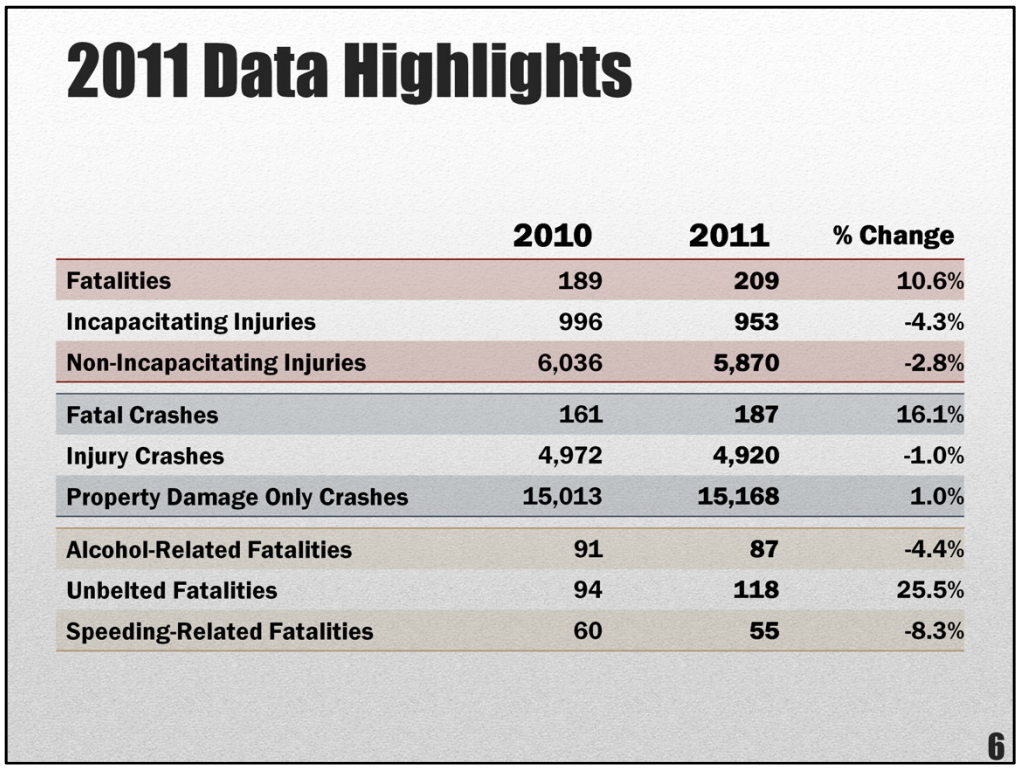
According to the 2011 data, we are already at the number we would hope to see in 2021!



WE KNOW WHERE WE WANT TO GO? WHERE HAVE WE BEEN?

This shows the history of severe injuries (fatalities & incapacitating/serious injuries) for both Montana and the US. The trend in both lines is downward. Both Montana and the nation has seen a steeper decrease in the most recent years.

National 2010 & 2011 severe injury data has not been released by NHTSA yet.



SO WE KNOW WHERE WE WANT TO GO, AND WE BEGIN TO SEE HOW IT IS GOING.
NOW LET'S LOOK AT WHAT JUST HAPPENED IN 2011…

Although fatalities went up, incapacitating injuries went down. The relatively small numbers of fatalities seen in Montana each year can fluctuate widely, so combining fatalities with incapacitating injuries provides a more accurate picture of overall traffic safety trends in the state.
Combining these numbers results in the severe injuries total (decrease of 26):
2010 – 1,185
2011 – 1,162

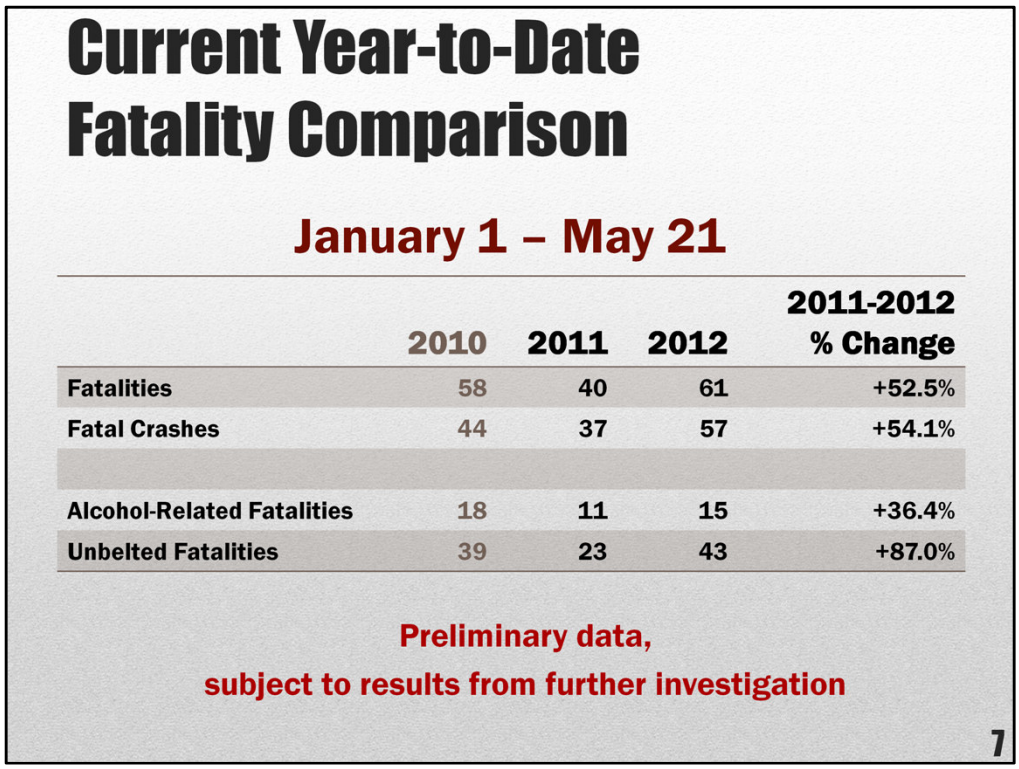
Alcohol-Related Fatalities as a percent of All Fatalities (raw numbers decreased, percent decreased):
2010 – 48.1%
2011 – 41.6%

Unbelted Fatalities as a percent of All Occupant Fatalities (raw numbers increased, percent increased):
2010 – 94/155 = 60.6%
2011 – 118/172 = 68.6%

Speeding-Related Fatalities as a percent of All Fatalities (raw numbers decreased, percent decreased):
2010 – 31.7%
2011 – 26.3%

When simply looking at these three problem areas, not wearing a belt was the most common risk factor seen in traffic crash fatalities.

Keeping in mind, one poor choice can easily lead to another. A person can drink and then make the decision to drive, not buckle up and speed.



Currently we have quite a few more fatalities this year compared to this time last year. One thing to keep in mind, last year we had a very wet spring, with various parts of the state underwater. So rather, lets compare 2012 with 2010, which was a banner year in our battle on traffic fatalities, with a total of 189 for the entire year.

Our total fatality compares are very comparable to 2010 (+5.2%).

The fatal crash total is quite a bit higher, which means we are having more crashes resulting in single deaths. 2010 had more multi-fatality crashes.

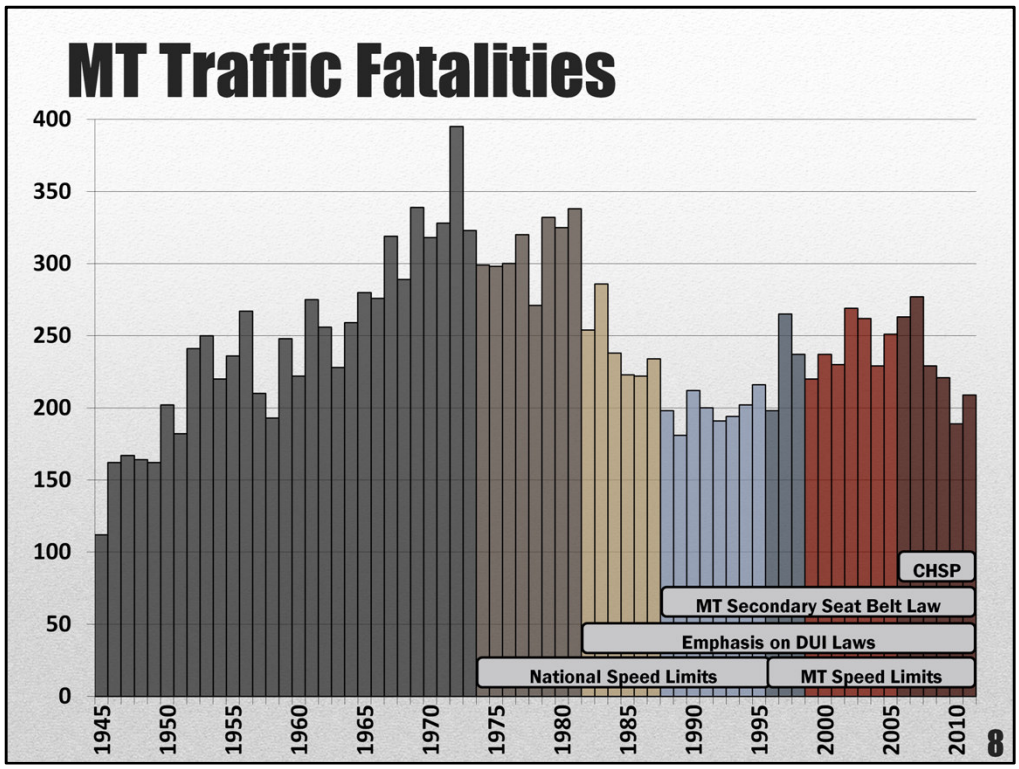
Alcohol-Related Fatalities as a percent of All Fatalities:
2010 – 31.0%
2011 – 27.5%
2012 – 24.6%
Knowing these numbers are preliminary, but still using them as a measure – 2012 is the best of the three years for alcohol-related fatalities as a percent of all fatalities.

Unbelted Fatalities as a percent of All Fatalities:
2010 – 39/50 = 78.0%
2011 – 23/39 = 59.0%
2012 – 43/55 = 78.2%
These are the big issue. They were in 2010 and they are in 2012.

Jan 1 – Jun 4 Comparison

	2010	2011	2012	2011-2012 Change
Fatalities	66	49	65	32.7%
Fatal Crashes	50	45	61	35.6%
Alc-Rel Ftls	20	14	16	14.3%
Unbelted	44	31	45	45.2%
Unbelted %	75.9%	66.0%	76.3%	15.6%

The more current data shows that 2012 is tracking with 2010.



NOW LET'S LOOK AT OUR FATALITY HISTORY, WHERE HAVE WE COME FROM?

Looking strictly at the number of fatalities is tricky, because we are dealing with so few events each year (under 300 fatalities per year for the last 25 years). Immediate impacts from laws like 0.08 BAC, open container and changes in the drinking age don't appear. This is often why we look at the combination of fatalities and incapacitating injuries. There are more of these severe injuries each year.

There are only four events that show a clear impact (speed laws, DUI laws, seat belt laws, advanced technology for engineering roads and cars):

DARK GRAY – general increase that somewhat correspond to the increase in VMT

BROWN-ISH – Emergency Highway Energy Conservation Act (March 1974, signed January 2, 1974): 55mph national speed limit in effect

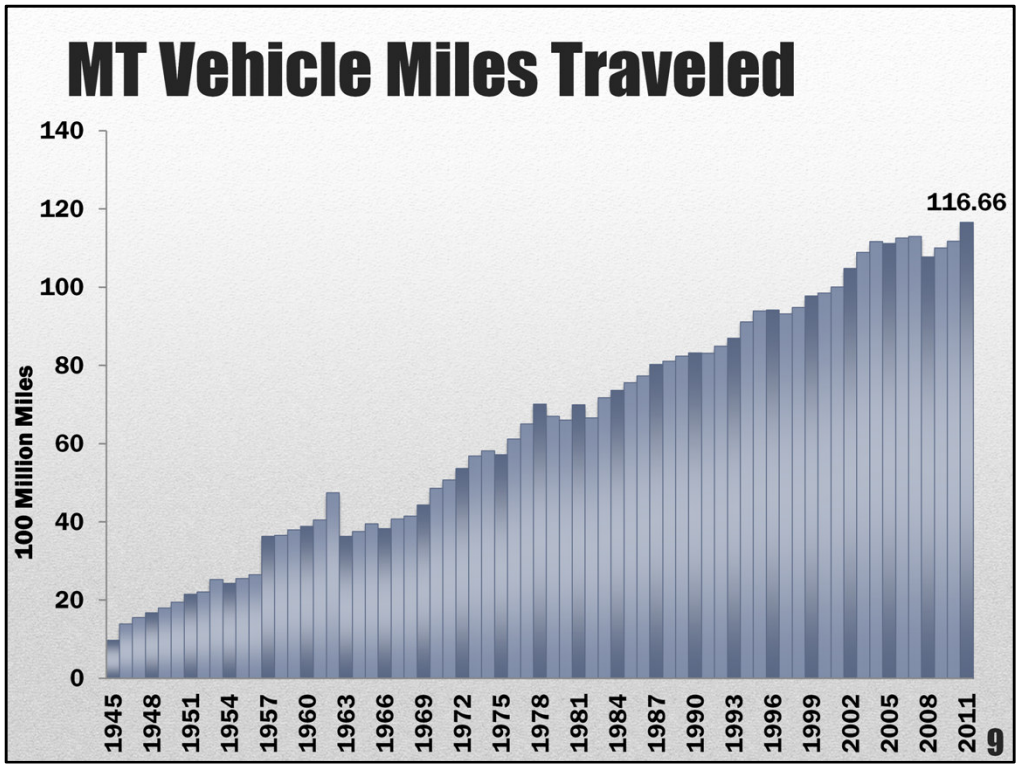
TAN – Tougher DUI laws and the changes in perception brought out by MADD and other prevention advocates (beginning in 1982/1983)

LIGHT BLUE – MCA 61-13-103: secondary seat belt law going into effect January 1, 1988 Surface Transportation & Uniform Relocation Assistance Act (April 2, 1987): national speed limit increased to 65 on rural interstate highways

GRAY – National Highway Designation Act (November 28,1995): end of the national speed limit; MT daytime "reasonable & prudent", night 65mph

RED – MCA 61-8-303: end of "reasonable & prudent", increased statutory speed limit; MT interstate 75mph

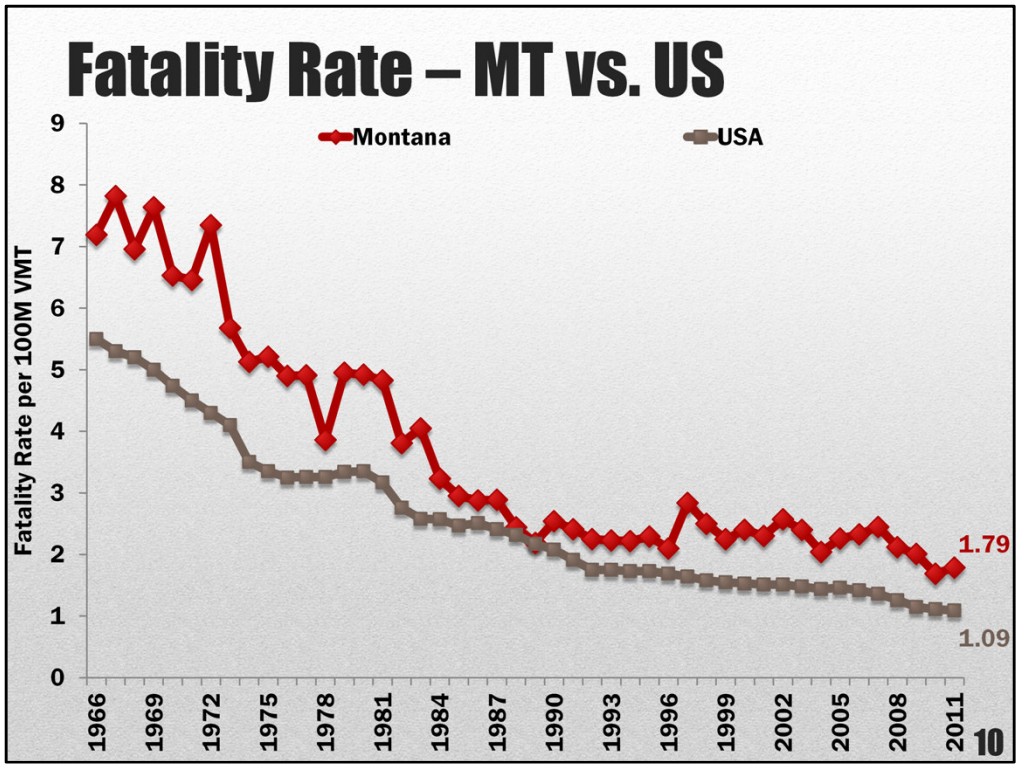
DARK RED – CHSP began, traffic safety stakeholders brought together to begin working together actively, toward a common goal



SO WE'VE HAD UPS AND DOWNS IN OUR FATALITIES, HOW DOES THIS CORRELATE TO HOW MUCH WE DRIVE?

Looking at the same time period, we have seen a continuous increasing trend in the number of vehicle miles traveled. There was a small decline in 2008, but since that time there have been three years of increases.

The 2011 VMT (11.666 billion miles traveled), is currently the highest seen in Montana. Part of this increase is due to the inclusion of 1,400+ off-system AADTs (non-MDT maintained roads). Historically, only a handful of off-system AADTs have been included in the yearly counts table, then an estimate was derived for the off-system. This year, due to program and database modifications, they were able to load all the off-system AADTs into the yearly counts table for inclusion in the VMT calculation.



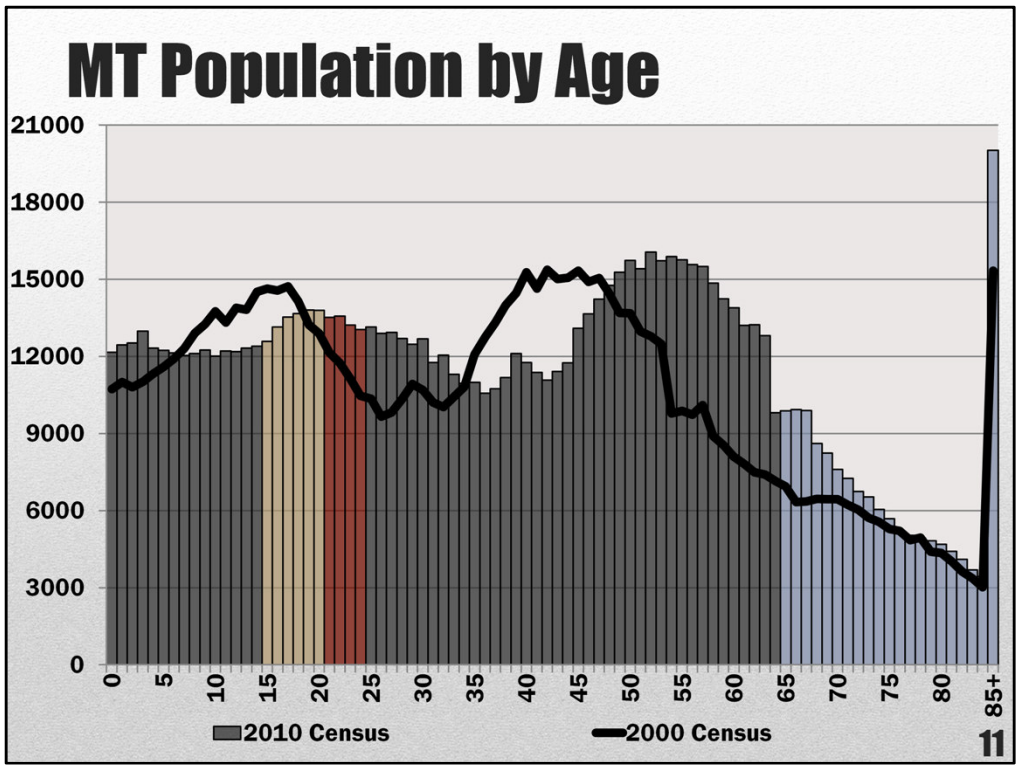
HOW DO OUR FATALITIES COMPARE TO THE NATION?

There were 209 Montana fatalities in 2011, coupled with a VMT of 116.66 hundred million miles, resulting in our fatality rate being 1.79. Although our fatality rate is quite a bit higher than the national rate, being a rural state plays a very large part of this. Based on 2009 data (the most current information published by NHTSA, Traffic Safety Facts, Rural/Urban Comparison, DOT HS 811 395), the national rural fatality rate was 1.96. MT's 2009 rural fatality rate was higher (2.44), but this is certainly one explanation as to why MT's rate consistently ranks higher than the nation's. Since MT will never be an "urban" state, comparing us to the nation, as a whole, may continue to show us lacking. So long as we continue to see a decline in our own fatality rate, we must count this as a victory.

As you can see, MT's fatality fate per 100M VMT rose a little bit compared to 2010, but is still lower than previous years.

2009 Fatality Rate Comparison

Fatality Rate	MT	US	2011 MT
Urban	0.67	0.73	0.93
Rural	2.44	1.96	2.10
TOTAL	2.01	1.14	1.79



WHAT DOES THE MONTANA POPULATION HAVE TO LOOK FORWARD TOO?

This chart shows the progression and aging of Montana's population.

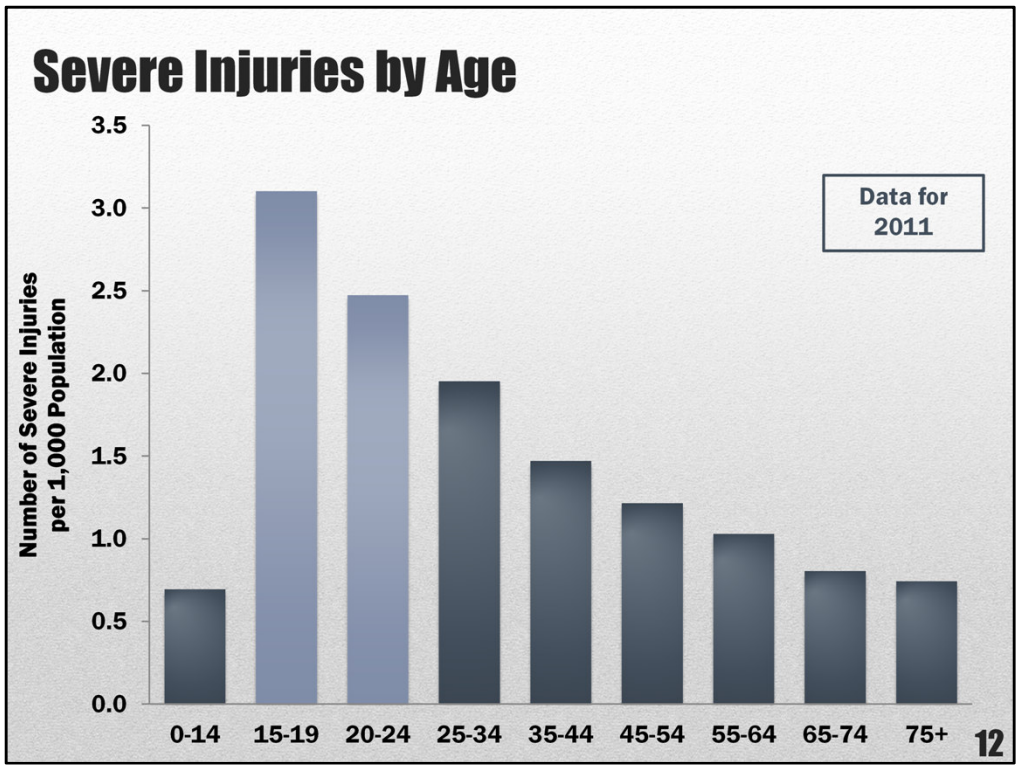
Four large groups of drivers…

TAN (15-20) - Young Drivers
There are fewer of these than there have been in the past number of years and the GDL program is well underway. These numbers will decline over the next decade.

RED (21-24) – New Drinkers, late college or just out of college.
We have a lot of these now and it is going to get worse over the next five years as the current young drivers move up into this group, hopefully with better educated driving experience under their belt (GDL), lots of media/educational messages supporting smart driving/riding decisions (drinking & driving don't mix, buckle up) and laws that back up those media messages. At the end of the next decade, these numbers will be lower and some changes in our alcohol crash numbers may be due to a smaller population of new drinkers.

Baby boomers – starting to head toward the older driver category.

LIGHT BLUE (65+) – Older Drivers
There are estimated to be over 20,000 people in Montana over the age of 85! According to the number of licensed drivers provided by DOJ/MVD, not even 9,000 (45%) of them have drivers licenses. But of the approximately 142,000 older drivers in Montana (age 65+), over 128,000 (90%) of them have licenses. In a rural state like MT, often these licenses are a must for our older population to live independent lifestyles. Their driving challenges are many and varied and we need to address them now.



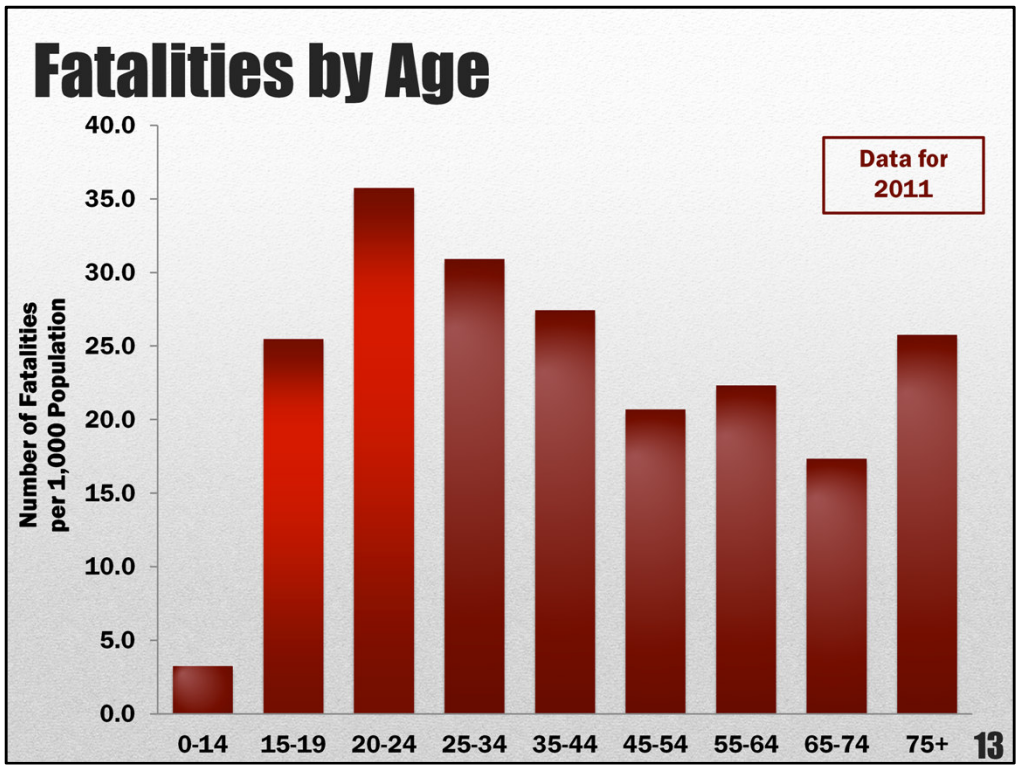
BASED ON THOSE AGE NUMBERS, LET'S LOOK AT THE SEVERE INJURIES.

Greatest number of severe injuries for their population:
15-19 year olds… the "new" drivers & potentially their passengers
Then there are the 20-24 year olds… the "new" drinkers

The highest number of severe injuries occurred in our 25-34 year olds, but their rate is lower than the younger group because of the number of people in this age category.

Also, keep in mind both the 15-19 and 20-24 year old age groups are only five-year groupings, the 25-34 group is a ten-year grouping. (Severe Injury Rate for 15-24 = 2.79) So for a five-year age span, we have almost the same number of injuries as we see in the older aged ten-year span. Too many of our young adults are getting severely injured in crashes!

AGE	Severe Inj	POPN	RATE
0-14	128	184,312	0.69
15-19	207	66,724	3.10
20-24	166	67,138	2.47
25-34	240	122,864	1.95
35-44	166	112,945	1.47
45-54	182	149,832	1.21
55-64	143	138,858	1.03
65-74	65	80,742	0.81
75+	49	66,000	0.74



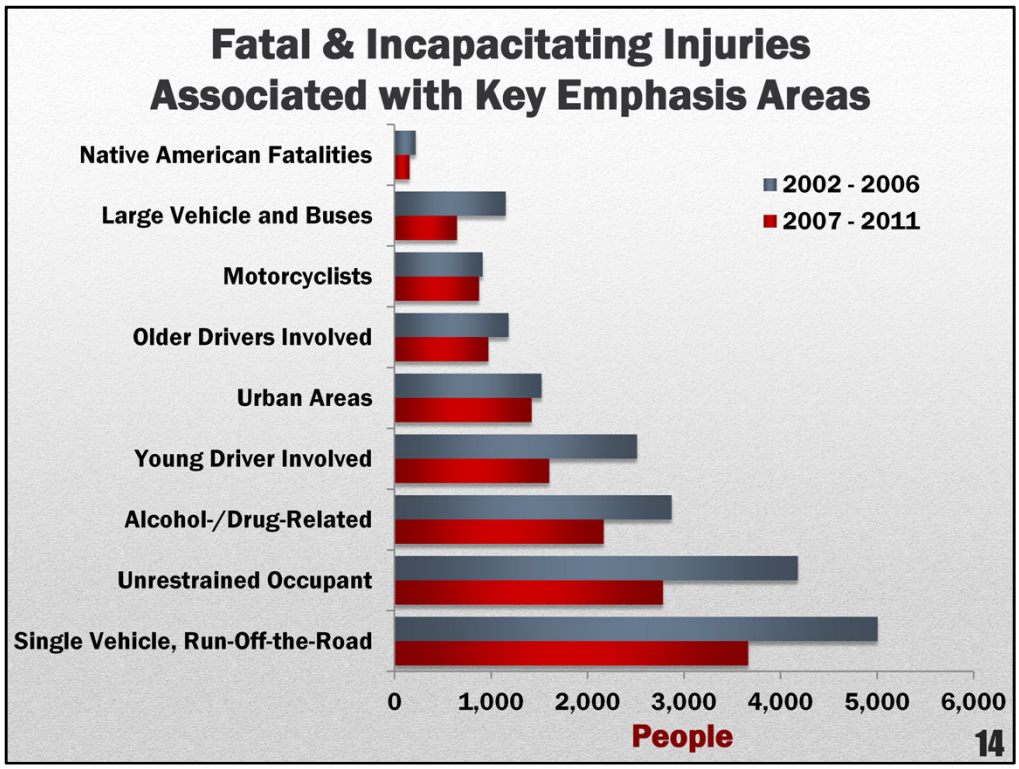
AGAIN, BASED ON THE AGE GROUPS, WHO IN OUR POPULATION ARE DYING ON OUR ROADS THE MOST?

Greatest number of fatalities for their population:
Still, our younger adults…20-44 year olds
And our oldest age group…75+

Just as was the case with severe injuries, the highest number of fatalities occurred in our 25-34 year olds, but their rate is lower than the 20-24 group because of the number of people in this age category.

Also, keep in mind both the 15-19 and 20-24 year old age groups are only five-year groupings, the 25-34 group is a ten-year grouping. (Fatality Rate for 15-24 = 30.63) So for a five-year age span, we have almost the same number of injuries as we see in the older aged ten-year span.

AGE	Fatalities	POPN	RATE
0-14	6	184,312	3.26
15-19	17	66,724	25.48
20-24	24	67,138	35.75
25-34	38	122,864	30.93
35-44	31	112,945	27.45
45-54	31	149,832	20.69
55-64	31	138,858	22.32
65-74	14	80,742	17.34
75+	17	66,000	25.76



WE'VE SEEN SOME REALLY BASIC OVER-ARCHING NUMBERS.
NOW LET'S LOOK INTO THE WEEDS…
HERE IS A QUICK SUMMARY OF THE CHSP EMPHASIS AREAS…

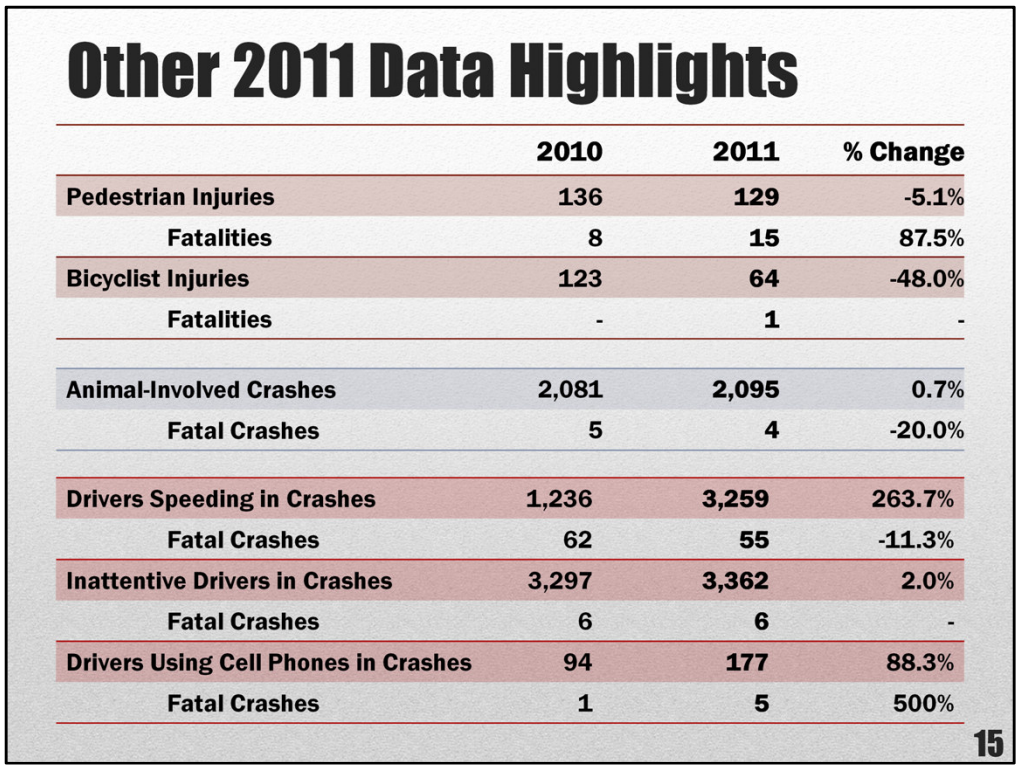
In keeping with the MT traffic safety goal, here are the emphasis areas focusing on the number of fatal and incapacitating injuries.

The gray bars are the total number of severe injuries from 2002 to 2006 (pre- and beginning-CHSP), the red bars are the total numbers from 2007 to 2011 (now).

The Native American category only shows fatalities because we do not gather race information for non-fatal injuries.

All categories saw a reduction in the number of fatal and incapacitating injuries between the two 5-year time frames.

Keep in mind many injuries can fall into multiple categories. For example…
In an **urban area** crash, an **older Native American motorcycle rider** could be killed after being hit by a **drunk young bus driver** who is **unbuckled** and received serious injuries.
That is one crash that hits eight of our emphasis areas. This example may be taking it to the extreme, but it demonstrates how each of our emphasis areas are intertwined.



FINALLY, SOME NUMBERS FROM 2011 THAT AREN'T SPECIFIC EMPHASIS AREAS IN MT, BUT ARE IMPORTANT AREAS TO KEEP AN EYE ON, NONETHELESS…

OTHER PEOPLE INVOLVED IN CRASHES (NON-OCCUPANTS)
These two categories are very important. Although our numbers are not large for either category, the people involved don't have the protection of metal (and lots of plastic) surrounding them as they travel on or next to our roads.

PEDESTRIAN-RELATED CRASHES
Fewer pedestrians were injured last year, compared to the year before, but quite a few more were killed.
*****The 2011 data is not a "spike" in the numbers, it is actually more on par with what is seen historically. So actually, 2010 is a data blip. This will be discussed more when we get into the performance measures.

BIKE-RELATED CRASHES
2011 saw the lowest number of bicyclist injuries in over a decade.
2010 was the first year in at least a decade where no bicyclists were killed, so we saw a slight increase last year.

CRASHES INVOLVING ANIMALS
In a rural state populated by many animals, large and small, domestic and wild, we will always have to deal with them on our roads. They can be a minor inconvenience or a major threat. These are only the reported crashes that produce damage of $1000 or more. Some people will not report crashes with animals, so the actual number of crashes may be higher.
Injuries (2010-2011): 202 - 213
Fatalities (2010-2011): 6 - 4
In 2011, animal-involved crashes made up 10% of all crashes in MT, 3.1% of all injuries and 1.9% of all fatalities.

COMMON DRIVER-RELATED ISSUES
It is important to examine this data with caution as it is the law enforcement investigator's professional judgment as to the apparent reason(s) for the crash. Each vehicle in a crash can have up to five contributing circumstances listed (including none listed). Two different investigators may look at the same crash and select different contributing circumstances.

SPEEDING-RELATED CRASHES
More drivers were marked as "exceeding stated speed limit" or "too fast for conditions" in 2011 than in 2010 for both all and fatal crashes. There may be database reasons behind these huge increases. The crash data is transformed twice before it is in the MDT Safety Management System, and although all efforts were made to accurately transform the data, 2011 is the first year with all crash data contained in MHP's new system. This means all local law enforcement data is transformed from the old forms into the new system. Then all the crash data (both local and MHP) is reverse-transformed in order to be put in the MDT Safety Management System. We are still working out all the kinks, and I am trying to delve into the data deeper to ensure the information published is accurate.
In 2011, this made up 10.6% of all drivers (3,259/30,638) in all crashes and 21.0% of drivers in fatal crashes (55/262).

INATTENTIVE DRIVING
Nothing much to say here. There are a lot of inattentive drivers.
In 2011, this made up 11.0% of all drivers (3,362/30,638) and 2.3% of drivers in fatal crashes (6/262).

CELL PHONE-RELATED CRASHES
This number is probably underreported, though the large increase compared to last year may be a promising sign of getting more accurate data.

In reality, who is really going to admit to using a cell phone? In previous years, according to the numbers, this problem was disappearing, but it is hard to pin down. Not only are people not going to admit that they were gabbing or texting rather than paying attention to the road, but law enforcement are hesitant to mark the box unless there is hard proof that a cell phone was in use at or close to the time of the crash.
In 2011, this made up 0.6% of all drivers (177/30,638) and 1.9% of drivers in fatal crashes (5/262).

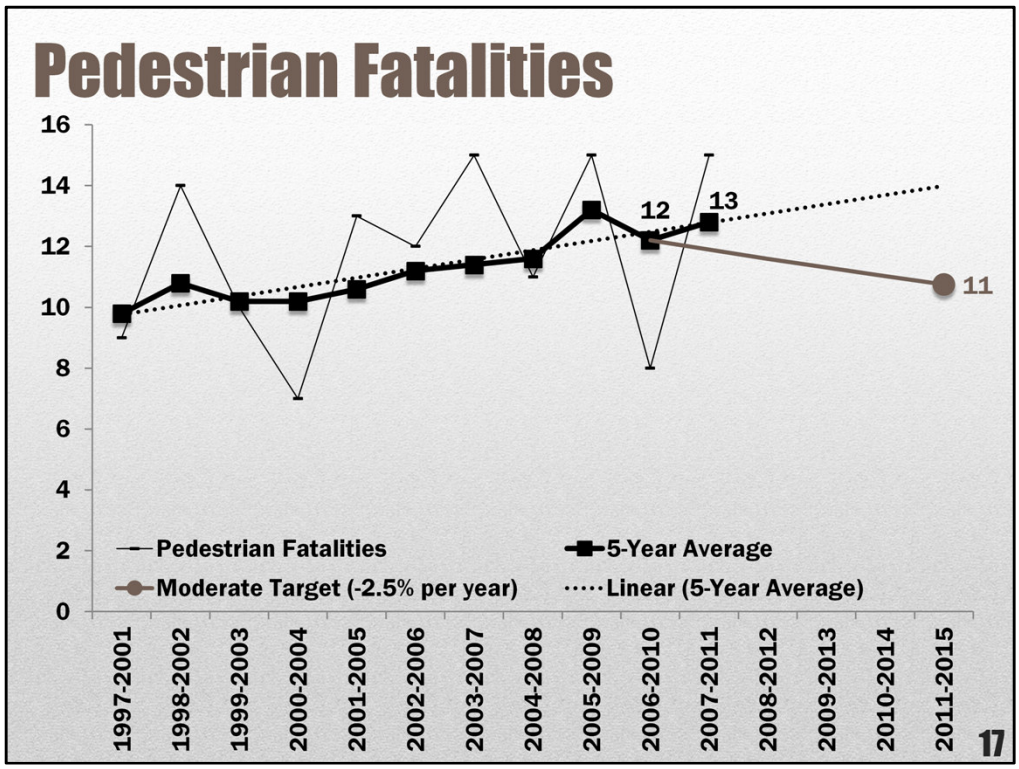
Given the crash data overview, everyone at this meeting had a task…to help determine specific targets for each emphasis area and for general crash areas of interest.

Safety performance measures and their associated targets provide:

- Greater accountability to CHSP Committee, teams and stakeholders;
- Greater linkage between CHSP safety goals and the strategies;
- Better understanding of the impacts of alternative strategies intended to improve transportation safety; and
- Information feedback to promote ongoing improvement of safety practices and strategies.

The performance measures will be a combination of NHTSA required measures and measures tied directly to the CHSP goal of reducing fatalities and incapacitating injuries.

We will use the first performance measure as an example.



Performance Measure handout, pages 17-18

We are starting with this example because it highlights a number of things we will need to consider with each performance measure we look at and each target we select. This is a NHTSA-required performance measure that does not fit into any one emphasis area.

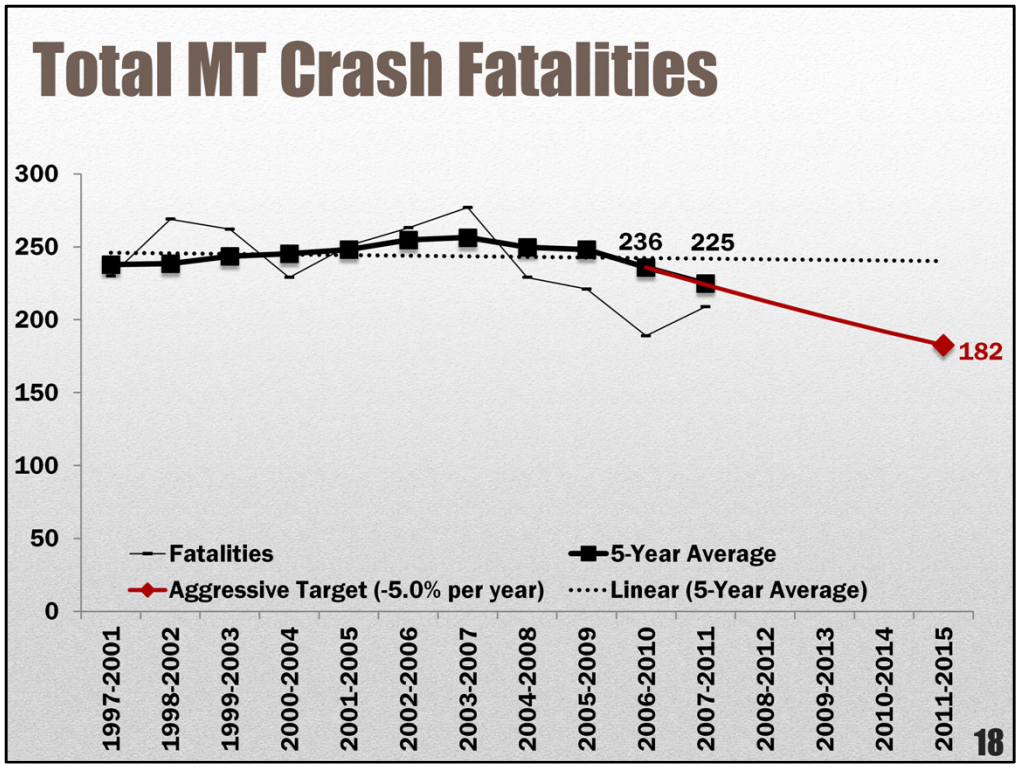
Each performance measure chart will look similar to this. The charts in the handout also have a data table at the bottom, in case you are interested in the actual numbers. The charts include:

- Specific crash numbers for each year (the thin black line with small dashes). The actual number is for the final year in the five-year sequence. Looking in the handout, at the table under the chart, the first row says, "Pedestrian Fatalities", and the number 9 under 1997-2001. This means in 2001 there were 9 pedestrian fatalities.
- The 5-year "rolling" average (the thick black like with squares). Looking in the handout, at the table under the chart, the second row, "5-Year Average", with the number 10 under 1997-2001. This means there were an average of 10 pedestrian fatalities during the years 1997 to 2001.
- The trend line for the 5-year rolling average (the thin dashed line).
- Potential targets for consideration (the moderate target was chosen):
  - The tan line ending in a triangle is the conservative target. This target assumes the average number of pedestrian fatalities will not increase or decrease from the baseline (12 in 2006-2010) to the target year (12 in 2011-2015).
  - The brown line ending in a circle is the moderate target. This assumes the average number of pedestrian fatalities will decrease (improve) 2.5% from the baseline (12 in 2006-2010) to the target year (11 in 2011-2015). This target matches the over-arching CHSP goal of cutting the number of fatalities and incapacitating injuries in half from 2007 to 2030.
  - The red line ending in a diamond is the aggressive target. This assumes the average number of pedestrian fatalities will decrease 5% from the baseline to the target year (9).

So what is all this information, all these lines and dots, really trying to tell us?
There are a very small number of pedestrian fatalities in Montana in any given year. The thin black line, the actual numbers jumps all over the place making it difficult to make a lot of sense out of it. So we look at the 5-year rolling average. This smooths out what appear to be random peaks and valleys (spikes/dips). We noted earlier that in 2010 there were 8 pedestrian fatalities and in 2011 there were 15, which looked like a mighty big swing in the wrong direction. When we compare the 2011 actual number with the 5-year rolling average the jump isn't as big, and ultimately the average does not increase much. Unfortunately with this particular performance measure, the trend line is clearly going up, not what we want to see.

So now to try to determine a target. Since the trend is increasing and even the last couple of years is increasing, any target we choose will look ambitious. It is up to the CHSP meeting participants to determine (by voting), how ambitious you want to be. Personally, I would probably lean toward the conservative target. Yes, ultimately we would rather not see any fatalities, but is that realistic with our current laws and strategies in the state.

The CHSP meeting participants voted for the moderate target.

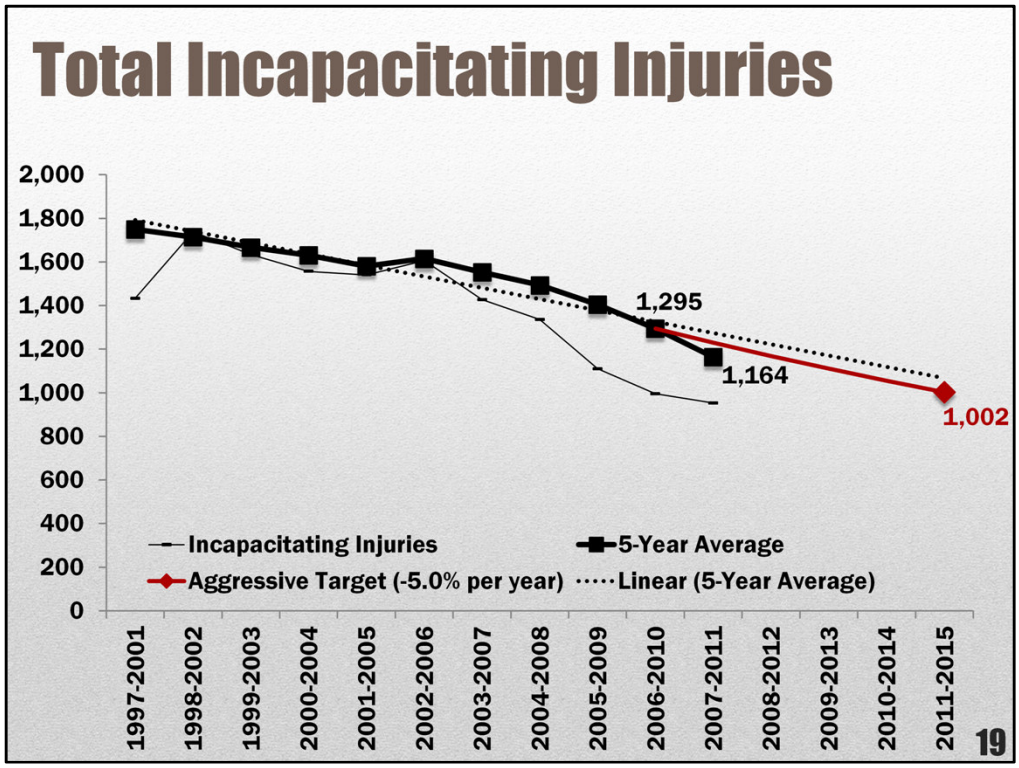


Performance Measure handout, pages 7-8

The 10-year trend is maintaining (not really increasing or decreasing).

The last couple of years appears to be heading down, which can clearly be seen in the annual numbers (thin black line).

The CHSP meeting participants voted for the aggressive target.

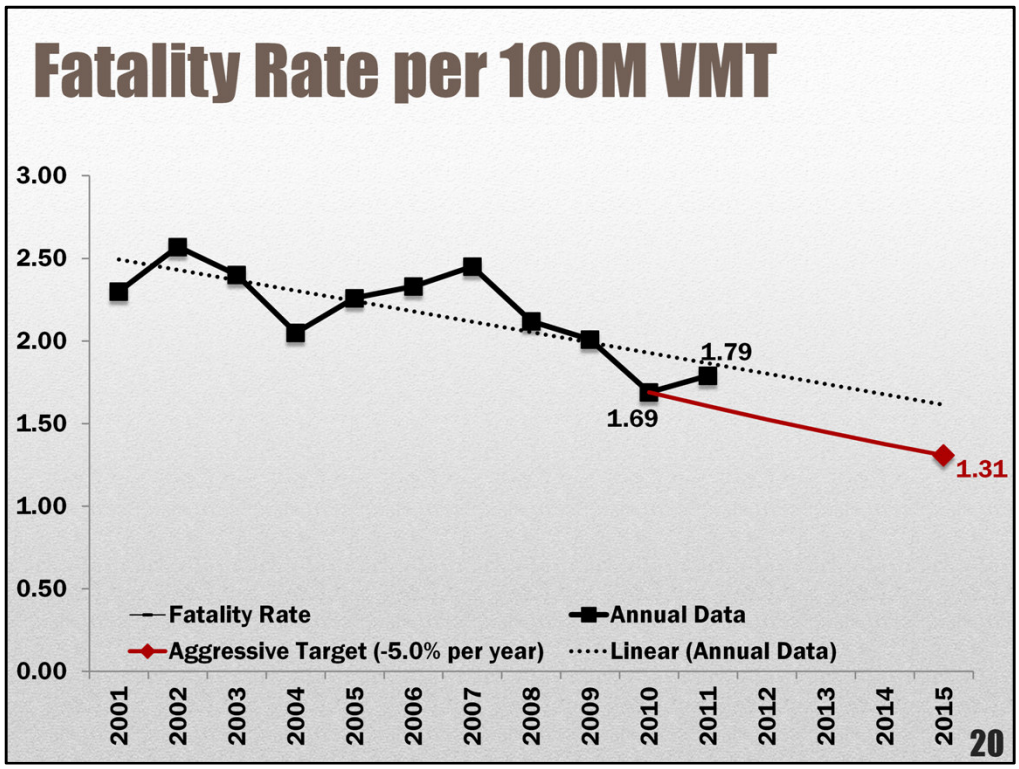


Performance Measure handout, pages 9-10

The 10-year trend is decreasing in line with the aggressive target.

The last couple of years appears to decreasing even more rapidly, with the actual numbers in a pretty steep decent (thin black line).

The CHSP meeting participants voted for the aggressive target.



Performance Measure handout, pages 11-12

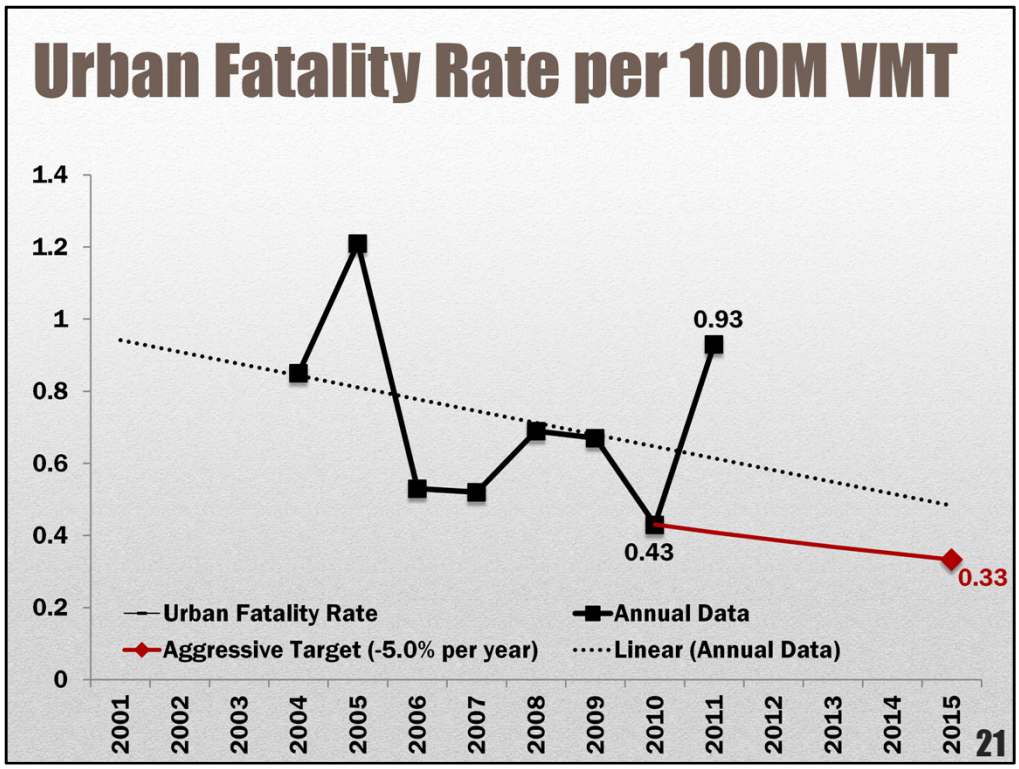
The next three slides, the fatality rates, do not use the 5-year rolling average to look at the trends or the targets, since this number is already transformed/manipulated/etc. so the thin black line will not be visible because it is being covered by the thick black line, which is all annual data.

The 10-year trend is decreasing in line with the aggressive target.

The last couple of years though appears to decreasing even more rapidly, even with the slight increase seen last year.

These rates are a bit fussy, and they depend on how much people drive, so choosing a target is a bit more difficult.

The CHSP meeting participants voted for the aggressive target.



Performance Measure handout, pages 23-24

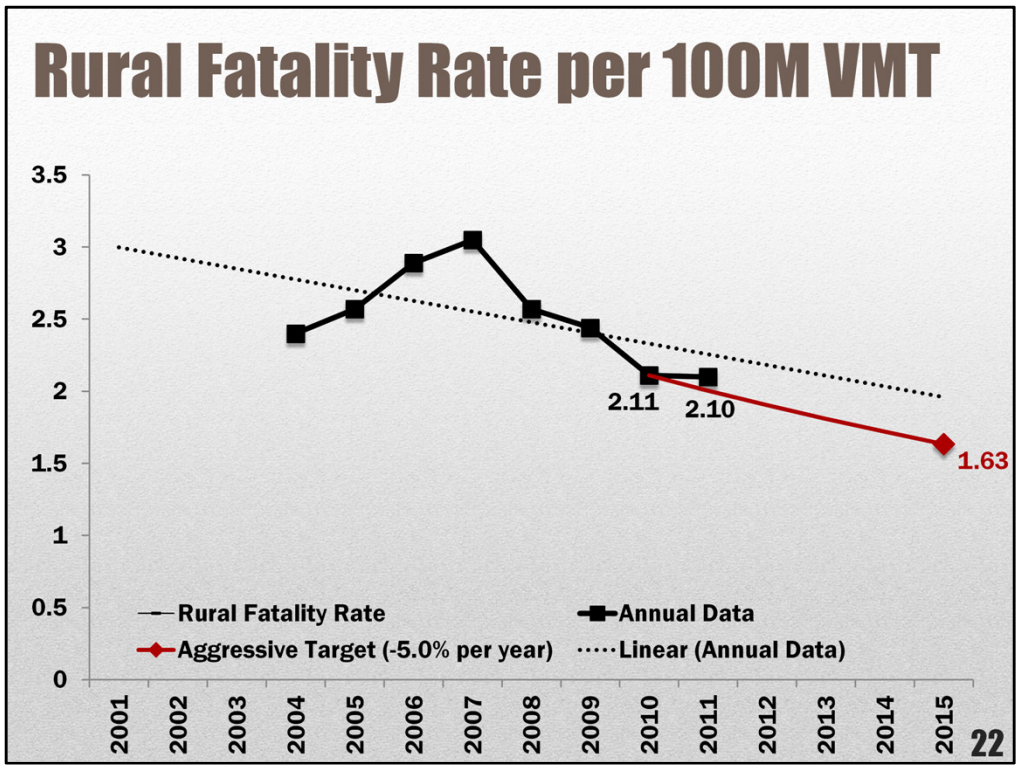
Again, the fatality rates do not use the 5-year rolling average to look at the trends or the targets, since this number is already transformed/manipulated/etc. So the thin black line will not be visible because it is being covered by the thick black line, which is all annual data.

There is not a complete ten years of data, so this starts in 2004.

The 10-year trend is decreasing much faster than the aggressive target.

The CHSP meeting participants voted for the aggressive target.

Note: The 2011 urban fatality rate was not available at the CHSP Annual Meeting.



Performance Measure handout, pages 13-14

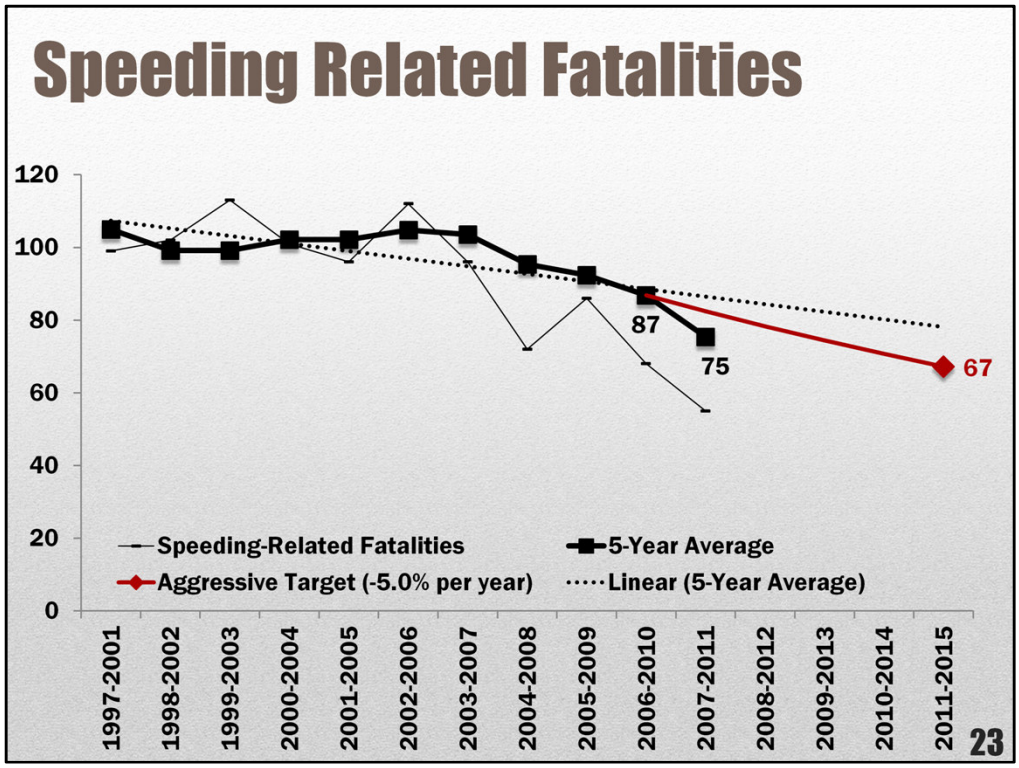
Again, the fatality rates do not use the 5-year rolling average to look at the trends or the targets, since this number is already transformed/manipulated/etc. So the thin black line will not be visible because it is being covered by the thick black line, which is all annual data.

There is not a complete ten years of data, so this starts in 2004.

The 10-year trend is decreasing at a rate comparable to the moderate target lines. Since 2007, the rate is decreasing even faster.

The CHSP meeting participants voted for the aggressive target.

Note: The 2011 rural fatality rate was not available at the CHSP Annual Meeting.



Performance Measure handout, pages 15-16

The 10-year trend is decreasing in line with the moderate target.

The last couple of years appears to decreasing even more rapidly, with the actual numbers in a pretty steep decent (thin black line).

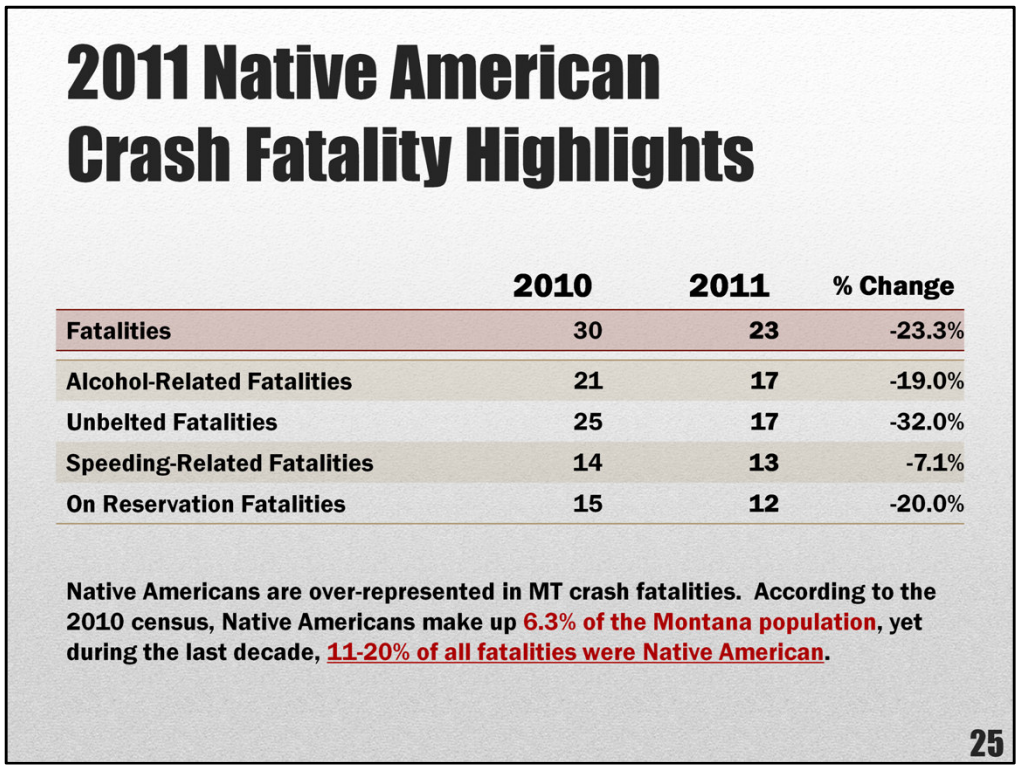
The CHSP meeting participants voted for the aggressive target.

Native American Crashes

Objective:

Reduce Native American fatalities.

24



The data for this session focuses on Native American fatalities because that is the only crash data that records the person's race. Not to diminish any fatality's significance to the family and friends that are left behind, but the small number of Native American fatalities seen each year can fluctuate widely, so most of the data is presented as a total of the last five years (2007 – 2011).

11-20% of all fatalities in a given year were Native American. When taking the total over the last five years, from 2007 to 2011 (157/1125), 14.0% of the traffic fatalities in Montana were Native American. That is over two time higher than their representation in our population.

Native American Fatalities as a percent of All Fatalities (decrease of 7, percent decreased):
2010 – 15.9%
2011 – 11.0% (This is the lowest percent in at least a decade.)

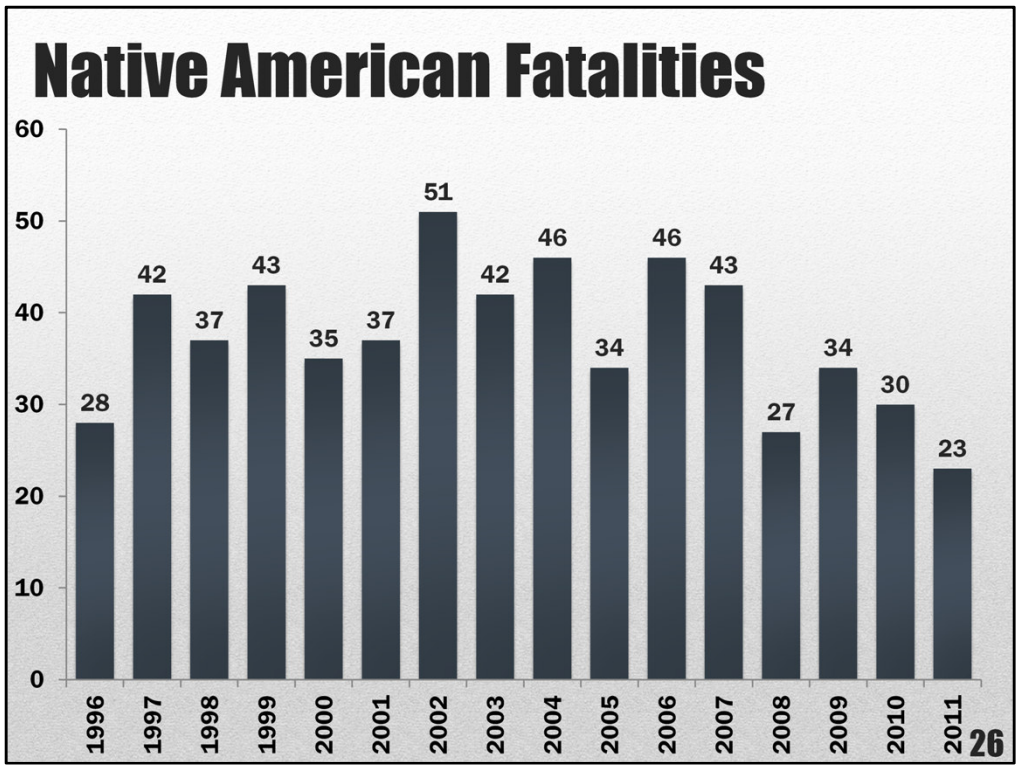
Alcohol-Related Native American Fatalities as a percent of All Native American Fatalities (raw number decreased, percent increased):
2010 – 70.0%
2011 – 73.4%

Unbelted Native American Fatalities as a percent of All Native American Occupant Fatalities (raw number decreased, percent decreased):
2010 – 25/28 = 89.3%
2011 – 17/20 = 85.0%

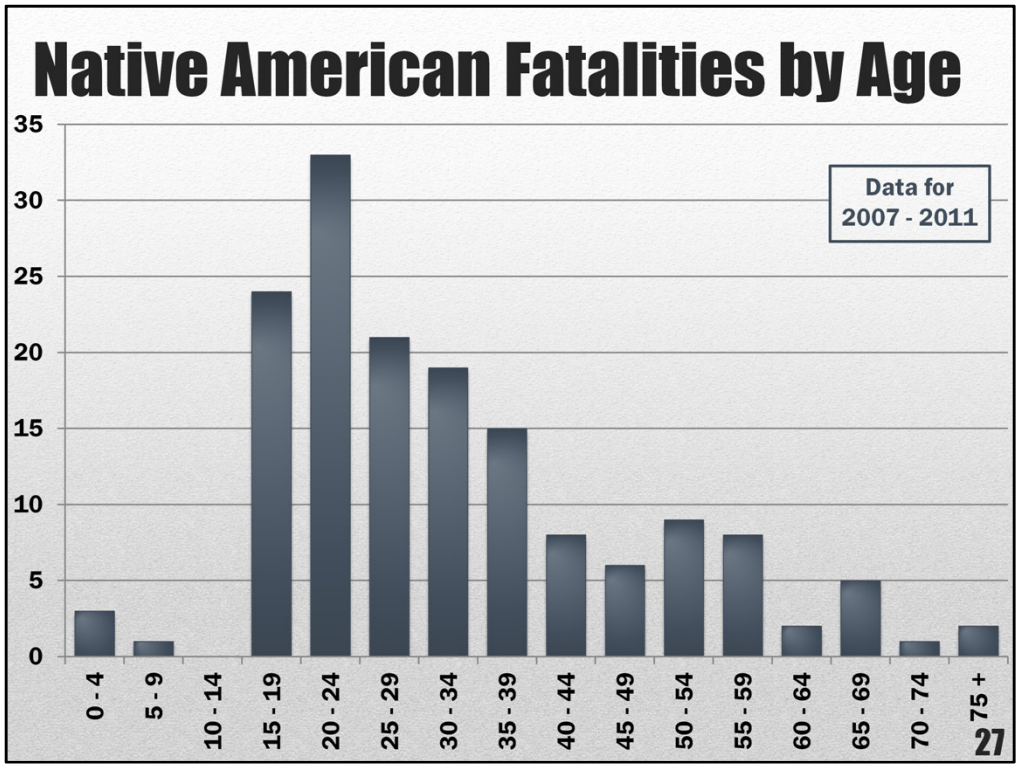
Speeding-Related Native American Fatalities as a percent of All Native American Fatalities (raw number decreased, percent increased):
2010 – 46.7%
2011 – 56.5%

When simply looking at these three problem areas, not wearing a belt was the most common risk factor seen in Native American crash fatalities.

On Reservation Native American Fatalities as a percent of All Native American Fatalities (raw number decreased, percent increased):
2010 – 50.0%
2011 – 52.2%



Here is the historical fatality numbers by year. They jump around quite a bit, but in looking at the last ten years, since 2002, there does appear to be a downward trend.

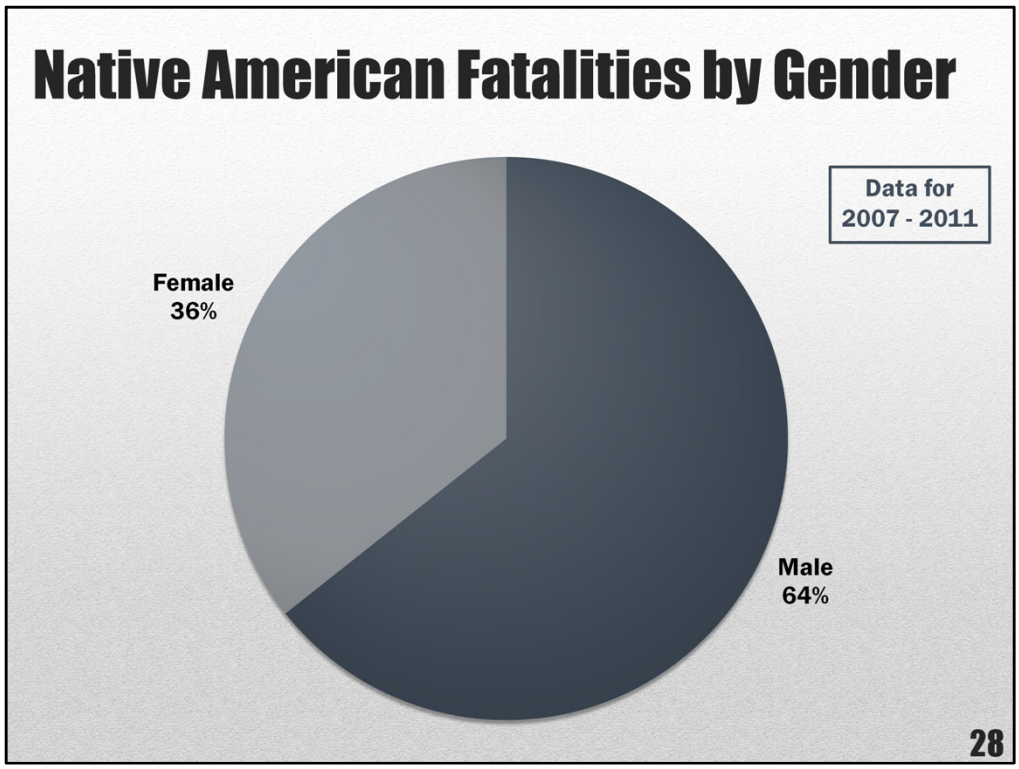


This is the 2007 to 2011 total number of Native American fatalities by 5-year age groups.

The age groups with the highest number of fatalities are the young adults: 15-39.

Actual numbers:

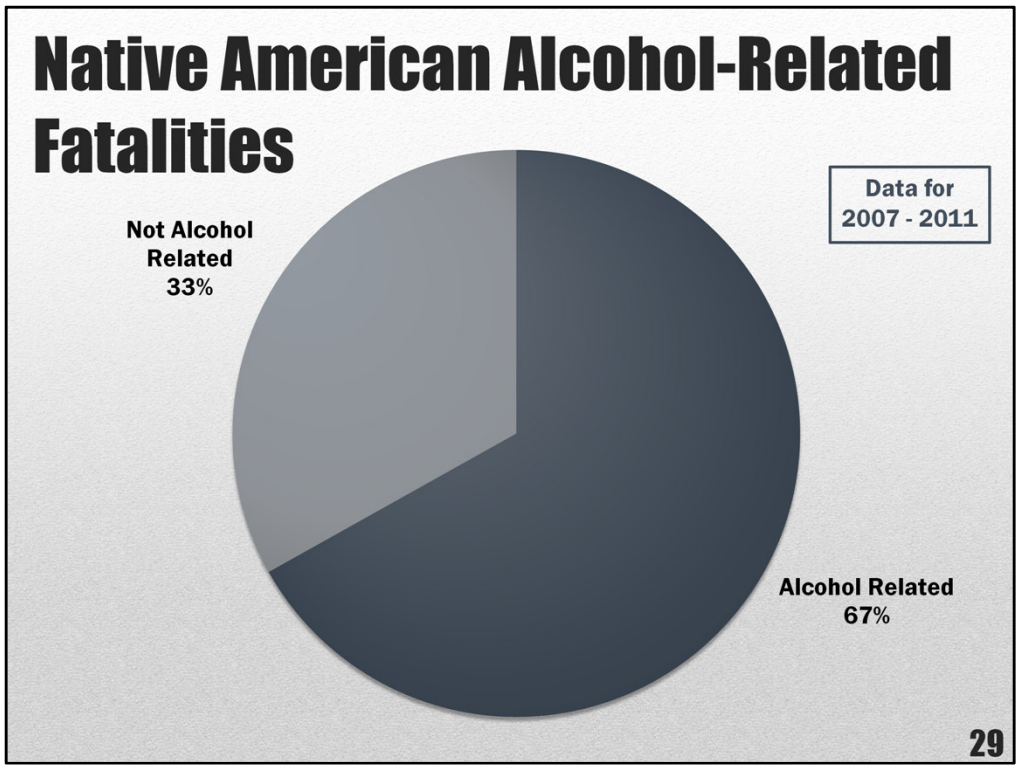
0 - 4	3
5 - 9	1
10 - 14	0
15 - 19	24
20 - 24	33
25 - 29	21
30 - 34	19
35 - 39	15
40 - 44	8
45 - 49	6
50 - 54	9
55 - 59	8
60 - 64	2
65 - 69	5
70 - 74	1
75 +	2
Total	**157**



Again, looking at the 2007 to 2011 total number of Native American fatalities by gender.

Actual numbers:

Male	101
Female	56
Total	**157**

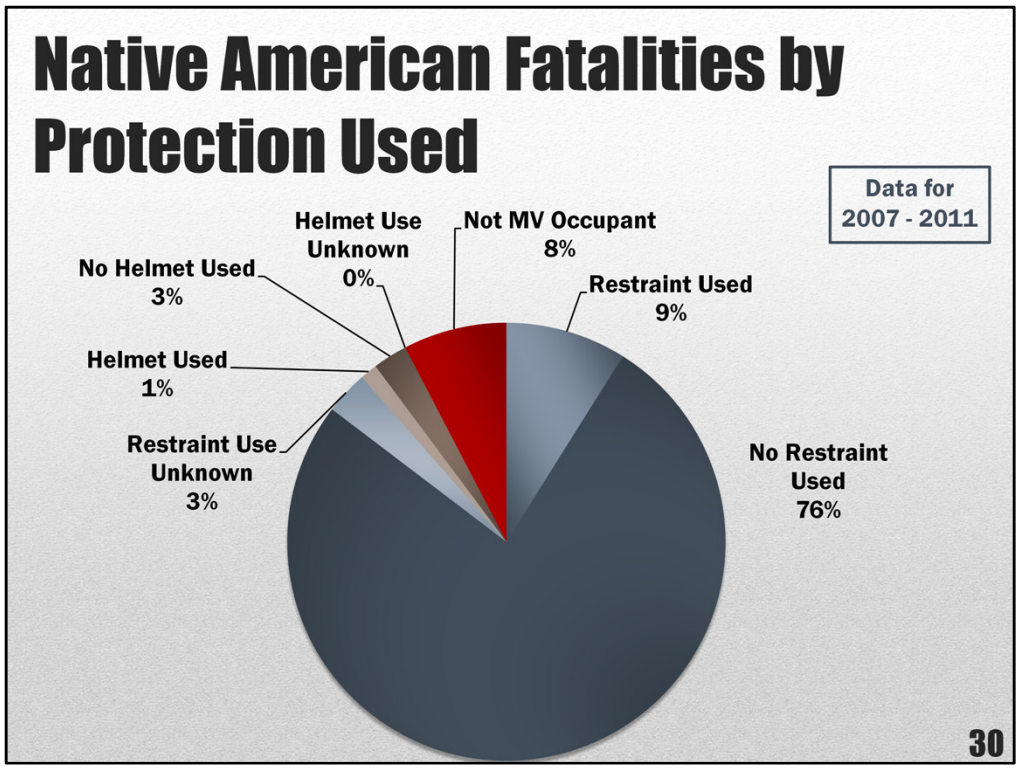


Again, looking at the 2007 to 2011 total number of Native American fatalities by alcohol involvement.

The person who died may not have been under the influence of alcohol, but they were killed by someone who was.

Actual numbers:

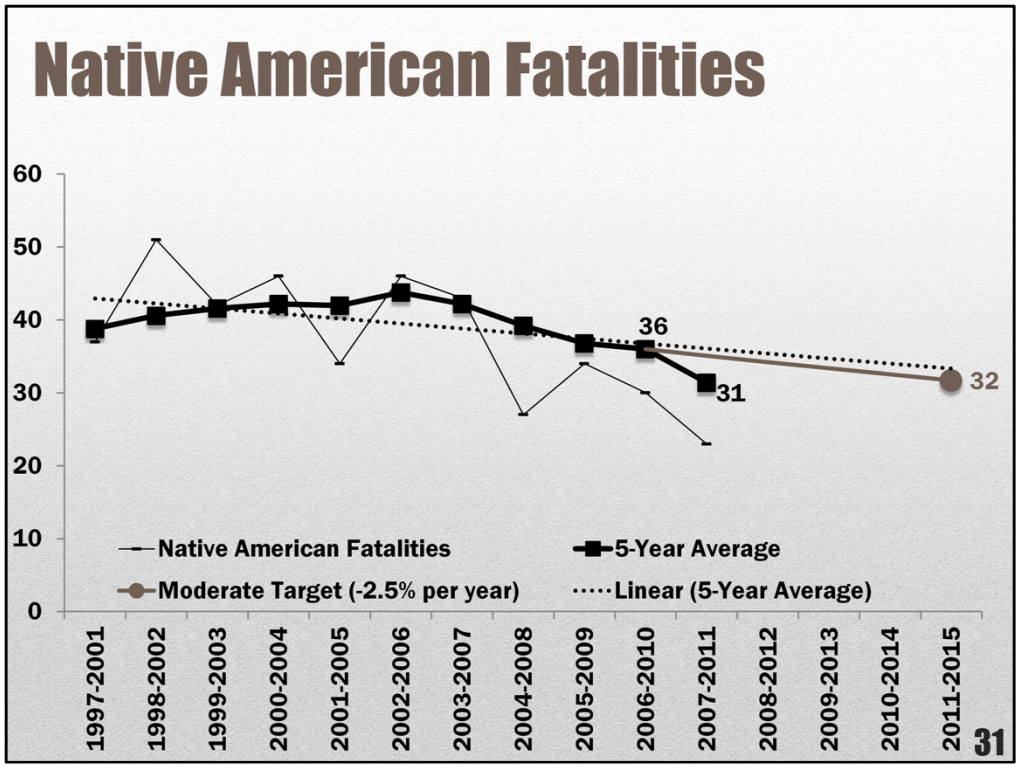
Alcohol Related	105
Not Alcohol Related	52
Total	**157**



Again, looking at the 2007 to 2011 total number of Native American fatalities by the type of protection they used.

Actual numbers:

Vehicle occupants:		
Restraint Used	14	(10.1%)
No Restraint Used	120	(86.3%)
Restraint Use Unknown	5	(3.6%)
TOTAL	**139**	
Motorcycle riders:		
Helmet Used	2	(33.3%)
No Helmet Used	4	(66.7%)
Helmet Use Unknown	0	
TOTAL	**6**	
Not MV Occupant	12	
OVERALL TOTAL	**157**	



Performance Measure handout, pages 19-20

The 10-year trend is decreasing in line with the moderate target.

The last couple of years appears to be decreasing more in line with the aggressive target.

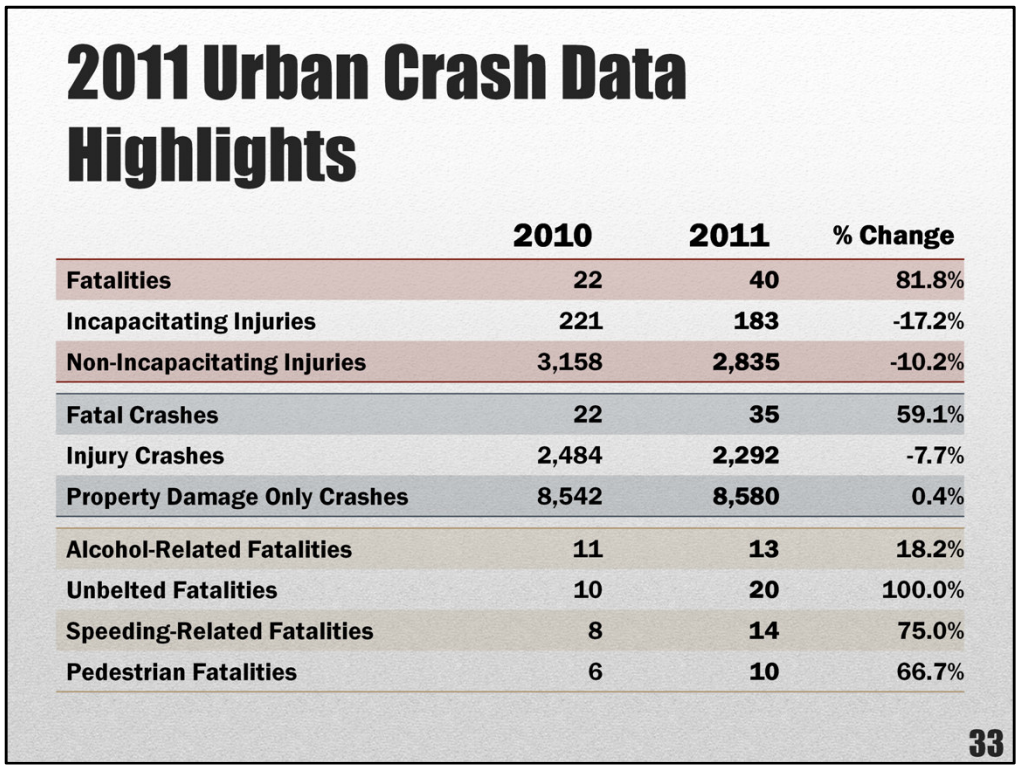
The CHSP meeting participants voted for the moderate target.

Urban Area Crashes

Objective:

Reduce fatal and incapacitating injury crashes in urban areas.

32



Although fatalities went up, incapacitating injuries went down. The relatively small numbers of fatalities seen in Montana each year can fluctuate widely, so combining fatalities with incapacitating injuries provides a more accurate picture of overall traffic safety trends in the state.
Combining these numbers results in the severe injuries total (decrease of 20):
2010 – 243
2011 – 223

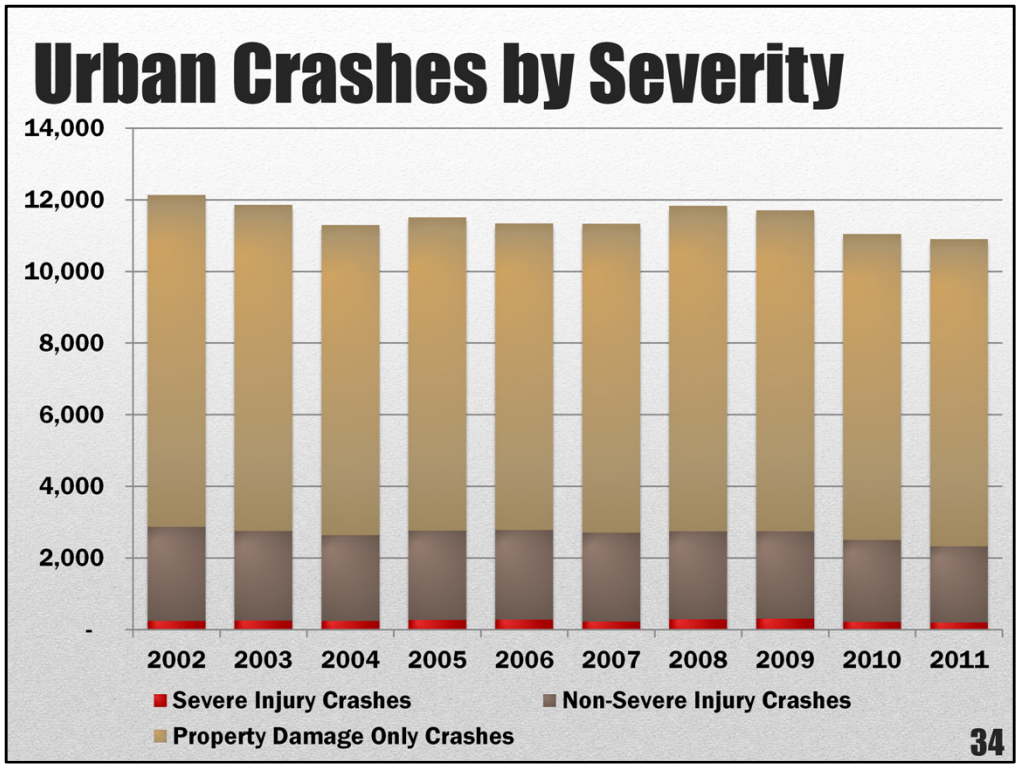
Alcohol-Related Fatalities in Urban Areas as a percent of All Fatalities in Urban Areas (raw number increased, percent decreased):
2010 – 50.0%
2011 – 32.5%

Unbelted Fatalities in Urban Areas as a percent of All Occupant Fatalities in Urban Areas (raw number increased, percent increased):
2010 – 10/16 = 62.5%
2011 – 20/29 = 69.0%

Speeding-Related Fatalities in Urban Areas as a percent of All Fatalities in Urban Areas (raw number increased, percent decreased):
2010 – 36.4%
2011 – 35.0%

When simply looking at these three problem areas, not wearing a belt was the most common risk factor seen in traffic crash fatalities.

Pedestrians are the most vulnerable of the road users, which makes this category of special interest, even though the numbers are too low to elevate the category to an emphasis area.
Pedestrian Fatalities in Urban Areas as a percent of All Fatalities in Urban Areas (raw number increased, percent decreased):
2010 – 27.3%
2011 – 25.0%



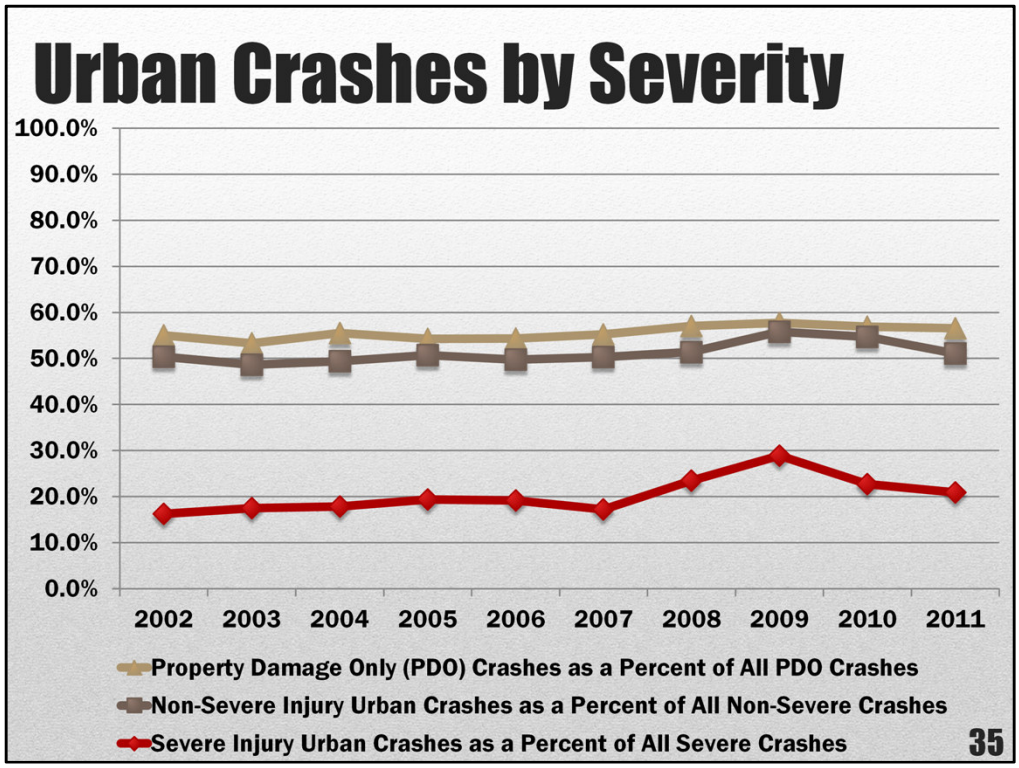
Looking at the last ten years…

Adding the red, brown and tan bars together provides the total number of urban crashes each year. Overall, the urban crashes have decreased and increased then decreased lately.

This picture is to provide a sense of the severity level involved in this kind of crash.

Urban crashes are typically property damage only crashes. They also are non-severe injury crashes; in other words, people leave the crash with bumps, bruises, and scrapes.

There are some severe injury crashes (the red bars), though they are few, and in the last two years have decreased even more.

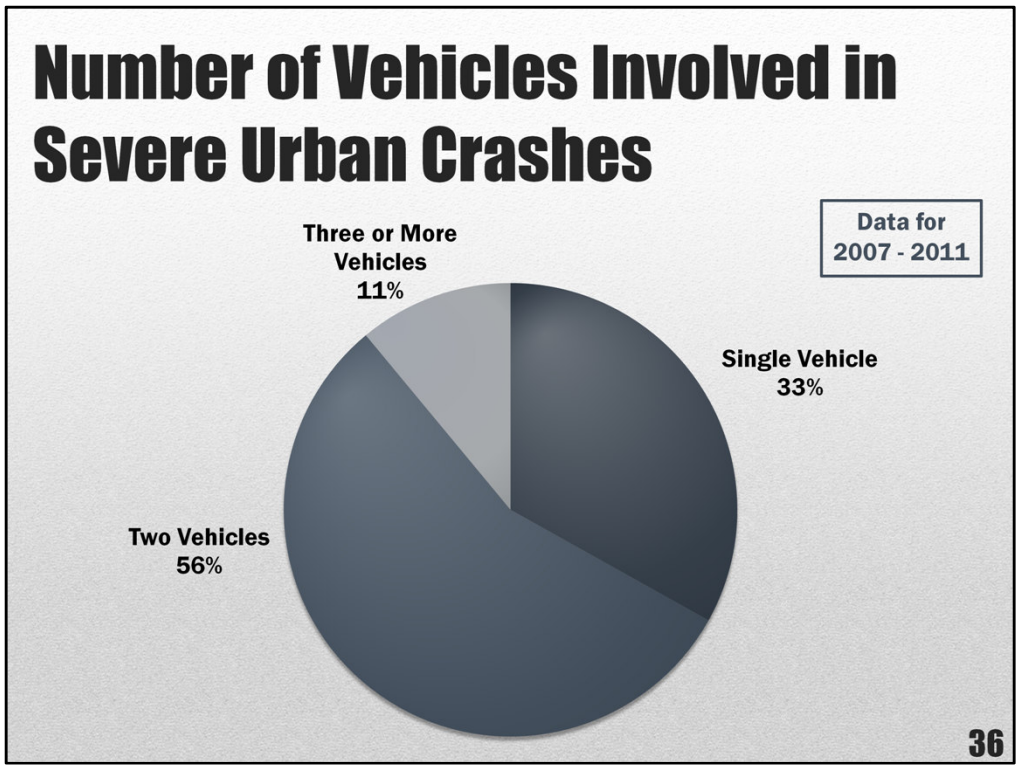


Still looking at the last ten years, this picture is to provide a sense of the severity involved in this kind of crash to the big picture of all crashes.

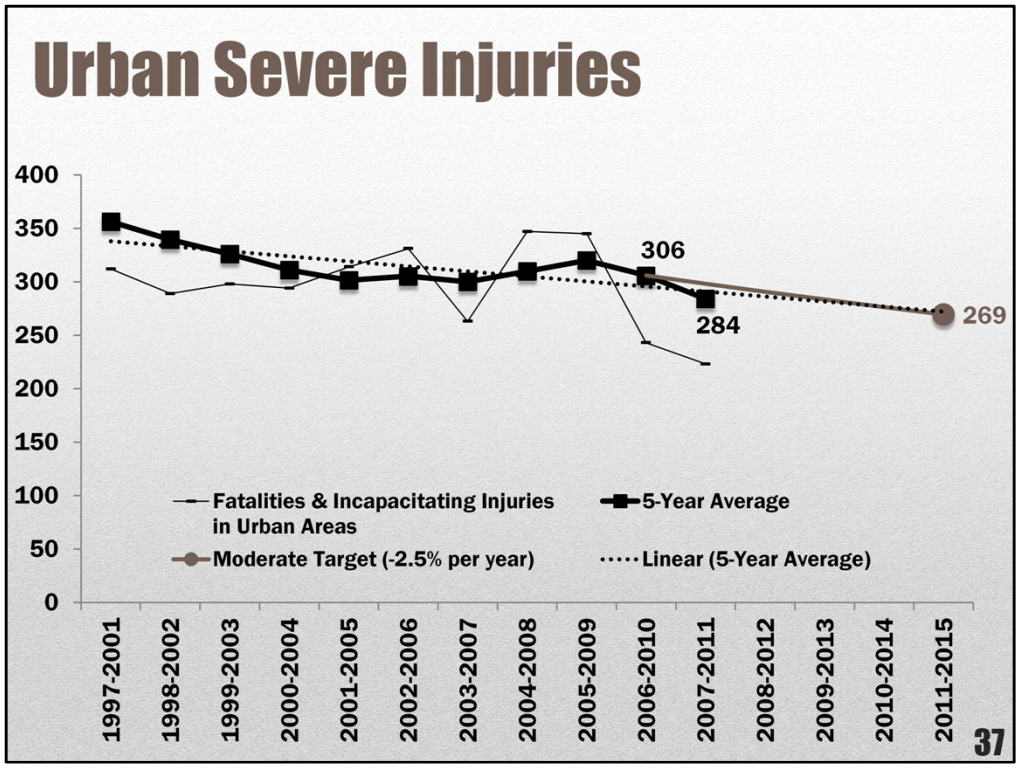
There is the potential for 100% of crashes to be of a specific type, so in order to show how often we see this specific emphasis area pop up in all crashes, we keep the scale at 100%.

Over 50% of all property damage only and non-severe crashes are in an urban setting. These percentages have slightly increase over the last ten years, but have never gotten higher than 60%.

Between 15 and 30% of all severe injury crashes are in an urban setting. These percentages were fairly stable between 2002 and 2007, but increased in 2008 and 2009, recently decreasing again, toward the earlier levels.



It is unknown why there are so many severe, single crashes in urban locations. In 2007-2008 there were 27-28%, then it jumped up in 2009 to 38.5%. This warrants a deeper look.



Performance Measure handout, pages 21-22

The 10-year trend is decreasing a bit slower than the moderate target.

The last three years is declining more aggressively.

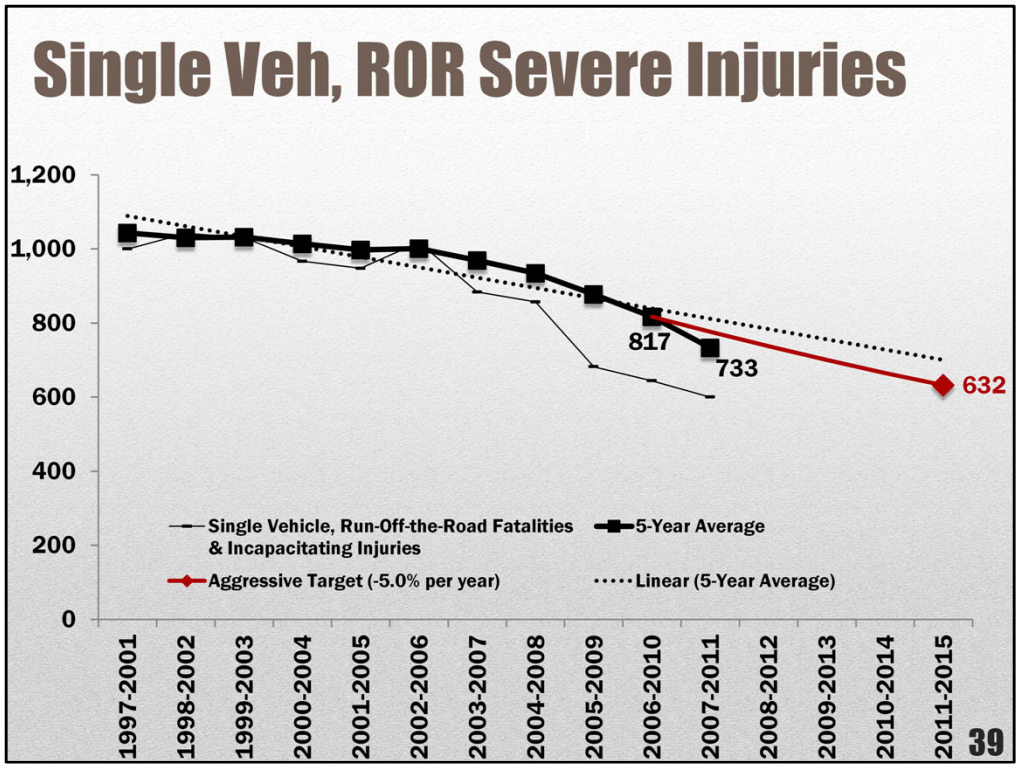
The CHSP meeting participants voted for the moderate target.

Run-Off-the-Road Crashes & High Crash Corridors

Objectives:

- Reduce and mitigate the consequences of single-vehicle run-off-the-road fatal and incapacitating injury crashes.
- Establish a process to reduce crashes, injury crashes, and fatal crashes in identified high-crash corridors and locations.

38



Performance Measure handout, pages 25-26

The 10-year trend is decreasing in line with the aggressive target.

The last couple of years appears to decrease even more rapidly, with the actual numbers in a pretty steep decent (thin black line).

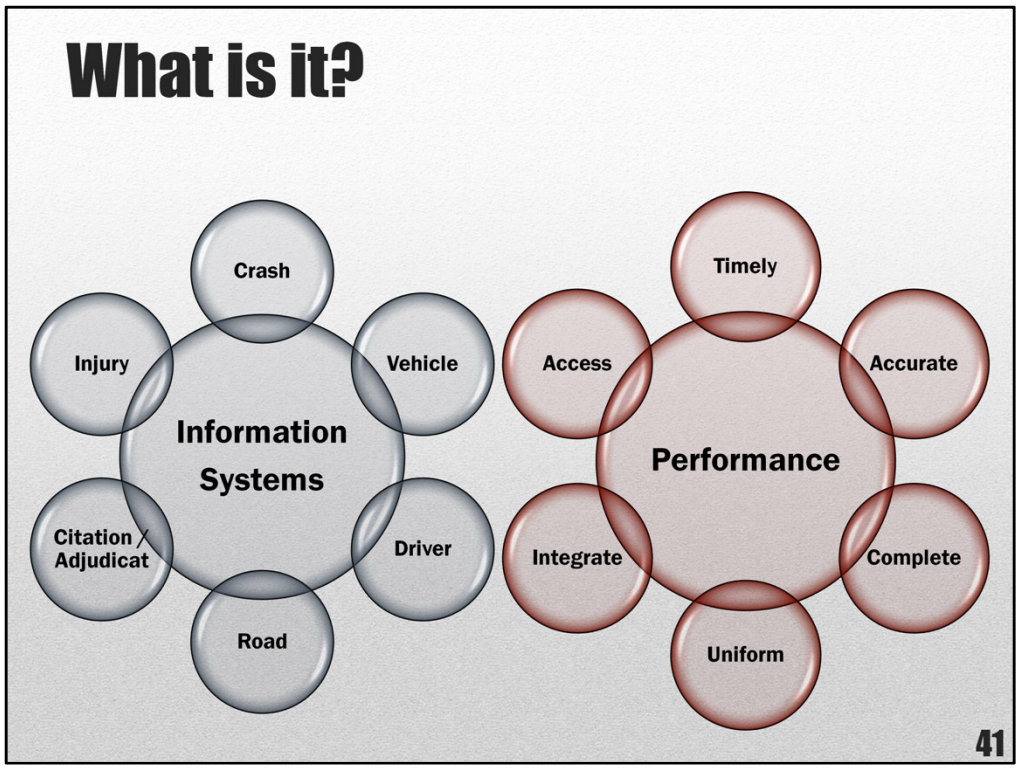
The CHSP meeting participants voted for the aggressive target.

Traffic Records Management

Objective:

Develop and implement a comprehensive transportation records and crash reporting, data management and analysis system, accessible to all stakeholders, to manage and evaluate transportation safety.

40

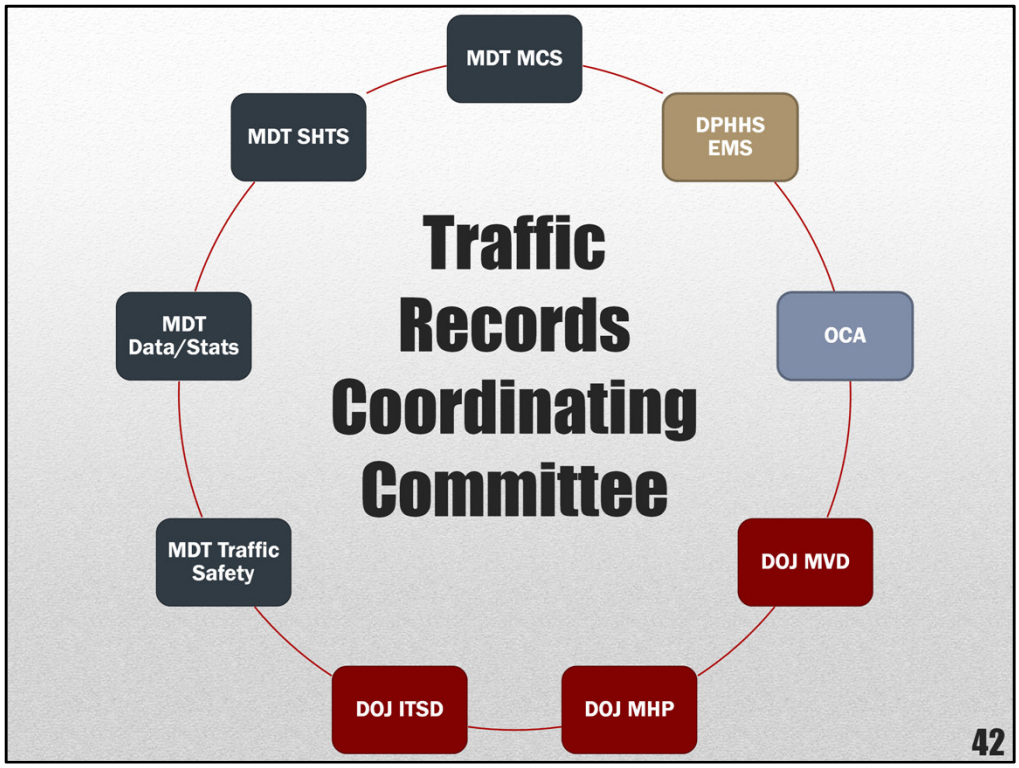


The information systems that contain traffic records:

- **Crash** (MHP): law enforcement crash reports
- **Vehicle** (DOJ-MVD): information on registered vehicles
- **Driver** (DOJ-MVD): information on licensed drivers, including driver history
- **Roadway** (MDT): information about the roadways within the state
- **Citation/Adjudication** (OCA): store traffic citation, arrest and final disposition of charge data
- **Injury** (DPHHS-EMS): store data on motor vehicle-related injuries and deaths, including pre-hospital EMS data, hospital emergency department data systems, hospital discharge data systems, trauma registries, and long term care/rehabilitation patient data systems

The way to measure system performance:

- **Timeliness**: the span of time between the occurrence of an event and entry of information into the appropriate database.
- **Accuracy**: the degree to which the data is error-free.
- **Completeness**: reflects both the number of records that are missing and the number of missing (blank) data elements that are in the database.
- **Uniformity**: the consistency among the files or records in a database, i.e. all jurisdictions should collect and report the same data using the same definitions and procedures.
- **Integration**: reflects the ability of records in a database to be linked to a set of records in another of the core databases, this includes integrating of files within databases rather than the integration of entire databases.
- **Accessibility**: reflects the ability of legitimate users to successfully obtain desired data, i.e. customer satisfaction.



Montana Department of Transportation (MDT)
MCS – Motor Carrier Services
SHTS – Planning / State Highway Traffic Safety
Data/Stats – Planning / Data & Statistics Bureau
Traffic Safety – Engineering / Traffic Safety

Montana Department of Justice (DOJ)
ITSD – Information Technology Services Division
MHP – Highway Patrol
MVD – Motor Vehicle Division

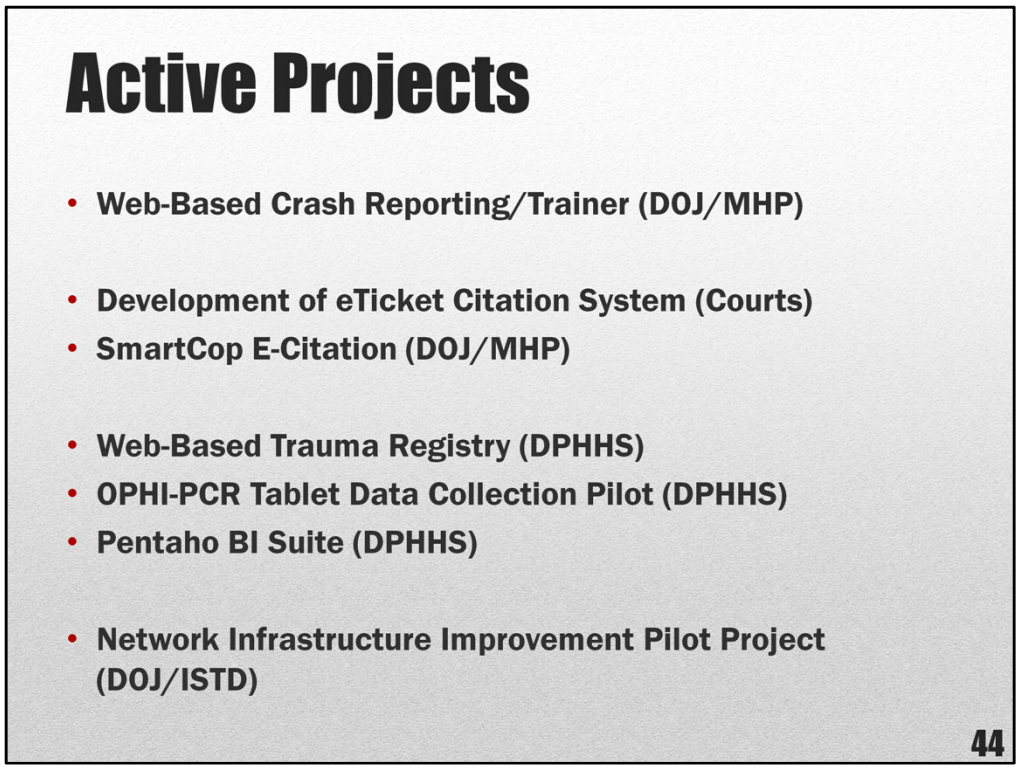
Office of Court Administration (OCA)

Montana Department of Public Health & Human Services (DPHHS)
EMS – Emergency Medical Services

TR Strategic Plan

- CHSP Strategy TR-1
- Originally developed in 2006
- Updated and posted to MDT website:
  - http://www.mdt.mt.gov/trspi/
  - NHTSA 408 Grant
  - Traffic Records Strategic Plan 2011 Update
- TRSP Annual Element: 2012
  - Current status of all projects

43



Montana Highway Patrol

- Web-Based Crash Reporting/Trainer – developing a mechanism to collect all crash reports electronically and provide training to all law enforcement; increasing data accuracy, timeliness, uniformity and accessibility.

Courts & Montana Highway Patrol

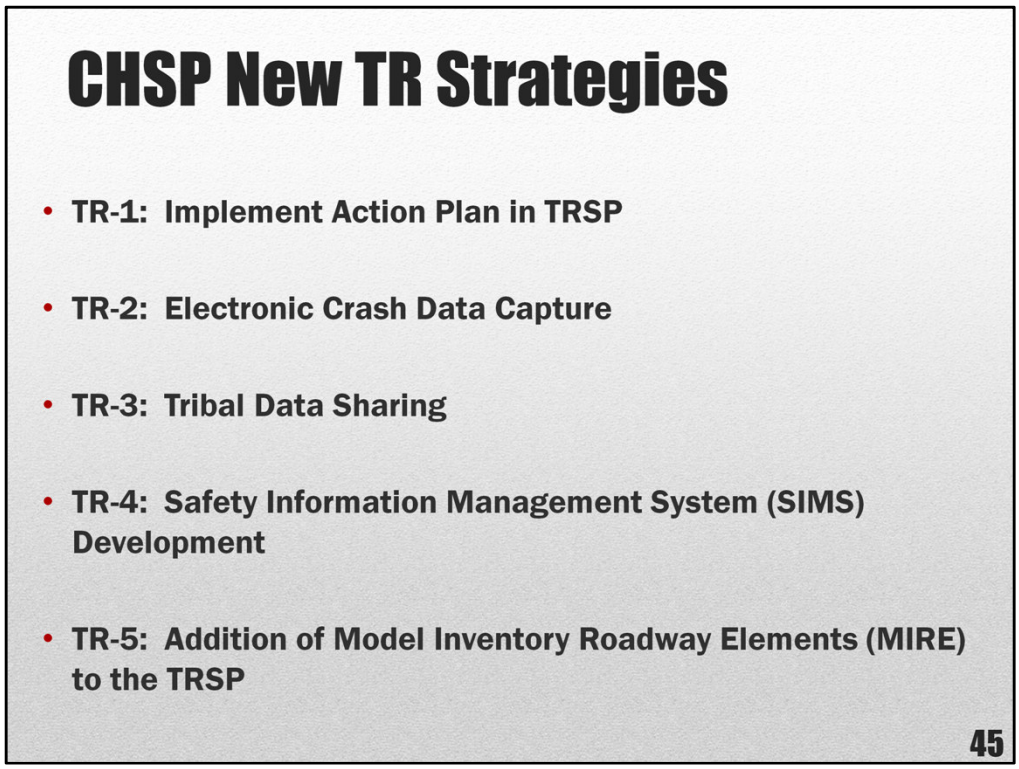
- Electronic Citations – developing a mechanism to collect citation information the transfer it to the local court databases electronically.

DPHHS – EMS & Trauma Systems

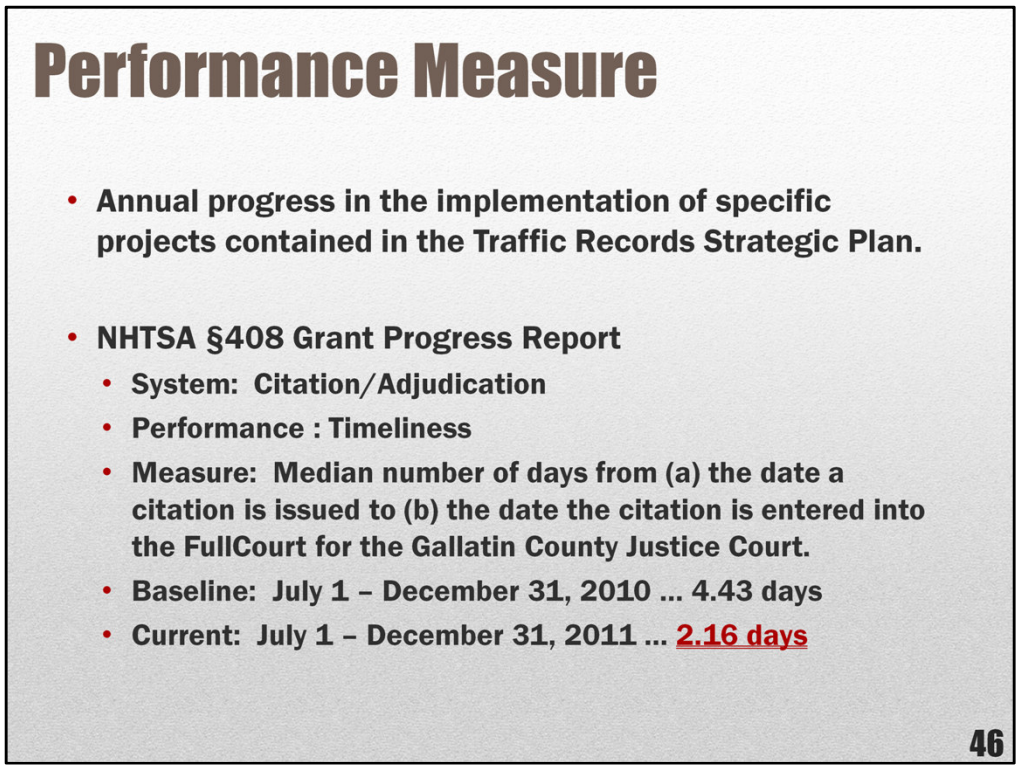
- Web-Based Trauma Registry – developing a mechanism to collect trauma data electronically; increasing data accuracy, timeliness, uniformity, completeness and accessibility.
- OPHI-PCR Tablet Data Collection Pilot – developing a mechanism to collect electronic patient care reporting in real-time; increasing timeliness, uniformity and completeness.
- Pentaho BI Suite – enhancing the Health Information and Resource Management System (HIRMS) by increasing the reporting and analysis functionality; allowing for greater integration, uniformity and accuracy.

Department of Justice

- Network Infrastructure Improvement Project Pilot – Improve the network capacity in order to sustain network performance for critical systems; allowing for greater system access and integration.



Bi-Annual Emphasis Area Progress Report
Begins on page 17



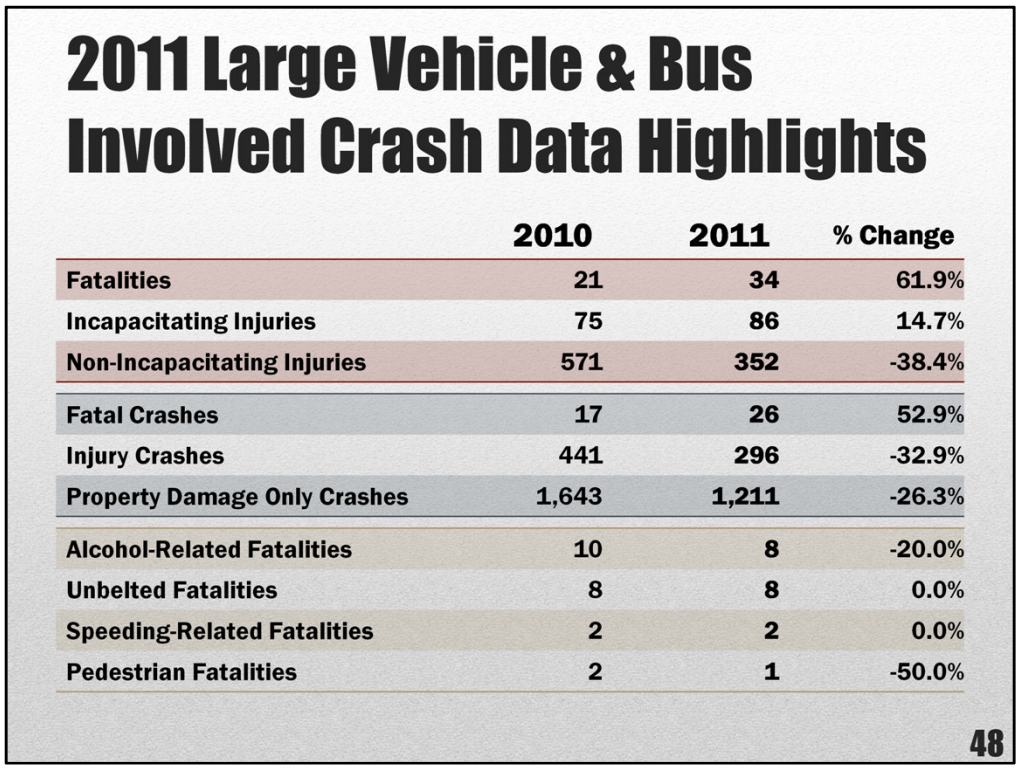
Submitted to the national 408 review team in Washington DC. Received notice that this performance measure shows measurable progress in improving the timeliness of Montana's citation/adjudication database.

Large Vehicle & Bus (LVB) Crashes

Objective:

Reduce fatal and incapacitating injury crashes involving large vehicles and buses.

47



Large Vehicle & Buses include vans (like cargo vans, not mini-vans), transit buses, school buses, trucks/truck-tractors (semis), motorhomes, ambulances, fire trucks, tow trucks and work construction vehicles.

Both fatalities and incapacitating injuries went up in this emphasis area. The relatively small numbers of fatalities seen in Montana each year can fluctuate widely, so combining fatalities with incapacitating injuries provides a more accurate picture of overall traffic safety trends in the state.
Combining these numbers results in the severe injuries total (increase of 24):
2010 – 96
2011 – 120

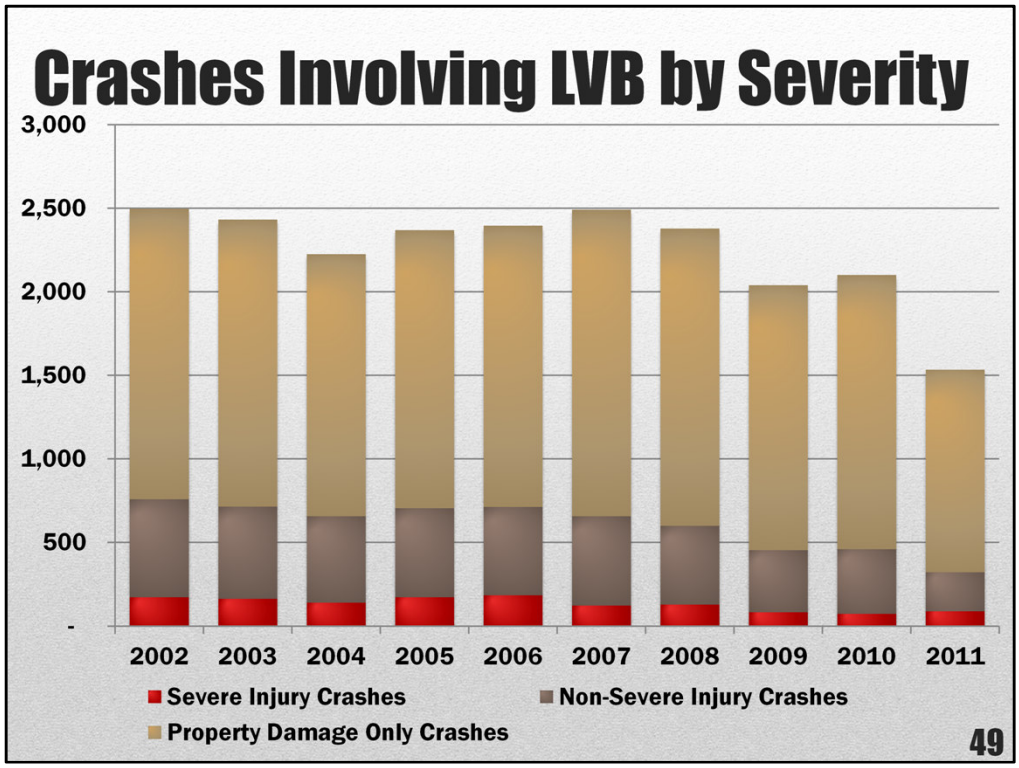
Alcohol-Related and LVB Involved Fatalities as a percent of All LVB Involved Fatalities (raw number decreased, percent decreased):
2010 – 47.6%
2011 – 23.5%

Unbelted and LVB Involved Fatalities as a percent of All LVB Involved Occupant Fatalities (raw number maintained, percent decreased):
2010 – 8/19 = 42.1%
2011 – 8/30 = 26.7%

Speeding-Related and LVB Involved Fatalities as a percent of All and LVB Involved Fatalities (raw number maintained, percent decreased):
2010 – 9.5%
2011 – 5.9%

When simply looking at these three problem areas, not wearing a belt was the most common risk factor seen in traffic crash fatalities.

Pedestrians are the most vulnerable of the road users, which makes this category of special interest, even though the numbers are too low to elevate the category to an emphasis area.
Pedestrian and LVB Involved Fatalities as a percent of All and LVB Involved Fatalities (raw number decreased, percent decreased):
2010 – 9.5%
2011 – 2.9%



Looking at the last ten years…

Adding the red, brown and tan bars together provides the total number of crashes involving large vehicle and buses each year. Overall, the crashes involving large vehicles and buses have decreased and increased then decreased lately.

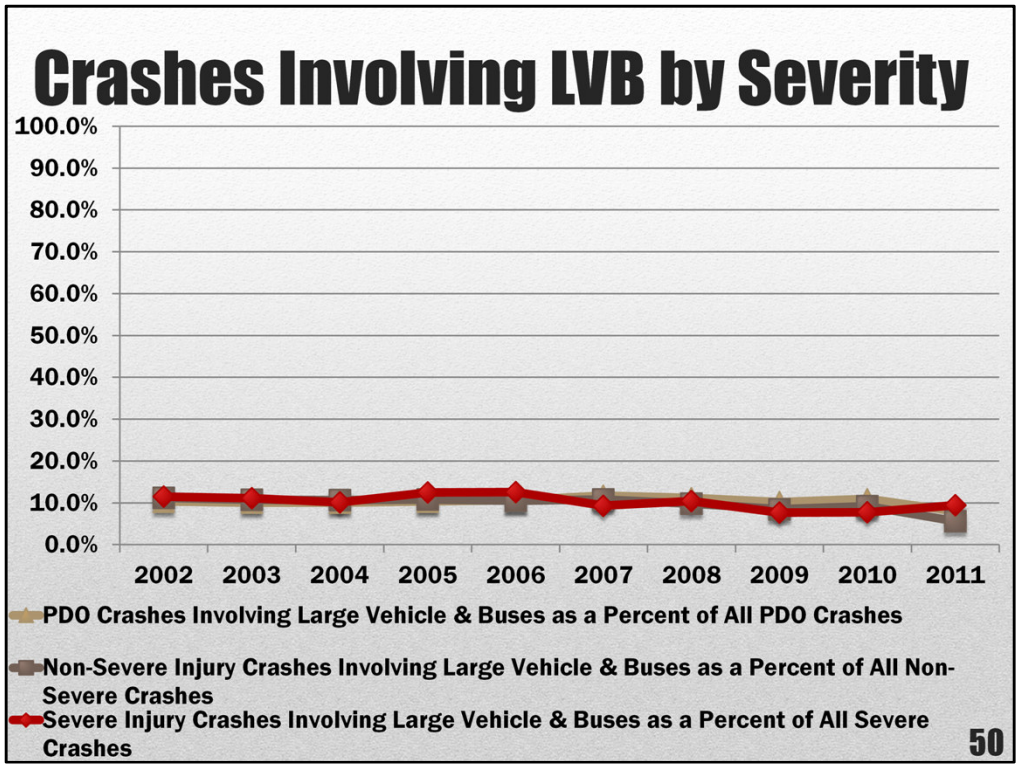
Some of the large decrease we may be seeing since 2008 is from the translation the data goes through when moving through the Highway Patrol's database and into the Dept. of Transportation's database.

This picture is to provide a sense of the severity level involved in this kind of crash.

Crashes involving large vehicle and buses are typically property damage only crashes.

There are a lot of non-severe injury crashes, though in the last three years the tan bar has grown smaller.

There are certainly some severe injury crashes (the red bars) that show up brightly, though the numbers have been decreasing.

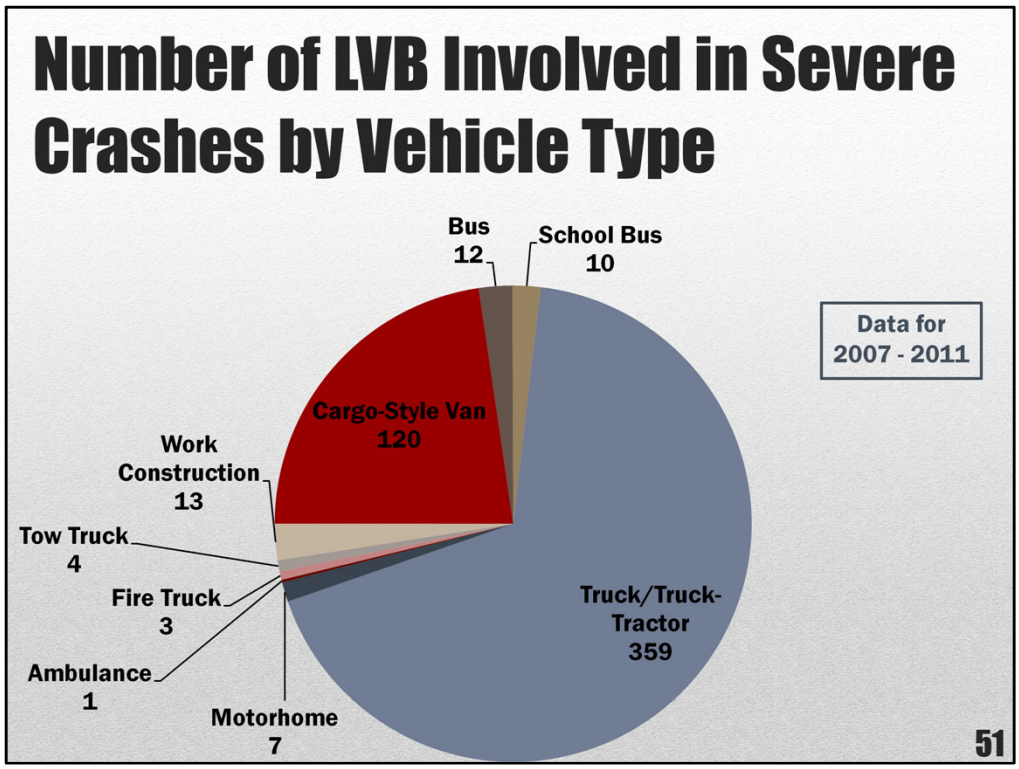


Still looking at the last ten years, this picture is to provide a sense of the severity involved in this kind of crash to the big picture of all crashes.

There is the potential for 100% of crashes to be of a specific type, so in order to show how often we see this specific emphasis area pop up in all crashes, we keep the scale at 100%.

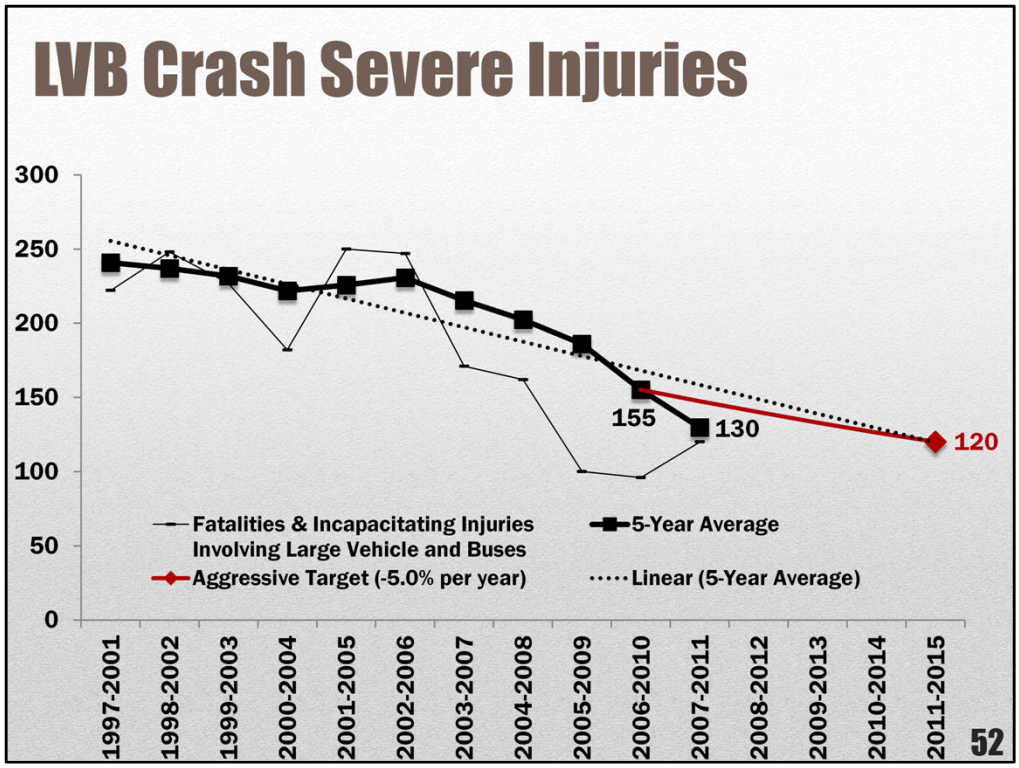
All severity levels (property damage only, non-severe injury and severe injury) hover around 10% of all levels of crashes, staying fairly stable throughout the last ten years.
So approximately 10% of all severe crashes involve a large vehicle or bus, and the same for non-severe crashes and property damage only crashes.

Although the potential is great for a horrific crash when large vehicles and buses are involved, they remain a fairly low percent of the overall Montana crash picture.



Large Vehicle & Buses include vans (like cargo vans, not mini-vans), transit buses, school buses, trucks/truck-tractors (semis), motorhomes, ambulances, fire trucks, tow trucks and work construction vehicles.

How many of these vehicles are involved in severe (fatal or incapacitating injury) LVB crashes? In the last five years (2007-2011), truck/truck-tractors were the most common with the cargo-style vans a clear (but distance) second. After that, it is sort of a free-for-all.



Performance Measure handout, pages 29-30

The 10-year trend is decreasing inline with the aggressive target.

The most recent years is declining even more aggressively.

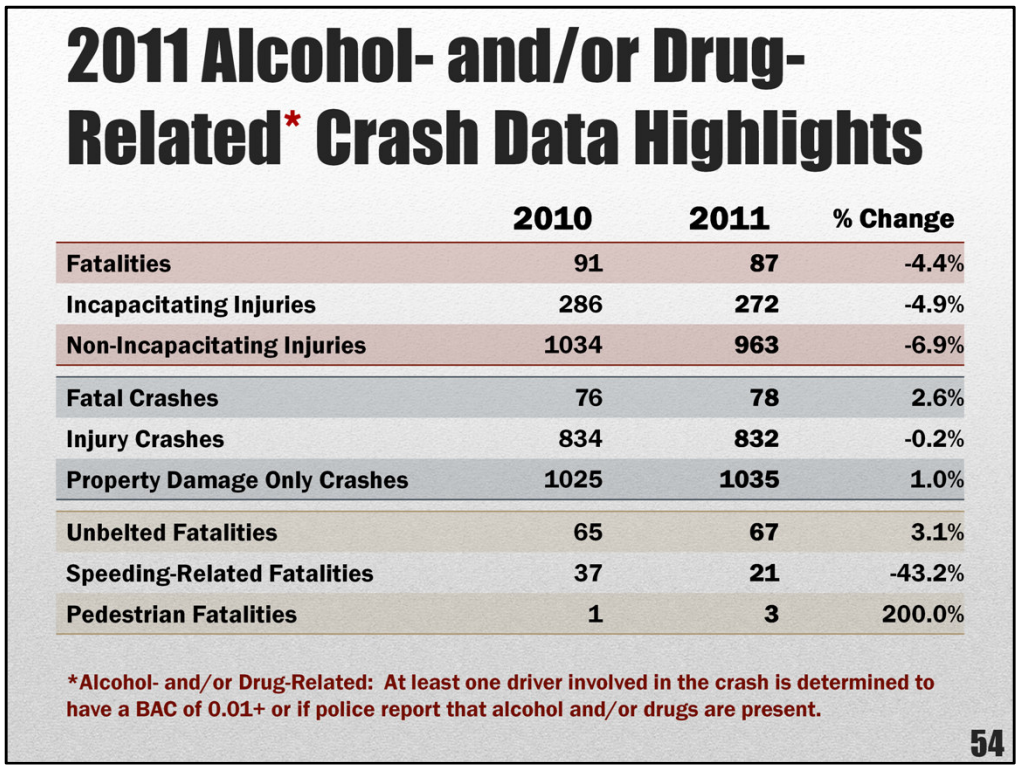
The CHSP meeting participants voted for the aggressive target.

Alcohol- and Drug-Impaired Driving Crashes

Objective:

Reduce statewide alcohol- and drug-impaired fatal and incapacitating injury crashes.

53



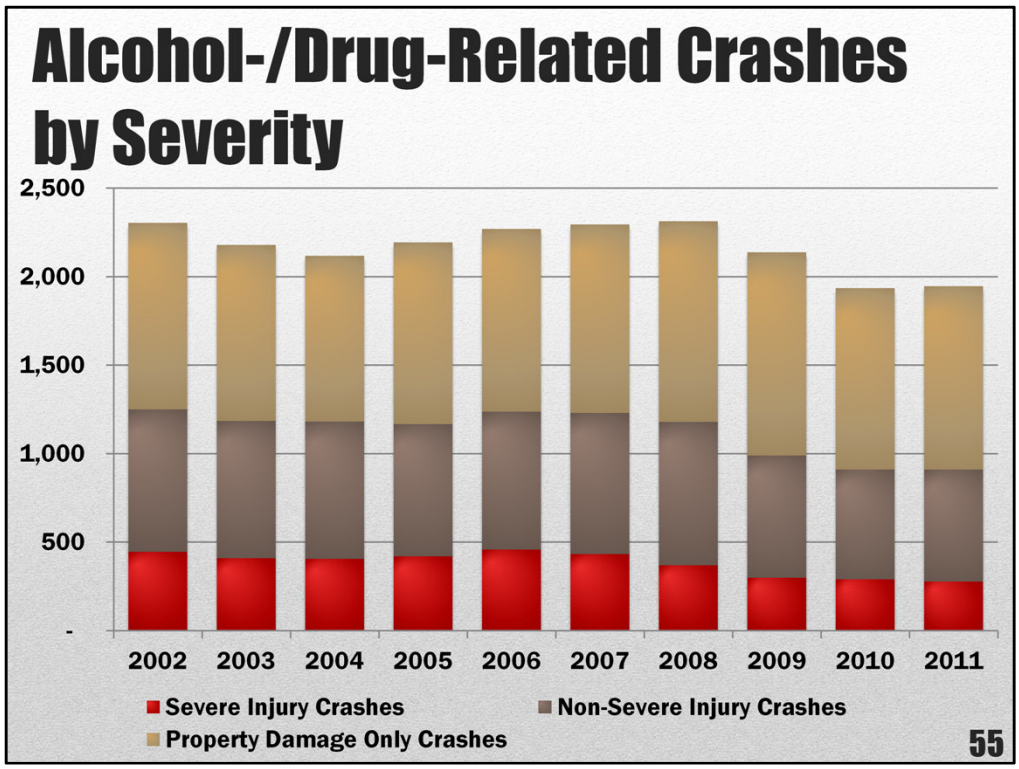
Fatalities and incapacitating injuries went down in this emphasis area. The relatively small numbers of fatalities seen in Montana each year can fluctuate widely, so combining fatalities with incapacitating injuries provides a more accurate picture of overall traffic safety trends in the state. Combining these numbers results in the severe injuries total (decrease of 18):
2010 – 377
2011 – 359

Unbelted and Alcohol/Drug-Related Fatalities as a percent of All Alcohol/Drug-Related Occupant Fatalities (raw number increased, percent increased):
2010 – 65/85 = 76.5% (compared to 60.6% for all fatalities)
2011 – 67/81 = 82.7% (compared to 68.6% for all fatalities)

Speeding-Related and Alcohol/Drug-Related Fatalities as a percent of All Alcohol/Drug-Related Fatalities (raw number decreased, percent decreased):
2010 – 40.7% (compared to 31.7% for all fatalities)
2011 – 24.1% (compared to 26.3% for all fatalities)

When simply looking at these three problem areas, not wearing a belt was the most common risk factor seen in traffic crash fatalities. Mixing alcohol and not buckling up increases the potential for a death.

Pedestrians are the most vulnerable of the road users, which makes this category of special interest, even though the numbers are too low to elevate the category to an emphasis area. Pedestrian Fatalities involving a Driver with Alcohol/Drugs as a percent of All Alcohol/Drug-Related Fatalities (raw number increased, percent increased):
2010 – 1.1%
2011 – 3.4%



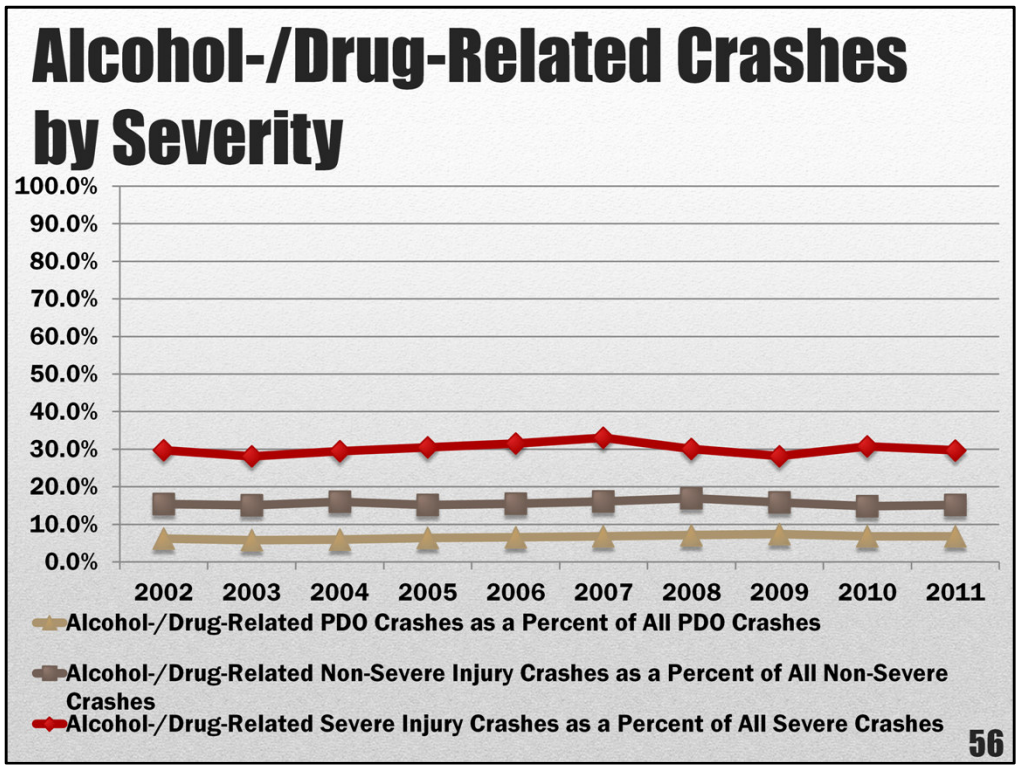
Looking at the last ten years…

Adding the red, brown and tan bars together provides the total number of alcohol/drug-related crashes each year. Overall, the alcohol/drug-related crashes have decreased and increased then decreased lately.

This picture is to provide a sense of the severity level involved in this kind of crash.

The first thing that jumps out in this chart are the red bars along the bottom. Those are the severe injury crashes, where people are getting tragically injured or killed. In previous charts, those red bars have been visible, but almost un-noticably so. Here they stand out glaringly. The good thing about the severe injury crashes is they are decreasing.

There are also a large number of non-severe injury crashes, very similar to the number of property damage only crashes. Clearly, alcohol/drug-related crashes involve a large number of people that receive some level of injury. Hopefully the decreases seen in the last couple of years will continue.



Still looking at the last ten years, this picture is to provide a sense of the severity involved in this kind of crash to the big picture of all crashes.

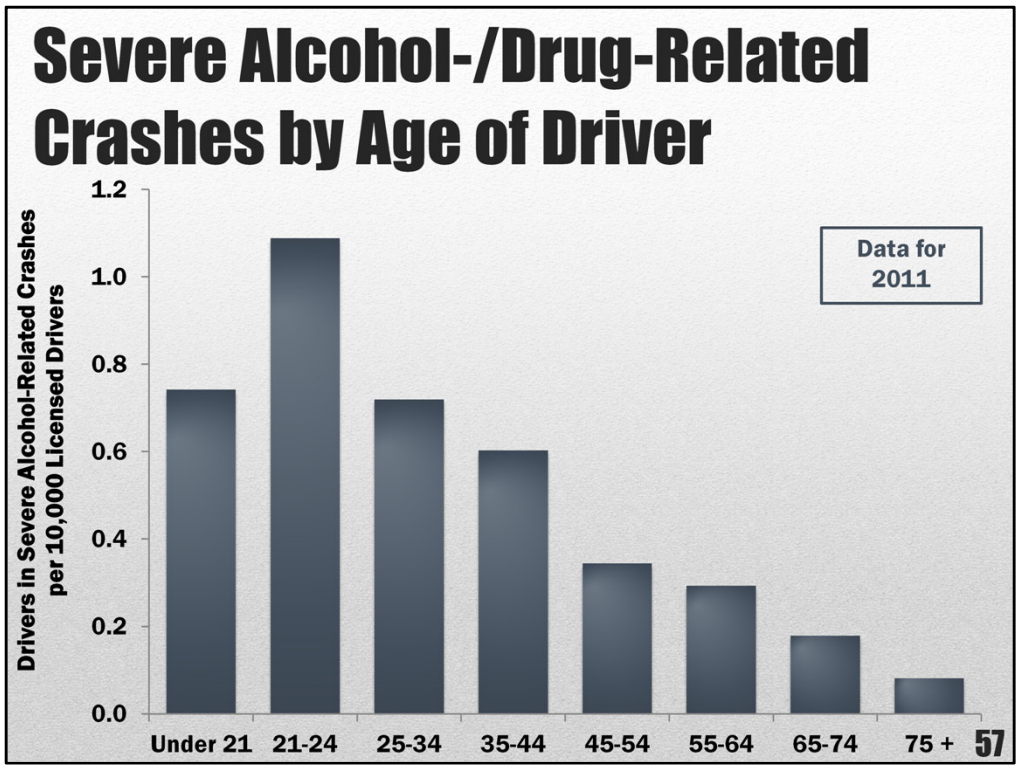
There is the potential for 100% of crashes to be of a specific type, so in order to show how often we see this specific emphasis area pop up in all crashes, we keep the scale at 100%.

Roughly 30% of all severe injury crashes involve alcohol and/or drugs, and this percent has been fairly stable over the last ten years.

Roughly 15% of all non-severe injury crashes also involve alcohol and/or drugs.

Less than 10% of all property damage only crashes involve alcohol and/or drugs.

If alcohol and/or drugs are involved in the crash, there is a greater likelihood that a person will be injured. The people drinking and driving are not on the roads “bumping” into things and causing a bit of damage, they are hurting themselves or others.



BASED ON SEVERITY, LET'S LOOK A LITTLE CLOSER AT THE AGE OF THE DRIVER IN THESE CRASHES.

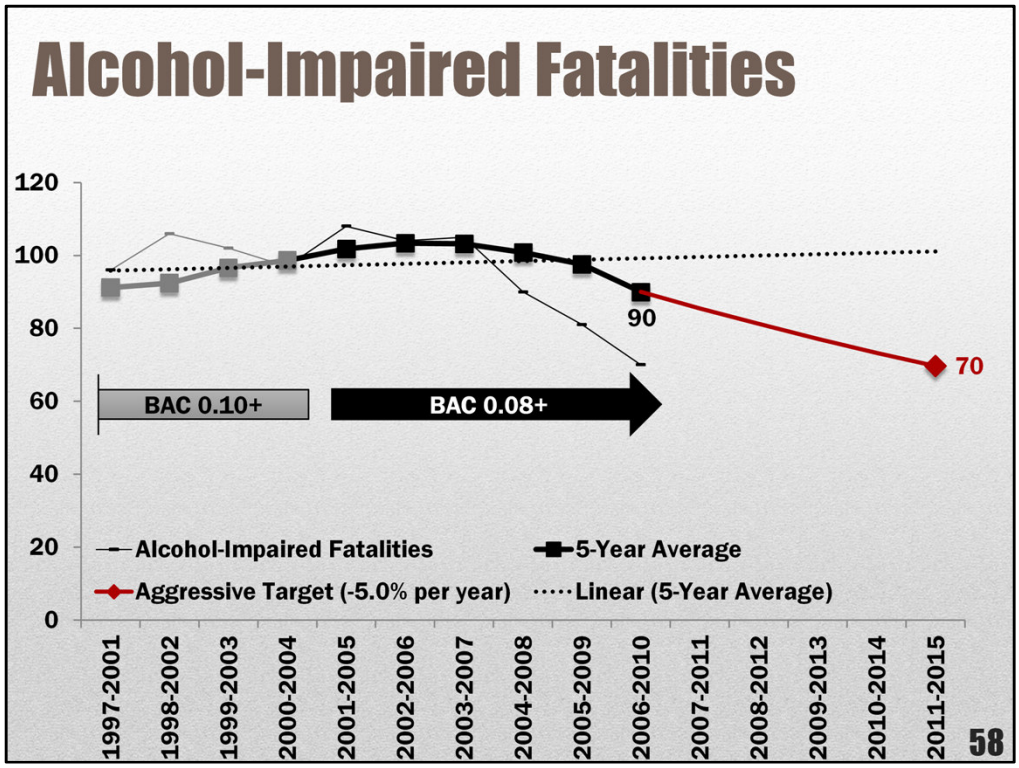
Greatest number of drivers involved in severe alcohol/drug-related crashes based on the number of licensed drivers: **21-24 year olds.. the "new" drinkers**. There are under 50,000 licensed drivers in this four-year age category, and last year 52 of them were involved in crashes resulting in fatal or incapacitating injuries.

Now keep in mind, not all of those 52 drivers may have been the ones drinking and driving. They may be victims of circumstance where an older drunk hit them. Also, a single really bad drunk driver may be counted multiple times.

There are two age groups that are basically tied for second as the drinking/driving/crashing drivers:
15-19 year olds… the "new" drivers, who legally should not be drinking and driving (but they could be impaired by prescription drugs, legal gotten), and
25-34 year olds… who technically are involved in the highest number of severe injury crashes, but by their sheer number of drivers in this category their rate is lower.

Also, keep in mind both 21-24 year old age group is only a five-year grouping, the older age groups are ten-year groupings.

AGE	Licensed Dr	Dr in Severe Alc Crashes	RATE
Under 21	49,855	37	0.7
21-24	47,783	52	1.1
25-34	127,948	92	0.7
35-44	111,118	67	0.6
45-54	139,459	48	0.3
55-64	143,216	42	0.3
65-74	89,958	15	0.2
75+	49,146	4	0.1

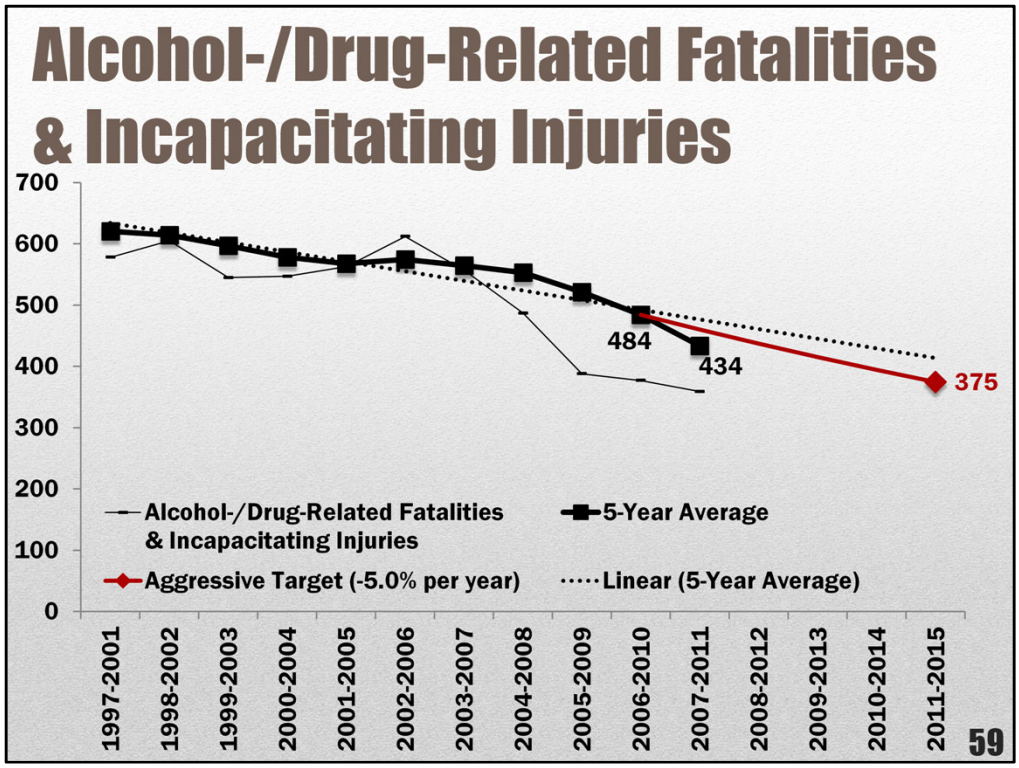


Performance Measure handout, pages 31-32

The 10-year trend is increasing slightly.

The four recent years is declining, with the annual numbers declining sharply.

The CHSP meeting participants voted for the aggressive target.



Performance Measure handout, pages 33-34

The 10-year trend is decreasing a bit faster than the moderate target.

The last four years is declining more aggressively.

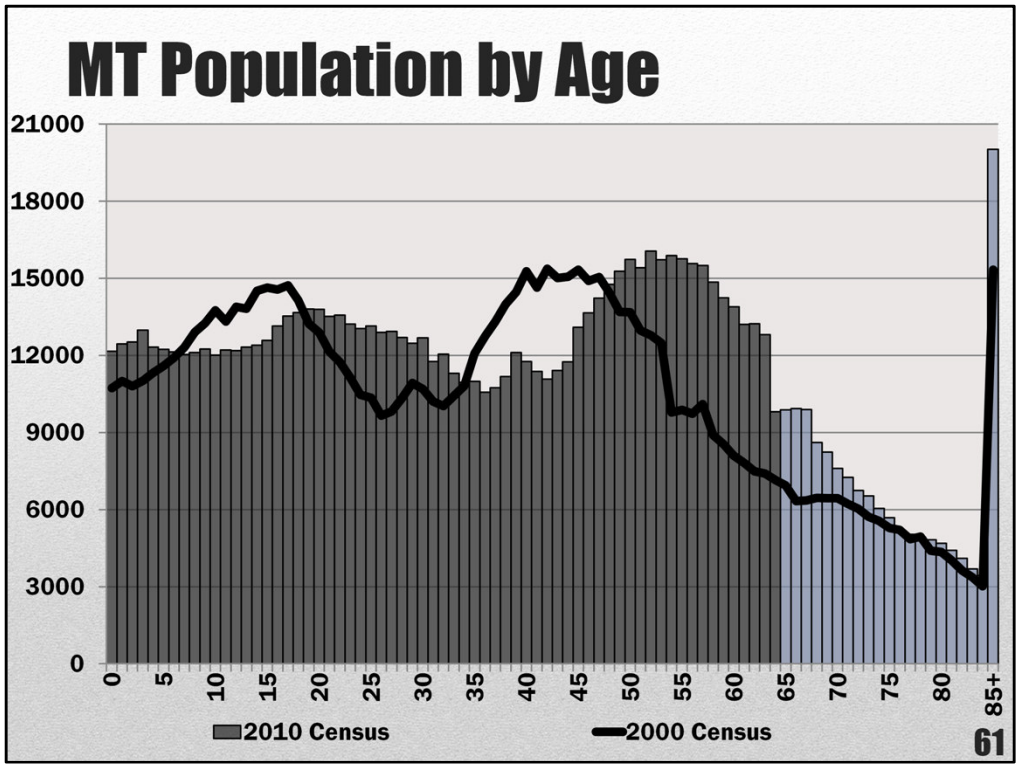
The CHSP meeting participants voted for the aggressive target.

Older Driver (OD) Crashes

Objective:

Reduce older driver (age 65+) fatal and incapacitating injury crashes.

60



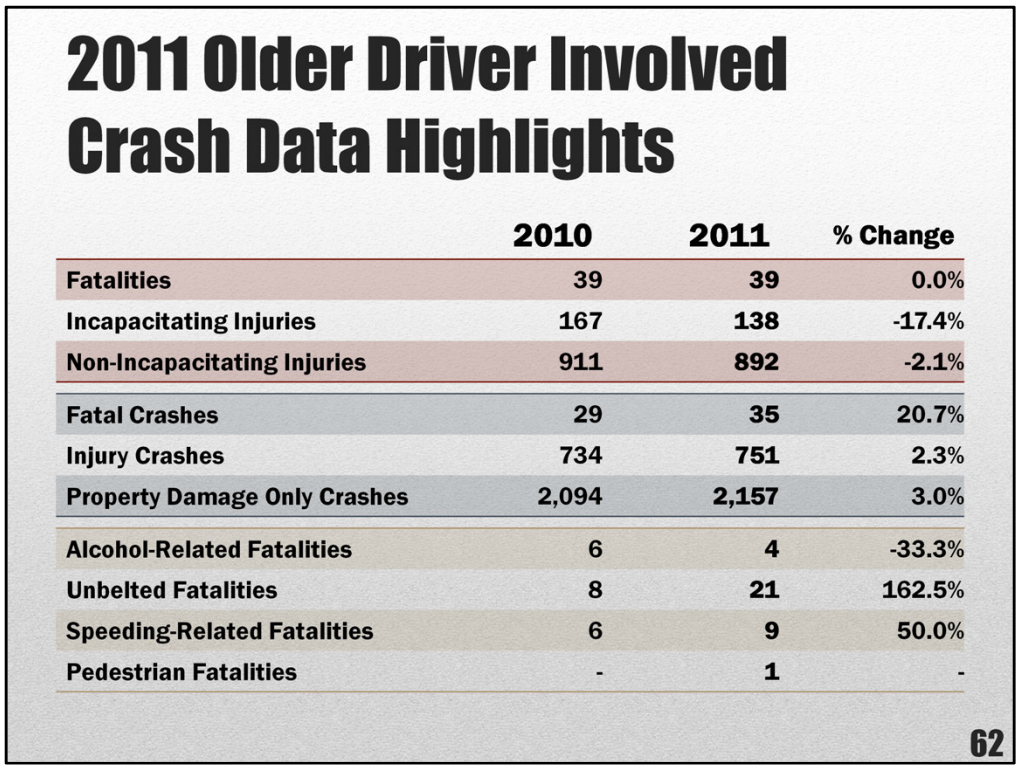
There are approximately 142,000 people in Montana age 65 and above, with 20,000 people being age 85 and above.

There are 128,000 driver's licenses currently issued to older Montanans, with 9,000 issued to those age 85 and above.

As you can see from comparing the 2000 and 2010 census, those numbers have already begun to increase, and they will continue to increase for at least the next 10-20 years. There are approximately 289,000 people in Montana age 45 to 64. Those people will be entering our older driver category as we head to the 2020 and 2030 census.

In a rural state like MT, often these licenses are a must for our older population to live independent lifestyles.

Currently 90% of the older Montana population has a driver's license. If we assume that 90% of the current population of baby boomers will be licensed in the coming years, then the number of older drivers will slowly double to approximately 260,000.



	2010	2011	% Change
Fatalities	39	39	0.0%
Incapacitating Injuries	167	138	-17.4%
Non-Incapacitating Injuries	911	892	-2.1%
Fatal Crashes	29	35	20.7%
Injury Crashes	734	751	2.3%
Property Damage Only Crashes	2,094	2,157	3.0%
Alcohol-Related Fatalities	6	4	-33.3%
Unbelted Fatalities	8	21	162.5%
Speeding-Related Fatalities	6	9	50.0%
Pedestrian Fatalities	-	1	-

Although the number of fatalities involving older drives maintained, incapacitating injuries went down. The relatively small numbers of fatalities seen in Montana each year can fluctuate widely, so combining fatalities with incapacitating injuries provides a more accurate picture of overall traffic safety trends in the state.
Combining these numbers results in the severe injuries total (decrease of 29):
2010 – 206
2011 – 177

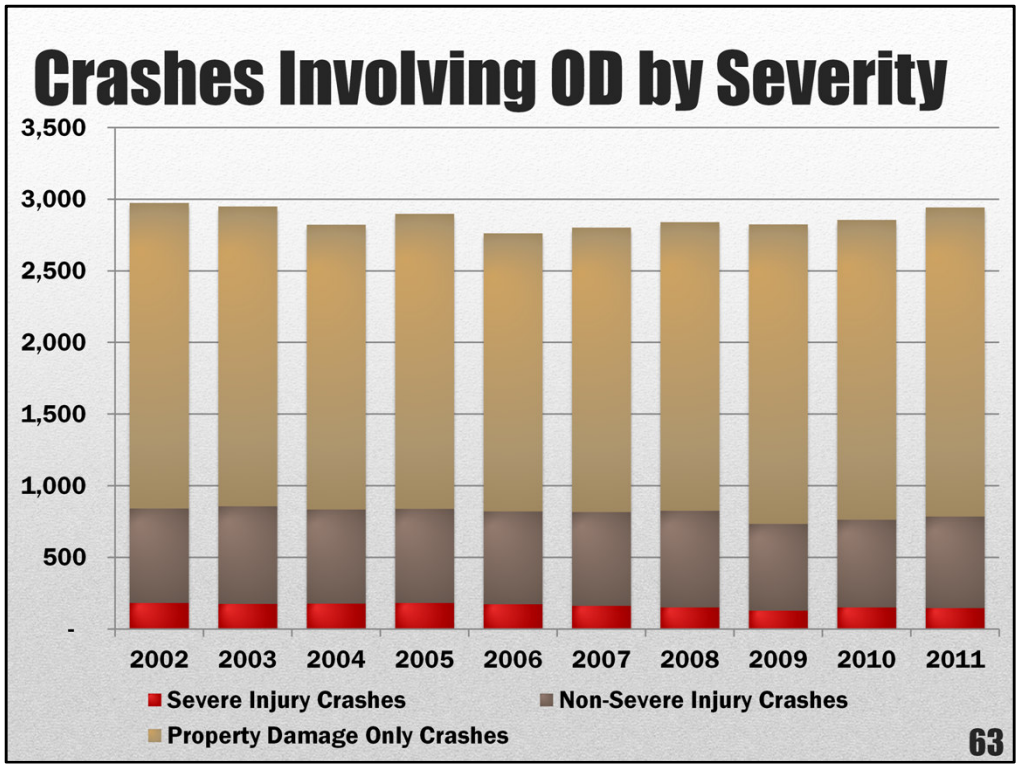
Alcohol-Related Fatalities involving Older Drivers as a percent of All Fatalities involving Older Drivers (raw number decreased, percent decreased):
2010 – 15.4% (compared to 48.1% for all fatalities)
2011 – 10.3% (compared to 41.6% for all fatalities)

Unbelted Fatalities involving Older Drivers as a percent of All Occupant Fatalities involving Older Drivers (raw number increased, percent increased):
2010 – 8/33 = 24.2% (compared to 60.6% for all fatalities)
2011 – 21/33 = 63.6% (compared to 68.6% for all fatalities)
Unknown why there was such a large jump from 2010 to 2011.

Speeding-Related Fatalities involving Older Drivers as a percent of All Fatalities involving Older Drivers (raw number increased, percent increased):
2010 – 15.4% (compared to 31.7% for all fatalities)
2011 – 23.1% (compared to 26.3% for all fatalities)

When simply looking at these three problem areas, not wearing a belt was the most common risk factor seen in traffic crash fatalities.

Pedestrians are the most vulnerable of the road users, which makes this category of special interest, even though the numbers are too low to elevate the category to an emphasis area.
Pedestrian Fatalities involving Older Drivers as a percent of All Fatalities involving Older Drivers (raw number increased, percent increased):
2010 – 0.0%
2011 – 2.6%



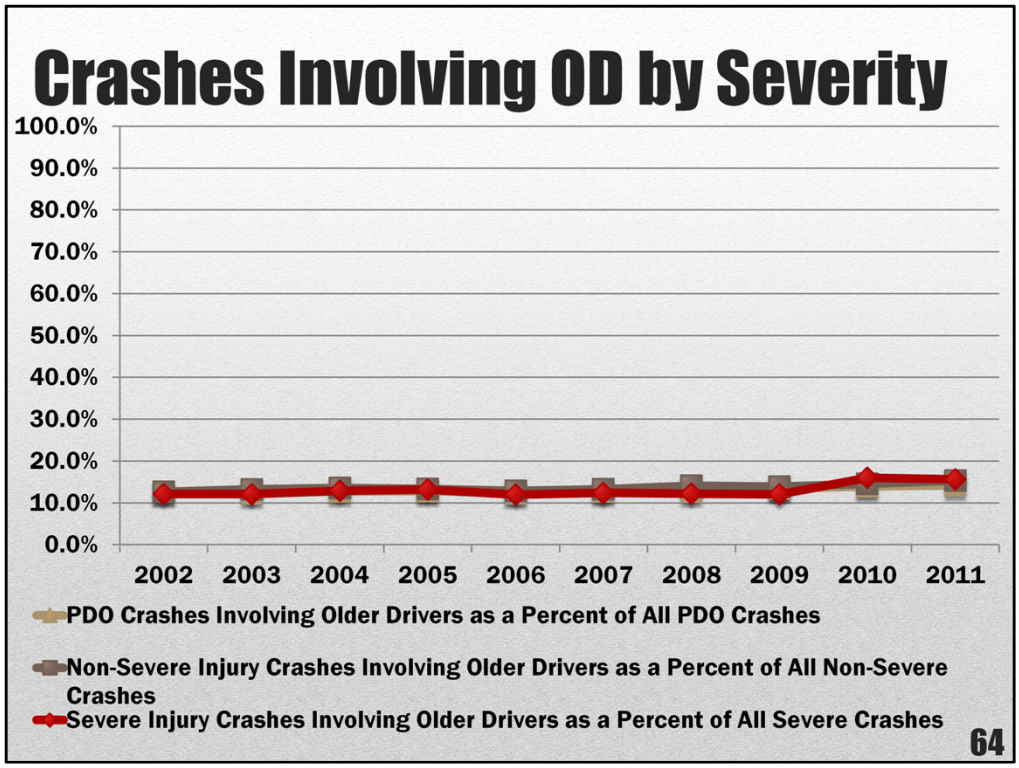
Looking at the last ten years…

Adding the red, brown and tan bars together provides the total number of crashes involving older drivers each year. Overall, the crashes involving older drivers have decreased and then increased lately.

This picture is to provide a sense of the severity level involved in this kind of crash.

Crashes involving older drivers are typically property damage only crashes. They also are non-severe injury crashes; in other words, people leave the crash with bumps, bruises, and scrapes.

There are some severe injury crashes (the red bars), though they are not as frequent as compared to the non-severe injury crashes and property damage only crashes.

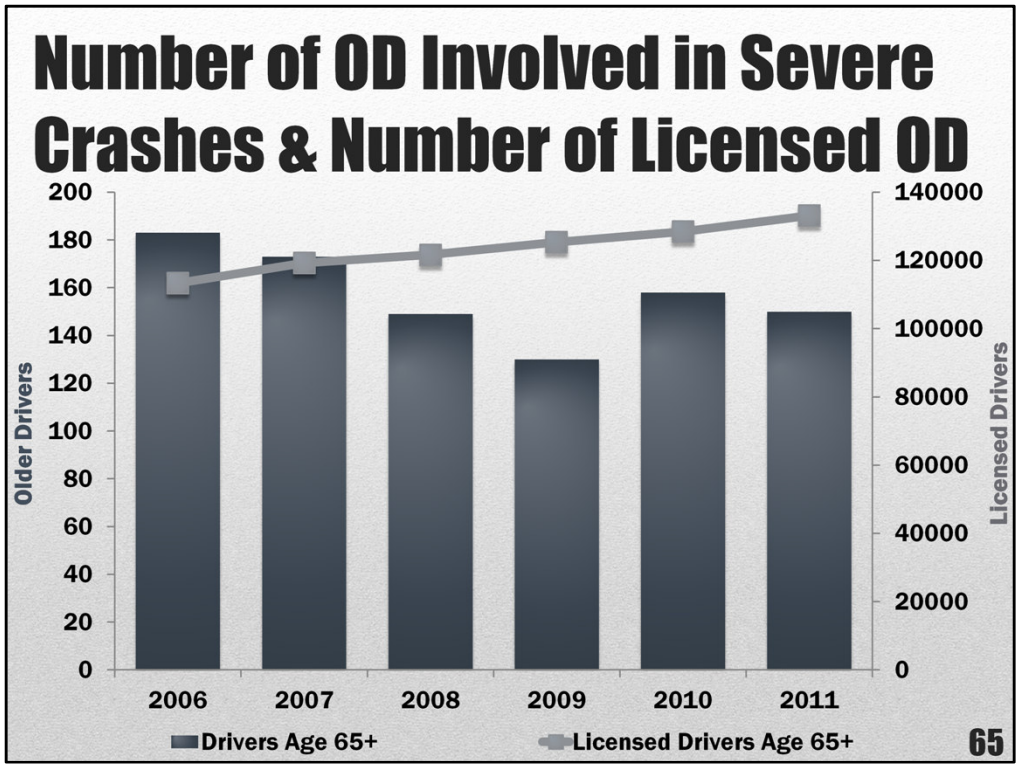


Still looking at the last ten years, this picture is to provide a sense of the severity involved in this kind of crash to the big picture of all crashes.

There is the potential for 100% of crashes to be of a specific type, so in order to show how often we see this specific emphasis area pop up in all crashes, we keep the scale at 100%.

All severity levels (property damage only, non-severe injury and severe injury) hover between 10 and 20% of all levels of crashes, staying fairly stable throughout the last ten years, though increasing slightly in the last two years. So approximately 10-20% of all severe crashes involve an older driver, and the same for non-severe injury crashes and property damage only crashes.

As our population ages, these percentages may go up. But they remain a fairly low percent of the overall Montana crash picture.



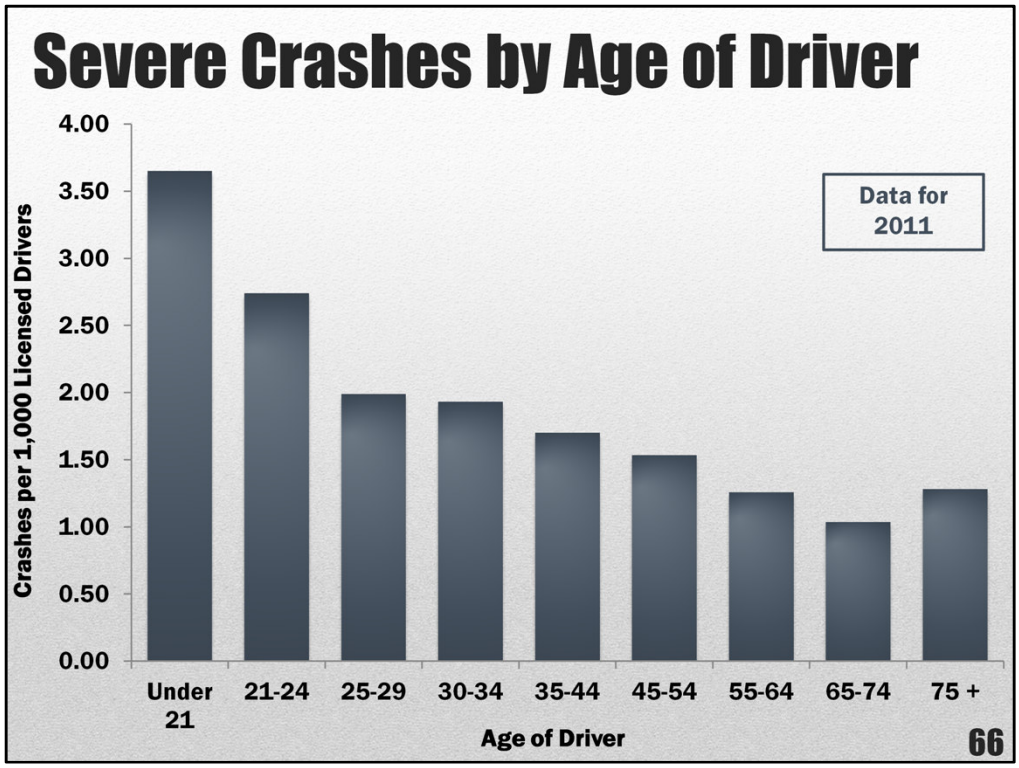
This chart is a representation of the number of older drivers involved in severe crashes (the dark bars), as well as the number of licensed older drivers over the last six years (the lighter line).

The number of older drivers involved in fatal and incapacitating crashes fluctuates a bit, but overall has a downward trend.

On the other hand, the number of licensed drivers aged 65 and over is clearly increasing.

As the baby boom bubble begins to turn into older drivers, the number of licensed drivers will undoubtedly continue to increase over the next ten years.

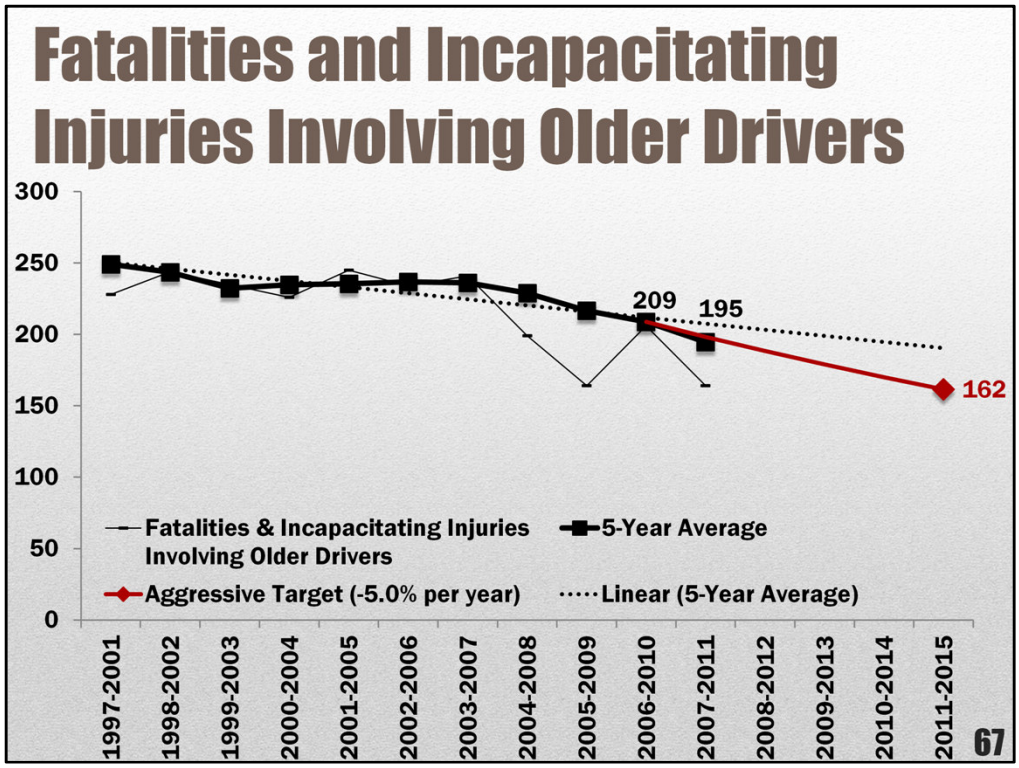
Hopefully this does not result in an upward trend of the number of older drivers we see in severe crashes.



BASED ON SEVERITY, LET'S LOOK A LITTLE CLOSER AT THE AGE OF THE DRIVER IN THESE CRASHES.

The older drivers are typically safe drivers, but when the number of them being involved in severe crashes is rated by the number of licensed Montana drivers, their involvement increases at the age of 75. Part of the reason for this increase is that older people are more frail, and when they are involved in any crash, their frailty automatically increases the severity of the crash.

AGE	Licensed Dr	Dr in Severe Crashes	RATE
Under 21	49,855	182	3.65
21-24	47,783	131	2.74
25-29	66,863	133	1.99
30-34	61,085	118	1.93
35-44	111,118	189	1.70
45-54	139,459	214	1.53
55-64	143,216	180	1.26
65-74	89,958	87	1.04
75+	49,146	63	1.28



Performance Measure handout, pages 27-28

The 10-year trend is decreasing inline with the moderate target.

The last three years is declining more aggressively.

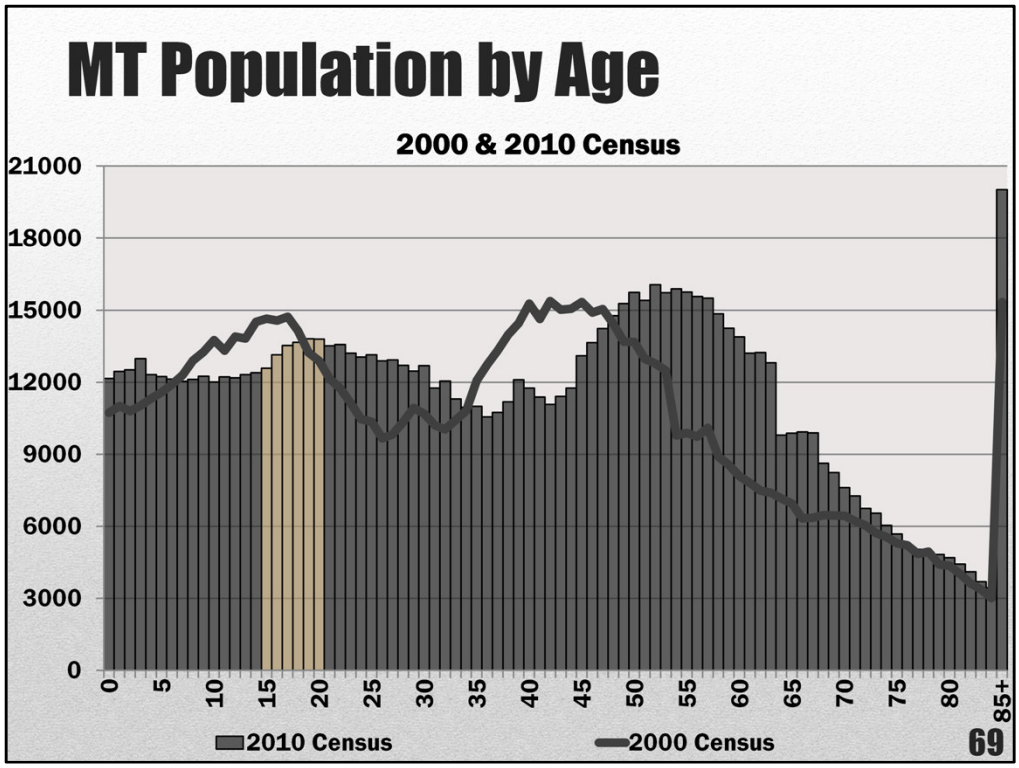
The CHSP meeting participants voted for the aggressive target.

Young Driver (YD) Crashes

Objective:

Reduce young driver (under age 21) fatal and incapacitating injury crashes.

68



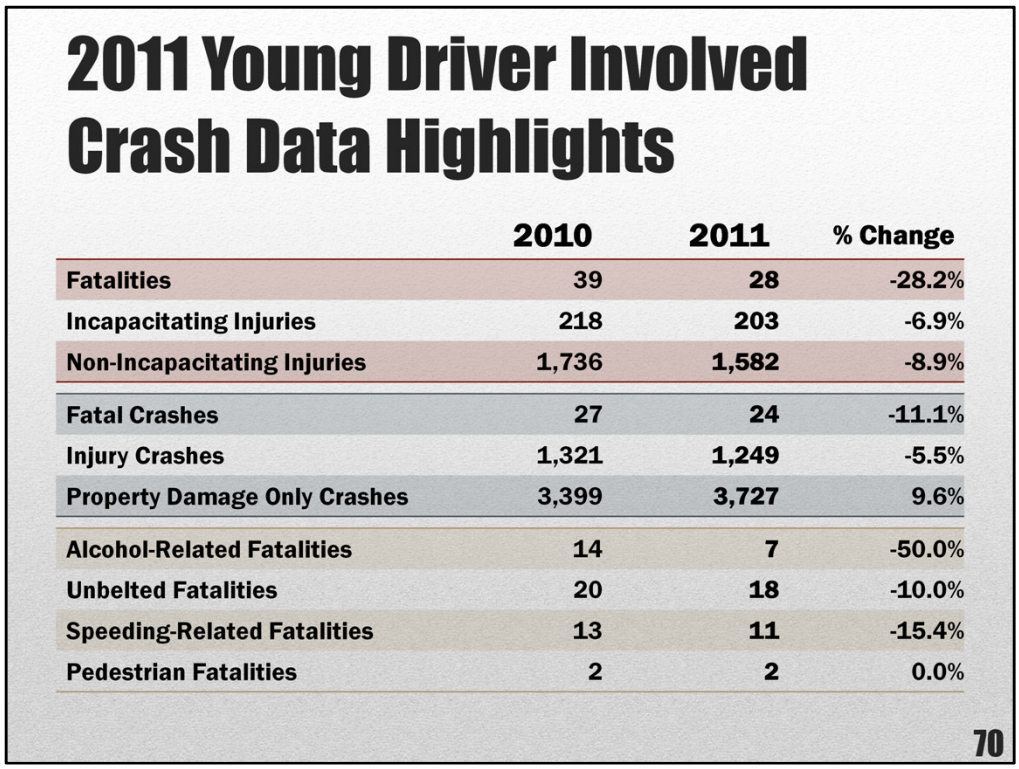
There are approximately 80,000 people in Montana age 15 through 20, our young drivers – our new drivers.

There are almost 50,000 driver's licenses currently issued to young Montanan drivers.

As you can see from comparing the 2000 and 2010 census, those numbers have already begun to decrease.

There are approximately 122,000 people in Montana age 5 to 14. Those people will be entering our young driver category as we head to the 2020 census.

Some of the advances we see in our young driver category may come by virtue of simply having fewer new/young drivers than we currently have.



Both fatalities and incapacitating injuries went down. The relatively small numbers of fatalities seen in Montana each year can fluctuate widely, so combining fatalities with incapacitating injuries provides a more accurate picture of overall traffic safety trends in the state.
Combining these numbers results in the severe injuries total (decrease of 26):
2010 – 257
2011 – 231

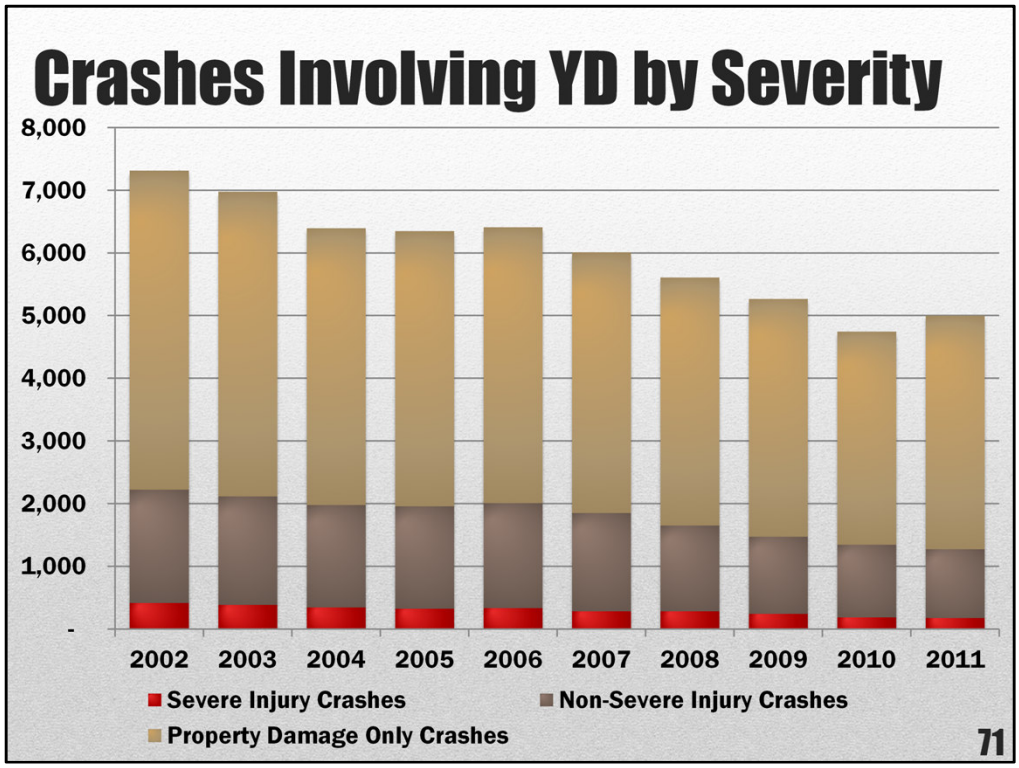
Alcohol-Related Fatalities in Involving Young Drivers as a percent of All Fatalities in Involving Young Drivers (raw number decreased, percent decreased):
2010 – 35.9% (compared to 48.1% for all fatalities)
2011 – 25.0% (compared to 41.6% for all fatalities)

Unbelted Fatalities in Involving Young Drivers as a percent of All Occupant Fatalities in Involving Young Drivers (raw number decreased, percent increased):
2010 – 20/35 = 57.1% (compared to 60.6% for all fatalities)
2011 – 18/23 = 78.3% (compared to 68.6% for all fatalities)

Speeding-Related Fatalities in Involving Young Drivers as a percent of All Fatalities in Involving Young Drivers (raw number decreased, percent increased):
2010 – 33.3% (compared to 31.7% for all fatalities)
2011 – 39.3% (compared to 26.3% for all fatalities)

When simply looking at these three problem areas, not wearing a belt was the most common risk factor seen in young driver related traffic crash fatalities.

Pedestrians are the most vulnerable of the road users, which makes this category of special interest, even though the numbers are too low to elevate the category to an emphasis area.
Pedestrian Fatalities in Involving Young Drivers as a percent of All Fatalities in Involving Young Drivers (raw number maintained, percent increased):
2010 – 5.1%
2011 – 7.1%



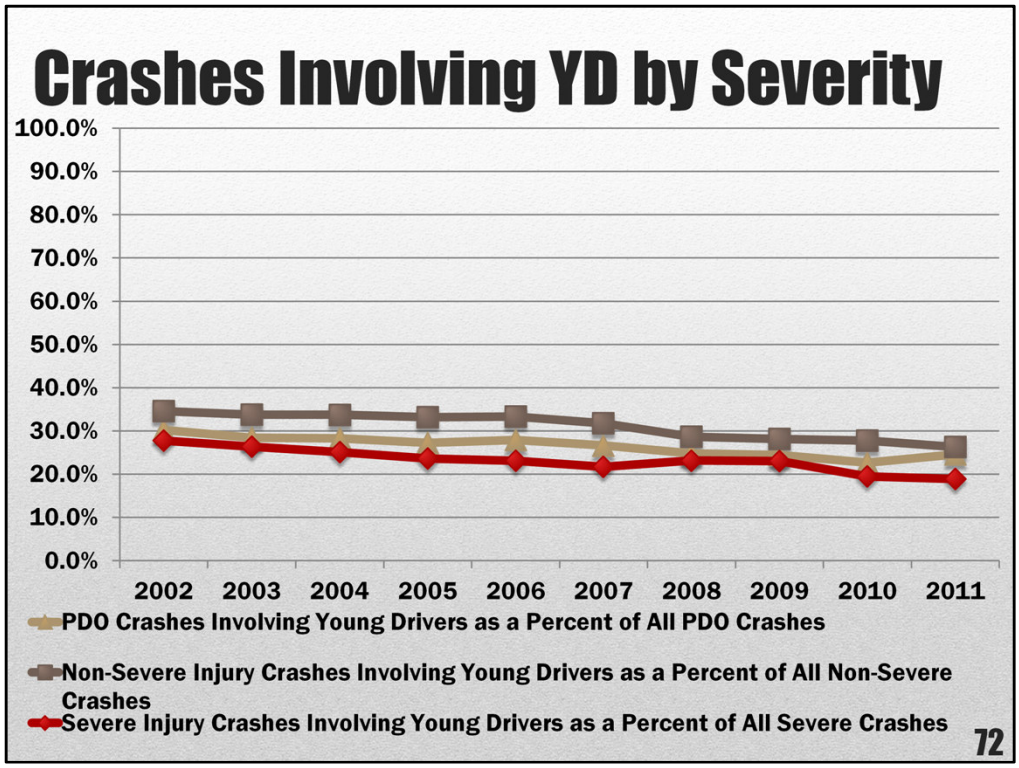
Looking at the last ten years…

Adding the red, brown and tan bars together provides the total number of crashes involving young drivers each year. Overall, these crashes have decreased over the last ten years.

This picture is to provide a sense of the severity level involved in this kind of crash.

Crashes involving young drivers are typically property damage only crashes. They also are non-severe injury crashes; in other words, people leave the crash with bumps, bruises, and scrapes.

There are some severe injury crashes (the red bars), though they were already limited in number back in 2002, they have decreased even more since then.



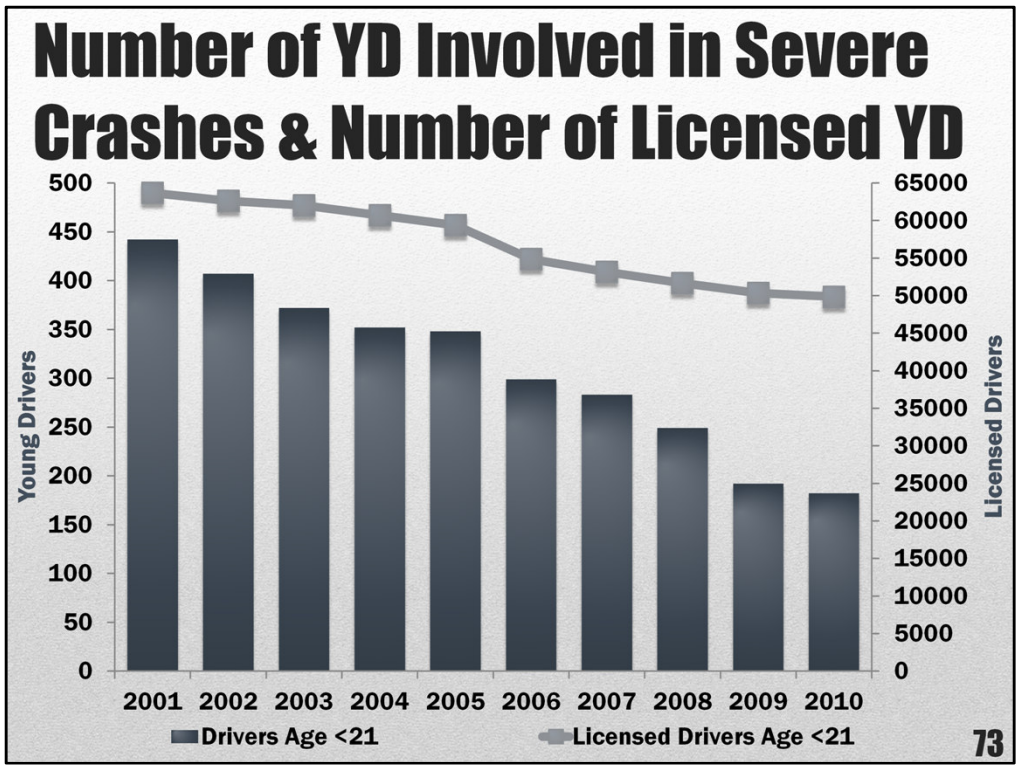
Still looking at the last ten years, this picture is to provide a sense of the severity involved in this kind of crash to the big picture of all crashes.

There is the potential for 100% of crashes to be of a specific type, so in order to show how often we see this specific emphasis area pop up in all crashes, we keep the scale at 100%.

In the last ten years, between 20 and 40% of all crashes, regardless of the severity, have involved young drivers.

Each of the levels of severity, though, have seen decreases.

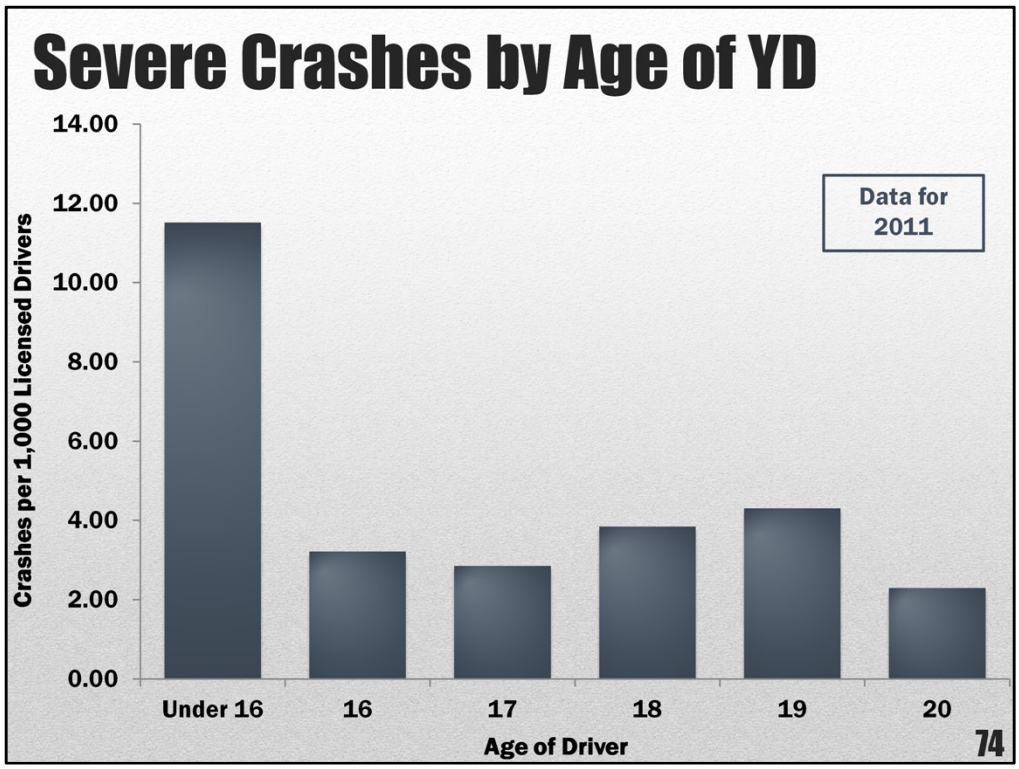
Hopefully, as our young driver population decreases over the next ten years, we will continue to see these decreases.



This chart is a representation of the number of young drivers involved in severe crashes (the dark bars), as well as the number of licensed young drivers over the last ten years (the lighter line).

The number of young drivers involved in fatal and incapacitating crashes has a steady downward trend, moving down faster than the number of licensed drivers is.

As the population of young Montanans begins to decrease, I expect to see a continued decrease in both the number of licensed drivers and the number of young drivers involved in severe crashes.



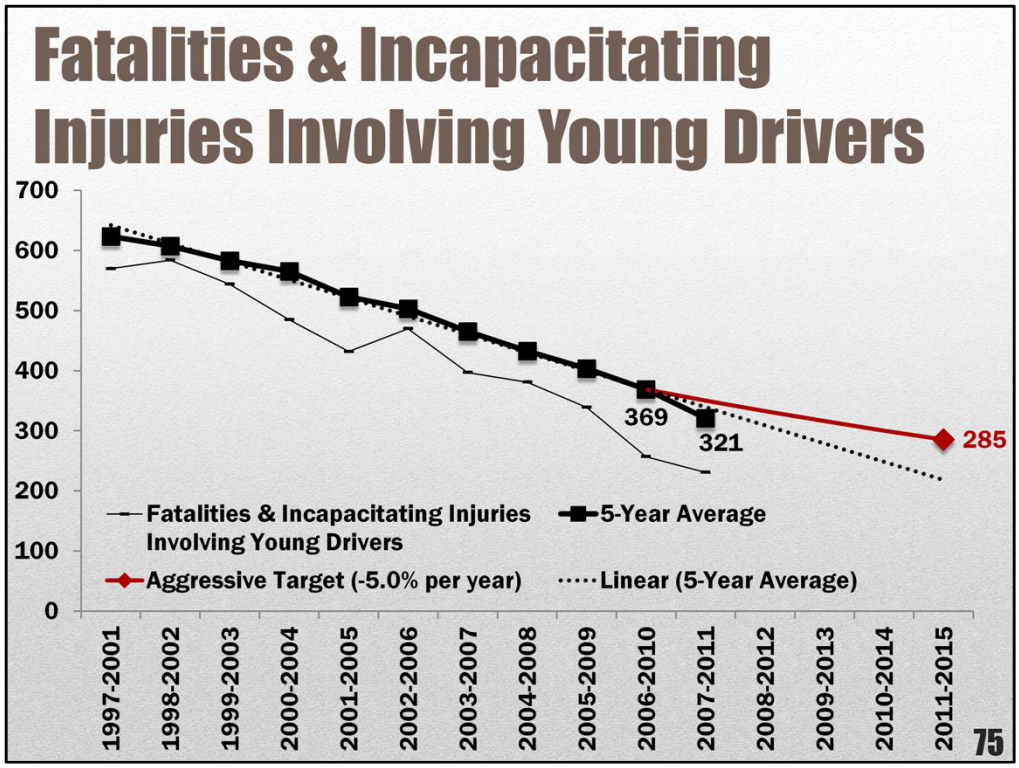
BASED ON SEVERITY, LET'S LOOK A LITTLE CLOSER AT THE AGE OF THE DRIVER IN SEVERE CRASHES

The kids under the age of 16 are far more likely to be involved in a severe crash. There were 24 very young drivers involved in severe crashes, the same number as the 18-year-olds, but since there are just over 2,000 very young drivers, their rate was far higher than any other driver age category.

Keep in mind, they may not have caused the crash, but their inexperience may not have allowed them to maneuver away from another crashing vehicle.

The number of licensed drivers triples once they turn 16, so it appears they are not involved in as many severe crashes, though 18-19 year olds kind of lead the way. Maybe new independence (in college or on their own with no parents around) and possibly a new driving location are factors in the slight increase in this age group.

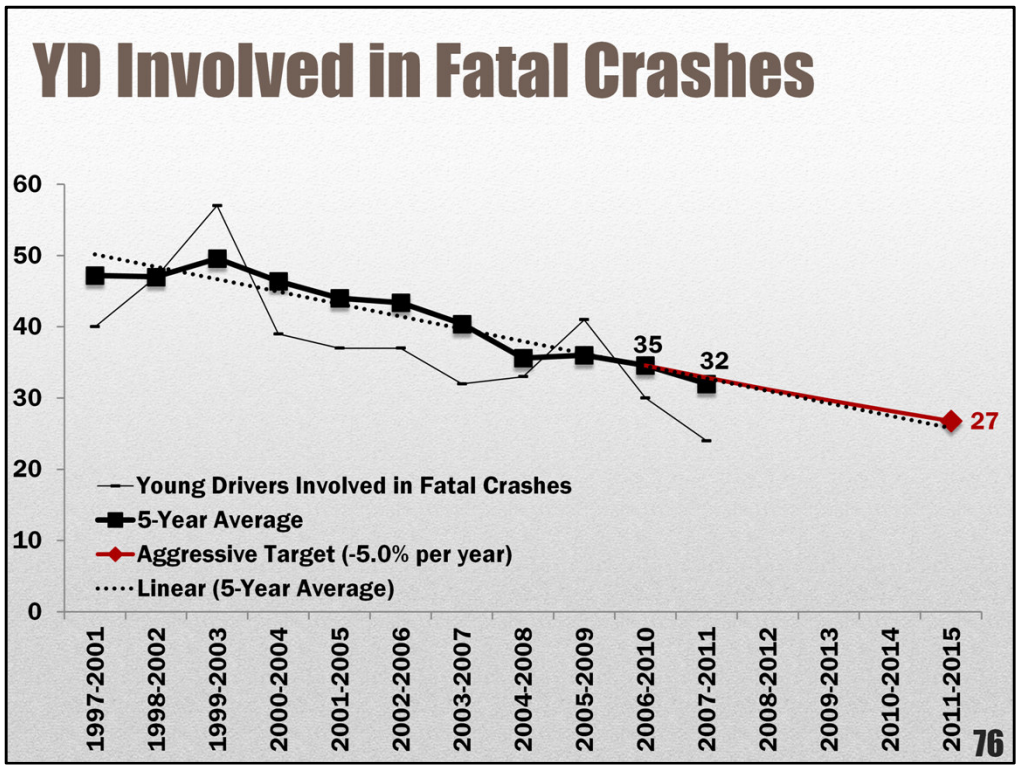
AGE	Licensed Dr	Dr in Sev Crashes	RATE
Under 16	2,084	24	11.52
16	6,537	21	3.21
17	8,411	24	2.85
18	9,887	38	3.84
19	11,146	48	4.31
20	11,790	27	2.29



Performance Measure handout, pages 35-36

The 10-year trend is decreasing a faster than the aggressive target.

The CHSP meeting participants voted for the aggressive target.



Performance Measure handout, pages 37-38

The 10-year trend is decreasing in line with the aggressive target.

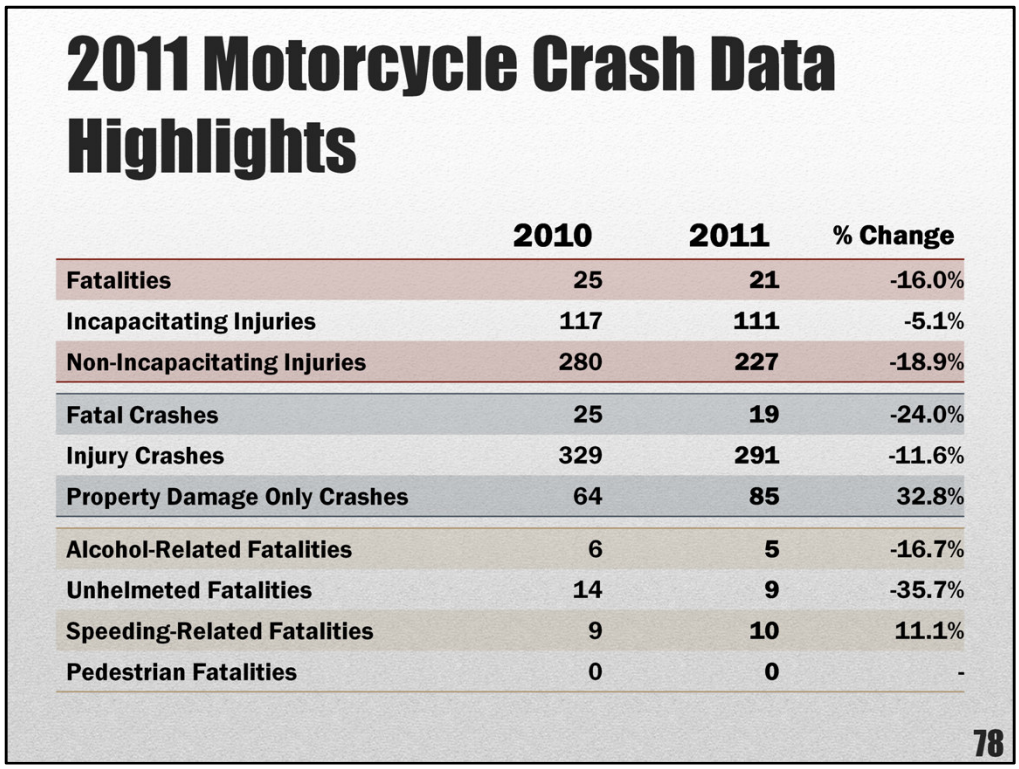
The CHSP meeting participants voted for the aggressive target.

Motorcycle (MC) Crashes

Objective:

Reduce motorcycle fatal and incapacitating injury crashes.

77



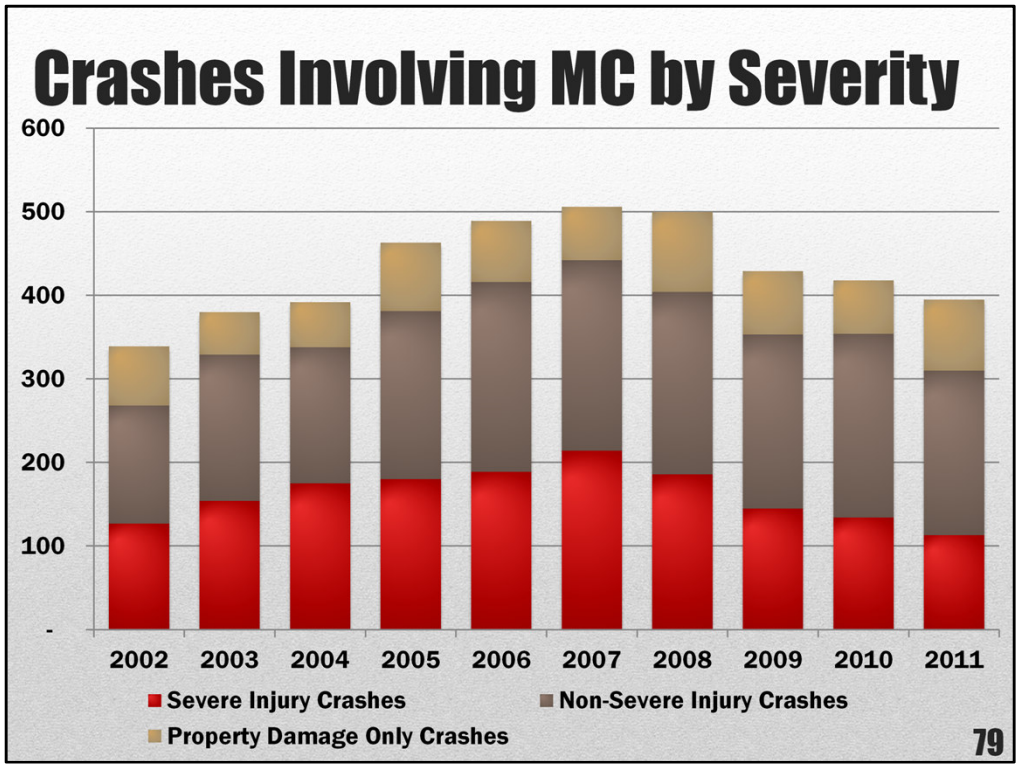
Both fatalities and incapacitating injuries went down. The relatively small numbers of fatalities seen in Montana each year can fluctuate widely, so combining fatalities with incapacitating injuries provides a more accurate picture of overall traffic safety trends in the state.
Combining these numbers results in the severe injuries total (decrease of 10):
2010 – 142
2011 – 132

Alcohol-Related Fatalities in Motorcycle Crashes as a percent of All Fatalities in Motorcycle Crashes (raw number decreased, percent decreased):
2010 – 24.0% (compared to 48.1% for all fatalities)
2011 – 23.8% (compared to 41.6% for all fatalities)

Unhelmeted Fatalities in Motorcycle Crashes as a percent of All Fatalities in Motorcycle Crashes (raw number decreased, percent decreased):
2010 – 56.0%
2011 – 42.9%

Speeding-Related Fatalities in Motorcycle Crashes as a percent of All Fatalities in Motorcycle Crashes (raw number increased, percent increased):
2010 – 36.0% (compared to 31.7% for all fatalities)
2011 – **47.6%** (compared to **26.3%** for all fatalities)

When simply looking at these three problem areas, not wearing a helmet and speed can both be listed as a common risk factor.



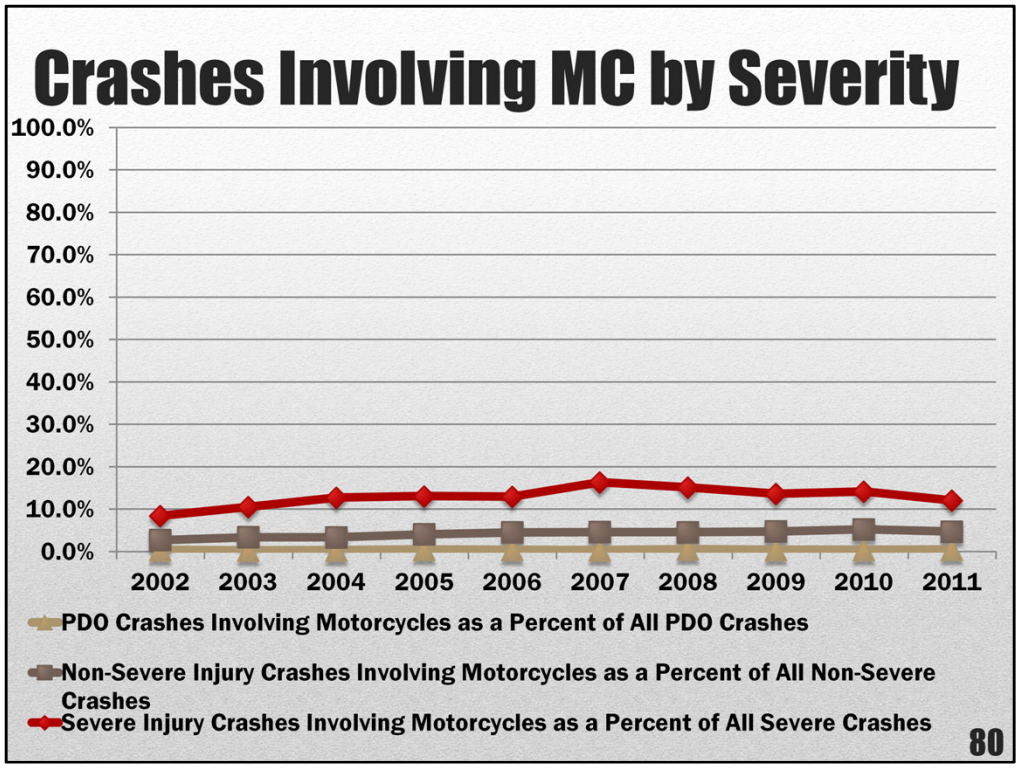
Looking at the last ten years…

Adding the red, brown and tan bars together provides the total number of crashes involving motorcycles each year. Overall, the crashes involving motorcycles increased then decreased lately.

This picture is to provide a sense of the severity level involved in this kind of crash.

The first thing that jumps out in this chart are the red bars along the bottom. Those are the severe injury crashes, where people are getting tragically injured or killed. In only one other chart, are those red bars so visible, the alcohol/drug-related crashes. As with the alcohol/drug-related severe crashes, the same type of crashes here also stand out glaringly. The good thing about the severe injury crashes is they are decreasing.

The other thing to note with this chart is the very small tan bars, the property damage only crashes. Very few crashes involving motorcycles result in no injuries. Most of that has to do with the lack of plastic and metal protection around the motorcyclists.



Still looking at the last ten years, this picture is to provide a sense of the severity involved in this kind of crash to the big picture of all crashes.

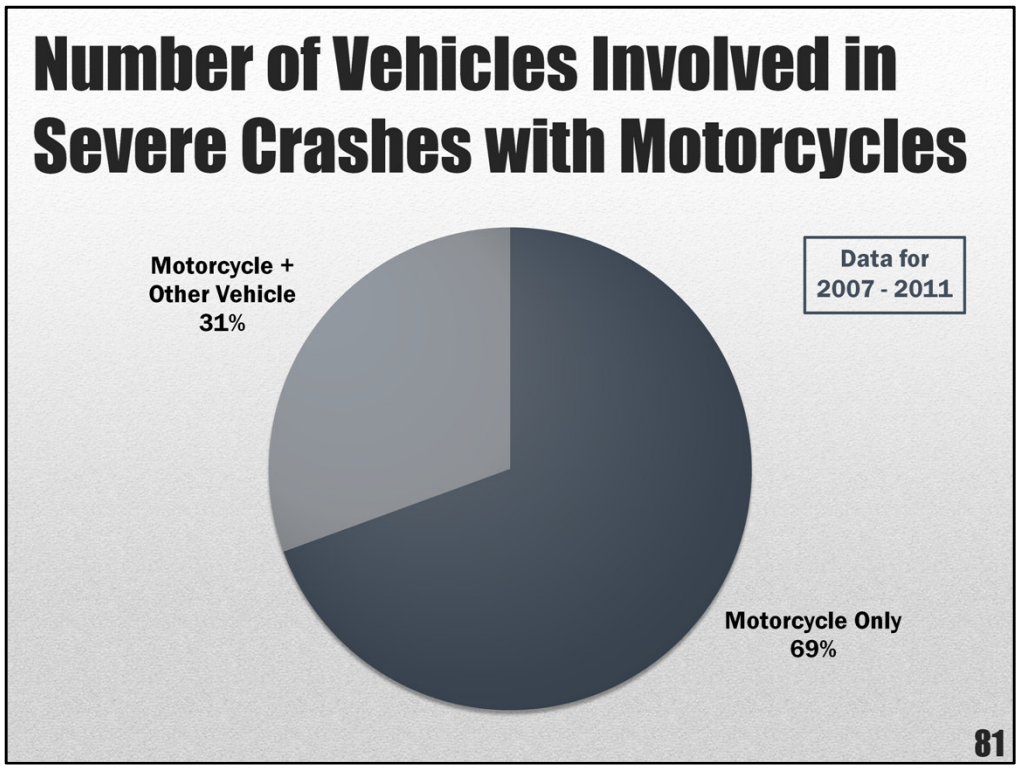
There is the potential for 100% of crashes to be of a specific type, so in order to show how often we see this specific emphasis area pop up in all crashes, we keep the scale at 100%.

Roughly 10-20% of all severe injury crashes involve motorcycles. This percent increased from 2002 to 2007 and is now slightly decreasing.

Roughly 5% of all non-severe injury crashes also involve motorcycles.

Less than 5% of all property damage only crashes involve motorcycles.

If motorcycles are involved in the crash, there is a greater likelihood that a person will be injured. With the lack of protection a full body of metal and plastic provide, crashes involving motorcycles don't result in simple scrapes and bruises, but more significant damage, and very rarely only property damage. Although the potential is great for a horrific crash when motorcyclists are involved, they remain a fairly low percent of the overall Montana crash picture.

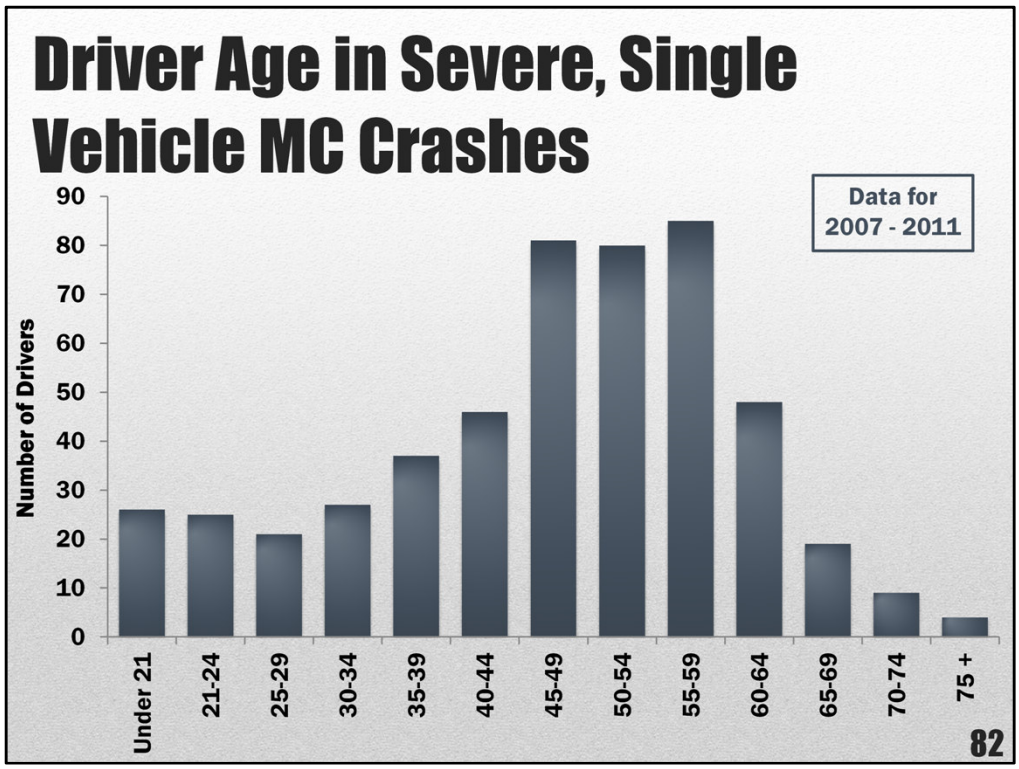


Because of their vulnerability and the different skill set required to handle a motorcycle (as opposed to the more forgiving nature of a passenger vehicle), motorcycle riders need to be fully aware of their surroundings and active drivers. Technically all drivers should be fully aware of their surroundings and active drivers, but if that was the case, I would be out of a job (which, for the sake of road users, would be a good thing).

But in motorcycle crashes resulting in deaths or incapacitating injuries, who is really involved?

69% of the severe crashes involved a single vehicle – the motorcycle.
There were 554 motorcycle-only crashes from 2007-2011.

31% involved at least two vehicles – the motorcycle and some other vehicle (this includes the possibility of more than one motorcycle). 244 crashes from 2007-2011.

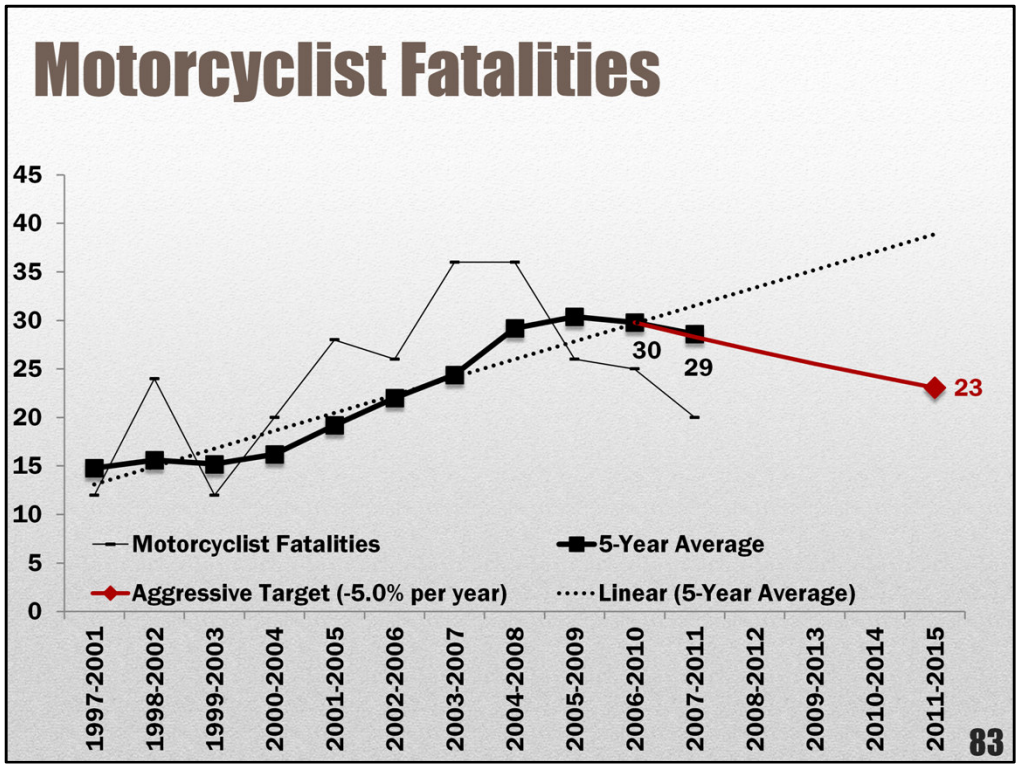


So if the majority of the severe crashes are single vehicle, crashes only involving a motorcycle, are the motorcycle drivers young hooligans or over-confident middle-aged drivers?

Those may be extreme descriptions, but it is clear that in motorcycle-only crashes resulting in fatalities or incapacitating injuries, the driver is usually between the ages of 45 and 59.

Age	2007 - 2011
Under 21	26
21-24	25
25-29	21
30-34	27
35-39	37
40-44	46
45-49	**81**
50-54	**80**
55-59	**85**
60-64	48
65-69	19
70-74	9
75 +	4

In truth, it is difficult to compare one age group with the next because the true number of motorcycle drivers on the road is unknown.

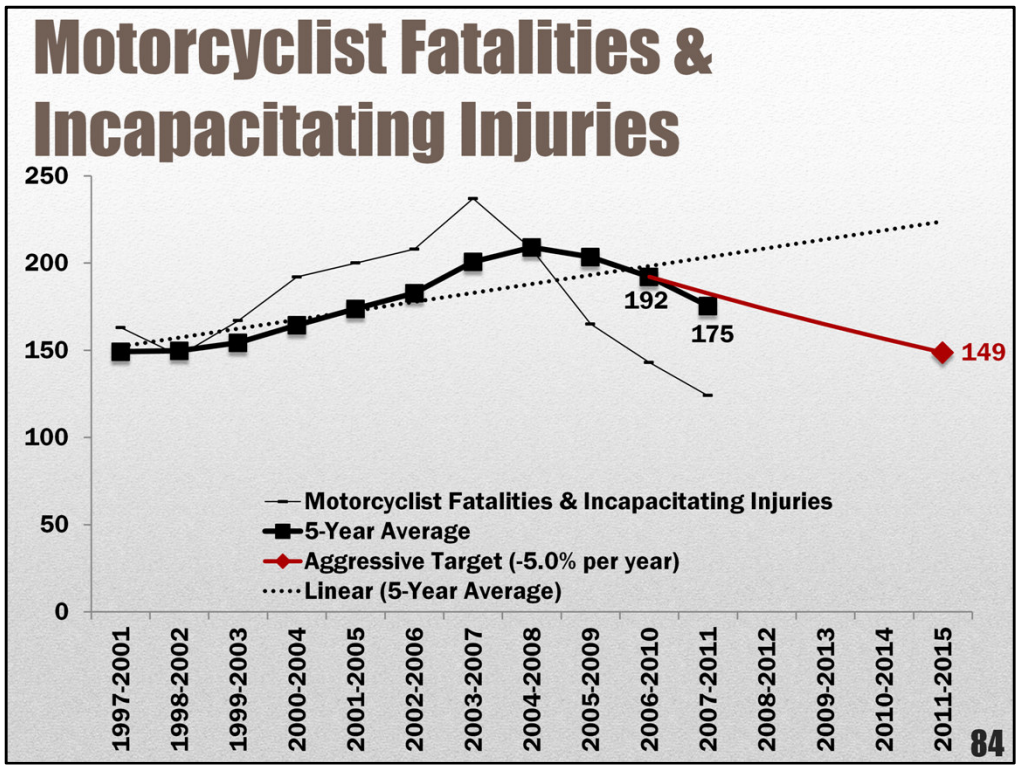


Performance Measure handout, pages 39-40

Just like the chart we saw in the pedestrian fatalities, motorcyclist fatalities jump around from year to year.

Although the 10-year trend is sharply increasing, the last few years have seen a decrease in the number of motorcyclist fatalities, approximately in line with the moderate target.

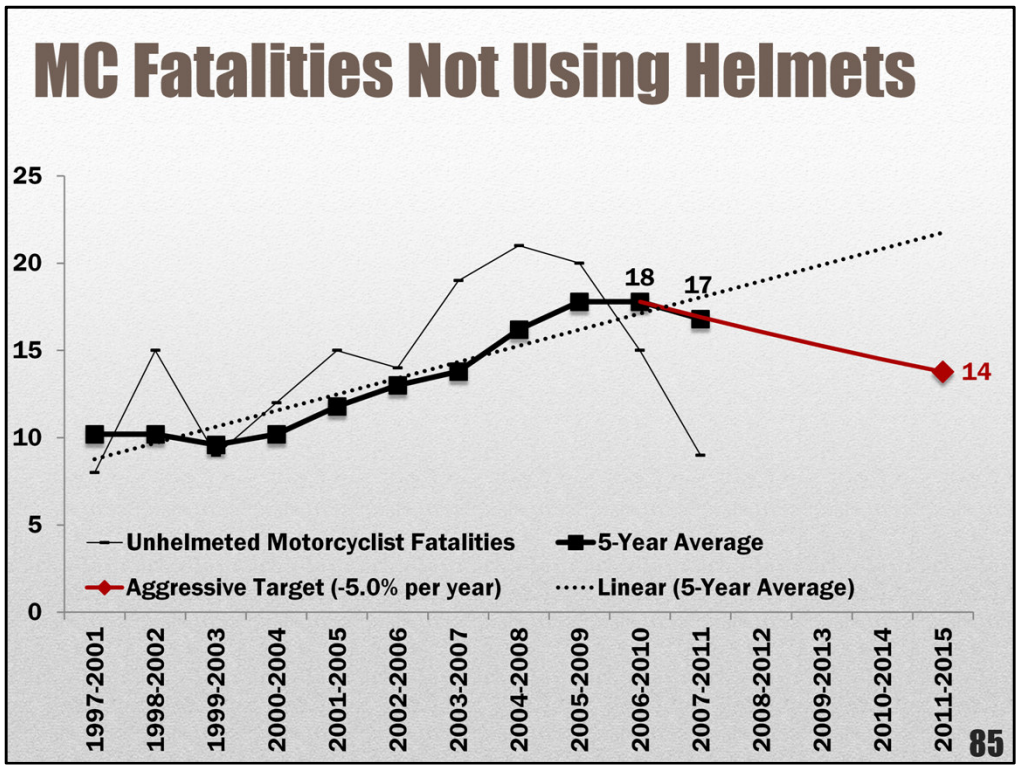
The CHSP meeting participants voted for the aggressive target.



Performance Measure handout, pages 41-42

This is a similar picture to the previous performance measure, but it has higher numbers each year, so they don't jump around quite as much.

The CHSP meeting participants voted for the aggressive target.



Performance Measure handout, pages 43-44

Once again, a picture with a dramatically increasing trend that is countered by decreases in recent years.

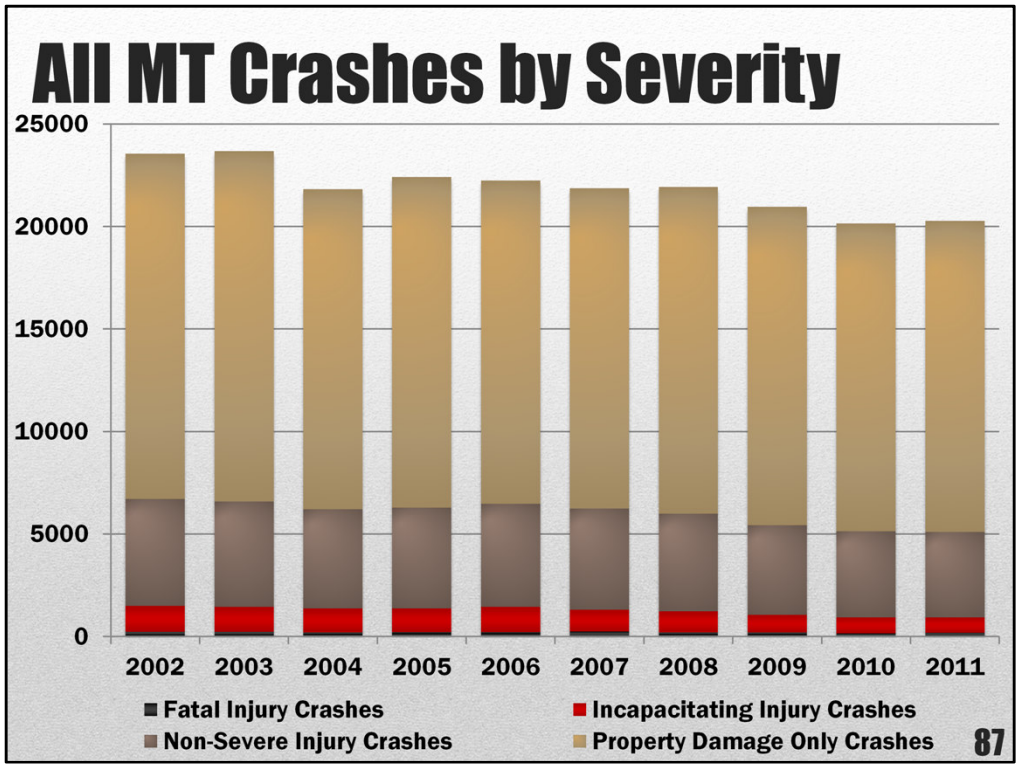
The CHSP meeting participants voted for the aggressive target.

Emergency Medical Services Delivery

Objective:

Develop an effective and integrated emergency medical services (EMS) delivery system.

86



The role of EMS as an emphasis area is different from the others because it is not trying to prevent crashes, rather it is trying to reduce the severity of the crashes. By improving EMS delivery, the goal is to keep a person that is initially in the red bar from moving down into the black bar.

Ignoring the yellow bar for the moment, the total number of injury crashes (black + red + brown) has been decreasing over the last decade. As we showed in the overview slides at the beginning of the meeting, the severe (fatalities + incapacitating injuries) crashes are also decreasing.

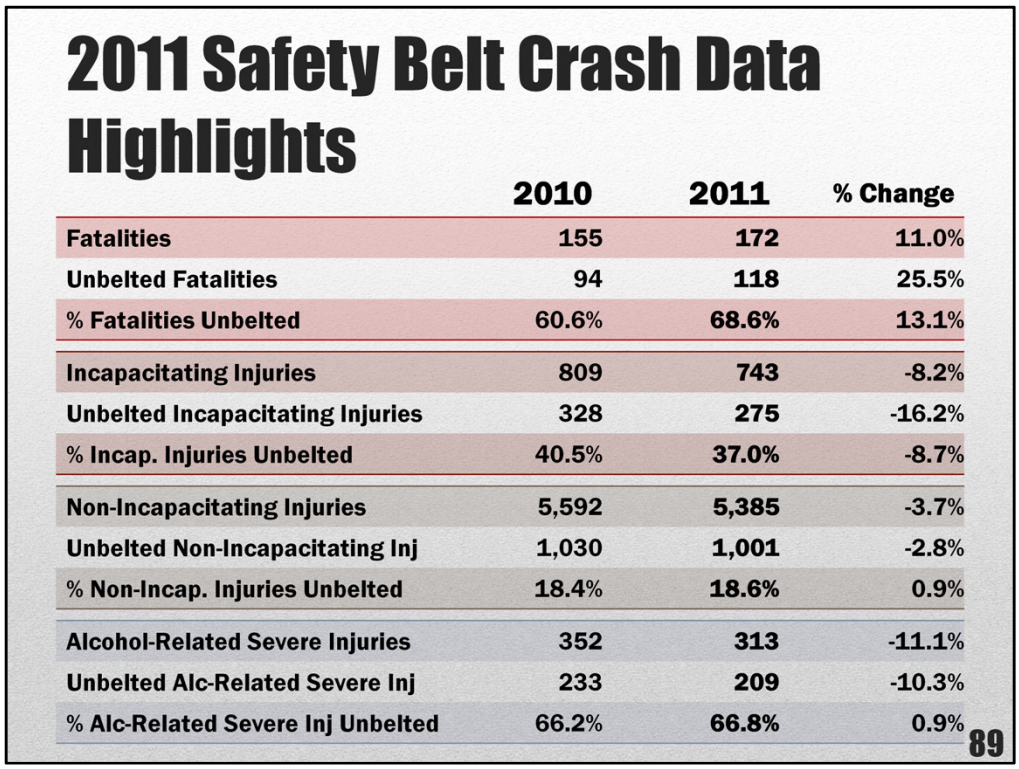
We certainly want the entire bar to get smaller, but eventually we want to make both the black and the red bars so small we can't see them.

Safety Belt Use

Objective:

Increase safety belt usage to 90 percent.

88



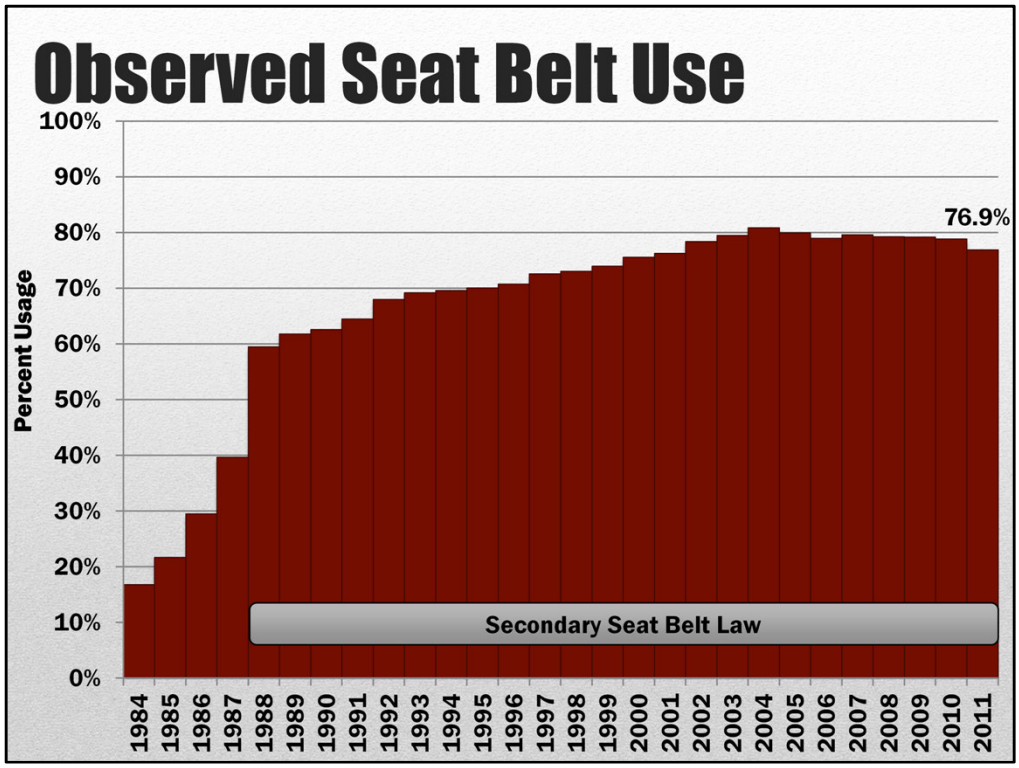
Comparing 2010 to 2011, all numbers are for vehicle occupants.

Total number of fatalities and unbelted fatalities went up.
The percent of unbelted fatalities went up.

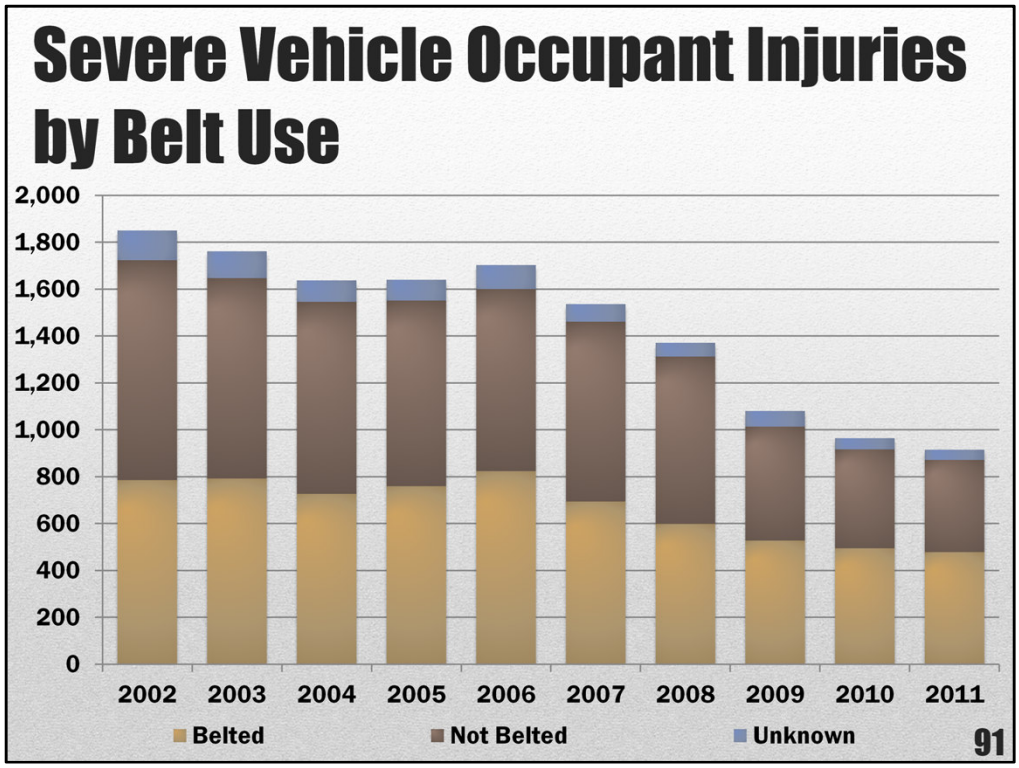
Total number of incapacitating injuries and unbelted incapacitating injuries went down.
The percent of unbelted incapacitating injuries when down.

Total number of non-incapacitating injuries and unbelted non-incapacitating injuries went down.
*****The percent of unbelted incapacitating injuries when up.

Total number of alcohol-related fatal and incapacitating injuries and unbelted alcohol-related fatal and incapacitating injuries went down.
*****The percent of unbelted alcohol-related fatal and incapacitating injuries when up.



MDT has conducted observed seat belt use across the state since 1984. Between 1984 and 1988, community education began teaching the safety benefits of wearing seat belts. In 1988, Montana passed the secondary seat belt law. Between 1984 and 2004 there was a steady increase in the percent of front seat, outboard occupants wearing seat belts. Since 2004 this percent has been in a slow decline. The highest percent continues to be on interstate and primary roads in Montana. With the lowest number of people seen wearing seat belts is in our cities and on our secondary roads.



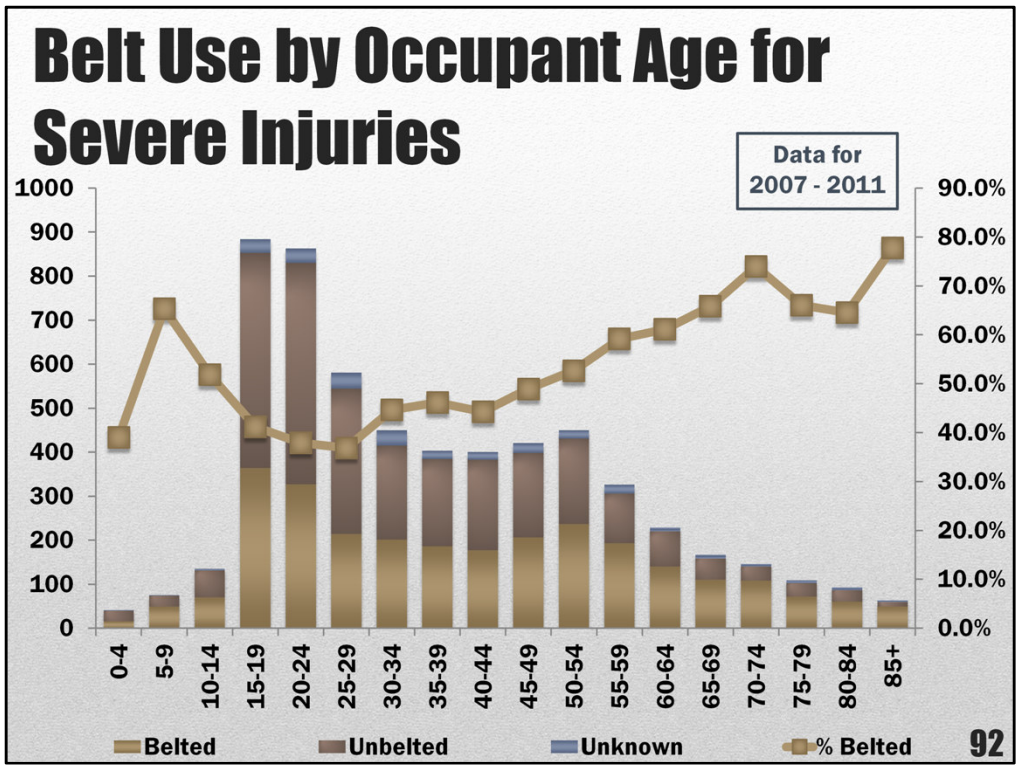
Looking at the last ten years…

Adding the tan, brown and blue bars together provides the total number of severe injuries each year. The severe injuries involve a fatality or incapacitating injury. Overall, the number of severe vehicle occupant injuries have decreased over the last ten years.

This picture is to provide a sense of the belt use involved in this kind of injury.

Historically the number of unbelted severe injuries was very similar to the belted severe injuries, with a slight lean toward the unbelted. Around 2006, that slight lean has turned in the other direction, more of the severely injured are wearing seat belts, especially in the last three years.

Hopefully the entire bars will continue to decrease, and the brown bars will disappear altogether.



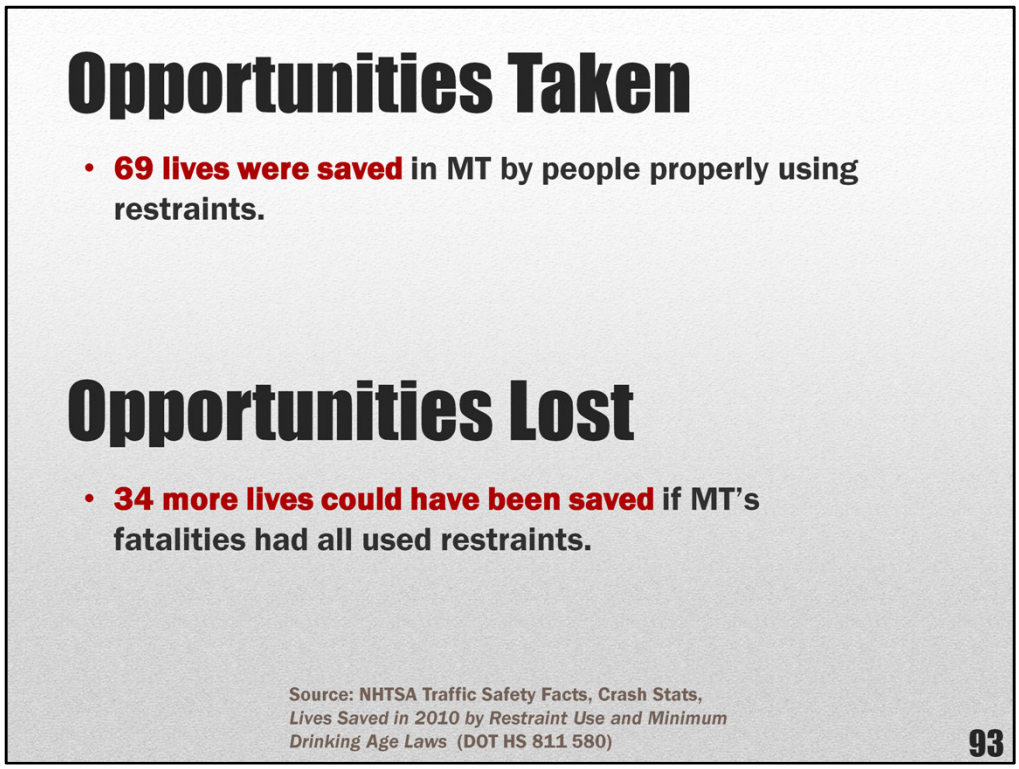
From the overview at the beginning, we recall that a very large number of our young people are getting severely injured in crashes. This chart shows the number of severe injuries broken down by age, as well as the belt use (the multi-colored bars). The line provides the usage rate, the percent of the severely injured in that age group that used a seat belt.

The three age groups with the highest number of people killed or seriously injured have the lowest percent belt use (15-29 year olds).

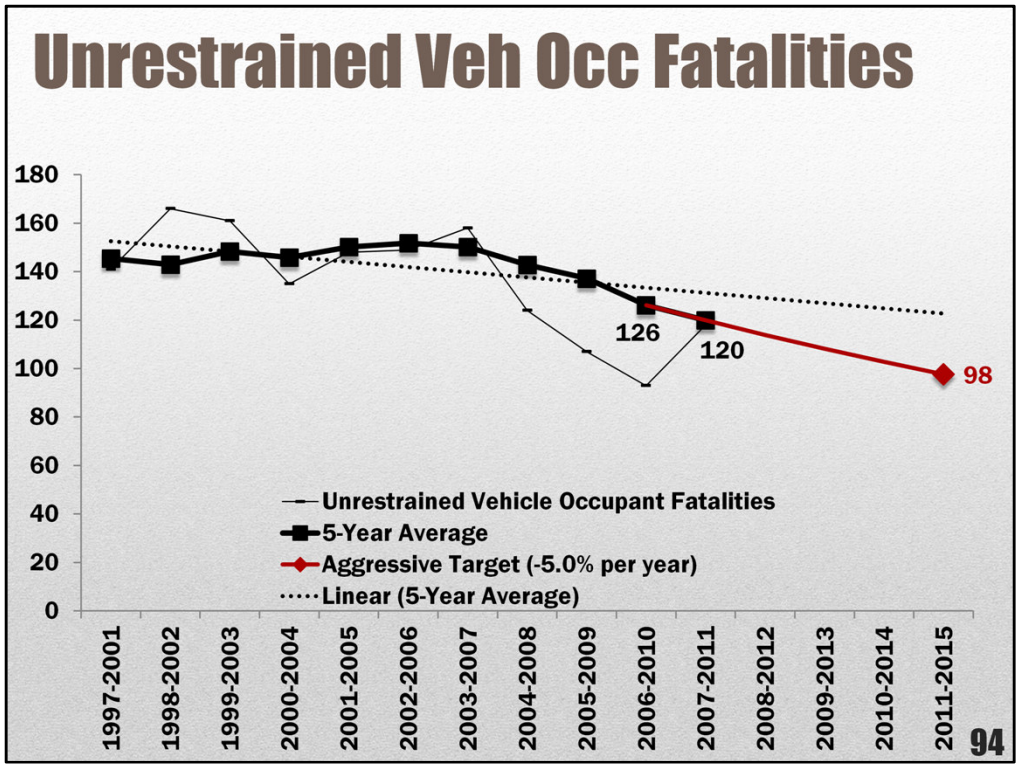
The youngest and most vulnerable appear to have a very low percent belt use rate, but that is due, in large part, to the very small number of 0-4-year-olds severely injured in the five year period. The number of very young being severely injured is very low, I believe in large part to parents and care givers using the safety devices available to protect the next generation.

Belt use begins to go up dramatically with age.

AGE	Belted	Unbelted	Unknown	Total	% Belted
0-4	16	24	1	41	39.0%
5-9	49	25	1	75	65.3%
10-14	70	61	4	135	51.9%
15-19	364	489	31	884	41.2%
20-24	327	503	33	863	37.9%
25-29	214	330	37	581	36.8%
30-34	201	214	35	450	44.7%
35-39	186	198	19	403	46.2%
40-44	177	206	17	400	44.3%
45-49	206	192	23	421	48.9%
50-54	237	194	19	450	52.7%
55-59	193	113	20	326	59.2%
60-64	140	80	9	229	61.1%
65-69	110	48	9	167	65.9%
70-74	108	32	6	146	74.0%
75-79	72	30	7	109	66.1%
80-84	60	26	7	93	64.5%
85+	49	10	4	63	77.8%
TOTAL	2779	2775	282	5836	47.6%



NHTSA provides some numbers each year that can be related to opportunities linked to seat belt use. These numbers were derived from 2010 crash data.

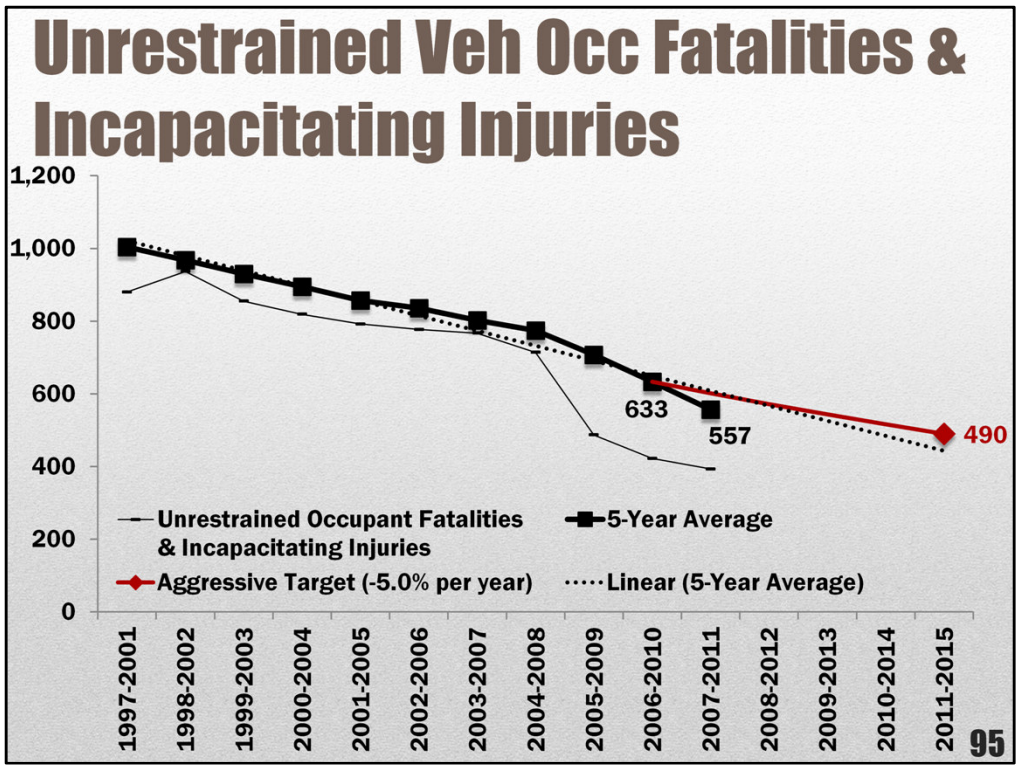


Performance Measure handout, pages 45-46

The 10-year trend is decreasing inline with the moderate target.

The last five years is declining more aggressively.

The CHSP meeting participants voted for the aggressive target.

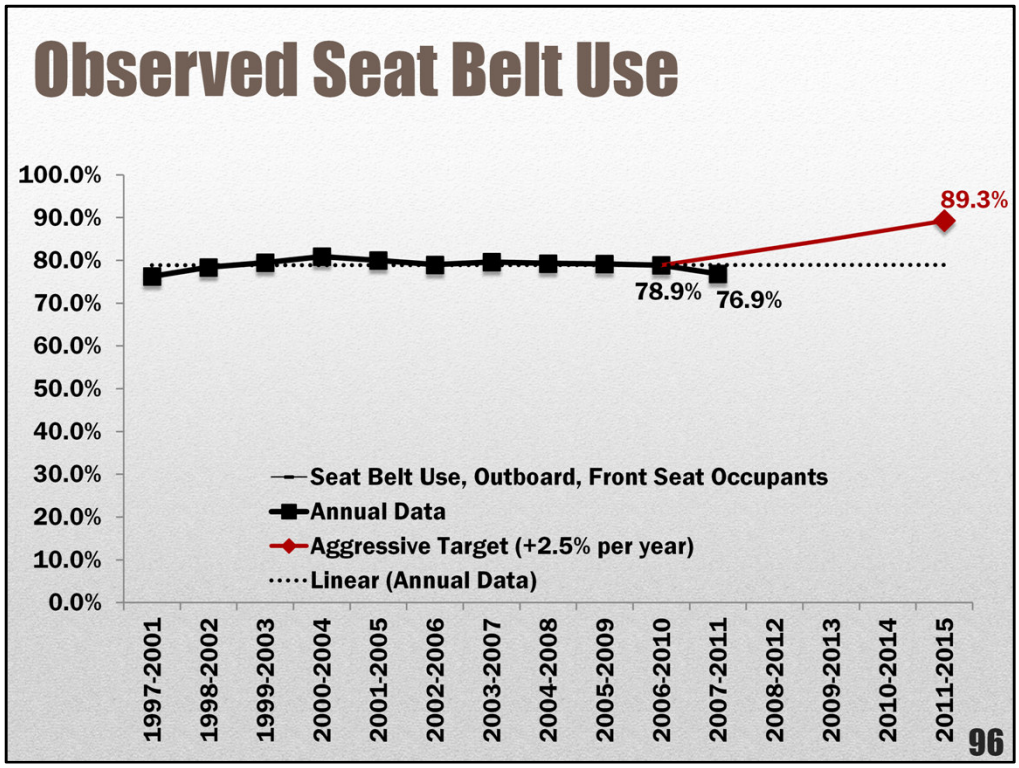


Performance Measure handout, pages 47-48

The 10-year trend is decreasing a little faster than the aggressive target.

The last four years is declining more aggressively.

The CHSP meeting participants voted for the aggressive target.



Performance Measure handout, pages 49-50

This is a performance measure that uses different moderate/aggressive targets and uses annual data, rather than the rolling 5-year average.

The moderate assumes a 1.0% increase and the aggressive assumes a 2.5% increase.

The 10-year trend is maintaining.

The CHSP meeting participants voted for the aggressive target.