

Follow-up from MDT:

Traffic Safety – Gabe and Tricia

- Does MDT have a policy regarding roundabouts?
 - MDT recognizes roundabouts as one of several types of intersection control and they are often considered the safest option, where operationally feasible, to reduce the severity of crashes due to the lower speed and reduction of conflict points compared with a conventional signal. Roundabouts are often nationally recognized as a proven safety countermeasure with significant crash reduction and are strongly encouraged by our Federal partners. Where we have roundabouts in place over a ten year period they have matched up with the national statistics. For example, the Canyon Ferry and Lake Helena Drive roundabout has shown 100% reduction in fatal crashes, 87% reduction in injury crashes and 26% reduction in overall crashes 10 years after installation compared with the 10 years prior to installation. See below for a more detailed explanation.
- The safety of roundabouts v. traditional intersections - Any Montana crash statistics we could share to demonstrate benefits?
 - Crash reduction at signals is low in comparison to roundabouts. Signals see a decrease of 33% of right angle crashes, the typical high severity intersection crash type. In addition, signals on high speed facilities introduce high speed rear-ends, trading one severe crash type for another.
 - Roundabouts are a geometric change to the intersection, slowing traffic and thus reducing high severity right angle type crashes. Roundabouts see a reduction of 90% for fatal crashes and 75% for injury crashes. Also pedestrians have fewer crossing conflicts than a signal. It is also easier to cross due to slower vehicle speeds and only crossing one direction of traffic at a time.
 - <https://www.mdt.mt.gov/visionzero/roads/roundabouts/purpose.shtml>
 - Multiple factors are considered when determining how to address crashes at intersections. Vehicular speeds, approach traffic volumes, site specific considerations, right of way implications, crash mitigation, and maintenance. If a roundabout is selected as the preferred alternative, a benefit cost is calculated to determine that the estimated cost is offset by the reduction in crashes the intersection is currently experiencing. For HSIP specific projects, the focus is on reducing high severity crashes and not all intersections would have a positive benefit cost to move forward to design and construction. FHWA also is a strong supporter and encourages MDT to utilize proven safety countermeasures. Currently there are 20 proven safety countermeasures with multiple studies supporting crash reduction. Roundabouts are one of these 20 proven safety countermeasures. <https://safety.fhwa.dot.gov/provencountermeasures/> In addition, the FHWA Montana Division Office and FHWA Office of Safety in Washington DC strongly support and encourage state DOT's to consider the use of roundabouts to address intersection safety.
- Funding of roundabouts – 100% federal?
 - Unless the roundabout is on a reservation or has Section 164 funds involved they are 90% federal like other safety projects. There was a time where certain types of projects, such as roundabouts, had 100% federal funding, but that G match option has since expired.

Maintenance - Swartz and McBroom

Is there discussion of lessening the spec on sanding gravel to keep costs down? [10:04:23]

Yes, MDT has conducted many efforts to try to decrease the costs of sanding Material. A summary of those efforts is described below:

- MDT does not require a hardness for the sanding material. There is a wear test in MDT’s specification book, but that test is only used for crushed base course and crushed cover aggregate, not sanding material.
- MDT surveyed Contractors in 2015 and some contractors stated that if we went back to the 3/8 inch minus material, we would see a cheaper cost for our sand.
 - MDT Maintenance put sanding contracts out for bid with an option where the contractor could choose either 3/8-inch minus or 5/16-inch minus sanding material. MDT did not see an impact of lower cost with either the 3/8-inch or the 5/16-inch specification.
- MDT allows contractors to choose between paying for material either by the ton or cubic yards. When paying by the ton, contractors must supply certified scales which has costs associated with it. When paying by the yard MDT uses a 3rd party application to measure and calculate the volume at no cost to the contractor.
- MDT reviews and considers excess materials from construction projects cost and if the material meets MDT’s specifications for sanding material, MDT tries to purchase those materials at a reduced price.
- MDT has been changing the timing and completion dates of our sanding contracts to give the contractors more time and flexibility to get the work done.
- MDT conducted a research project looking at the viability of reusing sand from the roadside. We have currently recovered thousands of yards of material and have screened the recovered material and are using this screened material in multiple areas.

How closely are chemicals (deicer) being monitored?

Deicer is being monitored throughout every storm and even daily by our managers. MDT created a Winter Material Use Dashboard that is updated as soon as the work is entered into the department’s Maintenance Management System. A target is set for the area in terms of gallons of deicer per mile plowed or pounds of sand per mile plowed for each section. After every storm, the material use is evaluated and compared to the targets. This is displayed in an easy to visualize dashboard as shown below.

Section Winter Material Usage Summary		October 21, 2021
1214 Noxon 07/01/2020 - 06/30/2021		Work Units: 24,624
Salt Brine Usage		
Salt Brine Used (gallons)	95,585.00	
Yearly Estimate Total (gallons)	159,758.00	
Target Gallons per Work Unit	3.50	
Actual Gallons per Work Unit	3.88	
Over/Under Target Rate Utilization	110.86%	
Yearly Estimate Usage	59.83%	
Sand Usage		
Sand Used (yards)	1,239.50	
Yearly Estimate Total (yards)	1,638.00	
Target Pounds per Work Unit	150.00	
Actual Pounds per Work Unit	151.01	
Over/Under Target Rate Utilization	100.67%	
Yearly Estimate Utilization	75.67%	

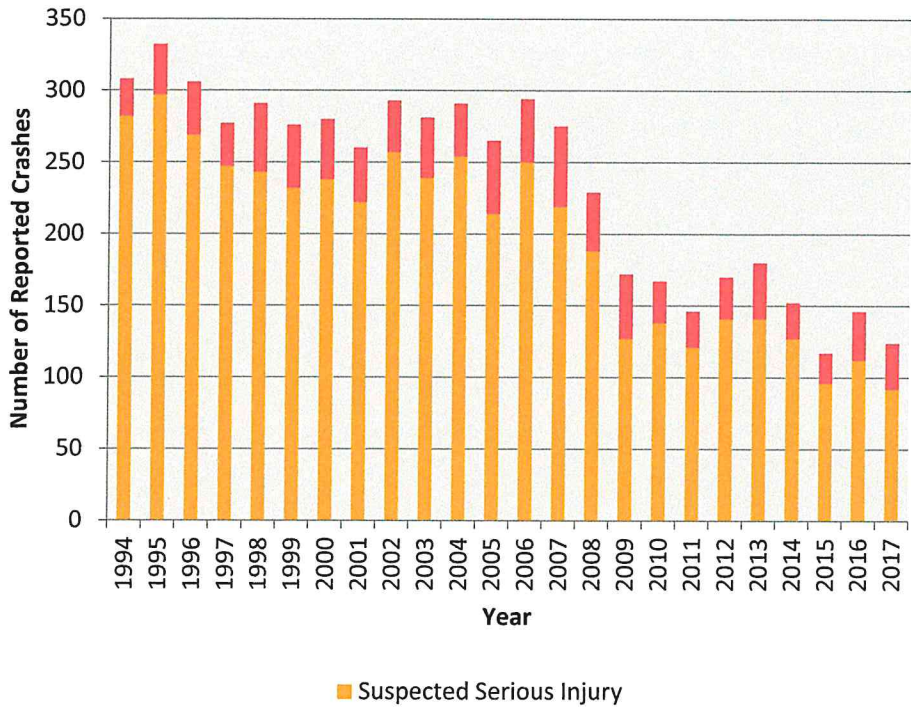
What chemicals are being used on the roadways (for winter maintenance)? [10:07:04]

The chemicals that are used on roadways are salt in our sanding material, liquid Salt Brine (Sodium Chloride), liquid Magnesium Chloride, and on one bridge we use liquid Potassium Acetate.

Is MDT evaluating the safety of highways where chemicals are used?

Yes, we do. MDT track accidents, in terms of fatalities and serious injuries, during winter months. We do not analyze down to the specific highway level, but we look at this statewide.

**Total Number of Reported Fatal and Serious Injury Crashes; State Owned Roadways
January, February, March, and December
1994-2017**



Does MDT have a plan in place for dealing with noxious weeds in the right-of way? [10:15:23]

Yes, the Montana Department of Transportation (MDT) has a *Statewide Integrated Roadside Vegetation Management Plan*. Integrated weed and vegetation management methods are used within the plan. MDT realizes that our roadway can be vectors for vehicles carrying noxious weed seeds into and throughout our state. Controlling these invasive plants along our roadways is a priority. This plan outlines MDT's budget, strategies, and the responsible positions as well as their roles in the plan. MDT works with counties, landowners, and other partners for noxious weed control along State maintained roadways. This plan is updated every 6 years. Below is a link to the *MDT Statewide Integrated Roadside Vegetation Management Plan*.

https://www.mdt.mt.gov/other/webdata/external/maint/2018-2024_vegetation_mgmt_plan_final.pdf

Has there been a change in the striping material? Mentioned they are hard to see.

There have been no changes in our striping material. MDT still utilizes waterborne paint and durable epoxy on our roads.

Vegetation in the R/W is hiding deer/elk and shading highways that need sun (in winter). Is MDT pursuing removal of vegetation/trees in MDT R/W (for safety purposes)? [10:24:42]

MDT does remove vegetation/trees along our Right of way during construction projects and through normal maintenance activities. MDT does have a Job Order Contract in place for removing trees. Additionally, MDT is working with DNRC to identify and develop beneficial projects for the removal of trees along the highway right-of-way.

SB 392 – status update on development of ARMs.

- Staff drafting ARMs and developing agreement template
- Broadband Coordinator position job description developed – moving forward with process to hire