

# LTAP MATTERS

Montana's Answers To Technical Education of Roads & Streets  
Vol. 35, No. 1

Winter 2017

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**MONTANA**  
STATE UNIVERSITY

Local Technical  
Assistance Program

# New Montana LTAP Director Matthew Ulberg

Steve Albert, Western Transportation Institute Director, announced Matthew Ulberg has accepted the Montana LTAP Director position.



"We are looking forward to have Matt Ulberg join our transportation team in March," Albert commented.

As Ulberg's resume notes, "Matt is a talented public speaker, and has the ability to quickly build a friendly and professional rapport with clients and the public.

In fact, he has more than 18 years of experience working closely with public and private sector clients to solve their engineering challenges. Matt's main areas of responsibility include client management, procurement, rural transportation and highway projects, municipal infrastructure projects, right-of-way acquisition, safety studies, and traffic engineering.

He enjoys exploring new ideas and implementing best practices that improve project quality and result in agency savings in construction or maintenance costs."

Ulberg is coming back to his Alma Mater having received his Undergraduate and Master's degrees from Montana State University in Civil Engineering.

# From MACRS President

On March 27 - 30, 2017, the Montana Association of County Road Superintendents will be holding their 37th MACRS Conference in Great Falls, Montana. As MACRS President, I would like to welcome everyone from those that come every year to those that are new. When I look at my grandson Colton, I am reminded of the responsibility of teaching him the importance of the simple rules of working hard, doing a good job and being proud of your accomplishments.



MACRS President John Anderson  
Fergus County Road & Bridge Supervisor  
& Grandson Colton

My focus in developing an agenda was to help better understand the responsibilities and duties of this job, whether for the seasoned veteran or the new road supervisor. This year's MACRS Officers and Representatives worked hard selecting topics that will be both interesting and assist the new and experienced road supervisors to get their jobs done.

The vendors supporting MACRS are another great resource and some of them have been with us for many years. We thank them for their continued support and sponsorship. They provide quality products and excellent service.

Last but definitely not least, thanks to Montana LTAP for the outstanding job coordinating and providing their support for this conference and all the past conferences.

Look forward to seeing everyone there,  
John Anderson, MACRS President  
Fergus County Road & Bridge Supervisor

To register for the conference: <http://www.montana.edu/ltap/resources/macrs/index.html> or call MT LTAP at 1-800-541-6671.

## Genevieve Houska

Administrative Associate/  
Conference Coordinator  
genevieve.houska(at)montana.edu

## Michele Beck

Graphic Designer/Librarian  
mbeck(at)montana.edu

The LTAP Mission is to foster a safe, efficient, and environmentally sound surface transportation system by improving skills and increasing knowledge of the transportation workforce and decision makers.



## Local Technical Assistance Program

LTAP Matters is published by the Local Technical Assistance Program. LTAP is located at Western Transportation Institute, College of Engineering, Montana State University, Bozeman, Montana.

We can be reached at the following:

Phone: (800) 541-6671 or (406) 994-6100  
FAX: (406) 994-5333  
E-Mail: MTLTAP(at)montana.edu

Our website lists upcoming training courses, registration forms, library information, our contact information, newsletters, various links, and MACRS information. Please go to: <http://www.montana.edu/ltap/>

The Local Technical Assistance Program is a nationwide network of 58 centers - one in every state, seven serving Native American tribal governments and one in Puerto Rico.

## MT LTAP ADVISORY COMMITTEE MEMBERS

The Advisory Board meets annually to make recommendations and evaluate the effectiveness of the Montana LTAP program.

**Steve Albert**  
WTI Director

**Harold Blattie**  
MACo

**Kris Christensen**  
Montana Dept of Transportation

**Thomas Danenhower**  
MMIA

**Kelly Elser**  
Town of Ennis

**Eric Griffin**  
Lewis and Clark County

**Justun Juelfs**  
Montana Dept of Transportation

**Tim Burton**  
Montana League of Cities & Towns

**Phil Hauck**  
City of Helena

**David Mumford**  
City of Billings

**Jim Muskovich**  
MACo

**Jim Rearden**  
City of Great Falls

**Bob Seliskar**  
Federal Highway Administration

**John Van Delinder**  
City of Bozeman



Front Page Photo: By Michele Beck. City of Bozeman Heavy Equipment Operator Aaron Mathias plowing city streets.

# Prepared for Unannounced DLI Inspection?

Permission granted for reprinting by Thomas Dannenhower, MMIA Risk Management Specialist

The Montana Department of Labor and Industry, Employment Relations Division recently announced their new public sector compliance emphasis program effective October 1, 2016.

The new emphasis program will focus on two elements of the Montana Safety Culture Act: MCA 39-71-1505(1)(a)(ii) and MCA 39-71-1505(1)(b). MCA 39-71-1505(1)(a)(ii) requires that employers (including public sector) provide documented job or task specific safety training to employees. The Department of Labor has indicated their focus will be on verifying employees have received documented task or job specific training on mobile equipment operations. This includes but is not limited to loaders, graders, tractors, skid steers, etc. In addition, they will also be verifying each employer has evaluated their processes and trained employees on specialized tasks including but not limited to herbicide and pesticide application, chemical handling operations, traffic control operations, etc.

## What is task specific training?

Montana ARM 24.30.2521 (1)(b) further clarifies the following regarding job or task specific training.

## Are You Prepared for an Unannounced DLI Inspection?

Public Sector Compliance Emphasis for 2016/2017 (b) provide job or task-specific safety training appropriate for employees before they perform that job or task without direct supervision. The department recommends this training:

- (i) include specific safety rules, procedures and hazards
- (ii) clearly identify the employer's and employee's responsibilities regarding safety in the workplace;
- (iii) be conducted by personnel knowledgeable of the task being trained; and
- (iv) be conducted:
  - (A) when the safety program is established;
  - (B) whenever employee job assignments change;
  - (C) whenever new substances, processes, procedures or equipment are introduced to the work place; and
  - (D) whenever a new hazard is identified.

## How do you create task specific training?

### Resources

The best source of information for creating task specific training for mobile equipment and power tools are the owner's or operator's manual. These manuals contain critical information such as instructions on: safety, usage, maintenance, storage, and troubleshooting, as well as technical specifications.

Resources for processes such as herbicide and pesticide applications and chemical handling should include the application guides and manufacturer's Safety Data sheets.

Resources for traffic control operations include the Manual on Uniform Traffic Control Devices (millennium edition) and OSHA 29 CFR 1926 Subpart G, Signs, Signals, and Barricades.

Classroom and Field Practicum Best practice for task training is to include both a classroom session and a field practicum. The classroom training should be designed to provide individuals with the technical skills and information required to perform a specific task. Remember that each person's learning style is different. Using a variety of communication methods such as lecture, group discussion, videos, etc. is a good way to cover the variety of learning styles and ensure the employees are learning the necessary knowledge and skills to safely complete their tasks.

The field practicum is a supervised practice in a non-production setting that is used to identify whether or not the employee can apply what they've learned from the classroom session. It is important for the employer to evaluate: the employee's knowledge of pre and post operation checks of the equipment; their ability to demonstrate proper start-up and shut down procedures of equipment, their ability to demonstrate safe operating procedures and proper procedures to address any change to the equipment, process or condition; their knowledge of any required maintenance and service of equipment, and their knowledge of how and where to report any problems or malfunctions. This field practicum allows for the trainer to provide critical feedback to employees on their ability to safely operate the equipment.

It should go without saying, but employees that do not demonstrate the necessary skills for safe operation of equipment during the field practicum should not be allowed to operate the equipment in a production setting until they can successfully demonstrate in the non-production setting (field practicum) that they have the necessary skills for safe operation.

Once the employees successfully complete the classroom and field practicum, it is still important to observe their operations in a production environment to ensure they have a thorough knowledge of safe operation and they are following the expectations set forth by the city/town.

## Documentation

It is important to document the training and maintain training files. The documentation should include the date and time of the training, the specific training topic, participants of the training, a sign-in sheet, trainers name, and include via attachment any materials provided during the training. Training records should be kept in a training file by date and topic, not in personnel files.

## Can a third party such as an equipment representative, consultant or insurance provider conduct the task specific training for employees?

The short answer is no. Although third parties can be a good resource for gathering information to include in the training, state and federal statutes require the employer to conduct the training. The term "competent person" is used in many OSHA standards and documents, which are enforceable by the Montana Department of Labor and Industry. An OSHA "competent person" is defined as "one who is capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them." Third parties would not meet the definition of "competent person".

## Why is task specific training important?

When employees know how to do a task correctly, it minimizes the risk of injury. Employees are the most valuable asset of an organization. Ensuring they are injury free reduces:

- 1) Excess costs such as overtime wages for other workers to make up for the injured employee's lost work.
- 2) Costs of finding and training a replacement for the injured employee.
- 3) Increased assessment costs due to a higher mod; and
- 4) Costs for damaged equipment or other capital assets. A safe work environment also improves employee morale.

*Continued on Page 11...*

# Snow & Ice Control Best Management Practices

This original article is from West Virginia LTAP's County Roads & City Streets, Fall/Winter 2016 quarterly newsletter, reprinted with permission. Also reprinted with permission from Maine LTAP various sections from "Maine Environmental Best Management Practices (BMP) Manual for Snow and Ice Control."

In conjunction with various agencies and contributors, Maine LTAP produced "Maine Environmental Best Management Practices (BMP) Manual for Snow and Ice Control." It is an excellent resource that presents tools and best practices for snow and ice control, when they should be used, and their limitations. To read the manual in its entirety, visit <http://maine.gov/mdot/csd/mlrc/documents/2015-08-17-June2015FINALversion.pdf>. The following selected sections can be applied in Montana.

## 3.1 Defining a Level-Of-Service

### What is it?

Snow and ice control Level-of-Service (LOS) is a defined set of operational guidelines and procedures that specify the extent to which maintenance services will be provided. Due to the variable nature of the weather events and the fact that budgets and resources are limited, a defined LOS policy provides a realistic basis for a winter maintenance operations program.

### HOW DOES IT WORK?

A LOS policy will require establishing a prescribed end-of-storm road condition for various types of roads, explaining what intermediate conditions are acceptable, and/or the frequency of snow and ice control maintenance operations. Some components of an LOS policy would include: overall approach, time to bare pavement, truck cycle times, % bare pavement, acceptable snow cover during and after a storm, materials used, typical application rates, plow route length, and time periods of reduced coverage.

### HOW IS THIS BMP IMPLEMENTED?

The LOS policy should, at a minimum, be a published policy document that is used by the municipality or transportation agency to support and explain its overall approach to winter operations within the limits of its budgetary and staffing resources and within context to local sensitive environments. Some communities choose to formalize a LOS policy into local code along with other requirements for public and private property snow removal.

### What are the Planning or Technical Considerations?

The LOS policy will largely be determined by the importance of the road and the average daily traffic count, but may also include consideration of sensitive environmental areas. A community should define its LOS policy with the input of transportation stakeholders which will require an evaluation

of traffic levels, road classification in both urban and rural areas, road speeds, average plow route length, and typical staffing and resources. These priorities identify the order in which the roads will receive attention when choices must be made and will also help to define the level of maintenance each priority level will receive under various activities. The use of geographic information systems (GIS) may make this evaluation easier and maps generated through the process assist in the graphical representation of traffic counts, road types, [and] environmental conditions that can assist a community in achieving informed input. While the focus of this BMP is on roads, LOS plans can be developed for parking lots and sidewalks as well.



### What are the Potential Benefits?

A LOS policy allows a community to defend its decisions to provide for maximum efficient use of traction and anti-icing/deicing materials through timely and carefully controlled applications. This will provide for the safe passage of road users while respecting the environment in general and fresh water resources in particular. It can also list the priorities of specific roads in regards to traffic, environment or other factors.

### What is the Cost to Implement?

The LOS policy development primarily requires an investment in time for roadway managers. The investment will depend on the level of detail of the policy and the desired level of engagement of road users and interested citizens. Additional investments may be made depending on the nature of the technology used to evaluate existing and future conditions, including GIS. The LOS policy development may require limited data collection regarding sensitive receiving waters and local road conditions (e.g. winter shade areas, difficult to manage surfaces).

*Continued on Page 5...*

# Snow & Ice Control (Cont'd from Page 4)

## 8.1 SIDEWALK & BUILDING ENTRANCES

### What is It?

Despite their somewhat small area, sidewalk and building entrances often are salted and sanded at a higher rate due to fear of "slip and fall" lawsuits. Sidewalks are often the most over-salted of all areas in winter maintenance. Sidewalks are the area of highest tracking into the building. Extra salt and sand contribute to slippery entryways inside the building. This section describes what the basic BMPs are for sidewalks and building entrances.

### How Does it Work?

Using BMPs assures these surfaces are safe for pedestrians while not wasting product, reducing product being tracked into the building, and reducing harm to local vegetation, streams, and groundwater.

### How is This BMP Implemented?

Focus on aggressive mechanical removal of snow. Always remove snow prior to applying deicer. The less snow, the less deicer required resulting in a safer walking surface. Do not use a scoop for deicer distribution. Use hand-held spreaders or drop spreaders rather than broadcast



spreaders to increase the amount of salt that ends up on the sidewalk. This makes the dispersed salt more effective and protects nearby landscaping vegetation.

If you are using a broadcast/rotary spreader, adjust the opening to limit dispersion of material onto the sidewalk or install shields to restrict the spread pattern.

Look for opportunities to close extra entrances during the winter to reduce the need to use chemicals on all sidewalks and steps.

Guidelines for spreading deicer on steps, stairs, and small sites:

- Even spread pattern of granules, aiming to avoid the clumping of granules.
- No piles of deicer.
- No deicer on dry pavement.
- No deicer in vegetation.

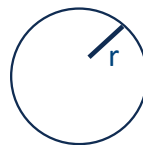
If you are not responsible for sidewalk maintenance, consider providing this information to the building occupants to educate them on these best practices for winter maintenance.

The amount of deicer needed is based on the size of the sidewalk/entranceway. To calculate the area, review a scaled map of the facility so you can calculate areas. Determine the size of the area that will be treated. Measure the area to be treated using the following calculations:

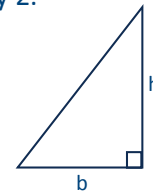
The area or square feet of a square or rectangle is Height (h) X Width (w)



The area or square feet of a circle is  $\pi r^2$  or  $3.14 \times (r \times r)$  where the radius is half of the distance across the circle.



The area or square feet of a right triangle is Base (b) X Height (h) divided by 2.



Measuring your area along with knowing the pavement temperature will allow you to use application rate charts. A good source for application rates can be found in the *Minnesota Winter Parking Lot and Sidewalk Maintenance Manual* (2010) which can be downloaded from <https://deicemandave.files.wordpress.com/2014/09/parkinglotmanual-june061.pdf>.

### What are the Potential Benefits?

Aggressive snow removal leaves less snow, which requires less deicer and creates a safer walking surface. Hand-held spreaders provide more even distribution, reduce the amount needed, reduce tracking into buildings, save money due to reduced material application, and reduce impact to the building from corrosion. Hand-held spreaders save at least 50% of the salt used spreading with a scoop, without reducing the level of safety.

### What are the Planning or Technical Considerations?

Explore closing any extra non-essential, high maintenance building entrances during the winter. Heated or textured mats may work for small problem areas such as sidewalks or steps. However note that deicers can harm heated sidewalks.

### What is the Cost to implement?

Although additional time may be required to assess and calculate sidewalk and entranceway, savings may be realized by minimizing the amount of salt and abrasives applied as a result of the pre-planning. ❖

# Calendar of Events • July 2016 - December 2016

## July 2016

S	M	T	W	Th	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

31

4: Fourth of July Holiday - Offices Closed

18-21: National LTAP/TTAP Summer Conference, Madison, WI

## August 2016

S	M	T	W	Th	F	S
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21	22	23	24	25	26	27
28	29	30	31			

16 - 18: **Montana Safety Fest - Bozeman** - <http://www.safetyfestmt.com/>

### Training on Request:

Summer Survival  
Hand Safety  
Slips, Trips, & Falls

### Training on Request:

Forklift  
Sign Safety  
Road Audits

## September 2016

S	M	T	W	Th	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	

5: Labor Day Holiday - Offices Closed

7 & 8: **27th Annual Equipment Safety Training and Snow Rodeo - Helena, MT (MT LTAP)** Brochure available in July

18-22: MACo 107th Annual Conference, Billings, MT  
[www.mtcounties.org](http://www.mtcounties.org) or MACo's Karen Houston 406-449-4360

20: **MT LTAP Safety Webinar: Snowplow Safety 7:30am-8:00am**  
**MACRS Fall District Meetings: Trench Safety & Culvert Installation, Load Securement Safety with Large Equipment**  
27: Conrad 28: Townsend 29: Missoula

## October 2016

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23	24	25	26	27	28	29
30	31					

**MACRS Fall District Meetings: Trench Safety & Culvert Installation, Load Securement Safety with Large Equipment**

4: Billings 5: Glendive

5-7: **85th League of Cities & Towns, Hilton Garden Inn, Missoula, MT**  
5: **Public Works Directors Meeting - Hilton Garden Inn, Missoula, MT**  
TBA: Put The Brakes On Fatalities Day - 16th Anniversary (go to: [www.brakesonfatalities.org](http://www.brakesonfatalities.org))

10: Columbus Day - Observed (Montana LTAP Offices Open)

11: **MT LTAP Safety Webinar: Hearing Safety - 7:30am-8:00am**

18-20: 31st Regional Local Road Coordinators Conference, Rapid City, SD

## November 2016

S	M	T	W	Th	F	S
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27	28	29	30			

8: Election Day - Offices Closed

11: Veterans' Day - Offices Closed

15: **MT LTAP Safety Webinar: WZ for Low Volume Roads - 7:30am**

16: **Roadway Safety Plus/Backovers-Runovers - Great Falls**

16 & 17: **MACRS Planning Meeting, 1-5pm and 8am -noon; Great Falls**

24-25: Thanksgiving Holiday - Offices Closed

*If you injure or kill someone while DUI, you can be convicted of vehicular homicide while under the influence. Expect a prison term up to 30 years and fines up to \$50,000, or both. DON'T DRINK & DRIVE! § 45-5-106, MCA*

## December 2016

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25	26	27	28	29	30	31

1: **LTAP Advisory Board Meeting - 1:00 pm, Helena, MT**

20: **MT LTAP Safety Webinar: TBA**

26: Christmas Holiday - Offices Closed

### Safety Meeting Webinars from Montana LTAP

Monthly Safety Webinars held at 7:30am usually on Tuesday Mornings  
Call Montana LTAP at 1-800-541-6671 for more information!  
Recorded safety webinars: <http://www.montana.edu/ltap/resources/webinars/index.html>

*Some dates and locations are subject to change.*

*Call Genevieve Houska, LTAP, 1-800-541-6671 to confirm.*

# Calendar of Events • January 2017 - June 2017

## January 2017

S	M	T	W	Th	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

- 2: New Year's Day - MT LTAP Offices Closed
- 8-12: 96th Transportation Research Board, Washington, DC
- 16: Martin Luther King Day - Offices Closed
- 17: MT LTAP Safety Webinar-Slips, Trips, & Falls 7:30am
- 24-25: 15th Annual Safety Congress - Helena, MT (MT LTAP)
- 24: Snow & Ice Control - Wolf Point, MT (MT LTAP)
- 25: Snow & Ice Control - Miles City, MT (MT LTAP)
- 30 - Feb 2: SafetyFestMT - Missoula, MT  
:http://safetyfestmt.dli.mt.gov/

## February 2017

S	M	T	W	Th	F	S
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5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28				

- 1-2: SafetyFestMT (con'td) Missoula, MT
- 13-16: MACo Mid-Winter Conference: Helena, MT
- 20: President's Day - Observed (Montana LTAP Offices Closed)
- 21: MT LTAP Safety Webinar -Hand & Eye Safety & PPE 7:30am
- 28: Asphalt Institute - Helena, MT (MT LTAP)

**SAVE THE DATES:**  
**MACRS 2017 Spring Conference**  
**March 27 - 30, 2017**

## March 2017

S	M	T	W	Th	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

- 13-17: MSU Spring Break
- 20: Work Zone Flagging - Havre(MT LTAP)
- 21: Work Zone Flagging - Great Falls (MT LTAP)
- 21: MT LTAP Safety Webinar TBA 7:30am
- 22: Work Zone Flagging- Helena (MT LTAP)
- 27 - 30: MACRS 37th Annual Conference-  
Heritage Inn, Great Falls, MT (MT LTAP)

## April 2017

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23	24	25	26	27	28	29
30						

- 3-7: National Work Zone Awareness Week (ATSSA)  
<http://www.atssa.com/Events/NationalWorkZoneAwarenessWeek.aspx>
- 11: Work Zone Flagging - Miles City(MT LTAP)
- 12: Work Zone Flagging- Glendive (MT LTAP)
- 13: Work Zone Flagging- Glasgow (MT LTAP)
- 14: Work Zone Flagging - Billings (MT LTAP)
- 18: MT LTAP Safety Webinar: TBA 7:30am
- 9-13: NACE Annual Conference 2017, Cincinnati, OH

## May 2017

S	M	T	W	Th	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

- 9: Motor Grader Safety Training - TBA
- 10: Motor Grader Safety Training - TBA
- 11: Motor Grader Safety Training - TBA
- 15: Motor Grader Safety Training- TBA
- 16: Motor Grader Safety Training - TBA
- 17: Motor Grader Safety Training- TBA
- 18: MT LTAP Safety Webinar: TBA 7:30am
- 21 -27: National Public Works Week(APWA)  
<http://www.apwa.net/discover/National-Public-Works-Week>
- 23-25: SafetyFestMT, Havre, MT - [www.safetyfestmt.com](http://www.safetyfestmt.com)
- 23-25: APWA North American Snow Conference: Des Moines, Iowa  
More info: <http://www.apwa.net/Snow>
- 29: Memorial Day - Offices Closed

## June 2017

S	M	T	W	Th	F	S
				1	2	3
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11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	

- TBA: LTAP North Central Regional Meeting
- 6: Work Zone Flagging - Bozeman
- 7: MACRS Executive Meeting, 1-5pm - Bozeman
- 8: MT LTAP Annual Advisory Board Meeting, 9am-12pm - Bozeman
- 20: MT LTAP Safety Webinar -TBA 7:30am

**Training Opportunities at Montana LTAP Website:**  
<http://www.montana.edu/ltap/training/index.html>



Mobility • Safety • Quality • Environment • Shortening Project Delivery

The following information comes from FHWA's website for Every Day Counts: <http://www.fhwa.dot.gov/innovation/everydaycounts/>

### Building a Culture of Innovation

by Gregory G. Nadeau, FHWA Administrator

The fourth round of Every Day Counts will help to drive additional proven practices and technologies into mainstream use.

The highway community's top priority is a safe surface transportation system. With budget constraints at all levels of government, it is also imperative to get the greatest value for every transportation dollar the American people invest. A nationwide focus on innovation is essential to both.

Since 2009, the Federal Highway Administration's efforts to further innovation have centered on the Every Day Counts (EDC) partnership with States and other public and private stakeholders to encourage widespread use of proven, market-ready solutions. Through this collaboration, FHWA is advancing innovations that speed project delivery and deploying technologies that save time, money, and--most important--lives.

In 2015, the Fixing America's Surface Transportation (FAST) Act included EDC by name, directing FHWA to continue cooperating with stakeholders to deploy new practices and technologies and create a culture of innovation in the highway community. Not only is this a vote of confidence in what EDC stakeholders have accomplished together, but also it ensures that this partnership focused on innovation will remain a driving force to improve program delivery and transportation infrastructure for years to come.

Designed to complement other initiatives focusing on technological advances, EDC plays an important role in helping transportation agencies harness innovation to deliver the best value for every taxpayer dollar. As U.S. Department of Transportation Deputy Secretary Victor Mendez, who launched EDC in 2009, said, "We've committed ourselves to a course that will benefit the American taxpayer. Every Day Counts is about fulfilling our mission in a better, smarter, faster way."

To that end, every 2 years FHWA works with State transportation departments, local governments, tribes, industry, and other stakeholders to identify a new set of innovations that merit widespread deployment through

EDC. The fourth round (EDC-4) will advance 11 innovations in 2017 and 2018. This fall, transportation leaders will gather at regional summits to learn about the EDC-4 innovations and commit to implementing those that fit the needs of their highway programs. More at this link: <https://www.fhwa.dot.gov/publications/publicroads/16sept/01.cfm>

### EDC-4 Innovations (2017-2018)

The following are EDC-4 Innovations coming up for the 2017-2018 year. For further information about these particular innovations, go to: <http://www.fhwa.dot.gov/innovation/everydaycounts/>

- **Automated Traffic Signal Performance Measures (ATSPMs)**
- **Collaborative Hydraulics: Advancing to the Next Generation of Engineering (CHANGE)**
- **Community Connections**
- **Data-Driven Safety Analysis (DDSA)**
- **e-Construction and Partnering: A Vision for the Future**
- **Integrating NEPA and Permitting**
- **Pavement Preservation (When, Where, and How)**
- **Road Weather Management – Weather-Savvy Roads**
- **Safe Transportation for Every Pedestrian (STEP)**
- **Ultra-High Performance Concrete Connections for PBES**
- **Using Data to Improve Traffic Incident Management** ❖

### Excerpt on STIC from this link:

<https://www.fhwa.dot.gov/publications/publicroads/16sept/01.cfm>

EDC has encouraged the development of State Transportation Innovation Councils (STICs), groups that enable public and private sector stakeholders to collaborate on innovation deployment. STICs--active in all 50 States, the District of Columbia, Puerto Rico, the U.S. Virgin Islands, and Federal Lands Highway--form the backbone of a national transportation innovation network dedicated to creating a world-class highway system through innovation.





# National Rural Road Safety Center



The National Center for Rural Road Safety was created by the Federal Highway Administration (FHWA) to identify the most effective current and emerging road safety improvements and deploy them on rural roads. In the federal transportation re-authorization bill (MAP-21, 2012) (<https://www.fhwa.dot.gov/map21/>), Congress explicitly created a next-generation Center that would integrate and advance the work of the previous rural center of excellence and the surface transportation center of excellence. The Center embodies the federal transportation goal for a center focused solely and specifically on enhancing safety on rural roads while supporting surface transportation in general.

The Center team is led by the Western Transportation Institute at Montana State University; other members of the team are Iowa State University's Institute for Transportation, Rutgers University's Center for Advanced Infrastructure and Transportation, Bubar and Hall Consulting, LLC., Cambridge Systematics, IDT Group, and the Local Technical Assistance Programs of Iowa, Louisiana, Montana, and New Jersey. In addition to the team, two more groups lead the guidance and management of the Center: the FHWA Technical Panel and the Stakeholder Group. Multiple FHWA offices are represented on the Center's Technical Panel, including the FHWA Resource Center, Technology Partnerships Program, National Highway Institute, Federal Lands Highway, and personnel from the Office of Safety's Local and Rural Road Safety Program, Research and Development, and Communications, as well as the Montana Division Office. This link to FHWA serves to further accessibility to technology transfer opportunities for local and rural users.

Center Director Steve Albert says "Despite that over-half of fatalities occur on rural roads, and safety being a priority, there has never been a national focused center that has fulfilled the role of a one-stop shop beyond a single state focus, for research, technical assistance/ transfer and training." The Center will integrate, coordinate and accelerate knowledge transfer safety solutions will include and move beyond engineering as a principle focus to include culture, since 90% of crashes are due in some part to the driver, not the infrastructure. (<http://www-nrd.nhtsa.dot.gov/pubs/811059.pdf>)

## STIC (Cont'd from Page 8)

STIC partnerships are the heart of EDC. Their mission is to evaluate innovations from sources such as EDC, the American Association of State Highway and Transportation Officials (AASHTO) Innovation Initiative, and the second Strategic Highway Research Program (SHRP2) and spearhead the adoption of those that add value to their State highway programs.

"EDC and other technology initiatives have really been critical in helping States save money and save time," said AASHTO Executive Director Bud Wright.



All STICs work to make transportation innovation mainstream, but their approaches are as different as the States they represent. ❖

The Center's philosophy is to empower as many state, local, and tribal agencies as possible with the most effective safety tools and strategies that are currently available. Building on a growing body of multi-disciplinary research, best practices and successful deployments in rural environments, the Center is poised to help agencies with their immediate rural road safety challenges. Albert reflects on the variety of safety challenges- "Addressing rural safety challenges is not straight forward; it requires a comprehensive assessment of needs and a multi-discipline approach to investigate the many factors that have an impact on safety. In other words, safety issues must be viewed through a wider lens, rather than addressing only one pieces of an issue at a time." In essence there is no "silver bullet" to address all rural challenges. Albert's philosophy for the Center is to "employ a safe system methodology to training and technology transfer that provides safety solution tools that address systemic needs, targeted not only at roads, but driver behavior, vehicle capabilities, infrastructure and cultural understanding too." The goal is to deliver training that accelerates change and makes it possible for agency managers, planners, operations staff and maintenance crews to do their jobs better the very next day.

The Center approaches roadway safety from every angle, and searches for noteworthy practices and information from a wide variety of assets that are suitable for technology transfer. As an example, when you consider 32% of speeding related fatalities occur in rural areas (<http://www.nrd.nhtsa.dot.gov/pubs/911637.pdf>), we can derive that a targeted and aggressive education and enforcement campaign might help reduce that number. Finding examples of successful campaigns of this nature does not need to be limited to rural areas, but instead we can look at best practices from any type of location to highlight and replicate effective strategies and programs.

To visit the National Center for Rural Road Safety website; <https://ruralsafetycenter.org>.

The Safety Center will host a FREE, 1-1.5 hour webinar series monthly.

**Go to this link for more webinar information:** <https://ruralsafetycenter.org/training-education/safety-center-trainings/registration-for-safety-center-trainings/>

**February 2017 – Small Town and Rural Multi-modal Networks Guide (Tuesday, February 14, 2017 from 11:00 AM-12:30 PM Mountain/1:00-2:30 PM Eastern)**  
This Safety Center sponsored webinar will be presented by Alta Planning and will provide an overview of the Small Town and Rural Multimodal Networks Guide, published in January 2017 by the Federal Highway Administration. At the conclusion of this webinar, participants will be able to: describe the general uses and benefits of this new guidance, understand the three topic areas in which contextual guidance is provided, and identify the speed, volume, roadway types, and land use areas in which each treatment is best suited for application.

**March 2017 – Safety Performance Management (Thursday, March 9, 2017 from 11:00 AM-12:30 PM Mountain/1:00-2:30 PM Eastern)**  
This Safety Center sponsored webinar will be presented by staff from the Federal Highway Administration (FHWA) and National Highway Traffic Safety Administration (NHTSA) to discuss safety performance measurement. Registration will open soon.

**April 2017 – Converting Paved Roads to Unpaved Roads (Tuesday, April 4, 2017 from 11:00 AM-12:30 PM Mountain/1:00-2:30 PM Eastern)**  
This Safety Center sponsored webinar will provide an overview of the National Cooperative Highway Research Program (NCHRP) Synthesis 485 Converting Paved Roads to Unpaved. The webinar will present the contents of the synthesis report which summarizes the state-of-the-practice of the road conversion process, tools that can be used to aid in the decision making process of whether to convert from paved to unpaved including available resources and design guides, and what has worked and what has not worked for those in the unpaving process including public outreach and identified impacts. Registration will open soon. st a FREE, 1-1.5 hour webinar series monthly. ❖

# Don't Risk It

Permission granted for reprinting by West Virginia LTAP from their quarterly newsletter, "County Roads & City Streets, Fall/Winter 2016";  
Written by Ron W. Eck, P.E., WV LTAP Senior Advisor

## Don't Risk It - Managing Roadway Winter Maintenance Liability Exposure:

Winter weather conditions can adversely affect traffic safety and can lead to motor vehicle crashes resulting in fatalities, serious injuries, and/or significant property damage. These consequences raise concern among public agencies over the threat of tort claims arising out of alleged negligence in the conduct or performance of snow removal and ice control activities. What do road agencies need to be aware of in this regard, and how can they reduce their liability risk?

### Essentials of Tort Law

A **tort** is a wrong that results in injury or damage. It is the violation of a duty owed to the injured party. What are the duties of a road agency? The principal duty is to provide reasonably safe roads. While what is reasonable would ultimately be determined by a jury, note that there is no duty to guarantee the safety of the road user or to provide 100 percent safe roads. In those instances where a road agency may not be able to provide reasonably safe roads, there is a duty to warn of existing hazards. **Standard of care** is the legal term for the criteria by which reasonableness is judged. Examples of winter maintenance standards of care include the *American Association of State Highway and Transportation Officials (AASHTO) Maintenance Manual*, the *WVDOH Maintenance Manual*, (For Montana: See *Montana Department of Transportation's Winter Maintenance Manual, Section C, Chapter 9*: <http://www.mdt.mt.gov/publications/docs/manuals/mmanual/chapt9c.pdf>) and your agency's winter maintenance policies and guidelines.

There is an element of time in assessing the reasonableness of a road agency's actions. The term **notice** means when the road agency was informed about a specific problem with the roadway system. Notice could be a phone call, an email or even an editorial in the local media. The concept of **constructive notice** is stricter. It basically says that even if the agency was not specifically informed about a roadway deficiency, after a reasonable time, a prudent road agency should be aware of that deficiency.

### Common Winter Maintenance Tort Claims

A common tort claim involving winter maintenance is the allegation of failure to keep the roads passable during a storm. The reality is, generally, the "storm-in-progress" rule applies, meaning there is no duty to remove general accumulations of snow. Thus, it will be difficult for a plaintiff to be successful with this theory of liability unless they can show that there was a clear disregard of agency priorities or a failure to warn of, or alleviate, problem areas.

Note, however, that plowing-related tort claims during or shortly after storm events are not uncommon. These usually involve higher-speed roads. The claim may be that the cloud of snow cast into the air partially or totally obscured driver vision, causing them to run off the road or strike another vehicle.

If the plaintiff's vehicle strikes the plow truck, the plaintiff may claim that the truck was not clearly visible due to deficiencies in lighting and/or retroreflectivity. Make sure your trucks have appropriate lights and retroreflective material; inspect these items before each run.

After a storm, do not ignore widening and clean-up. Windrows of snow in front of guardrails need to be removed so traffic barriers can function as designed. Be especially attentive to drainage problems created by plowed or shoveled snow. Meltwater can freeze, creating an isolated icing condition.



Do not make the mistake of thinking all winter tort claims arise out of storm events. Attention also needs to be paid to isolated icing conditions. The courts have imposed a duty to use chemical and/or abrasives on roadways when an agency has notice (actual or constructive notice) of a particular isolated or hazardous condition. Examples of situations that have a high potential for isolated icing conditions, and for which roadway personnel should be on the look-out, include:

- Clogged inlets where water runs across the inlet and then enters the traveled way and freezes
- High shoulders where water cannot drain from the pavement and accumulates inside the edge line
- Driveways where water flows from the driveway onto the roadway or, due to deficient drainage under the driveway, water accumulates at the driveway and enters the traveled way

Other isolated roadway conditions that should be monitored include icing where a section of roadway is shaded by trees and preferential icing of bridge decks. Be sure to identify (document) potential isolated icing conditions during winter maintenance dry runs. Correct these situations before winter or warn motorists of the condition.

### Reducing Risk

Following the winter maintenance risk management checklist below should help your agency reduce its tort liability exposure and help in defending claims that are made.

- **Develop and follow a snow policy or plan**
  - Follow rational procedures for setting winter maintenance priorities**
  - Don't promise more than you are able to deliver**
  - Provide an inspection system**
  - Establish a citizen response system**
  - Document, document, document!**
  - Train employees at all levels about equipment, materials and methods.**



# Blood Borne Pathogen Training - Town of Manhattan

Thanks to Steve Kurk, Town of Manhattan Street Department, for providing the following information.

This fall crew members from the Town of Manhattan Street Department were concerned about their own safety and health factors when using the VacCon while flushing out sewer lines. Steve Kurk, Manhattan Street Department, called several resources to find a trainer on Blood Borne Pathogens. His search led him to Bozeman Deaconess Hospital lab where they gave him the phone number of trainer Bryan McDaniels, Montana Occupational Health Department.



He outlined the differences between Hepatitis A, B and C. McDaniels covered vaccination prevention and cures for the various strains of Hepatitis. He also touched on other bacterial concerns but informed all that they were preventable in most cases with proper PPE and training.

After some logistical planning, the Town of Manhattan sponsored the Blood Borne Pathogen training on December 21, 2016, at the Manhattan City Hall. McDaniels presented to about twenty participants from Manhattan Public Works, Police and Fire Department; Belgrade Police; City of Bozeman Maintenance crew members; Gallatin County Detention Center Officers; and Town of Townsend Public Works employees.

According to Kurk, all those who participated concurred McDaniels did an outstanding job of explaining the differences and difficulties involved with blood borne pathogens.

When McDaniels first started out using large scientific words, Kurk became concerned this training might not go very well. But that quickly changed when McDaniels explained all who work in critical areas such as sewers and when handling "poop" situations, PPE and safety training were key in everyone's safety.

He held the interest of all for the hour he presented, followed by forty-five minutes of a question and answer session, where participants were fully engaged in getting their concerns answered. Kurk mentioned McDaniels said something that will stick in his mind and that was you could actually catch more from fast food restaurants than from what is in most sewer lines.

To request training from McDaniels, call 406-556-1900. ❖

## Prepared (Cont'd from Page 3)

### So what's the second element of DLI Safety Bureau's emphasis program this year?

MCA 39-71-1505(1)(b) and ARM 24.30.2521 (e) specify that employers are required to conduct a documented self-inspection or hazard assessment of each of their workplace facilities at least annually. The employer must also identify corrective actions needed and document the progress and actions taken to abate the hazards found during the self-inspection.

### So what types of hazards should we look for and address?

Key areas to focus on should include, but are not limited to: electrical hazards, machine guarding, housekeeping, and fall hazards.

### Are there resources to assist with self-inspections?

Yes! There is no need to reinvent the wheel. There are many existing checklists and action plans available for you to customize to meet your operations. One free resource with more than

50,000 templates for inspection checklists is IA Auditor. This free app is for mobile devices and your PC. This powerful tool allows you to build templates or select from thousands of existing templates, conduct audits and capture your data, analyze your data and send reports. For more information, visit <http://www.safetyculture.com/iauditor> or contact MMIA's risk management specialist Thom Danenhower at 406-495-7025 or [tdanenhower@mmia.net](mailto:tdanenhower@mmia.net)

## Montana LTAP Library

Welcome to the LTAP Lending Library where publications, videos, DVD's, and software may be borrowed for a two-week period. We have a limit of three videotapes or DVD's for a rent-free two-week period. Some publications are free or for a nominal charge upon request.

For information or checkout procedures, please call Genevieve Albert or Michele Beck, LTAP, 1-800-541-6671. If you have computer access, please e-mail us: [mtlap\(at\)montana.edu](mailto:mtlap(at)montana.edu).

We have new lists for the library publications, software, DVD's, and videos at our web site, just click on Resources: <http://ou.montana.edu/ltap/index.html> (Note: Many of our publications are electronically available.)

At this web site, you can also keep track of upcoming workshops, past and present newsletters, and workshop announcements.

## Editorial Contributions Welcome

LTAP welcomes contributions to *LTAP MATTERS*. Those wishing to submit relevant material to be published in the next newsletter can submit their ideas and articles to: Michele Beck, Local Technical Assistance Program, PO Box 173910, Bozeman, MT 59717-3910 (800) 541-6671 or (406) 994-6100 Fax: (406) 994-5333 email: [mbeck\(at\)montana.edu](mailto:mbeck(at)montana.edu) *LTAP MATTERS* is published quarterly. Funding for this program is provided by the Federal Highway Administration, Montana Department of Transportation, Montana State University, and a portion of Montana's gas tax revenues. This newsletter is designed to keep you informed about new publications, techniques, and new training opportunities for you and your community.

- Present and past issues are available at <http://ou.montana.edu/ltap/newsletter/index.html> or by calling 1-800-541-6671.
- Please contact LTAP if you are in need of a printed copy. This newsletter is now electronically disbursed to over 350 agencies and available on our website.
- LTAP attempts to provide accommodations for any known disability that may interfere with a person participating in any service, program or activity. Alternative accessible formats of this document will be provided upon request.
- Please send us any comments or concerns you may have regarding this newsletter with your name and address in order that we may respond in a timely manner.

## Parting Shot . . .

*This is a special Parting Shot... honoring Ed Hillman, Park County Road Supervisor, who recently passed away January 2017. We would like to share who he was along with his dedication to his road crew by making sure they received their MT LTAP Roads Scholar awards.*

Ed was the oldest of nine children born in Livingston, Montana, January 24, 1939. He moved around with his family and lived in Oregon, Yampa, Colorado, and Clyde Park. He attended primary school in Livingston, and was fond of saying, "I laugh and joke but I don't play games and I quit school because they had recess."

He met Donna Lee Bevin, the love of his life and they married October 23, 1958. They bought their first home on the windy Five Acre Tracts where they raised three children. In 1977 they built a home in the Shields Valley.

As a young man Ed drove a logging truck for his dad, worked at Les' Standard Station, Livingston Laundry, Park Lumber and Downer Lumber Company, as well as driving truck and delivering pop for the Pepsi Cola Company. He learned the construction business while working for Archie Mann.



*Ed Hillman  
Park County  
Road Supervisor*

In the early 1970's Ed bought a well drilling rig and became a very successful business man. Eventually he sold his drilling business and went to work for Touch America laying fiber optic cable.

Ed enjoyed the outdoors his entire life. He looked forward to hunting camp every year. Not for the hunting so much as the time with his family in their canvas wall tent. He had a passion for motorcycle riding; in the mountains, down the road, or sitting on the handlebars riding it backwards. A favorite pastime was riding his Razor with Donna at his side and their dogs in his lap. There was a special spot in his heart for Lake Powell and Moab, Utah. He spent plenty of time with his family playing in the water and soaking up the sun on the houseboat. He loved seeing the desert in bloom. The two cruises he and his family took to Alaska, were highlights in his life.

In his early 60's he went to work for Park County as the Road Department Supervisor where he enjoyed good comradery with his crew. Ed made sure his crew worked toward attaining their Roads Scholar awards by keeping in contact with the LTAP Office and monitoring class attendance.