

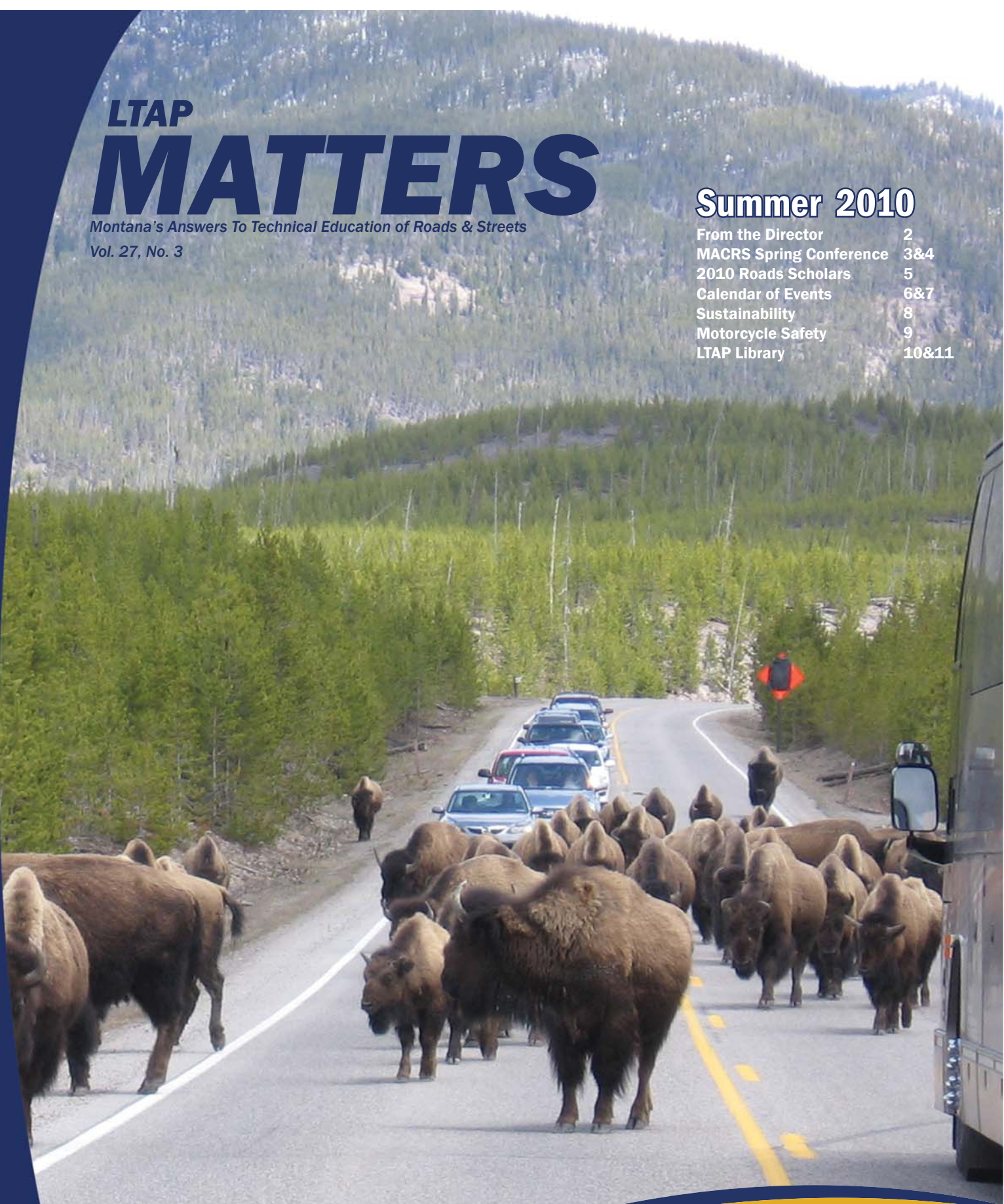
LTAP **MATTERS**

Montana's Answers To Technical Education of Roads & Streets

Vol. 27, No. 3

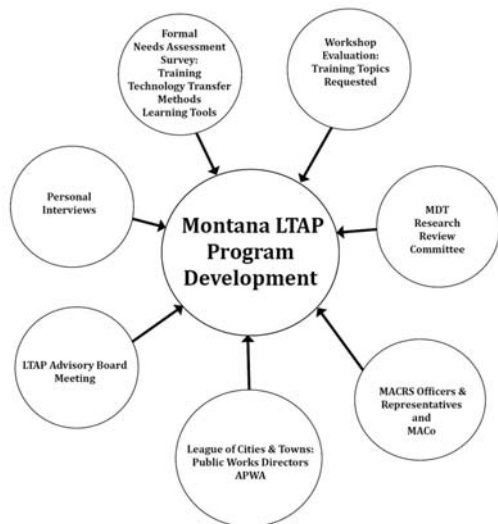
Summer 2010

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From the Director

While constructing our 2010-2011 Work Plan this spring, we designed the following graphic to visualize who we receive information from and how input is collected :



We used the culminated information from our 2009-2010 Needs Assessment Survey and other needs assessment formats to provide direction for our training program for the coming year.

Over one-fourth of my working month involves technical assists to local governments listed on the graphic above. For example, I recently received a phone call from a county road supervisor requesting information about using clay soils as foundation materials for a building his county commissioners were planning to construct. The supervisor remembered from a gravel roads course I taught that a certain amount of clay materials help compact a gravel road to where it is similar to the hardness of an asphalt road, but in this situation there were other factors to consider.

I advised not to use clay materials because they draw moisture. The major problem would occur during spring thaw when frost heaves develop. The expansion and contraction of the clay base thawing and freezing could and possibly would crack the building foundation.

My recommendation was to use a free-draining gravel base. By having a good gravel base, there would be sufficient drainage to keep moisture from collecting underneath the building and thereby possibly preventing any cracking in the foundation. Consideration also needed to be made for weight of the building and bearing capacity of the foundation.

Another important mile stone this spring was updating our *Flagger's Handbook* and *Guidelines for Temporary Traffic Control* to the new 2009 MUTCD. Thanks to the Work Zone Safety Oversight Committee for reviewing these two manuals. Lynn Miller, MDT Training and Development Specialist who serves on the WZSO Committee, provided important changes to these manuals. At her request, I had the opportunity this spring to present my Summer Survival module at the MDT Maintenance Academy to 49 attendees. Partnerships are vital for sharing resources.



Thanks to all who submitted information for our needs assessments. We have revised the survey for 2010-2011 and look forward to everyone's comments and suggestions on the new survey to continue creating a powerful program to meet your training requests.

As indicated on the front cover, Montana has different kinds of traffic congestion to contend with, allowing LTAP to fit the training requested by our constituents, rather than a "one-size-fits-all" training program.

Have a safe and fun summer, Steve Jenkins, Director

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

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On our website, we list upcoming training courses, registration forms, library information, our contact information, newsletters, various links, and MACRS information. Please go to: www.coe.montana.edu/ltap

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

The LTAP/TTAP 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.



MACRS Spring Conference March 2010

For those who arrived early in Great Falls for the MACRS 30th Annual Conference, Russ Huotari, Richland County Public Works Director, provided the morning session for the pre-conference regarding roadway construction and making choices of when to repair, when to rebuild, and when to replace a road. In the afternoon, D.J. Vanas presented for the pre-conference on *Tip of the Spear: Leading Your People to Victory* providing a leadership course for the Montana LTAP Roads Scholar program.



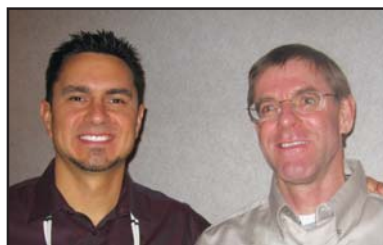
Lunch at the Conference



Keith Brendt, North Central Regional Vice-President, NACE

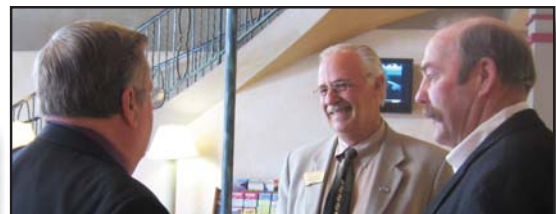
MACRS President Shawn Norick opened up the first session on Tuesday morning by welcoming everyone followed by greetings from Joe Briggs, Cascade County Commissioner; Larry Hendrickson, Liberty County Commissioner; and Mike Winters, Great Falls Mayor. Norick also welcomed Keith Brendt, North Central Regional Vice-President from NACE who offered some hands-on information about flood control. Brendt, from Fargo, North Dakota, tried to make last year's MACRS but was literally in an emergency situation with flooding at Fargo.

MACRS and LTAP scheduled D. J. Vanas as the keynote speaker, also. *Keeping the Fires Lit* was Vanas' keynote address to the general assembly. Comments from participants were very positive about D. J. being able to relate to his audience and the importance of what it means to be a leader. D. J. noted that during these stressful economic times it is important to focus on cooperation among the entire workforce and setting an example for others.



L to R: D. J. Vanas and Steve Jenkins

Steve Jenkins, Montana LTAP Director, followed with a skit involving Pondera County including Cynthia Johnson, County Commissioner; John Stokes, Road Administrator; and Frosty DeBoo, Operator. The focus of the skit was on how road standards and road specifications are filtered down through the ranks. Jenkins covered the importance of establishing standards to build and maintain gravel roads for safety reasons and establishing a Montana Road Standard.



L to R: Fred Hansen, MACo; Harold Blattie, MACo, & John Ostlund, Yellowstone County Commissioner

The afternoon sessions included Michele Puiggari, Missoula attorney, covering human relation issues. A panel discussion followed consisting of Harold Blattie, MACo; County Commissioner John Ostlund, Yellowstone County; and Lisa Axline, Helena DNRC office. They offered examples of working with DNRC and State lands.

Continued on Page 4 . . .

ADVISORY COMMITTEE MEMBERS

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

Debbie Arkell
City of Bozeman

Bob Seliskar
Federal Highway
Administration

Kelly Elser
Town of Ennis

Fred Hansen
MACo

Jim Rearden
City of Great Falls

Russ Albers
Chouteau County

Thomas Danenhower
MMIA

Eric Griffin
Lewis and Clark County

Russ Huotari
Richland County

Kris Christensen
Montana Dept of
Transportation

Alec Hansen
Montana League of
Cities & Towns

Lynn Miller
Montana Dept of
Transportation

30th Annual MACRS Spring Conference (Cont'd from Page 3)

On Wednesday morning, D. James McCubbin, Missoula Deputy County Attorney, and Paul Stahl, Lewis and Clark County Chief Deputy Attorney, addressed road law and offered information on right of way issues and various case studies pertaining to county roads.

During her session, Charity Watt Levis, Montana Department of Transportation Public Information Officer, provided insight on how to address television and newspaper reporters. She offered examples of what to say and what not to say and how to handle difficult situations such as vehicle accidents.

The afternoon included two different panels consisting of county road department supervisors and MACRS Representatives -- one discussing roadway management and the other addressing county gravel road stabilization projects.

MACRS President Norick urged all participants to visit the fifty vendors in attendance. Norick commented, "It definitely is a win-win situation. The vendors don't have to drive all over the state to talk with



Outgoing MACRS President Shawn Norick with awarded MACRS President's Buckle

county road departments and county road supervisors and commissioners have the ability to converse with vendors throughout the conference, allowing enough time to get questions answered." Norick thanked these following vendors for their additional support through sponsorship of events:

- Great West Engineering:** Guest Program and lanyards & bags.
- Joint Powers Trust:** MACRS Tuesday Evening Social and MACRS binders
- RDO Equipment:** MACRS Wednesday Night Banquet Social
- LyCox Enterprises, Inc.:** MACRS Wednesday Morning Break
- Schulte Industries, Tilleman Motors, and Capital I Industries:** MACRS Tuesday Morning Break

Norick also said a special thanks goes out to Tom Gossack, **Tractor and Equipment Company**, for his continuous work and support of MACRS. The evening concluded with the banquet and forty-five Roads Scholar awards. The MACRS Thursday morning business meeting covered important topics and nomination of upcoming MACRS Representatives and Officers. Go to <http://www.coe.montana.edu/ltap/pages/macrs.htm> to view contact information for 2010-2011 MACRS Officers or call Montana LTAP at 1-800-541-6671.

Norick passed the gavel to Wayne Buck, Rosebud County Foreman, now acting MACRS President for 2010-2011. Buck commented that he looks forward to another great year for MACRS and appreciates all the hard work everyone does to make this a viable organization for all county road employees.



Vendors at MACRS Spring Conference



Vic Miller, Blaine County Commissioner, wins cool shades at MACRS Luncheon Prize Drawing



Class of 2010 Roads Scholars



Twenty-eight of the forty-five Roads Scholars for 2010

“It was a very successful year for the LTAP Roads Scholar program,” commented Steve Jenkins, Montana LTAP Director. “There were forty-five Level One Roads Scholars awarded certificates and jackets at the 30th Annual MACRS Conference. The Roads Scholar program was started in 2001 and there is now a total of 131 Level One Roads Scholars. There are several Roads Scholar I participants that will be awarded Level Two within the next several years. The importance of training continues to be recognized as a vital part of retention of employees. This training also equates in making the roadway safer and developing a safer workplace.

Roads Scholar	County	Roads Scholar	County	Roads Scholar	County
Troy Amunrud	<i>Park</i>	Dave Fowler	<i>Gallatin</i>	Rory Nelson	<i>Fergus</i>
Forest Armstrong	<i>Madison</i>	Guy Foy	<i>Flathead</i>	Gene Olson	<i>Jefferson</i>
Tim Barthel	<i>Wibaux</i>	Jeff Friesz	<i>Sanders</i>	Archie Petersen	<i>Sheridan</i>
Colby Baumgarn	<i>Chouteau</i>	TJ Graveley	<i>Broadwater</i>	Pete Petersen	<i>Golden Valley</i>
Roger Bloesser	<i>Richland</i>	Eric Griffin	<i>Lewis & Clark</i>	Dana Rauser	<i>Broadwater</i>
Doug Bruha	<i>Fallon</i>	Dave Hall	<i>Fallon</i>	Matt Redden	<i>Big Horn</i>
Calvin Clark	<i>Stillwater</i>	Todd Henry	<i>Prairie</i>	Roger Riley	<i>Judith Basin</i>
Richard Damm	<i>Richland</i>	Ed Hillman	<i>Park</i>	Ray Rowberry	<i>Madison</i>
Terry Damm	<i>Richland</i>	Dan Horacek	<i>Fergus</i>	Joe Sharbono	<i>Dawson</i>
Frosty DeBoo	<i>Pondera</i>	Patrick Kountz	<i>Jefferson</i>	Fred Smith	<i>Lewis & Clark</i>
Ty DeVries	<i>Pondera</i>	Tom Loggins	<i>Butte-Silver Bow</i>	Jim Watts	<i>Sanders</i>
Joe Donnelly	<i>Custer</i>	Ronald Manderfeld	<i>Musselshell</i>	Ward Weisedel	<i>Custer</i>
David Egan	<i>Pondera</i>	Robin Miland	<i>Missoula</i>	Will Wertz	<i>Broadwater</i>
Bob Ferris	<i>Beaverhead</i>	Grant Miller	<i>Rosebud</i>	Brad Wilson	<i>Park</i>
Scott Fletcher	<i>Park</i>	Terry Mithcell	<i>Dawson</i>	Mark Zipperian	<i>Broadwater</i>

Calendar of Events • July 2010 - December 2010

July 2010

S	M	T	W	Th	F	S
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4	5	6	7	8	9	10
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5: 4th of July Holiday (Offices Closed)
 11-13: National Summit for Rural Traffic Safety Culture, WTI & AAA;
 Go to <http://www.RuralTSCSummit.org>
 12 - 15: National LTAP Conference: Oklahoma City, OK (LTAP)
 Also on: 12 - 15: 2010 Petersen Asphalt Research Conference &
 Pavement Performance Prediction Symposium Laramie, WY
 Go to www.petersenasphaltconference.org

August 2010

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15 -18: APWA Show - www.apwa.net; Boston, MA
 31 - Sept 3:2010 Nat'l Hydraulic Engineering conference, Park City, UT
www.udot.utah.gov/nhec

Training on Request:
 Forklift
 Sign Safety
 Road Audits

September 2010

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1 & 2: Snow Rodeo - Metra Park, Billings, MT (MT LTAP)
 6: Labor Day Holiday - Offices Closed
 15-17: Governor's Workers' Compensation and Occupational Safety &
 Health Program; Big Sky Resort, Big Sky, MT <http://erd.dli.mt.gov/up-events/govconf.asp>
 26-30: MACo's 100th Annual Conference, Billings, MT
 26-30: I.M.S.A. 2010 NW Section Conference, Great Falls, MT - Contact: Ray
 Krenick at 406-771-1401 Ext. 108 or rkrenick@greatfallsmt.net
 31 - Sept 3:2010 Nat'l Hydraulic Engineering conference, Park City, UT
www.udot.utah.gov/nhec

October 2010

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MACRS Fall District Meetings: (MT LTAP) Roadway Prism - CBR -
 Gravel Road Design Standards - Rural Safety Review
 4: Bozeman 5: Kalispell
 12: Big Timber 13: Great Falls 14: Miles City
 6,7,8: 79th League of Cities & Towns, Heritage Inn, Great Falls, MT
 6: Public Works Directors - (MT LTAP)
 7: MT LTAP Presentation of City Roads Scholar Awards
 20-21: Region 7 Local Roads Conference, Rapid City, SD

November 2010

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2: Election Day: Offices Closed
 3 & 4: MACRS Planning Meeting, Heritage Inn, Great Falls, MT
 11: Veterans' Day - Offices Closed
 25-26: Thansgiving Holiday - Offices Closed

December 2010

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7: Winter Maintenance & Winter Survival, Helena, MT - MT LTAP
 8: Winter Maintenance & Winter Survival, Great Falls, MT - MT LTAP
 24: Christmas Holiday - Offices Closed

*Some dates and locations are subject to change.
 Call Genevieve Albert, LTAP, 1-800-541-6671 to confirm.*

Calendar of Events • January 2011 - June 2011

January 2011

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- 4, 5, 6: Signing Basics & 2009 MUTCD (MT LTAP):
 4: Bozeman 5: Lewistown 6: Billings
 9-13: Transportation Research Board, Washington, DC
 11-13: Loss Control Conference (LTAP Safety Congress) MACo;
 12: MT LTAP Steve Jenkins
 17: Martin Luther King Day - Offices Closed

MACo Loss Control Conference:

January 11-13 - Red Lion Colonel Inn, Helena, MT
 January 12, Wednesday - Steve Jenkins Presents
 Preregistration Required - www.maco.cog.mt.us

February 2011

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- 1: Asphalt Institute, Helena (MT LTAP)
 7: Work Zone Tech, Helena, MT (MT LTAP)
 8&9: Traffic Control Supervisor Two-Day Course, Helena (MT LTAP)
 21: President's Day - Offices Closed
 22: Flagging Certification Course - Bozeman (MT LTAP)
 23: Flagging Certification Course - Lewistown (MT LTAP)
 24: Flagging Certification Course - Billings (MT LTAP)

Traffic Control Supervisor Two-Day Course

February 8 & 9 - Tuesday & Wednesday - Helena - Wingate
 Pre-registration Required - Montana LTAP - 1-800-541-6671
<http://www.coe.montana.edu/ltap/pages/training.htm>

March 2011

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- 8: Flagging Certification Course - Helena (MT LTAP)
 9: Flagging Certification Course - Missoula (MT LTAP)
 10: Flagging Certification Course - Kalispell (MT LTAP)
 14: Flagging Certification Course - Miles City (MT LTAP)
 15: Flagging Certification Course - Glendive (MT LTAP)
 16: Flagging Certification Course - Wolf Point (MT LTAP)
 17: Flagging Certification Course - Plentywood (MT LTAP)
 14-18: MSU Spring Break
 28-31: MACRS 31st Annual Conference
 Heritage Inn, Great Falls, MT (MT LTAP)

April 2011

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- 11&12: Gravel Roads - Helena (MT LTAP)
 13 & 14: Gravel Roads - Lewistown (MT LTAP)
 17-21: NACE 2011, Hilton Minneapolis, MN, www.naco.org
 27 & 28: Gravel Roads - Miles City (MT LTAP)

Training Opportunities at Montana LTAP Website:
www.coe.montana.edu/ltap

May 2011

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- 17: Flagging Certification Course - Great Falls (MT LTAP)
 18: Flagging Certification Course - Lewistown (MT LTAP)
 19: Flagging Certification Course - Billings (MT LTAP)
 24: Flagging Certification Course - Bozeman (MT LTAP)
 25: MACRS Executive Meeting - Bozeman
 26: Montana LTAP Annual Advisory Board Meeting - Bozeman
 30: Memorial Day - Offices Closed

June 2011

S	M	T	W	Th	F	S
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26	27	28	29	30		

- 1&2: LTAP Region 7 Meeting - Nebraska

Newsletter Costs Have Gone Up!

This newsletter costs about \$2.20 each to print and mail. If you prefer to receive this newsletter electronically, please call Montana LTAP at 1-800-541-6674 or e-mail Michele Beck: mbeck@coe.montana.edu with your e-mail address. OR if this newsletter is going to an incorrect address, please let us know so we can correct our mailing addresses. Thanks for your help.

Some dates and locations are subject to change.
 Call Genevieve Albert, LTAP, 1-800-541-6671 to confirm.

Starting from scratch: how to build sustainability into your programs from the ground up

By Keith Reester, Director of Public Works, City of Loveland, Colorado; Member, APWA Center for Sustainability
Reprinted with permission from APWA Reporter, May 2010

The challenge of “greening” public works operations can seem daunting; there is so much information, discussion, viewpoints and opinions on what makes an operation sustainable. In reality, public works has long been an industry of sustainability; we actually look at lifecycle costing, environmental impacts and community interaction when we build projects. The challenge facing us is how do we make sustainable practices a core value in our public works decision-making each day?

In a recent poll of APWA members over 72% indicated making moves to support sustainability through resource or personnel dedication. And during a recent APWA webinar on carbon footprint analysis over 85% of the participants indicated that a drive to be more sustainable was driven from an internal public works lead effort, not top-down or community-driven change. This highlights our industry commitment to this very real issue.

So you are facing starting some kind of sustainability program but you have no money, no expertise in-house, and no commitment from “above” to change what you are doing. Just like any other project that is bound with constraints, start with a few key steps, building momentum to success. In public works, we are very good at identifying the outcomes, the process to get there, and the strengths and weaknesses of every approach—take these same tactics on sustainability.

First, identify your vision by asking a few basic questions:

1. Are we targeting only public works operations?
2. Do we have organizational support for moving forward? Can we sell it upward?
3. How does this fit into the community vision for government?
4. Can we define where we want to go?
5. What obstacles exist to changing what we do?
6. Should this be a core value of our organization?

Second, seek to establish what resources exist. Explore the regional and national communities in the public works and government industries to find those who are already moving in the sustainable direction and build a partnership. Without question there are people ahead of you

on this topic and that is good; use that to your advantage and do not reinvent the wheel. The organizations that are further along the path than you can offer tools, ideas, support and information on what not to do; take this information and run with it. There are also people in your organization that are already engaged in this topic; take advantage of that enthusiasm and engage them as leaders in guiding your future.

Building a baseline is a next key step, and this is a place to utilize those energized folks on your team. Taking stock of what you do today is a critical place to start; it gives a basis for planning, resource management, and a good “vibe” to get things going. Start by taking an inventory of what you do right now in your public works and city team; begin by capturing some basic information:

1. Department
2. Division
3. Activity
4. Classification (waste reduction, use efficiencies, recycling, policies reducing impacts)
5. Measurable impacts (if possible)
6. Transferability (is this something we can transfer across the entire organization?)

You will find a surprising amount of effort already being committed to sustainability today; this lays a great foundation and proves that you are already engaged in sustainable thinking.

The next steps revolve around the things we already do for every project and program: analyze, plan, engage and measure. Strategically develop a plan forward for sustainability in your operations; identify short-, medium- and long-term goals. In the near term develop action plans for moving ahead with easy, low-hanging fruit changes; develop a system for measuring impacts such as carbon footprint analysis or trees saved or miles not driven. The task of measurement is quite daunting, but there are many existing tools to assist in

this process—this is the spot where the partnership will help you dramatically.

In the mid and long term, develop plans for engaging organizational and community resources, build business and community partnerships that support your efforts, and take key steps to make sustainability a core value for everyone on your team. A great example of this change in thinking is in the APWA Sustainability Framework; as public works professionals we are very good at asking the technical and impact questions, but we need to move to a stage where we always also ask the sustainability questions.

Let’s be honest—no matter what you do there will be naysayers, folks that say sustainability is a bunch of bunk. If as public works leaders we are facing the question of constructing a building and we are arguing for an extra three percent for LEED certification, we need to focus on the direct impacts, not the world-changing philosophies. Share key elements like the changes will reduce utility costs over the 40-year life of the building, will more fully manage stormwater runoff from the site, will create a more engaging user environment and, by the way, happen to be LEED certified. The discussions we need to engage and lead are about building projects and programs that show the full lifecycle impacts and how we can build better by being better at upfront decision-making.

The travel and television writer Anthony Bourdain said, “Aspire, but go gently.” This philosophy, like all that we do, shows our commitment to success but also our knowledge of context and the challenges of leading public works in the 2K10 era.

Keith Reester can be reached at (970) 962-2520 or reestk@ci.loveland.co.us.

“...start with a few key steps, building momentum to success. . . . identify your vision . . . seek to establish what resources exist . . . utilize those energized folks on your team.”

Motorcyclist Fatalities Are Increasing Dramatically

The number and rate of motorcyclist deaths on U.S. roads are rising dramatically. Motorcycle rider fatalities rose 115 percent between 1997 and 2005. During the same time, fatality numbers and rates for passenger car crashes dropped (Figure 1).

In just one year—2005—motorcycle crash-related fatalities increased by 13 percent (to 4,553), making motorcycle rider fatalities a leading contributor, along with pedestrian fatalities, to the slight overall increase that year in the national highway fatality rate.

Trends accompanying the rising motorcyclist death toll include a dramatic increase in motorcycle ownership, particularly by riders over 40, along with changes in other factors such as motorcycle size and rider experience. The rate of increase in fatalities has outpaced the rate of increase in motorcycle registrations, and the death and injury rates among middle-aged motorcyclist riders have increased most rapidly.

Roadway Factors for Safer Riding

Road design and maintenance factors can, and do, affect motorcycle crashes, injuries and fatalities. Design, construction, maintenance, and roadway practitioners can reduce hazards to motorcyclists and other road users by considering motorcyclist safety.

Pavement Surface

- Patch potholes promptly. Potholes pose a greater hazard to the operation of motorcycles than to larger vehicles.
- Specify pavement surfaces with adequate pavement friction. Examine the friction characteristics of asphalt sealants and of intersection markings. The use of thermoplastics, particularly for broad, horizontal intersection lines, can create slippery surfaces for motorcycles that stop at the intersections. Metal road surface components — either temporary or permanent— offer limited traction in many cases, and, when wet, are difficult to see.
- Reduce uneven road surfaces. Milled surfaces, parallel paving lane joints, parallel grids on bridges, steel plates, and other uneven roadway surfaces can be especially hazardous for motorcycles.
- Require tidy crack repairs. A motorcycle's traction can be seriously compromised by "tar snakes"— excess asphalt or other sealants used for crack repair.
- Remove debris and fluid spills quickly and thoroughly. Roadway debris and fluid spills pose greater hazards to the operation of motorcycles than to larger vehicles. Debris can deflect a motorcycle's wheel or hit the motorcyclist. Fluid spills can easily cause loss of traction.

Roadside Safety

- Install safety edges. Untapered vertical shoulder drop-offs are even more dangerous for motorcycles than for other vehicles. Adopting a standard contract specification requiring a 30-35° angle asphalt wedge along each side of the roadway

in all construction and resurfacing projects is a simple and cost effective way to assure pavement edge safety.

- Consider motorcyclist safety when designing roadsides. The potential impact on motorcycle riders should be considered in design and placement of roadside safety hardware, clear zones and side slopes, and other roadside safety strategies.

Visibility and Warning

- Consider motorcyclist hazard warning signs. Signage targeted toward motorcyclists can warn of conditions that are especially hazardous for them. These might include uneven pavement surfaces, rumblestrips or crosswinds.
- Ensure visibility of signs and roadway markings. Keep in mind that many motorcycles have only a single headlamp for illumination.

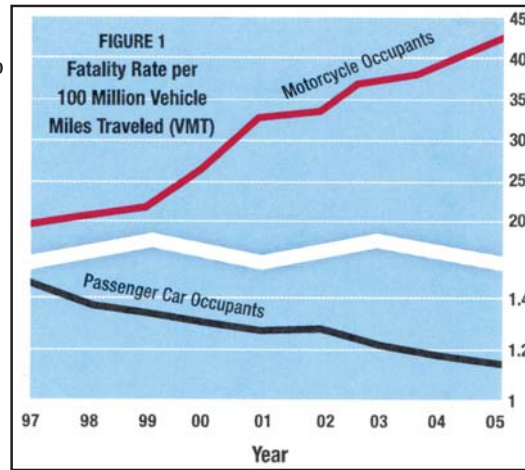


Figure 1 shows fatality rate trends for motorcycle occupants versus passenger car occupants. Between 1997 and 2005, fatality rates for motorcycle occupants rose 115 percent, to 42 fatalities per 100 million motorcycle VMT. During the same period, fatality rates for car occupants dropped steadily, to less than 1.2 fatalities per 100 million passenger car VMT.

The Integrated Safety Solution—

Safe Drivers, Safe Vehicles, Safe Roads

Safer roadways are just a small part of the solution to reducing the alarming trend toward increased motorcyclist injuries and fatalities. Motorcyclists should equip themselves with helmets and other protective clothing and equipment, get professional training, maximize their conspicuity through lighting and apparel, obtain the proper motorcycle license, and **absolutely never drink and ride**. Motorcycles should be properly maintained and operated. All road users, including drivers, motorcycle riders, and pedestrians need to obey the rules of the road and respect the rights of all. Only by addressing the problem from all angles can we achieve the desired result of safer roadways for all users.

Information from FHWA Brochure "Motorcyclist Fatalities Are Increasing Dramatically"

For More Information:

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For Montana Motorcycle Supplement 2010-2011: <http://www.doj.mt.gov/driving/forms/25-1300.pdf>

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 the 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: mtltap@coe.montana.edu.

We have new lists for the library publications, software, DVD's, and videos at our web site: www.coe.montana.edu/ltap.

At this web site, you can also keep track of upcoming workshops, past and present newsletters, and "What's New" items that change periodically. Our 2010-2011 Needs Assessment Survey will be available at this web site soon. Thank you in advance for taking time to complete it.

New Publications

p-34 Drilled Shaft Axial Capacities Effects Due to Anomalies (*FHWA September 2008*) Drilled shafts are increasingly being used in supporting critical structures, mainly because of their high-load supporting capacities, relatively low construction noise, and technological advancement in detecting drilled shaft anomalies created during construction. The critical importance of drilled shafts as foundations makes it mandatory to detect the size and location of anomalies and assess their potential effect on drilled shaft capacity. (132 pages)

p-74 Integrity of Infrastructure Materials and Structures (*FHWA October 2009*) This investigation was initiated for two purposes: (1) to evaluate stainless steel (SS) type 2304 (UNS S322304) as a corrosion-resistant reinforcement in concrete and (2) to develop sensor technology for characterizing corrosion rate on existing steel bridges in situ. (85 pages)

p-203 Simplified User's Guide to Time-Domain-Reflectometry Monitoring of Slope Stability (*USFS Sept 2009*) This is a simplified guide for the implementation and use of a TDR cable system for monitoring the movement of known and potential landslides. Slope movement can be monitored by a number of methods and pieces of advanced equipment. However, using time domain Reflectometry (TDR) is one of the least expensive methods. (25 pages)

p-289 InSAR Deformation Monitoring: General's Highway, Sequoia Nat'l Park (*FHWA July 2009*) Ground movement was monitored using Interferometric Synthetic Aperture Radar (InSAR) coupled with on-site corner reflector technology for an area where the General's Highway in the Sequoia National park, California crossed over an unstable slope. (36 pages)

p-343 Portable Seismic Property Analyzer: Identification of Asphalt Pavement Layers (*FHWA July 2009*) This study was to evaluate the effectiveness of the Portable Seismic Property Analyzer (PSPA) to rapidly and nondestructively measure thickness and in situ moduli of asphalt pavement layers. Based on the results, the PSPA is proposed as a viable tool for immediate implementation by the Federal Highway Administration, Federal Lands Highway. (96 pages)

p-410 Development of a Multiaxial Viscoelastoplastic Continuum Damage Model for Asphalt Mixtures (*FHWA Sept 2009*) This report highlights findings from the FHWA DTFH61-05-H00019 project, which focused on the development of the multiaxial viscoelastoplastic continuum damage model for asphalt concrete in both compression and tension. The performance of this structure is closely related to the performance of asphalt concrete. (264 pages)

p-469 Soil and Water Road-Condition Index - Field Guide (*USFS December 2008*) The soil and water road-condition index (SWRCI) was developed to provide a road-condition assessment tool for watershed and project-scale analysis. SWRCI is intended to be a rapid-assessment toll for soil scientists and hydrologists to identify effects of roads on soil quality ad function, as well as impacts to water quality and downstream values. (93 pages)

p-469A Soil and Water Road-Condition Index - Desk Reference (*USFS Dec 2008*) The SWRCI desk reference is a companion document to the SWRCI field guide and rating form. The desk reference - provides a description of each road attribute; identifies the questions the attribute addresses for a project- or watershed-scale road analysis; and identifies related indicators and the usefulness of the attribute in identifying road impacts to soil and water resources with referenced research findings. (25 pages)

p-782 Mini-Roundabouts (*FHWA 2010*) This technical summary focuses on single-lane mini-roundabouts that explore the unique characteristics of mini-roundabouts while reinforcing the need to apply the principles-based approach common to all roundabout design. It provides readers with an overview of key considerations for planning, analysis, and design of mini-roundabouts. (14 pages)

p-809 Implementing the High Risk Rural Roads Program (*FHWA March 2010*) This report documents common challenges, noteworthy practices and lessons learned experienced through the implementation of the High Risk Rural Roads Program. States can use these documented practices to launch their HRRRPs, identify next steps for a program already moving forward, or implement noteworthy practices to improve an established program. (52 pages)

Continued on Page 11 . . .

Montana LTAP Library

New Publications (Cont'd from Page 10)

p-867 Field Guide for Accessible Public Rights-of-Way 2009 Edition Revised (*Idaho T2 2009*) This guide is intended for use by department personnel who are trained and skilled in the application of its contents. Contents include sidewalks on public right-of-way, Perpendicular curb ramps, Parallel curb ramps, blended transitions, curb ramp transitions, driveways, pushbutton, protrusions, obstructions, crosswalk, transit facilities. (23 pages)

p-966 Alternate Strategies for Safety Improvement Investments (*Part of NCHRP Project 17-18, Task 19, January 2010*) This report contains some practical and timely information on safety efforts and funding scenarios from nine states. Project 17-18 is intended to fund studies to aid in implementing the AASHTO Strategic Highway Safety Plan. The focus of the safety programs should be on severe crashes, because the factors that contribute to them are different than crashes as a whole. Because local systems account for as much as 90% of total road miles and 60% of fatal crashes, states need new partners in a more comprehensive approach to safety. (40 pages)

New Software

SW845 Comprehensive Intersection Resource Library (Version 3) (*FHWA March 2006*) Resources included in this library represent a broad cross section of publications, educational materials and other media published by the Federal Highway Administration and other transportation safety partners. Beyond the initial section with background Information, the library content is organized into five broad categories, including traditional signalized and unsignalized intersections, roundabouts, highway/rail grade crossings, and nontraditional intersection designs such as single-point intersections. The last section provides links to other transportation safety partner web sites for additional information

SW 856 Local Roads Safety Resource CD (*FHWA January 2010*) This CD contains seven safety topics that provide guidance, tools, and other resources from government agencies and national associations on local roadway safety: Crash Data, Crash Types; FHWA safety programs; General Resources (web, documents, training), Road User Safety, Outreach material, Local Roads Safety Research.

New DVD's

DVD 169 Landscape (Mowers & Weed Trimmers), Tree Trimming Safety, Chainsaw Safety (*Digital-2000 2007*)

This safety DVD has three separate components:

1. Landscape Safety (7 minutes)
2. Tree Trimming Safety (7 minutes)
3. Chainsaw Safety (7 minutes)

Also included are Leader's sheet, Quiz, and Power Point Review, on a CD.

DVD 190 Front End Loader Safety (*Digital-2000 2007*)

Reviews how to operate a front end loader, importance of walkarounds, and basic equipment safety. (15 minutes) Also included are Leader's sheet, Quiz, and Power Point Review, on a CD.



DVD 890 Forest Applications Training (*Tim Ard's Forest Application 2010*) This DVD provides an introduction and 4 Bonus Modules by Tim Ard covering basics of Personal Protective Equipment, tree falling and chainsaw safety.

He also discusses his website for more information on this training series and available tools for purchase. (15 minutes)

- Personal Protective Equipment
- How to Cut a Tree Down Safely
- Bucking and Cutting
- Chain Sharpening



DVD 2210 Supervisor Safety Responsibilities (*Digital-2000 2007*) This DVD covers four important supervisor's responsibilities, including the legal liability of accidents:

1. Importance of a Safety Plan
 2. Importance of Safety Training for employees, especially in specific training area
 3. Importance of Hazards Communication Training
 4. Importance of Safety Rule Enforcement by supervisor.
- Each aspect is detailed how the supervisor sets the standards and why documentation of safety inspections, safety training, safety reporting and safety written counseling is important for everyone. (25 minutes)

Also included are Leader's sheet, Quiz, and Power Point Review, on a CD.



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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:

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This newsletter is designed to keep you informed about new publications, techniques, and new training opportunities that may be helpful to you and your community.

Present and past issues are available at www.coe.montana.edu/ltap or by calling 1-800-541-6671.

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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.