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Local Technical Assistance Program

# From Montana LTAP Director

Whether you deal with paved or unpaved roads, the finished road will only perform as good as the quality of materials that are used to build it. Montana is at a crossroads that will determine the level of service of the roads we have in the future. Montana Association of Counties (MACo) and their Transportation Committee are fighting for local governments on this issue.



Steve Jenkins , MT LTAP Director

Yellowstone County Commissioner, supporting his work to improve access to quality gravel: *"I understand the* 

The following is my letter

sent to John Ostlund,

Transportation Committee will be meeting at MACo on September 25 from 1:00 to 4:30. It is a chance to meet with Mr. Opper of Department of

Environmental Quality (DEQ) and present MACo's proposal for relief for counties as they apply for open pit mining. Despite assurances from DEQ when the current system was activated, the process is now cumbersome and unacceptable for counties who are without resources to respond to demands placed on our transportation system.

Traffic in Eastern Montana has increased exponentially. Counties cannot obtain materials to maintain roads in large part due to restrictions and the time-consuming agonizing process to find needed material. Private companies have jammed the permit process seeking profit and not necessarily public service. I have been bombarded by complaints from road supervisors who are frustrated because the gravel needed is available but not accessible. I know of two specifically who have been forced into early retirement because this problem under the current system has no solution. Other employees are moving to the private sector.

I will try to attend the session if you feel my testimony would be of benefit. Please feel free to use these examples if you are asked to testify. I knew many years ago when I started working with you in the Montana Association of County Road Supervisors (MACRS) that counties have a staunch ally in you. Thank you for your support on many issues, particularly this one. Sincerely, Steve"

Many would assume that because there is an abundance of oil being produced in North Dakota and Montana asphalt would be plentiful and inexpensive. The reverse is actually true. The fracking process of oil wells produces oil that is of the highest quality without residuals of paraffin and asphaltines that make up asphalt. After all the refining, the left over asphalt is simply not there with the oil currently being produced.

Due to all the heavy traffic in those oil producing areas, pavement and gravel cost have more than doubled. Crushed gravel that counties can no longer get permits to use, have risen in cost from \$8.00 a ton to more than \$18.00 a ton to buy from private suppliers.

Hopefully the State of Montana can pull together to solve these problems we all face. Albert Einstein said, "*The current problems we face cannot be solved at the same level of thinking we were at when we created them.*" This suggests we all contributed to the problem and we can now look at things differently and solve them.

> As always, travel safe, Steven V. Jenkins, M.E., P.E.

#### \*

#### Steven Jenkins, P.E. Director stevenj(at)coe.montana.edu

Genevieve Albert Administrative Associate/ Conference Coordinator galbert(at)coe.montana.edu

Michele Beck Graphic Designer/Librarian mbeck(at)coe.montana.edu

Veronica Grosek Student Assistant

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



Local Technical Assistance Program

P& TTAR

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.

Local Technical Assistance Program

We can be reached at the following:

Phone: (800) 541-6671 or (406) 994-6100 FAX: (406) 994-5333

E-Mail: MTLTAP(at)coe.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.coe.montana.edu/ltapv2/index.html

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.





of Transportation

Federal Highway Administration MT LTAP Advisory Committee Members The Advisory Board meets annually to

make recommendations and evaluate the effectiveness of the Montana LTAP program.

Russ Albers Chouteau County

VACANT APWA Rep

Kris Christensen Montana Dept of

Transportation

Thomas Danenhower MMIA

Kelly Elser Town of Ennis

Eric Griffin Lewis and Clark County **Dave Hand** Montana Dept of Transportation

Alec Hansen Montana League of Cities & Towns

**Greg Jackson** MACo

Russ Huotari Richland County

**Jim Rearden** City of Great Falls

**Bob Seliskar** Federal Highway Administration

Front Page Photo: Snow Rodeo - by Steve Jenkins, MT LTAP

# **Equipment Tip Overs - Let's Be Safe!**

The recent Equipment Tip Overs training session at the annual Snow Rodeo Equipment Training event in September was one of the priority requests on MT LTAP's Needs Assessment Survey.

"By providing this particular training, we are hoping to reach those who can apply practical methods for keeping their equipment safe, themselves safe, and the traveling public safe," explained MT LTAP Director Steve Jenkins.

From seventy-four participants at this training session, following were ways they experienced equipment tip overs:

- Driving too fast
- Hitting a stock pile and tipping over
- Motorgrader being hit by an errant vehicle
- Overhead clearance problems (including wires)
- Bridge failure
- ·Soft shoulders giving way and rolling over
- Unstable load
- Loss of traction
- •Winter work problems (visual constraints)
- Unfamiliar with route that is now covered by snow

• Plowing snow and icy shoulder grabbed blade and caused plow to be pulled off shoulder





Here is a list of possible solutions discussed:

- •Keep appropriate speed for situation
- •Focus Keep attention on job at hand (NO CELL PHONES)
- •Focus Be aware of traffic in your area of work
- •Focus Know work area, scout ahead for overhead wires, etc.
- If in doubt of bridge capacity, ASK!
- •Ask others working in same location road shoulder conditions
- •Park on even level surface (material can stick in top of box and even a slight incline can cause tip over)
- •Check Tires and Air Pressure DAILY
- Drive the route before the snow flies to be aware of new obstacles and get familiar with any issues
- Know your vehicle's limitations



## Snow Rodeo 2012

Yellowstone County Road and Bridge Department hosted this year's 23rd Annual Equipment Training and Snow Rodeo at the MetraPark in Billings on September 5 and 6.

"Montana LTAP provides the training for the first day," explained Genevieve Albert, LTAP's Conference Coordinator. "We had 74 participants from county, state, and city road departments."

Tom Jones, Helena crane rigging expert, opened up the first

day with Load Securement and Safety Rigging. His main concern was making sure participants understood their cable strengths and certified labels. He reviewed how to sling a load properly and safety methods to use. Iones was not an advocate of using chains because it is difficult to guarantee their certification strength, which he explained has led to

many serious accidents.



Tom Jones, Helena Crane Rigging Expert

Montana LTAP Director Steve Jenkins followed with trenching and excavation safety outlining the necessity of when to use a trench box if the trench is five feet or more deep. The audience shared their experiences of trench walls caving in, noting how quickly it happened and how difficult it was to get out of the trench even though only their feet were buried. Jenkins explained soil can weigh 100-145 pounds/cubic foot so to pull a worker's buried foot would take 750 pounds of force to remove it. Other safety excavation methods were also discussed.

To further explain soil types, the class went out on location where a trench had been dug. Jenkins demonstrated how to use sieves to determine soil types. To end the morning classroom presentations, Jenkins



covered equipment tip overs and safety prevention. (See Page 3 for full story on tip overs.)



In the afternoon, after a brief GIS/GPS presentation by Jackson Beighle, Electronic Data Solutions, participants

gathered in teams of ten and proceeded to the field work. Nine stations were established and most of the seven teams were able to locate and identify the coordinates.

LEFT: Steve Jenkins

Demonstrates Sieves

BELOW: Jackson Beighle (L) and Steve Jenkins







Also available during the afternoon where several new equipment walk-arounds for the motorgrader and front end loader. Participants were able to "test drive" the equipment after being checked out by the equipment trainer.

## Snow Rodeo (cont'd from Page 4)

Forty-four competitors were ready on Day 2 for the Snow Rodeo competition. In addition to the course work for SnowPlow, Backhoe, Motorgrader, and Front End Loader, all competitors took a safety exam and performed equipment diagnostics.

Mo Henman, Yellowstone County Road and Bridge Department's Assistant Director, appreciated the support from local vendors such as Tractor and Equipment Company, RDO Company, Tri-State Truck & Equipment, Titan Equipment, I-State Truck Center, Normont Equipment Company, Billings **Construction Center and Dust** Busters.



Mo Henman, Yellowstone County

"There are so many to thank who were involved in the Snow Rodeo, including Yellowstone County, Montana Department of Transportation, and City of Billings employees," Henman noted.



L to R: Ronni Tallerico, Yellowstone County & Debbie Kimball, City of Great Falls



Tara Jensen, Yellowstone County



Kim Peterson, Yellowstone County





## Calendar of Events • July 2012 - December 2012

**July 2012** 

July							
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4: Fourth of July Holiday - Offices Closed

30-Aug.2: National LTAP/TTAP Conference, Grapevine, TX

Training on Request: Summer Survival Hand Safety Slips, Trips, & Falls

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July 30-Aug.2: National LTAP/TTAP Conference, Grapevine, TX 16: EDC-Every Day Counts-Exchange Live Webinar 11am - 1pm FHWA/MDT/MTLTAP

26-29: APWA International Public Works Congress & Exposition, Anaheim CA. Go to this link: http://www2.apwa.net/events/

> Training on Request: Forklift Sign Safety Road Audits

#### October 2012

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1: MACRS Fall District Meetings: Materials- Kalispell

3-5: 81st League of Cities & Towns - Hilton Garden Inn, Kalispell, MT 2: Hands-On Equipment Training - City Street Employees

3: Public Works Directors - MT LTAP

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

10: Put On The Brakes Day - 12th Anniversary (go to: www.brakesonfatalities.org) MACRS Fall District Meetings: Materials

9: Great Falls 10: Havre 11: Lewistown 18: Miles City 23: MT LTAP Safety Webinar 7:30am-8:30am 24 & 25: 27th Pariarel Lead Pard Coordinators Conference Parial

24 & 25: 27th Regional Local Road Coordinators Conference, Rapid City, SD

#### December 2012

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**18: MT LTAP Safety Webinar -7:30am-8:30am** 24 & 25: Christmas Holiday - Offices Closed

Safety Meeting Webinars from Montana LTAP

August 12, 2012 - Electrical Safety September 18, 2012 - Gravel Roads/Materials October 23, 2012 - Millings November 20, 2012 - Winter Survival December 18, 2012 - Winter Maintenance Monthly Thirty-Minute Safety Webinars held at 7:30am on Tuesday Mornings Call Montana LTAP at 1-800-541-6671 for more information!

#### September 2012

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<sup>30</sup> 

5&6: 23rd Annual Equipment Safety Training and

Snow Rodeo - Billings, MT (MT LTAP) Brochure available in July 18: MT LTAP Safety Webinar 7:30am-8:30am

 23-27: MACo 103rd Annual Conference, Heritage Inn, Great Falls, MT www.mtcounties.org or MACo's Karen Houston 406-449-4360
18: MT LTAP Safety Webinar 7:30am-8:30am

> Training on Request: Winter Survival Winter Maintenance

Nov	November 2012									
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6: Election Day -Offices Closed

12: Veterans' Day - Offices Closed

14: MACRS Leadership Course - 8am - Noon (Roads Scholar Required) 14 & 15: MACRS Planning Meeting, Heritage Inn, Great Falls, MT

20: MT LTAP Safety Webinar - 7:30am - 8:30am

22 - 23: Thanksgiving Holiday - Offices Closed

27: Winter Maintenance & Winter Survival - Missoula

29: Winter Maintenance & Winter Survival - Billings

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

<sup>3:</sup> Labor Day Holiday - Offices Closed

## Calendar of Events • January 2013 - June 2013

January 2013							
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13-17: Transportation Research Board, Washington, DC

14-17:11th Annual Safety Congress - Great Falls, MT (MT LTAP):

14 am: Work Zone Tech

14 pm & 15: Traffic Control Supervisor

16 am: Signing/Prisms/Clear Zones

- 16 pm: Safety Audits
- 17 am: Sign Retroreflectivity/Driving Behavior
- 17 pm: Worker Safety

22: MT LTAP Safety Webinar - 7:30am-8:00am

21: Martin Luther King Day - Offices Closed

February 2013									
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18: President's Day - Observed (Montana LTAP Offices Open) 19: Asphalt Institute, Helena, MT (MT LTAP)

26: MT LTAP Safety Webinar - 7:30am-8:00am

27 - March 1: SafetyFestMT - Missoula, MT; www.safetyfestmt.com

March 2013									
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31									

1: SafetyFestMT - Missoula, MT www.safetyfestmt.com

5: Work Zone Tech Course - Helena (MT LTAP) 6: Work Zone Tech Course - Missoula (MT LTAP)

7: Work Zone Tech Course - Kalispell (MT LTAP)

10-16: MSU Spring Break

12: Flagging Certification Course - Great Falls (MT LTAP)

13: Flagging Certification Course -Lewistown(MT LTAP)

14: Flagging Certification Course - Billings (MT LTAP)

19: MT LTAP Safety Webinar -7:30am-8:00am

25-28: MACRS 33rd Annual Conference Heritage Inn, Great Falls, MT (MT LTAP)

#### May 2013

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TBA: Rocky Mountain Chapter - APWA - Spring Conference More info: http://rockymountain.apwa.net

9-10: LoTrans Virtual Conference

- 14: Work Zone Flagging Course Miles City (MT LTAP)
- 15: Work Zone Flagging Course Glendive (MT LTAP)
- 16: Work Zone Flagging Course Wolf Point (MT LTAP)
- 21: MT LTAP Safety Webinar 7:30am-8:00am

21: Work Zone Flagging Course - Bozeman (MT LTAP)

22: MACRS Executive Meeting - Bozeman

23: Montana LTAP Annual Advisory Board Meeting - Bozeman

27: Memorial Day - Offices Closed 30 & 31: LTAP Region 7 Meeting - Denver, CO April 2013 Μ Т W Th F S 2 5 1 3 4 6 7 8 9 10 11 12 13 15 16 17 18 19 20 14 21 22 23 24 25 26 27 29 30 28

8-9: Gravel Roads - Glendive (MT LTAP) 10-11: Gravel Roads - Wolf Point(MT LTAP) 15-19: National Work Zone Awareness Week (FHWA) 16: MT LTAP Safety Webinar - 7:30am-8:00am 21-25: NACE 2013, Des Moines, Iowa www.naco.org 22-23: Gravel Roads - Great Falls (MT LTAP)

June 2013							
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30							

18: MT LTAP Safety Webinar - 7:30am-8:00am

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

Training Opportunities at Montana LTAP Website: http://www.coe.montana.edu/ltapv2/training/index.html

20	21	22	23
27	28	29	30

### Snow Rodeo Winners (Cont'd from Page 5)



Andy Dean, Yellowstone County All-Around Snow Rodeo Champion 2012



LtoR: Clint Elkins, Missoula County; Ray Welsh, Stillwater County; Bobby Wise, Yellowstone County; Andy Dean, Yellowstone County; Tyler Hotchkiss, MDT Billings; Mike Longmire, Missoula County; Erik Lee, City of Missoula; Josh Watson, City of Bozeman; Brian Guckeen, City of Great Falls

#### SnowPlow:

1st PlaceMike Longmire, Missoula County2nd PlaceErik Lee, City of Missoula3rd PlaceJosh Watson, City of BozemanFirst-Timer Award: Cole Sheridan, Wheatland County



#### Backhoe:

1st PlaceBrian Guckeen, City of Great Falls2nd PlaceAndy Dean, Yellowstone County3rd PlaceBobby Wise, Yellowstone CountyFirst-Timer Award:Tyler Hotchkiss, Billings MDT



Front End Loader:1st PlaceClint Elkins, Missoula County2nd PlaceAndy Dean, Yellowstone County3rd PlaceMike Longmire, Missoula CountyFirst-Timer Award:Tyler Hotchkiss, Billings MDT



Motorgrader:

1st PlaceRay Welsh, Stillwater County2nd PlaceErik Lee, City of Missoula3rd PlaceTyler Hotchkiss, MDT BillingsFirst-Timer Award:Tyler Hotchkiss, Billings MDT



### **PTH Crusher Demo at Lewis & Clark County**



Lewis & Clark County's Public Works Director Eric Griffin and Tractor & Equipment Company's Tom Gossack held their second annual PTH demonstration this time at the Nilan

Eric Griffin, Lewis & Clark County demo Public Works Director time at

Reservoir just west of Augusta, Montana, mid-July.

"We had a great turn out again," Eric Griffin commented. "The PTH Crusher, pulled by the CAT Challenger MT654C, provided our county the availability to crush the rock directly after ripping the road with our motor grader in order to bring the rocks to the surface. We watered, bladed and shaped, and then compacted the road to provide a safe traveling surface."







Tom Gossack, Tractor & Equipment Company

### **Dust Is A Four-Letter Word**

#### Steve Jenkins, Montana LTAP Director

Dust is more than a dirty word – it's expensive, and potentially unsafe and unhealthy. Airborne dust is one of the greatest contributors to bumpy, raveled gravel roads, as well as potential health problems related to inhaling dust.

The Dust Bowl of the 1930's is a well known example of how airborne dust of epic proportions can be caused by human activity and dry weather. In more recent years, improved agricultural techniques and more paved rural roads have decreased the typical amount of airborne dust in many areas. But, in the Bakkan Oil Fields, the hundreds of trucks per day that travel on the roads have produced colossal maintenance challenges for those who manage the road systems. When dust flies off the road, the support around the larger rocks is lost. Those larger rocks are pulverized into smaller, fine particles by heavy traffic and become more dust. Pot holes and washboards result, as well as the road surface can actually become lower. Motor graders can smooth out the road surface, but without a plan to keep the fines on the road, a vicious cycle of dust and rock leaving the road surface is inevitable. Lack of visibility from plumes of dust kicked up by thousands of tires can be hazardous not only to other trucks, but to local citizens. And, despite the best efforts of all involved, breathing the small particles can be unhealthful.

Continued on Page 11....

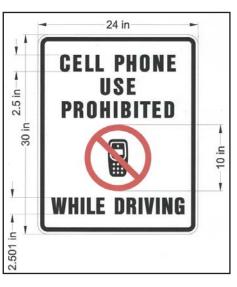
# **Cell Phone Symbols on Traffic Signs**

Marcee Allen, FHWA-Montana Division, Safety Traffic Design Engineer

A number of local Montana agencies have recently passed ordinances banning the use of hand-held cell phones within their city limits. FHWA applauds these proactive countermeasures taken against distracted driving in an effort to improve safety on your roads and highways.

As you may know, the U.S. Department of Transportation is leading the effort to stop texting and cell phone use behind the wheel. Since 2009, two national distracted driving summits have been held, texting and cell phone use has been banned for commercial drivers, states have been encouraged to adopt tough laws, and several campaigns to raise public awareness about the issue have been launched. To learn more about distracted driving go to www.distraction.gov.

I feel this is an appropriate time to reiterate to all of you that the Manual on Uniform Traffic Control Devices (MUTCD) governs the use of traffic control devices installed on any street. highway, bikeway, or private road open to public travel. When developing street signs to relay the specific regulation to the traveling public keep in mind that to date, a symbol for cell phones



has not been developed or adopted for use in the MUTCD. At this time the only appropriate way to display the regulation is with a word legend in accordance with Sec. 2A.06.12.

# GHSA and NHTSA Crash Criteria Guidelines for States (NACE News July 2012)

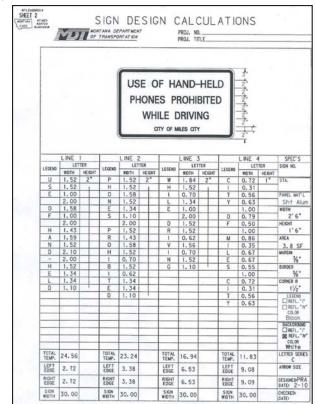
Capturing good data at crash scenes helps states hone their safety programs to reduce crashes, serious injuries and fatalities. Now states have a new and improved tool to do just that.

GHSA and NHTSA have announced the release of a revised voluntary Model Minimum Uniform Crash Criteria (MMUCC) Guideline, which includes broader distracted driving definitions so law enforcement can more accurately pinpoint which distractions lead to crashes.

Under the new surface transportation bill, MAP-21, states can use federal funding to make improvements in their crash and other related data systems and to comply with the new MMUCC Guideline. http://www.ghsa.org/html/media/pressreleases/2012/20120702\_mmucc.

If your agency wishes to use a cell phone symbol, an experimentation request must be submitted to FHWA and approved. I would be happy to assist you with the development and submittal of an experimentation request. The process for requesting experimentation is outlined in Section 1A.10 in the MUTCD. The MUTCD may be accessed on-line at www.mutcd.fhwa.dot.gov.

If you have any questions with regard to this information, please don't hesitate to contact me, 406-441-3909 or marcee.allen@ dot.gov.



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## **NACE Website Links for MAP-21**

If you are looking for links to more information on MAP-21 from: Enrolled Bill, MAP-21, HR 4348 (pdf), FHWA's MAP-21 Webpage, Summary of the Joint Conference Report on the Transportation Bill Agreement (pdf), FTA's MAP-21 Webpage, MAP-21 Summary and Highlights (pdf), MAP-21 Conference Report (pdf), American Association of State Highway and Transportation Officials (AASHTO) MAP-21 Website, American Road & Transportation Builders Association (ARTBA) summary of highway provisions, American Public Transportation Association (APTA) summary of transit provisions, New Starts Working Group summary of transit new start provisions, Association of Metropolitan Planning Organizations (AMPO) bill summary, and United States Senate Committee on Finance summary of the revenue provisions.

See: http://countyengineers.org/Pages/MAP21.aspx

# **Montana LTAP Library**

Welcome to the LTAP Lending Library where publications, videos, DVD's, and software may be borrowed for a twoweek 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: mtltap(at)coe.montana.edu.

### Dust (Cont'd from Page 9)

County municipalities develop road maintenance plans which include periodic grading and re-graveling of unpaved road surfaces. The main contributors to increased maintenance frequency and cost are traffic (numbers, speed, and weights) and weather. The traffic counts on the county roads in the Bakkan are climbing each year as more rigs are constructed and oil is transported to terminals. And the financial impact on county budgets can be staggering.

But, road maintenance professionals have options in their tool box. Roads can be paved if the traffic classification warrants that option. However, as traffic counts change, pavement may be expensive and difficult to maintain. One lower cost option

that many municipalities rely on is a magnesium chloride road stabilizer, commonly referred to as "Mag Water." Magnesium Chloride is a natural, abundant mineral from the Great Salt Lake.

It works by attracting moisture from the air and keeping the top surface slightly damp, which minimizes dust. It also binds tiny dust particles to clay and other rocks in the road. Its environmentally friendly characteristics make it widely used by the U.S. Forest Service, the Bureau of Land Management, and many counties throughout the United States.



We have new lists for the library publications, software, DVD's, and videos at our web site, just click on Resources: http://www.coe.montana.edu/ltapv2/

At this web site, you can also keep track of upcoming workshops, past and present newsletters, and workshop announcements. Our 2012 Needs Assessment Survey is available at this web site. Thank you in advance for taking time to complete it.

It is a commonly used dust control and road stabilization product, because it can be safely sprayed on unpaved roads, driveways, rodeo arenas, parking lots, and construction sites – anywhere airborne dust is a problem.

A study performed by Colorado State University has shown that magnesium chloride has been proven to cut unpaved road maintenance frequency by as much as 75% and gravel replacement by over half. Its forgiving nature also allows grading and correcting spot problems without ripping up the whole road. A study is currently underway by the Upper Great Plains Transportation Institute to review other products. But in most cases, magnesium chloride remains the workhorse of choice for road stabilizers.

> Dust is an annoyance. But it is really cost and safety that are the driving forces behind stabilizing gravel roads. Although DUST is a four letter word, using the right stabilizer with a well developed road maintenance program can turn cost into savings and improve safety. •

# **Required Roads Scholar Course: Leadership Offered in November 2012**

In order to assist those city street and county road employees striving to attain their Roads Scholar Level I certification, Montana LTAP Director Steve Jenkins will be instructing a Leadership Course on November 14, 2012, in Great Falls at the Heritage Inn. The course will begin at 8:00am and end at noon. Please go to this link for the registration brochure:

http://www.coe.montana.edu/Itapv2/training/

This is one of the four required courses to obtain Roads Scholar Level I.

It is also required for those working toward their Roads Masters, Roads Scholar Level II Certification. Jenkins noted there will be several Roads Masters certifications awarded this year at the MACRS Spring Conference 2013, being held March 25-28, 2013, in Great Falls at the Heritage Inn. For more information on Roads Scholars, please go to this link: http://www.coe.montana.edu/ltapv2/resources/ roadsscholar/index.html



Montana LTAP PO Box 173910 Bozeman, MT 59717-3910 Presort Standard U.S. Postage PAID Permit No. 69 Bozeman, MT 59718

#### **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 Montana State University PO Box 173910 Bozeman, MT 59717-3910

Street Address: MT LTAP 2327 University Way, Room 230 Bozeman, MT 59715

(800) 541-6671 or (406) 994-6100 Fax: (406) 994-5333 email: mbeck(at)coe.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.

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