



# LTAP MATTERS

Montana's Answers To Technical Education of Roads & Streets

College of Engineering    Montana State University-Bozeman    Bozeman, MT 59717-3910  
 Montana LTAP 1-800-541-6671

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## Gravel Road Operators Gather in Conrad, Montana

*By Michele Beck, Montana LTAP*

Pondera County hosted a three-day gravel roads training workshop for regional county employees on April 11-13, 2006, in Conrad, Montana. "We were very fortunate to have county commissioners who supported this three-day event," commented Steve Jenkins, Montana LTAP Director. He added, "The equipment instructors as well as the participants made this event a complete success."

LTAP and reprinted by the Federal Highway Administration, provided a wealth of information for the gravel roads operator.

During this classroom training, he noted that there are almost 70,000 miles of roads for cities, counties, and highway districts. Jenkins pointed out that a well-maintained roadway provides, above all, a safe road. He said that two general principles to consider when maintaining or rehabilitating a gravel road are: 1) Proper use of a motorgrader or other grading device; and 2) Use of good surface gravel. *Continued on Page 2...*

### First Day Training

During the first day of training, participants received the *Gravel Roads, Maintenance and Design Manual*. Jenkins explained that this manual, written by the South Dakota



*Participants at Pondera County Gravel Roads Workshop*

### PASS IT ON

After you have read this newsletter, copy what you need for your files and **pass it on** to other interested readers in your department:

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- \_\_\_\_\_
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Montana Dept of Transportation

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

# Gravel Road Training (cont'd from page 1)



Jenkins pointed out that the road needs to conform to a particular design to help with drainage and driving, but most overlook the gravel used to build the road. Unfortunately it is the motorgrader operator that gets the blame for a rough riding road, but Jenkins cited that the problem usually is the type of materials used for the road.

Main points covered in Section I of the classroom information:

1. Good drainage requires a crown of 1/2 to 3/4 inch for each foot of width (about 4 percent) on the cross slope.
2. Road shoulders provide a support for the traveled portion of the road but also provide a safety area for drivers to regain control if they leave the road. It also carries water further away from the road to the foreslope and ditch.
3. Gravel displacement can be caused by:
  - Traffic
  - Winter Plowing Operations
  - Erosion During Heavy Rain
  - Poor Routine Blading Techniques
4. Three reasons why corrugation occurs:
  - Driving Habits
  - Lack of Moisture
  - Poor Quality of Gravel

These problems could be corrected with the motorgrader in the spring time when there is minimal growth and moisture.

The first two have nothing to do with the equipment operator, but using the right blend of stone, sand, and fines will help the road. The stone should be fractured and the fine-sized particles should have a binding characteristic called "plasticity."

*Continued on Page 3...*



# Gravel Road Training (cont'd from page 2)

5. How to blade intersections, cattle guards, driveways entering roadway, railroad crossings, bridges

6. Rehabilitation of roadway using six-pass maintenance with diagrams and photos

Jenkins continued the classroom portion by exploring drainage solutions, surface gravel, dust control and stabilization, innovations, and concluded with maintenance of unpaved roads near wetlands.

## Second Day Training

The class moved into the field for the second and third day of training. Del "Mo" Henman, Yellowstone County Road and Bridge Department, gave the following tips to new operators and reminders for experienced operators:

- Become familiar with the motorgrader. Their new operators work in the gravel pit first and push the gravel around. He strongly advises trying out all the levers. See what the motorgrader can do. It is important that the novice try everything on the grader, such as articulation, front-leaning wheels to prevent from sliding, and blade movement.

- When they go to work on a road, the new operator goes out with an experienced operator. The lead grader is run by the experienced operator and the novice follows in his grader. While on CB's, they discuss the different road building techniques. After a few days, the novice is in front and the experienced operator follows to help out.

- While cutting, turn accumulator on and it will allow for some "give" in the lift arm cylinders. Turn off the accumulator when doing finishing work because hydraulics will respond quicker.

- When blading hilly country, once the blade is set for a smooth cut, slowly curl blade back and maintain depth of materials. Then when on level ground, roll back to standard position. At the bottom of the hill, roll blade forward which will bring edge down to maintain depth of material. The reason for doing this is to minimize adjusting lift arms. Sometimes a novice will constantly adjust the heel and toe, which will make the road uneven and rough. The longer you can go without adjusting the blade up or down, the smoother the surface will be.

- Remember, if the toe is adjusted, the heel of the blade does not move much. But if the heel is adjusted, the toe will move a lot more. Therefore, it is advisable to do minor adjustments with the toe. If roads are cut properly first, the heel should be set and left.

- It is very important that the base needs to be cut properly. You will save time in the long run if your first cut is correct. If needed, make a second cut to make sure it is correct, rather than trying to fix it with surface gravel.

*Continued on Page 4...*



*Del "Mo" Henman, far left, discussing motorgrader safety with class participants*

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

E-Mail (Internet):  
MTLTAP@coe.montana.edu

Web Site:  
www.coe.montana.edu/ltap

• Director  
**Steven Jenkins**  
StevenJ@coe.montana.edu

• Administrative Associate/  
Conference Coordinator  
**Lois Evans**  
levans@coe.montana.edu

• Graphic Designer/Librarian  
**Michele Beck**  
mbeck@coe.montana.edu

• Student Assistants  
**Tiffany Prongua**  
**Eric Moog**

LOW-VOLUME ROADS  
ENGINEERING BEST  
MANAGEMENT PRACTICES  
FIELD GUIDE

The U.S. Forest Service's International Programs division has released a field guide that explores the ways and means of building adequate low-volume roads and constructing them in an environmentally sensitive and cost-effective way. The guide is designed to help address the most basic roads issues in as simple a manner as possible. It includes "do's" and "don'ts" along with relevant design information. It also contains a list of selected references for more detailed information. The guide is available in Spanish and in English. For additional information on the handbook, contact Gordon R. Keller of the U.S. Forest Service at [gkeller@fs.fed.us](mailto:gkeller@fs.fed.us). Or: [http://trb.org/news/blurb\\_detail.asp?id=6377](http://trb.org/news/blurb_detail.asp?id=6377)

*From NACE UPDATE*

*June 13, 2006 - Volume 06 Number 13*

**Communicating with the Public  
Using ATIS During Disasters  
Concept of Operations**

This document is part of a study on "Communicating with the Public Using ATIS during Disasters" being conducted for the FHWA Office of Operations and the U.S. DOT ITS Joint Program Office. The purpose of the study is to examine what information needs to be communicated to evacuees and other travelers under disaster conditions and how the advanced traveler information system (ATIS) assets of a state's department of transportation or other transportation agency can be effectively used to deliver such information. Go to: [http://www.itsdocs.fhwa.dot.gov/JPODOCS/REPTS\\_TE/14262.htm](http://www.itsdocs.fhwa.dot.gov/JPODOCS/REPTS_TE/14262.htm)

*From the National Transportation Operations Coalition, June 7, 2006 Newsletter - NTOC Talks*

## Gravel Road Training (cont'd from page 3)

Joe Miller, from the Missoula County Public Works Department, performed the walk-around for new operators, generating discussion from the class regarding various things to look for when going over the motorgrader checklist:



*Joe Miller, Missoula County  
Public Works Road Department*

When I conduct a walk-around of my motorgrader, it is crucial to look for loose, broken pieces on the equipment. Because the motorgrader performs a multitude of tasks, there is wear and tear throughout the various components of this piece of equipment.

It is important to check the entire machine, don't get caught with the routine oil and antifreeze checks. The engine compartment is very important but too often operators stay focused on the maintenance of just the engine area and greasing the machine. I find it very beneficial to do my walk-through slowly, carefully looking for any type of crack or stressed area on my motorgrader.

The great thing about having a motorgrader workshop is the discussions that develop. Participants explain different things they have found when doing a walk-around. This reminds me that I can always be learning something from someone.

Cedric Coolahan, Powder River County Road Department, demonstrated how they train new operators. Bob Smith, Powder River County, explained in a telephone interview how this system works:

- When two guys are working together, the number one factor is safety. This buddy system helps if there is a problem such as

a break down, need to fix a flat tire, or they get stuck. The second reason this system works is when blading the road top, there is less moisture loss because the second grader comes along and rolls the dirt back for the second pass. If it was a single operator, he would have to go down the road, come back with his first pass on the other side of the road, and then roll the dirt for the second pass. By keeping that moisture loss at a minimum, there will be better road compaction. Consequently there will be less loss of fines that will keep the plasticity of the materials for better compaction.

- Another factor in having two blade operators, there is only one pick-up truck going out to the worksite, thereby saving on fuel.
- By having two operators, the lead grader can tow their truck down the last stretch while the second grader can back up and take care of the grading at the car gates (cattle guards). Again saving time and fuel by not having to drive back to the truck.



*Cedric Coolahan, Powder River County Road Department*

- When a new operator comes on board and is sent out with an experienced operator, this novice will learn how to solve problems quicker from the experienced operator. Rather than learn by trial & error, this new operator will learn from the experienced operator. They both have radio contact with each other. The experienced operator follows the novice and if he sees something happening, such as not setting the materials in place for the following experienced operator, he can let the new operator know before the small incident turns into an all-day fix.

*Continued on Page 5...*

# Gravel Road Training (cont'd from page 4)

The experienced operator can also help the novice learn how to deal with different levels of moisture in the road materials, grass, shoulder information, and various other gravel road concerns.

•When it comes to plowing snow, the two motorgrader tandem is extremely efficient with the lead plow taking care of the right-hand plow and the following operator having the left-hand plow. There is only one pass and the road is plowed. To date, there has been no problem with the public. When they see the plows out, they know to expect two plows and drive appropriately.

For this workshop, Jenkins said Tandem Training worked well because Pondera County provided a set up of eight motorgraders, allowing plenty of time during the two field days for everyone to get quality “real time” experience.

“This hands-on training combined with classroom information gave operators a solid foundation to build on. This helps build safer roads,” Jenkins concluded. ◆



Mark Fitzgerald, Pondera County Road Department



Joseph Christiaens, Pondera County Commissioner



Cynthia Johnson and Sandy Broesder, Pondera County Commissioners

**Fifth National Seismic Conference  
on Bridges and Highways  
September 18-20, 2006  
San Francisco, CA**

Contact: Phillip Yen at FHWA, 202-493-3056 (fax: 202-493-3442; email: wen-huei.yen@fhwa.dot.gov) or Mike Keever at Caltrans, 916-227-8806 (fax: 916-227-8242; email: mike\_keever@dot.ca.gov). Information is available online at [www.mceer.buffalo.edu/meetings/5nsc](http://www.mceer.buffalo.edu/meetings/5nsc)

**Registration Web Site for the  
National 511 Conference Now  
Available**

<http://www.transportation.org/meetings/74.aspx>  
(AASHTO)

The registration Web site is now available for the National 511 Conference taking place July 17-19, 2006 in San Diego, California. The preliminary program is also available.

**ITE 2006 Annual Meeting and  
Exhibit: August 6-9, 2006  
[www.ite.org/annualmeeting](http://www.ite.org/annualmeeting)**

Registration is now available for the Institute of Transportation Engineers (ITE) 2006 Annual Meeting and Exhibit, which will be held in Milwaukee, WI, at the Midwest Airlines Center on August 6-9.

More than 2,000 transportation professionals are expected to attend the meeting, which offers 55 technical sessions divided into five tracks. The tracks are Planning, Engineering and Design, Safety, Mobility and Operations and Implementing Transportation Solutions/Professional Development. Visit the ITE Web site to register and view the preliminary program at [www.ite.org/annualmeeting](http://www.ite.org/annualmeeting).

# Annual Calendar 2006

January 2006	February 2006	March 2006																																																																																																																																										
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Some dates & locations subject to change. Call Lois Evans, LTAP, 1-800-541-6671 or 406-994-6100 to confirm.

# Calendar of Events 2006

## 17th Annual Equipment Training & Snow Rodeo

Great Falls, MT **September 6 & 7, 2006**

Contact Lois Evans, LTAP Conference Coordinator, 1-800-541-6671, regarding registrations or inquiries. Note: Brochures will be sent in July.

## Montana Association of Counties Annual Conference

Grantree Inn  
Bozeman, MT **September 24-28, 2006**

MACo's Phone Numbers:  
406-444-4360-Main Office or 406-444-4370-Insurance Office  
Online at: <http://mt.gov/maco/MACoHOME.htm>

## MACRS District Meetings (Tentative Schedule)

- Butte **Tuesday - October 10, 2006**  
Best Western Butte Plaza Inn, 2900 Harrison  
406-728-3100
- Missoula **Wednesday - October 11, 2006**  
Ruby's Inn, 4825 N Reserve  
406-721-0990
- Great Falls **Thursday - October 12, 2006**  
LaQuinta, 600 River Drive South  
406-716-2600
- Glendive **Wednesday - October 18, 2006**  
Best Western, 223 N. Merrill  
888-4-536-3483
- Billings **Thursday - October 19, 2006**  
Billings Convention Center, 1223 Mullowney Lane  
406-248-7151

Contact Lois Evans, LTAP Conference Coordinator, 1-800-541-6671, regarding registrations or inquiries. Note: Brochures will be sent in September.

## The League of Cities & Towns 26th Annual Conference

West Yellowstone, MT **October 4-6, 2006**  
Outlaw Hotel  
Registration Contact: 406-442-8768 - League of Cities & Towns

## MACRS Planning Meeting

Lewistown, MT **November 2006**  
Contact Lois Evans, LTAP Conference Coordinator, 1-800-541-6671, regarding dates, registrations or inquiries.

## Other Future Events

Annual Region 8  
County Road Conference:  
Best Western RAMKOTA Hotel,  
Rapid City, SD  
Oct 25 & 26, 2006  
For further information, contact:  
SDLTAP at 800-422-0129

**APWA's North American  
Snow Conference**  
**April 22 - 25, 2007,**  
**Saint Paul, Minnesota**

<http://www.apwa.net/meetings/snow/2007/>

The APWA North American Snow Conference brings together more than 800 public works professionals from our city, township, county and rural streets divisions and state departments of transportation, as well as private sector organizations for the best in education and exhibits.

### Education Program

Keynote speakers and the always-popular Snow Conference Talk Show will be featured at general sessions on Sunday, Monday and Tuesday – plus more than 30 education and technical sessions and roundtables addressing a variety of topics including snow plowing procedures, new salt applications, anti-icing and de-icing, AVL/GPS/GIS, winter pavement maintenance, fleet responsibilities in a disaster, new technologies, snow removal, winter vehicle maintenance, and much more! Wednesday morning is dedicated to a technical tour program to give attendees a hands on look at how others tackle the problems of snow & ice.

IF YOU KNOW SNOW...  
WE WANT YOU!

We are looking for fresh and innovative twists to the usual topics and speakers with new perspectives. So don't hesitate, submit your idea today! To learn more about the selection criteria or to submit your idea online, go to [www.apwa.net/speakatsnow](http://www.apwa.net/speakatsnow)

## Vehicle Cleaning Technology for Controlling the Spread of Noxious Weeds and Invasive Species

The US Department of Agriculture's Forest Service has released a report that summarizes the concepts for removing seeds from vehicles and equipment to control the spread of noxious weeds, invasive species, and disease. (Go to: [http://trb.org/news/blurb\\_detail.asp?id=6281](http://trb.org/news/blurb_detail.asp?id=6281)) Many silvicultural and land management activities on national forest land involve moving vehicles and equipment at off-road locations. As a result, seeds and spores can be picked up, transported, and transplanted over great distances.

## Retroreflectivity Changes Proposed to MUTCD

In an earlier Notice of Proposed Amendments (NPA), the Federal Highway Administration (FHWA) proposed to amend the Manual on Uniform Traffic Control Devices for Streets and Highways (MUTCD) to include methods to maintain traffic sign retroreflectivity.

Based on the review and analysis of the numerous comments received in response to the notice, FHWA has decided to substantially revise the proposed amendments to the MUTCD and has issued a Supplemental Notice of Proposed Amendments (SNPA). Under the SNPA, FHWA proposes to amend the MUTCD to include a standard for minimum maintained levels of traffic sign retroreflectivity and methods to maintain traffic sign retroreflectivity at or above these levels.

Comments must be received on or before November 6, 2006. For further information contact Debra Chappell, FHWA Office of Safety Design (202) 366-0087. More information is posted in the May 8th Federal Register:

[http://www.access.gpo.gov/su\\_docs/fedreg/a060508c.html](http://www.access.gpo.gov/su_docs/fedreg/a060508c.html)

From NACE UPDATE

June 13, 2006- Volume 06 Number 13

# MACRS 2006

Great Falls, Montana, hosted this year's MACRS 2006. Over 300 participants, vendors, and speakers gathered to share, sell, and explain the latest on transportation issues. MACRS President Russ Albers was happy to announce that all 56 Montana counties were signed up as MACRS members once again. "It's just great to see familiar faces and meet new members," said Albers. "This organization has grown over the past 26 years. Montana has a lot of gravel roads and as technology advances, it's important to get this information out to this transportation workforce. We are fortunate that MACRS, along with Montana LTAP and MDT can play a big role in creating such a format as this conference."

Bill Kennedy, Yellowstone County Commissioner, started the first morning out discussing transportation issues. Steve Jenkins and Sam Gianfrancisco, Montana LTAP, presented county road standards. Following was Jim Lynch, MDT Director, discussing the funding in the new Highway Bill and Gas Tax.

Mark Willmarth, City of Great Falls Training and Development Director, addressed the main session with a favorite topic, "Dealing with the Public." The next two split sessions included Joe Haynes, Idaho Local Highway Technical Assistance Council, describing funding of Idaho highway districts. The other session was Ken Skorseth, South Dakota LTAP, covering the importance of selection of materials for gravel roads.



Mark Willmarth



Lois Evans, Montana LTAP, registration

Starting off the second day, Seth Broesder, representative from Congressman Denny Rehberg's office, addressed various transportation concerns. He was followed by Harold Blattie, Executive Director, MACo; Doug Kaercher, President, MACo Executive Committee; and John Ostlund, Yellowstone County Commissioner, on various legislative issues affecting counties.



Commissioner Kennedy & MDT Director Jim Lynch



Sam Gianfrancisco (LTAP), Ray Barnicoat (MACo), Steve Jenkins (LTAP)

During the mid-morning session, Tara DePuy, Civil Attorney for Park County; Paul Stahl, Lewis & Clark Deputy County Attorney; and Colleen Dowdall, Missoula Deputy County Attorney; addressed the main session with the ever-changing road law topic.

The afternoon began with a panel discussing developing working relationships. During the split sessions, George Huntington, Wyoming T2 Center, covered Asset Management issues.



George Huntington



# MACRS 2006 (Cont'd from Page 8)



Lt. Russ Christoferson, MDT, went over the requirements for CDL operators.

*Lt. Russ Christoferson*



Jake Goettle, Engineering Division, Environmental Services, MDT, explained the latest in storm water runoff requirements affecting county road departments.

*Jake Goettle*



*Vendor/Convention Area*

Entertainment for the banquet was Dr. Raphael Cristy, performing his "Charlie Russell's Yarns." ◆

The Guests Program included a day at Fort Benton touring historic sites and the second day participants took the Trolley Tour of Great Falls.



*Guest Participants*

**MACRS Conference Quote from First Timer**  
Forrest Armstrong, Madison County: "I've been with the county for over two years. I've been in road work for eleven years. This is my first time at MACRS and there's lots of good information. I also like exchanging ideas with other fellow county road crew."

## MACRS Officers 2006-2007



L-R: Herb Schmierer, District 4 Rep; Shane Escott, District 2 Rep; Jerry Forman, Secretary/Treasurer; District 1 Rep; Tim White, President; Jim McCarthy, 1st Vice President; Wayne Waarvik, 2nd Vice President (Missing: Tom Fairbank, District 3 Rep, and Dennis Pitts, District 5 Rep)



L-R: Eric Griffin, MACo Rep; Jack Knorr, MACo Rep; and Russ Huotari, Training Committee Rep

## Senate Confirms Capka as FHWA Administrator

The Senate has officially confirmed the nomination of J. Richard Capka as administrator of the Federal Highway Administration (FHWA). Capka had been serving as Acting Administrator since August 1, 2005, when Mary Peters resigned her post as Administrator. Before assuming the position of Acting Administrator, he served as FHWA's Deputy Administrator since August 2002.

## Transportation Safety Planning Website Launched

The new Transportation Safety Planning (TSP) Website <http://www.fhwa.dot.gov/planning/scp/index.htm> is now available and was developed by the FHWA Office of Planning as a resource for advancing the integration of safety in the transportation planning process. The FHWA Office of Planning TSP website is designed to assist transportation planners and safety professionals in meeting SAFETEA-LU safety planning requirements, including the SHSP process. The website also highlights reports, good practices, and links to the TRB Transportation Safety Planning Working Group (TSPWG) activities.

For additional information or comments about the site, please contact Sherry Ways at (202) 366-1587 or Lorrie Lau at 415-744-2628.

*From NACE UPDATE*

*June 13, 2006 - Volume 06 Number 13*

# Road Scholars 2006



*L-R: Doug Nisbet, Vance Morrison, Jerry Forman, Steve Bue, Alex Frank, Mark Trask, Don Stockie, Dean Stemler*

## SUMMER DANGER

**Heat Cramps:** Muscle cramps of the abdomen, legs or arms. First Aid: move victim to a shaded area and loosen clothing. Have victim drink large quantities of cool salt water prepared by dissolving 2 salt tablets or 1/4 teaspoonful of table salt in a canteen of cool water.

**Heat Exhaustion:** Headache, excessive sweating, weakness, dizziness, nausea, muscle cramps; skin is pale, cool, moist, & clammy. First Aid: Move victim to a shaded area and loosen clothing. If conscious, have victim drink 3 to 5 canteenfuls of cool salt water during a 12-hour period. Salt water preparation is described under heat cramps.

**Heat Stroke:** Heatstroke is a medical emergency. Skin is hot and dry; sweating has stopped; collapse or unconsciousness may come suddenly or may be preceded by headache, dizziness, fast pulse, nausea, vomiting and mental confusion. First Aid: Immerse victim in cold water; add ice if available. If immersion is impossible, move to a shaded area and remove victim's clothing; sprinkle with water and fan continuously. Transport immediately to the nearest medical facility, cooling the victim on the way. When conscious, give the victim cool salt water as described under heat cramps.

With increased traffic as Montana grows and new technologies becoming available, there is the need for more diverse skills and knowledge necessary for maintenance and preservation activities on roadways. Montana has over 70,000 miles of roads in cities, counties and highway districts. The Montana LTAP Roads Scholar Program provides not only recognition of roadway professionals that are constructing and maintaining these Montana roadways, but also promotes attendance at safety workshops and further learning and education.

The Roads Scholar curriculum is designed to provide participants with the fundamentals of safety, management, and advanced technologies, as well as exposure to a wide variety of other topics relevant to the transportation field. Through this program, local agencies will be providing an opportunity to develop the agencies' greatest asset--its employees.

This spring, Montana LTAP Director Steve Jenkins presented the following nine 2006 Road Scholars with their certificate of completion for Level I and a jacket.

### Steve Bue, Stillwater County

I've been worked for the county for 27 years. I'm now Bridge Foreman. After attending the 2006 MACRS Conference, I feel I will leave with practical tips that I can use on my job as Bridge Foreman and equipment operator. I also have a better understanding of county government, finances, liabilities, etc. I extend my thanks to the county commissioners, fellow county employees, and vendors.

### Jerry Forman, Custer County

I have been with the county for 27 years. I started out as a seasonal truck driver, after quitting my job as a mechanic for the local Cadillac dealer. When the time came for me to be laid off for the winter, the Commissioners asked if I would want to stay on with a permanent position of Office Manager. I took the offer, and over the years, took care of the office operations and worked as a heavy equipment operator. I worked closely with the Road Supervisor at the time, and was able to learn a tremendous amount from his 27 years experience with Peter Kewit Construction. In 1988, after his untimely death, the commissioners told me how they felt I had been groomed for the job over the previous 10 years and they offered me the position of Supervisor.

My wife and I enjoy living in Miles City where I was born and raised. My family had the 3rd largest dairy in Montana up until 1974. All of our kids are out of school. My main hobby is gold panning. I live for the chance to find a little color in the bottom of a pan, and rarely leave the county without some sort of gold recovery tool in my vehicle.

LTAP training has meant a lot to me over the years I have been with the county. I always felt that there was room to learn more things, and if those things could make my job more rewarding, that was even better. I have had a great working relationship with all of my commissioners over the years. I attribute a lot of that success to being able to prove to them that I am trying to be prepared and trained for many situations. One of the

*Continued on Page 11...*

## Road Scholars 2006 (Cont'd from Page 10)

biggest things a supervisor can do for their county is to strive to avoid all types of accidents, and avoid actions that would advocate litigation against the county. The training that LTAP provides covers those two aspects in one way or another, without fail. Not only has the training helped me in my job, but the personal satisfaction of learning "something new" is good too.

### Alex Frank, Stillwater County

I've worked for the county almost eleven years. The training I've received has been beneficial in increasing my understanding of safety and has complimented my practical experience.

### Joe Miller, Missoula County Public Works



Joe Miller

I have been a resident of Montana my entire life. I was raised in Frenchtown, Montana, where I graduated from high school in 1988.

I then moved to Seeley Lake, Montana, where I went to work for a construction company building logging roads. Operating heavy equipment became my passion. From 1988-1999, I worked for several companies operating many types of heavy equipment. In 1999, I went to work for Missoula County. Having worked three winters prior to this for the Montana Department of Transportation as a seasonal snowplow operator, I enjoyed the change of pace between summer dirt work and winter snow removal. I have made some lifetime friends at Missoula County and have enjoyed working here for the last six years.

In 1992, I married my wife, Jodie, of 14 years. Together we have three children and really enjoy camping, fishing and boating together as a family.

Receiving the LTAP Road Scholar was very important to me. Having worked the last 18 years at learning as much as possible about heavy equipment and operating it, this award tells me it was all worth it and gives me the drive to continue to learn and improve myself. Thank you for this award.

### Vance Morrison, Lewis & Clark County

For the past eleven years I have worked for the county. After graduating from high school, I worked in construction, utility, and water for four years. I then went to work for MDT at Wolf Creek for five years. The last eleven years I have been with Lewis & Clark County.

### Doug Nisbet, Lewis & Clark County

I have worked for Lewis and Clark County for 17 years. I enjoy hunting, fishing, and golfing. LTAP training has been very useful. I have been able to use what I have learned in my work.

### Dean Stemler, Madison County

I have worked for the county for nine years as of June 28. I worked in the logging industry for over 25 years. I built my own log cabin in 1988 with no electricity. I fell the logs above Whitefish and then hauled them to the Ennis area. I always have enjoyed the Madison County area and the rural living. I know that all the training I have received, I have used and will use it somewhere. Anything to better yourself helps you on your job. My thanks to Montana LTAP for all their hard work at the recent MACRS Convention.

### Don Stockie, Stillwater County

I worked in the oil fields in North Dakota before coming to Stillwater county. I moved here to be around family. My hobbies are fishing and boating. I use the training for improved productivity and I like getting new ideas from other folks.

### Mark Trask, Prairie County

I have worked for the county for the past 21 years. I previously spread fertilizer for the Farmers Bureau in Terry. I know all the training is good and hope to see more training come to the eastern part of the state. ◆



## Drink Up... Water That Is!

Just because it's summer time and we think about drinking more water, according to Jack Medina, MA, we need to drink 10 to 12 eight ounce glasses of water daily. Now comes the really interesting news, "Restricting your water can promote fat deposits. Your body uses water as the major component of blood to transport nutrients and wastes. A lack of water in the system can cause fats and other toxins, that are normally disposed of, to remain in your body - including that dimpled fat commonly referred to as cellulite.

Your kidneys have a difficult time processing contaminated water so your liver has to detoxify it. This means your liver can't do its main task, which is to process your blood and help break down fat. Thus, as you store water, the fat you eat can be stored in fat cells instead of being broken down in the liver. You become bloated, waterlogged, and obese.

The good news is that it is easy to solve this problem. An 8 oz. glass of water isn't very large. Keep it on your desk and keep refilling it." (Or keep plenty of water with you when you're out on the road.)

He suggests in order to get up to 12 eight ounce glasses of daily water, start out by drinking 4 eight oz. glasses the first day. Days 2 & 3 increase it to five glasses; Days 4 & 5 go to 6; Days 6 & 7 drink 7 glasses; Days 8 & 9 you should be at 8; Days 10 & 11 drink 9 glasses; Day 12 drink 10 glasses; Day 13 go to 11, and finally on Day 14 drink 12 eight oz. glasses. Be sure to spread drinking this water throughout the day. For more information, go to: <http://www.jackmedina.com/water.htm> for the entire article.

Author/speaker and an expert in Sports Performance Enhancement". Jack Medina is available for speaking engagements, consultation and personal training of athletes in various sports, professional and amateur. Jack has written a new book, "The Winning Edge: Fueling & Training The Body For Peak Performance" with Dr. Roy Vartabedian, an internationally known New York Times Best Selling Author of the "Nutripoints" program for optimal nutrition. Both books are available online at [www.jackmedina.com](http://www.jackmedina.com). Jack also has a monthly ezine (newsletter) available free which can be subscribed to on his website. All subscriber's addresses will be confidential and not sold or given to any other organization or group.

LOW COST LOCAL ROAD  
SAFETY SOLUTIONS  
RELEASED AT  
NACE ANNUAL CONFERENCE

A new joint publication released by NACE and the American Traffic Safety Services Association (ATSSA) titled, "Low Cost Local Road Safety Solutions," was made available to NACE members April 9-13 during the 2006 NACE Annual Conference in Grand Rapids, MI. The 39-page booklet contains 16 examples of numerous low-cost solutions that address roadway safety issues such as signs and pavement marking improvements, rumble strips, longitudinal channelizers and roadside cable barriers. The concise studies were compiled by the Texas Transportation Institute. The booklet also contains a section titled, "How Can I Conduct a Crash Study," as well as a list of current resources on the overall topic.

NACE members may obtain a free copy of the full-color publication by contacting Trish Hall by e-mail at [TrishH@atssa.com](mailto:TrishH@atssa.com) with "NACE/ATSSA BOOK" in the subject line.

Also during the conference, ATSSA Executive Director Roger Wentz spoke at the event's opening general session on April 11 regarding the roadway safety components contained in SAFETEA-LU. That presentation is downloadable, by clicking on the "News and PR" link of [ATSSA.com](http://ATSSA.com), then clicking on "Speeches" to access the PDF file.

Or <http://www.atssa.com/galleries/default-file/LowCostLocalRoads.pdf>

From NACE UPDATE

June 13, 2006- Volume 06 Number 13



### Senior Cyclists

Americans are living longer and stronger. More elder adults than ever before are participating in cycling. Senior cyclists may be cycling for the first time in years. They need to check out the current laws and rules that relate to bicyclists and sharing the road. More info on cycling: [www.bicyclinginfo.org](http://www.bicyclinginfo.org)

# New Rule Proposed for Wetland Conservation Practices

*Written by and permission granted to reprint this article from Julie Ufner, Associate Legislative Director, National Association of Counties*

On March 27, the EPA, along with the Army Corps of Engineers (Corps), proposed a new rule in the Federal Register on wetlands conservation practices. The proposed rule is open for public comment until May 30.

It is widely acknowledged that wetlands play a vital part in the environment. Currently, under Section 404 of the Clean Water Act (CWA), a project slated for exiting wetlands is subject to review by the EPA and Corps. Many times, this review requires a developer to rest or create a wetland to replace the one that was affected by the project.

The proposed rule was written to clarify EPA regulations concerning Section 404 mitigation. According to EPA, the proposed rule accomplish the following five items:

- *responds to recommendations by the National Research Council to improve wetland restoration and replacement projects*
- *sets clear science-based, results-oriented standards nationwide while allowing for regional variations*
- *increases and expands public participation*
- *encourages watershed-based decisions, and*
- *affirms the "wetlands mitigation sequence" requiring that proposed projects fully avoid and minimize potential wetlands impacts.*

According to EPA, the rule generally requires wetland compensatory mitigation for wetland losses and stream compensatory mitigation for stream losses. However, it also gives corps district representatives flexibility to determine what is best for the watershed.

EPA has stated that the proposed rule will set clear national standards for wetlands protection and is a step toward net gain of wetlands nationwide. The rule encourages wetlands mitigation banking as a way to offset wetland losses to agriculture and development.

However, environmentalists believe this is a step backwards, essentially hastening the loss of wetlands nationwide. They say there is little supporting evidence that corroborates claims that mitigation banking is a good way to replace lost wetlands.

Under the proposed rule, when on-site and in-kind mitigation is not an option, the Corps would encourage the 404 permit holder to buy mitigation banking credits to offset the expected wetlands loss.


Counties are often 404 permit holders. The most common 404 permits for counties deal with road construction and maintenance, other types of infrastructure (besides residential and commercial); shore protection structures; and dredging in navigable waters.

The proposed rule would require a Section 404 permittee to submit a mitigation proposal to the Corps. At that point, the Corps will seek public comment. After the comments are collected, the Corps will issue its decision on whether to grant a permit.

In FY03, the Corps issued 85,878 authorizations, including individual permits and general permit verifications. For those permits involving discharges of dredged or fill material into waters of the United States, approximately 21,413 acres of wetlands were affected in FY03, and 43,550 acres of compensatory mitigation was required. Not all permits require compensatory mitigation. In 2003, 51 percent of individual permits and 19 percent of general permits required compensatory mitigation.

On a side note, in recent years there has been controversy over the way the Corps has defined a jurisdictional wetland; determinations vary through both district offices and the people making the determinations.

Counties have been fiscally affected mainly, but not exclusively, in transportation projects dealing with roadside ditches. The Corps has undertaken several district-wide surveys to determine the scope of the problem. They have indicated that they expect to release a proposed guidance for their district offices to clarify how to define a jurisdictional wetland.

For more information regarding mitigation banking or to provide comments on the proposed rule, go to [www.epa.gov/wetland-smitigation](http://www.epa.gov/wetland-smitigation). 

# City of Bozeman's "Winter Stress Blowout"

*Information for this article was supplied by Steve Kurk and Michelle Dipinski, City of Bozeman*

On May 25, 2006, City of Bozeman hosted its First Annual Winter Stress Blowout, Equipment Safety and Road-eo. Additional sponsors included Gallatin County Road Department, Montana Department of Transportation and Montana LTAP.

Steve Kurk, City of Bozeman Street Department, initiated the planning for this equipment road-eo for city, county and state public works employees in the Bozeman area and surrounding small towns. He requested help from Marty Basta and Debbie Kimball, City of Great Falls, who plan the statewide Snow Rodeo and equipment safety workshop in Great Falls each year. After getting this information in order, he called a meeting of the sponsors and a plan was put into place.

Steve's goal was to bring public works employees from the area together so they can put a face with a name and know who they can call for assistance.

The morning started off with Steve Jenkins, Montana LTAP Director, presenting Dump



*Debbie Arkell, Director of Public Service, and Steve Kurk, City of Bozeman*

*Special Note: Steve Kurk recently received the Outstanding Chapter Member Award at the APWA Regional Conference in Boise, Idaho. He was selected from 268 Rocky Mountain chapter members. Debbie Arkell presented him this award and said, "Steve's efforts of working untiringly to educate the public about public works has significantly contributed to the success of the American Public Works Association."*



*Skip Tinder, MDT*

Truck Safety Training. Competition then began with thirty-two participants selecting from four equipment courses: Backhoe, Loader, Snowplow, and Motorgrader. There was also a station for walk-around inspection.

Kurk wanted to thank Michelle Dipinski, City of Bozeman, for tabulating scores and everyone who pitched in to help. The following winners were announced:

***All-Around Champion: Tracy Fairchild***

Backhoe:

- 1st Place: Tracy Fairchild, Gallatin County
- 2nd Place: Rod Bentle, Gallatin County
- 3rd Place: Clayton Stinson, Gallatin County

Loader:

- 1st Place: Kwinci Tatarka, Gallatin County
- 2nd Place: Matt Heckel, City of Bozeman
- 3rd Place: Tracy Fairchild, Gallatin County

Snowplow:

- 1st Place: Rick Blackwood, Gallatin County
- 2nd Place: Clayton Stinson, Gallatin County
- 3rd Place: Tracy Fairchild, Gallatin County

Motorgrader:

- 1st Place: Tracy Fairchild, Gallatin County
- 2nd Place: Mark Kottwitz, Gallatin County
- 3rd Place: Buck West, Gallatin County



*Tianna Workman and Pat Simon  
Water Department, City of Bozeman*



Welcome to the LTAP Lending Library where publications, videos, and software may be borrowed for two weeks and then returned to the Library. Up to three videotapes may be borrowed from the LTAP Lending Library rent-free for two weeks. Some publications are free or for a nominal charge upon request.

For information or checkout procedures, call Lois Evans or Michele Beck, LTAP  
1-800-541-6671

If you have computer access, please e-mail us at:  
mtltap@coe.montana.edu

At our web site:  
[www.coe.montana.edu/ltap](http://www.coe.montana.edu/ltap)  
You will find the total library publications, software, videos, and DVD's lists. At this web site you can also keep track of upcoming workshops, our newsletter, and "What's New" items that change periodically.

*"The LTAP Video Library is an important feature used in our safety program - Thank you."*

*Ravalli County Road & Bridge Crew*

*"You can't expect your employees to do the work unless you give them the tools."*

*Jack Knorr  
Stillwater County*

*"If you've got a cow jumping the fence, you don't shoot the whole herd."*

*Ronnie Blackford  
Highway Superintendent  
Miller, SD*

# Montana LTAP Lending Library

## Publications

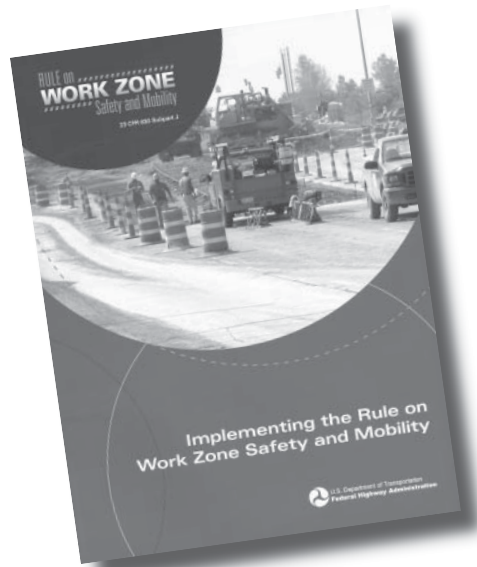
p-4: Multiyear Plan for Bridge and Tunnel Security Research, Development, and Deployment (FHWA March 2006) This report proposes a research and development program addressing highway bridge and tunnel security. In addition to securing the physical infrastructure, it is recognized that there is a need to protect the "info infrastructure" as increasing reliance is placed on information technology as a result of the greater role being played by intelligent transportation systems. (53 pages)

p-80: LTAP Bridge Maintenance Training (Texas LTAP/ Texas Engineering Extension Service 11/ 2005) This information is in the form of a reference manual and cd presentation. The manual covers a multitude of maintenance procedures and the presentation addresses the question of "why preventive maintenance". This is based on National Highway Institute course, "Bridge Maintenance Training." (75 page notebook w/cd's)

p-414: Computer-Based Guidelines for Concrete Pavements, Volume III: Technical Appendices (FHWA 1/2006) This Volume III documents the investigation, modeling, and validation of the enhanced High PERFORMANCE PAVING (HIPEPAV) II software program. It is the Technical Appendices, which documents work carried out during the study. (Volume I: p-412, Volume II: p-413) (345 pages)

p-454: Economics of Upgrading an Aggregate Road (Minnesota DOT & LRRB 1/2005) This report describes a research project that provides Minnesota counties, and townships with information and procedures to make informed decisions on when it may be advantageous to upgrade and pave gravel roads. It also provides resources to assist county and township governments in explaining to the public why certain maintenance or construction techniques and policy decisions are made. (72 pages) Website location: [http://mdt.mnpals.net/F/SYGJ2TFVHLN8C2KCLBS5PBVRRYGHQAQKMMPXILP47FMPJHPKMJD-02817?func=full-set-set&set\\_number=026659&set\\_entry=000036&format=999](http://mdt.mnpals.net/F/SYGJ2TFVHLN8C2KCLBS5PBVRRYGHQAQKMMPXILP47FMPJHPKMJD-02817?func=full-set-set&set_number=026659&set_entry=000036&format=999)

p-950: Implementing the Rule on Work Zone Safety and Mobility (FHWA 9/2005) This is one of four guides to assist transportation agencies understand and implement the provisions of the updates to the work zone regulations at 23 CFR 630 Subpart J (applies to all State and local governments that received Federal-aid highway funding). Transportation agencies are required to comply with the provisions of the Rule by October 12, 2007. This Guide is the main Rule Implementation Guide and provides a general overview of the Rule and overarching guidance for implementing the provisions of the Rule. This document includes guidelines and sample approaches, examples from transportation agencies using practices that relate to the Rule, and sources for more information. (92 pages) Available online: [http://www.ops.fhwa.dot.gov/wz/resources/final\\_rule.htm](http://www.ops.fhwa.dot.gov/wz/resources/final_rule.htm)



p-951: Work Zone Public Information and Outreach Strategies (FHWA 11/2005) This Guide is intended to help transportation agencies plan and implement effective public information and outreach campaigns for work zones. It is the second of four guides intended to support implementation of the Work Zone Safety and Mobility Rule. (63 pages) Available online: [http://www.ops.fhwa.dot.gov/wz/resources/final\\_rule.htm](http://www.ops.fhwa.dot.gov/wz/resources/final_rule.htm)

## Publications (cont'd)

p-2383: Simplified Guide to the Incident Command System for Transportation Professionals (FHWA 2/2006) The purpose of this Guide is to introduce ICS to stakeholders who may be called upon to provide specific expertise, assistance, or material during highway incidents but who may be largely unfamiliar with ICS organization and operations. These stakeholders include professionals at transportation agencies, companies involved in towing and recovery, as well as elected officials and government agency managers at all levels. Available online: <http://www.ops.fhwa.dot.gov/incidentmgmt/publications.htm>

p-2587: ITS/Operations Resource Guide 2006 (FHWA 2006) This Guide is a comprehensive listing of over 400 documents, videos, websites, training courses, software tools and points-of-contact related to innovative transportation operations strategies such as ITS. (362 pages) Available online: <http://www.resourceguide.its.dot.gov>

p-3001: Research, Development, and Technology Performance Plan 2006-2007 (Turner-Fairbank Highway Research Center 2006) This report describes who RD&T are, outlines their research and goals for the next two years. (35 pages)

## Videos

SG204: Lightning Safety 101 – Short Course (10 minutes) This video describes lightning safety tips for recreation and work situations. Outdoor illustrations include ball fields, golf courses, swimming pools, small shelters, school playground, outdoor workers, and various machinery. Indoor scenes include swimming pools, substantial buildings, the office workplace and the home. (National Lightning Safety Institute 1999)

## Software

SW 165: Forklift Safety (Coastal 2005) This DVD outlines taking the time to practice safety forklift operating procedures to protect workers from painful injuries and financial loss. (17 minutes)

SW 500: Dangerous Travelers: Controlling Invasive Plants Along America's Roadways (USFS 2006) This DVD covers the best management practices to assist road maintenance crews in controlling the rapid spread of invasive plants. (26 minutes)

## Software (Cont'd)

SW 815: Heat Stress: Don't Lose Your Cool (Coastal 2002) This DVD provides a no-nonsense approach to heat stress and teaches how to prevent and treat heat disorders. (15 minutes)

SW 820: PPE: Don't Start Work Without It (Coastal 2004) This DVD covers Personal Protective Equipment (PPE) that protects you from accidents. Different parts of your body and different types of hazards require different forms of PPE. Common forms of PPE include eye and face protection, hearing protection, head protection, hand protection and foot protection. (13 minutes)

SW 825: Hearing Protection: Sounds Good to Me (Coastal 2005) This DVD explains how humans hear, the PPE equipment that is used to protect the ears, and the effect of noise on the ear. Your workers will understand why proper hearing protection is of paramount importance to protect their ears from harmful noise. (14 minutes)

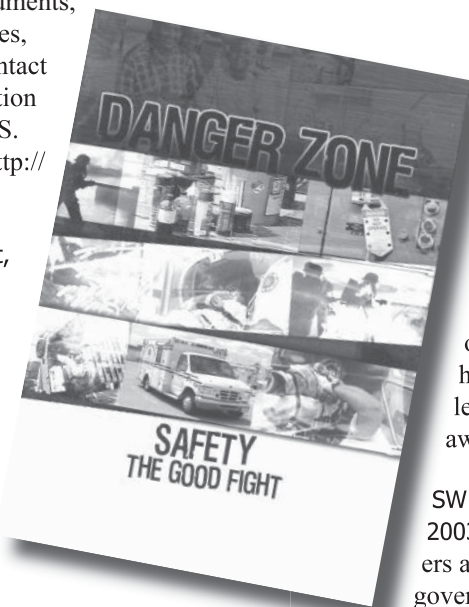
SW 827: Safety: The Good Fight (Coastal 2004) Viewers of this high-impact DVD learn how to keep their workplace safe through the tragic story of Patrick Hayes, a young man killed in an avoidable, on-the-job accident. Through interviews, we learn how the accident occurred and how employees can avoid making the same mistakes to maintain their safety. (15 minutes)

SW 830: Hazwoper: First Responder: Awareness Level (Coastal 2004) Employees who work in areas where hazardous substance are present need to know how to respond to a hazardous substance emergency. This DVD explains the five levels of emergency response and what first responders at the awareness level need to know. (15 minutes)

SW 860: Defensive Driving for Government Employees (Coastal 2003) This DVD looks at the techniques that can help drivers avoid accidents and lessen their severity if they occur. For government employees, motor vehicle accidents are the leading cause of death on the job, but many accidents could be prevented with defensive driving. (18 minutes)

SW 1011: Comprehensive Intersection Resource Library Version 3 (FHWA 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. Please note: some publications on partner web sites are available for purchase only. Purchase information is included in the file, or follow directions to the bookstore on the organization's web site. Amazing amount of resource info!

SW 2510: Lifelines: Your National Forest Roads (USDA 2006) This DVD explores the relationship between people and the land as it celebrates the partnership between the USDA Forest Service, Federal Lands Highway Administration, and state and local communities in providing continued stewardship and access to national forests. (32 minutes)





Local Technical Assistance Program  
 Faculty Court Unit 22  
 PO Box 173910  
 Montana State University-Bozeman  
 Bozeman, MT 59717-3910



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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.

The Local Technical Assistance Program Newsletter, **LTAP MATTERS**, is published quarterly. Funding for this program is provided by the Federal Highway Administration through the 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 that may be helpful to you and your community.

Present and past issues are available at [www.coe.montana.edu/ltap](http://www.coe.montana.edu/ltap) or by calling 1-800-541-6671.

### 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  
 Faculty Court Unit 22  
 PO Box 173910  
 Montana State University-Bozeman  
 Bozeman, M 59717-3910

(800) 541-6671 or (406) 994-6100  
 Fax: (406) 994-5333  
 email: [mbeck@coe.montana.edu](mailto:mbeck@coe.montana.edu)