



# LTAP MATTERS

Montana's Answers To Technical Education of Roads & Streets

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

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### 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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## SPCC...Are You In Compliance?

by Michele Beck

**“What does your plan contain?”** This question was asked by Montana LTAP Director Steve Jenkins as he presented the latest on Spill Prevention Control and Countermeasures Rule program to the county road departments this fall. He also noted that South Dakota LTAP generously shared their SPCC information in developing this program.

Jenkins explained that the oil pollution prevention regulation promulgated under the authority of the Federal Water Pollution Control Act (Clean Water Act) expresses through this rule the requirements for Spill Prevention Control and Countermeasures (SPCC) plans.

Jenkins pointed out that if a facility has an aggregate above-ground oil storage capacity of more than 1,320 gallons and oil can be reasonably expected to enter into navigable waters via any means from floor drains to direct discharge into water-- then it would fall under the requirement for an SPCC plan.

### The SPCC Plan

Reviewing the EPA requirements, Jenkins explained that there are three areas in the SPCC plan:

1. Operating procedures the facility implements to prevent oil spills.
2. Control measures installed to prevent oil from entering navigable waters or adjoining shorelines.
3. Countermeasures to contain, cleanup, and mitigate the effects of an oil spill that has an impact on navigable waters or adjoining shorelines.



In the summer of 1999, there was a train derailment and oil spill on the Clark Fork River in Montana. Nearly 39,500 of the 40,000 gallons of discharged asphalt were recovered and disposed. Jenkins asked the audience if their personnel has the training and equipment to respond to similar emergencies.

Jenkins noted that Montana is not bordered by an ocean, but the interpretation of navigable waters is often broadly interpreted by regulators. This includes interstate/intrastate “lakes, rivers, streams, wetlands, wet meadows, or natural ponds which are navigable or are tributaries to navigable waters” (Jane Nakad, US EPA). Jenkins pointed out that tributaries up to 200 miles from the actual navigable water have been held to liability.

... continued on page 2

## ADVISORY COMMITTEE MEMBERS

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Montana Dept of Transportation

### Workshop Quote

Thanks, LTAP! This training has the potential to save counties literally millions of dollars in fines. It will definitely help us mitigate some problems.

*Jerry Forman, Custer County*  
Re: SPCC Workshop

## SPCC... (Continued from page 1)

Jenkins discussed with participants the following points that the EPA requires in an SPCC plan:

- Professional Engineer certification
- Plan must follow the sequence of 40 CFR 112.7 or provide cross-references to the requirements in 40 CFR 112.7
- Facility diagram
- Oil spill predictions
- Facility drainage
- Facility inspections
- Site security
- Five-year plan review
- Management approval
- Appropriate secondary containment or diversionary structures
- Loading/unloading requirements and procedures for tank car and tank trucks
- Personnel training and oil discharge prevention
- Brittle fracture evaluations
- Bulk storage container compliance
- Transfer procedures and equipment (including piping)

Because not all facilities are alike, some of these elements may not be in a particular plan noted Jenkins. He further stressed that this plan needs to be reviewed and certified by a professional engineer and must be reviewed and recertified by a registered PE at least once every five years.

When it comes to training employees, Jenkins quoted the EPA requirements: "Personnel, training, and discharge prevention procedures: At a minimum, train your oil-handling personnel in the operation and maintenance of equipment to prevent discharges; discharge procedure protocols; applicable pollution control laws, rules, and regulations; general facility operations; and the contents of the facility SPCC Plan."

When training employees, Jenkins said to focus on these four points:

1. The responsibility of all personnel to comply with items in the rule.
2. What potential sources of spills might be.
3. Practical instruction on spill prevention.
4. Containment and countermeasures if a spill occurs.

### Training and Recordkeeping

During this portion of the seminar, Jenkins informed the audience that it was necessary to conduct inspections and tests in accordance with written procedures that the supervisor or the certifying engineer developed for the facility. These written procedures and a record of the inspections and tests need to be signed and kept by the

### Updates to SPCC Rules, §112.3

If your onshore or offshore facility was in operation on or before August 16, 2002, you must maintain your Plan, but must amend it, if necessary, to ensure compliance with this part, on or before August 17, 2005, and must implement the amended Plan as soon as possible, but not later than February 18, 2006. If your onshore or offshore facility becomes operational after August 16, 2002, through February 18, 2006, and could reasonably be expected to have a discharge as described in §112.1(b), you must prepare a Plan on or before February 18, 2006, and fully implement it as soon as possible, but not later than February 18, 2006.

(From Federal Register, June 17, 2004, Part II, Environmental Protection Agency, 40 CFR Part 112)

appropriate supervisor or inspector for three years with the SPCC Plan. This follows a standard business procedures of keeping records.

He pointed out that there needs to be a person designated at each applicable facility who is accountable for discharge prevention and who reports to facility management.

... continued on page 3

## SPCC... (Continued from page 2)

### Security

There were several security items Jenkins pointed out to meet the requirements.

Included in those were fully fencing each facility handling, processing, or storing oil, and to lock and/or guard entrance gates when the facility is not in production or is unattended.

Another procedure involved ensuring that the master flow and drain valves and any other valves permitting direct outward flow of the container's contents to the surface have adequate security measures so that they remain in the closed position when in nonoperating or non-standby status. He mentioned to lock the starter control on each oil pump in the "off" position and locate it at a site accessible only to authorized personnel when the pump is in a nonoperating or non-standby status.

When lighting a facility, Jenkins discussed the factors to consider such as discovery of spills occurring during hours of darkness, both by operating personnel, if present, and by nonoperating personnel (general public, local police). He noted that lighting can also detour spills occurring through acts of vandalism.

During regular examinations of above-ground valves and pipelines, Jenkins engaged the audience to discuss the various types of joints, pipeline supports, valves, and catch pans that needed to be checked at their particular facility. This further lead to discussion on all tanks containing oil that should be visually examined on a scheduled basis.



John Habermann, Indiana LTAP Photo

6,000 gallon tank with poured concrete retaining system

The bottom line on the SPCC Plan Jenkins outlined was have a plan. Have prevention measures in place, be prepared if you have a spill, keep personnel trained, know who to report to, and have phone numbers available.

Jenkins explained that Montana is in EPA's Region 8. Their office location is in Denver and their phone number is 1-800-227-8917 (Region 8 states only). EPA Montana Operations Office is in Helena and their toll-free number is 866-457-2690.

*Please contact our Conference Coordinator, Donnetta Bohrman at 1-800-541-6671 or email: [dbhorman@coe.montana.edu](mailto:dbhorman@coe.montana.edu) at the Montana LTAP office if there is any interest in booking the SPCC workshop.*

LTAP Matters is published by the Local Technical Assistance Program at Montana State University, Bozeman, Montana.

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### SPILLS

The reportable quantity of any common oil product spilled is 25 gallons. For further information, contact: Jane Nakad, 303-312-6202, or Martha Wolf, 303-3312-6839.

Website:  
[www.epa.gov/oilspill](http://www.epa.gov/oilspill) or  
[www.epa.gov/region8/](http://www.epa.gov/region8/)

## Work Zone Safety and Mobility in the Federal Register

To view this final rule on the  
Federal Register, go to this  
website: [http://wzdev.tamu.edu/  
docs/Sep9\\_04.pdf](http://wzdev.tamu.edu/docs/Sep9_04.pdf)

National Work Zone  
Awareness Week 2005  
April 3-9, 2005  
**Aware, Alert, Alive**

ARTBA & NSC Announce Winners of  
2004 Roadway Work Zone Safety  
Awareness Awards (website:  
[http://www.artba.org/news/  
press\\_releases/2004/11-08a-04.htm](http://www.artba.org/news/press_releases/2004/11-08a-04.htm))

### Awards:

Private Outreach Campaigns - The  
winner was New York State Chapter,  
Inc. Associated General Contractors -  
"2004 Work Zone Safety Act"

Government Outreach Programs  
The winner was Pennsylvania  
Department of Transportation  
Engineering District 10 - "Route 119  
South Work Zone Safety &  
Education Outreach Campaign"

Public/Private Collaboration  
Outreach Programs  
The winner was Illinois Road &  
Transportation Builders Association,  
Illinois Department of Transportation,  
the Illinois State Toll Highway  
Authority - "Keep Us Alive - Drive  
45" campaign

Safety Training - HRI, Inc. -  
"Lacawanna/Luzerne Counties SR  
81" (Special note: This training  
program paid off in June 2004 when an  
intoxicated driver entered the closed  
lane of a roadway construction work  
zone. A properly positioned trooper  
spotted the driver and immediately  
radioed another trooper stationed by  
the workers. The other officer used his  
patrol car to prevent the drunk driver  
from striking eight workers in the  
roadway. It helped prevent any serious  
injuries or fatalities.)

# Work Zone Rule = Talking Points

by Lloyd Rue, Design,

The FHWA published the final rule on Work Zone Safety and Mobility in the Federal Register on September 9, 2004, with an effective date of October 12, 2007. The new rule will affect all State and local governments that receive Federal-Aid Highway funding. The purpose of the update is to address the changing times of more traffic, more congestion, greater safety issues, and more work zones:



## Key Features:

- A policy-based approach to institutionalize work zone processes and procedures.
- Emphasis on both the broader safety and mobility impacts of work zones.

## How It Works:

- Advance work zone considerations as early as possible in project delivery.
- Adopt policies and procedures to support systematic consideration and management of work zone impacts.
- Develop and implement strategies to manage impacts.
- Monitor and assess work zone performance.
- Use work zone safety and mobility data to improve policy, processes and procedures.

## FHWA Support Efforts:

- Develop and provide implementation guidance that addresses every aspect of the new rule by summer 2005.

## Overview of the Final Rule

### Goals:

#### Expand thinking beyond the actual Work Zone itself

- ▶▶ Corridor, network, and regional issues (e.g., alternate routes and/or modes, truck traffic, special events, etc.)

#### Expand Work Zone management beyond "traffic safety and control"

- ▶▶ Address mobility in addition to safety
- ▶▶ Address current day issues of "operations and management" and "public information"

#### Advocate innovative thinking in Work Zone planning & design

- ▶▶ Think outside of the "traffic safety and management" box

## Specific Focus Areas:

- ▶ Institutionalize Work Zone processes, procedures, practices
- ▶ Advocate partnership and multi-disciplinary approach
- ▶ Communicate more effectively with the public
- ▶ Advance Work Zone considerations throughout project delivery
- ▶ Address needs for different project types and classes
- ▶ Emphasize work zone focused training
- ▶ Emphasize performance monitoring and assessment



# From the Montana LTAP Director

It's time to prepare for another winter season. Stockpiles of sand are popping up like giant anthills. Liquid deicer tanks and storage sheds are as full as the firewood stacks on cabin porches. Snow plows have new blades and the wings are being attached to the graders. But are we personally ready? Are we trained and do we have the clothing and materials to protect us from winter's chill?

We have already been reminded we are not ready here in Montana--thirty-five injured by carbon monoxide and three killed with two survivors when severe storm caused a plane crash. And yet the lessons learned from not panicking can be taught from a three-year-old boy in the Bitterroot mountains!

Discover how to survive this winter from the workshops I provide as I travel across the state teaching about carbon monoxide, hypothermia, safety, and skills.



Steve Jenkins Photo

I would enjoy being your personal guide through a day of discovery and preparation for the winter months.

*Steve Jenkins*

## Driving Is NEVER A Good Time for Multitasking

Multitasking behind the wheel doesn't make you an overachiever, it makes you dangerous. Driving is complicated enough. At a minimum, you are operating a piece of heavy machinery at a high speed, navigating across changing terrain, calculating speeds and distances, and responding to all the other drivers and obstacles around you. Adding one more activity into the mix can be enough to make you lose control of your vehicle or fail to respond in an emergency.

Talking on a cell phone, eating a hamburger, getting into a serious discussion, or changing a CD are all activities that can take your focus away from driving. All drivers engage in some kind of distracting activity while they are behind the wheel, according to research funded by the AAA Foundation for Traffic Safety and performed by the University of North Carolina Highway Safety Research Center.

Using in-car video cameras to observe drivers' behaviors while behind the wheel of their own cars, researchers' tapes showed that distraction is an everyday occurrence. In three hours of driving, all of the drivers were distracted at some point -- 90 percent by something outside the car and 100 percent by something inside the car.

Driver inattention is a factor in more than 1 million crashes in North America. Chances are you are doing something potentially distracting more than 15 percent of the time that your vehicle is in motion.

*Received from AAA*



Steve Jenkins Photo

## Other National Happenings

ATSSA's 35th Annual  
Convention and Traffic Expo  
February 25 - March 1, 2005  
"Where the Industry Meets"  
Phoenix Civic Plaza  
Phoenix, Arizona  
website: [www.atssa.com/  
meetevents/expo/](http://www.atssa.com/meetevents/expo/)

Transportation Research Board  
84th Annual Meeting  
**January 9-13, 2005**  
Washington, DC  
For Information go to website:  
[trb.org/meeting](http://trb.org/meeting)

International Conference on Best  
Practices for Ultra-thin(UTW) and Thin  
Whitetoppings (TWT)  
**April 12-15, 2005**  
Denver, CO  
Contact: Shiraz Tayabji at Construction  
Technology Laboratories, Inc., 410-  
997-0040; Fax: 410-997-8480 email:  
[stayabji@ctlgroup.com](mailto:stayabji@ctlgroup.com)

Seventh International Symposium on  
Utilization of High-Strength/High-  
Performance Concrete (HPC)  
**June 20-24, 2005**  
Washington, DC  
Contact: Thomas Adams at the  
American Concrete Institute, 248-  
848-3742  
**email:** [thomas.adams@concrete.org](mailto:thomas.adams@concrete.org)  
**Web:** [www.concrete.org/events/  
conferences/  
7th\\_International\\_Symposium.htm](http://www.concrete.org/events/conferences/7th_International_Symposium.htm)

2005 Value Engineering  
Conference  
July 20-22, 2005  
San Antonio, Texas  
Contact: Donald Jackson at FHWA,  
202-366-4630  
email: [donald.jackson@fhwa.dot.gov](mailto:donald.jackson@fhwa.dot.gov)  
or  
Susan McClain at Texas Department  
of Transportation,  
903-799-1311  
email: [smcclain@dot.state.tx.us](mailto:smcclain@dot.state.tx.us)

# Annual Calendar 2005

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Some dates & locations subject to change. Call Donnetta Bohrmann, LTAP, 1-800-541-6671 or 406-994-6100 to confirm.

# Calendar of Winter Events 2005

## **Risk Management - Loss Control Conference**

**Partnerships of MACo, Montana LTAP, &  
Montana Sheriffs' & Peace Officers' Association  
Lewistown, Montana January 17-19, 2005**

Yogo Inn 1-800-860-9646

Register with MACo

**Contact: Emelia McEwen at 406-457-7210**

## **Full Depth Recycling Seminar: 9:00am-Noon**

**Partnerships of Montana LTAP, Montana Contractors  
Association, and Northwest Cement Producers Group  
Billings, MT January 25, 2005**

Holiday Inn Grand

5500 Midland

406-248-7701

**Great Falls, MT January 27, 2005**

Holiday Inn

400 10th Avenue South

406-727-7200

**Register with Montana LTAP**

**Contact: Donnetta Bohrman, Conference Coordinator  
1-800-541-6671 or 1-406-994-6100**

## **MACRS 25th Annual Conference**

**Billings, Montana March 29-April 1, 2005  
Holiday Inn Grand  
406-248-7701**

**Brochures will be sent out late January for Registration**

**Contact: Donnetta Bohrman, Conference Coordinator  
1-800-541-6671 or 1-406-994-6100**

## **Full Depth Recycling Seminars**

On January 25, Billings, Montana, and on January 27, Great Falls, Montana, LTAP, in partnership with Northwest Cement Producers Group and Montana Contractors Association, will offer a half-day seminar. State-of-the-art information will be presented on Full Depth Recycling (FDR), sometimes called Cement Recycled Asphalt Base (CRAB), that can be utilized to save time and natural resources in the rehab and reconstruction of asphalt roads. Also included will be case studies of projects that illustrate why FDR is an excellent choice for

rebuilding roads. From specifications to step-by-step construction considerations, a wide range of topics regarding road reconstruction will be included in this program. This information will be of interest to city, county, highway districts, state, tribal, and federal agencies, as well as private contractors and consultants. Handouts provided!

Contact Donnetta Bohrman, Montana LTAP, for more information and registration, 1-800-541-6671 or email: [dbohrman@coe.montana.edu](mailto:dbohrman@coe.montana.edu).

## **Spring Events 2005**

- **March 29-April 1, 2005  
MACRS 25th Annual  
Conference**
- ▶ Billings, Montana
- ▶ Holiday Inn Grand
- ▶ Registration brochures will be coming out in late January, 2005

Washington State University  
**Road Builders' Clinic  
March 1-3, 2005**  
Coeur d'Alene Resort  
Coeur d'Alene, ID  
Call WSU Conference & Profes-  
sional Programs 1-800-942-  
4978 or go on-line:  
<http://capps.wsu.edu>

## **Let's Do It Again!**

At the MACRS Annual Conference last year, there were representatives from every county in this great state of Montana. Tom Romo, MACRS President, is asking commissioners, county road superintendents, and road crews to pull together once again and make this 25th Annual Conference a show of unity by having all 56 counties represented! The training, the vendors, and exchange of information at this conference is invaluable.

When the brochures arrive the end of January, make that extra effort to get signed up early.

# Frost Bites, Don't Let It Bite You

According to Information from AAA

Preventative car care is the best way to protect your safety and your investment. The type of care depends on your driving habits, mileage, and the manufacturer's recommended service schedule. Follow these tips to help you keep your vehicle protected during harsh winter weather.

## **Give the suspension a quick once over.**

Look for worn or damaged springs, shocks, struts and steering components that can impair ride and handling.

**Check tire tread.** In wet and snowy road conditions, having good tires with sufficient tread depth is crucial. To check any tire's tread depth, insert a penny vertically, upside down, into a tread groove. If you can see above Lincoln's head, the tire is in need of replacement.

**Regardless of type, keep your tires properly inflated to the vehicle manufacturer's recommendations.** Tires typically lose one pound of inflation pressure for every 10-degree drop in outside temperature. Never under inflate tires. It's a myth that lowering tire pressures will increase traction on slippery surfaces.

**Take to heart the old adage, "see and be seen."** Winter's short days, freezing temperatures, snow, sleet, slush, mud, rain, ice, and fog make it essential to always keep a good ice scraper and snow brush in your vehicle.

**Make sure all your car's lights are working properly.** With the help of a friend check the headlights, taillights, brake lights, backup lights, running lights, side-marker lights, fog lights, license plate lights, and four-way hazard warning lights.

**Check your battery.** Battery problems are the most common cause of road service calls in the winter. If you have any doubts about your car's battery or charging system, head to a facility for a complete charging system check, including a battery inspection and load test. And don't forget the most overlooked cause of poor battery charging, a loose alternator belt.

**Emergency plans.** Be prepared to take care of yourself should an emergency arise. Equip your vehicle with an emergency kit, depending on how far you travel off the beaten path.

**Check your antifreeze.** A 50/50 mixture of coolant and water provides your engine with protection down to 30 below zero. Never use 100 percent engine coolant as it will begin to freeze before the temperature reaches zero.

**Choose the right oil to protect your engine.** Oil viscosity does increase rapidly as the mercury drops. A lighter grade of oil will reach critical engine lubrication areas much quicker, greatly reducing wear. Choose oil based on your vehicle manufacturer's recommendations, and be sure to install a new filter when changing the oil.

**Have an under-car inspection.** Check the mufflers and pipes for leaks. Make sure all connections and mounting points are in good condition to reduce the possibility of being damaged by snow and ice ridges that build up on unplowed winter roads.



Steve Jenkins Photo

## Emergency Kit Items

- ▶ Jumper Cables
- ▶ Tire chains
- ▶ Windshield washer fluid
- ▶ Coolant (50/50 mix)
- ▶ Wiper blades
- ▶ Light bulbs
- ▶ Hoses
- ▶ Belts
- ▶ Basic tools
- ▶ Flares or reflectors
- ▶ Flashlight (with good batteries)
- ▶ Blankets
- ▶ Radio receiver
- ▶ Cellular phone
- ▶ CB radio
- ▶ Folding shovel
- ▶ Traction sand
- ▶ Food that won't freeze
- ▶ Medication you need regularly



# In Memory

by Shane Peterson, Associate Editor, *Government Technology*

Permission was granted to reprint this article from *Government Technology*, November 2004 issue

We've all seen white crosses or other shrines along the side of a road or highway marking somebody's death. Those memorials mean something to the people who loved the men, women or children killed in those traffic accidents, and could teach the living a lesson if they could speak.

At least two states have given a voice to those shrines. The South Carolina Highway Patrol and Montana's Department of Transportation gave families of victims of fatal traffic accidents a modern forum through which to express their grief: memorial Web sites.

## Big Sky Highways

The Montana Department of Transportation (MDT) created its "Remembrance ..." Web site <[www.mdt.state.mt.us/remembrance](http://www.mdt.state.mt.us/remembrance)> on July 1, 2004, said Dave Galt, director of the MDT.

If a family wants to create a memorial, the Remembrance Web site provides a PDF submission form that must be printed, filled out and sent to the State Highway Traffic Safety Office. The one-page form asks for general information about the deceased and the location of the fatal accident, and requests testimonial text. Photo submissions also are encouraged.

"We've had a lot of inquiries," Galt said. "The response has been good. I was a little concerned we might get some negative feedback, but we haven't."

Galt said his concern came from worry that people might perceive the Web site as too intrusive into their private lives or as a waste of taxpayer money. The idea for the Remembrance Web site came from a member of the MDT's technical team, he said, after he asked the team to propose ways to improve the Highway Safety program's Web presence.

"I challenged staff to come up with ideas that cover all sorts of things and could go

on the Web site," he said. "One of our technical folks was looking at different Web sites across the country and saw [the South Carolina Highway Patrol Web site] and asked me, 'Have you ever heard of this? Is this something you'd be interested in?'"

This is clearly a new area for e-government, usually defined as putting payment options or other bureaucratic necessities on-line. A government agency providing a way for a family to express its sorrow over the untimely death of a loved one creates a degree of intimacy not found in normal electronic service offerings.

"I'm head of the highway department," he said. "People die on the highways, and sometimes it just bothers me. What can we do to help? What can we do to make this better? What am I not doing? I've wanted in the past -- but I've refrained from doing it -- to express my sympathy to a family when this happens on the highway."

The death of a loved one is personal and private, but making it public through a memorial Web site give families the chance to allow the outside world to know that person.

Galt said the MDT has been careful in deciding how to make people aware of the site and let them know the state is willing to put submitted testimonials on the Remembrance Web site.

"How do you reach out? When do you reach out?" he said. "If I was on the phone [to a family] three days later, I'd look bad. We talked about that, and we decided we wanted to wait 90 days and then reach out. We'll send a letter out to express our condolences and offer this [Web site] as a way to help."



## Winter Preparation List

1. Before winter arrives, prepare your vehicle for use in ice and snow.
2. Avoid driving while fatigued.
3. Use your safety belt every time you get in the vehicle.
4. Never warm up a vehicle in an enclosed area, such as a garage.
5. Never leave your vehicle unattended with the engine running.
6. Make certain your tires are properly inflated.
7. Keep your gas tank at least half full to avoid gas line freeze-up.
8. If possible, avoid using your parking brake in cold, rainy and snowy weather.
9. Do not use cruise control when driving on any slippery surface (wet, ice, sand).
10. Always look and steer where you want to go.

Information from AAA

NACE 2005 Conference  
Information and Registration:  
[www.countyengineers.org](http://www.countyengineers.org)

(We do have the full agenda and registration information at the Montana LTAP office if you do not have website capabilities. Call us at 1-800-541-6671.)

# NACE Conference Right Next Door

The NACE 2005 Annual Meeting and Management & Technical Conference will be hosted by the North Dakota Association of County Engineers in Bismarck, North Dakota from April 17-21, 2005. Each spring over 350 NACE members and other attendees gather for this NACE annual conference.

**Networking:** Throughout the conference attendees will have opportunities to meet public works leaders and their counterparts from other counties around the country, to

- Gravel Road Maintenance
- Road Reclamation/Asphalt Recycling Techniques
- MUTCD Update
- What's New in Snow & Ice Control

#### Technology Track

- GIS, Rural County Applications
- Steel Straightening of Damaged Bridges
- Geotechnical Presentation
- What's New with our LTAP's

#### Management Track

- Local Road Research Programs
- Meeting the Transportation Workforce Shortage
- Dealing with the Media w/County Perspective
- Asset Management
- Litigation: Preparing Yourself for the Inevitable

**Committee Meetings:** Share your knowledge and insights on issues of interest to you. All members are encouraged to participate in the committees that cover a wide range of issues including traffic, construction and maintenance, information technology, GIS surveying, structures, stormwater and drainage, or asset management (see committee listing in the Annual Membership Directory or on the NACE web site at [www.countyengineers.org](http://www.countyengineers.org)).

**Exhibit Show:** During the first two days on Sunday and Monday, the exhibit show offers a friendly environment for delegates to learn about the latest products and services. This year's show will feature over 100 exhibit booths and an Outdoor Equipment Show. The exhibit map and listing will be updated on the NACE website so that you can see it ahead of time.

**Annual Banquet:** The grand finale of the conference is the President's Reception and Annual Banquet dinner which includes the presentation of Engineer of the Year awards, the induction of the new NACE officers and entertainment.

Finally, the local attractions and tours top off your reasons to attend. This conference is the only conference designed just for you because it is planned and hosted by your peers, NACE member volunteers.



exchange ideas, and have some fun. You can build professional contacts while meeting friends.

#### General Session & Technical Sessions:

By attending timely and informative sessions and workshops, delegates find ideas that help them get the most benefit out of scarce local government resources. Also you will gain a better understanding of the latest transportation legislation and regulations. An additional educational value is that you can earn professional development units for attending the NACE conference.

#### General Session Topics:

- Are We There Yet? - Reauthorization of TEA-21
- Feeding the Beast - Effective Media Relations
- Ready for Your Day in Court? - Mock Trial
- Everyone's Top Priority - Rural Road Safety

#### Technical Session Topics:

- Transportation Track
- Bridge Rehabilitation

#### NACE Optional Pre-conference Events

Saturday, April 16, 2005 -  
Golf Outing

Saturday, April 16, 2005 -  
Tour of Falkirk Mine

Saturday, April 16, 2005 -  
Curling/Hockey Game

Separate registration and fees  
required for these events.

Contact NACE or visit:  
[www.countyengineers.org](http://www.countyengineers.org)

# Roads Scholar Requirements

by Michele Beck

“At the present time, Montana LTAP has recorded a possible 2,446 Roads Scholars in the data base system,” reported Donnetta Bohrman, Conference Coordinator. She further explained that every time a participant attends any of the Montana LTAP workshops or conferences, they are entered into this data base. This started back in January, 2001. To date, there have been five people that met the requirements for Roads Scholar Level I:

- Wayne Buck, Rosebud County
- Russ Huotari, Richland County
- Jack Knorr, Stillwater County
- Herb Schmierer, Richland County
- Randy Werdall, Stillwater County

Bohrman continued to explain that this 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. It has been her understanding that through this program local agencies will be providing an opportunity to develop the agencies' greatest asset--its employees.



Dillon Gravel Roads Class 2004

She explained that there will be provisions for some courses and the Director will determine the student's ability to demonstrate a basic knowledge of the subject.

With the upcoming MACRS 2005 Conference, March 29-April 1, Bohrman noted there will be several more Roads Scholars honored at the Evening Banquet. “This is always an exciting time for those road personnel who have continued to pursue education and training and receive recognition,” commented Bohrman. “In addition to this recognition, the Roads Scholar Program promotes attendance at the various LTAP safety workshops and further learning and education,” she concluded.

## Roads Scholar -- Level I

### Core Requirements

This program may be completed in four to six years.

1. **Work Zone Class (1)**
2. **Equipment Operation Class (1)**
3. **Winter Maintenance or Safety Class (1)**
4. **Leadership Class (1)**
5. **Optional Classes (6)**

*Optional Classes for Road Scholar -- Level I*

1. Drainage
2. Forklift
3. PASER
4. Sign Vandalism
5. Summer Survival
6. Cattle Guards
7. Wheel Loader

## Roads Scholar -- Level II

### Core Requirements

This program may be completed in four to six years.

1. **Work Zone Class (2)**
2. **Equipment Operation Class (2)**
3. **Winter Maintenance or Safety Class (2)**
4. **Leadership Class (2)**
5. **Optional Classes (12)**

*Optional Classes for Road Scholar -- Level II*

1. Tort Liability
2. Management Classes
3. Culvert Placement Trenching
4. Sensitivity Training
5. Dust Control
6. IMSA

## Training Employees Improves Bottom Line

(Source: American Society for Training & Development)

In fact, there is evidence that investments in work force training can predict a company's future financial performance, including stockholder return. The ASTD found that of 575 publicly traded firms reviewed between 1996 and 1998, those that invested \$680 more in training per employee than the average company in the study improved their total stockholder return by 6%--even after other factors were considered. Not only is a firm's commitment to workplace learning directly linked to its bottom line, researchers found a link to the gross profit margin and income per employee. Firms in the top quarter of the study group invested an average of \$1,595 per employee in training and had 24% higher gross profit margins and 218% higher income per employee than firms in the bottom quarter, which invested \$128 per employee.

### Workshop Quote

LTAP continues to provide quality training and information to all employees.

*Del "Mo" Henman,  
Yellowstone County  
September 29, 2004*

# MDT Soliciting Your Participation

## Solicitation for Transportation Research Needs and Topics

from Sue Sillick, Chief, Research Bureau, MDT

The Montana Department of Transportation (MDT) conducts research to discover, develop, or extend knowledge needed to operate, maintain and improve the statewide multimodal transportation system. Specific goals include:

- Evaluation and Advancement of New Technologies
- Materials and Methods
- Development of Design and Analysis Techniques
- Study of Current Transportation Challenges

Research ideas are suggested through their annual solicitation for your participation in MDT's Research Program by submitting Research Problem Statement(s) found at this web site: [www.mdt.state.mt.us/research/unique/solicit\\_form.shtml](http://www.mdt.state.mt.us/research/unique/solicit_form.shtml).

The form may be submitted online by going to [www.mdt.state.mt.us/research/unique/solicit.shtml](http://www.mdt.state.mt.us/research/unique/solicit.shtml).

A champion (Item VI on the Research Problem Statement form) can be any MDT staff who feels strongly that the research will benefit the Department, is willing to chair the Technical Panel, and oversee the project as it progresses. A sponsor (Item VII in the Research Problem Statement form) is the Division Administrator responsible for implementation of the particular research results.

When problem statements are received, an internal champion and sponsor will be sought for each problem statement if one is not listed.

Please transmit the completed forms to Sue Sillick by December 31, 2004. Research staff will acknowledge each submittal and will later inform you of the status of your topic. If you have any questions, please contact Sue Sillick by phone at 406-444-7693 or e-mail her at [ssillick@state.mt.us](mailto:ssillick@state.mt.us).

After this solicitation closes, the Research Review Committee (RRC) and District Administrator will prioritize all of the research statements with a champion and sponsor. Then the RRC will choose which topics will be added to our research project list.

Please note that all research ideas submitted become public property. Submitters are not guaranteed to receive the contract for work resulting from any submitted research idea.

This solicitation is being directed to a broad range of universities, colleges, professional engineering firms, car and truck owner association, highway contractors, transit firms, etc., in the hope that MDT might receive a wide variety of research topics for consideration. Please pass on this information to anyone you might know who would be interested in submitting research ideas.



Problems should be submitted on the Research Problem Statement form and should be relatively brief, preferably not more than a typewritten page in length. The problem statements should include:

- The Problem title
- The Problem statement
- The Research proposed
- IT components
- The urgency of the problem and the probable benefits
- Implementation plan
- Your name, title, affiliation, address and phone number
- Champion information (optional)
- Sponsor information (optional)



# National Bicycling & Walking Study

by Michele Beck

The National Bicycling and Walking Study, Ten Year Status Report, October 2004, just came out from the Federal Highway Administration and can be viewed in full context at this web site: [www.fhwa.dot.gov/environment/bikeped/study/index.htm](http://www.fhwa.dot.gov/environment/bikeped/study/index.htm).

Chapter One deals with the Introduction and Background regarding this study. Because bicycling and walking were somewhat thought of as “forgotten modes” of transportation, only about \$2 million of Federal transportation funds were expended on these projects for bicycling and walking. In 1991, the U.S. Congress requested from the Federal Highway Administration how they were going to increase bicycling and walking while also improving the safety factors involved in these two methods of transportation.

Congress appropriated \$1 million to complete the National Bicycling and Walking Study. The Federal Highway Administrator and National Highway Traffic Safety Administrator walked the final report to U.S. Congress on April 22, 1994. The study had two overall goals: 1) Double the percentage of total trips made by bicycling and walking in the United States from 7.9 percent to 15.8 percent of all travel trips; and 2) Simultaneously reduce by 10 percent the number of bicyclists and pedestrians killed or injured in traffic crashes.

An overview of this progress of these two goals is covered in Chapter Two. Within the Department of Transportation, Chapter Three talks about the status of bicycling and

walking ten years after the release of this landmark study. In Chapter Four are the conclusions and recommendations for actions the Department can take to achieve the overall goals of the study.

There are also three appendices attached to this report covering:

- A detailed assessment of how the Department has responded in the last five years to each of the 60 activities in the nine-point Federal Action Plan provided.
- Detailed assessment of the Department’s response that was prepared for the first five-year report.
- Funding Information for bicycle and pedestrian projects using Federal-aid funds.

“Bicycle and pedestrian facilities and programs are an integral part of our nation’s transportation system for the 21st century,” Secretary of Transportation Norman Mineta wrote in a 2001 letter. He also supported the Department in “efforts to mainstream bicycling and walking facilities and programs into our Nation’s transportation system at all levels of government...”



Steve Jenkins Photo

Dan Jenkins  
Red Lodge, Montana  
State Championship



Steve Jenkins Photo

## Did You Know?

Montana has a full-time State Bicycle and Pedestrian Coordinator. Carol Strizich can be reached at 406-444-9273 or go to MDT’s website: [www.mdt.state.mt.us/tranplan/bikeped/bicycle.shtml](http://www.mdt.state.mt.us/tranplan/bikeped/bicycle.shtml). She was hired in response to a commitment in TranPlan 21, Montana’s long range transportation plan. Carol is also asking for help in collecting information from bicycle organizations and popular bicycling route data and usage in Montana. On the website, there is information about bike routes, safety, 36” x 36” “Bikes on Roadway” signs that can be reserved and checked out from three MDT individuals, and ever critical Montana traffic laws pertaining to bicycling.

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.

Call Donnetta Bohrman or Michele Beck, LTAP  
1-800-541-6671  
for information or checkout procedures.

Note that our website at [www.coe.montana.edu/ltap](http://www.coe.montana.edu/ltap) has been updated and includes the total library publications, software, and videos. At this website you can also keep track of upcoming workshops, our newsletter, and "What's New" items that change seasonally.

Your success in life will be a direct balance with how much you help others achieve it.  
*D.J. Eagle Bear Vanas*

# Montana LTAP Lending Library

## Publications

**p-14:** *Enhanced Abutment Scour Studies for Compound Channels (FHWA August 2004)*: This report describes a laboratory study of abutment scour for compound channels where the experiments simulated floodplains with defined channel and overbank flow areas at different elevations. This report will be of interest to bridge engineers and hydraulic engineers involved in bridge scour evaluations and to researchers involved in developing improved bridge scour evaluation procedures.

**p-73:** *Long-Term Performance of Epoxy-Coated Reinforcing Steel in Heavy Salt-Contaminated Concrete (FHWA June 2004)*: This report describes results obtained from a long-term natural weathering exposure testing of the remaining 31 post-Southern Exposure (SE) test slabs that contained epoxy-coated reinforcing bar (ECR), black bars, and stainless steel bars. This report will be of interest to materials and bridge engineers, reinforcing-concrete corrosion specialists, reinforcing bar manufacturers, producers of organic coatings, and manufacturers of stainless steel.

**p-213:** *Highway Engineering Handbook, 2nd Edition, 2004*: This new edition of the handbook has been updated throughout to reflect continuing changes and improvements in design trends and specifications. Significant new information has been added to the chapter on value engineering to reflect the current roles of the Federal Highway Administration and the American Association of State Highway and Transportation Engineers; additional examples of applications have been included too.

**p-218:** *Field Guide for Unpaved Rural Roads (Kansas LTAP 2004)*: The purpose of this updated guide is to provide assistance to local governments responsible for safety of unpaved rural roads. (Wyoming LTAP produced this guide in 1997.)

**p-252:** *Transportation Research Board of the National Academies: Eighth International Conference on Low-Volume Roads 2003 (No. 1819, Volume 1 and Volume 2)*: Nearly 70% of the road miles in the US, and nearly 90% of road miles in the world, are low-volume roads. Financial limitations force road administrators to seek low-cost and innovative solutions to keep their low-volume roads in the best condition possible. This is not an easy task. In recognition of this reality, a series of conferences on low-volume roads was begun in 1975 by what is now known as the Committee on Low-Volume Roads in the Transportation Research Board. The goals of this Eighth Conference are consistent with those of past meetings: to identify and share practical solutions for administration, planning, design, construction, environmental management, and maintenance of low-volume roads. This two-volume Proceedings contains 96 papers. (TRB 2003)

**p-605:** *Spill Compliance Manual, 2004*: The goal of this reference manual is to provide a very practical approach to spill response. What do you—the plant manager, or facility operator—need to know about setting up an emergency response team and maintaining cleanup supplies; what government agencies need be contacted; how should you handle the media in small and large emergency events; what are the actual regulations governing spill situations? (JJ Keller & Associates, Inc. 2004 ) 461pages

**p-606:** *Environmental Compliance Manual, 2004*: This reference manual provides a broad overview of many of the key environmental issues facing those who have the responsibility for administering environmental policies and procedures. While specific regulations regarding environmental issues are not within the scope of this book, references are often made to the regulations that will provide you with additional information about where to go for more help. The manual is divided into four parts: Federal Regulatory Overview, State Agencies, Pollution Control Issues, Compliance Assistance. (JJ Keller & Associates, Inc.2004) 500+ pages

# Montana LTAP Lending Library

**p-807:** *A Review of Pedestrian Safety Research in the United States and Abroad (FHWA 2004):*

This document summarizes research on pedestrian safety in the United States with a focus on crash characteristics and the safety effects of various roadway features and traffic-control devices; it also considers pedestrian educational and enforcement programs. The results of this research will be useful to transportation researchers, engineers, planners, and safety professionals involved in improving pedestrian safety and mobility.

**p-2391:** *Optimal Procedures for Quality Assurance Specifications (FHWA 2004);*

This report is a companion to p-2390: *Optimal Procedures for Quality Assurance Specifications*, which provided guidance to highway agencies. It summarizes the research work that was performed and contains the analyses to explain and justify the provided guidance. This report will be of interest to those materials, construction, specifications, and research engineers who wish to gain a better understanding of any specific procedures recommended in the manual.

**p-2528:** *Collaborative Research on Road Weather Observations and Predictions by Universities, State Departments of Transportation, and National Weather Service Forecast Offices (FHWA October 2004)* This report documents the results of five research projects to improve the sensing, prediction and use of weather-related road conditions in road maintenance and operations. The primary purpose for these projects was to evaluate the use of weather observations and modeling systems to improve highway safety and to support effective decisions made by the various jurisdictions that manage the highway system.

**p-2532:** *Identifying and Assessing Key Weather-Related Parameters and Their Impacts on Traffic Operations Using Simulation (FHWA September 2004)* The objectives of this report are to identify how adverse weather affects traffic operations, to assess the sensitivity of weather-related traffic parameters in a microscopic traffic simulation package (CORSIM), and to develop guidelines for using the CORSIM simulation model to account for the affects of adverse weather.

**p-2635:** *NIOSH Pocket Guide to Chemical Hazards:* The information in this guide includes chemical structures or formulas, identification codes, synonyms, exposure limits, chemical and physical properties, incompatibilities and reactivities, measurement methods, respirator selections, signs and symptoms of exposure, and procedures for emergency treatment. The information is presented in tabular form to provide a quick, convenient source of information on general industrial hygiene practices. (429 pages)

**p-2650:** *Software Reliability: A Federal Highway Administration Preliminary Handbook:* This handbook presents new software V&V techniques to address special needs related to highway software such as wrapping (using embedded code to make a program self-verifying); SpecChek™, a V&V tool to check software with its specifications; real-time computation of error propagation; and phased introduction of new software to minimize failures.

## Software

**SW-756:** *Winter Maintenance Training Materials (Volume 2)* Directed at local government public works technical personnel from the Public Works Director and Engineer, to the Road/Street Superintendent and public works technicians. Reviews important preparations prior to operations, discusses actual plowing and spreading operations, including the use of a variety of equipment, materials and techniques. Emphasizes sensible salting, looking at the various ways that salt can be used, by itself or in conjunction with other materials with a discussion on application rates. Covers deicing, prewetting, anti-icing and pickup and disposal operations along with relevant information for special areas and considerations, including post storm cleanup and record keeping. Includes technical information sheet and reference document addressing salt and the environment. (Salt Institute 2004)

**SW-2310:** *Alone in the Wilderness:* To live in a pristine land unchanged by man...to roam a wilderness through which few other humans have passed...to choose an idyllic site, cut trees and build a log cabin...to be a self-sufficient craftsman, making what is needed from materials available...to be not at odds with the world, but content with one's own thoughts and company... This video is a simple account of the day-to-day explorations and activities Richard Proenneke carried out alone, and the constant chain of nature's events that kept him company. (Bob Swerer Productions 2003)



Happy Holidays from all of us at Montana LTAP!





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Approximately 1630 copies of this public document were published at an estimated cost of \$1.20 per copy for a total cost of \$1,960 which includes \$1,500 for printing and \$460 for distribution.

MDT attempts to provide accommodations for any known disability that may interfere with a person participating in any service, program or activity of the Department. Alternative accessible formats of this document will be provided upon request.

Please send us any comments or concerns you may have regarding this newsletter with your name and address in order that we may respond in a timely manner.

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.

Individuals wishing to receive future copies of the newsletter at no cost may send their request to LTAP, 407 Cobleigh Hall, PO Box 173910, Montana State University-Bozeman, Bozeman, MT 59717-3910, or call 1-800-541-6671. Past issues are available at [www.coe.montana.edu/ltap](http://www.coe.montana.edu/ltap).

## 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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