



LTAP MATTERS

Montana's Answer To Technical Education of Roads & Streets

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

Winter 2003 January February March

Vol. 21, No. 1

INSIDE

- 2 PASER
- 3 PASER *continued*
Earth Day
- 4 Earth Day *continued*
- 5 Calendar of
Events
- 6 New Publications
- 7 New Publications,
Software, Videos

PASS IT ON

We are condensing our mailing list and request after you have read this newsletter, **pass it on** to other interested readers in your department.

PASER Presented at Fall MACRS

The October Montana MACRS meetings held in Glendive, Billings, Fort Benton, Whitehall, and Missoula focused on PASER, Pavement Surface Evaluation and Rating. At each meeting Steve Jenkins, LTAP Director, gave an informative introduction on the importance of road inventories.

He stated one of the first steps to creating a thorough inventory of

roads would be a map that is color-coded with all the county roads as a major visual inventory tool. Notes could be made regarding the number of dollars spent on different sections of roads. Pins could be used to denote locations of accidents and the need to consider improved safety signage in these areas. In addition to the map, a file could be established containing photographs of each road with the date taken, length of road, and condition.

The second step in road inventory would be understanding how to rate the roads. Jenkins recommended the use of PASER, developed in Wisconsin, to obtain a thorough inventory of asphalt, gravel and unimproved roads in each county. PASER contains a simple formula that includes evaluating each road

segment on a scale of 1-10. PASER follows a similar rating scale that the Army Corps of Engineers developed using a system rating roads with ten being best and one extremely poor

condition, based on stresses.

This in-house inventory process would need to be kept up if not from year to year at least every other year in order to have accurate records of the inventory. Jenkins suggested using Microsoft Excel to enter collected data and create a chart indicating the condition of county roads. He noted this only shows conditions of roads, not priorities or needs in road repair.

**“WHEN USING PASER, . . .
ONE INDIVIDUAL WITH ROAD
EVALUATION EXPERIENCE
CONDUCT THE INVENTORY
PROCESS . . .”**

continued on page 2...

ADVISORY COMMITTEE MEMBERS

Ray Barnicoat

Montana Association
of Counties

Kelly Elser

Town of Sheridan

Sam

Gianfrancisco

LTAP

Eric Griffin

Lewis and Clark
County

Alec Hansen

Montana League of
Cities & Towns

Russ Huotari

Richland County

Donna Sheehy

U.S. Forest Service

Bill Michalson

City of Helena

Bob Burkhardt

Federal Highway
Administration

Jim Reardon

City of Great
Falls

Sue Sillick

Montana Dept of
Transportation

Dan Williams

Montana Dept of
Transportation

Jack Knorr

Stillwater County

PASER *(continued from page 1)*

Jenkins pointed out this would be an excellent way to begin a five-year inventory plan to present to county commissioners. When using PASER, Jenkins suggested that one individual with road evaluation experience conduct the inventory process on their county roads. He emphasized that when concise information is presented, people will listen.

At the Billings meeting, Jack Knorr, MACRS Vice President, stated that PASER is a good route for all counties being better informed with solid data, developing an understandable presentation, and therefore intelligently ask for more money for the road budgets.

After the introduction of how and why PASER, participants split into two groups; one staying with Sam Gianfrancisco in learning how to rate roads using the PASER method and the other group met with Steve Jenkins to cover bridges, signage and cattle guards. Gianfrancisco went through the

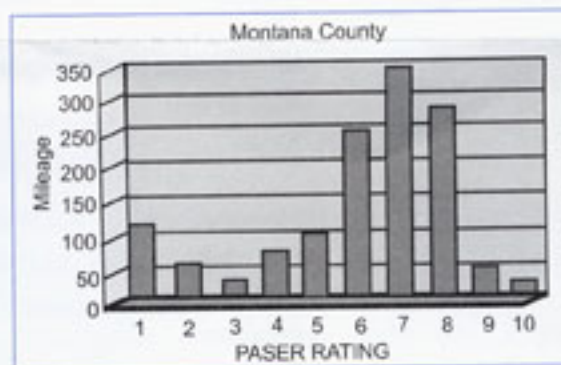
rating of gravel, asphalt and unimproved roads. He noted that across the State most counties do have more gravel roads than asphalt. Gianfrancisco added that it would not be in the county's best interest if the road grader employee evaluated his own section of road.

Gianfrancisco cited the following four

books can be used to evaluate county roads: *Gravel - PASER Manual*, *Asphalt - PASER Manual*, *Sealcoat Manual - PASER*, and *Unimproved Roads - PASER Manual*. Factors to consider when evaluating gravel roads include drainage,

base material, surface, vegetation, wash boards, geometrics, (horizontal and vertical), dust, and potholes.

From various slides, Gianfrancisco identified what to look for in rating roads based on guidelines from PASER. When considering paved roads, he noted asphalt ratings pay particular attention to cracking, such as latitudinal, longitudinal, edge cracking, petite cracking, patching,



Counties could develop charts to present road inventory information

(continued on page 3)

Great Falls, Montana celebrates Earth Day

Marty Basta

Operations Manager
City of Great Falls, Montana

The City of Great Falls held an Earth Day celebration on April 21, 2002 at the city-operated recycling center. Included in the festivities were informational booths and recycling contests for prizes ranging from Earth Day T-shirts to swimming pool passes and cash awards.

The city partnered with the private sector and U.S. Air Force personnel from Malmstrom Air Force Base to put

on the Earth Day celebration. Volunteers from throughout the community staffed the event.

Two local high school cheerleading squads competed for funds in a recycling competition. Both squads were allowed to keep all proceeds from the recyclables they collected with the winners also receiving a \$100 bonus provided by Pacific Iron and Steel. For the younger age participants there was a "stomp and swish" contest.

(continued on page 4)

PASER *(continued from page 2)*

and potholes. Again, the group viewed various slides and rated the asphalt roads based on PASER guidelines. Recently Gianfrancisco has been evaluating and rating Gallatin County roads and prefers PASER.

Afternoon sessions began with Jenkins and Gianfrancisco collecting sample road inventories from the audience, plugging the road inventories of rating with length of road into the Excel program, and producing a bar chart showing the capabilities of this simple inventory program. Jenkins noted that when doing road inventories, the

bridge inventories could be updated or included based on the National Bridge Index Rating, not the PASER program. This would allow counties to get a handle on their bridge inventories. If the county is going to be borrowing money, these inventories will assist with GASB34 information that is required. (See *LTAP Matters Newsletter 2002*, Vol. 20, No. 1 for GASB34 article.) Bart Kraus, Forsyth LTAP Instructor, was also available as a contact to assist with forecasting through the *IWORZ.com* program (phone 435-755-5126). The meetings concluded with a question and answer period.

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

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

FAX: (406) 994-1697

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

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

Business Manager:
Jeralyn Brodowy
•jer_b@coe.montana.edu

Accounting Tech/
Conference
Coordinator:
Donnetta Bohrman
•dbohrman@coe.montana.edu

Graphic Tech/
Librarian:
Michele Beck
•mbeck@coe.montana.edu

Saving Dollars

As postage and printing costs keep rising, please let us know if you are getting duplicate LTAP newsletters: 1-800-541-6671. Thanks for your help!

**MACo Annual Loss
Conference
January 14 -16, 2003**

MACo Risk Manager Ray Barnicoat announces their annual Loss Control Conference in Helena, January 14 to January 16. Ray said "This will be the 16th year that we have been doing the conference." The purpose is to assist members of the MACo Self-Insurance Programs to manage risks and to control the frequency and severity of loss. The goal is to keep the members' insurance costs at a minimum.

Barnicoat said, "We try to have something for everyone. The main focus is on law enforcement and road liability issues including work place safety. The people who should attend include commissioners, sheriffs, road supervisors and safety directors. We encourage everyone to participate in this educational opportunity. The speakers and the topics were selected to give you the latest information on issues that affect everyone directly."

The program and registration information has been sent to the counties.

Be sure to register early!

Contact Carla Smith,
Montana Association of
Counties, (406) 457-7204

Earth Day (continued from page 3)

To enter, participants brought aluminum cans for recycling and were given time to stomp the cans and shoot them into a container. Two winners from three age groups received Earth Day T-shirts and a pass to the Great Falls Water Park.

An Earth Day calendar-coloring contest was distributed to area schools a month before the celebration. The contest was also posted on the city's website (www.ci.great-falls.mt.us). Winners were announced at the Earth Day celebration with winners also receiving Earth Day T-shirts and pool passes.

The City of Great Falls conducts an annual Christmas tree recycling project where participants were given seedling certificates to replace the trees harvested for the holiday. These certificates were redeemed at the Earth Day event. Nearly 1,500 seedlings were distributed to Christmas tree recyclers. The city expects the annual event to provide community focus to its recycling programs that include curbside, drop-off and Convenience Center recycling services. The city recycles everything

from glass to motor oils as well as different paper products and metals.

A local use of recycled glass was developed by the city, blending glass with gravel for use in street repairs. A Re-Use-it area at the Convenience Center is a big success. Great Falls residents are encouraged to bring reusable items to the center rather than discard them. People wishing to receive such items may take them at no charge. The project provides many household items to

people who otherwise might not be able to afford them while diverting a large volume of waste from the landfill. The Great Falls Earth Day celebration is an excellent way for the city to better inform its residents of the benefits of recycling.

For more information on Great Falls' annual Earth Day celebration, contact Marty Basta at (406) 771-1401 or at mbasta@ci.great-falls.mt.us.

Adapted with permission from APWA Reporter, September 2002 issue.

**A LOCAL USE
OF RECYCLED GLASS
WAS DEVELOPED BY THE
CITY, BLENDING GLASS
WITH GRAVEL FOR USE
IN STREET REPAIRS.**



Calendar of Events - 2003

American Public Works Association Workshops

Sheraton Hotel, Billings, MT	January 8
Civic Center, Great Falls, MT	January 9
City Hall, Hamilton, MT	January 21
Westcoast Kalispell Center Hotel, Kalispell, MT	January 22

MACO-Loss Control Conference

Colonial Hotel, Helena, Montana	January 14-16
---------------------------------	---------------

2nd Annual Safety Congress

Civic Center, Great Falls, Montana	February 11-13
------------------------------------	----------------

MACO Mid Winter

Colonial Hotel, Helena, Montana	February 18-21
---------------------------------	----------------

Flagging & Work Zone Training

To Be Scheduled/March

Regional Forest Service Training

Missoula, Montana	March 17-21
-------------------	-------------

MACRS Annual Meeting

Fairmont Hot Springs, Montana	April 7-10
-------------------------------	------------

LTAP Director Speaks at League of Cities & Towns Conference

October 9, 2002, Steve Jenkins, LTAP Director, presented the PASER program to Public Works Directors who were attending the 71st annual Conference in Butte for the League of Cities & Towns. Jenkins previewed the need for road inventories

for cities and the importance to maintain documentation to keep track of road safety. He noted that the January APWA workshops will be covering more indepth information on PASER. Jenkins mentioned these workshops will also include presentations on APWA InfoLink.

2003 Spring & Summer Events

MAY 7

Gravel Roads

Miles City, MT

MAY 12-15

Drainage Classes:

Kalispell- May 12

Missoula - May 14

Butte - May 15

May 21

Gravel Roads

Miles City, MT

June, 2003

Equipment

Training On Request

*Loader

*Forklift

*Motor Grader
(Gravel Roads)

SIGN UP NOW!

On February 11-13, 2003, LTAP and the City of Great Falls will be hosting the 2nd Annual Safety Congress at the Great Falls Civic Center. As with last year's Congress, a Work Zone Package will be given out to participants including signs, chanelizing devices and sign supports. A sample of topics --work zones, safety audit, cattle guard safety, MUTCD. Contact Donnetta Bohrman, LTAP Conference Coordinator at 1-800-541-6671 or (406) 994-6100, fax (406) 994-1697 or email: dbohman@coe.montana.edu.

Lighter Side...

To make a long story short,
there's nothing like having
the boss walk in.

-Doris Lily

Experience is that marvelous
thing that enables you to
recognize a mistake when
you make it again.

-Franklin P. Jones

New Publications

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 Bohman, 1-800-541-6671 for information or checkout procedures.

p-366 Pavement Management Catalog This catalog is intended as a sourcebook of information regarding pavement management software and data collection equipment to assist officials in selecting systems to meet the needs of their communities.

p-387 Design, Construction, and Maintenance of Open-Graded Asphalt Friction Courses From National Asphalt Pavement Association, this report is on OGFC, A Hot Mix Asphalt mixture with interconnecting voids that provides improved surface drainage during rainfall.

p-389 Pavement Smoothness Index Relationships: Final Report This October 2002 research effort reports on developing a series of relationships between IRI and PI that can assist States in transitions to IRI or PI0.0 smoothness specification for HMA and PCC pavements.

p-390 Study of LTPP Laboratory Resilient Modulus Test Data and Response Characteristics: Final Report This report documents the first comprehensive review and evaluation of the resilient modulus test data measured on pavement materials and soils recovered from the LTPP test sections.

p-391 Back-Calculation of Layer Parameters for LTPP Test Sections, Volume II: Layered Elastic Analysis for Flexible and Rigid Pavements The report documents the first comprehensive review and evaluation of the resilient modulus test data measured on pavement materials and soils recovered from the LTPP test sections.

p-392 Validation of the Superpave Asphalt Binder Fatigue Cracking Parameter Using an Accelerated

Loading Facility This study used an Accelerated Loading Facility (ALF) to validate the Superpave asphalt binder parameter for fatigue cracking, $G^* \sin(\delta)$.

p-431 Electrochemical Chloride Extraction: Influence of Concrete Surface on Treatment This interim report describes the progress made in ascertaining the cause of the abrupt drop in the amount of current that can pass through salt-contaminated concrete.

p-434 Guidelines for Detection, Analysis, and Treatment of Materials-Related Distress in Concrete Pavements Vols. 1, 2, & 3 - This report documents the investigation of MRD in concrete pavements and the development of a set of systematic guidelines for the evaluation of MRD.

p-435 Transport Properties and Durability of Concrete: Literature Review and Research Plan This report reviews the state of the art for measurement of transport properties in the laboratory and field and discusses the linkages between transport properties and models for various deterioration processes of relevance to highway concretes.

p-806 Results from a Safety Survey: Workforce Development for Transportation Professionals Goals of the survey were to assess what topics the transportation safety community would like to have and to evaluate how they would like to access the training courses.

p-831 Safety Effectiveness of Intersection Left- and Right-Turn Lanes This TechBrief outlines a new report regarding intersection safety effectiveness.

p-832 IHSDM Intersection Diagnostic Review Model Knowledge Base Report This report documents the results of the study, "Development of an Expert System for the Interactive Highway Safety Design Model (IHSDM)."

p-857 European Right-of-Way and Utilities Best Practices This report describes the scanning study of England, Germany, Norway and the Netherlands to review best practices in right-of-way and utilities services.

Quotes for Inspiration....

The best time to plant
a tree was 20 years ago.
The second best time is now.
-Chinese Proverb

Problems are only
opportunities in
work clothes.
-Henry J. Kaiser

New Publications, Software & Videos

p-2544 Eddy Hulbert, Montana Silversmith
Historical biography of a Montana Silversmith in the Big Horn Country.

p-2630 Modifications of Air Pollution Models for Complex Site Geometries Vol I & II This is a two-volume study to improve air pollution dispersion models for depressed highway sites.

p-3510 ITS Peer to Peer Pamphlet Outlines the Peer to Peer Program that delivers short term assistance according to your ITS needs.

p-3522 Using Metropolitan ITS Deployment Tracking for Regional ITS Planning This report evaluates the utility of deployment tracking data and indicators to local planners by evaluating the ITS deployment planning experience in Tucson, Arizona.

p-3523 Metropolitan ITS Integration The purpose of this report is to inform transportation managers and decision-makers of the value of ITS integration.

Software

SW-147 A Guide for Hot Mix Asphalt Pavement From National Asphalt Pavement Association. Modules include Introduction, Materials, Design Parameters, Mix Types, Mix Design, Structural Design, Construction, Pavement Evaluation, and Maintenance/Rehabilitation.

SW-128B What If Roads Could Last a Lifetime? With Perpetual Pavement they can. Learn more about the latest innovation in asphalt paving from Asphalt Pavement Alliance.

SW-137 Winter Maintenance Training Materials The Salt Institute covers high quality training materials for LTAP trainers use in winter maintenance training seminars.

SW-169 Improving Safety, Reliability, and Security Perspectives on Surface Transportation Management and Operations: Congestion, Security, Public Safety and Weather

SW-180 Culvert Installation and Maintenance Workshop From LTAP North Dakota

SW-181 Compendium of Work Zone Research, Development, and Technology Transfer Projects, 1997 to 2002 The compendium contains 332 recent and ongoing projects related to work zone mobility and safety.

SW-183 FishXing Culvert Design for Fish

SW-190 Gravel Roads-Maintenance and Design Manual South Dakota Local Transportation Assistance Program (SD LTAP) with USDOT and Federal Highway Administration.

SW-263 LTAP Clearinghouse Yearbook 2002 Contains publications and presentations from the 2002 LTAP Annual Conference.

Videos

RM-185 Effective Pavement Preservation by Identifying Distress Conditions, Causes and Cures - 18 minutes





Local Technical Assistance Program
416 Cobleigh Hall
PO Box 173910
Montana State University-Bozeman
Bozeman, MT 59717-3910



Non-Profit Org.
U.S. Postage
PAID
Permit No. 69
Bozeman, MT 59715

Approximately 1,600 copies of this public document were published at an estimated cost of \$.959 per copy, for a total cost of \$1,730 which includes \$1,440 for printing and \$290 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 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, new 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, 416 Cobleigh Hall, PO Box 173910, Montana State University-Bozeman, Bozeman, MT 59717-3910, or call 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/articles to:

Donnetta Bohrman
Local Technical Assistance Program
PO Box 173910
Montana State University-Bozeman
Bozeman, MT 59717-3910
(800)541-6671 or (406)994-6100
Fax: (406) 994-1697
email:dbohrman@coe.montana.edu