

Montana

Local Technical Assistance Program

Work Plan and Budget
July 1, 2011 – June 30, 2012

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Table of Contents

Executive Summary	1
Introduction	3
Partnerships.....	7
Qualifications and Experience	8
Professional Staff	8
Program Overview	9
Customer Needs Assessments and Program Development.....	10
Summary of Program Development Input.....	12
I. Formal Needs Assessment Survey.....	12
II. MT Research Review Committee.....	12
III. League of Cities and Towns: City Transportation Officials.....	13
IV. LTAP Advisory Committee.....	13
V. MACRS Officers and Representatives and MACo.....	13
VI. Workshop Evaluation: Training Topics Requested.....	14
Four Focus Areas.....	16
Safety Focus Area.....	17
Infrastructure Management Focus Area	19
Workforce Development Focus Area	20
Organizational Excellence	21
Library Resources and Distance Learning	22
Summary of Work Tasks	23
Additional Services.....	26
Future Initiatives.....	27
Budget	27
Appendix A: History.....	30
Appendix B: Center Assessment Report	31
Appendix C: Staff.....	37
Appendix D: Needs Assessment.....	40
Appendix E: Distance Learning Lessons	45
Appendix F: 2011-2012 Montana LTAP Tentative Workshop Schedule.....	46
Appendix G: Needs Assessment Survey Topics in 2011-2012 Workshop Schedule	47

Figures and Tables

Figure 1. Montana LTAP 2010-2011 Workshop Map	4
Figure 2. Montana LTAP Road Scholar Map 2011	5
Figure 3. Stakeholders Intersection.....	6
Figure 4. Program Development.....	11
Figure 5. Technical Assistance Structure Strategy Diagram	15
Figure 6. Four Focus Areas.....	16
Table 1. Breakdown of Costs by Focus Area.....	28
Table 2. Breakdown of Budget by Source.....	29

Executive Summary

The Local Technical Assistance Program (LTAP) has a 27-year proven track record as an outreach program for the transportation workforce and has become a trusted resource for local agencies seeking training and technical assistance.

Montana LTAP's ability to efficiently and effectively transfer technology and information through courses and relationships to our rural and urban partners and customers is its primary measure of success. This past year Montana LTAP covered 29 different topics in presentations that were attended by 2,629 participants. Eighty training sessions were held, providing 16,186 hours of training.

Two particularly successful means for promoting ongoing skills are the Roads Scholar and Roads Master programs. These promote skills development at the local and tribal levels by recognizing staff for reaching competency in various areas of transportation expertise. The idea is to provide curricula that enable local transportation workers to study road fundamentals, safety, drainage, snow and ice removal, and other topics with the goal of becoming expert road managers.

LTAP provides education and technical assistance on transportation matters to a wide variety of entities, including city and town street departments, county road departments, public works departments, elected and appointed public officials, private individuals, and other stakeholders. By sharing and improving the distribution of this transportation-related information, the program promotes efficient use of local transportation agencies' scarce resources. Our vision is to improve the quality and safety of the surface transportation system through interactive relationships and information exchange. LTAP builds on long-standing relationships among partners that include the Montana Association of County Road Supervisors, Montana Association of Counties, Montana League of Cities and Towns, American Public Works Association, National Association of County Engineers, and Montana Department of Transportation. The overarching methodology of Montana LTAP will be to:

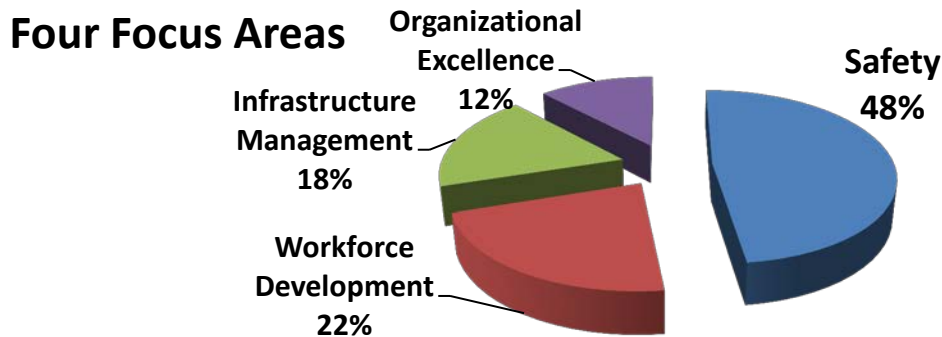
- ***integrate*** services and resources into a centralized location;

-
- coordinate** among all stakeholders; and
 - accelerate** distribution of transportation technology by moving Federal Highway Administration mandates, new transportation resources, and information into the hands of constituents.

Four focus areas are vital to the success of LTAP’s mission of fostering a safe, efficient, and environmentally sound surface transportation system by improving the skills and increasing the knowledge of the local and tribal transportation workforce:

- Safety**
- Infrastructure Management**
- Workforce Development**
- Organizational Excellence**

The figure below shows the percentage of its budget Montana LTAP allocated to each of these focus areas over the last three years.



The tasks engaged in by LTAP to achieve its objectives are seminars and training sessions, information sharing and on-site technical assistance, quarterly newsletters, transfer of technology materials, external communication, and evaluation.

Over the next decade, the need for training, technology transfer, and implementation of best practices throughout the transportation community will be considerable. Our partnerships with the Montana Department of Transportation, FHWA, the National Highway Institute, and other national transportation partners will allow us to better meet those needs.

Introduction

The Local Technical Assistance Program (LTAP) plays a unique part in transportation education. LTAP's development has answered a pressing need for transportation training and technical assistance at the local level. LTAP's capacity to provide face-to-face, hands-on training enables members of the transportation workforce to learn valuable information from our instructors, and provides them with opportunities to discuss issues and share solutions with their peers. This technology transfer program is all about sharing knowledge and best practices. In many instances LTAP is the primary source of professional development for the transportation staffs of local governments. In order to provide technical transportation training to local road agencies, public works agencies, public officials, county and municipal engineers, and the Montana Department of Transportation, LTAP will continue to be an easily accessible, central source for:

- **Transportation Information**
- **Technical Assistance**
- **Coordination and Outreach Assistance**

Montana LTAP officially began in January 1983 at Montana State University—one of the first ten university sites selected to house this program. Funding support for the program is provided by the Federal Highway Administration (FHWA), the Montana State Legislature (gas taxes from cities and counties), the Montana Department of Transportation (MDT), and Montana State University (MSU). (For more history, please see Appendix A.)

Montana LTAP's ability to efficiently and effectively transfer technology and information through courses and

<p>2010 Montana LTAP Training Opportunities</p> <ul style="list-style-type: none">• 2,629 Participants Attended• 80 Training Sessions• 16,186 Training Hours
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relationships to our rural and urban partners and customers is its primary measure of success. Montana LTAP staff has played key roles in the development, coordination, analysis, enhancement and day-to-day operations of transportation technology transfer.

This past year Montana LTAP covered 27 different topics in presentations that were attended by a total of 2,629 participants. Eighty training sessions were held, providing 16,186 hours of training (Figure 1 – Workshop Map). These highlights are addressed in the Center Assessment Report (Appendix B) filed with FHWA each year and reflect how the LTAP team effectively addresses constituent concerns and requests. Montana LTAP uses the National LTAP/TTAP (Tribal Technical Assistance Program) organization network of expertise consisting of 58 individual centers—one LTAP center in each state and Puerto Rico, and seven regional TTAP centers that serve tribal governments.



Figure 1. Montana LTAP 2010-2011 Workshop Map

One particularly successful means for promoting ongoing skills development at the local and tribal levels is the Roads Scholar and Road Master programs (Figure 2), which recognize staff for reaching competency levels through training and development of transportation expertise. The underlying approach is to provide curricula that enable local transportation workers to

Roads Scholar Program: 2,058 Participants
2010/2011: 35 Road Scholars Awarded
Total Scholars To Date: 165

study road fundamentals, safety, temporary traffic control, drainage, snow and ice removal, and other topics with the goal of becoming expert road managers. The courses help participants develop professionalism and advance their careers.

Road Scholars - Level I 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011

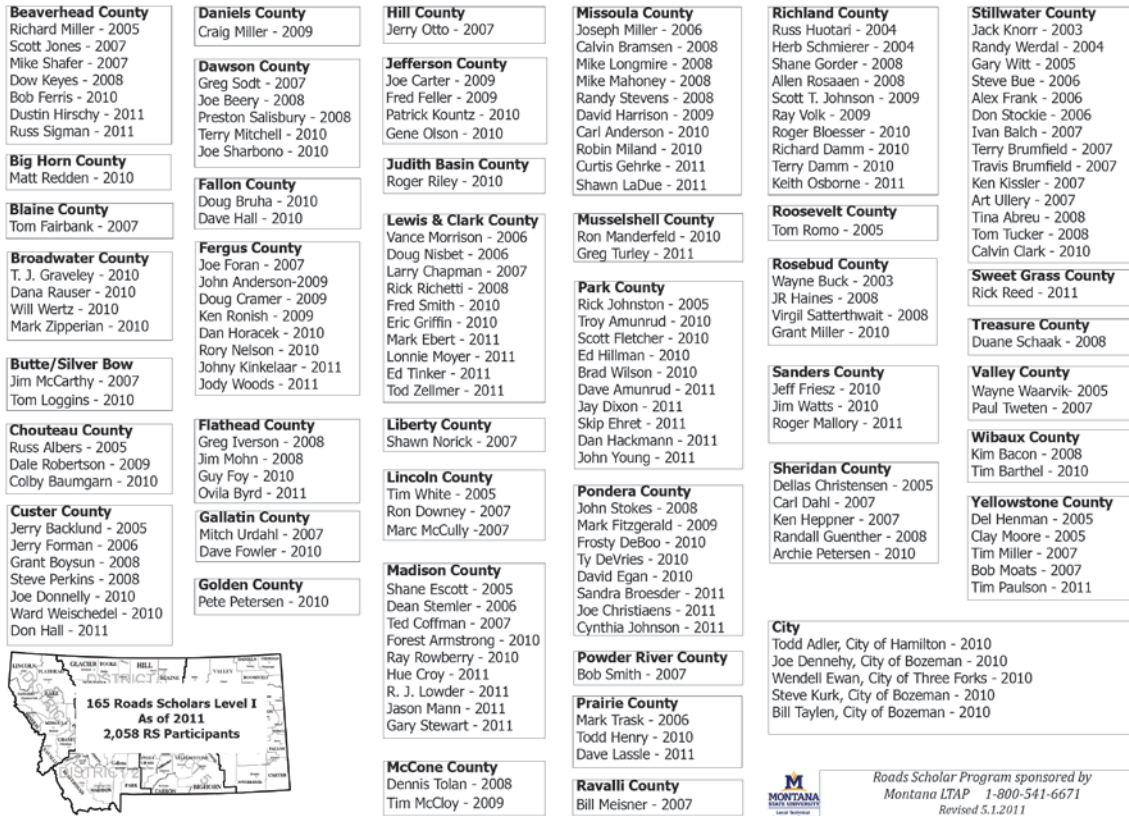


Figure 2. Montana LTAP Roads Scholar Map 2011

Montana LTAP’s stakeholders have an established record of creating a broad spectrum of tools to put transportation information into the hands of the professionals who need it, ranging from traditional, in-person workshops and training to state-of-the-practice electronic delivery methods such as software packages, online clearinghouses, and webinars. This experience will be instrumental in insuring that the technical assistance is promoted to and accessible by the largest number of users. Figure 3 illustrates the various intersections of technology transfer and needs as they relate to Montana LTAP, local government agencies and MDT.

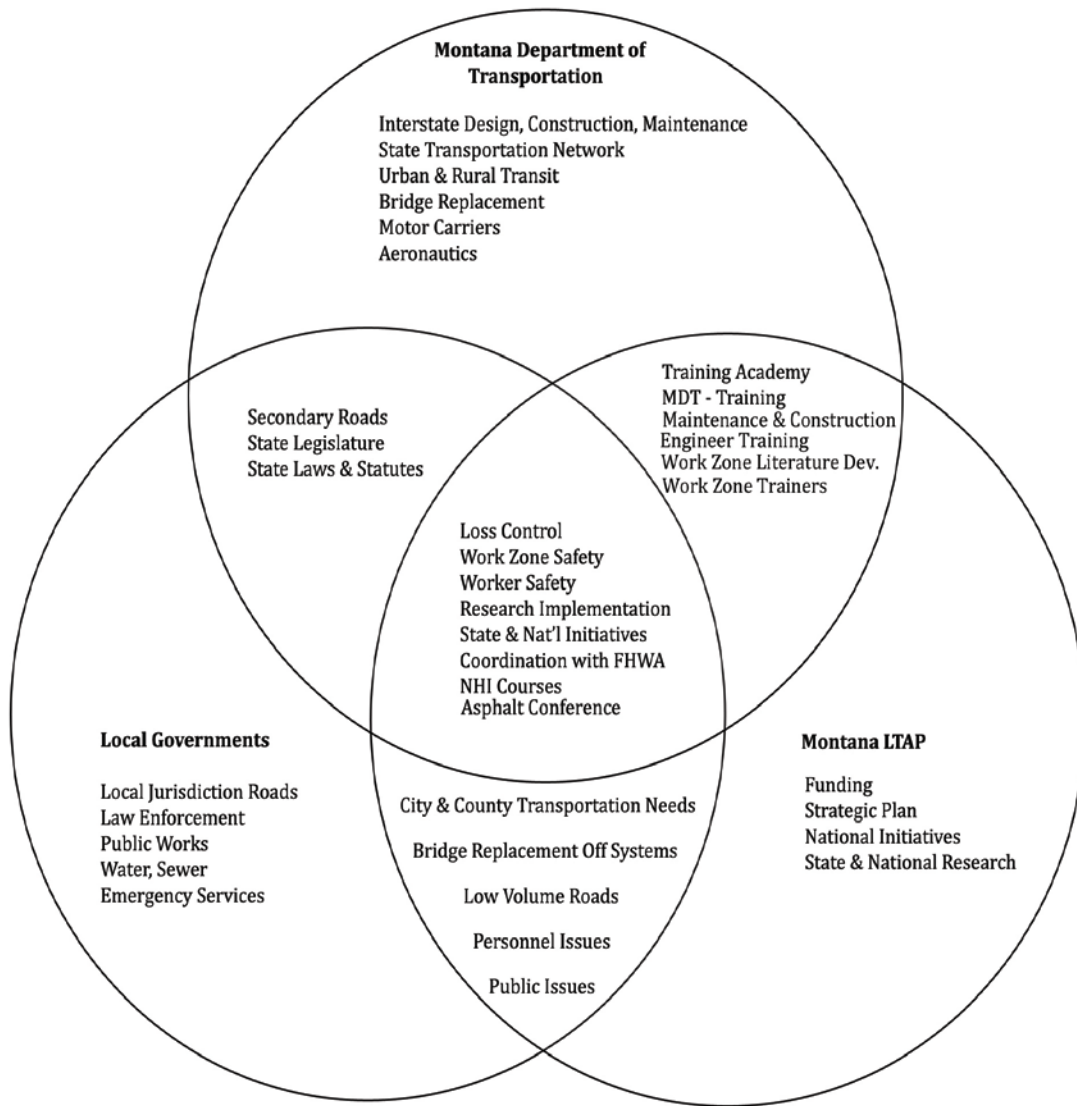


Figure 3. Stakeholders Intersection

Partnerships

Over the past year, Montana LTAP and the Western Transportation Institute (WTI) at MSU have conducted the following successful team projects:

- Dr. Nicholas Ward, MSU, presented on driver behavior at MACRS Conference
- LTAP provided assistance to Dr. Laura Stanley by distributing her questionnaire to LTAP listservs
- WTI and LTAP collaborated on South Dakota gravel proposal
- LTAP assisted WTI's TRANSCEND facility with winter maintenance issues

Montana LTAP has recently coordinated agreements with the following workforce-development-focused learning institutions:

- Flathead Valley Community College
- Salish-Kootenai College
- Miles City Community College
- Opportunity Link (covering an 11-county region in north central Montana that includes three Indian reservations and the Little Shell Chippewa Tribe).

Qualifications and Experience

Professional Staff

Currently there are three full-time staff members at Montana LTAP with one or two Montana State University work-study students assisting on various projects as need dictates.

- ***Steven V. Jenkins, P.E.***

Director of Montana LTAP, Steve has 28 years experience in working with local and tribal governments in roadway design, transportation planning, materials, research, and hydraulics. **He provides a broad range of educational programs to bring training and technical assistance** to local city, county, and state entities throughout the state of Montana (Appendix C).

- ***Genevieve Albert, B.A.***

Administrative Associate and Conference Coordinator, Montana LTAP, Genevieve has 15 years experience in private and public sector accounting along with six years of travel planning and conference coordination experience. **She provides the LTAP office with expertise in accounting and budget planning, and coordinates over 80 workshops per year for the program.**

- ***Michele Beck, B. A.***

As Montana LTAP's Graphic Designer, Michele brings to the table over 28 years of creative visual experience. In addition to her graphic design experience, she taught adult education for three years and understands the needs of adult students. **Michele's nine years of experience at Montana LTAP developing and designing safety training programs for the transportation workforce provides her with an in-depth knowledge of this broad field.** She has served on the National LTAP Communications Committee for two years and presented at the National LTAP Conference and LTAP Region 7 meetings.

Program Overview

LTAP provides education and technical assistance on transportation matters to a wide variety of entities, including city and town street departments, county road departments, public works departments, elected and appointed public officials, private individuals, and other stakeholders. By sharing technical information and improving the distribution of this transportation-related information, the program promotes efficient use of local transportation agencies' scarce resources. Our vision is to improve the quality and safety of the surface transportation system through interactive relationships and information exchange. We will be driven by these relationships and be known for our ability to enrich the knowledge base of our stakeholders. Montana LTAP proposes a structure that leverages the expertise of respected trainers both locally and from throughout the United States. LTAP builds on long-standing relationships among partners that include the Montana Association of County Road Supervisors (MACRS), Montana Association of Counties (MACo), Montana League of Cities and Towns, American Public Works Association (APWA), National Association of County Engineers (NACE), and Montana Department of Transportation (MDT). The overarching methodology of Montana LTAP will be to continue to:

LTAP mission: To foster a safe, efficient, and environmentally sound surface transportation system by improving the skills and increasing the knowledge of the local and tribal transportation workforce. The LTAP/TTAP centers serve more than 38,000 local agencies.

- **integrate** services and resources into a centralized location;
- **coordinate** among all stakeholders; and
- **accelerate** distribution of transportation technology by moving Federal Highway Administration mandates, new transportation resources and information into the hands of constituents.

All of the LTAP training I have received to obtain a Roads Scholar Level I has helped me tremendously. It has melded both my hands-on experience and my training experience together, allowing me to be the best road manager I can be. Education in all forms is great and should always be ongoing.
Ovila Byrd, Road Supervisor, Flathead County

Customer Needs Assessments and Program Development

Our transportation workforce is constantly changing, and it is critical that Montana LTAP monitor the current and future needs of transportation providers. For instance, Federal Highway Administration predicted that by 2011, one-half of the current transportation workforce will be eligible for retirement. To keep up with these changes, a formal Needs Assessment will be conducted again in 2011. A proposed outline format is provided in Appendix B. Montana LTAP monitors the needs of transportation providers through a variety of methods. In order to fulfill our mission, information is gathered from the LTAP Advisory Board, Needs Assessment Survey (Appendix D), various survey questionnaires, personal interviews, and injury insurance reports to gain a broad scope of the education technology transfer needs of our workforce. Offered training and resources reflect requests made by our partners and customers.

Methods of Needs Assessments that were conducted over the past year:

•Questionnaires and Surveys:

Workshop Evaluations
Electronic Version of Needs Assessment Survey on Our Website
Hard Copies of Needs Assessment Surveys Gathered at District Meetings

•Key Informant Interviews:

Personal Interviews with City Transportation Officials and County Road Constituents

•Group Assessment Methods:

Semi-Annual Meetings with MACRS Officers and District Representatives
League of Cities & Towns Conference with Public Works Directors
Advisory Board Meeting

•Mapping

Roads Scholar Map
Annual Training Workshop Map

By analyzing these assessments, LTAP is able to develop programs that best meet customers' needs. Figure 4 illustrates the variety of information gathered and put into action.

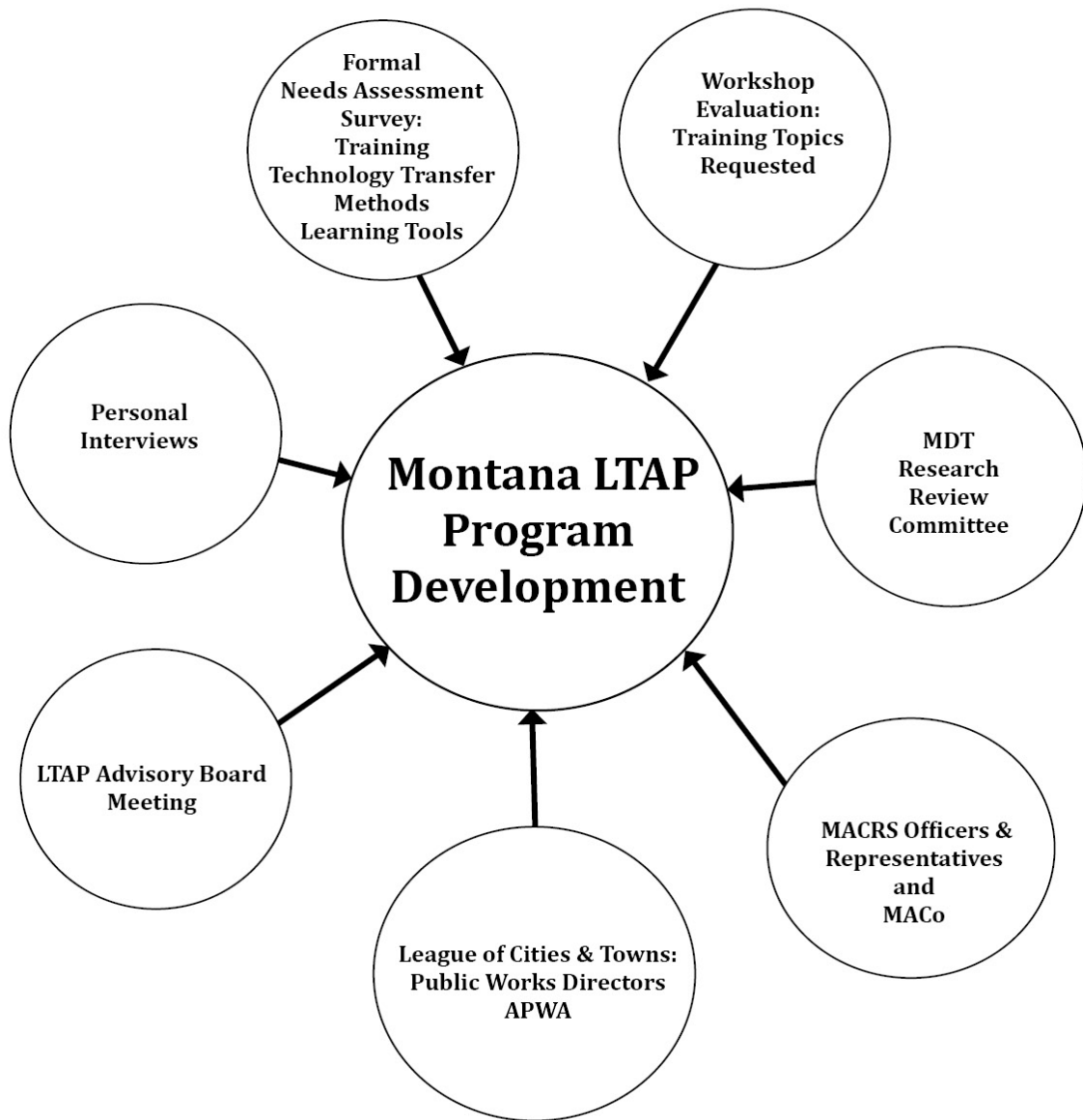


Figure 4. Program Development

Summary of Program Development Input

I. Formal Needs Assessment Survey

This survey was sent out electronically, delivered in hard copy at conferences and workshops, and mailed to city and county employees. Following is a summary of the survey results. Subjects were rated 1-5 by attendees, and given weighted averages accordingly.

Focus Area: Worker Safety – Top 3 Responses

- Winter Survival
- Back Safety
- Slips, Trips and Falls

Focus Area: Work Zone/Highway Safety – Top 3 Responses

- Emergency Mgmt. Signing and Incident Mgmt. (MUTCD 2I & 6I)
- Work Zone Traffic Control – Flagging
- Work Zone Technician- Level I

Focus Area: Infrastructure Management – Top 4 Responses

- Gravel Road Maintenance and Design (Various Topics)
- Winter Maintenance
- County Road Standards
- Culvert Placement Trenching

Focus Area: Workforce Development – Top 3 Responses

- Driving Safety
- Excavation Safety
- Dump Truck Safety

Focus Area: Organizational Excellence – Top 2 Responses

- Crew Supervision
- Motivation

II. MT Research Review Committee

- Urban Issues
- Pavement Management (Small Urban Areas)
- Work Zones

III. League of Cities and Towns: City Transportation Officials

- Asphalt
- Work Zone Safety
- Personal Safety/Personnel Issues
- Liabilities/Safety Audits
- AASHTO Design

IV. LTAP Advisory Committee (Listed from most votes to least)

- 1) Personal Safety
- 2) Gravel Roads
- 3) Asset Management
- 4) Work Zone Safety
- 5) General Safety
- 6) Personnel Issues
- 7) Loss Control

V. MACRS Officers and Representatives and MACo

Spring Training Requests:

- 1) Gravel Roads
- 2) Design and Maintenance
- 3) Work Zone Technician

Conference Requests:

- 1) Leadership
- 2) Employee Issues
- 3) Road Law
- 4) Public Relations
- 5) Roadway Management
- 6) Gravel Road Stabilization

Fall Training Requests:

- 1) Truck and Loader Safety
- 2) Gravel and Gravel Pit Safety
- 3) Winter Maintenance and Anti-Icing

VI. Workshop Evaluation: Training Topics Requested

Survey is designed for participant to select more than one topic. The number following each entry is the percentage of respondents expressing a need for that type of training:

Chip Seal/Asphalt	37%
Dust Control	23%
Winter Maintenance	22%
County Road Standards	22%
Gravel Roads	19%
Signing	18%
Technical Leadership	18%
Dump Truck Safety	16%
Surveying	15%
Cattle Guards	14%
Work Zone	14%
Winter Survival	14%
Weed Mowing	13%
Loader Safety	13%
Community Preparedness	10%
Trenching	10%
Summer Survival	9%
Forklift	9%
MUTCD 2N & 6I	5%

Montana LTAP follows a **Technical Assistance Structure** that allows for input from multiple stakeholders, flexibility and continual evaluation and improvements (Figure 5).

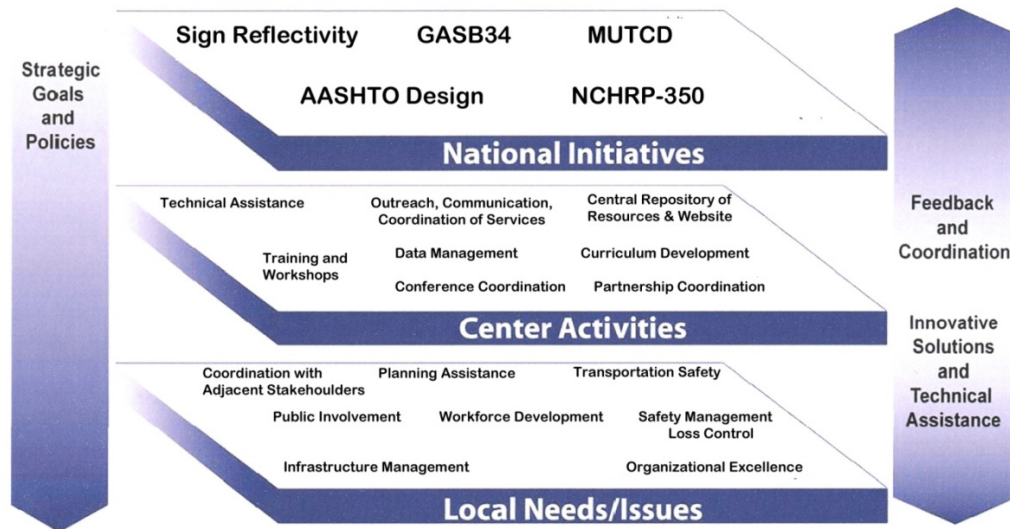


Figure 5. Technical Assistance Structure Strategy Diagram

Over the next decade, the need for training, technology transfer, and implementation of best practices throughout the transportation community will be considerable. Our partnerships with MDT, FHWA, the National Highway Institute, and other national transportation partners will allow us to better meet those needs.

The LTAP training I received gave me the knowledge to work and make our roads safer for workers and the public.
Jay Dixon, Operator, Park County Road Department

The LTAP work plan is derived with consideration of all of the input provided by the customers and funding organizations described above. Federal initiatives such as Sign Reflectivity and Asset Management are presented at workshops. Stakeholders provide input through the Advisory Board and other direct requests. Customers and all others provide input through the needs assessments. Interviews and the needs assessments are prioritized according to the topics requested. The resulting proposed training program is described in the next section of this document in the context of FHWA’s prescribed program areas. The topics mentioned in each of the four focus areas are listed in order according to requests—most requested topics are first, least requested topics appear last.

Four Focus Areas

Four focus areas, as defined by FHWA, are vital to the success of LTAP and assist the national program and the individual Centers in their collective attempts to assess performance, define outputs and outcomes, and better tell the LTAP/TTAP story. These focus areas are:

- **Safety**
- **Infrastructure Management**
- **Workforce Development**
- **Organizational Excellence**

Whether a small town or large city, public works directors don't have the time to keep up to date on all regulatory changes. LTAP's ability to track important changes and pass that information on is critical in our ability to maintain compliance with ever-changing regulations.

*Debbie Arkell, City of Bozeman
Director of Public Services*

Figure 6 presents the percentage of the total Montana LTAP budget allocated to each of these focus areas over the last three years.

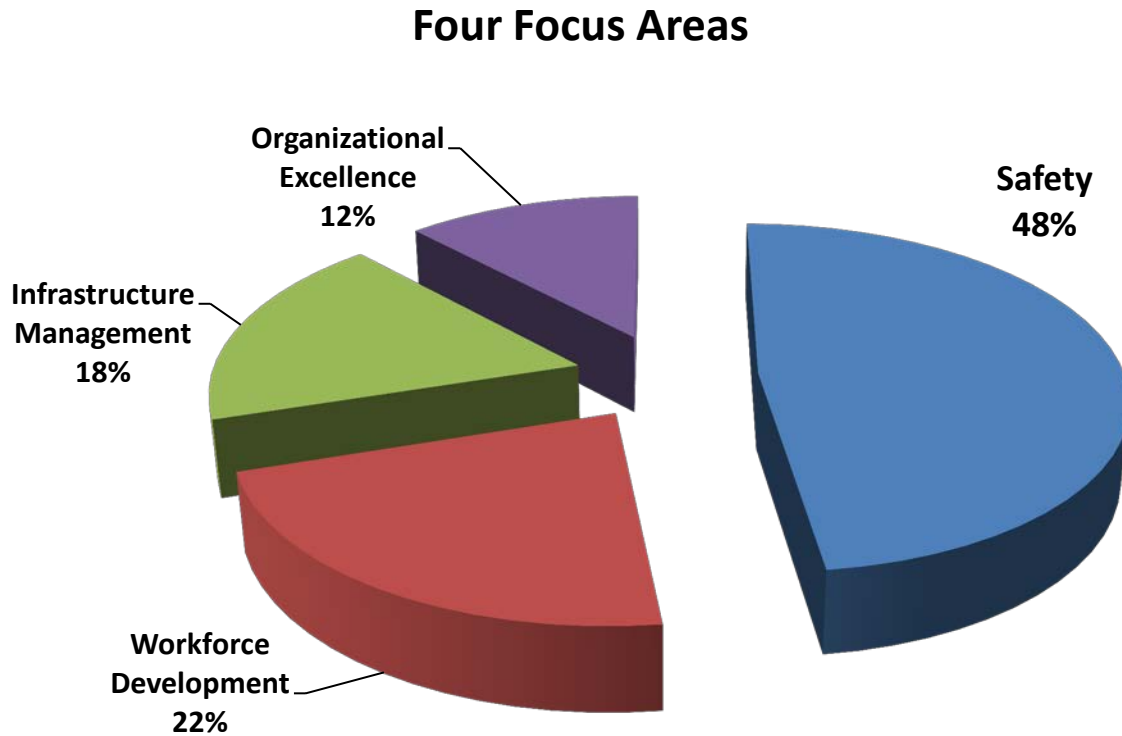


Figure 6. Four Focus Areas

The potential training programs for the next year are listed below under the four focus areas. Some training can be classified under more than one focus area, but for this plan each program is listed with the area it most closely applies to according to its description. These training programs are based on and closely aligned with the results of the needs assessment discussed earlier in this document. Please see Appendix G to view correlation of course topics listed and 2011-2012 Workshop Schedule (Appendix E).

Safety Focus Area

In previous meetings with MDT upper management, work zone safety was requested. Montana LTAP's planned training fulfills this request and also meets the needs assessment surveys' priority requests as indicated on previous pages 12 -14. With the 10th Annual Safety Congress being held in January 2012, Pierre Jomini (retired MDT Safety Management Engineer) will provide in-depth Safety Audit training. LTAP has partnered with MDT and the transportation departments of Washington, Oregon, and Idaho to provide three levels of work zone training:

1. Work Zone Flagger
2. Work Zone Technician
3. Work Zone Traffic Control Supervisor

All LTAP courses have helped me learn how to become a better road crew employee. Having worked at this present job for five years, the training has also provided methods on planning projects. As a transportation employee, I know that we need answers to questions and LTAP is there to help.
Dave Amunrud, Operator, Park County Road Department

In these and other workshops, the importance of seatbelts and danger of DUI and cell phone use are strongly reinforced.

Safety is a primary concern in every part of the surface transportation system, including local, tribal, state and Federal government partners as well as the private and commercial sector. Consequently nearly **half the LTAP budget** is allocated to this area. All needs assessment surveys in this plan outline this area as a priority and course selection aims at providing appropriate course material. The safety area focus includes worker and workplace safety and highway safety. Worker and workplace safety courses are concerned with the personal safety of the worker in the workplace, whether in the office or working on the road system. Examples include winter and summer survival, hand safety and use of

personal protection equipment, and shop safety. Highway safety focuses on factors that impact national statistics on vehicle-related deaths and injuries. Examples include roadside design, rural safety reviews, work zone technician safety, flagging certification, traffic control supervisor certification, training the flagger trainer, sign training and sign vandalism, and permanent signing traffic control.

Risk Management programs are offered because the same worker injuries affect us all:

- Back
- Trips and Falls
- Finger and Hand Injuries (Personal Protection Equipment)
- Motor Vehicle Crashes

Training in this specific area will focus on safety, which includes highway safety and worker/workplace safety. The following proposed course topics will be taught to cover the safety focus area:

- Winter Survival
- Traffic Control: Permanent Signing
- Worker Safety
- Sign Training and Sign Vandalism
- Shop Safety
- Summer Survival
- Equipment Safety
- Work Zone Flagging
- Work Zone Technician
- Work Zone Traffic Control Supervisor
- MUTCD
- Train the Trainer (Flagger)
- Roadside Design
- Loss Control
- Rural Safety Review

The training I received in each class is very educational. As time goes by, I need to attend these classes again to keep up with changes in procedures and regulations. Thanks to everyone for making this training possible.
Johnny Kinkelaar,
Operator, Fergus County Road Department

LTAP will initiate the 10th Annual Safety Congress in January 2012. Originally partnered with MACo's Loss Risk Conference, MACo will no longer support a joint partnership and therefore LTAP will be holding a week-long congress in Great Falls. Topics will include:

- Work Zone Technician
- Traffic Control Supervisor certification
- Signing and Clear Zones
- Sign Retroreflectivity
- Driving Behavior
- Worker and Personal Safety Topics:
Hand Safety, Back Safety and Winter Survival
- IMSA certification

•Safety Audits

Federal initiatives such as Every Day Counts, Toward Zero Deaths, and the Safety Edge will be covered during this week's courses.

Infrastructure Management Focus Area

The Infrastructure Management Focus Area includes gravel road design and maintenance, asphalt, dust control, county road standards, culverts, bridges, and storm water management. On pages 12 and 13, the needs assessment surveys list these course topics from this area as a high priority. Education for road surface management and safety features are provided in the League of Cities and Towns meeting and MACRS Fall District meetings. LTAP can then assist city and county road departments on methods of conducting road audits and inventories of road systems. For this past year's Gravel Roads course, LTAP developed a section on Proper Materials and Weight Bearing Capacities for Foundation of Roads. Following is a list of proposed courses to be covered under infrastructure management:

- Gravel Roads: Materials, Equipment, Design, Construction, DCP, Maintenance, Drainage
- Asphalt: Recycled Asphalt
- GIS/GPS
- Summer Maintenance
- Construction Technique
- Winter Maintenance
- Preconstruction and Design
- Asphalt Management
- Dust Control
- Culverts
- Bridges
- Right of Way
- County Road Standards
- Chip Seal/Asphalt
- League of Cities and Towns: Public Works Directors Agenda
- PASER (PAVement Surface Evaluation Rating)
- Storm Water Management

Montana LTAP will focus on developing strategies that maximize the performance of local governments' infrastructure while minimizing any negative effects on financial and human resources.

Examples of these strategies can involve guardrail installation, bicycle/pedestrian safety, gravel road design and maintenance, safety audits, signs and markings, retroreflectivity, drainage, geometrics, intersection safety, MUTCD (Manual on Uniform Traffic Control Devices), incident management, risk management and tort liability, Governmental Accounting Standards Board Statement No. 34 (GASB 34), asset management, pavement management systems, and traffic calming.

It is important to note unpaved roads, which are the most underfunded infrastructure in Montana (76 percent of roadways in Montana are unpaved), affect industries like agriculture, timber, mining, and tourism, and the expansion of communities. County commissioners report that they receive more constituent calls regarding roads than on any other topic. The PASER (**PA**vement **S**urface **E**valuation **R**ating) system was used for collection of county road condition reports. Roads were evaluated on a scale from 1 to 10, with 10 being a new road. The PASER study indicated that the average condition of unpaved roads was 4.5. The key solution in bringing the roads up to a higher level of service is Montana LTAP providing the training for the workforce that maintains and constructs these roads. Continued strategic training will improve road quality and assure economic stability for Montana.

Workforce Development Focus Area

This focus area pertains to the efforts to attract, retain and re-train present and future workers. During these difficult economic times, LTAP provides training to the transportation workforce at an affordable cost to local governments. The needs assessment surveys on pages 12 through 14 indicated these as high priority selected course topics for this focus area:

- Motor Grader Certification
- Dump Truck Safety
- Gravel Pit Safety
- Tort Liability
- Materials Training
- Asphalt Training
- Snow Rodeo Training
- Forklift
- Loader Safety
- Trenching
- Winter Maintenance
- Community Preparedness
- Surveying
- Weed Mowing
- SPCC (Spill Prevention Control and Countermeasures)

- Signing
- Cattleguards

LTAP has partnered with Flathead Valley Community College, Miles City Community College, Salish-Kootenai College, and Opportunity Link to further workforce development. Each of these agencies has a program to prepare participants to enter the construction industry, and it is hoped that these partnerships will assist and encourage those students intending to enter the transportation workforce.

Organizational Excellence

Throughout the fiscal year, professional development is a key focus for LTAP personnel as they become better equipped to efficiently transfer technology and information to our stakeholders. By providing training for staff and evaluating training successes, our organizational excellence focus will be met.

Relative to promoting organizational excellence within the constituencies we serve, several courses will be offered at the APWA Snow Rodeo and Equipment Training event in September. The Roads Scholar Program prepares local government personnel for better performance and leadership responsibility. The following organizational excellence courses and assessments are proposed for this focus area:

- Work Ethics
- Leadership Courses
- Crew Supervision
- Needs Assessments
- Center Assessment Report

Course evaluations collected at workshops include requests and needs of the transportation workforce. Compiled information is presented to the Advisory Board and MACRS Executive Committee to determine what course materials need to be prepared and/or presented.

Other activities that promote Organizational Excellence are described below:

- The Director meets annually with the League of Cities and Towns Public Works Conference Committee to review topic requests and to prepare an agenda for its yearly conference.
- Each fall the Director meets with the Rocky Mountain APWA Division members to prepare for the annual Equipment Training and Snow Rodeo. Montana LTAP coordinates the event and provides safety training for the first day. The city street departments and county road departments organize and coordinate the Snow Rodeo competition on the second day.
- The four focus areas are developed from all needs assessments presented to our Advisory Board, and from national training requirements passed down to the LTAPs from FHWA. This process assures a team effort in fulfilling training needs.

“Montana LTAP is an invaluable program that continues to provide needed training for Montana’s transportation workforce, especially during these tough economic times.”
Wayne Buck, MACRS President, Rosebud County Road Supervisor

Library Resources and Distance Learning

Audiovisual materials provide other training opportunities identified by the needs assessments. The majority of counties have at least one if not two safety meetings per week for crew members and use these videos and DVDs for meeting topics. The majority of videos checked out from our library database deal with Roadway Safety and Worker Safety.

The following is a list of the videos most frequently checked out:

1. Slips, Trips, and Falls
2. Beware the Bite (Electrical Safety)
3. Heat Stress
4. Your Responsibilities as a Dump Truck Driver
5. Defending Your Safety Zone (Back Protection)
6. Operating Guide: Motor Grader
7. Motor Grader Operation – Part III and PMA
8. Blading Unpaved Roads
9. Loader Operation – Part I
10. Transport Trailer Safety
11. Right of Way Mowing Safety
12. It Always Happens to the Other Guy (Equipment Safety)

Number of Workers Who Watched Videos/DVDs
Highway Safety: 65
Worker Safety: 803
Workforce Development: 136
Infrastructure Management: 318
Total: 1,322

Montana LTAP has been very helpful over the last few years providing us with videos for our safety meetings and we wanted you to know that it is greatly appreciated.
Charlie Eddlemon, MT Dept. of Transportation, Billings

Distance learning methods include webinars and other long-distance learning programs (See Appendix E). This past year LTAP provided monthly morning safety webinars based on requests from constituents and through the needs assessments. These monthly webinars will continue to be provided due to constituents' shrinking travel budgets.

Summary of Work Tasks

The following six technical assistance work tasks were assigned by FHWA when LTAP was first created. Although each LTAP operates to meet its specific customers' needs, all were given these specific directives to fulfill each quarter. As electronic methods of communication and training are developed, Montana LTAP has progressively evolved to stay abreast with the most effective means of transportation technology distribution.

1. Seminars/Training Sessions: Training sessions provided by Montana LTAP are guided by the needs requested from our constituents. For meetings, conferences and training sessions, the following summarizes allowable costs under this agreement: facilities rental and necessary equipment, supplies, and meals and coffee breaks (when meals are an integral part of a conference or meeting). Montana LTAP is presently developing webinar safety meetings for all constituents.

2. Information and On-Site Technical Assistance: The LTAP program will continue to contract individuals who can offer expertise in a variety of subject areas and on-site technical assistance. LTAP will continue to update and develop listservs to enhance communication and share timely, pertinent information with all other transportation entities. Present listservs include Montana Association of County Road Supervisors (all 56 counties), Montana Association of Counties (all county commissioners), League of Cities and Towns (public works directors, mayors, and local city officials), and Montana Department of Transportation (employees). Our toll free line has proven a useful tool for clients as has our website that provides training opportunities and links to other libraries, newsletters and transportation sites.

3. Quarterly Newsletter: The LTAP newsletter provides current articles each quarter to Montana LTAP's audience. Articles are gathered from a variety of sources including various transportation partnerships that Montana LTAP has developed. A lead article demonstrates local expertise in one of the four focus areas each quarter. Announcements of the latest DVDs and publications available are issued each quarter. The training calendar announces regional and national training opportunities in addition to LTAP's local workshops and all of LTAP's partners.

4. Transfer of Technology Materials: Funding will be directed to producing publications and DVDs, and on transferring to DVD our VHS collection, which contains material that supports in-house training opportunities. The library presently contains over 550 videotapes, 900 publications, 130 sets of software, and 20 DVDs. Links are provided under the Library heading on our website to additional resources for researching transportation topics. Montana LTAP will continue to provide webinar links for further training opportunities. At training sessions, handouts are provided so that participants can update their colleagues on the information discussed at the workshops.

5. External Communication: Montana LTAP maintains a mailing list composed of the county road workforce, city and street constituents, county commissioners, public works directors, MDT employees, U.S. Forest Service personnel, and various private transportation entities. Its development originated from the transportation workforce requesting training notifications, library information, quarterly newsletters, and technology research. Throughout the year the list is updated by phone and e-mail requests, address change notices, and conference attendees. With technological advances, LTAP is finding that electronic communication via e-mail and our website is becoming more widely used by our audience.

6. Evaluation: Evaluations will continue to be collected at each workshop following the Kirkpatrick level I format to assess our training effectiveness. These evaluations indicate how training courses are valued as well as what is not effective. Over the past years our instructors and course content always scored favorably, in the 90th percentile. There is an

area on the evaluation form where participants can express workshop needs. This information is tabulated and presented to the MACRS Executive Committee and the League of Cities and Towns when determining future training direction. Montana LTAP's quarterly report also summarizes the work progress within each of the four focus areas and is sent to the Montana LTAP Advisory Board members and WTI. The annual Advisory Board meeting also allows direct input into LTAP's future planning. The FHWA reports, PAR (Performance Assessment Report) and CAR (Center Assessment Report, Appendix B), provide overall accomplishments and activities, highlights and challenges faced by Montana LTAP over the contract period. These reports are also discussed at the Advisory Board meeting.

The training from LTAP has helped me with safety, equipment, and road issues. It has given me information to use for road construction and maintenance as well as public relations and co-worker relations. It has really helped me to become better at my job.
David Lasse, Operator, Prairie County Road Department

Additional Services

Montana LTAP responds to specific requests and special needs of various organizations. Most of these activities fulfill a local need that is met through training, distribution of resources, and applied research.

1. APWA Annual Snow Rodeo and Equipment Training – an event that is hosted by a city or a county providing technical training and equipment safety training for city and county road employees.
2. MACRS – the annual spring conference hosted by the MACRS organization and coordinated through the Montana LTAP office providing topics for county road supervisors, county road employees, county commissioners, and transportation-related vendors.
3. Montana League of Cities and Towns Conference – this fall event occurs annually and Montana LTAP coordinates the agenda for the public works officials. LTAP also presents a safety topic or several topics in conjunction with MTLCT’s specific agenda at this conference.
4. MACo—MidWinter Conference – generally held in February, this event is an opportunity for MACo to assist new county commissioners with all aspects of their position. Montana LTAP presents various topics related to their decisions regarding transportation issues.
5. MDT Work Zone Meeting – Montana LTAP along with the Montana FHWA representative meet with MDT personnel in developing various work zone manuals as well as determining how to transfer FHWA mandates.
6. Asphalt Conference – Montana LTAP partnered with the Asphalt Institute to coordinate and plan an asphalt conference covering topics of RAP, crack sealing, patching, chip sealing, warm mix technologies, and double-shot chip seals. The audience included county road departments, city street departments, MDT employees, and private sector workers.
7. Montana LTAP provides statewide work zone training coordination.

Future Initiatives

Following are five initiatives Montana LTAP proposes to pursue this year:

1. Coordinate and plan January 2012 Tenth Annual Safety Congress.
2. Evaluate our cooperative agreement with MDT and the Work Zone Program.
3. Formal Needs Assessment will be accomplished for 2012.
4. Encourage all small urban areas to develop pavement management programs in preparation for applying for federal funding.
5. Prepare tentative workshop schedule for 2011-2012 (Appendix F).

Budget

The following budget provides the basis for Federal, State and University funding of Montana LTAP from July 1, 2011, through June 30, 2012. Expenditures reflect an estimate of last year's expenses and projected goals for the program during the 2011-2012 state fiscal year. As the work progresses, it may be necessary to move monies among the tasks and expense categories; however, the total amount will be adhered to. Salaries stated are estimates. The University reserves the right to provide cost of living increases based on provisions from the Montana Legislature. Table 1 shows a breakdown of total costs according to the four focus areas. Table 2 breaks down the budget by funding source. The original budget with the FHWA funding is included in Appendix G.

Focus Areas	Salary/ Benefits	Prof. Services	Travel	Supplies/ Com	Minor Equip	Subtotal	IDC's	Total
Safety - 48%	107,536.70	7,440.00	2,397.79	5,136.00	960.00	123,470.49	30,609.51	154,080.00
Infrastructure Management - 18%	40,326.26	2,790.00	899.17	1,926.00	360.00	46,301.43	11,478.57	57,780.00
Workforce Development - 22%	49,287.65	3,410.00	1,098.99	2,354.00	440.00	56,590.64	14,029.36	70,620.00
Organizational Excellence - 12%	26,884.17	1,860.00	599.45	1,284.00	240.00	30,867.62	7,652.38	38,520.00
TOTAL COSTS	224,034.79	15,500.00	4,995.40	10,700.00	2,000.00	257,230.19	63,769.81	321,000.00

Table 1. Breakdown of Budget by Focus Area

	FEDERAL HIGHWAY ADMINISTRATION	GAS TAX REVENUE Sec. 15-70- 101 (1(b.)) MCA	MDT SPR	TOTALS
Salaries				
Steven V. Jenkins, Director	82,358.58		12,525.06	94,883.64
Genevieve Albert, Accounting Tech/Conference Coordinator		29,581.90	3,018.10	32,600.00
Michele Beck, Graphics/Librarian		29,731.90	3,118.10	32,850.00
Student Labor (2)			8,000.00	8,000.00
Benefits	22,474.13	24,019.53	9,207.49	55,701.15
Subtotal: Salaries/Benefits	104,832.71	83,333.33	35,868.75	224,034.79
Professional Services				
Conference Speakers, Workshop Trainers			8,000.00	8,000.00
Printing Expenses			7,500.00	7,500.00
Travel			4,995.40	4,995.40
Supplies/Communications			10,700.00	10,700.00
Minor Equipment			2,000.00	2,000.00
Subtotal: Direct Costs	0.00	0.00	33,195.40	33,195.40
TOTAL (Salaries/Benefits, Direct Costs)	104,832.71	83,333.33	69,064.15	257,230.19
Indirect Costs (34.5% FHWA, 20% Gas Tax,*30% MDT SPR)	36,167.29	16,666.67	10,935.85	63,769.81
GRAND TOTAL	141,000.00	100,000.00	80,000.00	321,000.00
* 30% of Payroll Expenditures				

Table 2. Breakdown of Budget by Source

Appendix A: History

Montana LTAP History

Begun in 1982, the Local Technical Assistance Program was first called “RTAP” for Rural Technical Assistance Program. We became “LTAP,” Local Technical Assistance Program, in 1991 as the Intermodal Surface Transportation Efficiency Act (ISTEA) widened the program’s scope to include urban areas with populations over 50,000. At this time, the Tribal Technical Assistance Program (TTAP) was also created. Together, these programs help local agencies build, maintain, and operate America’s transportation system by delivering targeted training and technical assistance to local and tribal governments.

Over the past 10 years alone, the LTAP and TTAP centers have achieved the following results:

- They conducted more than 60,000 training events.
- More than 1.5 million local transportation professionals attended LTAP and TTAP training.
- Participants logged more than 9 million hours of training.
- Nearly half of all LTAP and TTAP training included content related to highway and worker safety.
- Centers distributed more than 2 million technical publications and resources in response to requests from local and tribal agencies.
- Local transportation agencies saved an estimated \$8 for every \$1 LTAP spent on information and training.

Appendix B: Center Assessment Report

2010 LTAP/TTAP Center Assessment Report

Center Name: **Montana Local Technical Assistance Program**

Reporting Period: **January 1 to December 31, 2010**

Section One: Specific Successes and Challenges

•Based on your work in 2010, are there any new services, technologies and/or offerings that local agencies in your state or tribal area are asking for? Are you able to deliver those services and, if not, what would you need to do so?

Based on our 2010 Needs Assessment, comments from workshop evaluations, and direct dialogue with constituents, there were requests for electronic formats for training opportunities due to cut backs in training budgets. Consequently as a new service, any time webinars became available from other sources such as the LTAP Clearinghouse, APWA, Michigan LTAP, etc., we forwarded these links and information to our constituents' listserv of over 200 contacts. Montana LTAP also conducted several webinars introducing the Highway Safety Manual containing links to further HSM information.

A new classroom offering this fall was use of the Dynamic Cone Penetrometer for our new Soils and Foundation Testing module. Constituents were in search of a method for testing gravel roads without high instrument costs. The DCP was a valuable tool at a reasonable cost.

Due to increased questions regarding pavement management, Montana LTAP partnered with the Asphalt Institute to hold an asphalt conference in Montana in 2010. With the participation reaching well over 100, it was determined to develop another asphalt conference in 2011. This information would not have been available if it had not been for our partnership with the Asphalt Institute and generous speakers providing the requested information.

With the job market suffering, the number of calls for requesting flagging certification increased in 2010. Montana Department of Transportation Safety Committee requested updating Flagging Handbooks and Guidelines for Temporary Traffic Control handbooks to coincide with the new 2009 MUTCD. MT LTAP developed and designed these handbooks, and received approval by MDT's Safety Committee. MT LTAP administered all Work Zone certifications for MDT and we delivered those services.

•Are you able to meet the emerging needs, interests and opportunities of local agencies by leveraging additional resources? Describe your efforts.

Through partnerships with Montana Department of Transportation and the Asphalt Institute, MT LTAP was able to move forward by providing the new work zone handbooks and an asphalt conference.

With regards to courses and presenters for the Asphalt Conference, MT LTAP and the Asphalt Institute relied on industry representatives as speakers.

With 76% of all unpaved roads in Montana belonging to local governments and 95% of those roads gravel, our local agencies continually request new information in construction and design. The additional resources in this area are limited and MT LTAP was grateful to be able to use the *Gravel*

Roads: Maintenance & Design Manual provided by FHWA. Any additional materials would be welcomed.

A recent county road project used private industry to assist in lime stabilization. Steve Monlux, private road engineer, was recommended to the county by MT LTAP due to Monlux's extensive experience in gravel roads.

Our partnership with Western Transportation Institute provided MT LTAP an opportunity to assist in its grant writing proposal regarding gravel roads with the hope research findings will be able to be used by LTAP's constituents.

•Does your Center excel at a particular part of the LTAP/TTAP mission? What is it that you do best as a Center, and what do you think makes your Center unique? Be specific in your response.

Based on the Needs Assessment, the most requested method of training was hands-on, face-to-face training. Our constituents specified classroom interaction allowed interchange among participants learning from each other. Although our center had a limited number of training personnel, we provided tailor-made courses to fit specific requests throughout Montana.

As mentioned above, Gravel Road Design and Maintenance is MT LTAP's foremost requested course. As Director, my engineering emphasis was Geotechnical Engineering and I provided the information for gravel road specifications and design for soils in each particular area in Montana.

MT LTAP is unique in the aspect of maintaining the state's database for all certified work zone technicians, certified flaggers, certified flagger trainers, and certified traffic control supervisors. MT LTAP designed all tests, handbooks, training notebooks for all work zone safety entities. Through the MDT Safety Committee, MT LTAP assisted in the Flagging reciprocity agreement for Montana, Oregon, Idaho, and Washington. LTAP also provides all the training for these levels of temporary traffic control.

Because the majority of our constituents work in the outdoors, MT LTAP's Winter Survival Course was highly requested by city and county road departments because of the nature of new winter products introduced in the presentation. This course was divided into three modules that covered a winter safety overview; clothing and hypothermia; and carbon monoxide poisoning. Comments have been returned describing actual life-saving incidents using methods from this class by county and city equipment operators who found stranded motorists in blizzard conditions.

Section Two: National Program Management

Did you have direct contact with the FHWA Technology Partnership Programs team in 2010 and, if so, were you satisfied with the level of service you received? Provide specifics where appropriate.

While at our regional meeting in June, Cameron Ishaq delivered important information regarding the reorganization of the Office of Safety and contact resources. He was helpful in providing in depth information from the FHWA perspective.

The FHWA TPP team provided an outstanding conference in Denver for the Every Day Counts initiative.

At the National LTAP/TTAP conference, FHWA's separate discussion times also provided insight to the workings of funding and resources.

Marcee Allen, Montana FHWA Safety/Traffic Design Engineer requested to be a speaker at our Retroreflectivity presentation this past winter for Montana Association of Counties and then later cancelled. This did not provide a high level of service from our perspective.

On a local level, Kevin McLaury, Montana FHWA Administrator, participated in the League of Cities and Towns Public Works conference by presenting on the Every Day Counts initiative. He was helpful and available for questions afterward.

•Did you request a product or service from the FHWA LTAP/TTAP Clearinghouse in 2010? Were you satisfied with the response you received, and did that response meet your needs? Provide specifics where appropriate.

The FHWA LTAP/TTAP Clearinghouse provided outstanding materials such as the Highway Safety Manual; the Winter Maintenance CDs program and a webinar to further promote use of the CDs. Their new webpage made it easier to navigate to resources and contact information.

Their Interchange interviews were relevant and helpful such as the Needs Assessment, Back to Gravel, and Road Sign Replacement.

The Forum also helped keep our center up-to-date on the various committees and items we needed to keep ourselves current, especially the Safety Committee minutes on upcoming webinars and happenings in our region.

Because several staff members were not able to go to National in July, the taped sessions provided information--like actually being there!

The Clearinghouse staff was always helpful, especially when we initiated our first webinar using the Adobe Connect information. This has been an excellent tool for our center.

•How can FHWA better assist your Center and/or the national LTAP/TTAP in 2011?

They need to keep the funding status information coming. By providing transparent step-by-step status of where our funding is coming from, or when it is coming, helps us better prepare for an annual work plan and training calendar. If the funding isn't coming, we need to know in order to better prepare for alternative methods to transfer the technology.

We appreciate learning about any new FHWA initiatives and materials that support transferring the technology, such as receiving the HSM manuals. The webinar on the Winter Maintenance CD's was timely and informative.

FHWA's network of information assists us in keeping local governments informed. FHWA's Focus newsletter provides information that we have used in our newsletter or have used as a resource to pass on to our constituents. Having it sent electronically may be a consideration in the near future.

Section Three: Overall Program and Center Assessment

- Provide a qualitative assessment of your overall efforts to improve and expand the work of your Center over the past year. Address the overall "state of the Program" from the perspective of your Center, and include your perception of how your Center performed during the year and what impact your work may have had on our customers and the Program. Include as much specific information as possible, and share both challenges as well as successes. Limit your response to approximately three 8.5 X 11 pages.
- How does an LTAP center improve and expand with the same level of funding each year?

Improvement and expansion came from innovative thinking and wise money management. It came through building on long-standing relationships with our partners who have allowed us to continue to provide quality training for our stakeholders. Our partners included this past year were the Montana Association of County Road Supervisors, Montana Association of Counties, Montana League of Cities and Towns, American Public Works Association, National Association of County Engineers, and Montana Department of Transportation.

It came from new partnerships with Flathead Valley Community College, Miles City Community College, Salish-Kootenai College, Montana Peaks, and Opportunity Link to further workforce development. Each of these agencies has a program to prepare participants to enter the construction industry, and it is hoped that these partnerships will encourage these students to specifically enter the transportation workforce.

It came from a formal Needs Assessment, from our Advisory Board, from survey questionnaires at training sessions, from personal interviews, and from injury insurance reports guiding our center to offer training and resources reflected in these requests made by our partners and customers. It came from our emerged partnership with Western Transportation Institute, assisting them with grant proposals and reciprocation with assistance on our work plan. LTAP provided assistance regarding snow plow training for WTI's TRANSCEND project, and assistance with WTI/MDT's Noise Wall grant proposal and WTI's gravel roads grant proposal.

It came from teamwork and a conscious effort to provide the best training and information our staff could develop by updating and adding new modules to tried and true training courses. It came from no-cost materials and free webinars from the National LTAP/TTAP Clearinghouse.

Overall, Montana LTAP has once again reached its goals this past year by providing training and transferring technology in all four focus areas by working smarter and using funding resources wisely.

Montana LTAP employees are motivated by knowing lives are being saved on roadways and on the job. We know we played a unique part in transportation education and our development answered a pressing need at the local level. We have created a broad spectrum of tools to put transportation information into the hands of the professionals who need it, ranging from traditional, in-person workshops and training to state-of-the-practice electronic delivery methods such as software packages, online clearinghouses, and webinars. Ways that we reached these objectives were through our seminars and training sessions, information and on-site technical assistance, quarterly newsletters, transfer of technology materials, external communication, and evaluation. This experience was instrumental in insuring that the technical assistance was promoted to and accessible by the largest number of users. Audiovisual materials provided other training

opportunities identified by the needs assessments. Many counties have at least one if not two safety meetings per month for crew members and used our videos and DVDs for meeting topics. The majority of audio-visual material checked out from our library database dealt with Roadway Safety and Worker Safety.

This past year our low-cost training has been beneficial for city and county governments as their training budgets were depleted. By moving our newsletter and training announcements to half print and half electronic, we kept our costs low. Our capacity to provide face-to-face, hands-on training enabled Montana's transportation workforce to learn valuable information from our instructors, and provided opportunities to discuss issues and share solutions with their peers. New training such as GPS/GIS training opened new doors for possibilities for equipment operators who never had the opportunity for this type of training. Our courses, such as sign management, retroreflectivity and work zone safety, assisted in meeting FHWA's initiatives of Every Day Counts and Toward Zero Deaths. Adding to these initiatives was the Road Safety Reviews performed this year that initiated understanding of clear zone hazards. This program needs funding to reach all of our constituents. We had limited time and personnel, as did local governments, to go beyond this scope of training.

Throughout 2010, the staff played key roles in the development, coordination, analysis, enhancement and day-to-day operations of transportation technology transfer. More rewards come from teamwork. We kept updated ourselves by attending training such as marketing courses or ATSSA flagger training recertification; through correspondence with other LTAP/TTAP centers; attended the National LTAP conference; received current materials and webinar notices from the Clearinghouse; attended the National Summit for Rural Traffic Safety Culture, representing the National LTAP Safety Committee; reviewed FHWA's various websites on EDC, TZD, work zone safety, MUTCD; and provided library searches for constituents on pavement management and limestone stabilization procedures. Electronically-sent research papers answered requests from the private sector in Massachusetts.

We were successful in assisting Montana Department of Transportation by maintaining the database for the work zone certifications in flagger, work zone technician, traffic control supervisor, and flagger trainer. We updated the two work zone handbooks and traffic control supervisor notebooks to meet the new 2009 MUTCD changes, as well as trained their trainers. This partnership was and continues to be a win-win situation.

Our Roads Scholar program continued to grow and promoted ongoing skills development at the local levels recognizing the workforce for reaching competency levels of transportation expertise. The underlying approach provided curricula that enabled local transportation workers to study road fundamentals, safety, temporary traffic control, drainage, snow and ice removal, and other topics with the goal of becoming expert road managers. The courses helped participants develop professionalism and advance their careers. During training sessions, Roads Scholars assisted the trainer in answering questions and providing their insight of the topic. Seeing our constituents stand up for their Roads Scholar awards and be recognized at the annual spring and fall conferences, taking pride in their accomplishment, was a true measure that LTAP succeeded.

The Director met with the League of Cities and Towns Public Works Conference Committee to review topic requests, and prepared and distributed an agenda for its yearly conference. The Director also met with the Rocky Mountain APWA Division members and hosting city/county employees to prepare for the annual Equipment Training and Snow Rodeo. Montana LTAP

coordinated the entire event and provided safety training one day while the hosting city/county provided the snow rodeo competition on the second day. LTAP coordinated speakers, conference planning, and program design for the MACRS spring conference where over 300 participants gathered. This face-to-face four day conference allowed all LTAP employees to meet and greet constituents. This was part of building and reconnecting long-lasting relationships throughout the state.

Bottom-line on Montana LTAP's state of the union is we have once again provided outstanding transportation training and transferred technology to the best of our ability given the limited funding and personnel.

Appendix C: Staff

Steven V. Jenkins, P.E.

Education

B.S. Civil and Environmental Engineering, Utah State University, 1983

M.E. Geotechnical Engineering, Utah State University, 1985

Work Experience

May 1994 – present

Director, Montana Local Technical Assistance Program and Native American Technology Transfer Center

- Directing all training activities including course preparation, teaching, new technologies, assisting all levels of government
- Directing Montana Flagger Training Program and MDT Maintenance Traffic Control Training

October 1990 – April 1994

Director, Utah Technology Transfer Center

- Managing all aspects of technology transfer in Utah: proposals, work plan, budget, newsletters, training, library assistance, corresponding with all local governments and professional organizations, UDOT and FHWA.

July 1989 – October 1990

Roadway Design, Project Design Engineer, Utah Department of Transportation

- Assisted as project design engineer on various crucial projects including Panguitch Main Street, Manti Main Street, 2100 South 300 West Salt Lake City, Black Smith Fork River Bridge, Jordanelle, Railroad Projects, etc. Assigned to coordinate design activities with local governments.

July 1987 – July 1989

Transportation Planning, Local Government Aid, Utah Department of Transportation

- Assisted the local government engineer in administering the Federal Aid Secondary program. All bridge replacement projects off system for local governments. B and C fund administrator.

January 1986 – July 1987

Research, Materials and Research, Utah Department of Transportation

- Principal investigator on “Pipe Culvert Durability” and “Seasonal Load Restriction” research duties.

June 1983 – September 1984

Hydraulics, Roadway Design, Utah Department of Transportation

- Reviewed hydraulic design for replacement bridge structures after the floods of 1983 – 1984.

June 1983 – September 1983

Thistle, Utah, Utah Department of Transportation

- Inspector of drainage pipe placement and backfill. General Surveying.

Prospects / Reports / Publication

Author – Flagger’s Handbook, Montana 2004

Author – Guidelines for Temporary Traffic Control, Montana 2005

Author – Guidelines for Temporary Traffic Control, Montana 2010

Preparing and Teaching “Winter Maintenance” courses: These courses include all aspects of preparation for winter, equipment preparation, anti-icing, deicing with the use of chemicals, sanding, salting, and effective plowing. This course has been taught in many of the Western states.

Winter Survival Training: This course has been taught for over ten years in many areas of the country. It describes how to travel and survive in extreme cold and hazardous environments.

Snow Rodeo: This training and competition have been hosted by LTAP for fifteen years. Participants learn effective winter maintenance and equipment operations.

Assemble and teach course “Risk Management for Montana.”

Prepare and teach “Safety Management for Local Governments.”

Prepare and administer Work Zone Flagging course for Montana; certified thousands of students over a fifteen-year period on Work Zone Safety Signing and Flagging.

National Association of County Engineers: update and rewrite manuals for Procurement, Public Awareness and Support, and Drainage and Storm Water Design.

“School Zone Safety” training video for Montana in conjunction with the Department of Justice Highway Traffic Safety Division.

“School Zone Safety” training video in conjunction with Utah Department of Transportation. Assisted local officials in learning the new laws for safe school zones and training crossing guards.

FHWA technical panel to establish training for “Pavement Management for Local Governments.”

FHWA technical panel to establish training for “Culvert Management,” “Bridge Management,” “Hydraulic Design” and “Storm Water Design.”

Currently teach workshops on: Sign Management System, Road Surface Management System, Gravel Road Maintenance and Safety Features for Local Roads and Streets.

Prepared and taught WZTC Level I for Technicians.

Prepared and taught WZTC Level II for Supervisors.

Assisted Forest Service in design, signing and bridge aspects of training.
Assisted Forest Service in court cases regarding signing; implemented a sign inventory program throughout Utah, Idaho, and Montana.

Assisted FHWA and MDT; implemented a sign management program.

Assisted MACo (Montana Association of Counties), Montana League of Cities & Towns, MACRS (Montana Association of County Road Supervisors), APWA, ATSSA, NACE; developing and conducting annual meetings.

Assisted MACRS to become Affiliate Members of NACE.

Developed MACRS organization from just several counties as members to include all 56 counties and implemented bringing county commissioners to annual conference and present on panels.

Currently developing webinar system for weekly safety meetings in Montana.

Extensive use of distance learning on EdNet System at MSU, reaching 14 locations with over 1,000 participants.

Developed PASER (Pavement Surface Evaluation and Rating) presentation for MACRS and established data base collection of all counties road ratings.

Initiated Roads Scholar Program criteria, Level I and II, for Montana, developing Access database tracking system.

Developed Road Safety Reviews reporting system for county road departments.

Wrote and directed safety movie, *The Will to Survive*, focusing on winter survival techniques and documentary comments from Rulon Gardner, Olympic Gold Medalist, and Dr. Ken Kamler, mostly known for his Mt. Everest publications and author of *Surviving the Extremes*.

Professional Licenses / Societies

Professional Engineering Licenses for Utah and Montana

International Municipal Safety Association

- Certification for WZTC and Signing

American Traffic Safety Services Association

- Work Zone Technician Certification
- Work Zone Supervisor Certification

Member of following organizations:

- American Public Works Association
- National Association of County Engineers
- ATSSA
- IMSA

Certified Work Zone Instructor for Flagging
for Work Zone Technician & Traffic Control Supervisor

- Montana
- Washington
- Oregon
- Idaho

Appendix D: Needs Assessment

2010-2011 Formal Needs Assessment for Montana LTAP

LTAP Workshop Needs

Subjects were rated 1-5 by attendees and given weighted averages accordingly.

Focus Area: Worker Safety

Top 3 Responses

- Winter Survival
- Back Safety
- Slips, Trips, & Falls

Focus Area: Work Zone/Highway Safety

Top 3 Responses

- Emergency Mgmt. Signing & Incident Mgmt.
- Work Zone Traffic Control- Flagging
- Work Zone Technician- Level I

Focus Area: Infrastructure Management

Top 4 Responses

- Gravel Road Maintenance & Design (Various Topics)
- Winter Maintenance
- County Road Standards
- Culvert Placement Trenching

Focus Area: Workforce Development

Top 3 Responses

- Driving Safety
- Excavation Safety
- Dump Truck Safety

Focus Area: Organizational Excellence

Top 2 Responses

- Crew Supervision
- Motivation

LTAP Workshop Information

Are Montana LTAP Workshops cost affordable?

- Yes: 94.4%
- No: 5.6%

What type of training do you prefer?

- Full Day: 75.9%
- Half Day: 24.1%
- 1-2 Hours: 3.7%

What day works best for training?

- Thursday: 55.6%
- Monday: 38.9%
- Wednesday: 37%
- Tuesday: 36.1%

What time of day do you prefer training to start?

- 8:00 am: 91.7%
- 10:00 am: 8.3%

What time of year do you prefer training?

- September - October: 44.4%
- January - February: 36.1%
- November - December: 23.1%
- March - April: 22.2%
- July - August: 8.3%

LTAP Website Information

Is the Montana LTAP Website easy to navigate?

- Yes: 61.1%
- NA: 34.3%
- No: 4.6%

How often do you visit the Montana LTAP Website?

- Never: 44.4%
- Seasonally: 28.7%
- Monthly: 17.6%
- Weekly: 9.3%

When you visit the Montana LTAP Website, do you find everything you are looking for?

- No: 51.9%
- Yes: 48.1%

When you are visiting the Montana LTAP Website, what information are you looking for?

- NA: 42.6%
- Training Calendar: 40.7%
- Montana LTAP Library Information: 23.1%
- "LTAP Matters" Newsletter: 23.1%

LTAP Library Information

Have you or your agency received material from the Montana LTAP Library?

- Yes: 46.3%
- Unsure: 38.9%
- No: 14.8%

Is the material in the Montana LTAP Library useful?

- Useful: 36.1%
- Unsure: 36.1%
- Very Useful: 17.6%
- Useful: 9.3%
- Not Useful: 0.9%

What library material do you request most often?

- Have not checked out material: 43.5%
- Video & DVD: 40.7%
- Publications: 16.7%

LTAP Newsletter Information

Do you read Montana LTAP's newsletter "LTAP Matters"?

- No: 57.4%
- Yes: 42.6%

How do you receive "LTAP Matters"?

- Mail: 46.3%
- Unsure: 8.9%
- Electronically: 14.8%

What type of articles would you like in "LTAP Matters"?

- Worker Safety: 61.1%
- Workforce Development: 38.9%
- Infrastructure Management: 36.1
- Organizational Excellence: 29.6%
- Highway Safety: 22.2%
- NA: 9.3%

Would you like to see more articles on local topics?

- Yes: 76.9%
- No: 23.1%

If so, what types of local topics would you like to see?

- Local Road/Highway Projects: 51.9%
- Laws/Regulations: 38%
- Budget/Costs: 37%
- Technical Articles: 37%
- NA: 10.2%

LTAP Listserv Information

Are you a subscriber to the Montana LTAP Listserv?

- No: 75.9%
- Yes: 24.1%

LTAP Demographic Information

What is your job description?

- Road Crew: 55.6%
- Road Superintendent/Foreman/Supervisor: 30.6%
- Public Works Director: 6.5%
- Commissioner: 4.6%
- City/Town/County Engineer: 2.8%

How many years of work experience do you have?

- 20 + years: 32.4%
- 4-6 years: 19.4%
- 0-3 years: 14.8%
- 15-19 years: 13.9%
- 10-14 years: 13%
- 7-9 years: 6.5%

What is the population of your city?

- Under 4,000: 29.41%
- 4,000-10,000: 40%
- 10,000-15,000: 7.06%
- 15,000-30,000: 1.18%
- 30,000-45,000: 5.88%
- 45,000 and above: 16.47%

How many miles of road does your city/county maintain?

- Under 250: 6.8%
- 250-500: 19.3%
- 500-750: 9.1%
- 750-900: 20.5%
- 900-1,150: 12.5%
- 1,150-2,000: 29.5%
- 2,000 and above: 2.3%

LTAP Methods for Providing Technology Transfer

Subjects were rated 1-5 by attendees, and given weighted averages accordingly.

Top 4 Responses

- Workshops
- Conferences
- Hands-On Demonstrations/ Technical Visits:
- Personal Communication

Appendix E: Distance Learning Lessons

Four safety meeting webinars were held via Adobe Connect through the National LTAP Clearinghouse at Montana LTAP:

- Every Day Counts – January 25, 2011
- Pavement Preservation – February 15, 2011
- Drainage and Trenching Safety – March 24, 2011
- Pavement Inventories –April 26, 2011

Topics projected for next year’s safety meeting webinars include:

- Personal and Community Preparedness
- Signing
- Safety Audits (Attention to Clear Zones and the Safety Edge)
- Blade Operation
- Drainage
- Funding – by Russ Huotari, Richland County Public Works Director
- Winter Survival
- Work Zone Review
- Hand Safety
- Slips, Trips, and Falls
- Back Safety
- Electricity - Beware

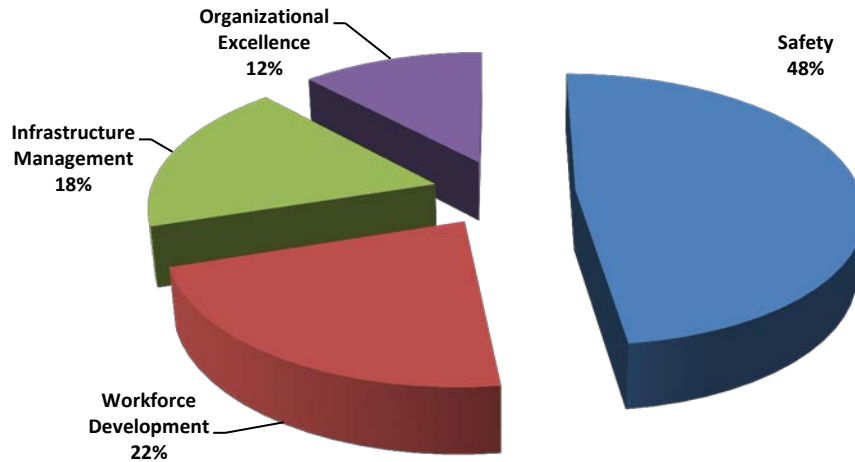
Other distance learning programs used and available for use include MDT’s GoToMeetings, National LTAP Clearinghouse’s Adobe Pro Connect, and a variety of webinars from NHI, FHWA, and other LTAPs.

Appendix F: 2011-2012 Montana LTAP Tentative Workshop Schedule

August 30-Sept. 1, 2011: Helena	Snow Rodeo & Equipment Safety – Topics to be determined
October 4, 2011: Big Timber	MACRS Fall District Meeting: Safety Audits/Gravel Pits – Materials/ Winter Survival-Maintenance
October 5, 2011: Billings	League of Cities and Towns – Public Works Directors – Crown Plaza
October 6, 2011: Miles City	MACRS Fall District Meeting: Safety Audits/Gravel Pits – Materials/ Winter Survival-Maintenance
October 11, 2011: Kalispell	MACRS Fall District Meeting: Safety Audits/Gravel Pits – Materials/ Winter Survival-Maintenance
October 12, 2011: Great Falls	MACRS Fall District Meeting: Safety Audits/Gravel Pits – Materials/ Winter Survival-Maintenance
October 13, 2011: Bozeman	MACRS Fall District Meeting: Safety Audits/Gravel Pits – Materials/ Winter Survival-Maintenance
November 2- 3, 2011: Great Falls	MACRS Planning Meeting
November 29, 2011: Missoula	Winter Maintenance and Winter Survival
November 30, 2011: Billings	Winter Maintenance and Winter Survival
January 23-26, 2012: Great Falls	10 th Annual Safety Congress: Jan. 23 –am - Work Zone Technician Jan.23 – pm/Jan.24: Traffic Control Supervisor Jan. 25 – am: Signing/Prisms/Clear Zones Jan. 25 – pm: Safety Audits Jan. 26 – am: Sign Retroreflectivity/Driving Behavior Jan. 26 – pm: Worker Safety – Hand & Back Safety/Winter Survival Jan. 26 – IMSA Certification
February 1, 2012: Helena	Asphalt Institute – Colonial Inn
February 2, 2012: Helena	Flagger Trainer
February 21, 2012: Bozeman	Work Zone Flagging
February 22, 2012: Lewistown	Work Zone Flagging
February 23, 2012: Billings	Work Zone Flagging
March 6, 2012: Helena	Work Zone Technician
March 7, 2012: Missoula	Work Zone Technician
March 8, 2012: Kalispell	Work Zone Technician
March 13, 2012: Miles City	Work Zone Flagging
March 14, 2012: Glendive	Work Zone Flagging
March 15, 2012: Wolf Point	Work Zone Flagging
March 16, 2012: Plentywood	Work Zone Flagging
March 26, 2012: Great Falls	Leadership – MACRS Spring Pre-conference
March 26-29, 2012: Great Falls	MACRS 32 nd Annual Conference, Heritage Inn
April 9-10, 2012: Missoula	Design and Maintenance of Unpaved Roads
April 10-11, 2012: Kalispell	Design and Maintenance of Unpaved Roads
April 25-26, 2012: Sidney	Design and Maintenance of Unpaved Roads
May 15, 2012: Great Falls	Work Zone Flagging
May 16, 2012: Lewistown	Work Zone Flagging
May 17, 2012: Billings	Work Zone Flagging
May 22, 2012: Bozeman	Work Zone Flagging
May 23, 2012: Bozeman	MACRS Executive Meeting
May 24, 2012: Bozeman	LTAP Advisory Board Meeting
May 30-31, 2012: Kansas	National LTAP Region 7 Meeting

Appendix G: Needs Assessment Survey Topics in 2011-2012 Workshop Schedule

Four Focus Areas



Infrastructure Management

August 30/Sept. 1, 2011
Snow Rodeo: GIS/GPS

Oct. 4,6,11,12,13,2011
MACRS Fall Meetings:
Gravel Pits/Materials, Winter Maintenance

Oct. 5, 2011
League of Cities and Towns: Storm Water, Right of Way, Preconstruction & Design, Tort Liability

Nov. 29,30, 2011
Winter Maintenance

Jan. 23-26, 2012
Safety Congress: Prisms, Clear Zones

Feb. 1, 2012
Asphalt Conference: Recycled Asphalt, Construction Techniques, Asphalt Management, Chip Seal

March 26-29, 2012
MACRS: Spill Prevention, Trenching, Tort Liability, Bridges, Right of Way, Road Standards, PASER, Storm Water

April 9-10, 10-11, 25-26, 2012
Design & Maintenance of Unpaved Roads: Construction Technique, Dust Control, Culverts, Bridges, Materials

Workforce Development

August 30-Sept. 1, 2011
Snow Rodeo: Loader, Forklift, Dump Truck

Jan.23-26, 2012
Safety Congress: IMSA Certification

March 26-29, 2012
MACRS Spring Conference: Leadership, Ethics
April 9-10, 10-11, 25-26, 2012
Design & Maintenance of Unpaved Roads: Motor Grader Certification

Organizational Excellence

Oct. 5, 2011
League of Cities and Towns: Crew Supervision

November 2-3, 2012:
MACRS Planning Meeting

May 23, 2012
MACRS Executive Meeting

May 24, 2012
LTAP Advisory Board Meeting

May 30-31, 2012
National LTAP Region 7 Meeting

Safety

Highway Safety:
Oct.4,6,11,12,13,2011
MACRS Fall Meetings: Safety Audits

Jan.23-26, 2012
Safety Congress: Work Zone Technician, Work Zone Traffic Control Supervisor, MUTCD Signing, Safety Audits, Sign Retroreflectivity/Driving Behavior, Roadside Design, Loss Control

Feb. 2, 2012
Flagger Train the Trainer

Feb. 21, 22, 23, March 6, 7,8,13,14,15,16 May 15, 16, 17, 22, 2012
Work Zone Flagging, Work Zone Tech

Worker Safety:
Oct.4,6,11,12,13,2011
MACRS Fall Meetings: Winter Survival

Nov. 29,30, 2011
Winter Survival

Jan.23-26, 2012
Hand & Back Safety, Summer Survival