

WYOMING LTAP CENTER

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**WYOMING TECHNOLOGY
TRANSFER CENTER (LTAP)**
Program Year 2016 – Proposed Activities

1. Introduction

1.1 History and Background

Established in August of 1985, initial funding was provided through a \$150,000 grant from the Federal Highway Administration (FHWA). Since 1987, the Center has been funded by Wyoming State statute. Each year, FHWA contributes 50% of the LTAP Center funding, while a partnership of Wyoming Cities, Wyoming Counties, the Wyoming Department of Transportation and the University of Wyoming collectively provide the required matching funds. The LTAP Center is one of 58 Centers which include a program in every state in addition to six Tribal Transportation Assistance Programs and one additional center in Puerto Rico. Over the years, the benefits of this program have been shown to far outweigh the cost.

1.2 Mission and Vision

- **Mission**

The LTAP mission is to foster a safe, efficient, and environmentally sound surface transportation system by improving skills and increasing knowledge of the transportation workforce and decision makers through training, technical assistance, and technology transfer.

- **Vision**

The LTAP vision is to be recognized as a premier resource in developing and transferring innovative technologies, proven solutions, and reliable services to successfully address and meet the needs of the transportation community and the driving public in the State of Wyoming.

1.3 Work Plan Organization

This work plan describes how the activities outlined in Section 2.2 below will fulfill the goals of each of the four focus areas: safety, infrastructure management, workforce development, and organizational excellence. Some activities will contribute to the goals of only one focus area, while others may help to fulfill the goals of multiple focus areas.

2. Operations

2.1 Personnel

LTAP staffing consists of Khaled Ksaibati, Director (50%), Caroline Johnson, Administrative Associate (92%), Bart Evans, Transportation Safety Expert (100%), Trenna Terrill, Engineer (100%), Promo Saha, PMS Post Doc (100%), and part-time graduate and undergraduate student employees.

2.2 Activities

Table 1 lists the T² Center's proposed activities for 2017.

Table 1: T² Proposed Activities for 2017

Activity	Proposed Activity
No. 1	Maintain a Mailing List
No. 2	Publish a Newsletter
No. 3	Distribute Technology Transfer Materials
No. 4	Provide an Information Service
No. 5	Provide Training Courses
No. 6	Maintain a Web Site
No. 7	Evaluate the Effectiveness of the Program
No. 8	Participate in Local, State, Regional and National Efforts
No. 9	Update Library

These activities are described in detail in the following sections:

- **Activity No. 1: Maintain a Mailing List**

The current mailing list includes 1,887 individuals, of which 1,625 are in-state and 262 are out-of-state. This list is updated continuously. One first class mailing with return postage prepaid is completed each year to identify needed changes to the mailing list database. In addition, mailing lists are updated with information supplied by local agencies, requests made in the newsletter, and directories of official municipal and county rosters. The Wyoming Transportation Department directory is also used to update the mailing list. Titles and names are cross-checked during the first and second quarters as directories become available.

As developed, the Center has two basic mailing groups. Group 1 consists of the entire T² mailing list which receives the newsletter. Group 2 consists of Wyoming only; this group also receives workshop notices and technical briefs.

- **Activity No. 2: Publish a Newsletter**

The LTAP Newsletter is designed to focus on Wyoming activities. When possible, it features articles dealing with Wyoming cities and counties, articles from the Wyoming Transportation Department and notices of upcoming workshops. Wyoming's winner of the annual "You Show Us" contest is showcased, along with Wyoming's other contest entries. There is a general emphasis on safety improvement and informing the LTAP audience of recent changes in guidelines. New additions to the LTAP library and training materials are highlighted in various editions. All layout and editing of the LTAP eight-page newsletter is developed solely by the LTAP staff.

- **Activity No. 3: Distribute Technology Transfer Materials**

All LTAP materials are classified in five groups: Planning and Administration, Design and Construction, Traffic and Safety, Human Resource Safety, and Maintenance. The entire library is available on-line as a searchable database. Library requests can also be made with a direct link from our database. All individuals have access to the LTAP Center by phone or the web site.

- **Activity No. 4: Provide an Information Service**

The LTAP Center provides local agencies with advice and guidance, but does not offer engineering services. Primarily, activities undertaken in this area are in the form of referrals to published materials, target workshops, etc. Requests for information are made during site visits by the Program Director and Transportation Training Coordinator, direct mail and access through the phone line. A major effort undertaken, in addition to developing newsletter articles and evaluating local LTAP program successes, is to determine problem areas in which LTAP may be of assistance. This direct link provides the LTAP Center with a unique opportunity to assist local agencies. The Director's personal library and university library are often utilized for these requests. The availability of the phone service is advertised in all LTAP information distributed and at all workshops.

- **Activity No. 5: Provide Training Courses**

The LTAP Center provides two types of training sessions: statewide and local host. The statewide sessions comprise the majority of the Center's training and are arranged for and presented by the Center, either using the Center's staff or outside experts, or a combination of the two. Local host sessions are arranged by the local agency requesting the training, with the Center providing the presenters. Fewer training sessions are offered during the summer months in order to accommodate construction season.

Sessions are usually presented in conjunction with other organizations, such as the Concrete Association of Wyoming, the Wyoming Department of Environmental Quality (WDEQ), FHWA and WYDOT. The Center has a close working

relationship with the Wyoming Association of County Engineers and Road Supervisors (WACERS), and is developing relationships with the Wyoming Association of Municipalities, the Rocky Mountain Chapter of the American Public Works Association, and other state, regional, and national professional organizations. The Center also works with various trade organizations and other members of the private sector in the development and presentation of training sessions.

Training sessions are generally attended by supervisory and technical personnel. These sessions are usually one day long, though they may on occasion be longer. Presentations are given by the Center's staff, WYDOT staff, as well as experts in various fields from across the country.

The Center also participates in the Transportation Learning Network (TLN) to provide training from a distance at several locations throughout the State. This training is done in close cooperation with WYDOT Training staff. National Highway Institute courses provide regional training from Laramie using the TLN.

Sessions planned for 2017 include Local Project Administration (LPA) Certification, Work Zone Traffic Control, ATTSSA Flagger Certification, the 22nd Annual Transportation and Safety Congress, Gravel Roads Maintenance, Bicycles & Pedestrians, and Concrete. The WYDOT Materials Certification courses will also be offered throughout the year.

Local host sessions are performed upon request from local agencies. Several local agencies have requested the work zone safety and flagger training.

- **Activity No. 6: Maintain a Web Site**

The Center has an internet web site: www.uwyo.edu/wyt2. This web site is being updated continuously in cooperation with a computer specialist. The web site is user-friendly and provides users with the ability to search the library on-line. The web site also includes notices of future workshops, recently acquired library materials, newsletters, certification materials, staff contacts, and links to other resources. This past year we incorporated a new on-line registration process for all workshops and certifications. This on-line registration is updated and maintained during the year.

- **Activity No. 7: Evaluate the Effectiveness of the Program**

Evaluation of the LTAP program is done on a continuous basis. Evaluation reports are produced for every workshop. In addition, the annual meeting of the Advisory Committee is utilized to assess the quality of the program. Close working relations have been established with the Wyoming Department of Transportation which also helps in the evaluation process. A major effort of this program task has been and continues to be to develop success stories.

- **Activity No. 8: Participate in Local, State, Regional and National Efforts**

The LTAP staff members participate in various local, regional, and national efforts to advance transportation knowledge.

- **Activity No 9: Update the Library**

The Library will be updated this year and be maintained to hold up to date information and publication.

2.3 Advisory Board

The Advisory Board members are selected to represent local, state, and federal agencies with interest in insuring the success of the LTAP program. The following members are currently serving on the board:

- Rob Geringer Engineer, Laramie County Public Works
- Joe Dailey, Division Administrator, FHWA
- Kevin Geis, Campbell County Road and Bridge
- Dave Johnson, Deputy Director, WAM
- Gary Korell, Streets and Sanitation Department Head, City of Torrington
- Timothy McDowell, Programming Engineer, WYDOT
- Dave Pendleton, Superintendent, Fremont County Road and Bridge
- Lee Potter, Assistant Division Administrator, FHWA
- Jeffrey Purdy, Planning and Research Manager, FHWA
- Taylor Rossetti, Local Government Coordinator, WYDOT
- Mickey Simmons, Public Works Director, City of Lander
- Enid White, Research Manager, WYDOT

3. Four Focus Areas

The eight LTAP activities were selected to support the following four focus areas: Safety, infrastructural management, workforce development, and organizational excellence. The following sections describe the proposed activities in each one of the four focus areas.

3.1 Safety:

The advisory board of the LTAP Center emphasized the importance of safety for local governments. Therefore, the center staff members have invested a significant amount of effort in this focus area. All eight tasks are geared to support safety in the state of Wyoming. The Wyoming LTAP Center has supported road safety efforts through its existing activities which include: training classes, newsletter publication, information dissemination, and technical assistance.

- The following Safety Training will be presented by the center in 2017:
 - Work Zone Safety
 - ATTSA Flagger Certification
 - 22th Annual Transportation and Safety Congress
- Safety Training Incorporated in Other Training Programs
 - Maintenance of Gravel Roads
- Other Safety Activities
 - The Wyoming Rural Road Safety Program (WRRSP)
 The Wyoming LTAP Center has established the Wyoming Rural Road Safety Program (WRRSP) with support from WYDOT and the FHWA. This program helps local governments in identifying low cost safety improvements on high risk rural roads statewide. In this project, safety techniques and methodologies were developed to identify and then rank high risk locations on all rural roadways in Wyoming. The methodology developed by the center has been approved for implementation.

The LTAP Center helped half of the Wyoming Counties in identifying high-risk safety locations and then selecting low cost safety improvements. The Center has done the benefit cost analysis on all the proposed improvements so that the most cost effective improvements would be selected for funding from the WRRSP. Fourteen counties have already submitted requests for safety funding out of the WRRSP.

The WRRSP funds 90.49% of project cost up to a maximum of \$100,000.00 of federal funds and will require a 9.51% local match. The center will continue to help interested counties in implementing WRRSP.

- The Wyoming Statewide Sign Program
 The LTAP Center, WYDOT, and FHWA initiated a new statewide sign program. This program will provide signs to local governments. The signs will then be installed at high crash locations. The LTAP Center has been helping to identify locations eligible for signing. Nine counties have participated in the first round of this program. The LTAP Center has worked out the details for a second round. Twelve counties will participate in this program.

- Speed Limits Study Program
 The LTAP Center developed this program in cooperation with WYDOT to help local governments in conducting speed studies to establish speed limits on local roads. So far, the center has helped nine counties and the Wind River Indian Reservation in establishing speed limit programs. The center will continue this effort in 2017.

3.2 Infrastructure Management

Many agencies throughout the United States use highly developed asset management programs. A recent scan report sponsored by the FHWA documents the sophisticated efforts of three local government agencies (LGA) – Hillsborough County, Florida; Kent County, Michigan; and the City of Portland, Oregon – each of which has a population greater than the State of Wyoming. While many Wyoming counties have some sort of asset management system in place, most are very simple. By necessity, these counties need inexpensive analytical procedures to address their most basic funding and budgetary needs.

The LTAP Center has been helping counties in establishing asset management systems. In addition, training in this important area has been provided by the center staff over the years.

- Infrastructure Management Training
 - Typical infrastructure workshops would include:
 - Asphalt Paving
 - Geotextiles
 - Maintenance of Gravel Roads
 - Concrete
 - WYDOT Certification Program
 - ✓ Asphalt
 - ✓ Aggregate
 - ✓ Concrete
- Technical Assistance in Infrastructure Management
 - The Center has been assisting counties in implementing asset management systems. This ongoing effort will continue throughout 2017.
- Other Infrastructure-Specific Activities
 - Management of Gravel Roads Program

The LTAP Center has completed a study to address the lack of a widely acceptable methodology for managing unpaved roads. Experts in the field will collectively develop a set of criteria for unpaved roads data collection and analysis that will work well for local government agencies with extensive unpaved road networks. This information may then be used by software providers to develop a gravel roads component for an asset management program.

This study will provide a template for unpaved roads asset management systems. By defining critical data and processes, local government agencies and others will have a model upon which they may base their efforts to operate and manage unpaved road networks. This will both help them save money and provide data-driven decision making capability that will allow the most cost-effective projects and maintenance activities to move forward and receive adequate funding.

The LTAP Center is working with all 23 counties in the state to establish a management system for local roads, a Management of County Paved Roads Program. The data for this PMS has been collected for half of the counties in the state in 2016 but it will be analyzed in 2017.

3.3 Workforce Development

The LTAP Center provides training in the workforce development focus area. In addition, the director of the center is a board member of the Transportation Learning Network (TLN). The center worked out an arrangement with WYDOT so that local governments can participate in TLN events at WYDOT district locations.

- Workforce Development Training
 - LPA Certification
 - 22th Annual Transportation and Safety Congress
- Annual Conferences Hosted
 - Annual Transportation and Safety Congress

3.4 Organizational Excellence

The center staff members have been participating in local, regional, and national efforts to advance the transportation knowledge. This section summarizes some of the organizations and groups with which the center is organizing various activities.

- Participation in Organizations at the National, Regional, State and Local Levels
 - National LTAP Association
 - ✓ Safety Group
 - ✓ Executive Committee
 - ✓ Strategic Planning Committee
 - Institute of Transportation Engineers
 - Transportation Research Board
 - Mountains Plain Consortium (MPC)
 - Transportation Learning network (TLN)
 - Wyoming County Commissioners Association (WCCA)
 - Wyoming Department of Transportation (WYDOT)
 - Federal Highway Association (FHWA)
 - Concrete Association of Wyoming (CAW)
 - American pavement Association (ACPA)
 - NACE
 - WACERS
 - APWA Rocky Mountain Division
 - Regional County Road Advisor's Conference
 - WYDOT Safety Management Systems Committee
 - WYDOT Certification Program

- ✓ Asphalt
- ✓ Aggregate
- ✓ Concrete

- Attending Train-the-Trainer Sessions
Center staff members will attend train the trainer sessions as needed.
- Recent Publications/Presentations by Center Employees
 - Terrill, T.; Mashhadi, M.; and Ksaibati, K.; “Developing a Tool to Help Highway Patrol in Allocating Resources to Crashes”; International Journal of Police Science & Management, <http://psm.sagepub.com/cgi/reprint/1461355716665855v1.pdf?ijkey=fzyur5F0waaAzd4&keytype=finite> ; 2016.
 - Svan, C.; Ng, K.; and Ksaibati, K.,” Benefit-Cost Analysis and Application of Intelligent Compaction for Transportation”; Journal of Transportation Geotechnics, 9, pages 57-68, 2016.
 - Hafez, M.; Ksaibati, K.; Anderson-Sprecher, R.,” Utilizing Statistical Techniques in Estimating Uncollected Pavement Condition Data”; ASCE Journal of Transportation Engineering; [http://ascelibrary.org/doi/full/10.1061/\(ASCE\)TE.1943-5436.0000898](http://ascelibrary.org/doi/full/10.1061/(ASCE)TE.1943-5436.0000898); 2016.
 - Offei, E.; Ksaibati, K.; Young, R.; and Apronti, D.,” Evaluating Base Widening Methods”; International Journal of Pavement Engineering, Volume 17, Issue 6, 2016, pp 517-527.
 - Saha, P. and Ksaibati K.,” A Risk Based Optimization Methodology for Pavement management System of County Roads”, International Journal of Pavement Engineering; Taylor& Francis; Volume 17, Issue 10, 2016, pp 913-923.
 - Lindsay Schumaker, Mohamed Ahmed, and Khaled Ksaibati, “Policy Consideration for Evaluating the Safety Effectiveness of Passing Lanes on Rural Two-Lane Highways with Lower Traffic Volumes: Wyoming 59 Case Study”. Journal of Transportation Safety & Security, <http://dx.doi.org/10.1080/19439962.2015.1055415>, 2016.
 - Shinstine, D. and Ksaibati, K., “Road Safety Improvement Program on Indian Reservations in North Dakota and South Dakota” Transportation Research Board, Transportation Research Record, 2015.
 - Shinstine, D.; Denzer, D.; and Ksaibati, K.; ”Livability and Transportation on Indian Reservations” Journal of Rural and Community Development, !0(2), 21-34, 215.

- Center Evaluations
 - Workshop evaluations: They are normally conducted at the end of every workshop.
 - Advisory Boards: Board members are normally informed about the center's various operations and they normally provide feed-back and recommendations for future directions
 - National performance reporting: The Center reports all activities to the FHWA as required. These reports are normally due in January of each year.

- Special Projects
 - As part of the continuous efforts to improve safety in Wyoming, the Center has secured funding to hire a traffic engineer to conduct speed studies on rural roadways throughout the state. Guidelines for conducting these studies have been developed in cooperation with WYDOT and FHWA. These guidelines are posted on the Center's website.
 - The Center purchased two retroreflectometers in 2006. One of them has been returned to WYDOT. The second one is being loaned to local governments for their use in evaluating sign sheeting retroreflectivity. Half-day workshops were held to explain the basic principles of retroreflectivity, operation of the retroreflectometer and various approaches to sign management.
 - Funding has been obtained from WYDOT to establish a traffic counter loan program for counties in Wyoming. The program will provide free traffic counters and training to interested counties. The collected data will be used to populate a statewide traffic database. The counters have been purchased and the loan policy has been developed.
 - The Center, in cooperation with WYDOT, has implemented a new loan program. WYDOT purchased two Haz-Dust Model EPAM 5000 portable air monitors and made them available to the Center. Under the new program, the Center will provide interested counties with dust monitoring equipment and training on how to use the monitors.
 - The Center has completed a study to evaluate the safety on Wind River Indian Reservations. This study has been expanded to include state roads on the reservations in 2016.

4. Conclusions and Summary

The LTAP work plan described in this document reflects a significant shift in defining the tasks needed to address four focus areas. The Center has invested significant human resources in the past few years to excel in all focus areas. It is clear from the plan that the Center's staff will continue to provide the services needed to transportation professionals around the state.

Budget

The proposed budget summarizes the Local Technical Assistant Program is shown in Appendix A. The budget is consistent with the funding and matching requirements in previous years.

Appendix A

WYOMING LTAP CENTER Program Year 2017 – Proposed Budget

	FHWA/ WYDOT	University of Wyoming	Total
Salaries & Fringe Benefits			
Khaled Ksaibati, Director	\$3,000	\$6,945	\$9,945
Full-Time Staff	\$2,000		\$2,000
Other Staff Support	\$4,100		\$4,100
Subtotal	\$9,100	\$6,945	\$16,045
 Fringe Benefits	\$4,550	\$3,472	\$8,022
 Subtotal Salaries & Fringe	\$13,650	\$10,417	\$24,067
 Travel	\$6,000		\$6,000
Other Direct Costs			
(Newspaper, Training			
Materials & Supplies,	\$11,600		\$11,600
Telephone, Postage)			
 Total Direct Costs	\$31,250	\$10,417	\$41,667
 Indirect Costs (20%)	\$6,250	\$2,083	\$8,333
 TOTAL PROGRAM YEAR 2015	\$37,500	\$12,500	\$50,000

Total match required: \$25,000

Match - Wyoming Department of Transportation and University of Wyoming.

WYOMING LTAP CENTER
Calendar Year 2016 – Proposed Budget

Category	Budget Amount
Salary and Fringe (Estimated Person Power Effort 5,800 Hours Including Professional Services)	\$24,067
Overhead (20% of Direct Costs)	8,333
Supplies & Equipment	11,600
Travel	6,000
TOTAL	\$50,000

Funding Sources	Amount/Budget Totals
FHWA	\$25,000
State Match	12,500
University Match	12,500
Total Program CY 2015	\$50,000
Estimated Carry Over	\$0