

Technology Exchange

LOUISIANA LOCAL
TECHNICAL ASSISTANCE PROGRAM

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2018



Pavement Preservation Podium



by Steve Strength

Introduction: Pavement Preservation (PP) is a national initiative under FHWA's Every Day Counts (EDC) program that DOTD has adopted and LTAP is promoting for implementation by local agencies. This article is the second in a series discussing LA LTAP's Transportation Asset Management (TAM) initiative, which includes a number of Pavement Preservation activities. Opportunities for local agencies to participate include an Asset Management Survey, a pilot program of blended learning on TAM and PP treatments, and at least two FHWA workshops. We hope you will consider enrolling your agency in this program and keep watching for updates in future communications.

Quick! How many miles of road are in your system? Surprisingly, many local agencies do not know the answer to this simple question. However, the single most important investment that most public agencies possess is in their road systems. Agencies may spend a great deal of time and money tracking how many vehicles, computers, radios, backhoes, batteries, or tires they own, but often don't pay nearly as much attention to tracking the condition of their roads as they age.

If you own one pair of shoes, the answer to the question of where you will put your feet in the morning is pretty simple. If you have only one grocery store within a reasonable driving distance of your community, where you do your routine shopping for groceries is an easy decision. If your town has only one street, where you will put your road maintenance dollars is a snap. If you have multiple roads in your community, with different levels and types of usage, in different configurations, and of different pavement structures, you will need some way to manage priorities in selecting different preservation treatments to ensure the most cost-effective approach for your community. Since road pavements are typically the most costly asset owned and managed by local governments, it only makes sense that preserving pavement by selecting the right treatment, on the right road, at the right time should be a high priority for road managers. Selecting the right road is the "where" part of an effective Pavement Preservation program.

In order to select the right road, we need to begin with two things: 1) an inventory of our roads and 2) some type of assessment of their condition. The inventory can be as simple as a list of roads with some basic information like length of road segment, width, and sur-

continued on page 2

CONTENTS

- Do I Need Transportation Asset Management? | 3
- Crash Data Workshop II Overview | 5
- Class and Conference Updates | 6
- Tailgate Talks | 7

TRAINING CALENDAR

LTAP Intersection Basics: Safety, Operations, and Accessibility

August 21, 2018 - Lake Charles

August 22, 2018 - Lafayette

August 23, 2018 - Baton Rouge

August 28, 2018 - Gray

August 29, 2018 - Hammond

August 30, 2018 - New Orleans

September 18, 2018 - Benton

September 19, 2018 - West Monroe

September 20, 2018 - Alexandria

The Local Technical Assistance
Program of the Louisiana
Transportation Research
Center in cooperation with
DOTD, FHWA, and LSU.

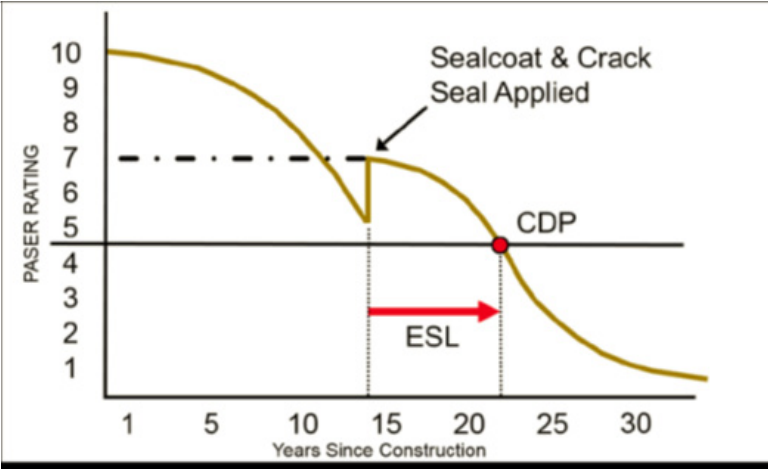
www.louisianaltap.org

Pavement Preservation, *cont. from page 1*

face type. If you are starting from zero, maps and lists of road segments for every parish can be obtained from DOTD's website, along with segment lengths by ownership and a unique identifier known as Linear Reference System Identification (LRSID). If you have GIS capabilities, your GIS team can probably get access directly to the state basemap and some basic segment information for you and possibly some interactive tools as well. Having a good inventory is an essential element of Transportation Asset Management (TAM). It can be especially helpful with disaster recovery and reimbursement, as discussed in Brett Kriger's article on page three of this issue.

The next step would be to assess the condition each road segment. A basic designation of "Good, Fair, or Poor" would be a start, but a simple, straightforward, and less subjective rating system, known as PASER, is specifically designed for local agencies. PASER stands for Pavement Surface Evaluation and Rating, and was developed by the University of Wisconsin-Madison specifically for local agencies. The system rates pavement on a scale of 1 to 10, with 10 being new and 1 being failed. The system rates pavements based on varying degrees of Structural and Non-Structural distresses, and you don't need an extensive technical background to learn the evaluation system. LTAP has copies of the PASER manuals for both asphalt and concrete roads, and training is available to help you get started. The degree of distress will help determine the types of preservation treatments that will be most effective once we get to the "How" stage of our Pavement Preservation Program.

Terry McNinch of PublicWorksTraining.com discusses field data collection during the Transportation Asset Management Training class on June 19 in West Monroe.



Courtesy PublicWorksTraining.com

The final piece of the "Where" puzzle is to decide which of the road segments need to be treated on a year-to-year basis. The temptation is to treat the worst segments first and then move on to the next worse, etc. Unfortunately, the worst segments are almost always going to require extensive rehabilitation or reconstruction, and most agency budgets do not allow for more than a very small percentage of their roads to be improved in this way on an annual basis. For example, if you have 400 lane miles of road in your community, and your budget allows you to reconstruct your worst 10 miles per year, it would take you 40 years to make it through the entire system. In the meantime, those other miles that you couldn't get to will continue to deteriorate, and if your budget lags behind or you add roads to your system, the problem compounds itself.

Terry McNinch of PublicWorksTraining.com, who has been helping agencies in Louisiana through LTAP's TAM training program, recommends a "mix of fixes" combining various preservation strategies at different points in the life cycle of the pavement. In this way, the overall life of the pavement is extended and at much lower overall cost. Terry uses the concepts of Remaining Service Life (RSL) for a facility and Extended Service Life (ESL) that can be gained by applying preservation treatments, at much lower cost than reconstruction. This approach of "keeping the good roads good" might mean that you go out and do some type of sealing treatment on a relatively good road, but at much reduced cost, to extend the life of that pavement by an additional number of years before more extensive repairs are needed.

Treatments that can keep the road from deteriorating beyond the Critical Distress Point (CDP) will save the agency significant costs in reconstruction and rehabilitation in the

continued on page 3

Do I Need Transportation Asset Management?

by Brett Krieger, Deputy Director of Disaster Response, Louisiana Municipal Association

Transportation Asset Management (TAM) is a concept through which transportation agencies take stock of their road, bridge, and related transportation infrastructure in an organized fashion in order to assist with decision-making on recurring and future needs and resources. It means many things to many organizations, but it is critical to ensuring that public agencies are able to maximize repair, replacement, and reimbursement for damages to roads and bridges from FEMA and FHWA following disaster events. These federal agencies will respond to your request for an assessment of the assistance programs' eligible damages by sending inspectors to quantify the estimated scope of the damage and will review your documentation of pre-event condition. The TAM system or plan you have in place will be the basis of eligibility determinations and whether your repair costs are covered by direct repair or reimbursement. Simply put, in order to determine how much damage you are able to get reimbursed for, FEMA and FHWA need to know the pre-disaster condition of your damaged infrastructure.

FEMA, in particular, is tightly limited by law to restoring damaged "facilities" (roads and bridges are "facilities") to provable, documented, and verifiable pre-event condition. FHWA has authorizations for emergency repairs to federal

aid routes that are more flexible, but, let's stick with the main points of the more stringent FEMA requirements. A good example of what FEMA requires is demonstrated in the following quote from a letter denying eligibility of flood damaged roads in Nebraska:

"Following its review of the project, FEMA notified the applicant of its decision to deny all funding. FEMA based its determination on the applicant's inability to demonstrate routine road maintenance prior to the disaster, and that the damages occurred as a result of the disaster.

On appeal, the applicant requested the full estimate of project costs and argued that it had a routine maintenance program prior to the disaster, though it only added new surface aggregate on an as-needed basis. The Regional Administrator (RA) denied the appeal and found that the support documentation submitted by the applicant did not enable a verification of pre-disaster conditions and determination the damages were disaster-related."

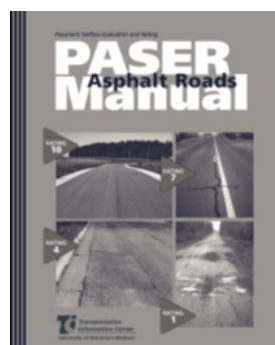
Failure to maintain adequate documentation of maintenance and condition will be costly. Your creation of a Transportation Asset Management Plan (TAMP) provides the structure

continued on page 4

Pavement Preservation, *cont. from page 2*

long run, and will also pay for themselves in ESL years for the system. However, the agency must have a viable TAM System to justify departing for the Worst-First approach that most constituents and elected leaders might be advocating based on "common sense."

In our next issue of *Technology Exchange*, we will begin looking at the "How" of Pavement Preservation, with a discussion of some of the most cost-effective treatments. LTAP's Asset Management Training initiative has enlisted 17 local agencies to participate in an online training program to help road managers move toward a more cost-effective Pavement Preservation approach over the next few months. If you would like more information on TAM, Pavement Preservation, or any of the evaluation tools described here, contact LTAP at (225) 767-9118, or email steve.strength@la.gov.



The PASER system is a low-tech, yet cost-effective method of pavement condition rating.



The "Worst-First" approach means relatively few miles of roads can be treated due to the high cost of rehabilitation or reconstruction.

Transportation Asset Management, *cont. from page 3*

for historic records and documentation that will ensure you receive the maximum federal assistance from either FEMA or FHWA.

FHWA requires that each state have an approved TAMP process certification/recertification and must certify at least every 4 years that the state DOT's processes for developing their TAMP meet applicable requirements of 23 CFR. Louisiana DOTD meets those requirements for state routes, but that does not provide the documentation for local and parish roads that will meet FEMA eligibility requirements. Even for accessing the more flexible FHWA emergency repair program requirements, local officials must know which roads and bridges are designated federal aid routes and make a report of damages that may be eligible.

To simplify and streamline the process of disaster event damage reporting, FEMA and FHWA are working together to create a system of guidance, forms, and a checklist that can be used for both agencies, thus eliminating delays and confusion on which agency will provide the necessary assistance. A properly submitted report to either will contain sufficient information to advance the claim and make an eligibility determination for both.

DOTD and FHWA have extensive assistance available on their websites to help develop a TAMP, but the process can be complex and expensive, and local governments across the country have raised many issues in their implementation of asset management programs:

Management and staff commitment is an important requirement. Building and maintaining the asset inventory is a necessary first step:

- Asset condition assessment and valuation may be accomplished at several levels of sophistication without compromising the value of the asset management program
- Asset management “programs” may be based on simple spreadsheets, as well as sophisticated database management packages, to match the needs and resources of the agency.
- Condition monitoring and maintenance of asset inventory data are essential and they require a continual commitment from management.
- Sharing of information among departments and establishing common databases are effective ways to reduce the and improve the quality of management information.
- Asset management tools need to be simple if they are to be used over an extended period of time, and the tools need to be easily understandable.

The TAMP can start at a relatively basic level with an inventory and visual condition assessment that is recorded by a local asset management team. LTRC, DOTD, and FHWA have technical assistance and training available to help you get started or build on the system you already have in place. When the next hurricane or flood event occurs even a basic asset management plan with inventory information and maintenance records will speed your recovery and ensure that you receive all of the assistance that your jurisdiction is entitled to.

To learn more about developing a TAMP, use the websites and contact information below:

Federal Highway Administration

Josh Cunningham

Emergency Repair Program Lead

225-757-7615

joshua.cunningham@dot.gov

www.fhwa.dot.gov/asset/guidance.cfm

Louisiana Department of Transportation and Development

Yvonne L. Murphy

Disaster Recovery/Mitigation Funds Manager

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wwwsp.dotd.la.gov/Inside_LaDOTD/Divisions/Multimodal/Data_Collection/Pages/Asset-Management.aspx

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Crash Data Workshop II Overview

We would like to extend a big thank you to all who participated and helped facilitate LTAP's recently completed second round of Crash Data Workshops (CDWS II). We had the honor of hosting 178 attendees, who represented over 90 different jurisdictions across Louisiana. Based upon the evaluations, attendees indicated it was a successful class and should prove useful in their journey to "Destination Zero Deaths." Conducted in collaboration with Louisiana's nine Transportation Safety Coalitions' "Infrastructure and Operations" emphasis area working groups, these series of workshops focused on using data from crash reports completed by law enforcement at the scene of an accident. These reports are used to better understand the contributing factors and possible causes of crashes on locally owned roadways. Armed with this knowledge, Louisiana parishes and municipalities can now access this data to aid in the development safety projects for their local roadways. By implementing countermeasures identified by the FHWA, the likelihood of similar crashes will be reduced.

FHWA has identified 20 treatments and strategies that local jurisdictions can implement to successfully address roadway departure, intersection, and pedestrian and bicycle crashes. Typical low cost, highly effective, proven countermeasures recommended by the FHWA include: signing and pavement marking upgrades and rumble strips to reduce roadway departure crashes; intersection improvements; roundabouts; guardrail installation; traffic studies; and many others. More information is available at: <https://safety.fhwa.dot.gov/provencountermeasures/>.

One of these FHWA proven countermeasures is the development of a Local Road Safety Plan (LRSP), which provides a framework for identifying, analyzing, and prioritizing roadway safety improvements on local roads. The LRSP development process results in a prioritized list of issues, risks, actions, and improvements that can be used to reduce fatalities and serious injuries on the local road network.

Development of these plans has been a strategic priority for the National Association of County Engineer's (NACE) in recent years. LTAP's own Marie Walsh is a member of the national team working on this effort!

One of the modules of the CDWS II dealt with Local Road Safety Plans and how a parish or municipality can go about developing one from the resources provided during the workshop. Currently, there are eight progressive Louisiana parishes who have drafted and adopted such plans with the vast majority of these being from the Acadiana region.

LTAP is always available to help you and your jurisdictions in developing a Local Road Safety Plan! If you have an interested Parish or Municipality but just don't know quite how to get started, give us a call and we can schedule a meeting or conference call to kick off the effort.



New Orleans



Lake Charles

Intersection Safety Classes

In August, LTAP will kick off training courses dedicated to intersection safety. It has been nine years since we've provided this opportunity, and needless to say, we are looking forward to it! Intersection safety is a significant component of highway safety; intersection fatalities, injuries, and crashes constitute some 21% of all crashes each year and 55% of crashes in urban areas. The objective of this workshop is to reduce the incidence of intersection crashes through application of design and safety and operations best practices with an emphasis on rural intersections. Registration is now open and can be found on our website at <https://registration.ltrc.lsu.edu/login>.

- Lake Charles- 8/21/18
- New Orleans- 8/30/18
- Lafayette- 8/22/18
- Benton- 9/18/18
- Baton Rouge- 8/23/18
- West Monroe- 9/19/18
- Houma- 8/28/18
- Alexandria- 9/20/18
- Hammond- 8/29/18

LEPA Conference

On May 14–16, the 2018 Louisiana Emergency Preparedness Association (LEPA) Annual Conference was held at the Crowne Plaza in Baton Rouge. The LEPA was founded in 1980, with a mission is to provide a nonprofit organization with the mission to improve public safety during emergencies. During the conference, an array of speakers covered various topics concerning safety and precautions needed to insure a safer community.

Along with speakers, the conference provided an opportunity for vendors to show their services for community. Louisiana LTAP participated with their own booth this year, showcasing the technical training services offered as well as an overview of their Crash Data Information.

Thank you to everyone who visited LTAP and allowed us to show you what we have to offer to ensure a safer community. If you would like to learn more information on LEPA, check out their website at <https://lepa.org>.

Joint Southeast/South Central Regional NLTAPA Meeting

The Louisiana LTAP Center is one of 58 centers across the nation and Puerto Rico that makes up the National Local Technical Assistance Program Association (NLTAPA). Members of the Louisiana LTAP Center staff are involved in the association in several ways. LTAP Director, Dr. Marie B. Walsh, is a past president of the organization and is a co-chair of the newly formed Innovations Work Group. LTAP Training Program Coordinator, Courtney Dupre, is a member of the Communications Work Group. LTAP Program Manager, Steve Strength, is a co-chair of the Training Resources Work Group and is currently the South Central Region Representative, the region in which Louisiana resides. The South Central Region recently hosted the 2018 National LTAP/TTAP Conference in New Orleans this past July. All of the LTAP staff worked hard to ensure the association had a successful annual conference!

This April, the South Central Region joined the Southeast Region for their annual meeting in Biloxi, Mississippi. All of the LTAP staff attended the conference at the South Beach Biloxi Hotel & Suites. Each of the 14 states there delivered presentations on their LTAP programs. The exchange of ideas that occurred during the center update presentations were invaluable for the LTAP center. Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, Puerto Rico, South Carolina, Tennessee, Arkansas, Oklahoma, New Mexico, Texas, and Louisiana all delivered reports on their centers. In addition to these insightful presentations, LA LTAP heard presentations on leadership, drones, and the collection of data on local roads, Road Safety Audits (RSAs), a report on the Mississippi Local Bridge Program, and Active Shooter Preparedness. We also received an update from FHWA's Center for Local Aid Support (CLAS).



The NLTAPA South Central and Southeast Regions pose for a group picture on Ship Island, MS.

Tailgate Talks to be Featured on LTAP Website

Is a reoccurring problem continuing to plague productivity? When doing their tasks, are your workers neglecting certain safety procedures when doing their tasks? Do you have veterans in your workforce that may need a refresher on certain areas? LTAP is here to give you a hand! Over the coming months, Tailgate Talks will be published online for your personal use.

Tailgate Talks and safety briefings can be a valuable instrument that managers, supervisors, and others can use to deal with on the job safety and other operational issues that need to be reviewed. The goal is to provide a concise yet thorough discussion that can be done on the jobsite or in your work area. A talk does not have to be long (15 minutes tops!) and you can use the tools at your disposal to help demonstrate your message (saving you money too!).

The first talks to be published will be based on our recent class “Tractor Mower Safety.” Grass cutting season is upon us and as such we will release talks for the following topics:

- Mower Safety Guards
- Cleaning Trash and Dirt Build-up from Mower and Tractor
- Slope Work Safety and Hazard Awareness
- Driving Tractor Mower on Public Highway
- Prepare for Safe Operation-Identification to Work Zone Hazards
- Power Take Off (PTO) Safety
- Rollover/Backover Safety
- Dealing with Obstructions

We will also be releasing talks on chainsaw safety with talks focusing on:

- Maintenance
- Proper Cutting
- PPE
- Felling safely and accurately

Be sure to check out the front page of our website at www.ltrc.lsu.edu/ltap to find these talks for you to download absolutely free. Remember identifying and addressing a problem sooner than later can help you save money on equipment and reduce injuries and fatalities in your workforce!

Tailgate Talk Example: Good Housekeeping

Guide for Discussion: Poor housekeeping is the reason behind many workplace incidents and resulting OSHA citations and although proper housekeeping is a best practice appropriate for all municipal operations and work zones, it is often overlooked. If debris, clutter, and spills are accepted as normal, then other more serious health and safety hazards may be ignored or go unnoticed. Good housekeeping improves morale and productivity along with safety. Good housekeeping is consistent: “panic” clean ups do not improve safety. The following “General Rules” should be covered in any discussion on housekeeping:

- Keep all waste debris in neat piles and away from the immediate work area.
- Remove debris from the job on a regular basis.
- Keep aisles, stairways, and walkways clear.
- Store materials only in their designated areas and label appropriately.
- If working with lumber, bend nails over or remove from lumber.
- Place trash barrels where needed to eliminate food rubbish.
- Keep tools and equipment stored neatly.
- Keep extension cords from being across walkways. If necessary, run them overhead; same applies to air compressor hoses.
- Don’t let trash and debris build up. If it does, make an extra effort to get it cleaned up.
- When doing tear-off, don’t drop materials outside the exterior walls of the structure, unless that area is effectively protected.
- During winter months, keep walkways clear of snow and ice and watch for slippery surfaces in the wash bay.

Good Housekeeping Can:

- Prevent minor injuries like cuts, punctures, and slivers.
- Prevent major accidents like slips, trips, falls, and fires.
- Increase job productivity by speeding up the movement of workers and materials on the job.

Remember :

Good housekeeping makes it easier for everyone to do their work safely and more effectively.

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http://www.t2center.uconn.edu/tailgate_talks_for_ltap_center_use.php



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The purpose of the Local Technical Assistance Center is to provide technical materials, information, and training to help local government agencies in Louisiana maintain and improve their roads and bridges in a cost-effective manner. To accomplish this purpose, we publish a quarterly newsletter; conduct seminars, workshops, and mini-workshops covering various aspects of road and transportation issues; provide a lending library service of audio/visual programs; provide technical assistance through phone and mail-in requests relating to transportation technology; and undertake special projects of interest to municipalities in Louisiana.