

Technology Exchange

LOUISIANA LOCAL
TECHNICAL ASSISTANCE PROGRAM

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Pavement Preservation Podium



When? Where? How?

Preservation initiative as part of the Every Day Counts (EDC) program, focusing on the When and Where parts of the equation. In this and coming issues, we will look at several proven technologies being promoted by the Pavement Preservation industry and by FHWA as they promote cost effective approaches to maintaining your roads, in other words, the how. LTAP has embraced this initiative through programs at recent LPESA conferences, FHWA-sponsored workshops in the fall of 2017, Transportation Asset Management (TAM) workshops this past summer, an ongoing online training program in TAM for Pavement Management, and the recently completed Roads Scholar #2 class series on Maintenance of Asphalt Roads. In this class, Instructor Nick Verret, P.E., discussed the first and most cost-effective pavement preservation treatment that can be employed by a road agency: crack sealing. As we will see, crack treatments of various kinds can significantly extend the life of asphalt pavements at a cost less than any other comparable procedure.

Going back to our house painting analogy from previous issues, the time to start thinking about repainting is when the first signs of deterioration appear, not after water intrusion starts to affect the underlying siding material. The same is true of pavement. In this case, the underlying layer we are trying to protect is the base and subbase of the roadway, which is where pavement failure most often occurs. The old drainage maxim of “Keep the Water Off the Pavement, Out of the Pavement, and Away from the Pavement” holds true, and the best way to do this is to seal cracks before they become too much of a problem. Another reason to consider crack treatment earlier in the life cycle of your pavement is to prevent the introduction of incompressibles – rock, sand, and other debris that will leave faults in the cracks if not cleaned and sealed, preventing the pavement from expanding and contracting evenly as temperatures change, often resulting in ridges or blow-ups at the crack joints.

Cracks in pavement are inevitable. Even the best quality construction will begin to show cracks due to thermal stresses within the pavement and between layers within the first

by Steve
Strength

In the last two issues of Technology Exchange, we examined FHWA's Pavement Preser-

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Crack sealing operation



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

www.louisianaltap.org

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LPESA Fall Conference 2018 Breaks Record in Attendance

by Courtney Dupre

During the last week of September, the Louisiana Parish Engineers and Supervisors Association (LPESA) held their 2019 Fall Conference in Bossier City at the Margaritaville Resort Casino. Local public works and transportation officials from around the state gathered to discuss important issues and best practices. The conference had a record attendance with over 100 registrants and 16 sponsors!

The agenda kicked off with a welcome from Carl Thompson, LPESA president, and Glenn Benton, president of the Bossier Parish Police Jury (who was also the 1st vice president of the Louisiana Police Jury Association). Guy Cormier, assistant director of the PJAL, delivered legislative updates to the crowd. This was followed by Pat Landry's, deputy assistant secretary, DOTD Office of Public Works' presentation on the Louisiana Watershed Initiative, which was formed in direct response to the historic flooding events of March and August of 2016. This \$1.3 billion initiative will include watershed modeling and funds for flood mitigation projects (see page 12).

Several LPESA Associate Members showcased resources and services to participants. Asphalt Pavement Alliance (APA) reported on asphalt pavement initiatives. Benjamin Pylant, P.E., CFM, of Half Associates, came from North Texas to present the "Three A's" of stream restoration: assess, analyze, and alternatives.

Our partners from Bossier Parish and the Northwest Louisiana Council of Governments (NLCOG) engaged the audience in a panel discussion about permitting, zoning, codes and development. Butch Ford, parish engineer for Bossier Parish moderated the session, while Kent Rogers, executive director, NLCOG, Carlotta Askew-Brown, senior planner



Patrick J. Landry, DOTD, presents on the Louisiana Watershed Initiative.

for Bossier City-Parish MPC, and Tyler Comeaux, P.E., vice president of Burk-Kleinpeter, Inc. made up the panel.

Day 1 wrapped with a successful networking social sponsored by LPESA Associate Members ERGON Asphalt Emulsions, Diamond B Construction Co., Highway Graphics, Inc., and Material Resources, Inc.

Day 2 kicked off with project and program updates from David North, DOTD District 04 administrator. Participants were sparked with innovative ideas when Dr. Marie Walsh, LTAP director, introduced the National Build A Better Mousetrap Competition. Mitch Wyble, LPESA Region 3 director/city engineer at Lafayette Consolidated Government, along with Tim Powell of EJ Company, gave an example of their transportation innovation from Lafayette called the "Folding Curb Inlet Drain Top." Dr. Walsh encouraged agencies to discuss their own innovations, and several agencies reported fantastic local developments that will be entered into the statewide Build a Better Mousetrap competition.

LPESA Treasurer/director of public works of Terrebonne Parish, David Rome, gave a fascinating presentation on the Isle De Jean Charles Resettlement Project (see page 13). The final part of the technical program was all about bridges. DOTD assistant bridge maintenance engineer/bridge inspection, Jasmine Galjour, P.E., shared information about bridge owner rating and federal compliance as well as new policy highlights. Haylye Brown, P.E., DOTD assistant bridge maintenance engineer/bridge maintenance, described information on various bridge maintenance techniques and then moderated a roundtable discussion about the topic.

LPESA and LTAP want to thank all registrants for taking the time to continue to engage and collaborate with the parish engineers and supervisors across Louisiana.



LPESA Treasurer David Rome delivers a presentation on the Isle De Jean Charles Resettlement Project.



Butch Ford, Bossier Parish Engineer, moderates a Parish Panel Discussion on Permitting, Zoning, Codes and Development. Kent Rogers, Northwest Louisiana Council of Governments, Carlotta Askew-Brown, Bossier City-Parish MPC, Tyler Comeaux, PE, Burk-Kleinpeter, Inc., North LA Operations participated in the panel.



LPESA's Spring Conference will be held at L'Auberge Baton Rouge on April 24-25, 2019. Be on the lookout for future announcements. Visit www.lpesa.org for more details.

LTAP Roads Scholar Graduation

During the LPESA Conference Technical Program, LTAP held an award ceremony for our most recent Louisiana Roads Scholar Graduates! Three students from Jackson Parish and 14 students from Caddo Parish were recognized in front of their peers and LPESA Board Members as having completed the Roads Scholar Program. The program is comprised of six required courses and four electives. The Administrator for the Parish of Caddo, Dr. Woodrow Wilson, Jr., presented certificates to all 14 students from his parish, shook their hands, and offered them praise and appreciation of their hard work for their community.

"The local transportation and public road maintenance workforce is critical to the success of our local governments and communities. LTAP's training through the Road Scholar Program provides opportunities for our students to improve their road and bridge maintenance skills at basic and practical levels," said LTAP Director Dr. Marie Walsh. LTAP is committed to continuing to offer high quality learning experiences and plans to roll out a more advanced "Road Master" curriculum beginning in 2019 as well as a Training Academy for new employees.

LTAP and LPESA extend their warmest congratulations to the recent Road Scholars and they look forward to certifying more of the hardworking road crew from local public agencies in Louisiana. If you are interested in becoming a Road Scholar or want to know more about any of the classes that are offered, please visit www.ltrc.lsu.edu/ltap/training.html



Dr. Woodrow Wilson, Jr. (far right), parish administrator of Caddo, and LTAP Director Dr. Marie Walsh (second from right) pose with the Roads Scholar Graduates from Caddo Parish.



Jackson Parish graduates take their photo with LTAP Director Dr. Marie Walsh and LTAP Training Program Coordinator Courtney Dupre.

LTAP Lagniappe in the Big Easy

By Rudynah Capone and Courtney Dupre



It's hot and humid in the Louisiana summertime, but that didn't stop 160 transportation professionals from convening at the annual National Local Technical Assistance Program Association (NLTAPA) Conference last July 23-26, 2018, at the Hotel Monteleone in New Orleans.

A lagniappe of fun—a little something extra—was in store for the LTAPers from across 58 LTAP centers whose common goal is to stimulate the progressive transfer of highway technology through training, workforce development, and technical assistance for local government entities.

With this year's theme, "LTAP Lagniappe: A Little Something Extra," the four-day NLTAPA conference succeeded in fostering peer-to-peer sharing and meaningful interactions. Out-of-towners were even convinced to try out fried alligators and crawfish tails for the first time, joining in the Second Line, and indulging in beignets and hot chocolate at Café De Monde. Theis became the talk of the LTAP community in the Big Easy that week!

The LTAPers engaged in stimulating discussions during the general sessions, workgroup meetings, and breakout sessions on topics such as transportation innovations, local road safety plans, training providers and tools, technical partnerships, Safety Circuit Rider program, class materials, social media best practices, educating vs. presenting, overcoming barriers to innovation, and training resources.

As this year's host, the Louisiana Transportation Research Center (LTRC)'s LTAP Center team led the pilot of a scavenger hunt using GooseChase mobile app that added to the element of fun throughout the learning experience. Each attendee was randomly placed in a team upon registration, and then any member of the team had to complete any task listed on the app to earn points.

The pre-conference session on "Safety Innovations" highlighted Federal Highway Administration's (FHWA) Every Day Counts (EDC) initiatives, including Safe Transportation for Every Pedestrian (STEP), Local Road Safety Plan (LRSP), Reducing Rural Roadway Departures, and Virtual Public Involvement. The full list of EDC innovations may be found on www.fhwa.dot.gov. The LTAPers also shed light on issues facing local agencies such as staff turnover, lack of training, lack of communication of safety priorities, and the insufficient funding.

LTAP/TTAP University

Each LTAP Center is different; it's important to stress that. The common denominator among these centers is their passion to deliver effective training and technical assistance services to the local transportation workforce. The "LTAP/TTAP University" captured some of the best practices in communication, technology transfer, navigating training contracts, and center webpages. Digital newsletters as well as using social media, graphic design tools (like canva.com), copyright-free image sources (pixabay.com, pexels.com, etc.), and email marketing platforms (Mailchimp.com, Constantcontact.com) are ways to deliver information in a more strategic way. Minnesota LTAP suggested that content for their newsletters can be found via conference agenda, partnership meetings, social media posts, association activities, and even the retirees.

Local Road Safety Plans

Developing local road safety plans was highlighted at the conference. FHWA is working closely with each of the state Department of Transportation (DOT) offices and LTAP centers to ensure the integration of local road safety planning and data-driven decision-making efforts in the overall implementation of the Strategic Highway Safety Plan (SHSP), which all states are federally mandated to have.

Local participation in the development of the SHSP is critical, and that's where LTAP centers take the lead. Louisiana LTAP is engaged as a team lead in the implementation of the SHSP Infrastructure & Operations (IO) Emphasis Area (EA) that include strategies addressing intersection, roadway departures, and bicycle and pedestrian safety. The implementation of low-cost safety projects funded through the Local Road Safety Program (LRSP) is an important component of Louisiana's IO Action Plan.

EDC-5: On ramp to innovation

FHWA is encouraging the states, counties, parishes, cities and towns to deploy Every Day Counts (EDC) innovations for the purpose of enhancing project delivery, improving road safety, fostering innovation, and maintaining an efficient transportation system in their local communities.

"We need to operationalize what research tells us and see where it goes to its end game in advancing transportation,"

FHWA Chief Innovation Officer Tony Furst addressed the participants during the opening session. "You need to signal innovation as a priority," he encouraged, with a note of emphasis on how LTAP centers can serve as advocates of innovation and shakers of EDC deployment at the local level.

The most recent EDC initiatives are under Round 5 (EDC-5), which is now on deployment phase. The full list of EDC innovations may be found on www.fhwa.dot.gov.

About NLTAPA

Formed in 1991, the NLTAPA (nltapa.org) represents 58 LTAP and Tribal Technical Assistance Program (TTAP) centers across the United States and Puerto Rico. These centers have been established as a collaboration between the US Department of Transportation (USDOT), state Department of Transportation (DOT) offices, universities, transportation training providers, local public agencies, and private partners. LTAP efforts revolve around the goal of stimulating the progressive transfer of highway technology through training, workforce development and technical assistance.



It's Not Big Easy Without Checking Out the Presbytere.

Participants were treated to an off-site networking event at the Presbytere on Jackson Square. Louisiana LTAP Center's Director Dr. Marie Walsh (right) and Program Manager Steve Strength (center) is joined by Arkansas Technology Transfer (T2) Center Director Laura Carter (left).



Much Appreciated, Ladies. NLTAPA's newly inducted President David Orr, New York LTAP Director, presented tokens of appreciation to Louisiana LTAP Training Coordinator Courtney Dupre and LTRC Special Events Program Manager Allison Landry for their hard work in coordinating the registration and logistics of the conference.



Selfies Galore. NLTAPA piloted the scavenger hunt using GooseChase mobile app and it became the talk of the conference. Thanks, Garrett Wheat (LTRC Leadership Program Manager) for organizing the fun!

Local Public Agencies Invited to Participate in 2019 Build A Better Mousetrap

Calling all local public agencies and innovators out there! Have you come up with an innovative idea for making your transportation workplace safer or more efficient? Perhaps a new gadget, piece of equipment or tool to do your job better, a new software program, or a new data management process? If so, then submit an entry to the Build a Better Mousetrap (BABM) State and National Competition.

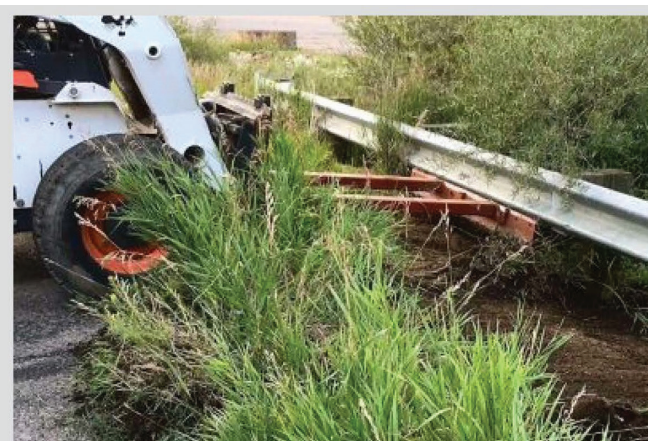
Build a Better Mousetrap is a nationwide competition sponsored by Federal Highway Administration (FHWA) and implemented through the Local Technical Assistance Program (LTAP) Centers across the nation. In Louisiana, the LTAP Center facilitates the selection process. Deadline of entries is on March 30, 2019. The submission form may be found on www.louisianaltap.org. Who is eligible? Any local public agency—a city, municipal or parish entity—may submit an entry that falls in any of the four categories such as:

1. inspection and data collection (automated means, testing tool, etc.)
2. asset management techniques (GIS, mapping or decision support system)
3. maintenance tools and methods (lifters, assemblies, etc.)
4. facilities improvements (storage, operations, services)

How are the entries judged? Entries will be rated based on four criteria: (1) cost savings or benefits to the community (30%); (2) effectiveness (30%); ease of transfer (20%) and; ingenuity (20%). They will be judged by an independent panel of judges consisting of: members of the Louisiana Parish Engineers and Supervisors Association (LPESA); a representative from Louisiana LTAP; and a representative from the Federal Highway Administration (FHWA) Louisiana Division.

Based on the aforementioned criteria, Louisiana winners will be selected—one for each category. These state winners will then be entered into the national BABM competition. Louisiana winners will receive a free training inclusive of lunch for the agency that submitted the entry. Also, they will be recognized with a plaque at the LPESA Spring 2019 Conference <http://lpesa.org/conferences.html>

National entries will be judged using the same criteria and the winners will be announced at the National Local Technical Assistance Program Association (NLTAPA) Conference scheduled on August 12-15, 2019, in Stowe, Vermont. Visit <http://nltapa.org/>



A Guardrail Reclaimer

An innovation from the Gunnison County Public Works Department in Colorado.

Removing debris and sand from under guardrails requires a lot of time, labor and resources to ensure the safety of the traveling public. Staff at the Gunnison County Public Works Department tackled the problem by designing a bull blade and a scraper to fit over the forks of a skid steer, adjustable to guardrail height and post space widths. Using scrap metal, the team came up with this creative design for around \$650. Now crews can clean more guardrails, more often.

NEW! People's Choice Award

For the first time this year, Louisiana LTAP will facilitate the selection of the People's Choice Award, which will be determined solely on the total number of likes received on LTAP's Facebook page. All entries will be posted on the LTAP Facebook page where people can LIKE an entry to indicate their vote. The voting period will be announced later. Follow Louisiana LTAP Center on Facebook for updates (search for "Louisiana LTAP Center").



Lafayette shares BABM project: a curb inlet drain top

Through the years, Lafayette Consolidated Government (LCG) employees have experienced numerous job injuries as it relates removing and reinstalling curb inlet catch basin tops. In an effort to reduce the number of injuries and make access

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LTAP Shares Federal Transportation Funding Programs for Local Agencies

Federal Transportation Funding Programs for LPAs



Local Road Safety Program (LRSP)



Safe Routes to Public Places Program (SRTPPP)



Transportation Alternative Program (TAP)



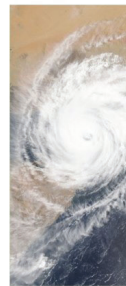
Recreational Trails Program (RTP)



Off-system Bridge Replacement (OSBR) Program



MPO Urban Systems Program



FHWA Emergency Relief Program

At the first-ever Louisiana Municipal Association's (LMA) Infrastructure and Transportation Summit, LTAP Director Dr. Marie Walsh presented on the different federal-aid programs and resources that local agencies may tap into for transportation project delivery and disaster recovery purposes through a DOTD-administered process. These programs are listed below with their corresponding description.

- Local Road Safety Program (LRSP), coordinated by LTAP,

provides funding for road safety improvement projects on locally owned roads through DOTD. Email Leo Marretta at leo.marretta@la.gov for more information.

- Safe Routes to Public Places Program (SRTPPP) provides funding for projects that improve pedestrian and bicycle facilities that connect to public places such as schools, libraries, recreation centers, hospitals, transit facilities, public parks, and business centers. Email Laura Riggs at laura.riggs@la.gov for more info.
- Transportation Alternative Program (TAP) provides funding for projects such as bicycle and pedestrian facilities, safe routes for non-drivers, conversion of abandoned railway corridors to trails, scenic turnouts, overlooks and viewing areas, archaeological activities, storm water mitigation, wildlife management, and community improvement activities. Email Brian Nunes at brian.nunes@la.gov for more info.
- Recreational Trails Program (RTP) provides funding for all kinds of recreational trail uses, such as for hiking; running; bicycling; skating; and more pedestrian uses (hiking, running, wheelchair use); bicycling; in-line skating; equestrian use; off-road motorcycling; all-terrain vehicle riding; four-wheel driving; or using other off-road motorized vehicles. Email Michael Domingue at mdomingue@crt.la.gov for more info.
- Off-system Bridge Replacement (OSBR) Program is designed to replace or rehabilitate deficient or functionally obsolete parish structures in a cost efficient manner. Every two years, participating parishes are provided with a list of qualified structures, estimated replacement costs, specific instructions, and the parishes' available funds. Email Barbara Ostuno at Barbara.ostuno@la.gov for more info.
- MPO Urban Systems Program is administered by DOTD through the Metropolitan Planning Organization (MPO) in each given geographic area. Funding is allocated based on population. Projects are selected by the MPOs. Email Tanya Bankston at Tanya.bankston@la.gov (for <200K projects) or Melissa LeBas at Melissa.LeBas@la.gov (for >200K projects)
- FHWA Emergency Relief (ER) Program is administered by FHWA. ER funds are available for the repair of federal-aid highways or roads seriously damaged by natural disasters. Email Yvonne Murphy at Yvonne.Murphy@la.gov for more info.

Better Mousetrap, continued from page 6

safer, LCG contacted East Jordan Iron Works (EJI) with concepts of what they wanted and how we wanted these tops to work. The result is a safer top at a relatively small increase in cost. "We discussed with EJI the need to provide a more effective less injury type of cover. We requested a cover that would be hinged and still removable but could be lifted by one person with minimal effort," shares LCG public works city engineer Mitch Wyble. The benefits of this project include reduction of workmen's compensation claims which ultimately reduces insurance premiums and provides for more man-hours at work in lieu of sick leave. For more information, contact Mitchell Wyble at mwyble@lafayette.la.gov.

Local Road Safety Plans: The Whys, Hows and Outcomes

By Rudynah Capone and Leo Marretta, Louisiana LTAP Center



Transportation planning can be a complex process for local governments, but with Local Road Safety Plans, the approach becomes rather collaborative, focused and data-driven.

Municipalities and counties/parishes are now utilizing this approach to mitigate road safety issues at the local level. In Louisiana, the Local Technical Assistance Program (LTAP) Center works closely with the parishes and municipalities in helping develop Local Road Safety Plans aimed at eliminating traffic crashes, fatalities and serious injuries. This effort promotes the statewide implementation of the Local Road Safety Program (LRSP) in support for the Strategic Highway Safety Plan (SHSP) toward reaching Destination Zero Deaths on Louisiana's roadways.

Why Implement Local Road Safety Plans?

First, this is a way to streamline the process of identifying, analyzing, and prioritizing road safety improvements on locally owned roads through stakeholder involvement. Also, it provides the opportunity to more fully engage local road authorities in defining local road safety issues and implementing solutions that impact their communities. Lastly, implementing a Local Road Safety Plan supports the statewide Strategic Highway Safety Plan's (SHSP's) goal of reducing roadway departures, intersection crashes, and non-motorized crashes that result in serious injuries or deaths.

Local road agencies are encouraged to consider developing a Local Road Safety Plan to be used as a tool for reducing roadway fatalities, injuries, and crashes. The process is even further streamlined through the Local Road Safety Program (LRSP) that the LTAP Center administers. The LTAP's LRSP team is working to streamline the process of identifying, analyzing and prioritizing road safety improvements on locally owned roads through stakeholder involvement.

Local road safety plans are recognized as a proven safety

countermeasure by the Federal Highway Administration (FHWA). The planning process brings together planners, engineers, public works personnel, elected officials, law enforcement officers, and even health experts to examine road safety in a way that addresses the complexity of the issues in a given locality.

The How

While local roads are less traveled than state highways, approximately 24% of Louisiana's 708 fatal traffic crashes (that led to 773 deaths) in 2017 occurred on locally owned roads. So, how can planners take action to bring these numbers down? The answer is through a data-driven and collaborative approach of developing and implementing Local Road Safety Plans utilizing the process described in the graphic above.

Following a data driven approach, LTAP has identified Louisiana's "Top 20 Parishes" (and municipalities within this list) that are over represented in traffic fatalities and serious injuries as a result of roadway departures or crashes at intersections. Together, these 20 Parishes account for approximately 90% of all crashes on locally owned roadways in Louisiana. The Top 20 Parishes are: Orleans; East Baton Rouge; East Jefferson; Lafayette; Calcasieu; Caddo; Ouachita; St. Tammany; Tangipahoa; Livingston; Bossier; Rapides; Terrebonne; Iberia; Vermilion; Ascension; Acadia; St. Martin; St. Mary; and St. Landry. Training and technical assistance are offered by LTAP to help local agencies analyze the crash data, identify the local issues, and develop possible solutions—all of which can then be included in the Parish's Local Road Safety Plan.

Outcomes

Parishes and municipalities can benefit from having a customized plan that reflects the complexity of their local road safety issues and eventually implementing projects that impact their respective communities. A comprehensive list of prioritized safety projects will guide the agency and help maximize available resources to mitigate safety concerns. Ultimately, this planning effort will increase local stakeholder involvement and citizen participation.

Email leo.marretta@la.gov for more info. Read more about Local Road Safety Plans as a proven safety countermeasure: https://safety.fhwa.dot.gov/provencountermeasures/local_road/

few years. Even on the most lightly travelled roadways cracks begin to occur before the public notices them. Keeping tabs on cracks as they develop and treating them in a timely fashion may appear to the public as a process where the agency is putting unnecessary dollars into a “perfectly good road,” but left untreated, these problems can become larger and geometrically more costly as time goes by. Like the old FRAM oil filter commercial says, “You can pay me now, or pay me later.”

Assuming your agency does not have funds to do full-depth overlays or rehabilitation on all of your asphalt roads every 12-15 years, you will want to know which roads to treat. This represents a departure from the typical “worst-first” approach. Good candidates for crack treatment include the following factors:

Ideal Application Conditions (temperature range, humidity, etc.)

- New or recently rehabilitated surface
- Good base support
- Little or no secondary cracking
- Little or no raveling at crack face
- Cool weather (fall or spring)
- Proper preparation (clean and dry)
- No obvious surface drainage issues

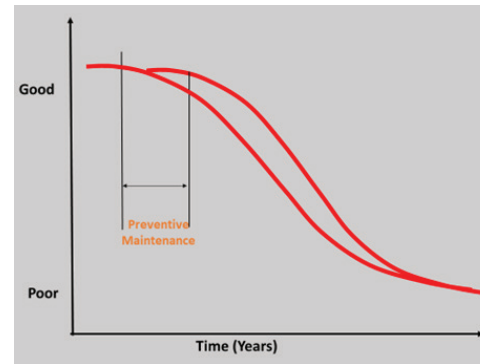
This means you will need to start looking at your pavement condition within the first few years of service life and consider treating cracks that show as little as 1/8” to 1/4” in width. The decisions needed for an effective crack treatment program include:

- Pavement evaluation
- Determine if Crack Sealing (working cracks) or Crack Filling (non-working cracks) treatment is needed
- Determine pavement temperature (high/low extremes)
- Select product appropriate to the job
- Proper application/equipment

One key decision is whether to rout the cracks. Routing can help to clean the sides of the crack to improve adhesion of the material, ensuring a watertight seal. It also can be adapted as a reservoir type crack routing and allow the crack to remain sealed under various conditions of load and thermal stress. Routing adds time to the crack treatment process but can pay dividends in durability and performance.

Cost effectiveness – A well selected, well-constructed crack treatment can add up to 9 years of life to the cracked pavement with up to 75% effectiveness. Recall that we are looking

to extend the life of good pavements, as shown on the life cycle curve below:



If proper treatment selection and techniques are utilized, this curve could be extended multiple times, provided that the pavement base and subbase remain viable. Therefore, crack sealing can be the most cost effective maintenance action you can undertake! Consider the relative costs of various treatments based on FHWA data from several years ago:

- | | |
|------------------------|---------------------|
| • Crack Treatment | \$.20-.30/sq. yd.* |
| • Slurry Seal | \$.90/sq. yd. |
| • Microsurfacing | \$1.25/sq. yd. |
| • Chip Seal | \$.85/sq. yd. |
| • Thin Hot-Mix Overlay | \$1.75/sq. yd. |

*Avg. cost of contract clean and seal crack treatment in South Western states. Projects > 200 LM.

More up-to-date cost information can be obtained from contractors, suppliers, and other local agencies with extensive treatment programs, but the relative benefits are clear. The equipment used and the application method chosen will also have a major effect on the cost effectiveness of the result. Any of the above treatments are more cost-effective than rehabilitation or reconstruction, even if your agency has a budget that can sustain the “worst-first” approach, but crack sealing tops the list every time!

While some larger agencies may have the means to employ their crews and purchase and maintain the needed equipment, most agencies in Louisiana employ contractors to do their crack treatments. Contractors and material suppliers are great sources of advice on the various sealants and techniques. After all, their businesses depend on selecting the right solution for your crack treatment needs. More information on the process and cost effectiveness can be obtained from Nick Verret’s presentation on crack treatments contained in the Roads Scholar #2 curriculum or by contacting LTAP. Good crack treatment seals the deal for maintaining your agency’s roads!

Leadership Spotlight: Tim Weaver, Assistant Director of Public Works in Caddo Parish



In this edition of Technology Exchange, we introduce our Leadership Spotlight. This section will recognize the unsung heroes of local governments, including transportation leaders, public works professionals, road superintendents and program

managers who have, in one way or another, hold an impactful role in the community they serve.

We are proud to feature Tim Alan Weaver, the assistant director of Public Works and Engineering for the Parish of Caddo. Tim oversees the day-to-day operations of 120 employees who are responsible for the improvements and maintenance of road, bridge, signage and drainage projects. Prior to joining Caddo Parish, Tim worked in the Carolinas as project manager overseeing multimillion-dollar construction projects and helped rebuild several US Post Offices on the coast after Hurricane Hugo. In 1994, he moved back to Louisiana as a Quality Control Engineer to help build the Red River Lock and Dam #4 in Coushatta. Tim holds a Bachelor's degree in Construction from Northeast Louisiana University and an

MBA from Centenary College. He is a board member of the Organization of Parish Administrative Officials (OPAO) and an active member of the Louisiana Parish Engineers and Supervisors Association (LPESA).

LTAP connected with Tim to get his insights on leadership. Here's what he has to say:

How do you define leadership as it relates to your chosen field?

Leadership is about empowering every member of my team to serve the needs of the citizens of Caddo Parish. I can do that through proper delegation of tasks in a simplified manner.

How long have you been in the public works field and what major challenges have you overcome as a leader and as a public works professional in general?

I have been in the public works sector for 24 years. I have been challenged by the dilemma of rightsizing through reorganizing and restructuring our department as a result of a shrinking tax base.

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LTAP Makes Intersection Basics Class More Interactive

LTAP added an element of fun to engage the participants at the Intersection Basics Class conducted in Lake Charles, Lafayette, Baton Rouge, Houma, New Orleans, Benton, West Monroe, Alexandria and Covington in the Fall of 2018. LTAP Program Manager Steve Strength and LRSP Manager Leo Marretta created a traffic scenario (in photo) using balls to act as vehicles, boards as intersections, and flip chart papers as crosswalks.

Parishes and municipalities have an obligation to address intersection issues as part of managing their road networks, improving quality of life, and reducing liability by providing intersections that afford safe and appropriate access to all users including pedestrians and other non-motorized users. Unfortunately, over 40 percent of local road fatal and severe injury crashes in Louisiana occur at intersections. Oftentimes, the operational and accessibility needs of all users are not fully considered.

The one-day "Intersection Basics: Safety, Operations and Accessibility" class was designed to help local agency personnel manage their intersections using best practices from FHWA, ITE, and other road authorities. Course topics included types of intersections, user characteristics and requirements, intersection treatments, ADA and pedestrian considerations, addressing operational and safety issues, driveways and access management, railroad crossings, and maintenance issues. Some of the latest best practice resources from FHWA, ITE, and other transportation safety authorities were shared to approximately 169 transportation engineers and planners, road supervisors, maintenance technicians, inspectors, risk managers, and local public agency decision-makers who attended.



On-Ramp to Innovation

Ten Innovations Identified in Every Day Counts Round 5

The latest innovations included in Round 5 of Every Day Counts (EDC-5) Initiative are quite a diverse lineup. As announced by the Federal Highway Administration (FHWA) early this year, these 10 innovations include: (1) Collaborative Hydraulics: Advancing to the Next Generation of Engineering (CHANGE); (2) Project Bundling; (3) Reducing Rural Roadway Departures; (4) Safe Transportation for Every Pedestrian; (5) Unmanned Aerial Systems (UAS); (6) Use of Crowdsourcing to Advance Operations; (7) Value Capture: Capitalizing on the Value Created by Transportation; (8) Virtual Public Involvement (VPI); (9) Weather-Responsive Management Strategies; and (10) Advanced Geotechnical Exploration Methods.

EDC is a state-based model that identifies and rapidly deploys proven but underutilized innovations that are aimed at shortening project delivery process, enhancing roadway safety, reducing traffic congestion, and improving environmental sustainability.

A series of regional summits were held in October and November 2018 to facilitate dialogues between stakeholders. It was an opportunity for brainstorming, strategizing, and identifying opportunities for deployment of any of these innovations.

Louisiana participated in the summit held in Orlando, Florida. The FHWA-Louisiana Division is currently dialoguing with the LADOTD, LTAP Center, Local Public Agency managers, and other local stakeholders to identify which of the 10 innovations are more likely to be adopted for deployment across nine regions. For more information on Every Day Counts, visit https://www.fhwa.dot.gov/innovation/everydaycounts/edc_5/. You may also check out “Innovation” tab of www.louisianaltap.org.

LRSP Project Spotlight: City of Monroe's Desiard Street Restriping



We are pleased to share the City of Monroe's success in implementing pavement marking improvements on Desiard Street that were funded through the Local Road Safety Program (LRSP). These improvements were done by restriping the roadway's centerlines, edge lines, crosswalks, railroad approaches, and on-street parallel parking spaces.

Local Road Safety Program: Call for Projects

LTAP's Local Road Safety Program (LRSP) is calling all parishes and municipalities seeking to secure funding for infrastructure safety improvements on locally owned roads. Project applications are accepted year-round; however, those submitted by cutoff dates March 31, June 30, September 30, and December 31 will be prioritized for project selection.

Projects eligible for funding include curve delineations, rumble strips, high friction surface treatments, pavement markings, signage, flashing beacons, intersection improvements, mini-roundabouts, and other proven countermeasures. For more information and technical assistance, email LRSP manager Leo Marretta at leo.marretta@la.gov.

Managing Flood Risk through Louisiana Watershed Initiative

By Rudynah Capone

Local agencies now have an opportunity to be involved in a collaborative endeavor that will change the way Louisiana manages flood risk, thanks to the proponents of Louisiana Watershed Initiative (LWI) and Governor John Bel Edwards's long-term vision of sustainability and resilience through watershed-based solutions.

The historic floods in March and August 2016 brought the emergency response agencies and experts together. It was an opportune time to reflect upon what Louisiana could do to improve floodplain management and risk-reduction planning at all levels of government. It is critical that everybody understands the lingering impact that any flood or extreme weather event leaves behind especially in the lives of affected families and loved ones.

With issuance of the Executive Order (EO JBE18-16), Governor Edwards designated key agencies to establish the Council on Watershed Management Agencies that will primarily lead the efforts of the initiative. These agencies include: the Governor's Office of Homeland Security and Emergency Preparedness (GOHSEP); Office of Community Development (OCD); Coastal Protection and Restoration Authority (CPRA); Department of Transportation and Development (DOTD); and Department of Wildlife and Fisheries (DWF).

As stated in the initiative's blueprint, this new approach requires unprecedented coordination and cooperation across all facets and functions of government agencies. Rather than immediately injecting capital into local projects or jurisdictions in an often uncoordinated manner, the Council on Watershed Management puts its focus on empowering the local entities and communities to implement regional solutions that follow watershed boundaries. There are six strategic areas that the council has identified as long-term outcomes as follows: data, engagement, standards, funding, capability and capacity, and integrated planning.

There is much work ahead of us. At the current stage, the Louisiana Watershed Initiative seeks to provide a clear picture as to how local communities can become more resilient to future disasters. Since 2014, efforts have been made including the formation of watershed coalitions with parish,



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working together for sustainability and resilience

state, and federal entities as well as holding a statewide "listening tour" that comprised of technical data presentations, peer exchanges, and elected official briefings.

Through the interagency structure and programmatic approach, the state is committed to this effort while also requesting municipalities, parishes, regional organizations and all stakeholders to do the same. Be informed, be vigilant, and be cooperative. Be part of the Louisiana Watershed Initiative. Visit www.watershed.la.gov for more info.



2014

- CPRA investigates the alignment of flood protection authorities with watershed boundaries as part of its response to Louisiana Senate Resolution 39



2016

- March and August: 145,000 homes damaged by flooding events
- Gov. Edwards directs state agencies to coordinate flood risk mitigation efforts
- CPRA develops Flood Risk and Resilience Program framework
- Following the 2016 floods, state agencies begin to facilitate the development of watershed coalitions, driven by the Louisiana Resilient Recovery Initiative.



2017

- OCD and DOTD begin to develop a hydraulic and hydrologic model of the Amite Watershed
- Cooperating agencies begin Phase I of a process to develop a statewide watershed-based floodplain management program



2018

- Gov. Edwards issues EO JBE18-16 creating the Council on Watershed
- Cooperating agencies release a multi-phased plan, early actions, and initial Louisiana Watershed Initiative program framework to conduct watershed-based floodplain management

Source: www.watershed.la.gov

Resettling America's First Climate Refugees in Isle de Jean Charles, Louisiana

By Rudynah Capone and David Rome

How do you save the home of America's first climate refugees where its main corridor floods frequently? It's overwhelmingly challenging and has been for six decades now.

For Terrebonne Parish in Louisiana, the last resort is to uproot the current residents of Isle de Jean Charles through a Resettlement Project. This effort is made possible through the Housing and Urban Development's (HUD) Community Development Block Grant (CDBG) National Disaster Resilience Competition. As of current plans, the project is scheduled for groundbreaking in March 2019. In early 2020, the Biloxi-Chitimacha-Choctaw band of Native American residents can begin resettling into their new homes that sit on the "Evergreen Site," 35 miles northwest of Isle de Jean Charles.

Let's paint a picture of how the dilemma has worsened through the years. Island Road is Isle de Jean Charles' only land connection to the rest of the state. When it was built in 1956, residents were able to trudge onto the marshes surrounding the road. This four-mile stretch of pavement sits above sea level but it drastically disappears when the water rises. As decades have passed, its original landscape has been lost. In fact, it has dropped its land mass by 98%, from 32,000 acres in 1955 to now less than 320 acres. The economic activities from oil and gas companies dredging through the mud have contributed to it. Their non-stop rising waters are not of any help either. The road has been fixed nearly a dozen times over the period of six decades. Terrebonne Parish spends approximately \$90,000 every year just to keep the road passable.

Currently, the island has 91 residents who are referred to as "America's first climate refugees". There are 26 occupied residences, 35 camps (some unoccupied), a volunteer fire station, a marina, a cemetery, public water, Atmos gas station, and septic tank sewer systems.

The Isle de Jean Resettlement Project is built on 515 acres of agricultural land and wetlands located just 15 miles north of Houma. Saint Louis Bayou and Bayou Blue are the only two natural bodies of water that run through this site. The relocation site can house 150-160 residential lots across 60 acres. Each lot will be between quarter to half an acre. Amenities such as ball fields, a recreation center, picnic pavilions, and playgrounds are also planned.



Photo source: www.isedejeancharles.com, 2018

The residents are categorized based on permanency in the island and whether they have been displaced prior to or after Hurricane Isaac in 2012. Current residents and those displaced by Hurricane Isaac will qualify for full relocation and housing assistance. Other families who have not been displaced but are interested in moving may purchase property at a fair market price.

While there are foreseen infrastructural challenges along the way, this project aims to achieve its vision of strengthening the Biloxi-Chitimacha-Choctaw tribe's safety while integrating historical traditions, novel technologies, and state-of-the-art resilience measures. Email Terrebonne Public Works Director David Rome at drome@tpcg.org for more info.

Leadership Spotlight, continued from page 10

If you were to pick three traits of an effective leader, what would you say they are and why?

I would say integrity, passion, and dependability are important traits that a leader should have in order to lead teams and affect change. With integrity, you're able to instill honesty and trust amongst your workers. With passion, you are able to naturally motivate and engage your team members. With dependability, you can ensure every member in your team can rely on the decisions you make.

You are a graduate of the Road Scholar Program. How valuable was that and what part of the program did you find to be useful in your work?

Coming from a building and construction background, I must say the Road Scholar classes provided me with the fundamentals of public sector work. We have sent several personnel to attend the classes, and every single one of them found it useful in their day-to-day operations across all aspects of public works.

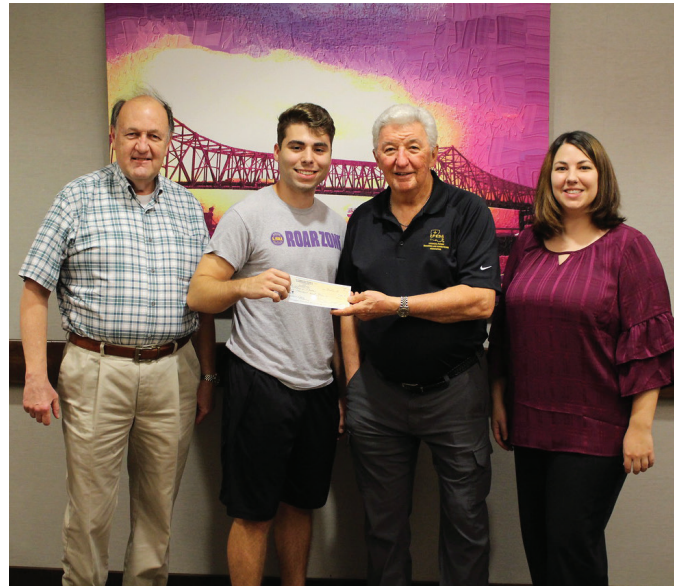
LTAP in Action

LPESA Scholarship awarded to Matthew Thomas of LSU

The Louisiana Parish Engineers and Supervisors Association (LPESA), in partnership with Louisiana LTAP, awarded the Scholarship for Excellence in Engineering Studies to Matthew Thomas, a native of Houma and senior civil engineering major at the Louisiana State University (LSU). Matthew is also a member of the American Society of Civil Engineers (ASCE) LSU chapter. The LPESA scholarship is awarded each year to an engineering student from a Louisiana university who has exhibited excellence in engineering studies. The candidates are submitted by the college of engineering of each university on a rotational basis. The universities from which the recipients are chosen are McNeese University, Louisiana Tech University, LSU and University of Louisiana at Lafayette (ULL). The scholarship committee is comprised of Bill Campbell and Wayne Winch of ULL, Tom Stephens of LSU, Dennis Woodward of LA Tech, and Dr. Marie Walsh of LTAP (in advisory role). To know more about LPESA, visit www.lpesa.org.

LTAP delivers Asphalt Maintenance Training

During the months of October through December this year, LTAP travelled across nine regions to deliver the “Roads Scholar #2: Asphalt Road Maintenance” class, with Nick Verrett, Natchitoches Parish Engineer, as the Instructor. This newly revised Road Scholar course is designed to help local agencies implement procedures for more effective maintenance of asphalt roads that will extend their service life without the need for constant repetition. For more info, find Road Scholar Program under “Training” tab of www.louisianaltap.org.



In photo awarding Matthew Thomas of LSU are (from left) LTAP Program Manager Steve Strength, LPESA Scholarship Committee member Bill Campbell, and LTAP Training Coordinator Courtney Dupre.

LTAP supports FEMA in conducting Emergency Disaster Response classes statewide

Almost 250 participants attended the Emergency Disaster Recovery Process classes that were held in Alexandria, Amite, Gonzales, Lafayette, Natchitoches, Gray, West Monroe, and Shreveport during August and September of 2018. These classes were coordinated by LTAP in partnership with FHWA, FEMA, LMA, GOHSEP, and DOTD to provide local public agencies guidance on navigating the process for reimbursements of disaster recovery work on transportation facilities and assets. It was an opportunity to highlight the FEMA and FHWA requirements, review criteria to determine eligible roads and bridges, develop adequate pre-event condition documentation, plan for event monitoring, and conduct damage inspection and evaluation criteria in this process. For more information, visit the FHWA ER Program at <http://www.fhwa.dot.gov/programadmin/erelief.cfm>



LTAP Director receives WTS Outstanding Public Service Award



Photo shows LTAP Director Dr. Marie Walsh (second from left) along with her fellow award-ees (L-R): Gresham Smith's Transportation Engineer Intern Rebecca Murray (Member of the Year), DOTD Secretary Dr. Shawn Wilson (Man of the Year), DOTD Local Public Agency Program Director Ann Wills (Woman of the Year), and Buchart Horn's Project Designer Kristen Gahagan (Outstanding Young Engineer). The award-ees were recognized during the Annual WTS Banquet held at the Country Club of Louisiana last November 29, 2018. (Photo courtesy of WTS Louisiana)

LTAP Director, Dr. Marie Walsh, was recently awarded the Outstanding Public Service Award from the Women in Transportation Seminar (WTS) Louisiana Chapter.

Dr. Walsh has been a familiar figure in the transportation field both nationally and across Louisiana. As the director of LTAP since 2004, Marie has contributed to the advancement of local transportation workforce development in a wide array of topics. Her efforts have put Louisiana at the forefront of road safety planning, capacity building, training and technology transfer. She is frequently invited by various agencies across the nation to share her expertise and in actively engaging with peers in national committees such as AASHTO and TRB Safety Committees, Toward Zero Deaths Steering Committee, and the National LTAP Association Innovations Committee.

“The local transportation and public road maintenance workforce is critical to the success of our local governments and communities. LTAP offers various training opportunities as well as technical assistance and resources that help local agencies do their work at basic and practical levels,” said Dr. Walsh.

When Dr. Walsh became the president of the National Local Technical Assistance Program Association (NLTPA) years ago, she engaged all LTAP centers across the nation in advancing their efforts to improve road safety. She made road safety her core focus in her leadership efforts.

Marie started her career in the environmental engineering field where she handled environmental auditing and systems management. She previously worked with the Louisiana Department of Environment Quality (LDEQ) where she managed the Technical Services Program of the Air Quality Division. Marie's beginnings with the LTAP program stemmed from her previous work with the East Baton Rouge (EBR) Parish's Quality and Employee Development Department. Back then, she worked with EBR Public Works in conducting LTAP classes at their facility. When the opportunity to be LTAP Director opened in 2004, she unhesitatingly jumped in, and everything just fell into place.



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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.