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IOWA STATE UNIVERSITY
Institute for Transportation

Winter safety tips

Winter has officially come again for Iowans, but several more months lie ahead and it's never too late (or too early) to be reminded of tips to stay safe during the cold months.

Whether you're driving in snow and sleet, operating snow removal vehicles to keep roads safer for everyone else, or working in cold weather conditions, there are a wide variety of potential safety hazards throughout the cold weather months.

The Operational Safety and Health Administration (OSHA) has the three Ps of safe winter driving: Prepare, Protect, and Prevent. However, these three actions are also useful tips for staying safe through any activity that takes you outdoors during the winter months.

Through its Worker Safety Training Resources for Public Agencies web page, available under the Resources dropdown menu on the Iowa LTAP home page, the Iowa LTAP has collected a variety of tools for agencies to conduct winter safety training.

Training tools include a training video, a snowplow operator safety series of videos,

OSHA's Winter Weather Safety E-Tool, and a tailgate talk flyer, among others.

To access this safety resource, visit <https://iowaltap.iastate.edu/safety-resources-main-face/>. The Iowa LTAP asks that you provide basic information initially during login to use these resources, in an effort to track who is using the materials, but the trainings are offered free of charge.

The Winter Safety Training available through the Iowa LTAP website is just one of nearly two dozen safety training topics curated to specifically assist local public works and county secondary roads departments with their safety training for employees. Each training can be made applicable for your particular agency and its unique needs.

Additional details about how to use the safety resources pages are available in the October–December 2020 *Technology News* available at <https://iowaltap.iastate.edu/technology-news-new/>. For other questions or more specific information about the Worker Safety Training Resources, contact Paul Albritton. ■



The winter safety training resources available from Iowa LTAP include a video series on snowplow operator safety, among other training tools

Acronyms and Abbreviations in *Technology News*

AASHTO	American Association of State Highway and Transportation Officials
APWA	American Public Works Association
FHWA	Federal Highway Administration
ICEA	Iowa County Engineers Association
IHRB	Iowa Highway Research Board
InTrans	Institute for Transportation (at ISU)
Iowa DOT	Iowa Department of Transportation
ISU	Iowa State University
LTAP	Local Technical Assistance Program
MUTCD	Manual on Uniform Traffic Control Devices
NACE	National Association of County Engineers
TRB	Transportation Research Board

About LTAP

LTAP is a national program of the FHWA. Iowa LTAP, which produces *Technology News*, is financed by the FHWA and the Iowa DOT and administered by the Institute for Transportation at Iowa State University:

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From the Director: Lean into joy

The word “joy” comes up a lot this time of year. So, I thought, why not write about it. The simple dictionary definition can't do this word justice. There is more to it than the analytical. Its true meaning, I think we can agree, is much larger and more expansive. Stop reading for a second, close your eyes if that works for you, and think about the last time you experienced joy. Now, happiness is one thing. What I'm talking about is pure joy. Sit with that feeling for a while. Are you smiling—maybe just a bit? Joy is something internal and deeper than the happiness one might get from, for example, a well-made sandwich. Joy is selfless. It's permanent. Inherent, I believe, and within. It's not based on this, that, or the other thing. Charlotte Joko Beck says “[j]oy is being willing for things to be as they are.” I hope this makes sense.

I think I've said this before, the human brain is a beautiful thing. Current neuroscience research shows that it remains malleable throughout our lives. In other words, it can be changed. But, it also has a built-in negativity bias that helped keep us alive during those years danger lurked around each corner. That part of our brain kicks in automatically. Luckily, the more “modern” parts of our brain can help us learn new habits. Responding with purpose. For example, we can cultivate and learn to “lean” into things like joy, time and time again. And joy is everywhere. If we choose it. Think about it this way, some of the deepest sorrows everyone experiences have an origin in the joy of love. Humans are inherently social and community oriented. We have been this way throughout history, and it takes great courage.

Joy is probably also on my mind because I recently attended an online Global Joy Summit. I smile to myself thinking about how many people reading this are probably saying, “Really Keith, a Joy Summit, don't you have better things to do?” My answer to that: “What is more important than joy?”

And, get this, during those four days there were more than 30 scientists, spiritual leaders, poets, comedians, and others that spoke and created. They also had a project going to create art with kids and adults, if I'm recalling correctly, in Poland and Ukraine. And, hold on to your hats, there were over 186,000 people in attendance from over 190 countries. Stop reading again, pause, and just think about that. Are you smiling—maybe just a little bit? Joy is contagious. And, yes, there are 186,000 people interested enough in joy, including for you, that they prioritized it in their lives. These were not naïve lost souls. This summit was put on because they were seeing exactly what we are seeing around the world. The summit was like an inoculation. Or, as my friend from Puerto Rico might say “a giant global virtual hug.” I can tell you that for me it was a rush to be able to click into attendance with people from all over the world and talk about joy. Can we ever have too much joy in the world? I think not, so I'll offer this challenge to you: today, smile at least at one person and shine. Maybe it's returned, maybe it's not. It doesn't matter. A connected internal shift will have occurred.

All of us here at Iowa LTAP hope you recognize and experience joy and happiness in the coming weeks and throughout your life. Hopefully, some of our programs will help with that. In the coming months we will continue having our webinars and are in the planning stages for the work zone safety series, bridge inspection workshops, and some MUTCD training. Stay tuned as we advertise these. Currently, the survey to show your interest in on-site work zone/flagger training is also open. Happy Holidays, friends.

With Gratitude,
Keith ■

“There are two ways of spreading light: to be the candle or the mirror that reflects it.”

—Edith Wharton

LTAP welcomes Kori Mahieu



Kori Mahieu joined the Iowa LTAP this past fall as the program's education and activity administrator just weeks

before one of its biggest annual events, the Iowa Streets and Roads Conference and Workshop.

Mahieu was thrown into the deep end, but she wasn't fazed. Her background in leadership and education meant she was more than prepared despite being new to this particular job.

"It's important to me to be someone people feel like they can count on and openly communicate with," Mahieu said.

"To me leadership is rooted in people and culture. The best part about being a leader is meeting people and hearing new perspectives and approaches."

She added that her background in education also played a part in her ability to be flexible and adaptable.

Mahieu, who originally hails from California City, CA in the Mojave Desert, came most directly from a job as an education manager at the Iowa Funeral Directors Association, and she worked as a lead teacher and assistant director at Bright Horizons Family Solutions in central Iowa prior to that.

Those experiences and her education helped her develop the skills—such as multi-tasking, follow-through, and project-based teamwork—needed to jump right into assisting with the Streets and Roads event as well as conducting her other LTAP duties.

For LTAP, Mahieu provides event coordination as well as administrative support to the program. She provides support to the LTAP staff with the coordination of events and workshops in the delivery of transportation training and outreach efforts to local agency officials.

"The people are definitely the best part about working at LTAP," Mahieu said. "My team and everyone at InTrans have been so welcoming and amazing to work with. I'm most looking forward to getting to know more of the local people we serve."

Contact

Reach out to Kori Mahieu with any LTAP event questions or just drop a line to welcome her to Iowa LTAP at (515) 294-6154 or at korim@iastate.edu. ■

Low Volume Roads Conference: Register today for July 23–26 event

Attendees also welcome to join Iowa Night on July 24

The 13th TRB International Conference on Low Volume Roads is approaching, and registration is open for this special opportunity for Iowa professionals.

The event will be held July 23–26, 2023, in Cedar Rapids. The conference is convened by the TRB and is a global forum to examine new technologies and new techniques in planning, design, construction, operation, maintenance, and administration of low volume roads.

Registration information and a preliminary agenda are available here: <https://trb.secure-platform.com/a/page/lowvolumeroads>. Register by March 23, 2023, for the early-bird rates.

Additionally, details about the field trip to see low volume road bridge and pavement



innovations in surrounding Linn and Johnson counties have been announced. The half-day tour is being organized by the ICEA and so far includes stops to see five different innovations. Along with the tour, the event will feature workshops, plenary sessions, break-out lectern sessions, poster sessions, and exhibits.

Low Volume Road Conference attendees are also invited to the Iowa Night on the evening of July 24. The event is hosted by the ICEA and is expected to be a great evening of good old Iowa friendliness, food, and fun. It is provided at no additional cost, and transportation will be

provided, but is limited to those who are registered for the conference.

Details about the Iowa Night can be found at <https://intrans.iastate.edu/events/iowa-night-at-lvr-conference/>, and the event does not conflict with any other conference agenda items.

The Low Volume Road Conference has been held every four years since 1975 and was last held in Cedar Rapids in 1979, for the 2nd International Low Volume Roads Conference. The event typically draws between 200 and 300 practitioners and researchers from more than 20 countries. ■

Iowa LTAP Mission

To foster a safe, efficient, and environmentally sound transportation system by improving skills and knowledge of local transportation providers through training, technical assistance, and technology transfer, thus improving the quality of life for Iowans.

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2022 Traffic and Safety Forum touts Safe System approach

130+ attend annual conference hosted by InTrans, Iowa DOT

The 2022 Traffic and Safety Forum keynote speaker Mike Dreznes made the case that road traffic injuries and deaths are a “forgotten pandemic” that needs to be addressed with the same fervor as the global response to COVID-19.

Dreznes, a retired senior vice president for the International Road Federation, then offered the 130+ forum attendees his vision of a world with “road safety vaccines.”

After offering up statistics to highlight the “forgotten” part of the pandemic—3,700 deaths per day worldwide for an estimated 1,350,000 killed on highways around the globe this year, not including injuries—Dreznes focused on the roadway preventative treatments that would be akin to a “vaccine.”

He pointed to the Second Global Plan for the Decade of Action for Road Safety (2021–2030) and its adoption of the Safe System approach to address potential roadway hazards likely to result in injuries.

Later in the afternoon, Federal Highway Administration (FHWA) Senior Safety and Geometric Design Engineer Steve Ratke gave a technical presentation on the FHWA's Safe System approach.

The five pillars of the Safe System approach, per the FHWA, are safe road users, safe vehicles, safe speeds, safe roads, and post-crash care.

For the forum attendees, consisting mostly of traffic engineers, Dreznes focused largely on the “safe roads” aspects, noting that roadway treatments must understand and forgive human error. Thus, he suggested three measures to address a known safety concern that are in order as follows:

1. Get rid of the hazard where possible
2. Make it so road users can avoid the hazard
3. Make the hazard less dangerous

“Do what you can while you can do it, ... and if it's not safe, don't do it,” Dreznes said.

The Traffic and Safety Forum is an annual fall event organized and hosted by the Iowa Department of Transportation (DOT) and the Institute for Transportation at Iowa State University. The purpose of the forum is to enable traffic and safety engineering professionals to learn about new and innovative systems and processes, share individual experiences, and collectively address issues of interest. ■



Mike Dreznes, 2022 Traffic and Safety Forum keynote speaker, urges action on road safety

CP Tech Center publishes new edition of *Concrete Pavement Preservation Guide*

Pavement preservation is often described as “providing the right treatment to the right pavement at the right time.”

To help highway agencies put that maxim into practice on their concrete pavement networks, the National Concrete Pavement Technology Center (CP Tech Center) recently released the third edition of its *Concrete Pavement Preservation Guide*.

This edition of the guide—which provides guidance and information on the selection, design, and construction of cost-effective concrete pavement preservation treatments—reflects advancements and new developments in the concrete pavement preservation arena that include the following:

- Information on new pavement evaluation equipment, technologies, and protocols
- Information on new materials and techniques for partial-depth repairs (PDRs)
- New information on full-depth repairs (FDRs), including updated information on precast and utility cut repairs
- Updated information on diamond grinding and grooving, including information on slurry-handling procedures
- An updated chapter on joint sealing with an introduction to the use of surface sealers
- An abbreviated chapter on concrete overlays with links to detailed information in the *Guide to Concrete Overlays* (4th edition), published by the CP Tech Center in November 2021
- Discussion of general sustainability considerations in the selection of pavement preservation treatments

“Several concrete pavement preservation treatments are available to meet a range of conditions,” said the guide’s project manager Steven Tritsch, an associate director at the CP Tech Center.



Concrete pavement diamond grinding (*International Grooving and Grinding Association*)



Sealing of a longitudinal joint
(*Scott Eilken, Quality Saw & Seal, Inc.*)



Chain lift-out method of slab removal
(*John Donahue, MoDOT*)

“These treatments are often applied in combination to address several deficiencies and to maximize overall effectiveness—and when applied in a timely fashion, preservation treatments can also significantly improve pavement performance and extend service life.”

The guide focuses primarily on preservation treatments that are applicable at the project level rather than at the network level and addresses such issues as prioritizing and budgeting.

“Effective pavement management programs are critical in identifying and forecasting the need for timely pavement preservation treatments, and that important link between forecasting need and optimal pavement management is highlighted in this guide,” said Tritsch.

The guide was published with funding from and as part of the Federal Highway Administration (FHWA) cooperative agreement Advancing Concrete Pavement Technology Solutions.

It is aimed at state and local design and material engineers, construction managers, quality control personnel, contractors, material producers and suppliers, technicians, and tradespeople who have some familiarity with concrete pavement maintenance and pavement preservation treatments. However, the guide is expected to also be of value to those who are new to the field.

In addition to the *Concrete Pavement Preservation Guide* (Third Edition), the CP Tech Center has developed a set of resource materials to train and educate users on the applications and benefits of pavement preservation. These pavement preservation resources are available at <https://cptechcenter.org/pavement-preservation/>. ■

In brief: Lasting LTAP impacts

About the Work Zone Safety Sign Package Program

Small city budgets for this type of work can sometimes lead to diminished funding for temporary traffic control devices and the use of signs, barricades, cones, and vests that are deteriorated and may be out of compliance with the 2009 MUTCD. That is why this Iowa DOT-funded program provides an opportunity for operations personnel from smaller cities in Iowa to improve their work zone safety and setups when conducting routine street maintenance. Participants are from cities with a population of less than 10,000 residents.

The program has grown from 10 applications in 2017, the initial year of the project, to 91 applications in 2021–2022.



Work zone sign package

Winners

A total of 10 cities from across Iowa were chosen as winners this year, each receiving a package that included \$2,500–\$3,000 worth of signs, vests, and materials. The cities include:

1. Allerton
2. Anita
3. Conrad
4. Crescent
5. Hartley
6. Hazleton
7. Ida Grove
8. LeClaire
9. Walnut
10. Winterset

"We are so excited to be able to continue this program again this year. With the ever-growing demands on the roads, streets, and bridges of Iowa, our goal is to make sure cities have everything they need to make their work zones safer," said Paul Albritton, the Iowa LTAP technical training coordinator and co-organizer of the program.

Each package included the following materials, which were of the correct type and size for lower speed city street work.

And all of the devices included high intensity retro-reflective sheeting suitable for nighttime use.

- One Lane Road Ahead signs
- Road Work Ahead signs
- Be Prepared to Stop signs
- Type III barricades
- 28 in. traffic cones
- Class 2 safety vests
- Sign stands
- 42 in. channelizers

Heather Sweeden from Ida Grove had this to say, "Thank you so much. This package is truly going to make a difference and enhance safety in our community!"

Jaron Benz from the City of Harley also wanted to express his appreciation, "We certainly appreciate the consideration by the committee and are very grateful for their choosing us. This work zone safety package will be a great asset for our workers' continued safety working in the roadways in and around the community of Hartley."

Contact Iowa LTAP Technical Training Coordinator Paul Albritton at palbritt@iastate.edu or 515-294-1231 with any questions. ■

The application period for the 2023 program will be open until December 31, 2022. The application includes questions about your department, past staff attendance at trainings, and details about your department's current work zone related equipment. To apply, visit the Iowa LTAP website here: <https://iowaltap.iastate.edu/iowa-ltap-work-zone-sign-packageprogram/>. ■

Article written by Brandy Haenlein, a communication specialist with InTrans.



Nearly 150 attendees joined Iowa LTAP for the 2022 Iowa Streets and Roads Workshop and Conference

Workshop and conference calendar

[Information current as of December 14, 2022] Iowa LTAP will continue holding both virtual and in-person events and trainings throughout the winter and spring.

For the most up-to-date information about in-person attendance requirements and additional upcoming virtual events, please check regularly at <https://iowaltap.iastate.edu/events/> and consider subscribing to our mail list at <https://iowaltap.iastate.edu/> for email updates.

2023	Event Name	Location	Contact
January			
8–12	TRB Annual Meeting	Washington, DC	TRB
18–19	Iowa DOT Federal-Aid Overview Seminar	Boone	Nicole Moore
20	Excavation and Trench Safety Refresher	Webinar (12:00 p.m. CT)	Paul Albritton
25–26	Iowa DOT Federal-Aid Overview Seminar	Hiawatha	Nicole Moore
February			
1–3	ICPA 59th Annual Concrete Paving Workshop	Des Moines	ICPA
8–9	Iowa DOT Federal-Aid Overview Seminar	Denison	Nicole Moore
14	Iowa Work Zone Safety Workshop	Cedar Rapids	Paul Albritton
15	Iowa Work Zone Safety Workshop	Cedar Falls	Paul Albritton
16	Iowa Work Zone Safety Workshop	Ottumwa	Paul Albritton
22	Iowa Work Zone Safety Workshop	Storm Lake	Paul Albritton
23	Iowa Work Zone Safety Workshop	Council Bluffs	Paul Albritton
28	Iowa Work Zone Safety Workshop	Ankeny	Paul Albritton
March			
1–3	Greater Iowa Asphalt Conference	Des Moines	Keith Knapp
9	Iowa Work Zone Safety Workshop	Ankeny	Paul Albritton
9–10	ISAC Spring Conference	Des Moines	Keith Knapp
30–31	APWA Iowa Chapter Spring Conference	West Des Moines	Beth Richards

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Event details and online registration

Watch for details and online registration information, by specific dates and events, on the Iowa LTAP Workshops page, iowaltap.iastate.edu/workshops/. ■



The Multidisciplinary Roadway Safety Series (left) and Winter Maintenance Workshops (center and right) events kept Iowa LTAP busy this fall

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