

Photo: Courtesy of Zack Segur



Fall 2017 MRA RAIL UPDATE

A publication of the Michigan Railroads Association

Freight Rail Industry Utilizing Drone Technology

The power of drones - or unmanned aerial vehicles (UAV) - is being harnessed across a multitude of industries every day. Sectors such as transportation, agriculture, mail delivery and insurance are utilizing drone technology.

America's freight railroads are exploring the use of UAVs for a variety of duties in an effort to further enhance safety on the ground. These include: inspection of tracks and bridges, protecting and monitoring rail assets, and taking part in emergency response efforts.

The ability of drones to capture detailed data about infrastructure in remote, difficult to access areas has significant benefits.

When record flooding hit Texas and Oklahoma in 2015, the waters washed away homes, businesses and infrastructure - including freight railroad tracks. During this time, the Class 1 railway operating in that area looked to the skies to assist their teams on the ground.



Photo: Courtesy of HazonSolutions.com

The railroad flew unmanned aerial vehicles mounted with high-definition video cameras over areas of the flood zone to inspect parts of the rail network that were difficult to access from the ground.

On the video feeds, the railroad's safety inspectors could see precisely where rail tracks had been washed out. They were also able to examine the condition of rail bridges, some of whose foundations had been slammed with debris.

By pinpointing the location of the damage, they were able to safely deploy employees as soon as the floodwaters receded and quickly return the rail line to safe operation.

The industry has also recently used drones after hurricanes Harvey and Irma inflicted great damage to survey impacted areas and help guide workers on the ground.

When a different railroad had a derailment recently, drones were quickly utilized to get up close to the accident - which greatly assisted decision makers. Having the ability to send in a UAV for video or air quality testing, instead of personnel on the ground, is critically important in some scenarios.

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Michigan Promotes National Rail Safety Week



FROM THE PRESIDENT

Jon Cool

Members of the Michigan Railroads Association (MRA) helped kick off the 1st ever National Rail Safety Week (RSW) in September. The MRA was excited to partner with Governor Rick Snyder who drafted a proclamation highlighting Rail Safety Week. Michigan Department of Transportation (MDOT) & Michigan State Police (MSP) also participated at the opening kickoff and throughout the week, in addition to local law enforcement agencies and area legislators.

Operation Lifesaver (OL) had a full agenda of Rail Safety Week activities throughout the state. Thank you to everyone who partnered with OL to

make the safety effort a success. CN Rail Police handled much of the planning work with OL and did an outstanding job promoting RSW 2017 across our state.

The 2nd call for projects for the Local Surface Crossing Program is now in progress. The program's first year was a success, as railroads partnered with local road authorities across the state to help fix surfaces at rail crossings.

We appreciate the strong partnership with the Michigan Municipal League, County Road Association and MDOT Office of Rail in making this new program so advantageous for the motoring public.

The Governor's Unmanned Aerial Systems (UAS) Task Force has been meeting to explore possible modifications to Michigan's Drone law. The legislation passed last year called for this task force to be created to look at areas that might require additional review.

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Legislator Rail Tours

The MRA would like to thank the numerous legislators who came out to tour rail operations across Michigan this year. We couldn't include every photo from the visits, but thank you to everyone who took the time to learn more about the freight rail industry in Michigan and the customers they serve.



Reps. Leutheuser, Rendon and Geiss tour the CN Delta Twp. auto-loading operation.



Marc Higginbotham, NS Consultant, Rep. Stephanie Chang and Steve Myrick tour the NS Oakwood Yard.



Mark Nagy - Development GLC, Tom Springsdorf - VP GLC, Chris Bagwell - President GLC, Chairman Cole and Rep. Hoitenga tour northern Michigan Great Lakes Central operation.



Mike Stickle - VP LSRC, John Rickoff - President LSRC, Chairman Cole, Rep. Rendon and Kevin Mitzzyk - CFO LSRC tour northern Michigan Lake State Railway operations.

► Continued from page 1 - From the President

The 28-member task force, led by the MDOT Office of Aeronautics, will make recommendations to the legislature in its concluding report later this fall. The rail industry uses drones to monitor rail yards, tracks, bridges and other infrastructure.

We support adding "key facilities" protections to the recommendations. These would prohibit private drone use over rail yards, utility operations,

chemical plants, etc. Private drone users continue to operate their devices over moving trains, rail personnel and rail yards.

This fall, the Michigan legislature may consider broadband expansion legislation. The rail industry will weigh-in with safety concerns regarding the specific safety protocols and safety procedures for utilities digging under rail infrastructure.

We also would like to note the many legislators who have taken time out of their busy schedules to join railroad companies for tours of their operations this year. We appreciate members of the House & Senate coming out to learn more about how railroads serve customers across our state. The tours are always valuable and cover many important components to rail operations, safety and economic growth.

Moving Michigan

FEATURING



James A. Squires
Chairman, President & CEO



Michigan freight in Detroit bound for Toledo.

Norfolk Southern supports the economic competitiveness of many rail-served industries and manufacturers in Michigan, working to find creative and cost-effective solutions to meet the freight transportation needs of the Great Lakes State.

NS' operations in Michigan are guided by the railroad's strategic plan, which is built on four pillars of strength: safety, service, stewardship of resources, and growth. Whether it's working with local short line railroads to expand customer shipping options; investing in track improvements to enhance safety and operating efficiencies; or partnering with local and state economic developers to recruit and grow business, NS seeks to increase the value it brings to Michigan's economy and transportation supply chain.

NS takes pride in its long history of service to Michigan, tracing its roots there to the 1840s and three primary predecessor roads: the Michigan Central, the New York Central, and the Wabash. These days, NS' Michigan operations span two operating divisions. The Dearborn Division, headquartered in Dearborn, oversees train traffic on one of NS' busiest corridors that connects Michigan's commerce to Chicago, Toledo, and Cleveland markets. The Lake Division, based in Fort Wayne, Ind., handles traffic over the railroad's "D" main line that serves Detroit, including automotive customers – a mainstay of NS' Michigan business portfolio.

In Michigan, NS serves the full supply chain involved in auto manufacturing. NS transports coke to steel manufacturers, moves finished steel parts to auto plants,

and delivers the final product to market. NS provides shipping and logistics support to a spectrum of automakers, including Ford, GM, and FCA. In Melvindale, NS' Oakwood Yard, auto ramp, and just-in-time auto parts facility offer first-rate service that aims to meet the unique needs of each customer. Two years ago, NS restructured its Triple Crown Services subsidiary to focus on movement of auto parts, and its daily service between Detroit and Kansas City offers a quality ride and reliable performance.

"We continually look for ways to expand service offerings and increase our value proposition to the auto industry in Michigan," said Whitney Price, NS director automotive sales.

Increasingly, NS has made its presence clear in Michigan through highly valued partnerships with short line railroads. These connections – currently with 12 short lines – provide NS access to 1,976 additional route miles of rail and offer shipping alternatives and expanded markets to more than 200 rail-served customers. Between 2014 and 2016, NS grew its Michigan short line traffic by more than 3 percent. During the first nine months of 2017, traffic grew by more than 4 percent. While NS' primary short line business is moving grain products, customer traffic also includes other agricultural products, plastics, fertilizers, chemicals, and metals and construction materials.

"We are committed to working with our Michigan short line partners to serve our customers and create value by meeting their supply chain needs," said Jodi Heath, NS short line development manager for Michigan. "We accomplish this by strengthening our

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Moving Michigan

FEATURING
NORFOLK SOUTHERN



At Oakwood Yard, an NS train crew prepares to depart on a train moving finished automobiles.

MI HEADQUARTERS NS DEARBORN DIVISION P 313.323.5000		
MICHIGAN TRACK MILES 487	MAJOR COMMODITIES AGRICULTURAL AUTOMOTIVE CHEMICALS COAL CONSTRUCTION INTERMODAL METAL	TOTAL TAXES, PURCHASES, PAYMENTS \$46.6 MILLION
EMPLOYEES IN MI 758		NS FOUNDATION CHARITABLE GIVING \$366,500 OVER LAST FIVE YEARS
PAYROLL IN MI \$51.7 MILLION		

► *Continued from page 3*

commercial relationships with short lines and mutual customers, and by dedicating resources specifically to this function.”

NS regularly makes capital investments to support Michigan operations, whether to expand business opportunities or to enhance safety and service. For example, over the past year, NS invested in track infrastructure to support new utility coal traffic and installed a crane lift and spill containment

structure at its Thoroughbred Bulk Transfer facility in Ypsilanti to expand freight capabilities. In addition, NS’ largest dual-rail replacement project in 2017 occurred in Michigan, involving replacement of 45 miles of rail on the D Line between Adrian and Belleville. The heavier, stronger rail reduces risk of defects and broken rail, enhancing safety and efficiency of train operations. As part of the project, NS installed new track switches and improved highway-rail grade crossings, giving motorists a smoother ride.

To ensure future prosperity, NS participates in economic development projects that create jobs and strengthen the economies of Michigan communities. Between 2014 and 2016, NS’ industrial development group supported the location or expansion of nine rail-served industries in Michigan that resulted in customer investment of \$21 million, 59 new customer jobs, and about 6,000 rail carloads of business. These projects involved businesses that manufacture or distribute automobiles, steel products, aluminum, grain, and lumber.

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Drones will be able to do their detective work despite dangerous conditions, keeping rail employees and first responders safe while improving railroads’ ability to gather the information necessary to help detect problems and to plan and prioritize corrective action.

Sometimes private drone users interfere with accident scenes by getting too close. A recent Michigan State Police active emergency scene experienced how this can be a dangerous, life-threatening matter. As state troopers and medical officials were attempting to bring in a medical helicopter, a private drone user was flying his UAV over the scene, preventing the helicopter from landing. It took valuable minutes to find the drone user and have that UAV grounded.

Drones could also help tremendously in remote environments like some of the freight rail lines in the north where temperatures can drop well below zero during the dead of winter.

Steel rails contract when temperatures drop, so if a rail is going to crack due to temperature, it will probably occur when conditions are coldest,

which can often be in the middle of a winter night, in snowy and difficult conditions. Sending a team of inspectors out in these conditions can be challenging and can introduce an element of risk associated with the extreme weather.

As drone and associated on-board detector technologies advance, an inspector could use data gathered by the drone to identify defects rather than needing to physically access the track. To add value to railway safety programs using drones, experts say, “We must be able to gather meaningful track and structure information, anytime day or night, and in poor weather conditions.” Soon, a drone flying at 500 feet may be able to spot a quarter-inch separation in a rail line even at night and in poor weather conditions.

Several other Class 1 freight railroads are gearing up to incorporate drones, including Union Pacific, which last year secured FAA approval to use drones for aerial data collection. This year, UP anticipates using drones for capturing images and air quality testing. The company also is assessing drones for hard-to-do inspections. Elevated bridges and telecommunications antennae several hundred



Photo: Courtesy of HazonSolutions.com

feet tall are examples that present significant challenges.

As regulatory and operational hurdles to flying drones are overcome, railroads across the United States are making plans to enhance safety programs with these modern eyes in the sky.

National Rail Safety Week a Success



Reps. Schor and Singh join Sen. Hertel, Operation Lifesaver, MSP, MDOT CN & CSX rail police, MRA and local law enforcement in kicking off National Rail Safety Week. Photo: MDOT Photo Unit.

The inaugural National Rail Safety Week (RSW) was held September 24 -30, 2017. The goal was to promote rail safety through law enforcement special events, educational posters, yard signs, social media, radio spots, TV and radio interviews. Also included was a RSW proclamation by Governor Snyder and RSW resolutions from Senator Goeff Hansen and Representative Triston Cole.

Rail Safety Week kicked off at the East Lansing Amtrak station Sept. 25th with participants from Operation Lifesaver, law enforcement agencies, MDOT, MSP in addition to area legislators. Thank you to State Reps. Sam Singh & Andy Schor and Sen. Curtis Hertel for promoting rail safety at the kickoff.

Ingham Co. Sheriff Scott Wriggelsworth addressed the media event, as well. Jon Bondra, CN police, who managed a great deal of the safety week planning, emphasized the need for more safety education around rail tracks. Sam Crowl, Operation Lifesaver State Coordinator, orchestrated the kickoff program.

Other supporters of RSW were Operation Lifesaver Authorized Volunteers (OLAV) who held events across the state. Safety promotion events were held in Holland and Grand Rapids which generated local TV coverage.

CSX Police Officer Scott Karcher and Amtrak Detective Brian Poynton arranged for an officer on the train (OOTT) program from Grand Rapids – through Holland Amtrak’s Pere Marquette line with a Michigan State Police Trooper on board to call out violations to local law enforcement jurisdictions.

Another OOTT event was held near Saginaw by the Lake State Railway (LSRC). This event was supported by John Rickoff, President of LSRC, who also gave interviews to the local media. A third OOTT happened on the Grand Elk Railroad from Kalamazoo to Grand Rapids. A huge thank you goes out to Michigan State Police and local law enforcement for participating in these safety events.

In Jackson, OLAV Rahn Stokes set up a booth and placed posters and signs around the depot

promoting RSW, he also handed out brochures and spoke to boarding passengers. In the Kalamazoo area, OLAV Bob Mrva manned a table and made contact with several locals in the area especially near the homeless shelters adjacent to the Amtrak depot. Bob also placed signs around the city and did a TV interview. In Durand, OLAV David Lewis met every train all week long with a display and handed out promotional materials to support the RSW effort.

Around the Lansing area OL Assistant State Coordinator Curtis Stewart did two TV interviews and manned the East Lansing Amtrak. Jon Bondra was featured in a full-page newspaper article in the Oakland Press, a Pontiac based daily paper showing photos of “See Tracks - Think Train” sidewalk signs and speaking about some of his experiences as a railroad police officer. Many others helped to make the first National Rail Safety Week across Michigan a successful event.

2017 Midwest Rail Conference



Sen. Margaret O'Brien helps kick off the 2017 Midwest Rail Conference in Kalamazoo with a dynamic welcome message. Thank you, Sen. O'Brien! Photo: MDOT Photo Unit.

Kalamazoo was the host city this year for the Midwest Rail Conference August 15-17. The theme was, “Midwest Connections: Passenger and Freight Rail Look to the Future.” Attendees travelled from Illinois, Indiana, Minnesota, Ohio and Wisconsin to participate.

Conference attendees gathered at Western Michigan University for two days of freight and passenger rail panels, talks and discussions. The event also included valuable trips – including an informative trip to the Norfolk Southern served Cargill facility in Decatur.

We’d like to thank Sen. Margaret O'Brien & Rep. Jon Hoadley for welcoming attendees to Kalamazoo. A special thank you also goes to the Norfolk Southern Lawman band for travelling to Michigan to kick off the conference with a great evening of musical entertainment.



Rep. Jon Hoadley addressed 2017 Midwest Rail Conference attendees with a passionate welcoming and pro-rail talk. Thank you, Rep. Hoadley! Photo: MDOT Photo Unit.

Rail Insider Spotlight



Sgt. Scott Carlson
Michigan State Police Traffic Crash Reporting Unit.
Photo Courtesy of MSP.

Q: PLEASE INTRODUCE YOURSELF.

My name is Scott Carlson and I'm a Sergeant with the Michigan State Police Traffic Crash Reporting Unit within the Criminal Justice Information Center. I attended Michigan State University and graduated with a bachelor's degree in Criminal Justice in 1994. My wife and I live in Mason with our three children.

Q: TELL US ABOUT YOUR POSITION WITH MSP.

A: My title with the State Police is UD-10 Trainer for the Traffic Crash Reporting Unit. My main responsibility is to train new police recruits on the correct procedures in completing a UD-10 Traffic Crash Report, and to provide basic instruction on investigating traffic crashes.

Q: WHAT TYPES OF INTERACTIONS HAVE YOU HAD WITH RAILROADS OVER THE YEARS?

A: My first interaction with the railroads happened in the late 90's when I attended a Grade Crossing Collision class presented by the late Officer Dave Cornelius with the Norfolk Southern Police Department. Dave was an excellent instructor and became a mentor to me over the years as I investigated train incidents in the Jackson County area.

Q: TELL US ABOUT YOUR WORK WITH THE UD-10 CRASH FORM – HOW DOES IT IMPACT RAILROADS?

A: I first began working on the UD-10 with a team of experts from around the state back in 2012 to help revise the UD-10 for 2016. While working on that team, I realized that this UD-10 revision would impact the information found in the Michigan Model Enforcement Guide. This guide is used by all officers in the field and is a great resource not only for reporting vehicle/train crashes, but includes a vast array of information for officers dealing with railroad issues.

Q: DESCRIBE THE RELATIONSHIP BETWEEN MSP AND RAILROADS.

A: I think the MSP has a great relationship with the railroads in Michigan, and in particular, the Officer on the Train program. Every year MSP participates in several of these initiatives around the state. These programs provide a unique opportunity for the officer to witness first-hand the inherent dangers and close calls encountered by railroad Conductors and Engineers on a daily basis.

Q: TELL US ABOUT YOUR INVOLVEMENT WITH MICHIGAN OPERATION LIFESAVER.

A: I've been involved with Operation Lifesaver for a couple years now. I first presented at an Operation Lifesaver meeting in 2015 where I highlighted the changes in traffic crash reporting for the 2016 UD-10 revision. This past summer I became a board member of Michigan Operation Lifesaver, representing the State Police.

Q: WHAT IS YOUR KEY MESSAGE THAT YOU SHARE WITH THE PUBLIC ABOUT YOUR WORK?

A: With regards to my current position, I would urge everybody to drive safe and don't allow yourself to be distracted, by things either inside or outside the vehicle. Last year, officers around the state investigated over 312,000 traffic crashes, resulting in over 5,600 serious injuries and 1,064 fatalities.

MRA

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