



A Publication of the Railroad Model and Historical Society of Southeastern Ohio, Inc.

PO Box 1, Albany, Ohio, 45710

November 2016

**Upcoming Events:**

**November 5-6, 2016**  
The Dayton Train Show at the  
Upper Valley Mall  
Springfield, Ohio  
Admission: \$7  
Operating Layouts, Memorabilia,  
Vendors, All Scales, Warther's  
Museum display

**November 8, 2016**  
Club Meeting  
7:00pm  
Ohio State Highway Patrol Post  
13600 Della Drive, Athens  
Bring something for  
show and tell!

**November 13, 2016**  
Fremont Model Train  
Show & Swap Meet  
Fremont, Ohio  
Admission: \$5  
Operating Layouts, Displays, All  
Scales, Model Railroad Supplies

**November 26, 2016**  
Train Collectors Association  
Thanksgiving Train Show  
Parma, Ohio  
Admission: \$6  
Operating Layouts, All Scales, Parts,  
New/Used, Buy/Sell/Trade, 150+  
Tables

**December 3, 2016**  
31st Model Train and Toy  
Show and Sale  
Marion, Ohio  
Admission: \$5  
Train and Toy Displays, Vendors

**December 10-11, 2016**  
Railfair 2016  
Sat. 10am - 9pm  
Sun. 11am - 5pm  
The Market on State,  
Athens, Ohio  
Admission: FREE  
Operating Layouts,  
Railroad Exhibits, Raffle

## What's Next in Emerging Technologies for Short-Line Railroads? Quite a Bit.

Jeff Stagl | Managing Editor | *Progressive Railroading*

Class Is and passenger railroads are trying to push the innovation/automation envelope to boost efficiency and safety. Regionals and short lines are, too.

Some of the technologies small railroads are working to adopt mirror the Class Is: unmanned aerial vehicles, or drones, for bridge inspections or washout detections; various wayside devices for identifying worn or soon-to-fail components; and light-emitting diode lights for better visibility and energy efficiency at grade crossings.

Similar to their interchange partners, some regionals and short lines also are contemplating the conversion of their locomotives' fuel source from diesel to liquified natural gas (LNG), which is cheaper in the long run and produces less greenhouse-gas emissions than diesel.

For example, Florida East Coast Railway (FECR) in June began revenue-service trials of two LNG-fueled locomotives between Jacksonville and Miami, following previous trials between Jacksonville and New Smyrna Beach. FECR — which is aiming to become the first North American

railroad to employ LNG in revenue service — plans to convert its entire 24-unit mainline locomotive fleet to the gas by mid-2017, with 13 units to be converted by 2016's end. The Federal Railroad Administration (FRA) has approved the regional's tender design; FECR aims to build 13 tenders to support its LNG locomotive fleet.

Small railroads welcome any opportunity to reduce expenses — fuel included — to help control costs.

“We are by our nature small businesses, so we look for technologies or methods that can help us do more with less,” says American Short Line and Regional Railroad Association (ASLRRRA) President Linda Darr. “The challenge is, we're so resource strapped, it's more intense for us to take on a new technology because of the costs involved.”

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Yet, innovation in many ways can practically pay for itself. To that end, a number of short lines are beta testing an application that would enable field personnel to conduct locomotive inspections electronically. The app — which promises to boost efficiency and productivity, and reduce record-keeping costs — is expected to be more widely available in 2018.

“They will be able to get information to a supervisor in real time, with no paper records,” says Darr. “They can get a faster response to issues.”

In addition to innovations that can help make them more efficient, short lines are interested in any technology that can assist with enhancing safety, she says. Enter the Autonomous Track Geometry Measurement System (ATGMS), which is designed to measure and transmit geometry data from trains equipped with unattended instrumentation — meaning workers aren't at risk on track

and service won't be interrupted.

Through the ASLRRRA, several short lines are working with the FRA's Research and Development Department to pilot a ATGMS car on their system. ENSCO Inc., which received an FRA grant and developed the ATGMS, has demonstrated the system on short lines.

Meanwhile, Benten Technologies is developing an app designed to help short lines with their locomotive inspection programs. The app would serve as an automation boost for small railroads.

ASLRRRA member Conrail also is trying to up its automation game to both boost safety and instill decision-making processes that are more cost efficient. The railroad has continually adopted information technology (IT) systems from CSX and Norfolk Southern Railway since they split up and integrated Conrail into their systems in 1999, then repackaged the data

streams into a post-event basis, says Ron Batory, Conrail's president and chief operating officer. The efforts have transformed the CSX and NS subsidiary into “one of the most innovative and efficient terminal switching service providers in North America,” he says.

The IT innovations Conrail has adopted include:

- a customer action railroad behavior system (CARBS) that monitors various shipper information, such as carloads, commodities and service-performance measurements;
- a performance attendance compensation education and safety system that tracks employees' attendance, compensation, safety and education/certification awards;

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### “You know you're a Railfan if...”

[http://www.mswphoto.com/IdiotRailfan/you\\_know.html](http://www.mswphoto.com/IdiotRailfan/you_know.html)

You scream and chant like a possessed, frothing sportsfan for the train to hit the car that just went around the gate.

You're the first to notice the incorrect numberboards and lift rings on a recently restored locomotive.

### “Hobo Speak”

<http://www.hobonickels.org/terms.htm>

**Balling the Jack** - A freight train which is rolling fast

**Bangtails** - Racehorses

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- a Conrail information reporting system that uses CSX/NS car reporting systems and handheld devices to record and manage rail-car reports in real time;
- a yard asset GPS monitoring and utilization system that keeps tabs on all static and mobile assets in a yard on a time and motion/positioning satellite basis; and
- locomotive and vehicle GPS monitoring and utilization systems that track and measure asset usage.

Conrail shares CARBS information with CSX and NS to better understand customers' needs, says Batory. Other information is provided to and extracted from the Class Is' IT systems via Conrail's in-house data warehouses.

"CSX and NS use their own transportation systems, then feed each other information, with firewalls to protect proprietary information. We took the CSX and NS systems and amalgamated the data," says Batory. "Now, we handle 1 million cars a year and can micro-manage the place."

The next step in Conrail's automation: developing the use of technologically advanced hardware to measure the time and motion of all static and mobile assets from both an operating and maintenance perspective.

The railroad currently is using and tweaking such hardware at its Pavonia Yard in Camden, N.J., to employ a real-time analytics approach to operating a switching yard. A yard enhancement project involved more than two dozen suppliers, including Vossloh

North America, UNITRAC Railroad Materials Inc., JMG Construction, Patrick Engineering, R. J. Corman Railroad Group, Icom North America Inc., Lat-Lon LLC, Progress Rail and Western-Cullen-Hayes Inc.

The Pavonia facility previously operated as a traditional electro-pneumatic gravity hump yard. After a thorough physical redesign and operating process re-engineering, the yard now functions on level ground with significantly fewer assets, and with higher productivity and less variability, says Batory.

"It's a real-time living, time-in-motion project," he says.

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- \$40 for a single membership for 1 year
- \$60 for a family membership for 1 year

Benefits of becoming a member:

- Voting
- Several great trips throughout the year
- Friends who share a common hobby and interests

# Railroad Could be Liable if Environmentalists Prove Coal Spills Occurred

*The Associated Press*

A federal judge in Seattle has found that BNSF Railway could be held liable in a lawsuit claiming that coal spilled from trains pollutes waterways if environmental groups can show at trial that such discharges actually occurred.

Ruling in the case brought by seven environmental groups against the railroad, U.S. District Court Judge John Coughenour said Tuesday that coal particles and dust that fall directly into waterways from passing trains are "point sources" of pollution under the federal Clean Water Act.

However, Coughenour declined to immediately find BNSF liable for any violations, saying significant facts remain in dispute. He denied requests from both sides for summary judgment and set the case for a Nov. 7 trial.

Seven environmental groups sued the railroad in 2013, arguing that it violated federal environmental law by allowing its trains to discharge coal and other pollutants into Washington state rivers and waterways without a permit.

BNSF spokeswoman Courtney Wallace said Wednesday the company is confident in its legal arguments and that its coal-loading rule eliminates most coal dust issues at the mines and throughout the region.

Hundreds of uncovered trains carrying coal from Powder River Basin in Montana and Wyoming traverse Washington state each year. The trains carry coal to export terminals in British Columbia, Canada, Centralia and other locations. More trains are expected if a proposed coal-export terminal is built in Longview.

The Sierra Club, Spokane Riverkeeper, Friends of the Columbia Gorge and others allege that coal chunks and coal dust fall off BNSF trains through holes in the rail cars, when coal trains encounter rough tracks, or get blown from open-top rail cars during high winds or fast speeds.

The coal breaks apart easily and contains mercury, arsenic, uranium and other toxins harmful to fish and human health, the lawsuit alleged. The discharges occur despite the use of topping agents or other suppressants, it adds,

The groups say they look forward to proving their case about the environmental harm from coal dust.

"This opens the door for the court to see the evidence collected across the Northwest of the impacts of these trains on our lakes and rivers," said Jerry White Jr. of Spokane Riverkeeper.

The railroad issued rules in 2011 that require coal to be loaded in a bread-loaf shape to reduce issues with wind and then sprayed with one of several approved topper agents or an alternative to control dust.

A rail facility that opened last year in Pasco also added another layer of dust control by spraying trains carrying coal and petroleum coke with a topping agent at the facility, Wallace said.

Coughenour agreed with BNSF that coal released to land and from land to water aren't considered a pollution point source. But coal that goes directly into water and coal dust that comes from passing trains directly above or adjacent to waters are pollution sources, the judge said.

BNSF also argued that federal interstate commerce laws pre-empt the relief that the environmental groups are seeking. The judge postponed that decision until after a possible finding of liability at trial.

Court documents show that in 2014 BNSF generated nearly \$5 billion in revenue from the transportation of coal, which represented about 22 percent of its total freight revenue. Ninety percent of that coal originated in Power River Basin.

## Our Mission

*To Teach...*

*Those who want to know more.*

*To Educate...*

*Those who want to learn the history.*

*To Promote...*

*The hobby with enthusiasm.*

*And to share and enjoy the pleasure of all that is Railroadng.*



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