

Robert Sumwalt of the National Transportation Safety Board addresses attendees on what it takes to create a “culture of safety in your organization.”



# Despite Potential Challenges, Future Is Bright For Wood Ties

The well-attended educational sessions at RTA’s 2012 Conference comprised a major component of the overall program.

Sessions presented information about a range of topics, including the improving economy and the potential effect of a “fiscal cliff” on the industry, the health of the nation’s short line railroads, new R&D efforts related to alternative wood treatments, the state of tie disposal, forestry issues, Class 1 engineering and purchasing plans, and more.

“The presenters at this conference represent the best minds in the industry,” said RTA Executive Director Jim Gauntt. “The valuable insight gained during their presentations will be incredibly useful for attendees over the course of the next year and beyond.”

Below are excerpts from each of the presenters’ remarks.



### Economy

**Anita Ogbara, Standard & Poor’s**

The cost disciplines that railroads have always exercised will support ratings over the near term. Railroads have been very effective at modulating cash flow to fund working capital needs. We do expect access to capital to be a strength for railroads. We believe that railroads will continue to reinvest cash flow from operations to fund ongoing maintenance, expansion projects, regulatory mandates and technological improvements.



### Safety

**Robert Sumwalt, National Transportation Safety Board**

Leaders create cultures by what they systematically pay attention to. A safety culture is triggered at the top, and it permeates throughout the entire organization. You can have people at the top saying, “Safety is our top priority.” But, if people down at the bottom are not receiving that message, you don’t have a culture of safety.



### Short Line & Regional Railroads

**Mike Ogborn, OmniTrax & ASLRRRA**

There are a lot of infrastructure needs for the short line railroad industry, and it’s important to us to have good working relationship with all of you in the RTA. Most short lines have revenue of \$10 million or less, and we must stretch our capital. I want to talk with you about a number of issues, such as what additives prolong life of tie service, the best methods of utilizing the ties, whether different sized ties would be better for the short line industry. Those are the kinds of things I’d like you to interact with this panel about.



**Tony Reck, Paducah & Louisville Railway**

Physically, most small railroads are in good shape. The high level of

customer service is attractive for industrial development and business retention. In some cases, Class 1’s prefer to see small- to mid-sized industries develop on short lines. We are seeing some renewed interest from Class 1’s in market share growth. Public policy may favor shifting more business to rail to alleviate highway congestion.



**Tony Cox, WATCO**

In 2012, we installed over 200,000 IG’s, over 200,000 grades, over 11,000 switch ties, around 4,600 bridge ties,

and we predominately still stick with timber ties. Challenges for us include on-time delivery. We know and understand that the challenges go both ways, and meeting the demands of planned programs and new projects is what we deal with. Our projected 2013 plan, we are anticipating a strong year, with 350,000-400,000 timber ties. Tie suppliers, a special thanks to all of you who serve our needs. Great job!



### Sawmill & Forestry Issues

**Teddy Reynolds, Reynolds Forestry**

Thirty percent of loggers have parked their skidders in the barn. But, a lot of these guys own hundreds if not thousands of acres. There’s not that many loggers that only

log. They have other investments in agriculture and tend to be a lot more efficient and have stored up a little bit of money to help them through. Whenever demand comes back, there might be a bit of a backlog, and they will have to arrange their financing, but they will respond.



**Business Luncheon**  
**Wick Moorman,**  
**Norfolk Southern**  
**CEO**

We fund enormous capital investments and have to make a substantial margin overall to generate the cash to fund capital expenditures. Over the last 10 years, the railroad industry overall has been able to do that. We have been able to price effectively. The more money we make, the more money we will use on capital expenditures. We have a bright future ahead of us if Washington does not get in the way, and I don't think they will.



**Tie Disposal**  
**Jason Feagans,**  
**National Salvage**  
**& Service Corp.**

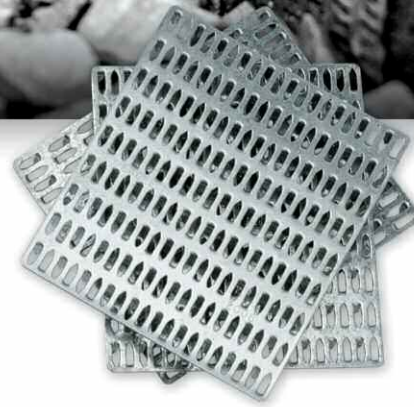
One of the challenges with alternative treatments, specifically, is that there is only one boiler facility permitted to burn ties treated with something other than creosote. And sorting is an issue with regard to identifying whether that tie has been creosote-treated or treated with something else 20 years from now. If we must sort ties one more time, in many places, we will be matching the economics of landfill disposal. New alternative treatments could make burning ties almost impossible—or certainly more expensive.



**Jeff Lloyd,**  
**Nisus Corp.**

Wood is a natural and renewable resource that can serve a primary life as a rail tie and a secondary life in other uses, including low carbon ►

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dioxide energy production. Future uses should consider cleaner and more efficient energy recapture such as SynGas and SynDiesel. Copper and boron can be extracted and reused to serve again as micro-nutrients in agriculture.



**Bob Gruber, Arch Wood Protection – A Lonza Company**

The life expectancy of ACZA hardwood ties is estimated to exceed 25

years. Reuse of ACZA-treated ties has the same opportunities as any other treated tie. The technology exists to remove metals for reuse.



**Bill Taylor, DTE Energy Services**

At DTE Stoneman LLC, we will burn borate-treated ties and copper naphthenate-treated ties to

produce power as long as we're able to get crossties into the facility. It burns

between 5,000 and 11,250 ties per day since October 2010. We are adding capacity to burn crossties at Woodland Biomass Power—2,200 per day. We will seek a permit to burn borate-treated or CuNap-treated ties. Because we own the plant, our engineers can get the permits to allow us to burn ties treated with products other than just creosote.



**Steve Smith, AquAeTer Inc.**

Each time, at the end of its lifecycle, a tie used for fuel resulted in reducing greenhouse gases and carbon monoxide by about 220 pounds

per tie. If you incinerate ties, you're emitting more carbon dioxide. So, it's the difference between contributing to the problem and being part of the solution. It's going to be necessary to have some kind of tipping fee in order to make the economics work. Crossties are more trouble and expense to burn for fuel than natural gas so, somehow, the difference has to be made up.



**Engineering James Carter, AREMA President**

Our relationship with RTA is particularly strong, and members of both organiza-

tions freely mix to promote the railroad industry. AREMA's Committee 30 focuses exclusively on ties, so you should consider becoming more involved with the committee. We are gearing up for Railway Interchange in Indianapolis Sept. 29-Oct. 2, 2013, so please make plans to attend.



**Dale Ophardt, CSXT**

Energy exploration creates opportunities for CSX—frac sand, pipe for construction, crude oil trains. In fact, there

are yards that are being reconditioned that weren't seeing a lot more activity thanks to exploration. In 2012, we have 35 miles of new construction.



**Kevin Hicks, Union Pacific**

Capital for 2013 will be very similar to 2012. Engineering spent \$1.7 billion last year on capital

replacement, 36 percent of which is on crossties and 24 percent on rail. Roughly, just on our mainline tie programs, more than 3 million crossties have been changed out.



**Brian Large, BNSF**

We have built a sustainable rail solution for all of our operations and are committed to serving this growing market. We have a

crude oil sales team, a comprehensive economic development service and a dedicated energy desk. BNSF's 2012 capital plan is approximately \$3.9 billion to maintain and improve the network, invest for future growth opportunities and drive efficiency.



**Jeff McCracken, Norfolk Southern**

NS is using its first CuNap ties. We have now also dedicated the entire state of New York, which

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is giving us fits about using creosote ties, to CuNap ties. We're getting ahead of the game, and hopefully will please a lot of people. It definitely pleases us, and I don't see why we can't expand this program more in the future. Use of CuNap ties opens up some doors that might otherwise close on us.



**Jim McLeod,  
Canadian National**

We have been involved in speed/capacity initiatives, including the Matteson project that is designed to

improve speed and fluidity through Chicagoland. Our Kirk Yard represents a \$165 million investment that will continue through 2013 so that we will be able to use it as a major hump yard. And, in the Barron Subdivision, 98,000 new ties were required to complete the upgrade.



**Wood Preservation  
Jeff Morrell, Oregon  
State University**

Oils are definitely changing. Supplies can vary

depending on feedstock. Wood treatment does not use enough oil to command a special blend; treaters will have to deal with what comes along. Oil solvents help reduce water uptake and checking. Proper oils improve preservative effectiveness. Users need to work closely with their suppliers.



**Adam Taylor,  
Tennessee Forest  
Products Center**

Ambient dip borate treatment of green ties is happening on a commercial

basis. More railroads are doing it, and more are thinking about it. Three plants are in production, with two more in the planning stages.



**Shane Kitchens,  
TASKpro**

Why add supplemental treatments? To arrest fungal decay, help arrest insect infestation, help

arrest corrosion of spikes and spike holes, and help minimize the movement of inva-

sive species. Products are available to utilize for supplemental treatments. If you keep the moisture out—keep the spores away—your wood will last for generations.



**Mark Manning,  
U.S. Borax**

Work continues on the development and proper evaluation of boron-based wood preservation systems

for exterior applications. You can combine borates in formulations with other active ingredients to reduce water absorption.

Does wood have to be dried before it can be treated with a fixed-borne product like zinc plus borate? It doesn't have to be, but it will have better results. Certainly, in the case of wood composites, it has to be dry.



**Dr. Lou Honary,  
University of  
Northern Iowa**

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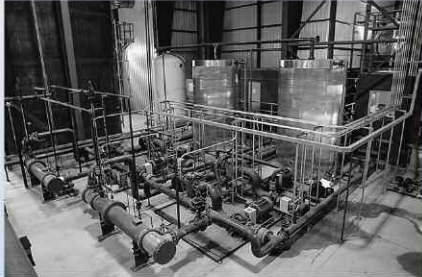
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volume but exceedingly fast curing in a thin film. It outperforms linseed and other drying oils but with potentially much lower cost due to the great infrastructure of the soybean producing industry. The oil has shown that it penetrates and cures in wood surfaces, forming an effective water barrier. The oil has been mixed with some of the common preservatives and acts as an effective carrier and sealant.



**Rob Hobson, SH Coatings**  
Super hydrophobic (SHC) technology is repelling water. ORNL SHC is an extreme water repelling

technology developed for waterproofing, anti-icing and corrosion prevention. Possible applications in the railroad industry are anti-icing for railroad switches, anti corrosion and repelling water off railroad ties. It's also a natural killer of insects. It breaks their shell and the insect dries up and dies. It also has a possibility of sealing the chemicals into your ties. It's very inexpensive to use as compared to polymers and can be used in widespread applications.



**Other Research**  
**Greg Grissom, Georgetown Rail Equipment**  
"Aurora" is an automated railroad track inspection

system invented in 2003 by Georgetown Rail Equipment. It conducts a 3D scan of the entire track at speeds of up to 40 mph. Key automated wood tie grading variables show warpage; tie surface standard deviation; roughness; orientations of checks and splits based on type, size and proximity to the tie plate; entropy; tie length; width and skew angle; plate cut; differential plate cut; and spike core.



**Mark Huston, BNSF**  
Aurora did 85.5 percent on a tie-for-tie match with an actual inspector, which is better than I did. Tie inspectors will con-

tinue to play a key role in the implementation of automated inspection technologies. They have to get out there and audit these locations by walking track and verifying the validity of the data. Inspectors need to be empowered to change marks if needed. We need to focus on getting the right ties marked and replaced as needed.



**Purchasing**  
**Chad Rolstad, BNSF**  
We've made a commitment to the wood tie. We're no longer experi-

menting with composite products. We're trying to do everything we can to be a good partner to the hardwood tie supply chain. There are no firm commitments or contracts, but that does not mean that's the way it always has to be. I would encourage our partners to think about ways we can provide guarantees to ensure long-term viability of raw material producers.



**Gary Hunter, Union Pacific**  
Black tie shipments for 2012 are 3.5 million. Black tie installations are 3.5 million. Currently, on the UP system, we are at about 88 percent wood. In 2012, we'll install 3.8 million wood ties; in 2013, 3.6 million; and in 2014, 3.6 million.



**Bruce Emberly, Canadian National**  
Approximately 2 million crossties and 55,000 switch ties are required for CN's basic capital programs, special projects, siding extensions and yard bypasses in 2013. With the exception of 90,000 concrete replacement ties, cross and switch ties purchased are hardwood with a small number of softwood ties.



**Lisa Pleasants, CSXT**  
CSX is open to new, cost-effective treatment methods. We are utilizing many treatment methods—40 ▶

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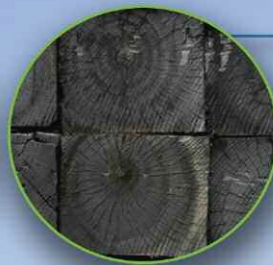
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percent creosote only, 50 percent or more borate/creosote, and less than 9 percent borate/copper naphthenate. Our 2013 program includes 3.4 million plus wood ties. Our program will pretty much look the same as it did for this year.



**John Zillioux,  
Norfolk Southern**


NS remains a solid wood franchise. We are very pleased with the mix of suppliers we have and the approaches they are taking in developing new technologies. NS has kept a presence in the green tie market this year by making direct purchases—1.3 million, which represents 49 percent of our tie purchases. We have bought 1.36 million treated ties, representing 51 percent.



**Rob Churma,  
Canadian Pacific**

In 2012, crosstie installations were 775,000 hardwood and 90,000 softwood. There are still no borates in our system. For 2013, we are projecting a million total wood ties. Softwood is now down to 10 percent, and we use no concrete ties. ■

*Thanks for attending this year's conference! We look forward to seeing you in Incline Village, Nev., next year!*



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