

Volume 73 Number 1

EST **1**1950

January 2023

SPARKS AND CINDERS

Our purpose as members of Wisconsin Chapter—National Railway Historical Society is to gather, preserve and disseminate information, both historic and current, pertaining to railroading in Wisconsin and the Upper Midwest.

Preserving Wisconsin Railroad History for 73 Years

Visit the Chapter Webpage www.nrhswis.org



On August 9, 2002 METRA #188 is leading a westbound commuter train on BNSF tracks at Riverside, IL. Photo by Tom Hoffmann

In This Issue

- ♦ From the Prexy
- ♦ Do You Know?
- ♦ A Local Local

Wisconsin Chapter Meeting Schedule

Upcoming chapter events

Friday, January 6, 2023 - Tom Hoffmann's 20-year look back

Friday January 13, 2023 - Second Friday Online Gabfest

Friday, February 3, 2023- From the Lake States Railway Historical Association collection (and chapter annual business meeting)

Friday February 10 - Second Friday Online Gabfest Tuesday, February 21, 2023 - Online Slide Show Friday March 3, 2023 - To Be Announced

Monthly meetings are held in the lower level of the North Shore Congregational Church at 7330 N Santa Monica Dr. in Fox Point. The church is handicap accessible. For more up to date information on meetings and speakers, and also any weather cancellations, check the chapter's webpage at www.nrhswis.org.

Doors open by 7:00 pm, so arrive early to socialize. Meetings start at 7:30pm sharp. Please bring a friend! Our meetings are live-streamed on the Zoom platform. Connection details are shared with chapter members and other interested persons via email the day of the meeting, or before. To ensure you are made aware of this info, we must have a working email address on file - send yours to president@nrhswis.org.

If you have a program idea please contact Program Chair Dave Nelson at engine1385@aol.com

The Big Picture is your page!

We've changed the format of the Sparks & Cinders back page, giving us room to run a large photo. Member submissions are solicited. Please send one or two of your outstanding pictures to Keith Schmidt, editor@nrhswis.org.

Sparks & Cinders is published by and for the members of the Wisconsin Chapter, Inc., National Railway Historical Society monthly except for July and August. The Chapter meets at the North Shore Congregational Church, 7330 N Santa Monica Blvd, Fox Point, Wisconsin, on the first Friday of each month, except June, July and August, at 7:30 p.m. The Wisconsin Chapter is a not-for-profit corporation, affiliated with the National Railway Historical Society and the Wisconsin Historical Society, organized to preserve the history of railroading in Wisconsin and the surrounding area. Additional information is available on the chapter's website, www.nrhswis.org.

Membership in the Chapter is open to anyone having an interest in any aspect of railroading who is also a member of the NRHS. Paying \$20 annually to the Chapter will entitle you receive Sparks & Cinders. Paying the National dues of \$50 to the NRHS will entitle you to membership and subscriptions to the NRHS Bulletin and NRHS News. Full NRHS membership is required to participate in chapter business discussions and to vote in annual chapter elections. All address changes should be sent to Mike Yuhas president@nrhswis.org (or via USPS at PO Box 070758 Milwaukee, WI 53207).

Wisconsin Chapter officers are: Mike Yuhas, President (president@nrhswis.org); Keith Schmidt, Vice-President; Tom Marcussen, Secretary; Tara Grudzielanek, Treasurer. Directors: Dan Grudzielanek, Ralph McClure, Andrew Roach, Cathy Wegner and Neal Wegner.

Contributions to Sparks & Cinders should be sent to Editor Keith Schmidt at editor@nrhswis.org (or USPS at PO Box 070758 Milwaukee, WI 53207) by the 15th of the month to be considered for the following month's publication.

All original material published in Sparks & Cinders may be reprinted in other railfan publications provided credit is given to "Sparks & Cinders, Wisconsin Chapter, NRHS." If an author is indicated for the item or article, credit must also be given to the author. The views, opinions, and comments published in Sparks & Cinders are those of the authors and do not reflect the policies of the Wisconsin Chapter or the National Railway Historical Society. Copyright ©2022, Wisconsin Chapter, Inc., NRHS.

Meeting Summary November 4, 2022

Introductions

Wisconsin Chapter President Mike Yuhas was working from our in-person meeting site at the North Shore Congregational Church in Fox Point tonight. He greeted everyone at 7:30 pm. He started recording on Zoom at 7:31 pm. He started the meeting at 7:32 pm. There were then 31 devices connected to the Zoom virtual meeting room, and 24 people in the physical meeting room in the church basement.

Announcements

We will re-start our monthly informal on-line Railroad Gab Fests—held on the second Friday of each month. The first will start at 7:30 pm on Friday, December 9, 2022. President Yuhas will send an e-mail with more details to all members. Our next regular bi-monthly on-line slide show will start at 7:30 pm on Tuesday, December 20, 2022. Our five presenters will be Ronald Burkhard, Elrond Lawrence, Andrew Wehrle, Edward Koehler, and Michael Yuhas. We can also expect an e-mail with more details on that.

Our next regular Chapter meeting is on Friday, January 6, 2023. It will be a hybrid meeting, both in-person at the North Shore Congregational Church in Fox Point, and online via Zoom. Tom Hoffmann will present "Twenty Years Ago—2003." The annual business meeting and election of Chapter Officers is now moved to February. That will also be a hybrid meeting. We will hold it on Friday, February 3, 2023. Paul Swanson will present selected photographs from the collection of the Lake States Railway Historical Association in Baraboo, Wisconsin. He plans to prominently feature photos taken by our late Chapter member Harry Evans.

Vice President Keith Schmidt was accepting in-person dues payments for both renewals and new memberships at the Fox Point site tonight. Annual dues remain at \$20.00 per person. If you have not yet renewed your membership into 2023, now is the time to do so. There are three ways to renew (or join). The first is cash payment while attending a Chapter meeting in person. The second is on-line payment via our website

Continued from Page 2

nrhswis.org. It includes a \$1.00 fee for PayPal processing costs. The third is to send a check to Wisconsin Chapter NRHS, P. O. Box 070758, Milwaukee, WI 53207. Dues payments support Chapter activities and publications. Your support is much appreciated.

NRHS National is also accepting online renewal payments for 2023. Those who do not renew online will receive a traditional paper invoice via US Mail.

Presentation

Long-time (over 50 years) railroad photographer and long-time Wisconsin Chapter member Al Baker took over at 7:37 pm. There were then 35 devices connected to Zoom. Mr. Baker gave us three presentations.

The first was a collection of modern-day photos (all taken since his 2016 retirement and return from Connecticut) of the Canadian Pacific (former Milwaukee Road) main line. They appeared in geographical order, going west bound from Morgan Street (1000 West—just west of Chicago Union Station), through the Milwaukee area, up to River Junction, Minnesota, on the west side of the Mississippi River across from La Crosse, Wisconsin.

The second presentation was a collection of drone shots taken since Mr. Baker first got started with drones in late June 2022. He expressed his appreciation to fellow member Brian Hechel for his guidance and technical support.

The third presentation was a collection of about 120 scanned slides from Mr. Baker's May 13-16, 1982 trip to Green Bay for the Chicago & North Western Historical Society Convention, and launch of C&NW's Prosperity Specials with 4-6-0 #1385. Zoom attendance peaked at 42 devices during the presentation. We had 24 attend in-person in the church basement. Two devices were at the church. Total peak attendance was therefore 64.

Closing Announcements

The presentations ended at 9:08 pm. President Mike Yuhas repeated the above announcements. He expressed his appreciation to members Dave Nelson for arranging our excellent programs, and Sal Ciofani for running the Zoom part of the meeting. Recording stopped at 9:13 pm. There was no online discussion group / chat room. The on-line Zoom meeting room closed at 9:14 pm.

Respectfully Submitted Thomas W. Marcussen Wisconsin Chapter Secretary

The Great Tri-State Rail Fair 2023

Date: Saturday January 28, 2023

Time: 9:00am to 3:00pm

Where: La Crosse Center South Hall

Address: 300 Harborview Dr

La Crosse, WI 54601

For more info contact Don Anthony 608-781-9383

danthony052@centurytel.net

Admission: Adults \$5.00 Children under 12 Free

Parking: Free

Website for information 4000 foundation.org

The Great Tri-State Rail Sale has vendors from six states offering 280 table of railroad merchandise. Patrons will have the opportunity to buy, sell and trade model trains, books, magazines, railroad art and hobby supplies.

Proceeds support the La Crosse rail display

From the Prexy

It was a hit: Al Baker's three-part presentation at our December meeting generated a lot of compliments. If you missed it, or want to watch it again, check the chapter's YouTube channel, youtube.com/@NRHSWis.

We resumed our online-only Railroad Gabfest series on December 9. These informal events take place on the second Friday, and bring together a bunch of the usual suspects as well as first-timers. Case in point: member Tom Sponsler, from the San Francisco area, checked in for the first time in December, and told us a little bit about himself. He mentioned he'd spent some time in Robinson, Illinois. A couple of the others had heard of Robinson or visited there, and the next thing you know, we were looking at maps and aerial photos from Robinson east along the Indiana Railroad to Terre Haute. It's fair to say that all of us learned something that evening. And that's the beauty of the Gabfest: what starts out as an innocuous comment can send us down a rabbit hole of railroad history. Ward Wells will host our next Gabfest on January 13. Details will be sent to members by email a few days before.

At press time, over half of chapter members have renewed their memberships for 2023. Thank you! If you haven't yet renewed, you can do so easily at www.nrhswis.org, or by handing twenty bucks to our treasurer at the next meeting, or by sending a check for \$20 to Wisconsin NRHS, PO Box 070758, Milwaukee, WI 53207. We will not be sending printed renewal notices this year. As info, your chapter membership expiration date is printed on this newsletter's address label.

Chapter elections will be held at our annual business meeting February 3. If you are interested in serving on the chapter's board of directors, or as an officer, drop me an email at president@nrhswis.org and you'll be placed on the ballot. Remember - you must be a member of the national NRHS and this chapter in order to hold a chapter board or officer position. Several incumbents are running for re-election, with the notable exception of your president. This means we still have an opening for a capable person to serve as prexy. Please considerhelping move the chapter forward by your candidacy. Contact me to discuss: president@nrhswis.org.

Thanks again for your support of the Wisconsin Chapter, NRHS!



Al Baker presents his three-part program at our December meeting. At right is Sal Ciofani, our Zoom operator and overall techie. It takes a village to run our meetings. Special thanks to our monthly presenters, and to Dave Nelson, for finding talent and helping with setup and teardown; Sal Ciofani, for keeping eyes and ears on our Zoom feed during meetings; and to Keith Schmidt for setup and teardown assistance. Photo by Mike Yuhas

Dues are due

To maintain your membership in the Wisconsin Chapter NRHS, and to support our programs and to continue receiving Sparks & Dinders, renew for 2023 online at www.nrhswis.org or send \$20 to Wisconsin Chapter NRHS, PO Box 070758, Milwaukee WI 53207. Check the mailing label of this issue of Sparks & Cinders for your membership status.



In case of foul weather

If severe weather threatens on the day of our meeting, be sure to check the chapter's website, www.nrhswis.org, for up-to-date information on poten-

www.nrhswis.org, for up-to-date information on potential meeting cancelations. In many cases, a canceled inperson meeting will still go on, remotely, via Zoom. Official information will be posted by 4pm on the day of the meeting, or earlier if it looks like we're in for a big wallop

NRHS RailCamp

Submitted by Betty Gerstung, NRHS RailCamp Coordinator

RailCamp 2023 is now up and running. RailCamp East operates in Newark, Delaware, and RailCamp Northwest is in Tacoma, Washington. Information and applications will be available January 1, 2023 on the NRHS web page, www.nrhs.com.

This is a very unique opportunity for young people to get hands-on, up-close and behind the scenes experiences with many aspects of railroading. From looking back at the part railroading has played in the development of our country to what it takes to work not only for a tourist line but a Class 1 operating railroad, every day is an adventure. A week of sharing these experiences with teens having the same interests turns into "the best week of my life!"

Financial assistance can help with the tuition. No applicant has ever been turned away due to his/her ability to pay. While Wilmington and Tacoma may seem like far off places, the last camp had kids from 21 different states.

Look for an illustrated article in the December issue of the NRHS News.

Editor's note: The Wisconsin Chapter would like to sponsor a camper. If you know a Wisconsin youth who is interested in railroading, and who wants to get their hands dirty for a week while learning "on the property," please contact president Mike Yuhas at president@nrhswis.org.

20 Years Ago - Tom Hoffmann

Join us for what is the longest running presentation series for the Wisconsin Chapter. Tom Hoffmann longtime chapter treasurer will dig into his slide collection to show slides from 2002. The slides are being digitized by Dave Nelson so that they can be better shared with the virtual audience along with the in person crowd. So join us for the first meeting of 2023 on Friday January 6, 2023 at 7:30pm. See more photos from Tom like the one below.



Central Michigan in Brent Creek MI April 6 2002

Notice of Annual Election

The Wisconsin Chapter, NRHS, Inc., will hold elections for board and officers at its annual meeting, Friday, February 3, 2023.

Although nominations may be made from the floor, persons seeking office are encouraged to let their intentions be known by contacting president Mike Yuhas at president@nrhswis.org, or by phone at 414-698-6625. Only members of both NRHS and the Wisconsin Chapter are eligible to run.

Mad City Model Railroad Show and Sale

Alliant Energy Center Madison WI Saturday February 18th 9am to 5pm Sunday February 19th 9am to 4pm

Tickets
Adults \$14.00
Children 5-15 \$6.00
Kids under 5 Free
Two Day Pass \$18.00
Senior and Veteran Discount tickets available at the door

See operating model train layouts. Also purchase model trains and railroadiana.

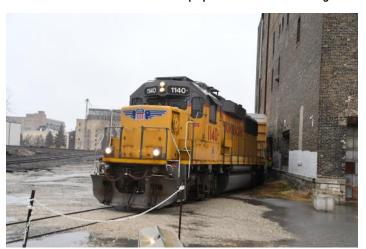
More information and discount ticket offers are available at www.nmra-scwd.org

A Local Local





On a rainy Wednesday December 14, 2022 UP #1140 is working some tight confines in the 3rd Ward area of Milwaukee. The #1140 is dropping off a chemical tank car at a plant near Water and Bruce Streets. The warehouse that is on the left is a former Hansen Storage building. It saw rail service for many years when it was storing paper rolls for the Milwaukee Journal and Sentinel newspapers. It is still storage today but no rail service.





After dropping off the tank car UP #1140 heads off to a warehouse nearby on Water Street. This warehouse gets a 60' Hi-Cube box car quite often. Once coupled to the car at the building the locomotive and cars head off into the woods and the end of track. The UP has done quite of brush trimming in this area lately. There is room for two locomotives and two cars on the track and then it just ends in the brush. Photos by Keith Schmidt



After getting out of the woods UP #1140 backs up the tracks back to the tracks that will take it back to its small train for that day. This area was once the CNW Marsh Yards. Some of these tracks would have lead to the CNW depot on Milwaukee's lake front. So these tracks would have seen the 400's. Now it's a train three days a week.

Do You Know?

By Dave Nelson

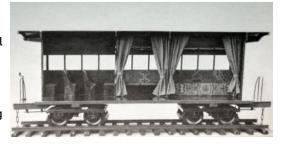
As soon as American railroads had routes long enough to involve overnight trains the matter of trying to sleep on board arose. An amusing drawing from the 1850s gives a sense of how



chaotic and uncomfortable sleeping in a coach seat could be for all concerned. The Cumberland Valley Railroad (later part of the Pennsylvania Railroad) built the first sleeping car in 1838; it had hard berths or bunks stacked three high with the lowest converting into a seat; there were separate sections for men and women. Although uncomfortable, sleeping on board a canal or packet boat was just as uncomfortable, so the experienced traveler would have

been grateful for any semblance of a prone sleeping posture. By the 1840s the Baltimore & Ohio had a woman's sleeping car, with

hard beds stacked three high on both sides of a central aisle -- again, hardly a picture of comfort but it was no worse than the sleeping quarters on board a ship or



canal boat. In Europe, the rich and royalty had sleeping and dining options on trains with luxurious, even opulent, accommoda-



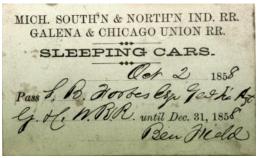
tions. America was more democratic: all travelers suffered equally.

But America was also seeing a veritable avalanche of inventions for mechanical furniture in the early 19th century (even Thomas Jefferson experimented with mechanical furniture); barbers, dentists and surgeons all had a need for chairs that could recline while lifting a footrest, and patent after

patent, some useful, some ridiculous, addressed those needs. The cumulative ideas resulted in chairs that could mechanically convert to a couch, and fold-up beds which could be pulled down from a wall or pulled out from a bureau or chest of drawers. By the 1850s the railroad applications for these mechanical furniture patents became obvious, an early example being the familiar fixed railroad coach bench whose seat-back could be moved from side to side to match the direction of travel.

But it was one man -- no, not George Pullman, but Theodore T. Woodruff (1811-1892) -- who perceived that if the goal was to match the number of seats with the number of beds, then the way to accomplish this was to combine reclining seats with hinged, fold-down beds: upper and lower berths. Woodruff was also the first to organize a sleeping car company; his first customer was the New York Central and in 1858 the Illinois Central, the Michigan

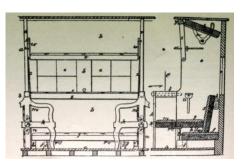
Southern & Northern Indiana (later part of the New York Central) and the Galena & Chicago Union, a precursor to the C&NW joined in. In my collection of railroad passes belonging to S.B. Forbes,



an Illinois Central station agent from the 1850s to the 1870s who was married to a relative of mine, is an 1858 pass for "sleeping cars" that must have been Woodruff's. If Woodruff's 1856 patent

drawings look just like the classic Pullman car it's because George M. Pullman (1831-1897) infringed on Woodruff's patents,

refused to pay Woodruff's patent litigation judgements, and used his firm's superior size and organization to overwhelm Woodruff's company, which he then acquired at a bargain rate. Pullman himself did invent and had patents to his name, but the essence of what we



think of as the traditional Pullman car was Woodruff's creation.

To give Pullman his due, he devoted much more attention to the entire notion of comfort and consistency than Woodruff ever could or did, with the eventual consequence that Pullman cars began to demonstrate European levels of true luxury, accompanied by European senses of class-based differences in accommodations: actual bedrooms with actual, if somewhat compact,



furniture for those with the money to afford it, even as the interest in mechanical furniture patents began to decrease in general. Ironically, the Pullman Company's introduction of the in-

expensive "roomette" in 1937 revisited any number of very old patent furniture ideas. As one commentator expressed it, the Pullman roomette was not a room at all, but an arrangement by which the passenger essentially traveled and slept inside the furniture.

Sources for this article include S. Giedion, "Mechanization Takes Command" (Oxford Univ. Press 1948); R.S. Henry "Trains" (Bobbs -Merrill 1957); A.D. Dubin "Some Classic Trains" (Kalmbach 1964); and A.D. Dubin "More Classic Trains" (Kalmbach 1974).

From the Archives

January 1958 - 65 Years Ago

Milwaukee & Suburban Transport Company streetcar and work equipment as follows: Kinnickinnic Car Station — 37 cars and 3 sweepers; National Car Station — 19 cars (storage); Cars scrapped during winter of 1957 — 22; Cars stored at Cold Spring Shops pending scrapping — 7; Fond du Lac Car Station — Cars 801, 802, 803 specially equipped with 2 poles each (used for training); Lakeside Power Plant — 1 car, 1 locomotive, 1 crane, 5 baggage trailers; Work equipment at Cold Spring Shops — 2 line cars, 6 sweepers, 1 snow plow, 3 double-ended work cars, 6 flat cars, 3 dump cars. (info from Daniel J. Platz).

January 1963 - 60 Years Ago

The last page of Sparks & Cinders included a ticket order form for those who wished to ride with other Wisconsin Chapter members on the last day of North Shore Line operation, January 20-21.... S&C editor Carl Solheim postulated Gumperson's Law of Reverse Probability. This natural law states that dropped toast always lands butter side down. As applied to railfans, it produces clear weather for weeks then rain, snow, sleet, hail, and/or fog when you are on an important photo excursion. It causes a previously well-behaved slide projector to jam only when showing slides publicly. It causes your pet model locomotive to derail only when visitors watch it. There are many other applications of Gumperson's Law, which, incidentally, has been found to have more scientific validity than the Gremlin Theory. January 1968 - 55 Years Ago

The last run of the Broadway Limited as an all-Pullman train occurred on December 12....The last of the Marmon-Herrington trackless trolleys have been shipped to Mexico City by the Transport Company. They will be used mainly for replacement parts for the extensive Marmon fleet in Mexico City.

January 1973 - 50 Years Ago

At least two of the Milwaukee Road Super Domes returned to service for the first time since Amtrak took over. They began running in trains 9 and 10 on December 20....Amtrak announced that Turbo Trains would be placed on the Chicago- Milwaukee and Chicago-St. Louis runs this coming summer.... The WERHS operation at East Troy recreated the Schuster's Christmas trolley parade during the Christmas season. Reports indicate that it was a success.

January 1978 - 45 Years Ago

On Monday, December 19, the Chicago, Milwaukee, St. Paul & Pacific Railroad filed a petition for voluntary bankruptcy in Federal Court in Chicago. The Chicago Milwaukee Corp., the railroad's parent holding company did not file and its operations in land, timber, food service, and highway paving are not affected.

January 1983 - 40 Years Ago

A reprint of an article from the Chicago Tribune details the multitude of BN operations, administrative as well as operational, that have been moved out of Chicago....The first

pages of a reprint of a 1944 history of the Milwaukee Road,

January 1983 - 35 Years Ago

A WC locomotive roster dated October 11, 1987 was reprinted. Several articles about the railroad tunnels in western Wisconsin were included in this issue of Sparks & Cinders

January 1993 - 30 Years Ago

The ICC has given final approval for the GB&W, FRVR, and AHW to be absorbed by the WC. With this action, the WC has begun the process of removing the tracks from Division St. in Oshkosh. The relocation to the FRVR line will be complete by 1995....CP power is showing up more frequently on Soo Line trains.

January 1998 - 25 Years Ago

Thomas M. Downs, Chairman, President, and CEO of Amtrak resigned on December 10, 1997. He was replaced by George Warrington....Wisconsin Central Transportation Corp. stock price dropped by almost 20% on December 16 after WC announced that its fourth quarter results would fall short of analyst's expectations....UP has begun to phase in Chicago- Texas intermodal service after suspending it on November 1 to help relieve traffic congestion in the corridor as part of the Service Recovery-Plan....Amtrak's Empire Builder now features an on-board "Empire Builder Magazine" tailored to the specifics of its route and customers.

January 2003 - 20 Years Ago

The era of SD45s on CN's Wisconsin Central Division is winding down. A majority are working off horsepower hours on other railroads and will probably be stored when they return.

A group of 40 SD40-3s is slated to replace them. These are ex-CN SD40s rebuilt by Alstom and leased back to CN.... A Southeastern Wisconsin Regional Planning Commission study committee has recommended that heavy rail commuter service be established between Kenosha and Milwaukee to connect with Metra at Kenosha.

January 2008 - 15 Years Ago

Thursday December 13, 2007 marked 100 years of service to East Troy, Wisconsin, by electric traction. John I. Beggs, President of Milwaukee Electric Railway and Light Company sent the very first electric train from Milwaukee to the resort city of East Troy. East Troy Mayor, Thomas O'Connor and F. Simmons drove a silver spike to finish the link. One hundred years later, another silver spike was driven in commemoration of the event. The observance was presided over by East Troy Electric Railroad's Andy Witkowski, Chris Lanning, Norman Carlson, and, of course, local politicians Early on the frigid morning of January 21, 1963 the Chicago North Shore & Milwaukee Railway ceased passenger operations. January 21, 2013 will mark 50 years since service ended on this fabled interurban

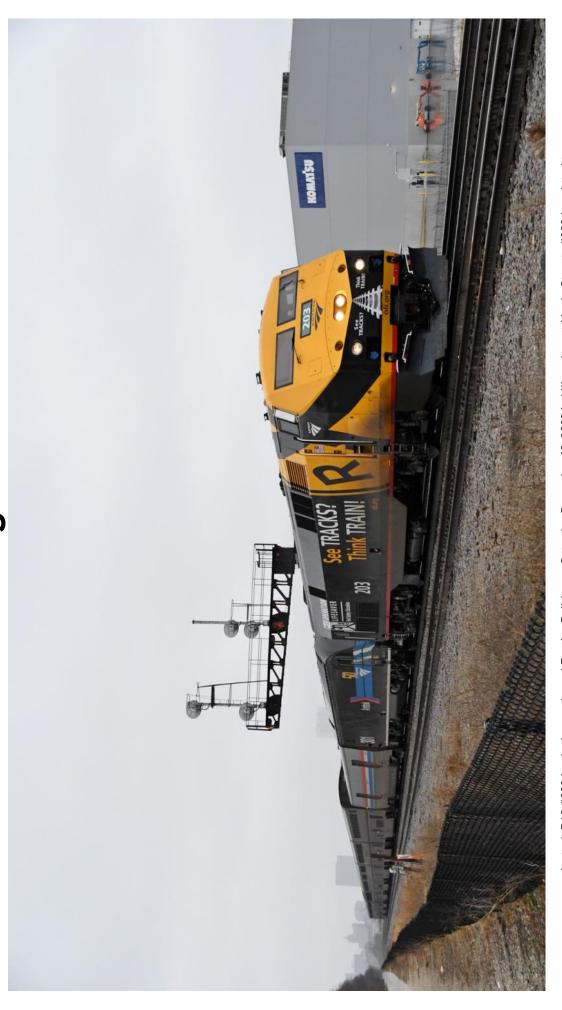
January 2013 - 10 Years Ago

On November 30 2012 the first Oregon Talgo train set departed Milwaukee's Talgo plant enroute to Pueblo, CO for testing. The train was handled by Wisconsin and Southern for the first part of the trip. On November 10 three members of the Chapter Jeff Marker, Bob McCleod and Gary Braun traveled to Chicago and Aurora via Metra. The late departing Metra train arrived in Aurora with enough time to take in the renovated roundhouse and some other attractions in the area.

January 2018 — 5 Years Ago

Tom Hoffmann reported that the frac sand business is going strong on both the UP (former CNW) and Canadian National (former WC). The traffic levels are straining the capacity of the UP Adams Subdivison. Neal Wegner reported an increase in loaded coal trains moving west of the Canadian Pacific (former Milwaukee Road) main line in Brookfield. Bob Gallegos said those trains were going to Wisconsin Power & Light's Columbia Power Plant, south of Portage, on a temporary re-routing. The CP is doing track work on their normal route, on the west side of the Mississippi River north of Clinton, Iowa to La Crescent, Minnesota. The Lakefront Brewery, in the former Commerce Street Power House, is showing a display of Wallace W. Abbey photos of the Milwaukee Road Beer Line branch. The grand opening was last night.

The Big Picture



Amtrak P42 #203 leads the eastbound Empire Builder on Saturday December 10, 2022 in Milwaukee at Maple Street. #203 is painted to recognize the 50th anniversary of Operation Lifesaver. The rail safety program stresses grade crossing and railroad safety. Like this rolling billboard says "See Tracks Think Trains" Photo by Keith Schmidt