BALDWIN'S AMAZING LOGGING TANK ENGINES p. 10

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Pennsylvania's Cumberland Mine Railroad moves a loaded coal train from mine to dock. This amazing insular railroad is close to Pittsburgh, Pa., but is relatively unknown. William Beecher Jr.

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From the Editor

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Coal has been an integral part of railroading since its beginnings almost 200 years ago. It has been the lifeblood of American railroads. But it feels more endangered than ever. On business trips back east this year, CSX and Norfolk Southern intermodal trains outnumbered coal by a wide margin. But coal isn't going away any time soon. There will be demand for rail-hauled coal for years. With this issue, we kick off a series of stories around the "Coal Isn't Dead" theme. We'll highlight insular railroads, short lines, branches, and main lines where coal is still king. The story of American railroading and coal traffic is far from over. From our series, I think you'll come to understand that coal is still a part of everyday railroading.

THE TRAINS INTERVIEW

Leslie Richards

SEPTA general manager faces steering agency through COVID-19

▲ **SEPTA Silverliner V cars lead a train past the small station at Tacony, Pa., heading for Trenton, N.J., during the morning rush in June 2015.** Two photos, Mitch Goldman

LESLIE RICHARDS, former secretary of the Pennsylvania Department of Transportation, became general manager of the Southeastern Pennsylvania Transportation Authority on Jan. 6, 2020, two months before COVID-19 upended public transportation. TRAINS spoke with Richards about her first months on the job and SEPTA's plan to recover from the current crisis.

Q What were your first few months like?

A I thought I would be working on ways to increase ridership. Never did I think that at any point I would be asking people not to ride our system or be making large decisions right away on how to decrease our system. We've had over 300 of our employees test positive. So not only did we have to adjust on what's going around, but also the number of healthy and available employees we had each day was changing.

Q How is ridership now?

A It hit largest on Regional Rail where at times we were down 98%. We're seeing it slowly go up. Our [transit] ridership right now is, on average, around 35% of where it was. Regional Rail is closer to 10%.

Q How has that impacted your finances?

A We're losing a million dollars a day. We are being hit for the first time in SEPTA's history with funding challenges from the operational side as well as the capital side at the same time. Fifty percent of our funding comes from the state. We have a very difficult situation in that our state funding legislation is about to sunset next fiscal year. With the pandemic, the Commonwealth right now is falling short in the billions.

Q What are your plans to address the shortfall?

A We're in the process right now of identifying $250 million worth of capital projects that will not be funded moving forward. We may have to suspend lines. We may have to truncate lines. Our senior staff, including myself, we took a pay cut. We ended up deciding that no other furloughs or pay cuts were needed. They are still on the table, but we have not made those decisions just yet. We did make other adjustments that did allow us to cut costs.

Leslie Richards

Q How difficult will it be to make major operational changes?

A It's extremely challenging. Normally when you change operations, it takes months in the making, and it's a very coordinated effort with all of our unions as well. So many things are counterintuitive to how we

have typically operated. Making quick operating decisions, that's also a flexibility and a nimbleness that many of our staff have not faced before. This pandemic has demanded it of all of us, things have changed so quickly.

Q The poverty rate in Philadelphia is 25%. Those populations rely most on transit. How will SEPTA protect service for those communities?

A We have seen through this pandemic that transit is an essential service. These are the people who are stocking our grocery shelves, who are keeping our hospital rooms clean, who are feeding those who are working at our medical institutions. And so we're looking at how we can better partner with our communities, with our advocacy groups, with our neighborhood groups. I sit on a task force that the mayor has convened with all of the city departments and agencies.

Q What is your No. 1 priority right now?

A To keep everybody safe and healthy. We lost seven of our employees to COVID-19 complications; never ever want to live through anything like that again. We've seen how important our customers are to allowing all of us and our communities to function at this time. We're going to be in this for a very long time, and we are going to be recovering from this for a very long time while we all figure it out. — *Dan Zukowski*

A SEPTA train arrives at Croydon, Pa., during the afternoon rush as another train heads north.

Metra, UP fight spawns another court case

Commuter agency sues railroad over fare collection; UP says it's putting safety first

THE ALREADY ROCKY RELATIONSHIP BETWEEN Union Pacific and Chicago commuter railroad Metra has become even more contentious — and litigious.

Metra sued the freight railroad in a Cook County, Ill., court in October, saying its "arbitrary and capricious" refusal to deploy conductors for fare collection and other activities on UP-operated commuter trains on three Metra routes is damaging the commuter agency's income and reputation.

While Metra stopped collecting fares on all routes early in the COVID-19 pandemic, all lines except the three operated by UP resumed the activity in June. Union Pacific did nothing to collect fares until Oct. 5, when it began checking tickets for inbound and outbound passengers as they passed employees in plexiglass enclosures at the downtown Ogilvie Transportation Center. Metra said this cost it millions of dollars in ticket revenue, and that the practice at Ogilvie was "unsafe, unfeasible, and ineffective and was not a substitute for abiding by the terms" of the contract between the two entities. It further said UP's refusal to have crew members move through trains to check on tickets and passengers created safety issues.

Metra CEO and Executive Director Jim Derwinski said the railroad had "refused to address these issues in any meaningful way and have left us no recourse but to seek relief through the courts."

Union Pacific responded by saying its actions reflected safety concerns, as it is "unwilling to put fare collection ahead of employee and commuter health and safety during a global pandemic, and we are prepared to vigorously defend ourselves in court." It also said the ticket-checking system at the downtown station was "working well," and that it had "repeatedly asked Metra to increase its police presence" on trains to ensure fare enforcement and address security issues such as passengers not wearing face masks to address COVID-19 concerns.

An inbound Metra train on the Union Pacific West line overtakes a freight at the La Fox, Ill., station in May 2019. Metra and UP are now engaged in two court fights. TRAINS: David Lassen

The suit comes at a time when Metra and Union Pacific are already in court over the future of operations on the UP West, Northwest, and North lines. The federal suit filed by Union Pacific in December 2019 seeks to determine, among other issues, its obligation to continue to operate commuter trains in the absence of a contract. Union Pacific has said it wants to turn over the commuter operations, as well as the personnel needed for them, to Metra, while continuing to control dispatching along with the routes themselves.

In its response to the latest suit, UP said it had "worked diligently with Metra over the last 15 months to find an agreeable solution for a seamless services transfer upon expiration of the contract." Metra's view is less positive: in a filing when it asked the U.S. Surface Transportation Board to intervene in the dispute — a request the STB subsequently deferred while the federal court case plays out — it said UP was asking Metra to pay "more dollars in absolute terms even while UP performs fewer services." — *David Lassen*

Boyd, former Amtrak, IC president, dies

First U.S. Secretary of Transportation hailed for safety contributions

ALAN BOYD, FORMER PRESIDENT of the Illinois Central Railroad and Amtrak who was the first U.S. Secretary of Transportation, died Oct. 18, 2020, at age 98.


Alan Boyd

Current Amtrak President and CEO Bill Flynn hailed Boyd's importance to Amtrak and passenger rail, saying that at the DOT and Amtrak, "Alan Boyd championed safety, the development of an integrated, multi-modal transportation system, and consistent federal funding for intercity passenger rail service to realize its full potential. By his emphasis on ensuring employees gained the training they needed and standards were adjusted to new business demands, Mr. Boyd left us after four years in a much stronger position than when he arrived."

Boyd was instrumental in creation of the cabinet-level Department of Transportation and was its first secretary under Lyndon Johnson, confirmed by the Senate without opposition. He served in that role from 1967 to 1969, then became IC president, holding that position until 1972.

Boyd, Amtrak's third president, arrived at a difficult time, as funding was curtailed under the Carter Administration, but brought railroad experience and institutional knowledge. During his 1978-82 tenure as president, Amtrak received its first Superliner cars, ordered 150 Amfleet II cars, began operating the *Crescent* as Southern Railway exited the passenger business, and completed its conversion to head-end power for all equipment.

He also had significant involvement with the National Trust for Historic Preservation, serving as chairman of the private organization dedicated to saving historic sites. The organization at one time offered a paid internship, and then a fellowship, named in his honor.

Boyd was born in Jacksonville, Fla., in 1922. He served as a C-47 pilot in World War II, and was chairman of the Civil Aeronautics Board. He died at a Seattle retirement home. — *David Lassen*

NEWS BRIEFS

UP's Vena to step down

Jim Vena, whose arrival at **UNION PACIFIC** to oversee the railroad's version of Precision Scheduled Railroading triggered a $9 billion stock bounce, announced he would step down as chief operating officer at the end of 2020, becoming a senior advisor. Vena, 62, came to UP in January 2019 from Canadian National. Eric Gehringer will become executive vice president-operations.

CANADIAN PACIFIC, which sold most of its ownership share in the Detroit River Rail Tunnel in 2009, will gain full tunnel ownership in a deal announced in October. The $312 million purchase from Borealis Transportation Infrastructure Trust marks the second time in less than a year CP has repurchased assets sold by previous management, after its purchase of short line Central Maine & Quebec.

After suspending operation of the *Canadian* for more than eight months, **VIA RAIL CANADA** said it would resume one weekly round trip over the Vancouver, British Columbia-Winnipeg, Manitoba, portion of the route as of Dec. 11. Among COVID-19 restrictions: passengers won't be allowed in the *Park*-class dome-lounge-observation car. Scott A. Hartley

Construction of the proposed high speed rail line between Las Vegas and Southern California, rebranded as **BRIGHTLINE WEST**, has been postponed indefinitely after parent company **FORTRESS INVESTMENT GROUP** was unable to sell $2.4 billion in private activity bonds. Brightline West had said construction would begin on two segments in late 2020. A California official said she did not know when the company would again request the ability to sell bonds.

Conway Scenic adapts to COVID-19

Successful tourist railroading during the pandemic

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Conway Scenic's annual 470 Club Special on Oct. 17, 2020, was greeted by an early season snow at Crawford Notch. Leading the excursion was 470's former Boston & Maine F7A No. 4266. Brian Solomon

In March 2020, news of the COVID-19 pandemic seemed like a distant threat from my office in Conway Scenic's 1874-built North Conway, N.H., station. By the end of the month, the news became real when, with little warning, the New Hampshire governor imposed statewide restrictions to stem the coronavirus spread. This precluded our spring reopening. However, several days into this shutdown, we laid the foundations to reopen.

By June, we wondered when and if we might be able to resume operations. We then learned through the media that New Hampshire had allowed tourist railroads to have guests, with strict conditions to mitigate virus spread. We faced unknowns: Should we reopen? How would we implement the mandates? How would these changes alter our operations?

Conway Scenic avoided a prolonged period of hibernation and chose to make the best of changed circumstances. This was done for the benefit of our guests and employees, while aiming to help sustain businesses in the Mount Washington Valley, including our own, that depend upon seasonal tourism. Naysayers abounded. "No one will ride." "Our trains are unnecessary." "Tourism is dead." All were misguided.

The changed circumstances brought countless challenges. Our old operational model had been upended, and we had only a few days to implement complicated mandates, in order to be allowed to accommodate guests. Not everyone adjusted easily. Satisfying mandates, especially those aimed at socially distancing a visitor while meeting a guest's expectations, proved problematic. We had to restrict the number of guests on trains and in the station. We had to limit platform access and escort guests to their seats to avoid guests mingling when boarding. Car capacity was limited; we innovated by retrofitting some cars with partitions to improve both safety and increase capacity. We sanitized car interiors between runs with airline-grade materials. However, loading and sanitizing required greater time between runs, and this made it impossible to adopt my ambitious pre-pandemic operating timetable.

Our world had changed and we reacted, but Conway Scenic had been thrust into a situation that no one anticipated and without time to plan effectively. In a preliminary training meeting, I implored train crews to be patient, explaining that changes were only a work in progress, and our understanding of the situation was only minutes ahead of the general public. These last two points proved difficult for both our employees and guests to grasp, and this lack of comprehension haunted us throughout the 2020 season. Last year's precedents no longer mattered, and we had to make unpopular changes to keep running in a changed environment.

We anticipated running two trains a day, and after a two-month advertising hiatus, I initiated an intensive media blitz largely focused on the local market. Yet, the Mount Washington Valley emerged as a relative safe haven with exceptionally low rates of infection. So with overseas tourism and long-distance travel moribund, local visitors flocked in vast numbers. Many of the area's attractions had been unable to respond quickly and remained closed, but to cope with the influx, we added trains and lengthened our consists. By September, we had scheduled five trains a day, seven days a week, and most trains were sold to limits of social-distancing constraints.

Success came with a price. Many new visitors were drawn to the novelty of a "train ride," most were delighted, but a few were bemused when our heritage railroad failed to live up to expectations. Complaints included, "our train returned the same way it went out," "our equipment was 'old,'" and our "rivers were boring." More difficult was that with every turn, COVID-19 made running the railroad more complicated, which placed unprecedented stress on our employees. We were at the center of the mask controversy to which there was no one, universally popular solution. A few guests were hostile to mask mandates, others guests were terrified by the spectre of unmasked persons, but in the end, most complied with state requirements.

The swell of new and returning visitors demonstrated that we'd made the right decision, and our railroad flourished where others were not so fortunate. We pleased many with their first train ride, and we had some great moments in the sun. Now, we are reviewing our lessons from 2020, while crafting bold plans for 2021.

Railroads can be their own worst enemy

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Potential carload customers forced to wait ... and wait

If you want to know yet another reason why railroads' share of the transportation pie is shrinking, consider this story. A logistics manager was asked to put together a new move for Gulf Coast chemical shipments that originate on BNSF Railway bound for destinations in the East on both CSX Transportation and Norfolk Southern. The shipments aren't high volume, but since they involve chemicals — among the most profitable traffic on rails — it is high-margin business that railroads covet.

BNSF responded to the logistics manager's rate request the same day. The answer from CSX came the next day. And NS? It took three weeks to respond!

Yes, three weeks. That may have been an acceptable turnaround time in the 19th century, when railroads were the only game in town, but it's almost laughable in today's one-click world.

This is not to pick on NS. Shippers say the three-week response time could have come from any of the Class I railroads, most of which have whittled down the size of their sales and marketing forces. Insiders also say the Class I railroads can be slow to respond to carload rate requests when they are concerned about cannibalizing existing moves or if other competitive issues arise. "When this happens," one logistics pro says, "rate requests can get tied up in knots and take a long time to complete."

Shippers, of course, do not like it when railroads move at a snail's pace, and delays can prompt them to stick with trucks. Trucking companies offer virtually instantaneous pricing. Intermodal rates are available in minutes, too. Both trucking and intermodal are relatively straightforward because they involve moving a container or trailer from dock to dock with no intermediate stops. Carload is a different animal, involving local service at each end and a switching move or two in between. So you can understand why it would take slightly longer to provide a rate. But railroads are a step behind the competition when the best way to measure carload rate response time is with a calendar.

It's also a problem when you match railroads up against expectations that are increasing by the day. Millennials, those born between 1981 and 1996, are now the biggest single generation in the workforce. They grew up with technology and are accustomed to getting information at lightning speed. So, imagine the reaction of a 25-year-old logistics manager who has to wait 21 days for the railroad to answer. In her mind, it would be as absurd as clicking on an item on Amazon, only to have the price obscured for weeks. This does not bode well for the future of carload, which contributes roughly 66 cents of every dollar railroads earn.

Railroads know they need to do better. Arthur Adams, CSX's senior vice president of sales, was a breath of fresh air at a recent shortline railroad conference: "We have a crisis as a rail industry. We have seen continued share erosion over the last decades relative to other modes of transportation. Some is self-inflicted. We're not very easy to do business with. We have underinvested in technology and the customer experience. And we haven't provided a seamless transportation experience that our shippers realize ... from other modes."

You hear a lot these days about Class I railroads wanting to make it easier for customers to do business with them. And in recent years, they all have made great strides improving their online tools. Yet clearly, they still have a lot of catching up to do, from landing new business to providing an easy way to monitor freight cars as they move from one railroad to another.

When I shared the three-week example with several railroad executives and shippers, not one of them was surprised. Some, when asked how long the slowpoke railroad took to respond, even guessed three weeks. The surprise, they said, was that BNSF and CSX responded so quickly.

This tells you that the big railroads aren't always geared up for new merchandise traffic — even lucrative chemical business. It also raises a question: If railroads can't figure out carload after more than 150 years of practice, how do they expect to compete in the new economy dominated by e-commerce and higher requirements for service and speed?

Railroads move low-volume but high-profit chemicals in merchandise trains. Tank cars, potash, and other carloads traverse Canadian Pacific Railway at Oconomowoc, Wis., July 24, 2020. TRAINS: Angela Pusztai-Pasternak

TANKS FOR THE MEMORIES

When Baldwin went into the timber, and how you can see four of these locomotives in action

by Martin E. Hansen

With last year's completion of 2-4-4-2 *Skookum* and this year's addition of Black Hills Central 2-6-6-2T No. 108, much attention has been directed toward the 40-some logging Mallets constructed by the Baldwin Locomotive Works between 1909 and 1937. This fall, White River Productions sent to press, "Timber Titans, Baldwin's Articulated Logging Locomotives," a book chronicling in detail, the history, design, and life of these unique locomotives, authored by myself, Steve Hauff, and Dale Sanders. Let's take an overview of these locomotives and the effect they had in the Pacific Northwest.

South Dakota's Black Hills Central is a Baldwin tank Mallet stronghold with 2-6-6-2T No. 110 in operation for many years and recently restored near twin No. 108 coming on line in 2020. No. 110 engine is shown near Oblivion, S.D. Jeff Terry

Sierra Railroad 2-6-6-2 No. 38 rests in Sonora, Calif., on March 10, 1955. Sierra purchased No. 38 from Weyerhaeuser as a last attempt to hang on to steam power. Martin E. Hansen collection

While construction of large numbers of steam locomotives for mainline railroads was always the primary focus for the major locomotive builders starting in the late 1800s, these builders did not overlook niche markets. They could increase overall market share by designing specialized locomotives to meet the needs of small operators. The timber business was one of the largest industries to start utilizing specialized steam motive power. Every timber region in the United States had miles of logging railroads. Steep grades and temporary track often used by those railroads created a demand for flexible locomotives of substantially different designs than found on mainline railroads.

The timber industry market was so lucrative that locomotive construction with specialized companies such Lima, Heisler, and Climax, developed geared locomotives specifically for logging and were able to make a handsome profit doing so. These upstart locomotive builders did not go unnoticed by Baldwin, who early on, set out to try and take a share of this market.

Baldwin's initial foray into the timber industry consisted of small rod engines of both tender type and also of the tank-type configuration. These engines could handle modest loads over relatively steep grades and were small enough to take the tight curvature of these logging lines. However, geared logging locomotives quickly grew in size and power and started to eclipse Baldwin's initial market share when the small tank engines they were producing could not measure up.

To overcome the competition the company received from the geared locomotive manufacturers, Baldwin at one point attempted its own geared locomotive design. However, only a small handful of those engines were created, and they were never deemed successful. Baldwin soon decided that it should abandon its attempt to develop its own geared locomotive and revert to

Southwest Lumber Mills No. 12 is shown soon after arriving in Arizona. The engine still has factory saddle tanks and oil bunker, with simply a round tank car added to provide more range. Martin E. Hansen collection

White River Lumber Co. 2-6-6-2T No. 7 shows off its full saddle tank at Enumclaw, Wash., on Sept. 10, 1946. No. 7 came from Saginaw Timber Co. of Aberdeen, Wash. Al Farrow, Martin E. Hansen collection

standard rod-type locomotives for which the company had become famous. This led to Baldwin's early 2-6-2 rod engines developed in the late 1890s and then the first 2-8-2 locomotive developed for logging beginning in 1907.

BALDWIN'S SHOT AT SALES

While Baldwin's sales of these early Prairie and Mikado locomotives to the timber industry certainly made them a player in this market, Baldwin felt the need to sell more engines by developing even larger locomotives for lumbermen in the Pacific Northwest. Literally, thousands of miles of logging railroad track were in service in the Pacific Northwest by 1909. As those rail lines extended farther from the mill into the timber, the need for powerful steam locomotives to transport heavy timber back to the mill at reasonable speeds became a necessity for most larger logging railroads. They asked Baldwin to develop locomotives that were bigger than the smaller rod engines and geared engines available on the market but still flexible enough for the unique demands of the logging railroad industry. One of Baldwin's earliest attempts to design an engine to meet those needs was the unique 0-6-0-0-6-0T No. 6 built for the McCloud River Railroad of McCloud, Calif., in 1906. This engine consisted of a pair of 0-6-0T engines joined back-to-back with a hinged connecting point and one set of throttle controls. The intent was to add more power to a tank locomotive that was flexible enough to still handle the sharp curves of a logging railroad. This locomotive did not prove entirely successful and after only a couple of years in service both of the engines were separated and ran the rest of their careers as individual locomotives. However, the seed was planted with Baldwin that it may be able to develop a successful, articulated steam locomotive for the timber industry.

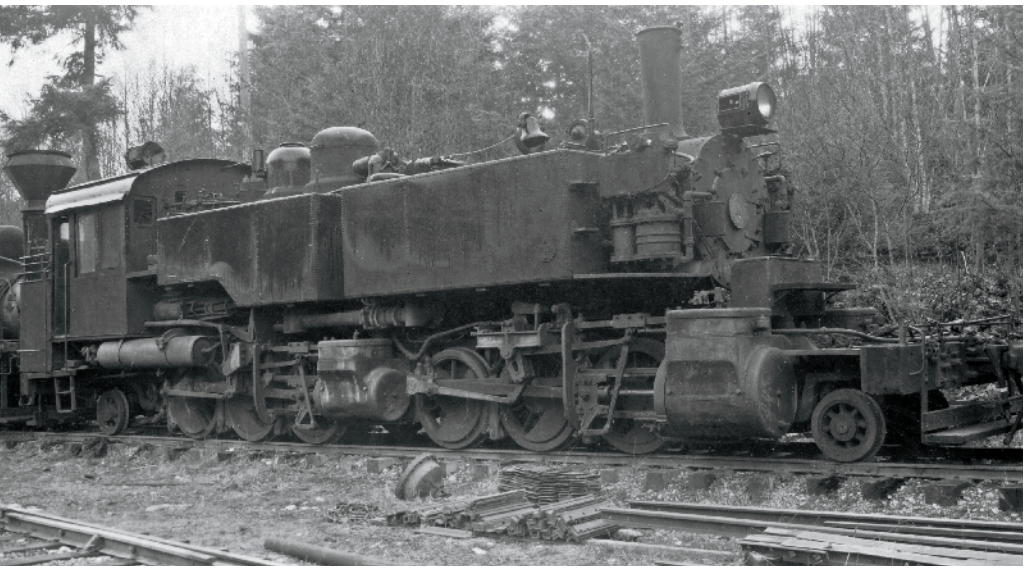
The opportunity for Baldwin to design the first true logging mallet presented itself in 1909 when the Little River Railroad of Tennessee approached Baldwin, requesting a more powerful rod-type engine that could be safely operated on light rail and sharp curves of the Little River Railroad. With this order in hand, Baldwin's design engineers set about to form the very first logging mallet. They settled on a wheel configuration of 2-4-4-2 to address sharp curves on the Little River Railroad while keeping the weight down. They also elected to make the engine a compound engine to extend its range for fuel and water. Thus, was born Little River Railroad No. 126.

Unfortunately, while the Baldwin design engineers had taken great pains to adapt a rod engine to the needs of the Little River Railroad, they overlooked one specification that Little River had insisted upon. When Little River approached Baldwin, they maintained that the locomotive weigh no more than 65 tons. Unfortunately, when No. 126 rolled across the scales at Baldwin's Eddystone, Pa., factory, it was slightly more than 71 tons. Hoping that these few tons difference would not be a problem, Baldwin shipped No. 126 to Little River.

Within just a few weeks of test runs, No. 126 proved too large and too stiff for Little River's track. After derailing a number of times and laying rail over on several curves, Little River telegraphed Baldwin and instructed them to come pick up the locomotive and take it back to the factory as that they were not going to pay for it.

Despite this setback, Baldwin's engineers were confident that they had hit on a design that would be successful for Little River if they brought the weight of the locomotive down. Baldwin quickly agreed to replace No. 126 with a new locomotive, No. 148, which would be of the same 2-4-4-2 wheel configuration but would weigh only 68 tons. By 1910, Baldwin had completed No. 148 and shipped it to Little River Railroad. This locomotive proved to be an instant success, and Baldwin knew it finally created a product that it could sell to logging railroads, especially those in the Pacific Northwest.

Little River No. 126 remained at the Baldwin plant from 1909 until mid-1910 when Baldwin resold the locomotive to the Whitney Co. in Blind Slough, Ore. No. 126 was given her famous name, *Skookum,* which she still bears to this day. This engine would work for a number of logging companies over her 40-plus year career and her design would prove to be the spring-



One of the early split side tank Baldwin logging Mallets was St. Paul & Tacoma Lumber Co. No. 10. It is at the end of its operating days at Electron, Wash., in March 1952. Martin E. Hansen collection

board for future logging mallets built by Baldwin. Even before *Skookum* had been resold by Baldwin, an order came in from the Booth-Kelly Lumber Co. of Wending, Ore., for a large, flexible, rod engine. Baldwin's engineers set about developing yet another compound, articulated locomotive to meet this order, this time giving her saddle tanks for additional traction and eliminating the need of a fuel tender behind the engine. By January 1910, Booth-Kelly Lumber Co. No. 2 rolled out of the Baldwin factory and was shipped to its new home. As originally built, the locomotive was designed to burn both wood and oil, depending on its owner's needs from year to year. Once placed into service, No. 2 proved to be a success, and Baldwin now had another locomotive design in its arsenal that the company could use to invade the Pacific Northwest timber market more successfully.

While Baldwin received an order for a small 2-6-6-2 logging locomotive in 1910 from the Caspar South Fork & Eastern Railroad of Caspar, Calif., it would be another 10 years before Baldwin would have an order for another logging mallet. Between 1910 and 1920, Baldwin was certainly successful in marketing to the timber industry with sales of a number of 2-6-2, 2-6-2T, 2-8-2, and 2-8-2T locomotives. Why no one ordered another logging mallet during that booming decade is a mystery.

In 1920, Booth-Kelly Lumber Co. returned to Baldwin and ordered another logging mallet, which was a near twin to the 2-6-6-2T No. 2 built 10 years earlier. This order would start Baldwin on a 17-year building spree in which 35 more logging mallets and logging simple articulateds would be built specifically for the lumber industry in the Pacific Northwest. Over the years that Baldwin built logging mallets and articulated engines, a majority of them were of the 2-6-6-2T configuration, but they also built several 2-6-6-2 tender type engines and even a pair of 2-8-8-2s were built for Weyerhaeuser.

One of the unique features of the 2-6-6-2T locomotives was the configuration of the saddle tanks on these engines. In the early days, Baldwin's logging mallets had split square saddle tanks necessitated by the dry pipe that ran from the steam dome to the high-pressured cylinders. Once that dry pipe design was modified (due to the introduction of superheating), Baldwin was then free to have full side tanks on the logging mallets of a both square and curved configuration. Several different square tank configurations were used on many of these engines while many different split saddle tanks of a curved configuration also adorned different engines.

Finally, Baldwin designed three 2-6-6-2T locomotives that had full saddle tanks extending from one side of the engine and up and over the top of the boiler and down to the other side.

Not all of Baldwin's logging mallets were actually mallets at all. Weyerhaeuser Timber Co. ordered four 2-6-6-2T locomotives to be built with simple cylinders rather than compound cylinders. While these locomotives did not have the fuel and water savings found through a compound cylinder arrangement, they had enormous traction and starting power beyond that even found on the standard compound logging mallet built by Baldwin.

CHANGES ALONG THE WAY

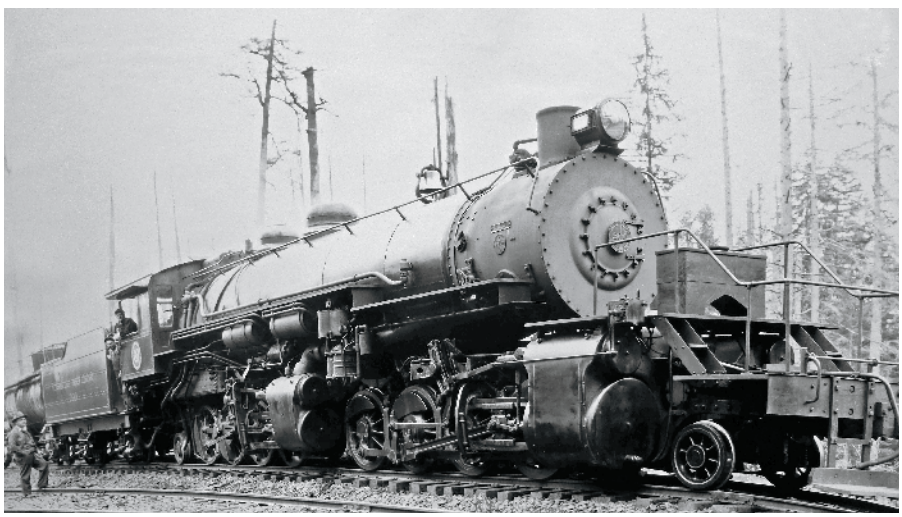
Another interesting aspect of the Baldwin logging mallet was how a number of these locomotives were modified over their years of service both by their original operators and by subsequent owners. A good example of the adaptability of these loco-

On a rainy day in August 1948, Long-Bell Lumber Co. 2-6-6-2 No. 1001 shows its articulating capabilities that made all the Baldwin logging Mallets so popular. Guy L. Dunscomb, Martin E. Hansen collection

Southwest Lumber Mills 2-6-6-2 No. 12 displays a second configuration at Flagstaff, Ariz. The engine still sports saddle tanks but has lost its oil bunker and has acquired a rectangular tender. Ted Wurm, Martin E. Hansen collection

motives is found in the various configurations that Hammond Lumber Co. No. 6 took on over its several decades of service. Built in 1929 for Hammond's operations out of Mill City, Ore., No. 6 was a saddle tank 2-6-6-2T locomotive with curved side tanks on each side of the boiler. She retained that configuration when she was shipped to Hammond's Redwood operations out of Samoa, Calif. However, after a few years at Samoa, she was resold to Southwest Lumber Mills in Flagstaff, Ariz., where she began the change in appearance over the next two decades.

Initially, Southwest Lumber Mills added a cylindrical tank car behind No. 12 to give the locomotive more range. After a few years, the rectangular tender from another steam locomotive replaced the tank car and saw the removal of the oil bunker behind the cab of No. 12. After a few years operating in that configuration, Southwest Lumber Mills removed the side tanks altogether, and the locomotive became then a standard 2-6-6-2 logging mallet with tender. No. 12 continued in that configuration through the end of its career and that's how we find this fine workhorse today on display in Flagstaff, Ariz.



A true giant of the woods was Weyerhaeuser's 2-8-8-2 No. 200. Built by Baldwin in 1929, this and 1933 sister No. 201 were the largest logging locomotives built. Clark Kinsey, Martin E. Hansen collection

Other operators modified their Baldwin tank logging mallets over the years by adding tenders and removing all or part of the side tanks installed by Baldwin. Weyerhaeuser was most notable for modifying a number of its logging mallets especially those that operated out of its Klamath Falls, Ore., operation. One of the more famous modified Weyerhaeuser logging mallets can be seen today on display at the Northwest Railroad Museum in Snoqualmie, Wash., where the locomotive is lettered for its last operator U.S. Plywood Corp., as No. 11.

Twin Black Hills Central 2-6-6-2T mallets make a run for the hill at Oblivion, S.D., on Oct. 4, 2020, in a doubleheader, celebrating lead engine No. 108's return to service earlier in the year. The story of Baldwin's tank mallets continues. TRAINS: Jim Wrinn

SURVIVORS AND RUNNERS

The success of Baldwin's logging mallet design is born out of the fact that neither Alco nor Lima ever attempted to create a logging mallet to compete with Baldwin's design. While some drawings of proposed logging articulateds from Alco and Lima have surfaced, none of the those designs even made it into production. Alco stayed with its 2-6-2 and 2-8-2T locomotives as the company's only real offering for the loggers in the Pacific Northwest. Lima, in turn, decided to stay with its successful Shay geared locomotive as its sole offering into the timber industry, refining the product with its famous Pacific Coast model.

The durability of Baldwin's foray in building big steam power for the timber industry is best demonstrated by the fact that today no less than 10 of the 40 logging mallets built by Baldwin are still in existence, and of those, four are running at two Western steam preservation strongholds.

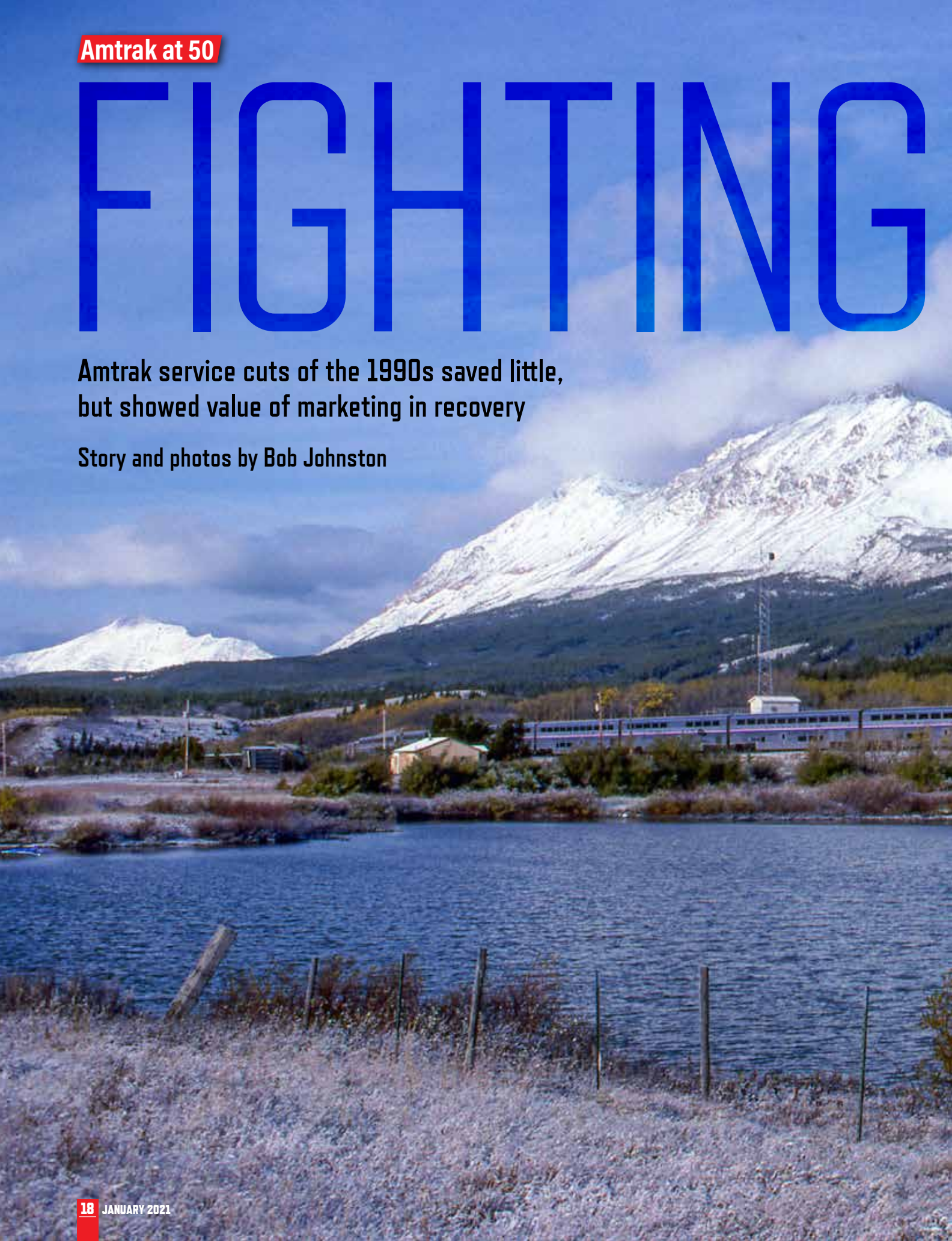
Clover Valley 2-6-6-2T No. 4 is operable at the Pacific Locomotive Association's Niles Canyon Railway in California where it has been joined temporarily by Baldwin's first logging mallet, *Skookum,* which was returned to service by Oregon Coast Scenic Railroad in 2019. Also operable is former Rayonier Inc. 2-6-6-2T No. 110 on the Black Hills Central Railroad, running between Hill City and Keystone, S.D. A few years ago, Black Hills Central acquired former Weyerhaeuser 2-6-6-2T No.108, one of the three full-saddle tank mallets from the Northwest Rail Museum in Snoqualmie and restored it to operable condition in 2020. This gives fans the chance to experience doubleheaded Baldwin logging Mallets both at Niles Canyon Railway and at Black Hills Central. This is something that even the most optimistic Baldwin locomotive design engineer could never have envisioned when they first set out to build big steam motive power for the Pacific Northwest timber industry.

Amtrak at 50

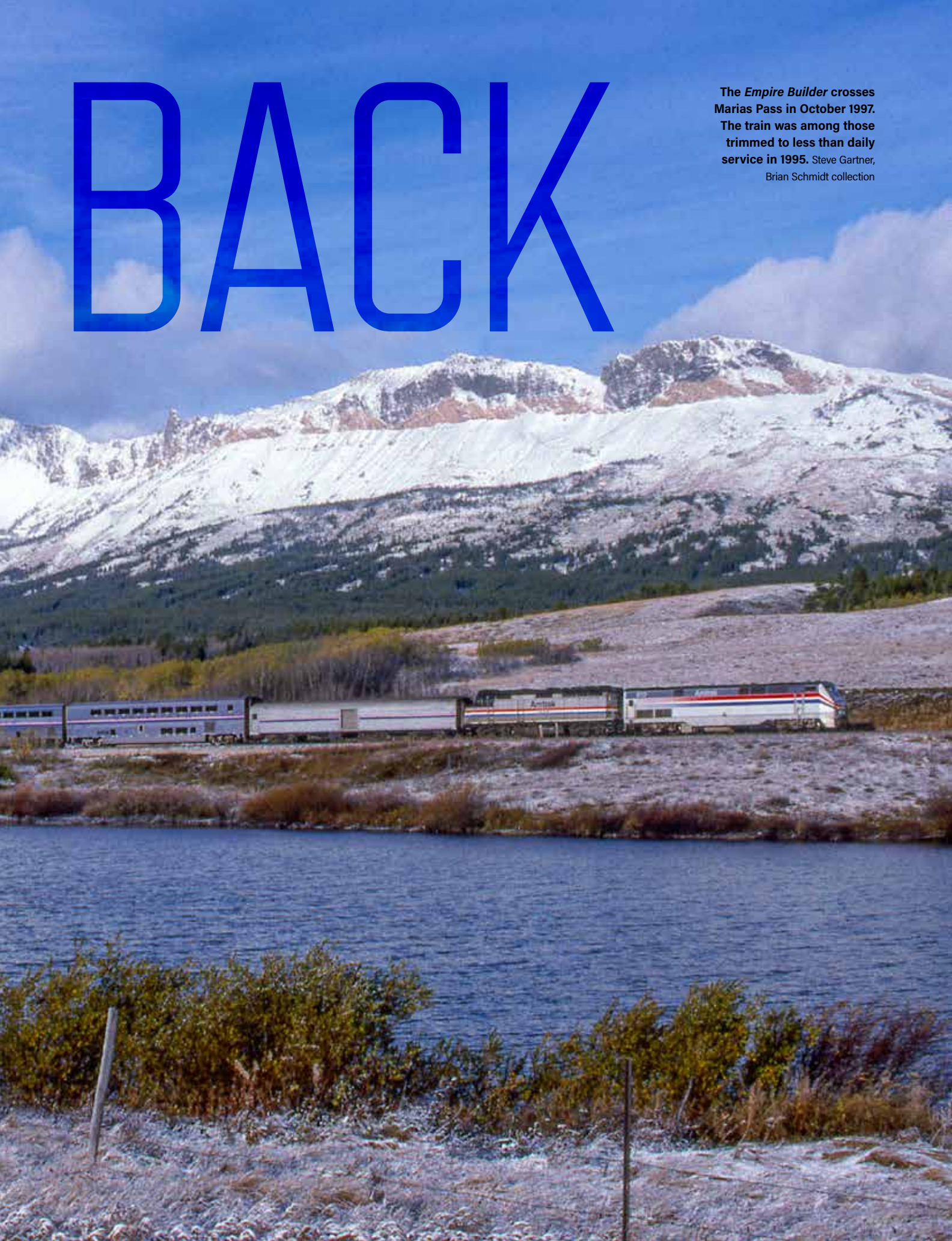
FIGHTING

Amtrak service cuts of the 1990s saved little, but showed value of marketing in recovery

Story and photos by Bob Johnston



BACK



The *Empire Builder* crosses Marias Pass in October 1997. The train was among those trimmed to less than daily service in 1995. Steve Gartner, Brian Schmidt collection

The *Coast Starlight* passes the former Union Station in Tacoma, Wash., on Sept. 15, 1996. For part of that year, the train ran just five times a week. Doug Nuckles, Brian Schmidt collection

After the COVID-19 pandemic decimated the transportation and hospitality industries with mandatory quarantines and lockdowns, Amtrak announced in mid-June 2020 that it would cut all but one long-distance train to triweekly departures beginning in October.

The company embarked on a similar effort in 1995, when it faced a budget shortfall as its operating loss was set to top $1 billion for the first time. But the plan generated disappointing revenues, incurred unforeseen costs, and pushed the system into a death spiral of contraction. Yet organizational resilience, decentralized responsibility, and activism by community leaders helped restore growth to the remaining network.

Why the initial decisions were made and how the network was able to recover provide lessons for citizens and lawmakers intent on maintaining a strong national passenger rail system as Amtrak moves into its 50th year.

BUDGET BUSTING

Money losing. That's been the label hung on Amtrak since it took over passenger operations from private railroads on May 1, 1971. The company's boom-and-bust, merry-go-round ride has alternated between spurts of massive investment that brought Superliners and Amfleet following an oil embargo at the end of its first decade, then bouts of austerity triggered by winds of political change in the 1980s. That ride landed with a thud when a Democratic President and Republicans in Congress sought to balance the federal budget in the 1990s.

The National Railroad Passenger Corp. was established to preserve at least a skeletal nationwide passenger rail system as a "for profit" company while providing services its private predecessors had deemed unprofitable. This was the dilemma Tom Downs faced in December 1993, when he took over from W. Graham Claytor Jr. as Amtrak's fifth president.

Claytor argued forcefully throughout the Ronald Reagan and George H.W. Bush administrations that the company would never take in enough to be profitable, but could be sustained with what he characterized as an "Ampenny" — one cent from every Highway Trust Fund dollar — to provide predictable funding.

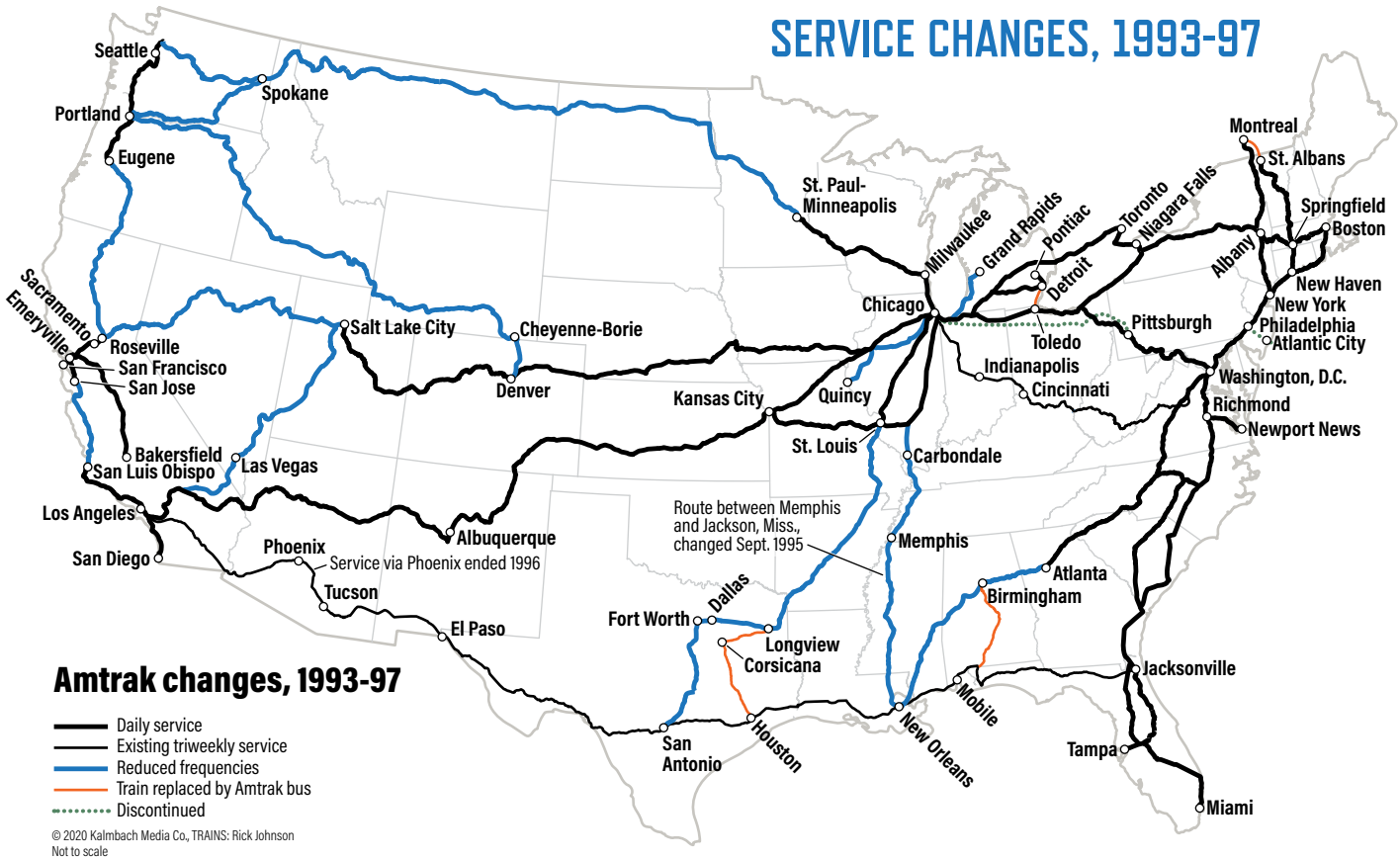
Amtrak president Tom Downs

"His mantra was to continuously increase the revenue-to-cost ratio, and Graham always thought providing excellent service would help that," recalls Cliff Black, who has the historical perspective of joining Amtrak in 1981 and retiring in 2010 as its media relations manager and principal spokesman.

Expanding revenue — not just cutting costs — was always part of the equation. But that wouldn't be good enough in Claytor's last budget, for fiscal 1994, which in a sweeping cost-cutting move reduced both the Denver-Seattle part of the *Pioneer* route and the St. Louis-San Antonio portion of the *Texas Eagle* to three times per week in November 1993. Other reductions included substituting an Amtrak Thruway bus on the Carbondale, Ill.-to-St. Louis segment of the *River Cities* — which formerly offered an overnight through coach connection with the *City of New Orleans* to and from Kansas City — and eliminating nearly 300 station, onboard service, and mechanical positions.

Cliff Black, former media manager

The 1993 cuts were meant to counteract an expected $30 million shortfall, but they became the first steps in weakening network income. As TRAINS observed at the time, "Conversion of the *Pioneer* and *Eagle* to triweekly operation saps much-needed revenue from eastern connections at Chicago. For instance, the triweekly *Cardinal* now misses passenger swaps with both trains in each direction. One train a day to communities outside the Northeast is 'bare bones' enough to potential travelers whose plans may not fit Amtrak's schedule; thinning frequencies and services further makes the rail alternative even less attractive."



THE 1995 CUTBACKS

Nevertheless, the incoming CEO faced more stringent budget-tightening demands from the Clinton Administration and Congress the following year. There was no easy solution.

"Tom Downs felt the way to please the White House, labor, and all of the different constituencies was to dig deep into the numbers to figure out a formula that would both keep the system going and save money," Black says. "In retrospect, that's why he had Mercer Management Consultants do studies. Of course, there was a lot of cynicism by the old-timers: paying $7 million — or whatever it was, I'm not sure — to have some consultants come in here to tell us how to stop running trains."

Press releases issued by Black's department at the time trumpeted the cost savings estimated in the Mercer analysis: $173 million for the remainder of 1995 after frequencies were reduced, and "annualized savings" of $364 million in the 1996 fiscal year. Unlike current Amtrak management's assertion that its 2020 employee furloughs and long-distance train reductions would save $150 million — announced two months before it finalized any connection specifics — Mercer in 1995 attempted to spell out, by route and category, exactly how the bottom line would be affected (see table, page 22). A key element of the analysis estimated the nine affected routes would see only $99 million in revenue losses.

The *Empire Builder* at Essex, Mont., in May 1996. The theory that savings would result from concentrating ridership on fewer trains per week proved false. D.L. Zeutschel, Brian Schmidt collection

"Their 'clawback' theory," Bob Vander Clute, Amtrak's vice president of transportation under Downs in 1995, tells TRAINS, "anticipated that some high percentage of passengers would be on three or four trains rather than seven each week, and your costs would be reduced accordingly. A win-win, right? But it was really the opposite that was true: route expense remained and the revenue disappeared."

In the case of the *Empire Builder*, the Mercer plan cut departures to four times weekly, serving its endpoints — Chicago, Seattle, and Portland, Ore. — with the already-triweekly *Pioneer*. But trips over their full length only represented a tiny portion of both trains' patronage.

Even when service was cut on part of the route, the *Empire Builder* (at Pleasant Prairie, Wis., in March 1995) remained daily between Chicago and St. Paul. Robert S. McGonigal

CANCELLATIONS AND RECOVERY IN THE 1990S

Service	Date	Adjustment	Segment	Disposition	Date
Texas Eagle	Oct. '93	Triweekly	St. Louis-San Antonio	4 weekly*	Feb. '98
	Sept. '95	Bus replacement	Dallas-Houston		
Montrealer	April '95	Bus replacement	Montreal-St. Albans, Vt.	Vermonter to Washington	April '95
Pioneer	Oct. '93	Triweekly	Denver-Seattle	Discontinued	May '97
Desert Wind	Feb. '95	Triweekly	Salt Lake-Los Angeles	Discontinued	May '97
California Zephyr	June '95	4 times weekly	Salt Lake-Oakland	Daily	May '97
Empire Builder	Feb. '95	4 times weekly	St. Paul-Seattle/Portland	Daily	May '97
Palmetto	Feb. '95	Discontinued	New York-Tampa, Fla.	Silver Palm restored	Nov. '96
River Cities	Oct. '93	Bus replacement	St. Louis-Carbondale, Ill.		
City of New Orleans	June '95	5 times weekly	Chicago-New Orleans	Daily**	May '97
Broadway Limited	Sept. '95	Discontinued	Pittsburgh-Chicago #	Restored	Nov. '96
Coast Starlight	Jan. '96	5 times weekly	Los Angeles-Seattle	Daily	March '96
Crescent	Feb. '95	Triweekly	Atlanta-New Orleans	Daily***	May '97
Hoosier State	June '95	Triweekly	Chicago-Indianapolis	Discontinued	Sept. '95
Gulf Breeze	April '95	Bus replacement	Birmingham-Mobile, Ala.		

 # Three Rivers initially retained New York-Pittsburgh; extended to Chicago in November 1996
***4th trip extended to Los Angeles; daily Chicago-San Antonio only in May 2000**
****Six times weekly effective November 1996**
*****Four times weekly effective November 1995**

"We figured the ridership on the *Builder* might turn over seven times: Milwaukee-St. Paul; Chicago-Grand Forks, N.D.; Fargo, N.D.-Seattle; and the like," Vander Clute says. If the train no longer departed when all these travelers wanted to go, people just didn't show up. "We found that once you lose them, passengers found alternate ways to travel and it costs a fortune to recapture them," he says. "On certain routes, there was no equipment saving, because it would sit in a facility for an extra day or more without earning revenue." Days without service meant crews were on the road longer, with layovers away from their points of origin. "It was a logistical nightmare," Vander Clute says, adding, "I'm not saying the costs exceeded the savings, but the [overall] savings weren't nearly as great, because the consultants never went down that deep."

A DIFFERENT COMPANY

Back then, many states paid to add trips along shorter routes outside the Northeast Corridor. Such deals changed dramatically when the Passenger Rail Investment and Improvement Act passed in 2008, mandating states to pay what Amtrak billed them for trains operating less than 750 miles. Costs and obligations in the wide range of agreements Amtrak had with different states and operating authorities became standardized under the act's Section 209, which prohibits Amtrak from running shorter-distance trains without state support. Company charges are prescribed by its opaque Amtrak Performance Tracking cost-allocation methodology [see "Triweekly Plan Puts States in a Bind," "News," November 2020].

Bob Vander Clute, former Amtrak VP

That was not the case in the mid-1990s, when Amtrak was solely responsible for generating revenue and managing expenses, regardless of how far a train traveled. This explains why the reduction scenario retained daily Chicago-St. Louis service on the *Texas Eagle* and Chicago-Twin Cities operation on the *Empire Builder*, even though the scheme trimmed frequencies on the rest of those trains' routes. Daily eastern connections were also maintained at Chicago, though the *Broadway Limited* would make its last runs in September.

Although outside consultants largely orchestrated the belt tightening Downs felt he had to make, his determination to bring route and corridor decision-making closer to the customer eventually helped make an incontrovertible case for daily operation.

"The Amtrak I came to was so centralized that it amazed me there was a national menu committee," Downs tells TRAINS. "We immediately began restructuring into regional business units with product-line managers. The ones that effectively tailored service to their markets were the most successful."

Product manager Tommy McDonald

The transformation to localized bottom-line responsibility took place at the same time frequency contractions began, so the railroaders tapped for those jobs were in a position to analyze the effect on revenue and expenses independently for each route. These managers' mission was clear: get butts in seats, keep people coming back, and deliver service in the most cost-effective manner. In the Northeast, separate Regional and Metroliner product lines were first established. This paved the way for the separate Acela product line five years later, even though Downs' successor, George Warrington, began recentralizing the company.

"We uncovered an incredible number of

issues that had been skirted for years," Northeast Regional's Dave Nogar admitted to TRAINS in a January 1996 interview. Once then-new Viewliner sleeping cars became available, his group rebranded the Boston-Washington *Night Owl* into the Boston-Newport News, Va., *Twilight Shoreliner*.

Product-line managers presiding over routes whose frequencies were reduced immediately saw the extra challenges created by not having seven days of revenue. Leaders like the *City of New Orleans*' Tommy McDonald were determined to overcome those issues.

Promoted from locomotive engineer, the Mississippi native sought to cater to and expand the clientele that had been the backbone of the train's ridership from its Illinois Central roots. But initially, the train did not run Tuesdays and Wednesdays southbound, or Wednesdays and Thursdays northbound, hampering that effort.

McDonald was one of the first managers to revamp his train's menu with locally sourced cuisine and drop prices to expand dining-car patronage. He calculated the food cost of red beans and rice with turkey sausage at $1.12; freshly made bread pudding, which became a favorite example at corporate brainstorming meetings referenced by Downs, came in at 12 cents per serving. He cut costs by switching the onboard service crew base from Chicago to New Orleans, "but we ran the numbers and you couldn't use the equipment for anything else, just laying over extra days in Chicago and New Orleans not earning revenue," McDonald tells TRAINS, concluding, "You can't cut yourself into prosperity."

Free to sink or swim, McDonald managed to use otherwise-idle sleeping cars and a Superliner diner to promote and stage several Mardi Gras specials from Chicago to the Crescent City. This demonstrated his route could generate revenue with increased days of operation. "We sold it out — people got mad when they couldn't get a ticket," he recalls. He successfully made the case: an additional midweek *City of New Orleans* departure day was restored in April 1996.

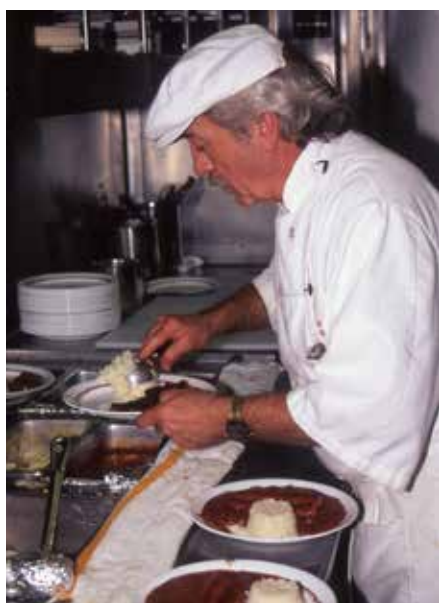
SELLING THE 'STARLIGHT'

Dawn Lyon was in a unique position to observe the company's transition to a business-unit structure. First hired as an intern in Amtrak's Washington headquarters before being promoted, she migrated to the newly created Oakland, Calif., office, which managed government affairs with Western states, regional promotion, and customer outreach.

"As I think back, we were pretty scrappy," she tells TRAINS. "Decentralization was instrumental in giving us a level of autonomy that was liberating. It gave the product-line managers, responsible for profit and loss, the opportunity to look at ways to get creative and build ridership — to have the freedom behind marketing and implementing onboard service standards with a sense of employee pride that helped sell it. We could change and promote the product without having to go through a lot of red tape."

The Southbound *City of New Orleans* makes its station stop in Hazlehurst, Miss., on Aug. 19, 1995. Successful Mardi Gras special trains using idle *City* equipment helped make the case for the train's restoration to daily service. Robert S. McGonigal

Lyon would later parlay the experience to start her own communications and marketing firm, but not before exhaustively exploring public-private partnerships with casinos for potential Los Angeles-Las Vegas, Nev., service. The concept was ultimately thwarted by regulatory roadblocks and Union Pacific infrastructure demands. Her Amtrak West team did come up with a slogan, "The hottest train with the coolest scenery," for the *Coast Starlight*. "It was corny, but it worked, with images on and off the train to start the conversation with potential customers," Lyon says.



Chef Bill McAnally prepares red beans and rice, one of the *City of New Orleans*' signature foods, in February 1997. Regional cuisine was popular on many trains.

Recruited from the hospitality industry in 1995, product-line manager Brian Rosenwald had given the team something to promote by creating a special environment on the train — out of necessity.

"When I took over, the *Starlight* had suffered three consecutive years of coach-travel decline," Rosenwald says, "primarily due to the arrival of Southwest Airlines and its $19 fares up and down the West Coast. We couldn't compete on price, so we first focused on building sleeping-car patronage with amenities."

The train had been recently re-equipped with new Superliner II cars, for which Rosenwald says his product line was charged $3 million annually in depreciation, compared with $800,000 if it were operated with older Superliner I equipment.

"I didn't care," he says, "because if I could show a revenue and ridership surge, I just wasn't willing to let allocation become an important consideration. It may fill an accounting function, but it is meaningless to measure financial performance." He did get pushback from mechanical forces in resurrecting the former Santa Fe *El Capitan* lounges as "Pacific Parlour Cars," part of the *Starlight*'s first-class upgrade, but he was responsible for calling the shots.

"He had minstrels, magicians, and historians onboard," remembers Downs. "And [onboard expense] didn't increase very much because he made money by selling local wine at premium prices. Brian was a marketing genius about that."

Notes from a southbound TRAINS journey in July 1996 captured Rosenwald's innovations, such as the wine tasting hosted by chief of onboard service Russ Setell and three sleeping-car attendants. Those notes also show that the battle for revenue never stopped. Conductor Gary Case saw that a

Magician Damien Tong has the attention of young riders in the *Coast Starlight*'s "Kiddie Car," a space set aside in the lower level of a Superliner coach that was part of the train's marketing.

number of roomettes in the *Starlight*'s three sleepers hadn't been sold, so out of Portland he announced over the P.A., "I'll be passing through the coaches and will be happy to give you a quote."

Case later admitted, "This family from Michigan couldn't afford what we wanted on two rooms, so I gave them a deeper discount than 20% — that's supposed to be the bottom, but Brian wants all of them sold, and we still had three left."

With initiatives like this and attempts at boosting ridership during off-peak periods, Rosenwald and his customer-focused employees were able to increase *Coast Starlight* revenue by 55% over four years from the time amenities and advertising were introduced, with a 21% bump the first year. This was in spite of being forced to run only five days per week between Jan. 7 and March 11, 1996. Gil Mallery, head of the Amtrak West business unit, and Rosenwald bitterly opposed planned triweekly service.

"We were just hitting our stride, so we got that changed," says Rosenwald. "Even so, the downside of not running Sundays and Mondays was not only the loss of revenue and connections but the inefficiency of crew turns; it was cheaper to fly them home. Of course, it was a total failure in reducing costs. Instead, it reduced ridership, and we were able to make the case to quickly return to daily service and capture Easter travel that year."

Brian Rosenwald, *Starlight* manager

LOCAL PUSHBACK

Vocal complaints about triweekly service also came from communities along many routes. The mayor of Meridian, Miss., John Robert Smith, led a coalition of city officials south of Atlanta that enlisted political firepower from U.S. Sen. Trent Lott (R-Miss.). The pressure resulted first in a fourth *Crescent* round trip, then the return of daily service on Nov. 10, 1996. Lott later nominated Smith to Amtrak's board of directors; he is now chairman of Transportation for America, an advocacy group for multimodal transportation planning.

Rugby, N.D., mayor and local funeral director Dale Niewoehner, who at the time regularly used the *Empire Builder* to transport remains, famously planned to meet with Downs when the eastbound *Builder* paused at Rugby, but the train was late and Amtrak's chief executive was asleep, so Niewoehner used the occasion to make sure the state's U.S. Senators and lone House representative understood the drawback of less-than-daily trains on a route with few other mobility options.

In Texas, Mineola Mayor Celia Boswell had just succeeded in getting a *Texas Eagle* stop at her town's recently rehabilitated train station when she learned it was on the hit list for discontinuance as of May 10, 1997. Forceful intervention by Boswell, with the help of *Texas Eagle* product-line manager Joy Smith; mayor Audrey Kariel from nearby Marshall; and U.S. Sen. Kay Bailey Hutchison, who helped arrange a state bridge loan with then-Gov. George W. Bush, all helped preserve the service, even though Amtrak had taken it out of the May 10 timetable. This local involvement in time of crisis led to the formation of TEMPO, the Texas Eagle Marketing and Performance Organization. The group's promotional efforts, along with the belief mail and express business would grow, led a fourth frequency to be added in 1998. The *Eagle* returned to daily operation in 2000.

Having been saved from planned elimination in 1997, the *Texas Eagle* launched "California Service," with through cars to LA, on Feb. 7, 1998. Daily operation was restored in 2000.

LESSONS FOR 2021

The financial pressures on Amtrak today, most would agree, are much more daunting than what Downs and his product-line managers faced in the mid-1990s. In fiscal 2019, the Northeast Corridor and state-supported service generated 79% of the company's $2.354 billion in ticket revenue. In the COVID-19 environment, in the fiscal year beginning October 2020, those services would yield just over $408 million, based on a rough projection of June and July 2020 figures over 12 months, assuming demand conditions remain the same. If daily long-distance train frequencies were maintained, their share of the total would jump from 21% in 2019

Rugby, N.D., mayor Dale Niewoehner, a vocal advocate of the Empire Builder, is representative of local efforts to restore daily service. He is shown with Amtrak's David Gunn in 2003.

to 57% of 2020's sharply reduced income. But with most of those routes generating revenue only three of seven days per week, there is no way that summertime ratio can be maintained.

The biggest unknown is how and when potential travelers can be enticed to make journeys again. To date, the company has limited onboard coach capacity to half of the available seats, but it also reduced consists enough to regularly trigger long-distance train sellouts near terminals. It did begin using some advertising and social-media posts to emphasize cleanliness protocols and promote the unique attributes of private-room travel, but declined to deploy Viewliner II sleeping cars that might allow price experimentation on different routes.

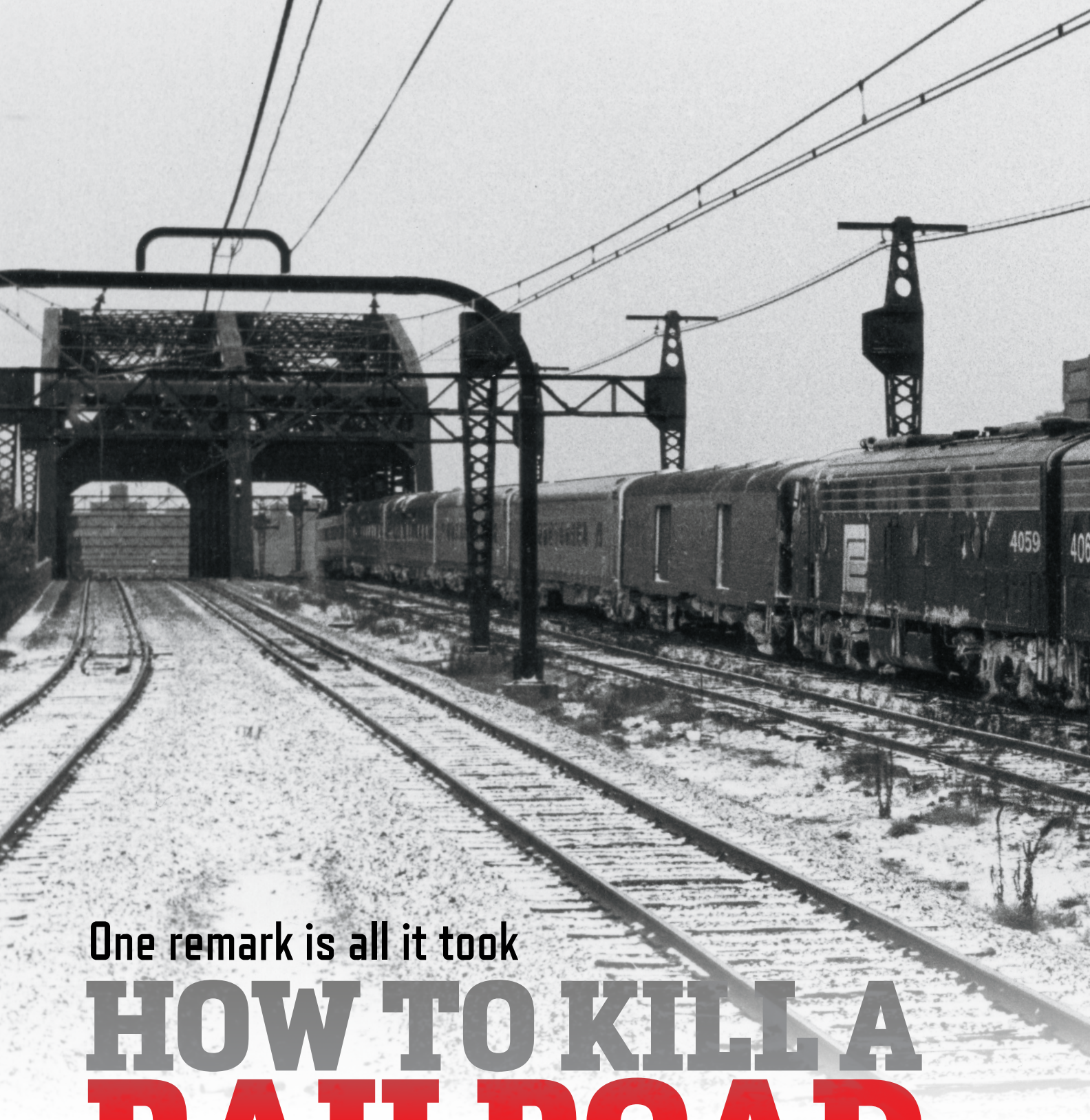
Amtrak management's plan to not even consider bringing back daily service until it can evaluate advance bookings for June 2021 in February ignores the reality, amply demonstrated over summer 2020, that in this environment, travel decisions for all trains are made closer to departure than ever. It indicates a profound misunderstanding that passengers don't book differently because their train travels a longer distance. They will only travel if the train is there when they need to make a trip. All this was proven conclusively in the 1990s reductions.

The company's current leaders have insisted to Congress that the triweekly move will, in fact, preserve the routes. But the restoration criteria they have employed will inevitably create winners and losers, ultimately weakening the network. Significantly, the three long-distance trains that were to be cut in 1997 because they had the worst revenue-to-cost ratio — the *Pioneer*, *Desert Wind*, and *Texas Eagle* — had been relegated to triweekly status four years earlier. Only the *Eagle* was saved.

Bound for Salt Lake City, the *Pioneer* is serviced in Portland, Ore., on Nov. 2, 1996. The train was sacrificed in 1997 to restore daily service elsewhere. Robert S. McGonigal

Tom Downs learned from a model the company developed after hearing from its product lines that "taking the long-haul trains to less than seven days per week was a financial end of the road for Amtrak ... so the *Desert Wind* and P*ioneer* became sacrificial hostages that allowed the other trains to return to daily operation."

The effort to operate during the triweekly period and get people back on the trains when daily service was restored was led by a cadre of individuals who might lose sleep every night worrying about how to grow revenue and improve customer service in response to their patrons needs. The corporate structure that facilitated those efforts, including virtually all regional and route-specific marketing to tell potential customers where the trains go, has been gutted by current management. Unless changes are made to address these shortcomings, survival and future growth will be a steep hill to climb.



One remark is all it took

HOW TO KILL A RAILROAD CAREER

by Kenneth L. Hojnacki

Amtrak train No. 61 leaves Cleveland Union Terminal, headed west to Chicago, in November 1971.
R.G. Hanousek

WHAT DOES A SERIOUS RAILFAN DO when it comes time to decide the course of his or her career as college graduation approaches? Guidance counselors don't know how to react when you say you want to do something related to railroads, especially in the mid-1960s when railroads themselves were having trouble figuring out how they were going to survive the next decade. I had originally planned on a teaching career, but after seeing friends graduate ahead of me with no job prospects in sight, I didn't think there was much future in pursuing a career as a history teacher. What to do, what to do?

At that time, surprisingly, a large number of railroads had formal management training programs. I wondered what they were all about. Back then, with no internet to research who had such programs, I wrote to about two dozen of the largest railroads in the U.S. asking for information on their management training programs. I was surprised and pleased to receive a large number of positive responses. The brochures and booklets they sent were filled with extensive descriptions of opportunities with the railroads and the potential career paths they could offer. The Milwaukee Road, Missouri Pacific, New York Central, and many more got my blood pumping.

Even more so than now, the urban legend was that if a railroad knew you were a railfan, you had no chance of being seriously considered for a job. In truth, I did take more of an interest in the practical side of railroading, reading Railway Age in our college library as well as following new trends in the pages of Trains. I tried to avoid any inference that I had more than a career interest in the business of railroading. I thought I could speak with some knowledge of railroad operations without any indication that I was interested in trains themselves long before I thought of

Gulf, Mobile & Ohio E7s Nos. 101A and 102 back their train into St. Louis Union Station as the sun sets, before the author's train departs.

railroading as a career.

As my senior year began, I was refining my choices for applications. No railroad recruiters came to our state university campus in Oswego, N.Y., so everything had to be on my initiative. I sent formal letters of inquiry to a number of railroads and had even met with a New York Central officer in Syracuse. We had a lengthy talk and he directed me to send my application to headquarters in New York City. I received a few "Thank you for your interest, but ..." letters and no reply from others. However, I was thrilled to receive a letter from Missouri Pacific stating they would have a regional agent come to campus to interview me. Hallelujah! I was on my way!

The big day came and we had a long talk about my studies, my career ambitions, and what he knew of the railroad's training program. It all seemed to go well. Then it was time to wait. No nibbles came from anywhere until, nearing Christmas break, MoPac said it wanted me to come to St. Louis to be interviewed further. All right! Things were looking better and better.

But that's where being a railfan began to sabotage my career chances. MoPac wanted to fly me out but I thought, "Why not get a train ride out of this?" So I made my excuse that the weather was so questionable in upstate New York that time of year, I didn't want to chance having a flight cancelled or delayed, so would they mind sending a train ticket? Well, yes, they could do that, and on Jan. 27, 1970, I was on by then-nameless Penn Central train No. 61 to Chicago, where I would change to the GM&O to St. Louis.

Of course, the weather wasn't really that bad, but I was going to a railroad job interview and doing it on a train. When I got to Chicago Union Station, I upgraded my GM&O ticket for $4.98 for parlor car seat 20 on train No. 3, the *Abraham Lincoln*. Never having been in a parlor car before, I tried to take in everything from the swivel chairs to the steward in his starched, white jacket taking drink orders from the dark-suited brokers and businessmen leaving the Windy City in pursuit of commerce.

Terminal Railroad Association SW1 No. 506 switches Penn Central coaches under the trainshed. Three photos, Kenneth L. Hojnacki

Business car *The Industrial Developer* brings up the rear of N&W's remnant of the *Wabash Cannonball* as it backs into the station.

It was dark as we left Union Station, so I saw little of the countryside. My fellow travelers were too ensconced in their Wall Street Journals and Chicago Sun Times to pay any attention to a kid looking very out of place in this world of first-class travelers. I stayed overnight at a hotel near the Missouri Pacific office building in downtown St. Louis and presented myself in my best (and only) Robert Hall suit the next morning.

I spent the morning with a personnel officer who explained the training program in more detail. I again talked about myself, my studies, my interests, and filled out many forms. From his questions, I began to get the impression they were looking for people with engineering or sales backgrounds and aspirations, but I indicated interest in the operations area. He arranged for me to have lunch with two young men who had been in the program for a couple of years, focusing on operations. It was interesting and enlightening hearing about their experiences. What struck me most were their comments about being assigned to numerous small-town locations throughout the South and the difficulty of fitting into those communities and local working groups.

The afternoon began with a meeting with the vice president of operations, since that was my area of interest. He talked for a long time about working in operations, the challenges that faced management, and the company's philosophy of providing transportation. He spoke of the difficult decisions a manager would face if a good customer had a car that needed to go into a particular train in order to reach its destination on time, but the car wouldn't be ready by the train's scheduled departure time. He noted he had to decide whether to delay the train and possibly cause other shippers' loads to arrive late or to incur the wrath of the good customer by releasing the train without the delayed car. Insert the death blow here.

Although I later realized he was not looking for any answer from me, I just couldn't hold myself back. I proudly stated that I would send the train out and deal with the customer later. The VP paused and looked sternly at me, then said that there were many factors to take into consideration, such as whether the crew was one that could make up time, if there were other trains that could forward the car, and so forth. The interview ended soon after that. I knew when I walked out of his office that my application was at that moment headed for the round file.

I dejectedly headed to St. Louis Union Station to wait for my return train home. I was originally scheduled to take *The Limited* northbound, but luck had run out there as well. Too late for that train, I ended up riding train No. 6, *The Midnight Special*, a one-coach, mostly mail train that left at 10:40 p.m.

The last Gulf, Mobile & Ohio *Midnight Special*, No. 6, arrives in Chicago, May 1, 1971. B.L. Bulgrin

To kill time before the *Special*'s departure, I was able to photograph the Norfolk & Western remnant of the *Wabash Cannonball* backing into the trainshed, along with some Missouri Pacific and GM&O trains.

The *Midnight Special* was anything but special. Feeling exhausted and downtrodden, I boarded the lone coach. There was no food service or other amenities, so I sat up for a while, then curled up in my suit on the coach seat and slept most of the way back to Chicago, where we arrived around 5:30 a.m. The trip to Syracuse on another nameless Penn Central train, No. 64, was uneventful and seeing my fiancé again helped ease the agony of defeat I was feeling. Sure enough, a few days later came the "too bad, so sad" letter saying I did not fit their needs but thank you for applying.

Sure enough, the very thing I tried not to do — come across as a know-it-all railfan — came roaring out to end all hopes of a railroad career. Slightly over a decade later, Missouri Pacific merged with Union Pacific Railroad but I was not to be part of that railroad renaissance. It would be four years after my unfortunate interview that I finally earned my only Railroad Retirement credits when I hired on to fire the Arcade & Attica Railroad's 4-6-0 No. 14 on its steam trains for three seasons. But where would I be today if only I had kept my mouth shut that fateful day in St. Louis? T

CUMBERLAND, COAL, AND DIESELS

An isolated, single-purpose mine railroad finds its way

Story and photos by William Beecher Jr.

Cumberland Mine's original locomotive, SD38-2 No. 22, wrestles its train out of the mine at Kirby with fresh loads for the dock at Alicia, Pa. I-79 is the closest thing to civilization, as the railroad twists and turns in remoteness, which completely avoids major towns in the area.


22

A Contura transportation employee carefully watches as the coal loader's loading shoot lowers and pours a smooth, even load into a slowly moving hopper. The crack of this car's springs groan as the load spreads like flowing water throughout the inside.

"BRAVE NEW ERA" was the headline in the January 1969 edition of TRAINS magazine. "Meet an unadulterated railroad," Editor David P. Morgan crowed with palpable enthusiasm as he described a new type of efficiency, using the age-old technology of steel wheels on steel rails. He was on point. Morgan's obvious affection for isolated systems called this anomaly, "A pure railroad, under no obligation to be anything but a railroad." His excitement and optimism for one of the nation's first unmolested systems were only a first glimpse of what the railroad transport model had the potential to become. Accelerating the idea were changes in U.S. environmental regulations and the Organization of Petroleum Exporting Countries oil embargo. They caused an enormous boom in U.S. energy production, particularly coal. By 1974, spot market shipments of U.S.-mined black diamonds had increased by as much as 150% delivered to steel and power generators. Rising costs and tightening supply of highly desirable low-sulphur

A frosty, cool, fall morning has this Cumberland Mine empty hopper set about halfway loaded. Contura's tipple and concrete clean coal silo are seen over the hillside. On a good day, the train will make three round trips.

coal, led the industry to seek new solutions to meet rising demand at competitive costs.

The transportation industry's solution was what editor Morgan called "robot railroads" — single commodity, geographically isolated, electrified, and greatly automated. Among them were Arizona's Black Mesa & Lake Powell and Ohio's Muskingum Electric Railroad. They captivated TRAINS editors and their audience alike, with massive efficiency and unbridled imagination. Unencumbered by complicated terminals, interchange delays, passenger losses, and even Federal Railroad Administration regulation, was this at last the future of profitable railroading? Sound operating practices, coupled with technology, proved their worth for the next several decades. They labored away, quietly doing what they were intended to do with little fanfare or attention. It was coal transportation's golden hour. What would happen after the turn of the century was beyond anyone's prediction.

All the capital outlay and ingenuity were not enough to overcome market trends of the early 2000s. The further tightening of governmental regulations of carbon emissions and the explosion of natural gas recovery through new methods, such as fracking, made coal less desirable for power generation. What started as a ripple became a flood as utilities dumped coal, causing prices and consumption to freefall. An early victim was Ohio's Muskingum Electric, which moved its last loaded hopper in early 2002. The Black Mesa & Lake Powell closed in 2019, and its owner is now dismantling the system. Yet with all the hoopla and fanfare of electrification and automation, another much simpler, geographically isolated, single-purpose railroad was constructed in the rolling hills of southwestern Pennsylvania, near Pittsburgh. This system has found a way to survive in this brave, new energy era. It's Contura Energy's Cumberland Mine.

STRONG AS STEEL

United States Steel has historically been the largest producer of steel in the nation. Yet by the latter half of the 20th century, only one third of U.S. Steel's profits remained in steel production. Diversification was the primary focus. A February 1974 Department of Interior release highlighted the construction announcement of a mine, dock, and support railroad in the 70-inch-thick Pittsburgh Seam located in the southwestern corner of Pennsylvania. Greene County, Pa., sits astride one of the most prolific bituminous coal seams in the country. Original contract specifics had U.S. Steel supplying 90 million tons of steam coal to Canadian utility Ontario Hydro at a rate of 3 million tons per year for a projected 30 years. The U.S. Steel Cumberland Mine was born.

Materials, equipment, right-of-way, and dock were acquired and completed in late 1976. The mine site was chosen southwest of the hamlet of Kirby, Pa. The large facility consists of a deep mine with two slopes and shafts connected by a conveyor and electric narrow gauge shuttle car system. Initially, three continuous miners were the primary method of coal removal but have been supplemented with long wall mining units as demand increased. These mining machines are extremely efficient and mine panel sections ranging from 3,000 to 24,000 feet in length. An interesting aspect of these machines is they allow the roof to cave in behind the equipment. The machine creeps forward toward the working face of the coal, protecting workers and equipment with hydraulic jacks. The cutter head moves horizontally along the working face or panel of coal being mined. Cut coal and overburden are then conveyed laterally toward the ends of the machine through a trough, where conventional tunnels then link production to the surface. A preparation plant was also constructed on site to handle coal cleaning and sizing. A concrete clean coal silo and modern 5,000 tons-per-hour unit train flood loader rounds out the mine.

Seventeen miles of newly graded right-of-way, with deep granite ballast, and 133-pound stick rail highlight a main line of obvious modern construction, winding and twisting through this bucolic corner of Pennsylvania that is characterized by wide valleys, streams, and small farms. The main line crosses no public roads at grade. Many bridges and several large cuts keep the grade to a minimum, which ends abruptly on the west shore of the Monongahela River, adjacent to the tiny town of Alicia, Pa. The operational headquarters for the railroad and river operations, the Alicia dock terminal is quite simple in complexity and application. Besides a few runaround tracks, a small, one-stall mechanical shop and sand tower handle all on-spot railcar and locomotive maintenance. A mobile office houses transportation management, and a dumper building connected by a concrete storage silo and related dockside loading conveyors, kept construction costs to a minimum.

Acquired new from EMD was SD38-2 No. 1, which arrived in an attractive, two-tone-blue-and-white paint scheme, as well as 60 steel five-bay rapid discharge hoppers in blue from Ortner Car of Cincinnati. Having a disconnected railroad presents

problems when it comes to taking delivery of new or replacement equipment. In this case, the area's hilly geography doesn't help either. As such, all new cars and locomotives are delivered across the Monongahela River on the former Monongahela Railway (now Norfolk Southern) East Division, disassembled, floated across the river to the Alicia dock, and reassembled on Cumberland Mine tracks. Full operation by U.S. Steel began in November 1976 and has run continuously through the current day under several corporate flags.

WHAT'S IN A NAME?

Economics and company focus in the halls of U.S. Steel's Pittsburgh headquarters eventually put the Cumberland Mine, railroad, coal contracts, and dock assets up for sale. AMAX Coal bought them in May 1993. As a rule, owning coal assets and contracts is historically a volatile business practice as companies buy and sell these assets to leverage advantage in this competitive marketplace. Cumberland was no exception. AMAX was quickly merged with Cyprus minerals. A subsequent sale and bankruptcy later landed Cumberland in the Foundation Coal Holdings, followed by Alpha Natural Resources, and finally Contura Energy.

The largest producer of thermal low sulphur coal in the Contura portfolio, Cumberland was the 29th largest producer of tonnage in the nation with 650 million tons of proven recoverable reserves, even after 42 years of active operation. Contura employs 750 people at the operation, of which 650 are in coal production. Miners and railroad personnel are represented by the United Mine Workers of America, shipping annually about 5.6 million tons. Contura has further expanded Cumberland's global reach by acquiring the LaBelle River & Rail Transload up stream from Alicia, which allows coal to be transloaded from barge back into railroad hoppers connected to the U.S. rail system via CSX and NS.

DAILY GRIND

After 42 years of constant operation and added tonnage, Cumberland Mine is busier than ever. A complete replacement of hoppers has brought various lighter aluminum hoppers, lettered CMYX and OFOX, to the system, as well as two additional locomotives. First an additional EMD SD38-2, No. 22, was acquired from another AMAX property, Yankeetown Dock. And most recently a Dash-2-upgraded SD40 of Southern Pacific/CITX heritage, No. 3098, began life as SP No. 7330. All three wear a simplified blue and white adorned with heralds and American flags as their paint scheme.

Straightforward is a great way to describe operations. U.S. Steel No. 1 used to lumber out of Alicia solo with 25 or so hoppers and run around at either end of its trip and repeat, which became more time consuming as demand increased. To speed up

New kid on the block is No. 3098. The engine started life as Southern Pacific No. 8477 in 1966, then became GCFX, then CITX 3098, leased to CSX and then Canadian Pacific, before being taken apart on the NS and trucked here and reassembled by Hulcher.

No. 22 eases ahead one car length at a time under remote control, unloading 4,100 tons of coal in about an hour at Contura's Monongahela River transloaders dump-house in Alicia, Pa.

This is Contura's Alicia Dock. The Monongahela Railroad's (now Norfolk Southern) East division/ Loveridge secondary main line is on the east side of the river, and is as close to the outside world as Contura's railroad comes to the greater U.S. system. Gray's Landing Lock is also seen as well as the exhaust of customer Mon Power's Fort Martin Power plant.

operations it was decided to remote all locomotives with a Locotrol/RCO system and run trains in a push-pull fashion, negating the timely runaround and adding additional cars to the active trainset consisting of 37-40 hoppers, which seems to fit the current mine/railroad/dock demands. Contura's manpower requirements run the operation with three 10-hour shifts, giving flexibility of an hour overlap for operational issues and maintenance at the beginning/end of the shift. Loading and unloading is a delicate balance, dictated by barge availability and production. There is no ground storage at the dock, so timing is key through all facets of production and transportation. A second train can be run when balance is off or demand is high. Called "the short set" by the crews, the SD40 with its added horsepower seems to draw this assignment solo more often than not with 27 cars. This trainset is also staged loaded when not being used at the dock to protect high demand or maintenance requires this reserve tonnage.

A normal morning finds the day-shift engineer relieving the inbound third shift on fresh loads, at the dock in Alicia around 9 a.m. It's here the engineer/operator will take over at the dump house, spotting the lead car with the remote-control belt pack in the dumper house. With a crack of a ratchet, the air-powered bottom-dump hopper practically springs off the rails as the extreme weight is released out the bottom and off of its compressed trucks. Careful to make sure the dumper bin has devoured the entire hoppers contents only takes a minute or two, another quick turn of the control rachet and the bottom doors seal back shut. Carefully, the trainset is eased forward one car length at a time and repeated. Unloading generally consumes about an hour under normal conditions. The rear locomotive soon becomes the lead locomotive and the empty train departs for the mine at Kirby.

Cumberland's crews run the train conventionally behind the control stand between dock and loader and return like any other Class I railroad engineer does. An interesting aspect of today's engineer's qualifications is that he can also run a continuous miner or longwall unit 5 miles underground as well as the EMD, which he faces — talk about qualifications! Today's engineer has run a miner underground for Cumberland for many years, and bids train operations and hours like any other mining job in

No. 22 pulls a Cumberland Mine train into the loader. The train will soon inch along to fill, a process that will take about an hour. The operator will set up the train to run from the opposite end. Eight round trips are made in a 24-hour cycle under the current production schedule.

The last car has been loaded and is now the head car, Contura's large blue flood loader straddling the head car of the Cumberland Mine train is ready to convey 4,100 tons of black diamonds back to Alicia for dumping, and so the cycle goes.

Contura's operation. All locomotives face east, so empty trains always operate long hood forward. The engineer calls out his departure from Alicia on radio, and the train accelerates to the 25 mph maximum over smooth jointed rail. A generous cut negates a large tunnel at MP 13 (measured from the mine) and is the scenic highlight of the line. A talking detector at MP 7.5 gives a "no defect" read out, via radio to the engineer. The railroad gently winds along Whitley Creek and past an ancient covered wooden bridge near Garards Fort. This is backwoods railroading. The lead SD38-2 barks underload through the I-79 tunnel and sounds great, as the long hood swings around another broad right-hand curve. The town of Kirby, the only town of significance along the line, consists of a church and few well-kept houses. The 17 miles click by in about an hour as the train rolls up to the Kirby flood loader.

The engineer spots the head car under the loading chute and assumes his position in the loader control room with his belt pack controller cut in. The loader is fully charged, and the loading chute is lowered above the hopper top, and loading commences. With one hand on the loader controls and one on his belt pack, the train is inched along, uniformly loading each hopper. 4,100 tons is the full output of a loaded train, which takes an hour to fill. Soon the trailing locomotive is now the lead locomotive, the operator sets up his now short hood-facing controlling EMD and is back on the move with another loaded train. Eight round trips per 24 hours is optimum for Contura's current production schedule.

MULTI-MODAL AFFAIR

Since Cumberland's conception, U.S. Steel has had the ability to control most of its external costs, through a large family of U.S. Steel-owned businesses, mainly in transportation. It was only natural to exploit excess capacity in these other divisions and is quite a lesson in multimodal interline transport. Take the Ontario Hydro contract as an example. Coal was routed into U.S. Steel-sponsored barges, dumped on U.S. Steel's domestic coal distribution dock at Duquesne, Pa., loaded into U.S. Steel-owned Union Railroad coal trains, interchanged with sister road Bessemer & Lake Erie and hauled to the Great Lakes, dumped at the U.S. Steel-owned Conneaut Dock Great Lakes coal pier, loaded into U.S. Steel Great Lakes fleet boats, and backhauled to coal consumers in Canada (among others). This lowers the costs for all these operations with a steady backhaul. Further, some of the energy produced was consumed at the U.S. Steel Stelco Mill in Hamilton, Ontario. After the sale to AMAX, Cumberland Mine changed its focus as the Ontario Hydro contract played out. The mine started supplying coal to many local consumers like the APV Hatfield Generation station in Masontown, Pa., and FirstEnergy's Fort Martin Power Station in Maidsville, Pa. Most recently, the global reach of Cumberland's tonnage expanded greatly with Contura's purchase of the Labelle River Transload at Brownsville, Pa. It supplies international customers via the ports of Baltimore or Lamberts Point via CSX or NS. That tends to be the direction of a lot more future production, as local consumers change to natural gas or older plants close. A 2019 Contura conference call with investors highlighted the recent move of a longwall mining unit to a new district in the mine, and sale of 97% of 2020's tonnage at around the $56 per ton range, which will keep coal trains running well into the future.

And so it goes, almost every day of the year, slowing only for maintenance, using rails and wheels to maximum effect. Cumberland Mine continues to do what others have not. Morgan would be impressed and pleased. T

A HAT TRICK PLUS ONE

IN THE INTERNET AGE, each railfan is looking on his or her computer or phone for the next great shot. Some type of "heritage" or otherwise special locomotive is leading a train, and a flurry of emails and text messages goes out. Often, a precision strike is made, taking the railfans away from home (or work) just in time to intercept the special whatever, and then return to their lives.

Yet, the best opportunities come when we least expect them. This means spending time by the tracks, photographing whatever comes by in the conditions of the moment. There is no heads up for this type of experience.

Take, for instance, this January 2018 shot of four moving trains. Two westbound Union Pacific freights came through Rochelle, Ill., which bills itself as the Hub City for its rail and highway connections, while a third eastbound train eases into the Global III intermodal yard on the west side of town. Three trains in the frame is a hat trick, to borrow from hockey.

The stack train on the left, running "wrong main" in this former Chicago & North Western territory, clearly doesn't have work at Global III on this day. The freight in the middle has his lights dimmed, preparing to stop a mile up ahead if the train at right entering the yard hasn't cleared up yet.

But, if you're paying attention, there's another train in the frame. On the horizon is an eastbound BNSF Railway intermodal accelerating toward the now-clear diamond in town. There's our "plus one."

This type of score doesn't come from your railfan network. It requires being there in the moment, poised, ready for any shot that comes your way.

Keep your stick on the ice. — *Brian Schmidt*


Y078
1/2

Late at night in a Southern Railway engine terminal: These Geeps are idling in Greensboro, N.C. Two photos, Mike Small

BLOWING SMOKE IN THE CRESCENT CITY

An unconventional test for air leaks late one night

by Charles Powell

IN APRIL 1980, I became the Southern Railway's mechanical supervisor for locomotive servicing on the second shift at Oliver Yard in New Orleans.

For an ex-management trainee who didn't mind getting his hands dirty, New Orleans was a great assignment. In most places, a company supervisor was limited by union agreements as to the work they could perform. But at Oliver Yard, there were no machinists, electricians, pipe fitters, or blacksmiths. We had union service attendants who did the fueling and servicing of the locomotives. The rest of the work was done by the mechanical supervisor with assistance from a service attendant or carman if heavy lifting was involved.

At most small terminals on the Southern, locomotive repair work was limited, as most of the roundhouses had gone the way of the steam locomotives. New Orleans, at the far southwestern end of the railroad, still had a shop with a drop table and overhead crane, so we did all but the heaviest repairs to our assigned yard engines. We typically had around eight yard engines on hand, usually a mixture of MP15s, GP7s, and GP9s. The older GPs were on their last rodeo at New Orleans and showed their years of service.

One of those engines was GP7 No. 8252, which I found looking at me from outside the shop office upon my arrival at 2:30 p.m. The general foreman was standing by to give me my evening marching orders. "We had to take the 8252 out of

service today because it has a 6-pound brake-pipe leak, and I have been over it all afternoon and can't find the leak."

The locomotive brake system's pressure-maintaining feature was designed to maintain the brake-pipe pressure throughout the train with a maximum leakage of 5 pounds per minute per FRA regulations. You checked this by cutting out the pressure feed valve and then watching the needle on the brake-pipe gauge to see how much pressure would leak off in one minute. No. 8252 was losing 6 pounds a minute; it would have been really interesting to see the drop if it was coupled to a train.

Finding these leaks on a locomotive was done by pressurizing the brake pipe with the engine shut down as it could be hard to hear otherwise. In a confined area with lots of piping, it also might take a squirt bottle of soapy water to spray on the pipe fittings and look for the connection that blows bubbles. Apparently, neither of these methods had worked, so the general foreman gave me instructions on a novel way to find the leak. It was one we were not taught in the Southern's thorough management trainee program.

"Put a brake pipe glad-hand fitting (what railroaders call the connection on the end of the train brake-pipe hoses) on the shop air hose so you can connect the shop air to the hose on the end of the locomotive. Before you hook them up, unscrew the air hose out of the angle cock (the valve on the brake pipe on each end of a car or locomotive), open the angle cock, light a fusee (what railroaders called flares), stick the burning fusee in the angle cock, slide the train line hose over the fuse and screw it into the angle cock. Then hook up the shop air and blow smoke through the brake pipe and look for where it comes out!"

My jaw dropped as I asked myself, "What did I just hear?" The fumes from the burning phosphorus of a lit fusee were pretty harsh, and I could imagine that they might work a number on the rubber gaskets and finely machined components inside the brake valves.

"Are you kidding me?" I responded. The general foreman swore that he had used the trick many a time when he worked in Birmingham, Ala. Shaking my head, I said I would give it a try; after all, he was the general foreman and his initial seniority date on the railroad predated my birth by several years.

I proceeded with my normal duties, which was to go to the engine service track and inspect the yard engines before the second-shift crews went on duty. After finishing that and getting a lineup from the yard tower on when the inbound trains were expected to show up, I went back to the diesel shop.

Late at night, in the late 1970s, Southern Railway first- and second-generation Geeps mingle in the fuel tracks at Greensboro, N.C., in a set-up not unlike the one the author had in New Orleans.

The master mechanic was still in his office, so I stuck my head in and told him of the test I was going to perform. Like me, he shook his head and said, "I have to see this to believe it."

The shop had platforms level with the running board of the locomotives and a pit underneath to access all of the equipment of the running gear. I went down into the pit and got a standard train line end hose and a pipe union and connected that to the end of the hose coming from the shop air supply.

I then unscrewed the hose on the end of No. 8252, popped off a fusee, stuck it as far as it would go into the open angle cock, and carefully slid the air hose back over it and screwed it into place. I then hooked the shop air to the end hose of the 8252 and cut in the air.

I GRABBED A WATER HOSE TO EXTINGUISH THE BURNING AIR HOSE AS MY HEARING CAME BACK AND THE GAGGING STOPPED.

I could hear air flowing through the hose into the locomotive, so I started walking to the opposite end to open that angle cock to confirm smoke was flowing through the pipe, and I would then go under the locomotive and start looking for blowing smoke. I was about halfway back when an ear-splitting boom occurred and I was instantly enveloped with thick, black smoke and the foul-smelling scent of burning rubber! I stumbled back to cut off the shop air as the end of the air hose was twirling through the air, whipping wildly.

With the air off, I grabbed a water hose to extinguish the burning air hose as my hearing came back and the worst of my gagging stopped. I looked up to the master mechanic who had been watching this operation from the shop platform at the end of the locomotive. He was leaning back against the wall with his handkerchief out cleaning the soot off of his glasses. "Are you sure he said this would work?" the master mechanic asked.

"'Done it many a time at Birmingham,' he told me," I responded. We both shook our heads in disbelief.

After washing the soot off of my face, I picked up and trashed the burnt hose and replaced it. Then I pumped the air system up and started to listen as I worked my way under the locomotive. In minutes, I found the leak and proceeded to correct it. I was amazed that the general foreman had missed it.

Later that evening, I spoke to the second-shift supervisor across the yard at the carshop and told him what had happened. After he stopped laughing, he said that was the craziest thing he had ever heard.

The next afternoon, I reported the results of my adventure from the previous night to the general foreman. He swore that trick had never failed him. When I told him all I did was listen to find the leak, he responded that after nearly 35 years working around railroad equipment, he guessed his hearing wasn't what it used to be. I can now say that after finishing my 38-year railroad career that my hearing is not as good as it once was. My wife will attest to this. T

CHARLES POWELL is retired from a career with SR, Norfolk Southern, and the Association of American Railroads' research lab in Pueblo, Colo., the Transportation Technology Center. He served as the engineer for SR's Best Friend of Charleston *steam locomotive and train replica in the 1980s.*

April Fool's Day and a tank Mallet

An apparition appears from the fog

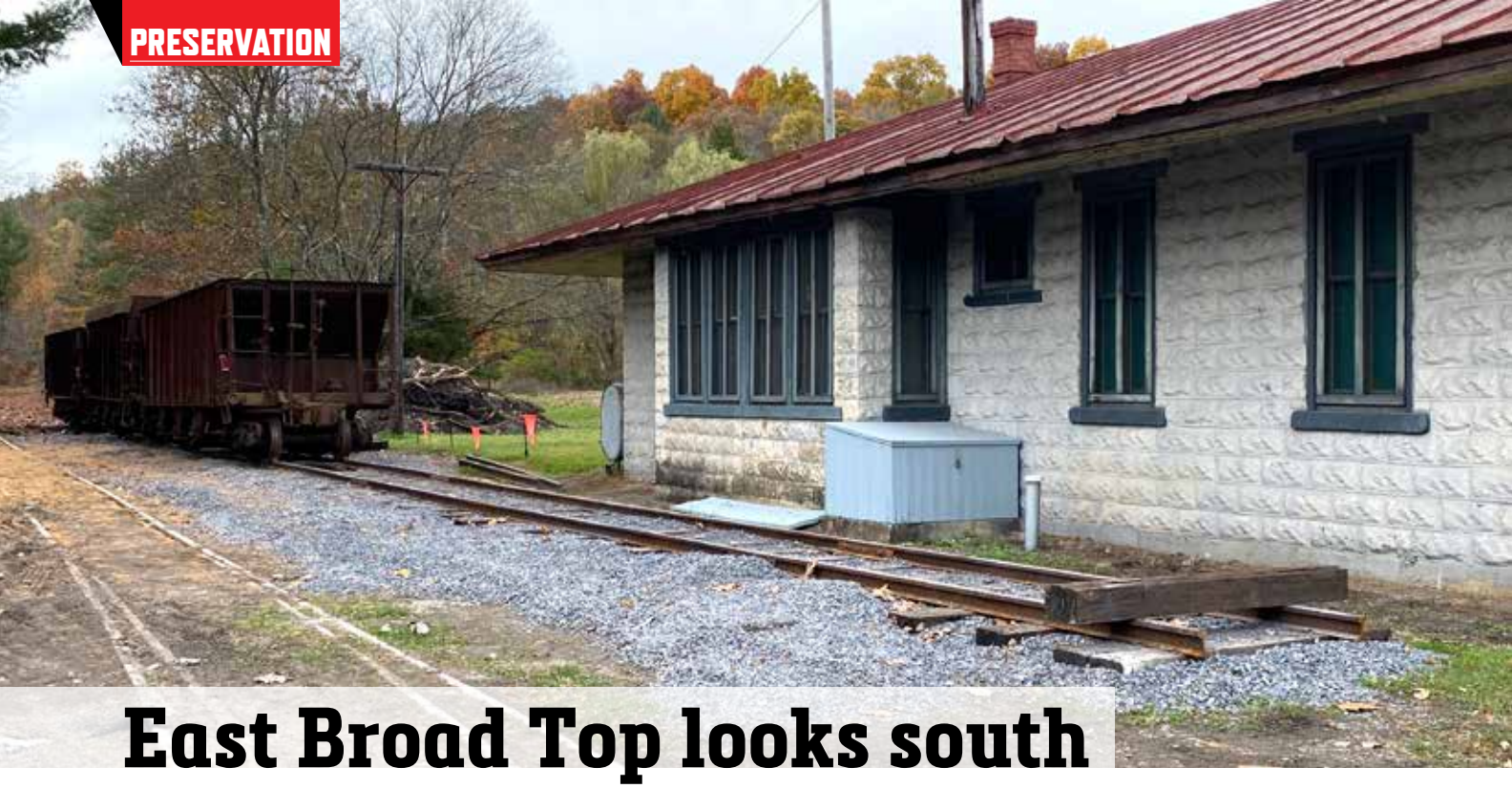
by J.W. Swanberg

IN THE SPRING OF 1964, I photographed and rode Klickitat Log & Lumber's Shay locomotive No. 7 in Washington state during its final days of operation. This was long before the internet, but I ran into some Canadian fans who advised that Rayonier was still operating steam logging trains at a place north of Hoquiam called Railroad Camp, so I headed there the next day. On the foggy morning of April 1 (no fooling!) I found two Rayonier compound articulateds steamed up at Railroad Camp: One was the fairly conventional 2-6-6-2 No. 38 (ex-Sierra Railroad), while the other was also a 2-6-6-2, but it had a large split tank on its boiler, and it also had a slope-backed tender, so its Whyte wheel arrangement classification was 2-6-6-2T+T. Usually, we think of tank engines as small creatures puttering around factories or as shop goats, but No. 111 was a big tank engine indeed.

Rayonier mainly used ex-Southern Pacific Baldwin diesel road-switchers out of Railroad Camp in 1964, with No. 38 kept in steam as a standby. No. 111, though, was more active and was used two or three days a week on a branch where the track was too poor for the diesels. Soon, the engine coupled on to a string of empty log cars, whistled off, and headed tender-first up the branch in the fog. I drove part way in pursuit, but the dirt logging roads were so bad that I decided to wait for No. 111's return, because then she would be stack-first with a loaded log train. Thankfully, the sun came out and burned off the fog, and soon I heard No. 111's tuneful whistle, and this veritable apparition from the past steamed toward me out of the Douglas firs. I chased the train back to Railroad Camp, where No. 111 spent an hour or so switching, allowing for more photos. I also asked the friendly engineer for a cab ride, and despite her trailing truck, the 111 was a rough-riding machine.

Rayonier's steam log trains were indeed a fly in amber by 1964, and No. 111 amazingly continued running until 1967. Sold to tourist railroad California Western in 1968, No. 111 was rebuilt as No. 46 with a larger tender, but unfortunately her saddle tanks were removed, so it became just a 2-6-6-2, losing her "T." California Western stopped steam operations in 1981, and No. 46 was donated in 1984 to the Pacific Southwest Railroad Museum in Southern California, where this engine awaits restoration.

Rayonier tank Mallet No. 111 enters Railroad Camp, Wash., with a train load of logs on April 1, 1964. J.W. Swanberg



East Broad Top looks south

Restoration organization looks to add track, reopen long-abandoned Joller branch

▲ **Three EBT hoppers sit on a freshly graded section of narrow gauge track at the Robertsdale, Pa., depot as a symbol of the railroad's interest to return to its historic southern terminus.** Lawrence Biemiller

THE NONPROFIT ORGANIZATION that owns the East Broad Top Railroad is considering rebuilding a mountainous branch line that's been inactive since the 1940s, a move that would provide spectacular ridgetop vistas and increase the number of destinations available to visitors.

The nonprofit EBT Foundation Inc., owner of the historic narrow gauge line in south-central Pennsylvania, is considering revival of a 2.5-mile-long branch known variously as the Coles Valley Branch, Midvalley Branch, or Joller Branch, Joller being the postal designation for the former mining community at the top of Wrays Hill. Perched at an altitude of 1,600 feet, the town was named for the first and last letters of the name of a mining operator there, John Miller. Both deep and strip mining eventually played out, and reclamation projects have erased most of the evidence of structures that once stood on the site.

The 275-foot Pogue bridge, located 3 miles south of Rockhill Furnace, Pa., was found to be in good condition after inspection. Dan Cupper

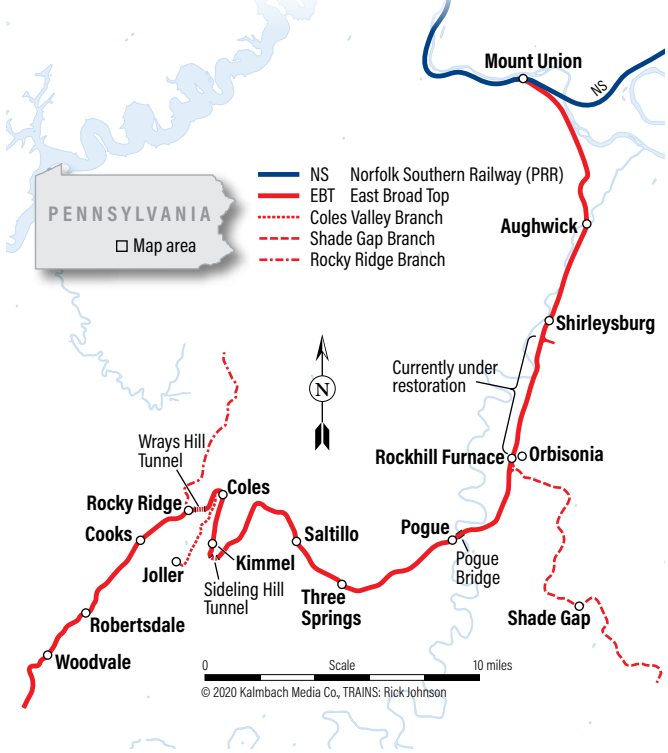
The foundation is working to restore the tourist-era portion of the main line about 4 miles north of its headquarters at Rockhill Furnace (elevation 630 feet, and adjacent to Orbisonia), to a wye and picnic area at Colgate Grove, but the more scenic part of the line lies in the mountains south of there.

Foundation Chairman Henry Posner III revealed the Joller proposal during a Friends of the East Broad Top virtual reunion in October. This is the first time plans have been discussed that involved a location other than along the 32-mile-long main line of the EBT. The foundation owns the southernmost 27 miles of the main.

The foundation board hopes eventually to reopen the line to its southern end at Robertsdale/Woodvale as it was when the railroad ceased common-carrier operation in 1956. To that end, the railroad has relocated three EBT steel hopper cars to Robertsdale to signify its interest. But Posner believes that offering multiple rides and destinations increases interest and opens opportunities for greater tourism investment.

He cited the Harz Mountain narrow gauge railroad in central Germany as an example where tourists engage in multiple-day stays, spending money in hotels and restaurants. "The East Broad Top can be a driver of tourism that is good not just for the towns but for the region," he says. "We want to appeal to as broad a range of people as possible, to give people a reason to stay and boost the local economy."

"When Henry mentioned Joller, there was a great deal of enthusiasm from the Friends of The East Broad Top," says EBT Communications Manager Lawrence Biemiller. The 1,300-member, nonprofit Friends group has been instrumental in restoring buildings and rolling stock, a role for which Biemiller described the railroad as "deeply grateful." The Friends group maintains the Robertsdale station and



recently announced an $86,000 grant to the foundation to restore the carpenter's shop that is part of the historic Rockhill Furnace shops complex.

The Foundation is still shaping its master plan, which includes numerous options without timelines, all of which will depend on funding. Joller is a possibility as an interim destination before restoring the railroad all the way to Robertsdale/Woodvale because of the condition of the Wrays Hill Tunnel, one of two mainline tunnels that would require work to clear. Foundation General Manager Brad Esposito says the other tunnel, Sideling Hill Tunnel, would require "moderate" work to reopen, but Wrays Hill would take "extensive" work. The Coles Valley Branch leaves the main line at a point between the two tunnels, just south of East Broad Top's own version of Horseshoe Curve.

Thus, the railroad could, if funding allowed, reopen its main line southward from Rockhill Furnace to Joller via the less-difficult-to-restore Sideling Hill Tunnel. Reopening Wrays Hill Tunnel and extending operations to Robertsdale/Woodvale could be a longer-term project.

When the foundation board began looking at options, Esposito noted the railroad still owned the Coles Valley Branch right-of-way "in fee simple," though the track had been removed in the 1950s. That is not the case with other former EBT branches, such as much of the Shade Gap Branch, where abandonment allowed landholders to reclaim the property from easements granted by the original owners.

Esposito says the foundation has conducted preliminary engineering inspections of all bridges and tunnels, including the largest span on the line, the 275-foot-long Pogue Bridge, located 3 miles south of Rockhill Furnace. Bridge inspections turned out better than expected, he says, meaning that reopening the line and rebuilding the Coles Valley Branch becomes feasible, given enough money to pay for it. — *Dan Cupper*

South portal of EBT's Sideling Hill Tunnel, which would be reopened to provide access to the Joller Branch. Dan Cupper

STEAMING THE LAST BALDWIN

A face only the C&O could love is back

THE LAST BALDWIN steam locomotive has its face on again. Crews working on Western Maryland Scenic Railroad 2-6-6-2 No. 1309 at the shop in Ridgeley, W.Va., have completed the iconic front end of the articulated. With two cross-compound air pumps mounted on the front of the smokebox, centered bell hanger, and low-mount headlight, it is classic Chesapeake & Ohio steam. The restoration effort is nearing its completion with the installation of the main rods and the completion of the backhead. A firing table from sister No. 1308, on display in Huntington, W.Va., was borrowed for a pattern and so that testing of No. 1309 can take place this fall.

Once completed, the locomotive will be the largest Mallet operating in the world and the largest and only articulated operating in the eastern U.S.

TRAINS readers have made it possible to steam the last Baldwin for the first time since 1956. Thank you for the donations you've given in the past nine months, including $50,000 from the John Emery Rail Trust. Because of you, work resumed and is nearing completion. The focus now is on raising a final $75,000 to cover the cost of the new firing table, coal for test runs, and labor. If you've already donated, please consider another contribution to cover these costs. It's not too late for first-time donors, either. To help meet these goals, go to www.wmsr.com/1309 or mail a check specified for 1309 to Western Maryland Scenic Railroad, P.O. Box 1168, Cumberland, MD 21503. — *Jim Wrinn*

WMSR: Josh Scott

Hot spot: NS Southern East District

This scenic line is not the Indiana you've probably envisioned

▲ **A Norfolk Southern freight rolls west past a pond near Kyana, Ind. Much of the line is near state Route 64 and easy to explore.** Three photos, Bruce Stahl

LOCATION Norfolk Southern's ex-Southern Railway route between Louisville, Ky., and St. Louis, Mo., is full of surprises. The line, now called the Southern East District, has unexpected scenery as one follows the tracks through Southern Indiana, especially between New Albany, across the Ohio River from Louisville, and Huntingburg.

Railfans can follow trains using state Route 64 the entire way. Road traffic is usually light, and there are plenty of places to park along the route. (Be warned: If you venture west from Huntingburg, you may run into coal truck interference, as this area is often congested.) If you enjoy exploring new lines, this is an excellent one to visit as you travel through towns of various sizes dotted throughout Southern Indiana.

TRAIN-WATCHING: The Southern East District is alive throughout the day. Coal drags, auto rack trains, and manifest freights are the frequent stars of the show. Because it is single track, trains tend to run in groups. There are various slack times during

A westbound freight passes St. Anthony, Ind., in July 2020 with EMD SD70ACe No. 1006 leading. The trailing freight cars look like a snake cresting the hill. The white milepost denotes 206 miles from St. Louis.

An eastbound coal train navigates a deep rock cut under Tunnel Hill Road Bridge east of Depauw, Ind. The former Southern Railway route links Louisville, Ky., and St. Louis, Mo.

the day, however.

The line offers some great locations for photography. Top on the list is the deep cut at Tunnel Hill Road east of Depauw, where a daylighted tunnel puts today's trains in a deep rock cut. Other highlights include a concrete trestle in Georgetown, dramatic curve in Ramsey, and westbound climb into Eckerty. You can't go wrong exploring on your own; all of the towns along this route have something to offer.

If you like to pace trains, this is the line for you. Pacing westbounds from Birdseye to Huntingburg works well and can be done safely in a leisurely manner.

NS connects with the Louisville, New Albany & Corydon at Corydon Junction, DuBois County at Huntingburg, and CSX Transportation at New Albany. There is a second NS line that runs from Huntingburg south to Evansville and other points on the Ohio River.

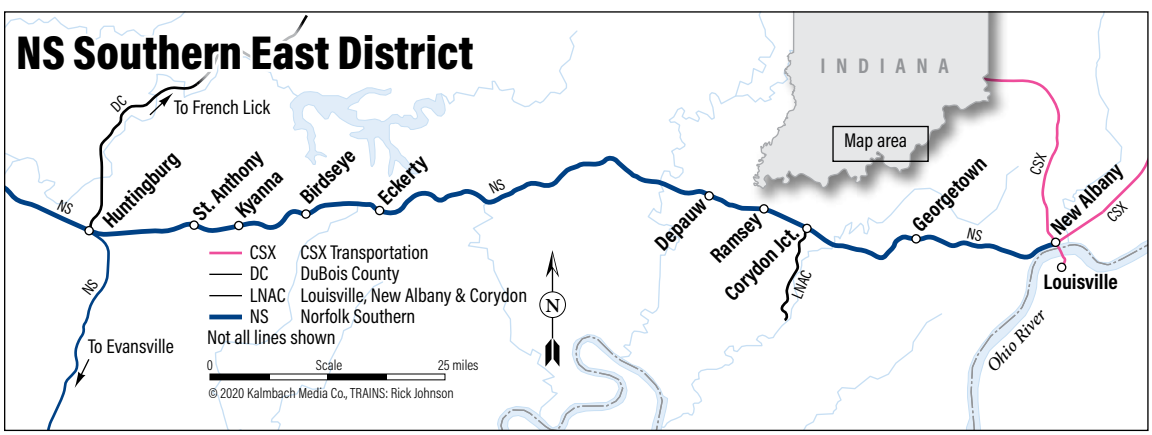
RADIO FREQUENCIES

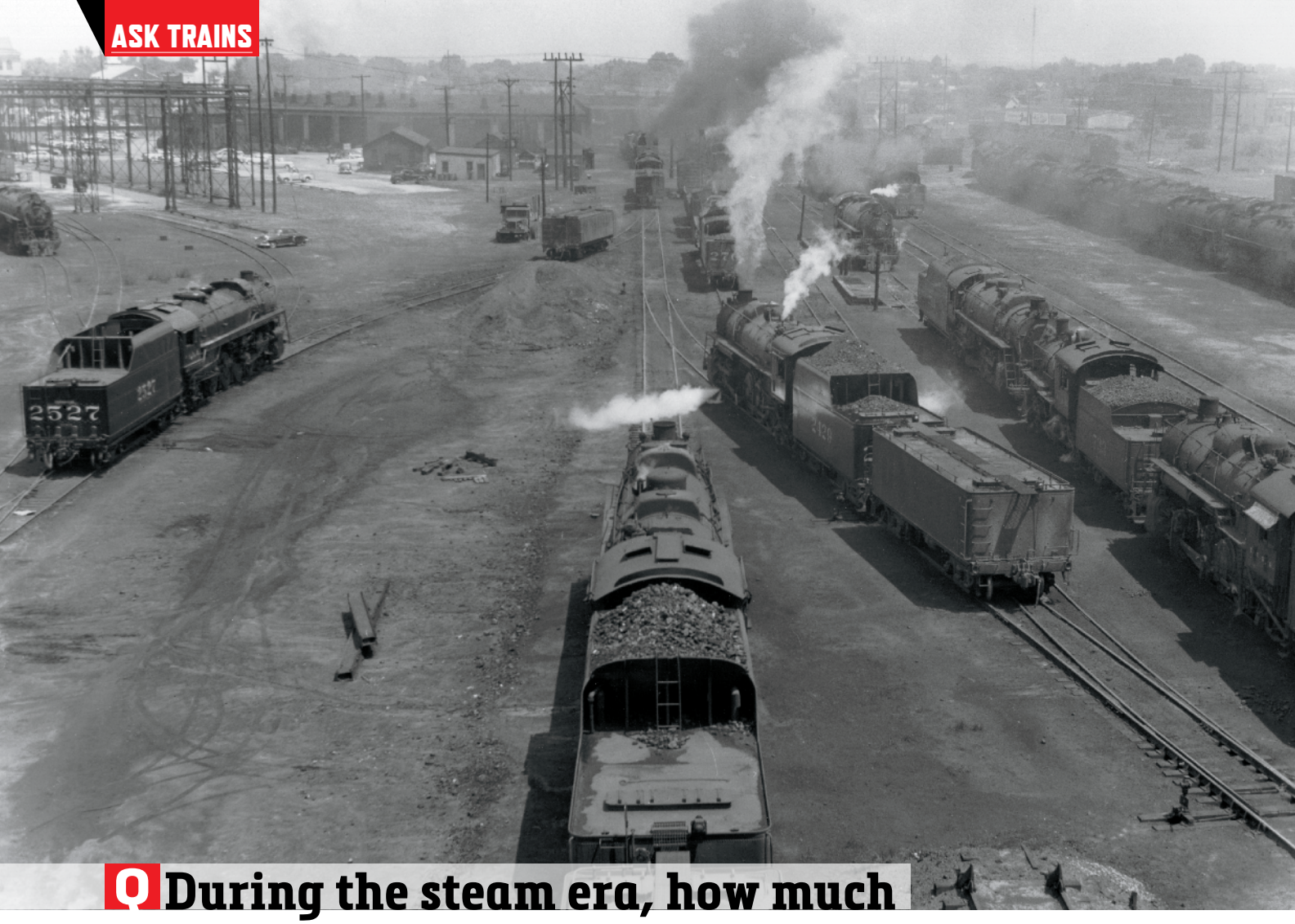
NS road, 161.295; NS dispatcher 161.445.

WHAT'S MORE

Southern Indiana offers great outdoor experiences. If you like fishing, boating, or watching eagles, try Patoka Lake north of Birdseye. Spelunkers will enjoy Marengo Caves National Landmark, located on Route 64 in Marengo. Just east in Milltown, visitors can raft on the Blue River.

North of the line, one can visit French Lick and Jasper, which both sport their own excursion train operations. You can even ride a trolley at the French Lick Resort & Casino. Neighboring West Baden is home to the West Baden Springs Hotel with its classic rotunda. Finally, if in Jasper, try the Schnitzelbank Restaurant for hearty German fare. — *Bruce Stahl*





Q During the steam era, how much of the fleet was available?

– Mark Stauter, Rolla, Mo.

▲ A yard full of steam power inhabits the engine terminal and roundhouse area at Paducah, Ky., on June 3, 1956. This important shop town on the Illinois Central on this Sunday morning had no fewer than eight locomotives in steam that are visible in this image. More are stored at right. And inside the roundhouse ahead, many more are seeing maintenance. Robert Malinoski; Louis A. Marre collection

A In the days of steam (let's say 1900 through 1955), railroads large and small had an immense infrastructure with hundreds of thousands of skilled and unskilled railroaders dedicated to keeping steam locomotives in service at maximum efficiency. By federal law, every steam locomotive had its boiler washed out to remove sediment every 30 days, and there was a detailed regime of regular inspections and repairs.

Steam locomotives have always been high-maintenance machines. The figure varied by type of locomotive and its service, but a working engine might spend an hour being serviced or in the shop for every few hours it was out on the road. Yard engines needed less attention. Mainline engines needed more, and there was an elaborate system of inspection, reporting, and repair dedicated to keeping these surprisingly fragile and persnickety machines in good order. That is partly why diesel locomotives so quickly replaced steam.

On most large railroads, every steam locomotive underwent heavy servicing and sometimes rebuilding every few years. That was because locomotives had so many wearing parts. Keep in mind that there were tens of thousands of steam locomotives in operation, and hundreds of shops doing this kind of ordinary maintenance work. Things are different now.

When a large railroad had 1,500 or 2,000 steam locomotives in service, it might have had 10% to 20% of its fleet in a shop somewhere undergoing major or minor maintenance. Today with tightened federal regulation and a vastly reduced

▶ Inside the massive, cavernous backshop of the Illinois Central at Paducah, Ky., locomotives undergo heavy repairs. Some lines saw 10% to 20% of their fleets in shops at any time. IC

workforce of steam-locomotive specialists, it is hard to keep individual engines in service. For every hour a steam locomotive operates today, it may require another 10 hours in the shop, including the federally required inspections and routine servicing. It is the same for classic World War II combat aircraft or ships.

It all comes down to money — to pay skilled craftsmen, shop costs, insurance, and the other expenses associated with archaic technology. It is mildly astonishing that so many steam locomotives remain in service. Ride behind them while you can. Their continued operation is never a sure thing. — *John P. Hankey, historian, noted author, and frequent* TRAINS *contributor*

More on this: All railroads maintained their steam locomotives at repair facilities, generally referred to as shops. These were purpose-designed structures, which were well laid out for an efficient flow of work from stripping to final reassembly and testing. They were equipped with all the machines and cranes necessary for the various tasks, including machines for which there was no purpose other than steam locomotive repairs. The shops were staffed by machinists, boilermakers, blacksmiths, pipe fitters, sheet metal workers, carpenters, electricians, painters, helpers and apprentices, all of whom were trained either in trade schools or by the railroad itself, oftentimes through apprenticeships, some of which lasted years. Their activities were directed by the railroad's motive-power department, which included mechanical engineers, draftsmen, superintendents, and foremen. A purchases and stores department made sure that sufficient tools and parts were kept on hand to meet the daily and long-term needs.

The condition and inspection of the locomotives was under the jurisdiction of the Interstate Commerce Commission, which later became the Federal Railroad Administration. In 2000, the FRA updated the ICC rules. The latest rules can be found in 49 CFR Part 230. In many ways, they are less stringent than the old rules.

The railroads were responsible for maintaining enough of their locomotives to cover their operations. In August 1939, the Denver & Rio Grande Western's Salt Lake Division was assigned 108 locomotives of which 80% were serviceable, 7% in the shop (a Class 3 repair took about one month, a Class 4 repair took two weeks). Class 6 repairs, including boiler washing, were done at the various roundhouses to which the locomotives were assigned. 10% of the locomotives were awaiting shopping, so about 20% of the locomotives were being repaired or waiting for repairs. — *J. David Conrad, retired chief mechanical officer, Valley Railroad Co.*

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3. By mail	378	371
4. Outside the mail	38	0
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f. Total distribution (sum of 15c and 15e)	72,498	70,828
g. Copies not distributed	26,836	25,040
h. Total (sum of 15f and 15g)	99,334	95,868
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16. Electronic copy circulation		
a. Paid electronic copies	2,133	2,029
b. Total paid print copies and paid electronic copies (sum of 15c and 16a)	74,216	72,486
c. Total print distribution and paid electronic copies (sum of 15f and 16a)	74,631	72,857
d. Percent paid (both print and electronic copies) (16b divided by 16c times 100)	99.44%	99.49%

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Little engine, mighty army

Cenex Harvest States workers use compressed air from SW1 No. 200 as they clean switches within the complex of grain elevators on the St. Louis River at Superior, Wis., on a snowy Dec. 28, 2015. Little engines like this one do a lot of work that's often unseen. Steve Smedley


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Tucking tail and heading for home

Union Pacific's former Southern Pacific rotary snowplow No. 222 is westbound at Casa Loma, Calif., heading back to Roseville after having crank shaft issues. The image was made Feb. 28, 2018.
Ryan Clark

Plow extra in New England

A Pan Am Southern plow extra, running with a pair of book-ended ex-Boston & Maine double-track plows, is seen approaching Charlemont, Mass., on Feb. 10, 2015. Kevin Burkholder

Pushing and pulling

The San Juan Mountains that border Colorado and New Mexico have been famous for their snow. In preservation, Cumbres & Toltec Scenic 2-8-2 No. 489, with a snowplow on its pilot, leads a flanger train at Sublette, N.M., on March 7, 2015. Historic Transport Preservation organized the trip. Chris Webster

Meanwhile, back at the ranch

A pair of BNSF Railway SD40-2s, Nos. 1963 and 1972, push a spreader around the wye at East Glacier Park, Mont., on Dec. 26, 2013. Justin Franz

Cold blades that have done their job

Union Pacific rotary snow plow No. 90081 takes its rest in retirement at the Museum of Transportation near St. Louis, Mo.
Peter Preston

Post-plow cleaning

Goderich-Exeter Railway maintenance-of-way workers clean off GEXR wedge plow No. 55413 after plowing from Stratford to Goderich, Ontario, on Jan. 20, 2016. Fighting snow is an annual occasion on northern railroads, and it never gets easier. Ron Bouwhuis

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