

The Little Train that Could

Despite Wildfire Threat, Railroad Stays on Track

CONDUCTOR DAVE MARTINEZ of the Durango & Silverton Narrow Gauge Railroad stands on the open platform of a century-old passenger car and looks down the length of the train.

It's boarding time. Families, checking their tickets, are flocking to bright, golden-yellow coach cars. Once on board, passengers scurry to find their seats, pulling on jackets in anticipation of the high-altitude chill. Hard-core rail fans, camcorders in hand, dash to the locomotive for last-minute close-ups of steam and smoke.

As the final authority on the train, Martinez must see that passengers are safely aboard, supplies are properly stored and the departure time is observed before the train can move onto the line.

Engineer Monty Caudle looks down the right side of the train from his seat in a vintage steam locomotive and waits for the conductor's signal.

Martinez shouts, "All aboard" and waves. Caudle nudges the throttle forward. The train's whistle blows... long—long—short—long. The signal is always the same as the engine approaches its first public crossing. But each engineer has a distinctive hand on the whistle cord, and everyone in the yard knows who's driving No. 482 today.

There is both a mystique and a dogged determination to the Durango & Silverton Narrow Gauge Railroad. It's the vintage steam locomotives, the adventure of riding through southwestern Colorado's breathtaking vistas and the taste of the West's gold-rush era that beckon visitors from around the world.

But in the summer of 2002, Colorado's wildfires brought the railroad to the precipice of disaster by threatening its very existence.

Warning signs

Since 1882, when the railroad—then known as the Denver & Rio Grande—began hauling gold and silver from ore mines, coal-fired steam locomotives have powered the train. It runs on rails that are just three feet wide, hence the name "narrow gauge," which enables the train to navigate steep hills and tight, mountain turns.

But those coal-fired engines blow out burning cinders that can, and often do, start spot fires.

Steep grades along the route from the railroad's base in Durango to its northern terminus in the town of Silverton, about 45 miles away, enhance the chance that a fire will start because the locomotives are literally "pouring on the coals" to make the climbs.

"Being a coal-fired steam engine, we create ash and sparks," says Allen C. Harper, president of the Durango & Silverton (D&SNGRR). "As a result, we've always had spark arrestors on the stacks of the train to catch sparks that come up through the chimney. We have always taken precautions to make sure that following every train, there was a cart with a two-man crew that would look for any sparks that came out, or look for fires and call for assistance."

Routinely, the railroad takes advantage of winter precipitation to perform preventive wildfire maintenance on its rights of way, which extend about 50 feet on either side of the track, officials say.

The maintenance includes setting controlled fires in high-risk areas to eliminate overgrown ground cover, cutting back brush



Allen C. Harper,
president of the
Durango & Silverton
Narrow Gauge Railroad



The Missionary Ridge Fire reaches Vallecito Reservoir, 23 miles northeast of Durango

and, if necessary, removing volatile pine trees growing too close to the tracks.

Normally, the work takes place in the mid-to-late spring months, says Evan Buchanan, director of train operations.

But by January 2002, suspicions were already growing among weather, fire and forestry specialists that the winter's dry conditions could trigger a serious wildfire season. If that prediction held true, D&SNGRR officials reasoned, it could only increase the railroad's ever-present fire risk.

So instead of waiting for spring, D&SNGRR maintenance crews immediately began routine wildfire mitigation work.

What usually takes a month or so lasted nearly five, railroad officials say, because the crews did even more work than usual as a hedge against the wildfire forecasts. In all, about 15 miles of the highest-risk railroad right of way were treated. By May, railroad officials also began meeting with the local fire authority and with federal forest service staff to determine if extra precautions were needed.

A different type of spark arrestor was installed on each steam engine smoke stack to help reduce the size and frequency of escaping cinders, a recommendation made the previous fall by the U.S. Forest Service.

The two-person carts started hauling an attached "water wagon," which carries 300

gallons of water, a pump and 400 feet of fire hose. The water supply trailed a few minutes behind each train to quickly douse any spot fires.

Railroad maintenance crews were trained by the federal forest service in wildland fire-fighting techniques.

Train dispatchers began keeping a closer eye on weather and fire forecasts, and began documenting the predictions and trends.

The railroad purchased a diesel engine that could be used as a stopgap measure to keep the train running if the fire danger grew too high.

By this time, D&SNGRR officials were cautiously optimistic they were ready to meet the wildfire threat. They would soon find out that what they'd done still wasn't enough.

Danger and decisions

June 2002. The Missionary Ridge Fire roared to life. The fire forced the evacuation of about 2,300 homes and burned dangerously close to Durango.

By the time the fire was out 40 days later, it had claimed about 73,000 acres, 56 homes, 27 outbuildings and dealt a severe blow to the local economy through lost tourism revenue and, ultimately, jobs.

"When things started getting bad and we saw the Missionary Ridge Fire, we knew then that we were going to have trouble," Harper said. "We started taking more and more precautions. We talked to the federal forest service daily. They went out of their way to cooperate."

The railroad added special sprayers to the steam engine smoke stacks to mist the exhaust and cinders passing through the spark arrestors.

A boxcar carrying 1,000 gallons of water was added to each of the four trains that run during the summer tourist season. The boxcar, which sits behind the locomotive and coal tender car and ahead of the passenger coaches, also had firefighting equipment on board to quickly suppress any fires.

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By now, the Missionary Ridge Fire had been burning for nearly two weeks and another new wildfire, also near Durango, had begun. Fears in the community were rising, and despite the railroad’s efforts to adapt to the fire danger, pressure was mounting on Harper.

Some Durango residents called Harper and asked him to shut down the train because they were afraid it would cause fires and they could lose their homes, he says. Others supported the idea of keeping the train running.

Local businesses, some conflicted by the situation, called too. To lose the train operation, they argued, would deal a serious economic blow to the community and their trade. But so would a fire in their town — a concern that also reportedly had local officials considering legal action to force the railroad to temporarily cease operations.

Business owners in Silverton, a town of 400 that depends on the train for tourist trade, wanted the railroad to keep running. According to news accounts, some businesses were predicting they would have to close if the train stopped bringing them customers.

For the railroad itself, the jobs of about 250 D&SNGRR employees were at stake, too.

Harper found himself in an agonizing squeeze play, so he got on the train and went for a ride. That’s when he knew what he had to do.

“I was coming down Hermosa Hill and you could see the Missionary Ridge Fire on one side and then we went by a spot fire on the right of way and I said ‘we have struggled long enough,’” Harper recalled. “We made the decision to shut it down for the first time in the history of the railroad.”

Steaming ahead

Though Harper was down, he wasn’t about to be out. Determined to get back up and running, railroad officials quickly devised a new plan to get the trains back on track.

One day later, they were operational again in a scaled-back capacity. The normal 45-mile route was broken down into three segments that enabled passengers to still make the whole trip to Silverton using a combination of steam-powered train, diesel-powered train, railbus and a motor coach bus.

The steam engines were put back on the line—running only in the flat areas with ready highway access so that emergency vehicles could quickly get to a fire if one started. Passengers could ride just the steam segment or disembark at a small station and board a train pulled by a diesel engine for the second leg of the route.

The diesel, which does not emit as many burning cinders as the steam locomotive, would then make a five-mile, round-trip excursion along the High Line where the track runs along the edge of a cliff, affording a breathtaking view of the Animas River 400 feet below.

At yet another small station, passengers then could get on a bus and ride to Silverton for shopping and lunch before heading back down to Durango. Or, they could



A work crew from Fire Ready, a local fire mitigation company, was hired by the railroad to clear brush and cut trees along the right of way

The crew takes a break as No. 482 climbs Hermosa Hill



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take a railbus for a 12-mile side excursion through the high country. Passengers paid just \$20 for each leg — one-third of the normal \$60 ticket price for the whole ride.

Mindful of the worsening fire danger, the railroad purchased two old tank cars and in three days rebuilt them and added custom firefighting features.

Each car, which can carry 7,000 gallons of water, was equipped with water cannons that could shoot a large volume of water up to 250 feet away. The cars ran ahead of the passenger trains to wet down the right of way to minimize the chance of a fire starting from a wayward spark or ember.

Financial peril

Though Harper kept the railroad running—even through another four-day shutdown caused by a late-summer wildfire near the tracks—it was far from being financially on track for the season.

An estimated 35,000 pre-sold tickets, worth about \$1 million, had to be refunded. Harper had to release 100 seasonal employees as he struggled to make

enough money to keep his 84 full-time staff working.

“The big picture is that the Durango & Silverton Narrow Gauge Railroad is a national treasure and it needs to be protected and guarded,” Harper said. “Those 80 year-round people are family and I have to take care of them. I couldn’t just send them all home. You can’t reassemble the people who keep this railroad going. We have a great railroad and it deserves to be saved.”

Overall, Harper estimates that he lost about \$4.5 million in revenues. He spent another \$500,000 on extra gear, equipment and overtime needed for the wildfire efforts. And as of spring 2003, the cost of the wildfire mitigation measures had totaled about \$740,000.

“The train does 80 percent of its revenue in 100 days,” Harper said. “The wildfires wiped out 40 of those 100 days. It was devastating for everybody.”

The economic losses spilled over into the community as well. Business for local companies reportedly was down more 30 percent. Local governments saw a drop in sales tax revenue from the railroad’s losses.

In the early fall of 2002, with the fire risk still present, railroad officials continued wildfire mitigation efforts, hiring a local company known as Fire Ready to do more clearing and brush removal along the right of way.

Harper also bought four more old diesel engines that, when refurbished, can be used in the future to temporarily replace the steam engines in the event of an extreme fire emergency.

Through the winter, railroad crews cut firebreaks in high-risk areas and continued clearing more brush. In late spring, the annual weed-reduction program along the tracks was completed for the year.

Future of promise

Despite the hardships, railroad officials see promise in the future of the historic Durango & Silverton, a railroad that has survived other

All aboard! Pulling out of the Durango station



devastating natural and economic disasters through the years.

The 2002 wildfires taught them that it takes more than a deep passion for rare, steam-locomotive trains and an iron will to survive disaster. It takes knowledge, preparedness and adaptability.

“We went through a learning curve last year,” says Paul Schranck, D&SNGRR general manager. “Most of this stuff we implemented we hadn’t done before. But we all have a high stake in this railroad and we wanted it to work. We talked and came up with ideas. Now, we have fine-tuned these things so that we know it works well.

“Fire is something you have to constantly be aware of,” Schranck added. “You have to stay a week ahead of it. If you think you need something, have it out there. Don’t wait for something to happen.”

Harper agreed.

“The biggest thing I learned was to be better prepared,” he says, “and we are. We are smarter. Now, I’ve got the diesels. I’ll be able to run two full trains every day, even if the drought comes again. Our railroad is ready. My people are ready. Nothing will shut me down this year. I’ll keep rolling.”

No. 482 follows the twists and turns of the Animas River north to Silverton. Inside the engine, fireman Mike Nichols stokes the firebox with another 20-pound shovelful of coal to keep the iron giant steadily chugging along.

Just past Sultan Mountain, a deep ravine tightly cradles the tracks. Suddenly, the rugged terrain opens into a flat meadow where several creeks join the Animas River.

This is Silverton, once the end of the line for the railroad in its boom mining days. It is bound on all sides by the mountains—age-old keepers of the precious ore that gave life to this picturesque town.

No. 482 pulls right into the middle of town. A feast of historic Victorian buildings, now home to quaint shops and eateries, beckons passengers. For a few hours, visitors stroll down wooden boardwalks and explore the rich lode of commerce before the three-and-a-half-hour trip back to Durango.



Back on board, Caudle eases the throttle forward and the train steams toward home.

As the Durango Depot comes into view, the train slows to a hissing, steamy crawl. End of the line for this trip. ■

Evan Buchanan, director of train operations

