

A Runaway Train Explosion Killed 47, but Deadly Cargo Still Rides the Rails

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Promises Made



Three days after the disaster, workers were still combing through debris. Credit Paul Chiasson/The Canadian Press, via Associated Press

When things go wrong, those in power often promise to make it right. But do they? In [this series](#), The Times is going back to the scene of major news events to see if those promises were kept.

The runaway train hurtled into the center of town shortly after midnight, with no one aboard to apply the brakes or sound a whistle to warn residents about the deadly cargo bearing down on them.

When it reached a tight curve, the freight train, going 65 miles an hour, derailed. Amid a deafening, horrific screech of rupturing metal, more than a million gallons of fuel spilled and exploded.

The blast incinerated most of downtown Lac-Mégantic, Quebec. In a community of just 5,600, 47 people were killed.

The scale of [the disaster](#) on July 6, 2013, not only shocked and outraged Canada, it also raised alarm in towns and cities across the country, where a growing number of trains, laden with oil, explosives and toxic chemicals, were rolling through urban centers day and night.

Canada's government, and the railway industry, vowed to quickly address people's fear.

"This is an unbelievable disaster that has occurred here," Stephen Harper, the Conservative prime minister at the time, said after inspecting the destruction. "They'll be investigations to ascertain what has occurred to make sure that it can't happen again."

And there have been changes — at least on paper.

Railways are now required to look for alternative routes to keep shipments of dangerous goods out of urban areas, but trains filled with risky cargo still

rumble day and night through Calgary, Edmonton, Montreal, Toronto and other cities.

Not much has changed since that night in Lac-Mégantic, either. Six years after the catastrophe, the core of the town remains a wasteland, with much of the once-vibrant downtown a weed lot.

The emotional scars have been slow to heal, too.

“People are still afraid,” said Jamie Stearns, who owns a local landscaping business. “Personally, when I hear the whistle of the train, it comes right back — the shivers.”



Railway tracks leading toward the crash site in Lac-Mégantic. Credit Ian Willms for The New York Times

WHAT WE FOUND

Setting the Stage for Disaster: Deregulation

The Lac-Mégantic derailment came at a time of surging oil and gas production in Canada. It also followed a trend of deregulation that had turned over much in the way of safety oversight to the railways themselves.

In its [report after the accident](#), Canada's Transportation Safety Board portrayed the company responsible, the now-defunct Montreal, Maine and Atlantic, as a threadbare operation at which saving time and cutting costs trumped safety.

But the railway's use of a skeleton crew, vulnerable tanker cars and routes going straight through population centers were all allowed under the country's regulations.

“Lac-Mégantic was the violent consequence of a series of policy decisions interacting — whether they were deregulation or privatization or austerity — and the consequence was that there was a steady erosion of safety,” said Bruce Campbell, who prepared several studies on the accident as executive director of the Canadian Center for Policy Alternatives, a research group in Ottawa.

After the accident, Canada's government did reverse that deregulation trend, increasing its oversight of railways, adding inspectors and introducing new safety rules. And for the first time, railways now must be licensed by Transport Canada to operate. If the regulator finds serious safety violations, it can immediately revoke that permit.

But the efficacy of some of these changes remains an open question. And one of the most important new rules comes with a loophole enormous enough for train after train to barrel right through.



After the crash, an impromptu shrine went up at a local church. Credit Ian Willms for The New York Times

WHAT WE FOUND

Avoid Urban Centers? Easier Said Than Done.

In 2016, the government ordered all railways to [start examining the routes](#) they were using to ship dangerous cargos. They were told to see if they could identify alternative runs using remote rail lines instead of ones threading through urban areas.

In theory, this regulation could help reduce the chances of a deadly accident in a populated area. In practice, however, little has changed on the ground — or, more accurately, in the centers of Canada’s most populous cities.

Locomotives pulling tanker cars heavy with oil, propane and noxious chemicals continue to be a common sight in the hearts of several major Canadian cities. Look up at any time in downtown Winnipeg, and you're likely to see tanker cars passing by on the city's busy elevated tracks.

Transport Canada, the department responsible for making and enforcing rail regulations, said the railways did not give it reports on how many dangerous-goods trains, if any, they've moved away from cities following their obligatory safety reviews.

Canadian Pacific and Canadian National, the two major railways that haul the overwhelming majority of Canada's rail traffic, referred questions about dangerous cargo in cities to the Railway Association of Canada, their lobbying group. In an email, the association declined to provide any statistics about reroutings, citing "security purposes."

Ian Naish, the [former director of rail accident investigations at the safety board](#), who is now a safety consultant, said the number of dangerous goods that have been redirected "is probably zero."

The closing of some rail lines in remote areas to increase efficiency, combined with the fact that many Canadian communities were built around railway tracks, means "there really aren't any alternatives," Mr. Naish said.



Louis-Serges Parent and his ex-wife, Therese Lachance, at the site where their home once stood. It was destroyed in the disaster. Credit Ian Willms for The New York Times

WHAT WE FOUND

Improved Technology, but Unproven

The government's most notable change after Lac-Mégantic: All tanker cars of the type that crumpled in the derailment have stopped carrying anything that is toxic or can explode or burn.

The cars that ruptured were an old design, called DOT-111, with limited crash resistance.

Lisa Raitt, the transport minister in the Conservative government at the time of crash, announced that this design would be gradually phased out, and that by 2025, these tankers would no longer be carrying flammable products.

Her successor, Marc Garneau, who took office in 2015 in Justin Trudeau's Liberal government, twice sped up that schedule, and in January of this year, the goal was met.

Taking the place of many of the old tankers is a new design, with substantial reinforcement and other safety improvements, called [DOT-117](#). But limitations in crash testing means that while the new cars promise much on paper, their effectiveness in a real-world disaster remains to be seen.

“We won't know for sure until we see how they perform in actual accidents,” said Ms. Fox, of the safety board. “I know that's not very reassuring.”



A tanker car from the wreck left in Lac-Mégantic. Credit Ian Willms for The New York Times

WHAT WE FOUND

To Control a Train, 2 Is Better Than 1

Another critical policy change was an order given just weeks after the disaster obligating all trains in Canada to once again carry at least two crew members. That only one worker was operating the Lac-Mégantic train was a major factor in the catastrophe.

In the United States, the Federal Railroad Administration recently abandoned a proposed regulation that would have required at least two-person crews on most trains.

Thomas Harding was the lone engineer on the train, which was carrying crude oil from North Dakota to an oil refinery in New Brunswick. Mr. Harding took control of the train in Montreal.

Late in the evening of July 5, he stopped for the night in Nantes, a hamlet uphill from Lac-Mégantic, and parked his train on the mainline.

Though exhausted after the journey, Mr. Harding took the laborious step of setting the mechanical hand brakes — a train's version of an automobile parking brake — on the five lead locomotives, an equipment car and an empty boxcar.

That was the first big mistake. Investigators calculated that Mr. Harding should have also secured the hand brakes on 18 to 26 of the tank cars before retiring to his hotel.

But the corner cutting by the solo worker initially didn't matter. The train stayed put because he had also applied air brakes on the locomotives. Not long after he left, however, a small fire broke out in the lead locomotive. A fire crew extinguished it and, following the railway's instructions, shut down the engine.

That was the second big mistake. Turning off the lead engine also cut off the brakes' air compressor, eliminating the pneumatic pressure needed to keep the brakes applied. When the brakes ultimately released about an hour after midnight, the train began rolling downhill for seven miles to Lac-Mégantic, gaining speed all the way.



Mayor Julie Morin with a plan for the reconstruction of downtown Lac-Mégantic. Credit Ian Willms for The New York Times

WHAT WE FOUND

Recurring Runaways

Making sure that no one now operates a train alone was applauded by safety experts. But requiring multiple crew members is no guarantee runaway trains won't happen.

The number of runaway trains in Canada has increased by about 10 percent over the last decade, with 62 trains taking off on their own in 2017. In February, [three Canadian Pacific employees died](#) when a runaway train that had been parked on a mountain slope in British Columbia flew off a bridge.

Hand brakes have not evolved all that much since the 19th century, and applying them is slow, backbreaking work.

“Hand brakes are good,” said Ms. Fox. “But they need to have some other defense, because hand brakes can be defective.”

There’s little sign, however, that Canadian railways are adopting new technologies, like electronically controlled brakes, that have the potential to stop runaway trains.



Much of Lac Mégantic remains a wasteland. Credit Ian Willms for The New York Times

WHAT WE FOUND

A Barren, Devastated Downtown

The fuel explosion that took 47 lives also destroyed 40 buildings in Lac-Mégantic, a resort and industrial town abutting a scenic lake.

A \$150 million decontamination program led to the demolition of another 37 buildings and the removal of 294,000 tons of rubble and soil. Adding to the pain of many survivors, the first thing to be rebuilt at the disaster site were the rail tracks themselves, an important lifeline for the town's factories.

While new roads now run through the former disaster zone, most of it is barren, filled with underused parking lots.

Driving through the wound that was once downtown remains too painful for many in Lac-Mégantic. In a disaster that killed nearly 1 percent of the town, it's not a question of if residents knew someone who died, but how many.

"Every time I cross this desert, I feel death's been there, and it's still there," said Gilbert Carrette, a member of a citizens' rail safety group formed after the wreck. "The best medicine to heal people's minds would be to fill this empty place."

For many residents, the most important project is moving the tracks to the northern edge of town. Last year, the federal and Quebec governments agreed to pay for a \$100 million rail bypass, but the estimated completion date is four years away.

The town's reconstruction office does have ambitious [plans](#) for a new downtown, but Julie Morin, mayor since 2017, said that developers would stay away until the train line was moved. She does not anticipate that anything approaching the old downtown will return for a generation.

"It's really haunting us, cause we're still living this tragedy," said Mr. Carrette. "People have that feeling that everything is frozen downtown."

The still-desolate landscape also serves as a wrenching reminder for the country as a whole about the risks that come with the railways running through so many towns.

Ms. Fox, of the safety board, said the disaster had left a mixed legacy.

“It would be unfair to say that no progress has been made,” she said. “But I also think it would be inaccurate to say that we can sit back and relax. Because there’s still more that can be done.”

The Takeaway: A concerted push on safety, but trains still pull deadly cargo through downtowns across Canada.

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