Area poorly prepared for crude-oil train fires

Stocks of firefighting foam few and far between

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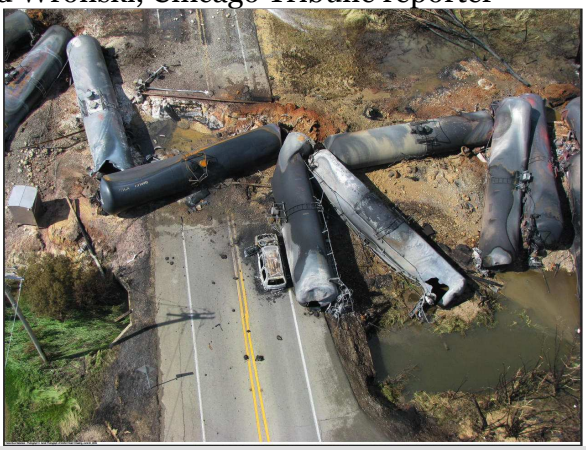

In 2009, a Canadian National freight train hauling 75 tank cars with ethanol derailed and erupted into a massive fireball in Cherry Valley, near Rockford. Although firefighters had about 400 gallons of foam on hand and more on the way, they concluded it wasn't enough to put out the fire. (National Transportation Safety Board)

Few Chicago-area fire departments have enough firefighting foam and equipment to respond effectively to the roaring infernos seen near Rockford and elsewhere in recent years when multiple railroad tank cars carrying flammable liquids derail and explode, the Tribune has found.

So-called unit trains, rolling pipelines with more than a hundred tank cars hauling millions of gallons of crude oil, have become game changers for emergency responders,posing new threats and requiring updated safety strategies, experts say.

Such trains have become a common sight in the Chicago area, the nation's busiest rail hub. Each day, one-fourth of U.S. freight traffic — nearly 500 freight trains and 37,500 rail cars — passes through the city and suburbs, experts say, although it's unknown exactly how much of this traffic is crude oil.

Yet, the majority of communities lack the thousands of gallons of foam and equipment — like airport "crash trucks" — to respond immediately and effectively to smother flames fueled by one or more railroad tank cars, officials say.

Most fire departments stock only enough 5-gallon containers of foam to extinguish fires involving vehicles and tanker trucks. Larger incidents, involving train loads of flammable liquids, would overwhelm individual departments, officials say.

"We couldn't carry enough 5-gallon drums and couldn't switch them out fast enough to get that kind of foam on a tank car or any fire like that," said Jim Arie, Barrington's fire chief. "That requires very specialized equipment and personnel.

"It's truly the worst-case scenario for a fire department, and it's not the kind of thing you can staff for or have enough equipment for."

These days, tank-car trains run frequently through scores of suburbs on the tracks that Canadian National Railway Co. acquired in 2009 from the Elgin, Joliet & Eastern Railway, Arie said.

"We may be two years, five years or 12 years before we have an incident. We can't staff up for that every day, day in, day out, knowing that it may be way down the road before something happens," Arie said.

In Aurora, which has nine fire engines and 195 firefighters, including a 27-member hazardous-materials team, a fiery derailment would result in a "major disaster," said Chief Jim Lehman. Both the Canadian National and the BNSF Railway Co. run tank-car trains through Aurora.

"We could do all the training in the world and have all the equipment in the world, but if one of those (trains) comes off the rails and creates an issue in a very densely populated area, our exposure would be very significant," Lehman said. "Our ability to deal with an incident of that magnitude would be very taxing."

Nationwide, crude shipments have grown from 9,500 carloads in 2008 to more than 400,000 in 2013, according to the Association of American Railroads.

The industry stands by its performance, saying more than 99.9 percent of its shipments arrive safely, according to the railroad association.

To deal with any large-scale emergency, nearly all of the state's 1,200 fire departments depend on each other for help as part of the Mutual Aid Box Alarm System, or MABAS. Besides responding to major events like fires and natural disasters, MABAS also has 42 specialized operations teams for hazardous materials.

MABAS mobilized crews and equipment from several departments June 19, 2009, when a Canadian National freight train hauling 75 tank cars with ethanol derailed and erupted into a massive fireball in Cherry Valley, near Rockford.

Although firefighters had about 400 gallons of foam on hand and more on the way, they concluded it wasn't enough to put out the roaring fire, which eventually spread to 13 tank cars, said Steve Pearson, who was then chief of the North Park Fire Protection District in Machesney Park.

Unable to get close enough to attack the intense flames, which rose hundreds of feet high, firefighters could do little but let the blaze burn itself out and go into a "defensive position" a half-mile away, Pearson told the National Transportation Safety Board forum on railroad safety last month.

"Even if we had an endless amount of foam, it could not have been safely applied to this incident," he said.

But firefighters stress the importance of responding to such incidents as swiftly as possible with ample foam before they get out of control.

Although some people were rescued, a 44-year-old woman in a car stopped at the train crossing was fatally burned and several others were injured. Her pregnant 19-year-old daughter lost her baby.

It wasn't until 5 p.m. the next day, nearly nine hours after the derailment, that all fires were extinguished and residents could return to about 600 homes that were evacuated, Pearson said.

Increased risks

The roster of fiery derailments has steadily grown along with the flow of volatile crude oil from the booming Bakken fields of North Dakota, Montana and Canada.