

Fact sheet: Crude oil trains in the Columbia River Gorge

These are the facts, details and sources below: crude oil trains are passing through the Gorge now; the type of cargo being carried can be extremely hazardous, explosive and otherwise difficult to clean up from the river; history of crude oil train derailments is recent; the crude oil destinations are proposed to increase, driving significant increases in train shipments in the Northwest; Gorge first responders are not prepared to handle this special hazard; the taxpayers are likely to pay for damages in event of a derailment; and Oregon citizens have not yet been given the facts about the trains now passing or about the impacts of the proposed expansions in crude-oil-by-rail traffic.

Crude oil trains are passing through the Gorge now

As of November 2014, three mile-long BNSF trains per day of at least 100 cars each exclusively haul crude oil on the Washington side of the river (these are called “unit trains”); three mixed Union Pacific trains per week haul crude oil on the Oregon side; the City of Hood River is advised that Union Pacific soon will be moving crude oil unit trains in Oregon. The Washington State Department of Ecology’s *Marine & Rail Oil Transportation Study* (2014) states that 19 unit trains pass through the state each week, affecting nearly 3 million residents living in 91 cities and towns.

(Sources: *Oregonian*, www.oregonlive.com/environment/index.ssf/2014/07/3_oil_trains_weekly_make_portl.html ; November 25, 2014 UP advisory to HR City Manager Steve Wheeler)

Where is the crude oil destined?

Federal law does not allow the export of crude oil (although Congress is considering repealing that restriction). The crude oil currently being hauled mostly is destined for Arc Logistics Terminal in Northwest Portland, Global Partners Terminal in Clatskanie in Oregon, and diverse refineries and terminals in Northwest Washington. The Oregon-destined crude mostly is transferred to barge and taken to refineries in Puget Sound. From refineries, oil products can be exported.

(Source: <http://earthfix.opb.org/energy/article/trains-carrying-utah-crude-oil-destined-for-portla/>)

What’s the cargo being carried?

Each BNSF train carries more than 3 million gallons of highly volatile light crude oil from the Bakken oil fields of North Dakota. The tank cars are type DOT-111, not designed to carry crude oil under pressure, which have had safety problems for decades. Redesigned DOT-111 cars still are not safe for explosive crude oil. Newer crude oil tank cars have been redesigned for safety, but the production of these lags far behind the growth in use. The Canadian government has ordered that the older oil tank cars (DOT-111) be discontinued or retrofitted by May 2017. The United States has a much slower phase-out plan that will keep these cars on the rails for years.

A crude oil tank car usually is black and always has a red emblem to indicate its cargo. This emblem is a diamond-shaped red placard on the side of the car with a symbol for flammable liquid and two numbers: a “3” indicating flammable content and a larger 4-digit number for the crude oil load (see adjoining graphic). The industry predicts that BNSF will carry tar sands crude oil from Alberta (called bitumen or “dilbit”), and perhaps some is being hauled now.

Union Pacific carries its crude oil in freight trains where the tankers are mixed with other types of cargo, although they indicated the possibility of using unit trains in the future, and at least one unit train passed in April 2014. The cargo being hauled in heated tankers by UP is a tar-sands crude bitumen from the Uintah formation in eastern Utah.

(Source: www.railway-technology.com/news/newscanada-to-phase-out-dot-111-tank-cars-to-ensure-rail-safety-4220128)



This cargo can be extremely hazardous, explosive and otherwise difficult to clean up from the river

The Bakken crude is a lightweight substance that is highly explosive due to propane and other gasses that are mixed in with the raw material, and the tank car is under pressure from these gasses. The DOT-111 tank car punctures and otherwise damages easily, so derailment poses the immediate hazard of an oil spill that can catch fire and explode. Since January 2013 there have been 10 explosive derailments in the United States and Canada. These disasters have increased with the increase of Bakken crude oil hauled by rail; before January 2013 there were no such catastrophic crude oil accidents.

The Bakken and bitumen crude oil present different consequences. Except for the fluid used to dilute the heavy crude oil for transport, the hazard posed by tar sands from either Alberta or Utah is that it’s difficult to clean up when spilled. If spilled into the Columbia River cleanup will be extremely costly, and possibly so difficult the pollution will endure for decades. In July 2010 a pipeline carrying tar sands crude broke and spilled 800,000 gallons into Michigan’s Kalamazoo River, covering 35 miles of riverbed. Cleanup has cost more than \$1 billion. Crude oil from shale in Utah is still a potential, with mining set to begin in 2015.

(Sources: National Transportation Safety Board, www.nts.gov/news/2010/100915.html; www.mlive.com/news/grand-rapids/index.ssf/2014/11/2010_oil_spill_cost_enbridge_1.html#incart_story_package ; November 18, 2014 e mail from refinery engineer Ron Karstens to Peter Cornelison; <http://earthfix.opb.org/energy/article/trains-carrying-utah-crude-oil-destined-for-portla/>)

Recent history of crude oil train derailments

Since January 1, 2013 there have been ten derailments involving Bakken or other light crude oil cars in the United States and Canada, seven involving fire and explosions and two involving spills of crude. The fires and explosions at New Brunswick, Canada (January 2013), Lac Mégantic, Quebec (July 2013), Alabama (November 2013), Casselton, North Dakota (December 2013), and Lynchburg, Virginia (April 2014) were carrying the Bakken crude oil. Before January 2013 there were no spills of crude carried by rail.

(Sources listed in [en.wikipedia.org/wiki/List_of_rail_accidents_\(2010-present\)](http://en.wikipedia.org/wiki/List_of_rail_accidents_(2010-present))).

Industry interests are proposing significant increases in train shipments in the Northwest

Because of the growth in fracked oil and the difficulty of expanding pipeline capacity, the industry has targeted Northwest refineries and transfer facilities for substantial expansion, and this proposed expansion is pushing the growth in future crude oil by rail shipment. New crude-oil-by-rail handling capacity has been already built or is proposed at 11 refineries or terminals in Oregon and Washington.

If all proposed oil terminal (transfer or refining) facilities are built to capacity, the combined capacity to handle crude oil in Oregon and Washington would increase to 804,900 barrels per day. This would cause an increase in the daily crude-oil-by-rail traffic to 23 unit trains (both full and return empty).

(Sources: Eric dePlace, *Sightline Institute, Northwest Fossil Fuel Exports (September 2014)*; *Oregonian Rob Davis series*).

Gorge first responders are not prepared to handle this special hazard at the community level

“For such a large-scale incident ... our resources would be overwhelmed very quickly. We do not have adequate resources [and] would have to request mutual aid from other agencies [and] possibly require state mobilization.” “... local jurisdictions – many who are struggling to maintain their fire fighters and first responders, let alone provide them with adequate resources to respond to oil fires, explosions and derailments.”

(Sources: Chief Bob Palmer, *Mid-Columbia Fire and Rescue*; *Washington State Council of Fire Fighters August 2014 resolution*; *The Oregonian*, www.oregonlive.com/environment/index.ssf/2014/05/how_oregon_oil_train_spill_pla.html)

Taxpayers are likely to pay for damages in event of a derailment

“Because there is no mandate for railroads to develop comprehensive plans or ensure the availability of necessary response resources, carriers have effectively placed the burden of remediating the environmental consequences of an accident on local communities along the route.”

(Sources: *National Transportation Safety Board statement, January 2014*; Eric dePlace & Rich Feldman, *Risk Assessment for Railroads*, <http://daily.sightline.org/2014/05/19/risk-assessment-for-railroads/>)

Oregon citizens have not yet been given the facts about the trains now passing

In July 2014 the federal government required the railroads to give state emergency officials route information, but railroads fought this and still pressure state officials to keep the information from local governments.

(Sources: www.propublica.org/article/govt-data-sharpens-focus-on-crude-oil-train-routes; Rob Davis *Oregonian series*, <http://topics.oregonlive.com/tag/oil-trains/posts.html>)

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