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PSC Rail Safety Hearing

My name is Cate Campbell. I live near Missoula, Montana and am a retired railroad brakeman.

There exists an interesting relationship between waterways and railroads. They both occupy the landscape's valleys. Waterways are there because of physics and rail lines because of economics. This inevitable pairing has built-in pitfalls when it comes to rail shipments of hazardous materials. The proposed route for more oil trains across Montana puts our prized rivers and riparian zones in the cross hairs of a serious train derailment.

Consider an overlooked hazard in these shipments: worn and broken rails. Defective rails have caused numerous wrecks, some of which include explosive materials like Bakken oil. In July of 2015, near Culbertson, MT, 22 cars of a 106-car BNSF train derailed spilling 35,000 gallons of oil. In the last 2 years, of 31 crashes involving crude or ethanol, 17 resulted from track problems.

I worked as a brakeman for Burlington Northern Railroad for 16 years in the 70s and 80s when there was less rail traffic and no exploding trains. Rail integrity was inspected regularly. But the sheer number and tonnage of trains has exceeded the ability of inspectors to catch hairline fractures and widening gauges. "Wide gauge" is the single largest cause of accidents involving track defects. In the case of the Pennsylvania derailment, it was broken spikes that caused the rail to widen, even though the track had been replaced in 2012, according to Federal Railroad Administration officials.

Railhead is perhaps the highest stressed civil infrastructure due to the passage of heavily loaded wheels across a very small contact area. The stresses at the 'contact patch' cause yielding of the railhead steel in the form of detail fractures, chipping, and vertical splits.

"Petroleum crude oil unit trains transporting heavily loaded tank cars will tend to impart higher than usual forces to the track infrastructure during their operation," the railroad safety board said in a report this year. "These higher forces expose any weaknesses that may be present in the track structure, making the track more susceptible to failure." As temperatures drop, steel rails progressively shrink, amplifying the potential for any existing defect to cause a failure, FRA safety experts said in interviews. Frozen ballast, the crushed rock that forms the rail bed, also causes rail to suffer greater shocks under the load of heavy trains.

Rick Inclima, safety director at the Brotherhood of Maintenance of Way Employees, said that oil trains could be creating unique stresses on the track. "You can certainly get some rhythmic forces in oil trains that you might not see on a mixed freight train with cars of different sizes, weights and commodities," he said.

Federal focus on oil shipment safety has included upgrading tank car integrity and lowering speeds. But broken rail accounts for 1/3 of all rail accidents, for example, the Mount Carbon, WV, CSX derailment spilling 378,000 gallons of crude oil. At that time the Federal Railroad Administration's chief, Sarah Feinberg, said, "What this broken rail incident shows us is that we need to insert ourselves and put some pretty high standards in place. It's important to remind folks that the rail and track issues are important too. We have a zero-tolerance policy on crude routes because the stakes are so high for the communities that live along those tracks." She went on to say, "We try to look at absolutely every place where we can affect and improve safety. Track is generally the place that we're focusing at the moment and it's clearly overdue. Rail head wear is one place in particular that we feel needs to be addressed as soon as possible." But according to the director of safety for the union that represents track inspectors, "there was certainly a lot of pushback and a lot of political pressure put on the FRA not to adopt regulations for rail wear."

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