



FRIENDS OF THE COLUMBIA GORGE

VIA E-MAIL

August 16, 2016

Angie Brewer, Planning Director
Wasco County Department of Planning and Economic Development
2705 East Second Street
The Dalles, Oregon 97058
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Re: Union Pacific Railroad Mosier Area Expansion – PLASAR-15-01-0004

Dear Ms. Brewer:

Friends of the Columbia Gorge, Columbia Riverkeeper, The Lands Council, Oregon Physicians for Social Responsibility, and Stand (collectively “Friends”) have reviewed the above-referenced application and submit these comments to augment our initial comments of April 11, 2016 and our comments of June 7, 2016.

- Friends of the Columbia Gorge is a non-profit organization with approximately 6,000 members dedicated to protecting and enhancing the resources of the Columbia River Gorge. Our membership includes hundreds of citizens who reside in the six counties within the Columbia River Gorge National Scenic Area (the NSA).
- Oregon Physicians for Social Responsibility, guided by the values and expertise of medicine and public health, works to protect human life from the gravest threats to health and survival by striving to protect our climate and advance environmental health. The organization is comprised of approximately 2,500 health professionals and public health advocates working collaboratively to protect the health of all Oregonians.
- Columbia Riverkeeper is a non-profit organization with over 10,000 members, including many members that live, work, and recreate near the proposed project area. Columbia Riverkeeper’s mission is to protect and restore the water quality of the Columbia River and all life connected to it, from the headwaters to the Pacific Ocean.
- The Lands Council, with a membership of 1,500, has protected thousands of acres of public land and, in the process, worked to preserve the forests, water, and wildlife we all depend on for life.
- Stand is an advocacy organization made up of people challenging governments and corporations to make the health of our communities, our environment and our climate the top

priority. Stand works to protect the forests and the stable climate required to keep our planet – and us – thriving.

I. The Mosier Derailment

Of course, the elephant in the room is the Union Pacific railroad (UPRR) derailment in Mosier. On June 3, 2016, a Union Pacific train carrying highly flammable Bakken crude oil derailed in the community of Mosier.¹ When Bakken crude oil trains derail they inevitably break open, leak, and ignite. That is exactly what happened in Mosier even though reinforced railroad cars were in use. As a result of the derailment, one tank car was punctured, the volatile oil ignited, and three additional tank cars caught on fire.² The Federal Railroad Administration (FRA) determined on June 23, 2016 that “Union Pacific’s failure to maintain its track and track equipment resulted in the derailment.”³ This was not an accident, but negligence on the part of Union Pacific.



Bakken crude oil train exploding after derailing in Mosier Oregon in Wasco County on June 3, 2016. Photo by KGW Television.

Union Pacific has about 32 miles of main line track through Wasco County. UPRR says that it runs 25-30 trains per day on the tracks.⁴ Over a year, that is about 292,000 to 350,000 total rail miles traveled per year by UP trains through the County. From 2006-2015, UP averaged 3.3 accidents per 1 million miles traveled.⁵ Therefore, we should expect about one accident per year

¹ Federal Railroad Administration, PRELIMINARY FACTUAL FINDINGS REPORT, Derailment of Union Pacific’s Unit Crude Oil Train ONETU 02 Transporting Bakken Crude Oil for U.S. Oil, Mosier, Oregon (June 23, 2016).

² *Id.*

³ *Id.*

⁴ Union Pacific To Enhance Infrastructure in Mosier, Fact sheet distributed by Union Pacific at March, 2016 meeting in Mosier, OR.

⁵ <http://safetydata.fra.dot.gov/OfficeofSafety/publicsite/Query/rchart.aspx>

of a Union Pacific train in Wasco County at current traffic levels. Oil trains, being heavier and carrying a commodity that tends to slosh around when the train speeds up or slows down, tend to have greater than average accident incidence.⁶ Their weight also can damage tracks.⁷ Oil trains are trouble on even the best maintained tracks.



Explosive fire in Mosier caused by a Bakken crude oil train derailment. The large white building is the Mosier K-12 school that was filled with children at the time of the crash. The building would have been “incinerated” if the normally prevailing winds were blowing on that day according to Mosier Fire Chief Ron Appleton. Photo by Paloma Ayala.

Unfortunately, Union Pacific perennially has poor accident statistics when compared with its peers. For example, in 2015 UPRR experienced 3.17 accidents per 1 million train miles travelled.⁸ The 2015 industry average was 2.59 accidents per 1 million train miles travelled.⁹ Additionally, a higher percentage of Union Pacific’s 2015 accidents resulted in derailments and significantly more of them were due to faulty tracks, signals, or other equipment maintained by Union Pacific.¹⁰ The industry average of accidents caused by tracks, signals, or equipment is 44% and it is 56% for Union Pacific.¹¹ This demonstrates the pattern of inadequate maintenance done by UP. While no railroad is acceptably safe, Union Pacific truly redefines “railroad safety.”

⁶ “Petroleum crude oil unit trains with heavily loaded tank cars will tend to impart higher-than-usual forces to the track infrastructure during their operation. These higher forces expose any weaknesses that may be present in the track structure, making the track more susceptible to failure.” Transportation Safety Board of Canada, RAIL SAFETY ADVISORY LETTER – 04/15, *available at* <http://www.tsb.gc.ca/eng/medias-media/sur-safe/letter/rail/2015/r15h0021/r15h0021-617-04-15.asp>

⁷ *Id.*

⁸ <http://safetydata.fra.dot.gov/OfficeofSafety/publicsite/query/AccidentByRegionStateCounty.aspx>

⁹ *Id.*

¹⁰ *Id.*

¹¹ *Id.*

In an attempt to make Union Pacific and other railroads safer, the FRA has been trying for years to pass rules to improve railroad safety.¹² Union Pacific, however, has been aggressive in lobbying the FRA to defer safety improvements and has pushed Congress to overturn FRA safety rulemaking.¹³ Union Pacific has gone as far as threatening to sue the FRA over critical safety improvements.¹⁴ Simply put, UP is more concerned about profits than safety. This focus may well have caused UP's negligence in maintaining its tracks to progress to the explosion and fire in Mosier.

The facts are simple:

- The Mosier derailment was caused by Union Pacific's negligence in maintaining its tracks.¹⁵
- This is part of a pattern – Union Pacific perennially has a startlingly poor safety record.¹⁶
- Union Pacific has done everything in its power to prevent safety improvements that would eat into its profits – which totaled \$8.1 billion in 2015.¹⁷

At the same time, Union Pacific is proposing a project that would add more tracks on both sides of Mosier so that the railroad can run longer faster trains more frequently.¹⁸ Instead of adding new tracks that will result in more trains and more accidents, Union Pacific needs to focus on maintaining the tracks it already has and fixing its industry poor safety record.

II. Increase in Train Traffic

Union Pacific claimed initially that “[t]he new double track will allow [UPRR] to move 5 to 7 more trains per day through Mosier.” *Union Pacific Mosier Fact Sheet*. However, in a May 6, 2016 email response to an inquiry into the number of additional daily trains the project would allow posed by the US Army Corps of Engineers the railroad failed to back up this claim and instead changed the subject:

Q: “What is the maximum possible increase in the number of trains per day as a result of the project? (My information shows a max of 7 trains per day)”

A: “Train count and more importantly carloadings are driven by the global market, and Union Pacific regularly attempts to forecast this demand by commodity. This project is not tied to any forecasted increase in carloadings, rather it is designed to alleviate a major bottleneck in our system. This bottleneck causes delays regardless of the number of trains.” *Email from Luke Baatz, Senior Manager, Project Design, Union Pacific Railroad to Peter Olmstead, Project Manager/Biologist, US Army Corps of Engineers*.

¹² See, e.g., <http://spectrum.ieee.org/transportation/mass-transit/stop-that-train>

¹³ See, e.g., Union Pacific Railroad Company Comments on Docket No. PHMSA 2012—0082(HM-251), *available at*, https://www.up.com/cs/groups/public/@uprr/@customers/documents/up_pdf_nativedocs/pdf_up_media_upcomment.pdf

¹⁴ <https://next.ft.com/content/05834616-0647-11e5-89c1-00144feabdc0>

¹⁵ *Id.*

¹⁶ <http://safetydata.fra.dot.gov/OfficeofSafety/publicsite/Query/rrchart.aspx>

¹⁷ See, e.g., Union Pacific Railroad Company Comments on Docket No. PHMSA 2012—0082(HM-251), *available at*, https://www.up.com/cs/groups/public/@uprr/@customers/documents/up_pdf_nativedocs/pdf_up_media_upcomment.pdf; and <http://www.up.com/media/releases/160121-4q15-results.htm>.

¹⁸ Union Pacific To Enhance Infrastructure in Mosier, Fact sheet distributed by Union Pacific at March, 2016 meeting in Mosier, OR.

The US Army Corps of Engineers asked Union Pacific about “the maximum possible increase in the number of trains per day as a result of the project.” Union Pacific dodged the question entirely.

As part of our inquiry into the application submitted by Union Pacific and as a way to verify the railroad’s public pronouncements that the Mosier double tracking project would not result in significantly more train traffic even though it would remove the “the single greatest operational bottleneck in [sic] entire 206-mile Subdivision,”¹⁹ Friends of the Columbia Gorge retained railroad experts Terry Whiteside and Gerald Fauth III. Between the two of them, they have over 68 years of experience in transportation working for both rail carriers and shippers.

In their expert testimony, they conclude that the Mosier double tracking project, when coupled with the modern train signaling mentioned in the application,²⁰ would provide infrastructure to increase rail traffic through Mosier by 45 to 52 trains per day or around two additional trains per hour. Up until last December there had been a ban on crude oil exports from the US for the last 40 years. An end to the crude oil export ban was stuffed into the federal budget that went into effect last December. This has opened up a gold rush for firms seeking to export oil from North Dakota, Utah, and Colorado. While some of the coal and oil export terminals that have been proposed in the Pacific Northwest have been deferred or denied, there is still a considerable amount of growth expected in coal and oil exports. For example, Portland has proposed to allow an unlimited number of new petroleum terminal facilities of up to 5 million gallons (or equivalent volume) of storage to be built in the city and to allow on site growth in the ten terminal facilities that already exist in the city based upon discretionary criteria.²¹

The companies that currently have terminals in Portland have speculated that they would require 2,024,000 new barrels of storage in the year 2035 versus today²² – about the same new capacity as the proposed Vancouver Energy (Tesoro-Savage) oil by rail export terminal. *See* Appendix I, below. Furthermore, if every facility used its land in Portland as efficiently as Chevron does today, then the current facilities could expand to 17,219,048 total barrels of petroleum storage if the current proposal was adopted. *Id.* That is equivalent to almost 8 Tesoro-Savage terminals. This, along with the proposed double tracking, would result in a massive increase in dangerous oil train traffic through Wasco County.

In fact, Mr. Whiteside and Mr. Fauth III conclude that “UP anticipates 6 to 12 additional oil trains per day and 5 to 10 export coal trains per day through Mosier, which would equal 36 to 57 trains per day or 1.50 to 2.38 trains per hour.” Union Pacific’s contention that the project is for mere system improvements and would only provide infrastructure for an additional 5–7 more trains per day does not stand up to greater scrutiny. Instead, this proposed project would provide

¹⁹ Project Narrative at 2–4.

²⁰ The applicant’s narrative states that: “[a]ll lighting and signage installed will be the minimal amount required under federal law for the safe operation of the railroad. Additionally, up to seven wooden poles and wireless signaling appurtenances will be installed at an aboveground height of approximately 53 feet.” Project Narrative at 1–4. The seven 53 foot tall wooden poles and wireless signaling appurtenances are not required under federal law and apparently do not appear to be on the engineering drawings. If that is the case, these structures – and any others that do not appear with specificity – cannot be reviewed for scenic area criteria and cannot be approved as part of this application. The applicant acknowledges that “[s]pecific signage locations will be determined in the field.” *Id.* Therefore, whether the signage meets scenic area criteria cannot be evaluated and the signage cannot be approved.

²¹ *See* <https://www.portlandoregon.gov/bps/article/586612>

²² *See* <https://www.portlandoregon.gov/bps/article/582407>

capacity for many more dangerous oil trains to pass through Wasco County each day and increase the expected number of train accidents per year in Wasco County.

III. Rail Safety Impacts of Coal Trains

Mr. Whiteside and Mr. Fauth III conclude that UPRR is banking on traffic increases from oil trains as well as coal trains. Currently, the Millennium Bulk Terminals coal export facility is undergoing review in Longview, Washington. If that terminal is approved then coal trains coming from Utah and Southern Wyoming are likely to share the tracks through Wasco County with oil trains. The U.S. Surface Transportation Board declared that coal is a “pernicious ballast foulant” that destabilizes railroad tracks and leads to more accidents.²³ At least one railroad “has determined that coal dust poses a serious threat to the stability of the track structure and the operational integrity of” its railroad network.²⁴

Coal dust that is emitted from train cars gets into the rock ballast that supports the railroad ties, making the track unstable and more susceptible to damage. In fact, the Burlington Northern Santa Fe railroad has attributed derailments to ballast contaminated with coal dust.²⁵ Additionally, coal trains are heavy and result in more damage to tracks. As illustrated by the derailment in Mosier, damaged tracks can result in derailments of oil trains. Coal trains mean even more train safety woes for Wasco County.

IV. Air and Water Quality Impacts of Coal Trains

Increased coal train traffic would also cause an increase in dangerous air pollution in Wasco County including fugitive emissions of coal dust and diesel emissions from trains. The Columbia River Gorge National Scenic Area is already severely impaired by air pollution, especially nitrogen oxides (NOx) and particulate pollution. The Gorge now stands among the most polluted places in the country, including Pittsburgh and Los Angeles. A 2005 joint study by the U.S. Forest Service and National Park Service studied twelve federally managed areas around the West and found that the Columbia River Gorge National Scenic Area and Sequoia National Park had by far the worst “annual standard visual range[s]” of the twelve areas.²⁶ Similarly, a 2000 Forest Service study of air quality monitoring data from 39 federally managed “visibility protected” areas in the West found that the Scenic Area has “the highest levels of haze” and “the sixth worst visibility pollution of these areas.”²⁷ Gorge air quality has been monitored for the last twenty years. The Forest Service has documented that visibility impairment occurs on at least 95% of the days that have been monitored.²⁸

Deposition of pollutants also has profound negative impacts on ecosystems. Studies demonstrate that in the Western United States, some aquatic and terrestrial plant and microbial communities

²³ See <http://www.troutmansandersenergyreport.com/wp-content/uploads/2011/03/Coal-Dust.pdf>

²⁴ Available at <http://www.bnsf.com/customers/what-can-i-ship/coal/coal-dust.html>.

²⁵ See Decision, March 3, 2011, Arkansas Electric Cooperative Association—Petition for Declaratory Order, Surface Transportation Board, Docket No. FD 35305, at 7.

²⁶ Mark Fenn, USDA Forest Service et al., *Why federal land managers in the Northwest are concerned about nitrogen emissions*, at 10 (Dec. 2004).

²⁷ Arthur Carroll, USDA Forest Service, Letter to Columbia River Gorge Commission, at 3 & attach. 3 (Feb. 7, 2000).

²⁸ Robert Bachman, USDA Forest Service, *A summary of recent information from several sources indicating significant increases in nitrogen in the form of ammonia and ammonium nitrate in the Eastern Columbia River Gorge and the Columbia Basin*, at 2 (June 24, 2005).

are significantly altered by nitrogen deposition.²⁹ Metals, sulfur, and nitrogen concentrations in lichen tissue found in the Gorge are comparable to that found in lichen tissue sampled in urban areas. Nitrogen deposition rates in the Gorge are comparable to the most polluted areas in the United States.

Particulate matter pollution also threatens human health and welfare. In fact, when reviewing the National Ambient Air Quality Standards for PM_{2.5}, the EPA found that there is no level of particulate matter pollution at which there are no human health effects. According to the EPA, fine particulate matter pollution causes a variety of adverse health effects, including premature death, heart attacks, strokes, birth defects, and asthma attacks.³⁰ Even low levels of PM_{2.5} can cause low birth weights, damage lung function, and increase risks of heart attack and premature death. Studies reviewed by EPA revealed a linear or almost linear relationship between diseases like cancer and the amount of fine particulate matter in the ambient air.³¹ Consequently, particulate matter contamination has adverse health effects at any concentration.



Photo of an open-top coal train emitting large quantities of coal dust at Columbia Hills State Park in the Columbia River Gorge National Scenic Area. Photo taken on May 22, 2015 five months after the Pasco re-spray facility became operational. Provided by Friends of the Columbia Gorge.

²⁹ See Mark E. Fenn, et al, Ecological Effects of Nitrogen Deposition in the Western United States, BioScience Vol. 53:4, Apr. 2003, available at <http://www.bioone.org/doi/abs/>

³⁰ 71 Fed. Reg. 2620, 2627–36 (Jan. 17, 2006).

³¹ *Id.*

Open-top coal trains lose huge volumes of coal dust and debris during transportation. Even after a facility designed to coat coal with sticky surfactants opened in Pasco Washington, the picture above demonstrates the occurrence of a massive coal dust emission from a coal train in the Gorge. According to Burlington Northern Santa Fe studies, between 500 lbs. and 2000 lbs. of coal can be lost in the form of dust from each rail car.³² In other studies, as much as three percent of the coal in each car (around 3600 pounds per car) can be lost in the form of dust. A study of a West Virginia rail line found that one pound of coal per car per mile is lost from coal trains.³³ At this rate, one coal train with 120 cars traveling 85 miles through the Columbia River Gorge National Scenic Area could lose just over 10,000 pounds of coal in the Gorge. One coal train per day for 365 days is 3,650,000 lbs. per year emitted into the air and inhaled by County residents or deposited on Gorge lands and in Gorge waterways. The increase in the number of trains that can travel through Wasco County as a result of this proposal could have a direct adverse effect on the health of the County's citizens.

V. Conclusion

Union Pacific has a very poor safety record and the June incident in Mosier was a direct result of poorly maintained tracks. Railroad experts refute UPRR's contention that the project would only allow 5–7 more trains per day through Wasco County. Many more dangerous oil trains are likely to pass through the County if this proposal is approved. Not all of those trains will pass through The Dalles and Mosier safely. Friends June 7, 2016 comments identify dozens of areas where the Union Pacific Mosier double tracking proposal does not meet legal criteria. We ask the County to deny the application on the legal grounds found within those comments.

Thank you for this opportunity to comment.

Sincerely,



Steven D. McCoy
Staff Attorney
Friends of the Columbia Gorge



Lauren Goldberg
Staff Attorney
Columbia Riverkeeper



Laura Ackerman
Organizer and Oil Policy Director
The Lands Council



Regna Merritt
Healthy Climate Program Director
Oregon Physicians for Social Responsibility



Matt Krogh
Extreme Oil Campaign Director
Stand

³² See Hearing, July 29, 2010, Arkansas Electric Cooperative Association—Petition for Declaratory Order, Surface Transportation Board, Docket No. FD 35305, at 42: 5-13.

³³ Simpson Weather Associates 1993. Norfolk southern rail emission study: consulting report prepared for Norfolk Southern Corporation. Charlottesville, VA.

CC: Columbia River Gorge Commission
M.G. Devereux, Deputy Director, Oregon Parks and Recreation Department
Audie Huber, Confederated Tribes of the Umatilla Indian Reservation
Carl Merkle, Confederated Tribes of the Umatilla Indian Reservation
Brent Hall, Confederated Tribes of the Umatilla Indian Reservation
Brady Kent, Confederated Tribes and Bands of the Yakama Nation
Elizabeth Sanchez, Confederated Tribes and Bands of the Yakama Nation
Dave Cummings, Nez Perce
Elmer Ward, Confederated Tribes of Warm Springs
Julie Carter, Columbia River Inter-Tribal Fish Commission
Rob Lothrop, Columbia River Inter-Tribal Fish Commission

This chart, with the original numbers taken from Figure 6 on page 14 of the City of Portland’s Fossil Fuel Zoning Amendments Discussion Draft, depicts the impacts of the city’s conceptual proposal. The City’s proposed draft zoning amendments would also allow onsite expansions of nonconforming facilities. If every facility used its land as efficiently as Chevron currently does, then the existing facilities could expand to 17,219,048 total barrels of petroleum – even if the current proposal was adopted. If Chevron’s speculative expansion is added then the total is 17,571,048 barrels.

NW Portland Facility	Acres	Current bbls	Speculative 2035 new bbls	bbls/acre	Total bbls at 76,190/ac
Chevron Petroleum terminal	21	1,600,000	352,000	76,190	1,600,000
Kinder Morgan Willbridge Petroleum terminal	33	1,551,000	342,000	57,364	2,514,286
Arc Logistics Asphalt/crude oil	39	1,466,000	323,000	45,872	2,971,429
NuStar Petroleum terminal	22	1,191,000	262,000	66,045	1,676,190
McCall Oil Petroleum terminal	19	930,000	205,000	59,737	1,447,619
Conoco Phillips Petroleum terminal	21	760,000	167,000	44,143	1,600,000
BP West Coast Petroleum terminal	18	601,500	132,000	40,750	1,371,429
Kinder Morgan Linnton Petroleum terminal	13	420,000	92,000	39,385	990,476
Equilon/Shell Petroleum terminal	38	400,000	88,000	12,842	2,895,238
Pacific Terminal Services Petroleum terminal	2	275,000	61,000	168,000	152,381
Total	226	9,194,500	2,024,000		17,219,048

Source: City of Portland, Bureau of Planning and Sustainability, Fossil Fuel Zoning Amendments Discussion Draft, Figure 6, available at <https://www.portlandoregon.gov/bps/article/582407>