

November 24, 2015

Via Web Portal and Hand-Delivery

Westway and Imperium Terminal Services Expansion Projects EISs
c/o ICF International
710 Second Avenue, Suite 550
Seattle, WA 98104
<https://public.commentworks.com/cwx/westwayimperiumcommentform/>

Re: Quinault Indian Nation Comments on Draft Environmental Impact Statements for the Westway and Imperium (now Renewable Energy Group) Crude-By-Rail Terminals

Greetings:

On August 31, 2015, the City of Hoquiam and Washington Department of Ecology issued two similar draft Environmental Impact Statements prepared under the State Environmental Policy Act (“SEPA”) for the proposed Westway and Imperium (now Renewable Energy Group) crude-by-rail terminals. The Quinault Indian Nation has reviewed these documents and supporting materials and submits the following comments. Exhibits to this comment letter are submitted on a separate CD. These comments expressly incorporate and attach expert reports prepared by Nuka Research and Planning Group (Exh. 1), Fred Millar, Ph.D. (Exh. 2), Resource Dimensions (Exh. 3), and Joseph Wartman, Ph.D. (Exh. 4).

1.0 SUMMARY

- The DEISs conclude these projects would cause significant and harmful impacts to tribal resources that cannot be mitigated.
- The DEISs determine that multiple aspects of these projects would cause significant and harmful environmental and public health impacts that cannot be fully mitigated. These impacts include increased air pollution from more diesel trains and ships, increased noise, and increased vehicle delay at railroad crossings large enough to disrupt emergency vehicle response times.
- The DEISs find that these projects create serious and harmful risks of oil spills, collisions, derailments, fires, and explosions that would cause significant and unavoidable environmental damage.
- The expected frequency of any type of oil spill (2,100 gallons or more) harming the marine environment is a one spill every 2.2 years. These projects would cause 40-fold increase in oil

spill risk in Grays Harbor as compared to current conditions. The DEISs' analysis and presentation is needlessly complicated and designed to minimize the perception of risks.

- SEPA compels the DEISs to contain thorough information and discussion, to be based on sufficient information to support their conclusions; to obtain and include reasonably available unknown information; to disclose gaps in analysis and scientific uncertainty in order to allow a reasoned decision. The DEISs fail to comply with these requirements.
- The DEISs fail to review and analyze the complete impacts of these proposed projects. The DEISs' analysis (1) fails to consider increased rail impacts and risks across the state; (2) fails to consider increased vessel impacts along the Pacific coast; (3) fails to consider a reasonable range of alternatives; (4) fails to review the projects' full lifetime; (5) fails to use the appropriate no-action baseline; and (6) fails to present logical, consistent, and supported information. On these failures alone, the DEISs violate SEPA and would not withstand judicial review.
- The DEISs play math games with the reader to make significant risks and harms appear less likely. The DEISs do this by: (1) incorrectly treating the no-action alternative as similar to the proposed projects; (2) reviewing impacts for only 20 years, as opposed to the lifetime of the projects; (3) not fully reviewing all cumulative impacts; (4) limiting the scope of review; (4) using different calculations for amount of oil per train and marine vessel; (5) underestimating the number of annual vessel trips; and (6) not providing the public with a clear understanding of the increase in risk due to these projects.
- The DEISs fail to fully review impacts of increased rail traffic, fail to use most recent and applicable data on oil train accidents, rely on admittedly inadequate federal regulations and unknown future supposed rail improvements, and present unclear and confusing information on predicted accidents on the PS&P line.
- Maps of oil spill trajectories are uninformative, and risks represented by sliding scale graphics do not provide useful information.
- The DEISs fail to use sufficient evidence or provide thorough review of types of crude oil to be transported, the source and destination of the crude oil, and impacts on public waters, plants, fish and wildlife.
- The DEISs do not adequately address air pollution impacts or impacts from increased rail traffic (including delays and noise).
- The DEISs fail to fully address seismic risks, particularly for moderate earthquakes and tsunamis in general.
- The DEISs fail to accurately and adequately review and consider economic impacts.

- The DEISs' greenhouse gas analysis is incomplete and fails to include a full carbon life-cycle analysis. For the emissions reviewed, the DEISs attempt to downplay their significance.
- The DEISs inappropriately rely on inadequate regulatory standards and future promises to discount rail safety risks.
- These projects would violate civil rights and other laws because of the disproportionate impacts that are acknowledged to be unavoidable.

The DEISs must be revised to address their fundamental deficiencies. Correction of the DEISs' flaws will lead to even firmer conclusions that these projects present significant, adverse environmental and public health harms and risks that cannot be mitigated. SEPA itself grants the authority to say no. Ecology and the City of Hoquiam should use that authority, as well as separate authority from other applicable statutes and regulations, to reject these oil shipping terminals.

2.0 WESTWAY TERMINAL COMPANY AND IMPERIUM TERMINAL SERVICES

2.1 ON-SITE PROJECT DESCRIPTIONS

Westway and Imperium would transfer oil received by rail into onsite storage tanks. Westway intends to build five storage tanks that would each hold 8.4 million gallons of oil. Westway DEIS at 1-1.¹ Westway's facility would have the capacity to hold 42 million gallons of oil at any time. Westway DEIS at 1-1. Imperium would add nine storage tanks that could each hold 3.36 million gallons of oil. Imperium DEIS at 1-1. The expansion would result in a total yearly throughput capacity of 806.4 million gallons for Westway and 1.26 billion gallons for Imperium. Westway DEIS at 2-8; Imperium DEIS at 2-11. The daily crude oil throughput for the Westway and Imperium facilities would be, respectively, 48,918 barrels and 82,192 barrels. Westway DEIS at 6-14; Imperium DEIS at 6-14.

In addition to the Westway and Imperium projects, a third crude-by-rail facility is proposed for Grays Harbor. US Development Group ("USD") and its subsidiary, Grays Harbor Rail Terminal, have applied for the same type of facility as Westway and Imperium, one that would receive crude oil by rail, store it in large tanks, and ship it out by vessel. The USD project would move an average of 45,000 barrels through its facility each day. Westway DEIS at 6-14; Imperium DEIS at 6-14. That oil would arrive by 365 additional train trips into and out of Grays Harbor each year and approximately 120 vessel trips. Westway DEIS at 6-5; Imperium DEIS at 6-5. The USD project would mean an additional unit train every day, on average, and more than two vessel trips each week. Westway DEIS at 6-6; Imperium DEIS at 6-6.²

¹ Because the Westway and Imperium DEISs are identical in many respects, these comments apply to both, and citations to the DEISs are applicable to both documents unless noted.

² As discussed further below, it is not clear how the DEISs arrived at these numbers and if they are accurate.

2.2 SOURCES OF CRUDE OIL

Westway and Imperium propose to begin accepting, storing, and shipping at least two different types of crude oil, each of which present tremendous, though different, environmental and human health threats. Both companies anticipate that the crude oil they would handle would originate in the Bakken formation in the Intermountain Region and central United States. Westway DEIS at 2-9; Imperium DEIS at 2-12. Bakken crude is a low sulfur crude oil that is referred to as “light, sweet.” Westway DEIS at 3.14-9; Imperium DEIS at 3.14-11. Compared to other crude oils, it has a higher vapor pressure, higher degree of volatility, higher degree of ignitability, and a higher degree of flammability. *Id.* In other words, Bakken crude is highly flammable and prone to explosion. Imperium DEIS App’x M at 4-3 to -4.

In addition to Bakken crude, the projects also discuss accepting diluted bitumen (or “dilbit”) oil from the tar sands of Alberta, Canada. Westway DEIS at 2-9; Imperium DEIS at 2-12. Unlike Bakken crude, dilbit is a heavy, dark, and viscous oil. Westway DEIS at 3.14-9; Imperium DEIS at 3.14-11. To decrease viscosity to allow transportation, dilbit is diluted with lighted hydrocarbons. When spilled, dilbit behaves very differently from other oils because it is heavy but also contains lighter diluents. Westway DEIS at 4.3-3; Imperium DEIS at 4.3-3. Initially, dilbit would float on the water, but its lighter components would eventually evaporate, allowing the remaining dilbit to sink below the surface, making it very difficult to remove. *Id.* Oil such as dilbit that is imported from Canada is not subject to the U.S. crude oil export ban and may be shipped to ports around the world. Westway DEIS at 5-1; Imperium DEIS at 5-1.

2.3 RAIL TRANSPORTATION

The crude oil would be moved to the Westway and Imperium terminals by way of unit trains, which are trains consisting of approximately 120 cars loaded with crude oil.³ Westway DEIS at 2-9; Imperium DEIS at 2-13. Westway anticipates converting its site into a crude oil depot would result in a maximum of 458 unit train trips each year, for an average of 1.25 trips every day. Westway DEIS at 2-9. Imperium’s crude oil business would result in an additional 730 unit train trips each year, for a total of two trips on average each day. Imperium DEIS at 2-13. The train trips would originate in either the central United States, for Bakken crude, or in Alberta, Canada, for tar sands crude. Westway DEIS at 2-9; Imperium DEIS at 2-13. The crude

³ The DEIS fails to deal with the issue of varying tank car capacity. One barrel of oil = 42 U.S. gallons. For “light” crude oil, such as that from the Bakken, the Association of American Railroads has stated that the ideal rail tank car capacity is 30,000 to 32,000 gallons (or 714-761 barrels). In prior correspondence with regulators, Westway has used the figure of 714 barrels of crude per tank car, while Imperium estimates an average of 743 barrels per tank car. The Shell refinery in Anacortes used 720 barrels per tank car in its calculations. Ecology and Hoquiam should demand that the companies use a consistent tank car capacity number, not just one that serves individual calculations.

would then travel to Centralia, Washington along the main rail lines, and then along the PS&P rail line to the Port of Grays Harbor. *Id.*

2.4 MARINE TRANSPORTATION

Westway and Imperium would transfer crude oil from their sites by ocean-going vessel to other locations in the United States and abroad. Within the United States, Westway and Imperium would transfer oil mainly to refineries in Puget Sound and northern California, but they could transfer Canadian tar sands crude abroad. Westway DEIS at 2-9; Imperium DEIS at 2-13. The type of vessel would vary, but the largest vessels that would call at the sites are Panamax class tankers that hold up to 14.7 million gallons each. Westway DEIS at 2-10; Imperium DEIS at 2-13. Both expect to use tank barges, which hold up to 6.3 million gallons per barge. Westway estimates a maximum of 238 vessel trips each year, Westway DEIS at 2-10, and Imperium estimates a maximum of 400 vessel trips each year, Imperium DEIS at 2-13.

3.0 STATE ENVIRONMENTAL POLICY ACT

The State Environmental Policy Act (“SEPA”) is Washington’s core environmental policy and review statute. Like its federal counterpart, the National Environmental Policy Act (“NEPA”), SEPA broadly serves two purposes: first, to ensure that government decision-makers are fully apprised of the environmental consequences of their actions and, second, to encourage public participation in the consideration of environmental impacts. *Norway Hill Preservation and Prot. Ass’n v. King Co.*, 87 Wn.2d 267, 279 (1976). For decades, SEPA has served these purposes effectively, requiring full environmental reviews for projects with significant environmental impacts.

In adopting SEPA, the Washington legislature declared the protection of the environment to be a core state priority. RCW 43.21C.010. SEPA declares that “[t]he legislature recognizes that each person has a fundamental and inalienable right to a healthful environment and that each person has a responsibility to contribute to the preservation and enhancement of the environment.” RCW 43.21C.020(3). This policy statement, which is stronger than a similar statement in the federal counterpart of NEPA, “indicates in the strongest possible terms the basic importance of environmental concerns to the people of the state.” *Leschi v. Highway Comm’n*, 84 Wn.2d 271, 279-80 (1974).

4.0 REASONABLE ALTERNATIVES

SEPA requires that an EIS contain a detailed discussion of alternatives to the proposed action. RCW 43.21C.030(c)(iii). SEPA’s regulations provide that an EIS must consider as alternatives those “actions that could feasibly attain or approximate a proposal’s objectives, but at a lower environmental cost or decreased level of environmental degradation.” WAC § 197–11–440(5)(b). The discussion of alternatives in an EIS need not be exhaustive, but the EIS must present sufficient information for a reasoned choice among alternatives. *Toandos Peninsula Ass’n v. Jefferson Cy.*, 32 Wash. App. 473, 483 (1982).

4.1 FAILURE TO REVIEW ANY REASONABLE ALTERNATIVES

The DEISs simply fail to comply with SEPA in their consideration of reasonable alternatives. For both projects, the DEISs analyze only two options: the company's proposal and a no-action alternative. Westway DEIS at S-2 to -3; Imperium DEIS at S-2 to -3. An EIS for a private project on a specific site must consider a "no action alternative plus other reasonable alternatives for achieving the proposal's objective on the same site." WAC § 197-11-440(5)(d); *Weyerhaeuser*, 124 Wn.2d at 39. Additional reasonable alternatives, including other terminal designs, must be analyzed in a supplemental draft environmental impact statement in order to comply with SEPA.

4.2 PUBLIC PROJECT OF THE PORT

The DEIS adopts the private purpose of the project applicants with no consideration of the public use of the Port of Grays Harbor property, including any public need for the projects. Whether an EIS must include consideration of offsite alternatives depends on whether the project is public or private, for a public project EIS must also include a discussion of offsite alternatives to the proposal. *Weyerhaeuser*, 124 Wn.2d at 39.

Westway and Imperium are private companies, but the Port of Grays Harbor, a public entity, did not engage in any SEPA analysis prior to entering into the leases for these proposed projects. By virtue of land ownership, ports and cities have power to determine appropriate uses of public property and to require tenants to mitigate their environmental impacts. As courts have stressed, the "fundamental idea of SEPA" is to "prevent government agencies from approving projects and plans before the environmental impacts of doing so are understood." *Int'l Longshore & Warehouse Union, Local 19 v. City of Seattle*, 176 Wn. App. 512, 522 (2013) (emphasis added). Here, the DEIS defines alternatives so narrowly as to merely accept the applicant's private agenda, without any consideration of other uses of the Port's property and without considering alternative locations for these facilities.

4.3 NO ACTION ALTERNATIVE

The DEIS for Westway incorrectly defines the no-action alternative. For Westway, the DEIS notes:

...unrelated to the proposed application, the applicant anticipates an increase in throughput of methanol over the 20-year analysis period. For the purposes of this analysis and based on the applicant's understanding of market conditions, an additional estimated throughput of up to 12 million gallons of methanol per year would arrive by vessel, would be unloaded and stored on site, and would be loaded into barges or rail cars for offsite transport in a manner similar to existing conditions. Offsite transport is estimated to add approximately one tanker in, 10

tank barges out, and 364 rail cars (accommodated as part of existing freight trains) per year.

Westway DEIS at 2-12. That is not the present no-action alternative, which is to act as a baseline for comparison.

At other places in the DEIS, the definition of the no-action alternative is also incorrect and based on unsupported assumptions about future events. “Although the proposed action would not occur, it is assumed that growth in the region would continue under the no-action alternative, which could lead to development of another industrial use at the project site within the 20-year analysis period (2017 to 2037). Such development could result in impacts similar to those described for the proposed action.” Westway DEIS at 3.12-16. The DEIS also states, without citation, that “[u]nder the no-action alternative, large commercial vessel trips are projected to increase between 2017 and 2037 due to increased trade of commodities.” *See also* Imperium DEIS at p. 3.11-11, 3.12-15, 3.13-4; Westway DEIS at 3.11-11, 3.12-16, 3.13-4.

These statements are completely unsubstantiated and clearly designed to imply that any development or unknown future growth would have similar impacts to the proposed crude-by-rail terminals, undermining the DEIS’s credibility.

5.0 SCOPE OF REVIEW

SEPA requires an environmental impact statement (“EIS”) for any action that has a “probable significant, adverse environmental impact.” RCW 43.21C.031(1). Significance means a reasonable likelihood of more than a moderate adverse impact on environmental quality.” WAC 197-11-794.

“A proposal’s effects include direct and indirect impacts caused by the proposal. Impacts include those effects resulting from growth caused by a proposal, as well as the likelihood that the present proposal will serve as precedent for future actions.” WAC 197-11-060(4)(d). The scope of impacts includes direct, indirect, and cumulative impacts. WAC 197-11-792. “The range of impacts to be analyzed in an EIS (direct, indirect, and cumulative impacts, WAC 197-11-792) may be wider than the impacts for which mitigation measures are required of applicants.” WAC 197-11-060(4)(e). The environmental impact statement must address “reasonable alternatives” to the proposed action, including a “no-action” alternative, WAC 197-11-440(5). It is implicit in SEPA that an “agency cannot close its eyes to the ultimate probable environmental consequences of its current action.” *Cheney v. City of Mountlake Terrace*, 87 Wn.2d 338, 344 (1976).

Importantly, the regulations specifically direct that an “agency shall not limit its consideration of a proposal’s impacts only to those aspects within its jurisdiction, including local or state boundaries.” WAC 197-11-060(4)(b). Indeed, SEPA constitutes a ringing affirmation of the connectedness of Washington with the rest of the planet. It speaks of “humankind” and “human beings” rather than just citizens of this state. RCW 43.21C.010. SEPA explicitly calls

on responsible agencies to “recognize the world-wide and long-range character of environmental problems” and take steps to cooperate in “anticipating and preventing a decline in the quality of the world environment.” RCW 43.21C.030(f); *Eastlake Comm. Coun. v. Roanoke Assoc.*, 82 Wn.2d 475, 487 (1973) (observing “unusually vigorous statement of legislature purpose...to consider the total environmental and ecological factors to their fullest in deciding major matters”) (emphasis added). Those regulations also recognize that environmental impacts do not end at the state’s borders, and explicitly require consideration of the impacts of projects outside of the state’s jurisdiction. WAC 197-11-060(c); *Cathcart-Maltby-Clearview Comm. Council v. Snohomish Cty.*, 96 Wn.2d 201, 209 (1981) (SEPA “also mandates that extra-jurisdictional effects be addressed and mitigated, when possible.”).

Washington’s courts and hearings bodies are only starting to grapple with these important issues, but the conclusions so far are consistent: indirect impacts of fossil fuel transportation projects, including transportation of the fossil fuels to and from proposed terminals, must be considered in the SEPA process. For example, in *Quinault Indian Nation v. Hoquiam*, 2013 WL 6062377 (Nov. 12, 2013), the Shorelines Hearings Board vacated mitigated determinations of non-significance (“MDNSs”) for these two crude oil terminals for failing to adequately consider the cumulative and indirect impacts of rail and vessel traffic.

5.1 SCOPE OF RAIL ANALYSIS

Precedent from other ongoing SEPA processes for fossil fuel transportation projects with a rail component supports a broad scope for these DEISs. Ecology and other co-lead agencies have been clear that the scope of the EISs will include indirect impacts, some of which may appear distant from the projects themselves. For example, in announcing the scope of the EIS for the Gateway Pacific Terminal (coal export) near Bellingham, Ecology confirmed that the EIS would look at—in addition to the obvious onsite impacts like wetlands fill, habitat loss, and pollution—impacts of increased rail and marine vessel traffic throughout the state and even beyond.⁴ The same is true for the proposed oil shipping terminal in Vancouver.⁵

Here, however, the DEISs analyze the impacts of rail traffic and rail transportation only along the PS&P line from Centralia to Hoquiam. DEIS at S-4-5. This truncated analysis excludes issues on the BNSF mainline from the drill sites across the state of Washington, through many communities that will be impacted by these projects.

⁴ Available at <http://www.ecy.wa.gov/geographic/gatewaypacific/gpt-faq.pdf>. Transportation of coal for the project will be studied “to the point where the extraction of natural resources originates,” albeit with less detail than within the state of Washington.

⁵ Energy Facility Site Evaluation Council, Scope of Draft EIS for Tesoro Savage

5.2 MARINE SCOPE

The scope of review for marine impacts is similarly truncated. The Imperium DEIS at p. S-4 to -5 states that only “[r]esources in and around Grays Harbor that could be affected by vessel transport” are generally analyzed. “Similarly, all vessel trips generated by the proposed action would travel through Grays Harbor along the Grays Harbor Navigation Channel between Terminal 1 and the Pacific Ocean. Therefore, these known corridors are the focus of the impact analysis related to rail and vessel transport.” *Id.* This limited scope of review for marine impacts omits impacts to the Pacific coast and along the route taken by barges and tankers transporting oil.

5.3 CUMULATIVE IMPACTS

SEPA requires consideration of cumulative effects. WAC 197-110060(4)(e); WAC 197-11-330(3)(c) (“Several marginal impacts when considered together may result in a significant adverse impact.”); *White v. Kitsap Cnty.*, SHB No. 09-019 at 17 (2009) (cumulative impacts of a proposed action together with the impacts of pending and future actions should be considered when making a threshold determination). In *Quinalt Indian Nation v. Hoquiam*, the SHB overturned MDNSs for these two crude-by-rail facilities explicitly because they failed to consider the cumulative effects of increased rail and marine vessel traffic from each other, and a third crude-by-rail project. *Quinalt*, SHB No. 13-012c, Order on Summary Judgment (Dec. 9, 2013) at 18 (“agencies are required to consider the effects of a proposal’s probable impacts combined with the cumulative impacts from other proposals”).

First, addressing cumulative impacts in a separate section (Chapter 6 for both DEISs) is both confusing and at times misleading to the reader. Constant reference to prior discussions requires a back-and-forth between sections. Under SEPA, “environmental impact statements shall be readable reports, which allow the reader to understand the most significant and vital information concerning the proposed action, alternatives, and impacts.” WAC 197-11-425.

Second, for the reasons discussed directly above, the cumulative impacts section fails to address many applicable cumulative impacts because the scope of review is too small. This is especially notable with respect to rail transportation, as none of the cumulative impacts of increased oil and coal unit train rail traffic along the BNSF main line is addressed. There are twelve crude-by-rail projects in Washington and Oregon that are either already built or at some stage of the permitting or construction process that will collectively add an additional twenty-four trains a day to already-congested rail lines. This is in addition to two major coal terminals that would add an additional thirty-six trains per day to the mix. The DEISs must fix this glaring error.

Moreover, the DEISs chose a life of project length of 20 years, but did not explain this choice. WAC 197-11-060(4)(c) requires that “[i]mpacts shall include those that are likely to arise or exist over the lifetime of a proposal or, depending on the particular proposal, longer.” 50

years seems a more reasonable lifespan for these major infrastructure projects. The DEIS must be supplemented with an explanation for the chosen review period.

5.4 FAILURE TO ADDRESS CONSEQUENCES

Throughout the review, the DEISs fail to address the consequences of the risks and dangers discussed, both to the natural environment, to the people living and working in the region, to other users of impacted resources, or to economic concerns. For example, the DEISs dedicate a mere page to superficially acknowledging cumulative impacts to natural resources in the event of an oil spill. They do not address or analyze the recovery time of affected aquatic species (plant or animal), nor do they address or analyze the long-term impacts on natural resources and their respective habitats that are likely in the event of a spill. The Quinault Indian Nation provided extensive information on this, none of which was included or acknowledged.

6.0 MITIGATION

Many affected environments sections mention possible impacts that are either not addressed in mitigation measures or not mitigated by suggested mitigation measures and are also not included in significant and unavoidable impacts without explanation. For example, both DEISs mention the possibility of ballast water discharge introducing invasive species, yet the mitigation measure for this significant threat to the aquatic environment is monitoring. Westway and Imperium DEISs at p. 3.4-16. Monitoring is not mitigation — if monitoring activities found an invasive species that was already introduced it could have devastating effects on fisheries.

Overall, mitigation measures must be enforceable, not just promised (as, for example, conditions in permits), actually address the identified risk or harm (not just monitoring or further study), and not simply restate other regulatory requirements.

7.0 ADEQUACY OF DEIS ENVIRONMENTAL REVIEW

An EIS must evaluate the likely impacts related to the project. WAC 197-11-060(4). Decision makers must provide a “detailed statement” of environmental impacts. RCW 43.21C.030(2)(c). SEPA requires full disclosure and “detailed” consideration of all affected environmental values. At its heart, SPEA is an “environmental full disclosure law.” *Norway Hill Preservation and Protection Association v. King Cnty. Council*, 87 Wn.2d 267 (1976). The *Norway Hill* court also highlighted the legislature’s intent that “environmental values be given full consideration in government decision making,” and its decision to implement this policy through the procedural provisions of SEPA which “specify the nature and extent of the information that must be provided, and which require its consideration, before a decision is made.” *Id.* at 277-78.

Environmental reviews under SEPA must identify significant impacts on the natural and built environment. WAC 197-11-440(6)(e). Such reviews must use sufficient information and disclose areas where information is speculative or unknown. WAC 197-11-080(1), (2). Where

there is scientific uncertainty, Washington courts have required agencies to disclose responsible opposing views and resolve differences. These requirements feed into the ultimate standard of review for EISs, that, adequacy is based on a rule of reason, *Cheney v. Mountlake Terrace*, 87 Wn.2d 338, 344 (1976), and courts require reasonably thorough information disclosure and discussion, good data and analysis to support conclusions, and sufficient information to make a reasoned decision. *Klickitat County Citizens Against Imported Waste v. Klickitat County*, 122 Wn.2d 619, 633 (1993). Sufficiency of the data is also assessed under the “rule of reason,” which requires a “‘reasonably thorough discussion of the significant aspects of the probable environmental consequences’ of the agency's decision.” *Weyerhaeuser v. Pierce Cnty.*, 124 Wn.2d 26, 38 (1994) (citations omitted).

In making the similar assessment under NEPA, federal courts require agencies to take a “hard look” at environmental impacts. More specifically, for review of the NEPA claims, the Court must “ensure that an agency has taken the requisite hard look at the environmental consequences of its proposed action, carefully reviewing the record to ascertain whether the agency decision is founded on a reasoned evaluation of the relevant factors.” *Te-Moak Tribe v. Interior*, 608 F.3d 592, 599 (9th Cir. 2010) (quoting *Greenpeace Action v. Franklin*, 14 F.3d 1324, 1332 (9th Cir. 1992) (internal quotation marks and citations omitted)). This review must be “searching and careful.” *Ocean Advocates v. U.S. Army Corps of Engineers*, 402 F.3d 846, 858 (9th Cir. 2005). It also is guided by a “rule of reason” that asks “whether an EIS contains a reasonably thorough discussion of the significant aspects of the probable environmental consequences.” *Churchill County v. Norton*, 276 F.3d 1060, 1071 (9th Cir. 2001), amended by, 282 F.3d 1055 (9th Cir. 2002).

Washington Courts have employed the “hard look” doctrine directly or in other cases have required full disclosure and consideration of environmental values. *See Pub. Util. Dist. No. 1 of Clark Cnty. v. Pollution Control Hearings Bd.*, 137 Wash. App. 150, 158, 151 P.3d 1067, 1070 (2007); *Toward Responsible Dev. v. City of Black Diamond*, 179 Wash. App. 1012 review denied, 180 Wash. 2d 1017, 327 P.3d 54 (2014) (unpublished opinion) (“Courts review an EIS as a whole and examine all of the various components of [the] agency’s environmental analysis ... to determine, on the whole, whether the agency has conducted the required ‘hard look.’”); *see also Coalition for a Sustainable 520 v. U.S. Department of Transportation*, 881 F. Supp. 2d 1243, 1259 (W.D. Wash. 2012) (holding implicitly that “hard look” under NEPA sufficient for SEPA review). Where “hard look” is not discussed or employed directly, courts have required a “reasonably thorough discussion” of environmental impacts. *See Toward Responsible Dev. v. City of Black Diamond*, 179 Wash. App. (2014); *PT Air Watchers v. State, Dep’t of Ecology*, 179 Wash. 2d 919, 927, 319 P.3d 23, 27 (2014) (citing *Norway Hill*, 87 Wn.2d at 275) (requiring “full disclosure and consideration of environmental values”).

As discussed in the sections below, the DEISs fail to provide the necessary hard look and reasonably thorough discussion of environmental impacts throughout their many pages. This is an overarching failure.

8.0 TREATY IMPACTS

The Quinault Indian Nation is a signatory to the Treaty of Olympia (1856) in which it reserved a right to take fish at its “usual and accustomed fishing grounds and stations” and the privilege of gathering, among other rights, in exchange for ceding lands it historically roamed freely.

Treaty rights are not granted to tribes, but rather are “grants of rights from them—a reservation of those not granted.” *United States v. Winans*, 198 U.S. 371, 380-81 (1905). Treaties take precedence over conflicting state laws by reason of the Supremacy Clause of U.S. Constitution. Art. VI, Sect. 2; *Worcester v. Georgia*, 31 U.S. 515, 531 (1832). Treaties then are the supreme law of the land: “The right to resort to the fishing places in controversy was a part of larger rights possessed by the Indians, upon the existence of which there was not a shadow of impediment, and **which were not much less necessary to the existence of the Indians than the atmosphere they breathed.**” *Winans*, 198 U.S. at 381 (1905) (emphasis added). The treaty-reserved right to take fish at usual and accustomed places is a property right protected by the Fifth Amendment. *See, e.g., Menominee Tribe of Indians v. United States*, 391 U.S. 404, 411 (1968); *Muckleshoot v. Hall*, 698 F. Supp. 1504 (W.D. Wash. 1988).

In a landmark court case known as the “*Boldt* decision,” a federal court confirmed that Indian tribes have a right to half the harvestable fish in state waters and established the tribes as co-managers of the fisheries resource with the State of Washington. *United States v. Washington*, 384 F. Supp. 312 (W.D. Wash. 1974). The *Boldt* decision affirmed that the Quinault usual and accustomed fishing areas include “Grays Harbor and those streams which empty into Grays Harbor.” *Id.* at 374. In *United States v. Washington*, 873 F. Supp. 1442 (1994), a federal district court concluded that treaty rights include shellfish and that tribes are entitled to 50% of the harvestable shellfish on most Washington State beaches.

The Chehalis and the Humptulips Rivers and the Grays Harbor estuary provide the freshwater and marine habitat that supports chinook, chum, and coho salmon and steelhead of critical importance to the Quinault Nation’s Treaty-protected terminal river fisheries within Grays Harbor. Grays Harbor nourishes other species of fish important to the Nation’s Treaty-protected fisheries such as White Sturgeon and Dungeness crab, an economically vital fishery on the Washington coast.

The Quinault have lived near and depended on Grays Harbor for generations. They have been called the Canoe people because of the importance of the ocean, bays, estuaries, and rivers to every aspect of tribal life. *See generally* Jacqueline M. Strom, *Land of the Quinault* (1990). Quinault fishers catch salmon, sturgeon, steelhead, halibut, cod, crab, oysters, razor clams, and many other species in Grays Harbor.

Fish and shellfish are a source of social, economic and cultural values. Many tribal fishers derive their entire economic livelihood from fishing and shellfishing. Salmon has particular historic significance as a vital cultural and economic resource of the Quinault people.

Salmon represent a means for employment in fishing, guiding and processing jobs. Often fish are used in trade between tribal members for other foods or goods. Salmon and razor clams are communally served at social and community events, such as ceremonies and funerals. Often, salmon and other fish and shellfish are shared with family members, elders and others in the community that do not, or can no longer, fish. Resource Dimensions, Exhibit 3, at 56.

Fishing is also a way to educate younger generations in life lessons, both as a means to pass on traditional knowledge and to perpetuate ceremonial values. There are also spiritual values inherent in fishing, such as thanksgiving for the ability to utilize the resources. Stewardship and protection of natural resources for future generations, including fish and shellfish resources, are central to the Quinault people's identity. This necessarily includes preserving ideal habitats for all species. *Id.*

Quinault weavers have gathered materials from the Grays Harbor area for many generations. Sweetgrass, cattail, and other grasses and willow gathered from the Bowerman Basin are used by the Quinault as a material in the traditional weaving of baskets and mats and for ceremonial purposes. Weaving is as integral to contemporary Quinault culture as it was in the past. Bowerman Basin, located in Grays Harbor to the north of the proposed Westway and Imperium projects, is one of the two major areas remaining in Washington with large sweetgrass populations. Sweetgrass is a key component, and participant, in the highly complex estuarine ecosystem processes. Its loss due to a potential oil spill would significantly harm juvenile salmonid and bird habitats, and estuary function, which would have huge negative implications for the Quinault. *Id.*

8.1 IMPACTS ON FEDERALLY-GUARANTEED TREATY FISHING AND GATHERING RIGHTS FROM INCREASED RAIL AND VESSEL TRAFFIC AS WELL AS INCREASED OIL SPILL RISK.

The DEISs for Westway and Imperium both conclude that "increased vessel traffic related to the proposed action in Grays Harbor could increase the potential for conflict with fishing areas and access to fishing areas for the Quinault Indian Nation," Westway DEIS at S-42, and that these impacts were unavoidable and significant. *Id.* (Section 3.12). Yet even this finding of significant and unavoidable impact is too conservative, as the DEIS fails to address protection of Chehalis River and Grays Harbor estuarine habitat, instead addressing only impacts to in-river and mouth-of-river fishing. Westway DEIS at 3.12.4.3.

Statements throughout the DEIS support the conclusion that increased traffic caused by the expansion will disrupt tribal fishing. See Westway DEIS at 3.17.5.2: "one of the prime commercial fishing areas is located in the navigation channel east of the Hoquiam River. Access to this area would be restricted during vessel loading and tank vessel transits"; at 3.17.43 "There can be as many as 400 or more commercial, tribal and recreational vessels in the harbor during peak fishing times..."; at 3.17.43 "All vessels fishing in the navigation channel may have to move gillnets out of the way or risk damage or loss"; at 3.17.43 "The marina [Westport Marina] is known as Washington State's fish landing port...".

The DEISs inappropriately minimize these impacts by assuming fishers can adjust their fishing efforts to other areas in Grays Harbor and the Chehalis River. This assumption discounts the explanations of treaty fishing in the Chehalis that were provided to the Department of Ecology by letter from the Quinault Indian Nation on May 20, 2015, explaining the unique fishing techniques employed by Chehalis fishers. It appears this information was ignored.

As explained, Quinault fishers utilize gillnet fishing techniques to harvest the salmon and white sturgeon resources in the Chehalis Basin. Sizes of gillnets within Quinault-managed fisheries can range from a length of 10 to 1,200 feet and carry depths from 2 to 75 feet. The depths of different nets can be specific to the depth and condition of the fishing area for which the net is intended. Different stretches of river channel have different depths and underwater obstructions resting on the river bottom (i.e. rocks, stumps, trees, etc.) that can damage nets. Therefore, some nets are only designed and built for specific areas and cannot be fished in other locations. Fishers cannot simply move their nets to avoid interference with oil vessels because the nets would not be suited to other locations.

Similarly, the DEISs fail to address or analyze impacts to fishers who retrieve nets and gear to avoid interference with vessels. As explained in the Quinault Indian Nation's letter to the Department of Ecology dated May 20, 2015, a 600-foot drift-net that does not carry any fish or debris can be retrieved from the water in less than 5 minutes – at the quickest. In contrast, upwards of 300 salmon can be caught in an average length drift-net at any one time – with hydraulic machinery, instances like these can take upwards of two hours to clear fish and completely retrieve the net from the water. Retrieval times can easily double when fishers are pulling nets by hand. The active fishing vessel operator's abilities to respond to unanticipated conditions or unanticipated commercial vessel movements is extremely limited compared to other vessels operating in Grays Harbor, even given the aforementioned careful attention a vessel operator takes while fishing. Although Quinault drift fishers retrieve their deployed nets from the water as expeditiously as possible in order to avoid any accidents or damage to fishing gear, a lost fishing opportunity inevitably occurs.

The DEISs make the erroneous assumption that Quinault fishers all come from the Reservation to fish in Grays Harbor and the Chehalis and will therefore not be delayed by train crossings. As explained in the Quinault Indian Nation's letter to the Department of Ecology of May 20, 2015, the fleet of Quinault vessels that fish the Chehalis, Areas 2A, 2A-1 and 2D either access the area from the Quinault moorage location near the QMart in the Lower Wishkah River just north of the highway and railway bridges entering Aberdeen, or from various boat ramps located along the Grays Harbor fishing areas that can handle the various sizes of vessels utilized. Authorized buying agents will purchase and transfer fish at boat launches including the 28th Street boat launch located in Hoquiam, the Pakonen boat launch located across from the mouth of the Wishkah River, the Cosi Boat Launch located in Cosmopolis or the boat launch at Friends Landing near Montesano. During the peak salmon run entry periods, Quinault fishers can make anywhere from two to six trips in a 24-hour period to land catches.

Further, such delays could interrupt and impede any individual or firm conducting business activity proximate to the proposed train route. For example, Treaty commercial fishers needing to access their fishing areas, or bring their catch to a processor, may be prevented from fishing or from being able to sell their catch prior to spoilage. Quinault's natural resources enforcement staff could be adversely affected if the 28th Street boat launch is blocked by rail or rail-related traffic. Resource Dimensions, Exh. 3 at 8. A derailment could potentially delay fishers from reaching their fishing areas, and with no net in the water no revenue is generated. This could cause fishers to miss the most productive fishing times (slack tides, per interviewees). Additionally, in terms of transporting catch for sale, delays at crossings would increase the time the catch is remaining exposed to the elements in crates, potentially affecting whether the catch is purchased by the processor, and the value of the catch. *Id.* at 102.

The importance of river and marine habitat for fish and wildlife is discussed further in the Fish and Wildlife section of these comments below, as well as in the Direct Testimony of James E. Jorgensen, Exh. 5, and Testimony of Ervin Joseph Schumacker, Exh. 6, both submitted in prior proceedings about these projects before the Shorelines Hearings Board. Additionally, the Resource Dimensions report at Exhibit 3 goes into great depth about the importance of fish and shellfish to Quinault fishers—economically, culturally, and spiritually. Treaty resources, including fish and plants, supported by the Pacific Ocean, the Pacific coast, Grays Harbor, and its rivers and tributaries are inextricable from the Quinault people's traditional and modern ways of life. The social, cultural and economic values provided by Treaty resources have been cherished and handed-down through the generations. Today, the importance of these resources, and their guarantee by Treaty, remains of utmost importance to the Quinault people, as “The Quinault people are acutely aware of these special gifts and thank the Creator for his offerings,” (James and Chubby, 2002). Resource Dimensions, Exh. 3 at 55.

The proposed mitigation measures (Imperium DEIS at 3.12.7.1) are wholly inadequate, as they simply call for coordination and possible adjustment of schedules to minimize conflict with fishing schedules. These proposed mitigation measures ignore the legal supremacy of treaty rights or the practical implications to limiting treaty harvest and impacting treaty rights. Even the DEISs acknowledge that “[n]o mitigation measures would completely eliminate the possibility of impacts to fishing resources because of vessel operations related to the proposed action.” Imperium DEIS at 3.12.8.

8.2 IMPACTS ON HISTORIC AND CULTURAL RESOURCES ONSITE AND ALONG RAIL LINE.

As succinctly explained by the Washington Department of Archaeology and Historic Preservation in its DEIS comment letter dated September 3, 2015, its experts “disagree with your consultant's assertion that these deposits have a low probability to hold significant archaeological materials.” The Quinault Indian Nation submitted several references to support the high likelihood that Grays Harbor is a site containing archeological and/or cultural resources. *See*, letter to Department of Ecology from Quinault Indian Nation, May 20, 2015, and Exhibits G through P attached thereto.

8.3 IMPACTS TO TRIBAL RESOURCES

By signing the Treaty of Olympia, the Quinault Indian Nation reserved not only fishing and gathering rights, but also the right to hunt on open and unclaimed lands. While the proposed DEISs address the tribal resource of fisheries there is no mention of treaty hunting rights or analysis of impacts on tribal treaty hunting rights. Building or increasing the use of rails can hinder the movement of wildlife, particularly deer and elk. The increase of rail traffic from the proposed projects will cause stress and contribute to increased mortality rates in wildlife populations. Decreased wildlife movement will result in lower immigration rates that will lead to more habitat fragmentation and result in lower wildlife populations. The proposed rail line was not analyzed for impacts to wildlife connectivity, a critical element to supporting tribal treaty hunting rights. While the most popular species Quinault members rely on to provide food for tribal families are deer and elk, migratory waterfowl also play an important sustenance and cultural role.

The DEISs fail to mention that treaty fishing and gathering access would be limited during clean-up of damaged infrastructure in the event of a spill, explosion or fire, which could persist for a significant period of time.

The DEISs fail to mention or address the spiritual and cultural importance of the treaty rights and resources to the Quinault, or address the impacts to those values in the event of interference in use or destruction of those resources due to an oil spill.

Additionally:

- Inconsistencies in the tribal resources section make it difficult to assess the accuracy of impacts. Specifically, the number of new vessels is discussed with inconsistent language. The fourth paragraph of Imperium's DEIS at p. 3.12-19 states, "Vessels related to the proposed action would transit this portion of the navigation channel eight times per week on average; for comparison, large commercial vessels would transit this portion of the channel approximately eight times per week on average under the no-action alternative." There is no stated difference in number of vessels transiting the channel between the proposed action and the no action alternative.

Imperium DEIS p. 3.12-19 (and elsewhere throughout the document) states "Operation of the proposed action at maximum throughput would result in a maximum 400 tank vessel trips per year through Grays Harbor, compared to 436 large commercial vessel trips per year projected under the no-action alternative." The accompanying footnote states "Proposed vessel trips are total for the facility so are not in addition to trips attributable to the applicant under the no-action alternative (approximately 14 per year)." The footnote suggests that the no-action alternative would have 14 vessel trips per year instead of the 436 implied in the paragraph above.

If the main text is accurate, it states that the proposed action would have 400 vessel trips and the no action alternative would have 436 vessel trips; there would be fewer vessel trips under the proposed action. This is disputed by the following sentence, however, which states “This increase in vessel trips related to the proposed action could have an impact on tribal resources...” (Imperium DEIS at p. 3.12-19).

Imperium DEIS at p. 3.1-22 restates the same information slightly differently: “Operation of the proposed action at maximum throughput would add 400 tank vessel trips through the harbor per year to the 436 large commercial vessel trips under the no-action alternative.” This language suggests a total of 836 trips.

- The DEISs incorrectly assume that construction of the proposed action would have no impact on tribal resources (Imperium DEIS at p. 3.12-16, Westway DEIS at p. 3.12-17). The assumption is predicated on successful mitigation measures for noise impacts caused by impact pile drivers. The mitigation measure states “If the accumulated sound exposure level is exceeded at the closest distance, monitoring will be moved to a distance of 210 feet from the pile driving. If on any given day the accumulated sound exposure level threshold is exceeded at that distance, pile driving for that day will be stopped and continued the next day.” This statement implies that 210 feet is not the closest distance (because initial monitoring was conducted at the closest distance). So impact pile driving will only cease if accumulated sound exposure levels are exceeded at some farther distance. Therefore, accumulated sound exposure at the closest distance could continue unmitigated. Imperium DEIS at p. 3.5-20 states “Exposure to high levels of underwater noise can cause changes in behavior [to fish] and result in possible injury (Popper et al. 2006; Popper and Hastings 2009a, 2009b).” Any injury to fish would impact tribal resources. The mitigation measure is also contradicted by the statement that impact pile driving would last 2-3 months (Imperium DEIS at p. 2-15 and Westway DEIS at p. 2-11).
- The DEISs underestimate interactions between tribal fishers and vessels. Imperium DEIS at p. 3.12-16 and Westway DEIS at p. 3.12-18 state “Depending on the specific circumstances of each interaction (e.g., chance of a vessel calling during an open fishing window, distribution of the fish, number of fishers on any given day), it is difficult to predict whether increased occupancy at Terminal 1 would significantly affect the tribe’s ability to meet the treaty allocation under their current practices. If a vessel is at berth during the fall fishery, Quinault fishers have the option to fish longer (complete more drifts) or may choose to fish other preferred locations in Grays Harbor (such as other portions of the navigation channel, farther away from the shoreline or farther upstream). However, opportunities to relocate during intense fishing periods may be limited if the other areas are occupied by fishers. Implementation of the mitigation described in Section 3.12.7.2, Applicant Mitigation, would reduce the potential impacts on treaty tribal fishing.”

The Quinault Indian Nation disagrees that this paragraph does not indicate significant impacts to treaty resources.

Logical errors in preceding paragraphs contribute to these conclusions. For example, Imperium DEIS at p. 3.12-17 states that Terminal 1 would be occupied up to 200 days per year. This assumes that all 400 vessel calls (Imperium DEIS at p. 2-13)⁶ will be tank barges that have a 24-hour occupancy period. Some of the vessel calls would be by Panamax class vessels, which have a 48-hour occupancy period. It is possible that Terminal 1 would be occupied by more than 200 days per year⁷, which means that there would be a vessel at the terminal more than 4 days per week.

Analysis of impacts is based on evenly spaced vessel calls throughout each week and year. There is no evidence that vessel calls would be evenly spaced, and impacts could be substantially higher if Terminal 1 is occupied every day. For the last two years, U.S. crude oil supply was highest in October.⁸ This indicates that the highest levels of crude oil supply, and therefore oil transport, may coincide with peak salmon fishing seasons (Imperium and Westway DEIS p. 3.12-10).

Imperium DEIS at p. 3.12-16 to 3 p. 12-17 and Westway DEIS at p. 3.12-18 state that a docked vessel would occupy 20 to 25% of the navigation channel. Again, this assumes the width of a tank barge. A Panamax tanker is 28 ft. wider and would occupy more of the channel.

8.4 POTENTIAL SIGNIFICANT ADVERSE IMPACTS TO TRIBAL RESOURCES CANNOT BE MITIGATED.

Even with the above errors and omissions, the DEISs find significant impacts to tribal treaty resources that cannot be mitigated. Westway DEIS at S-42 (“Increased vessel traffic related to the proposed action in Grays Harbor could increase the potential for conflict with fishing areas for the Quinault Indian Nation compared to the no-action alternative.”); *id.* at S-61 (same for cumulative impact analysis). Ecology and Hoquiam should use these findings to deny the requested permits.

⁶ See discussion of vessel call inconsistencies on pg. 22.

⁷ Footnote 12 on pg. 2-13 indicates that 100% tank barges were assumed because with less capacity than Panamax tankers, more trips would be required. It is unclear what the balance is between vessel size, occupancy, and number of trips.

⁸ U.S. Energy Information Administration. 2015. U.S. Product Supplied of Crude Oil and Petroleum Products. Accessed September 1, 2015. Available at <http://www.eia.gov/dnav/pet/hist/LeafHandler.ashx?n=PET&s=MTTUPUS1&f=M>.

9.0 RAIL TRANSPORTATION

Crude oil is a hazardous material as defined by the U.S. Department of Transportation,⁹ and crude has certain properties that make it uniquely dangerous. First, it is a liquid, meaning that it can migrate away from the site of an accident or other release and travel into communities, down waterways, or into groundwater. Crude oil is also generally less flammable than other hazardous liquids (like ethanol and gasoline), meaning that it is more likely to migrate some distance before reaching an ignition source and catching fire.¹⁰

Second, unlike other liquids transported by rail, unrefined crude oil contains a wide range of contaminants, including sulfur and arsenic; toxic metals like mercury, nickel, and vanadium; and organic compounds like phenols, ketones, and carboxylic acids.¹¹ Hydraulic fracturing, or “fracking” contributes an additional suite of contaminants, including hydrochloric acid and in some cases hydrogen sulfide.¹² Indeed, the Federal Railroad Administration has observed “an increasing number of incidents involving damage to tank cars in crude oil service in the form of severe corrosion of the internal surface of the tank, manway covers, and valves and fittings,” and suggested that this involves contaminated oil.¹³

Domestic crude oil production has been undergoing a major boom in recent years, chiefly because of the increase in fracking, and primarily around the Bakken formation in and around North Dakota. U.S. Energy Information Administration (“EIA”) Administrator Adam Sieminski testified in 2013 that:

Domestic oil production in the United States has increased significantly, and at 7.4 million barrels per day as of April 2013 is now at the highest level since October 1992. Over the five year period through calendar year 2012, domestic oil production increased by 1.5 million barrels per day, or 30%. Most of that growth occurred over the past 3 years. Lower 48 onshore production (total U.S. Lower 48 production minus production from the federal Gulf of Mexico and federal Pacific) rose more than 2 million barrels per day (bbl/d), or 64%, between

⁹ 49 C.F.R. § 172.101. Hazardous materials are materials that have been determined by the Secretary of Transportation to be capable of posing an unreasonable risk to health, safety, and property when transported in commerce. *See* 49 C.F.R. § 171.8.

¹⁰ *See* Exh. 8, BP West Coast Products LLC, “Material Safety Data Sheet – Crude Oil,” May 13, 2002. (flash point of 20° - 90° F).

¹¹ *See* Exh. 9, EPA, “Screening-Level Hazard Characterization, Crude Oil Category,” Mar. 2011.

¹² Exh. 10, Abrams, L., “*Fracking chemicals may be making oil more dangerous*,” Aug. 13, 2013.

¹³ *See* Exh. 11, Herrmann, T., FRA, Letter to Jack Gerard, American Petroleum Institute, July 29, 2013 at 4.

February 2010 and February 2013, primarily because of a rise in productivity from oil-bearing, low-permeability rocks.¹⁴

This dramatic increase in production has caused a corresponding boom in crude-by-rail. In May 2013, the Association of American Railroads (“AAR”) profiled how crude production and crude-by-rail are undergoing twin booms:

Historically, most crude oil has been transported via pipelines. However, in places like North Dakota that have seen huge recent increases in crude oil production, the existing crude oil pipeline network lacks the capacity to handle the higher volumes being produced. Pipelines also lack the operational flexibility and geographic reach to serve many potential markets. Railroads, though, have capacity, flexibility, and reach to fill the gap.

Small amounts of crude oil have long been transported by rail, but since 2009 the increase in rail crude oil movements has been enormous. As recently as 2008, U.S. Class I railroads (including the U.S. Class I subsidiaries of Canadian railroads) originated just 9,500 carloads of crude oil. By 2011, carloads originated were up to nearly 66,000, and in 2012 they surged to nearly 234,000. ... In the first quarter of 2013, Class I railroads originated a record 97,135 carloads of crude oil, 20 percent higher than the 81,122 carloads originated in the fourth quarter of 2012 and 166 percent higher than the 36,544 carloads originated in the first quarter of 2012.

Crude oil accounted for 0.8 percent of total Class I carload originations for all of 2012, 1.1 percent in the fourth quarter of 2012, and 1.4 percent in the first quarter of 2013. It was just 0.03 percent in 2008.

Assuming for simplicity, that each rail tank car holds about 30,000 gallons (714 barrels) of crude oil, the 97,135 carloads originated in the first quarter of 2013 equal approximately 762,000 barrels per day moving by rail. As a point of reference, according to EIA data, total U.S. domestic crude oil production was approximately 7.1 million barrels per day, so the rail share is around 11 percent—up from a negligible percentage a few years ago.¹⁵

¹⁴ Exh. 12, *Hearings Before the Committee on Energy and Natural Resources, U. S. Senate*, July 16, 2013 (Statement of EIA Administrator Sieminski at 2).

¹⁵ Exh. 13, Association of American Railroads, “Moving Crude Petroleum by Rail,” May 2013, at 3-5.

As also noted by AAR, “[t]he Bakken region has accounted for the vast majority of rail crude oil originations in recent years.”¹⁶ According to the North Dakota Pipeline Authority, around 700,000 barrels of crude oil per day were moving out of the area by rail in early 2015, down from a peak of around 800,000 barrels per day in late 2014.¹⁷ From 2008 to 2014 there has been an increase of nearly 5,100 percent in U.S. Class I railroads carrying crude oil (see Figure 1).¹⁸ As shown in the data from AAR,¹⁹ crude-by-rail volumes increased rapidly from 2009 into the second quarter of 2013, then dipped for several months as a result of crude pricing that encouraged a shift to pipeline transport. Later in 2013, pricing was again favorable for rail and crude production continues to increase, such that crude-by-rail volumes rebounded.²⁰ Crude-by-rail volumes experienced another dip around April of 2014, but once more volumes climbed.²¹ Since January 2015, crude-by-rail from Bakken has seen a decrease, however experts do not expect this trend to continue and total levels remain high.²²

¹⁶ Exh. 14, Association of American Railroads, “U.S. Rail Crude Oil Traffic,” June 2015, *available at*

<https://www.aar.org/BackgroundPapers/US%20Rail%20Crude%20Oil%20Traffic.pdf>.

¹⁷ See North Dakota Pipeline Authority <http://northdakotapipelines.com/directors-cut/> Monthly Updates for April 2013-August 2015; Exh. 15, “How oil is transported from North Dakota’s Williston Basin,” THE GLOBE AND MAIL, Dec. 2, 2013.

¹⁸ Exh. 14, Association of American Railroads, “U.S. Rail Crude Oil Traffic,” June 2015, *available at*

<https://www.aar.org/BackgroundPapers/US%20Rail%20Crude%20Oil%20Traffic.pdf>.

¹⁹ See Exh. 16, Association of American Railroads, “AAR Reports Record Second Quarter Crude-by-Rail Data; Decreased Weekly Rail Traffic,” Aug. 29, 2013; Exh. 17, “AAR Reports October and Weekly Rail Traffic Gains, 3Q Crude Oil Up Year Over Year,” Nov. 7, 2013.

²⁰ Fielden, Sandy, RBN Energy, “On the Rails Again? – Bakken Crude Rail Shipments Return to April Highs,” <http://www.rbnenergy.com/on-the-rails-again-bakken-crude-rail-shipments-return-to-april-highs>, Oct. 30, 2013.

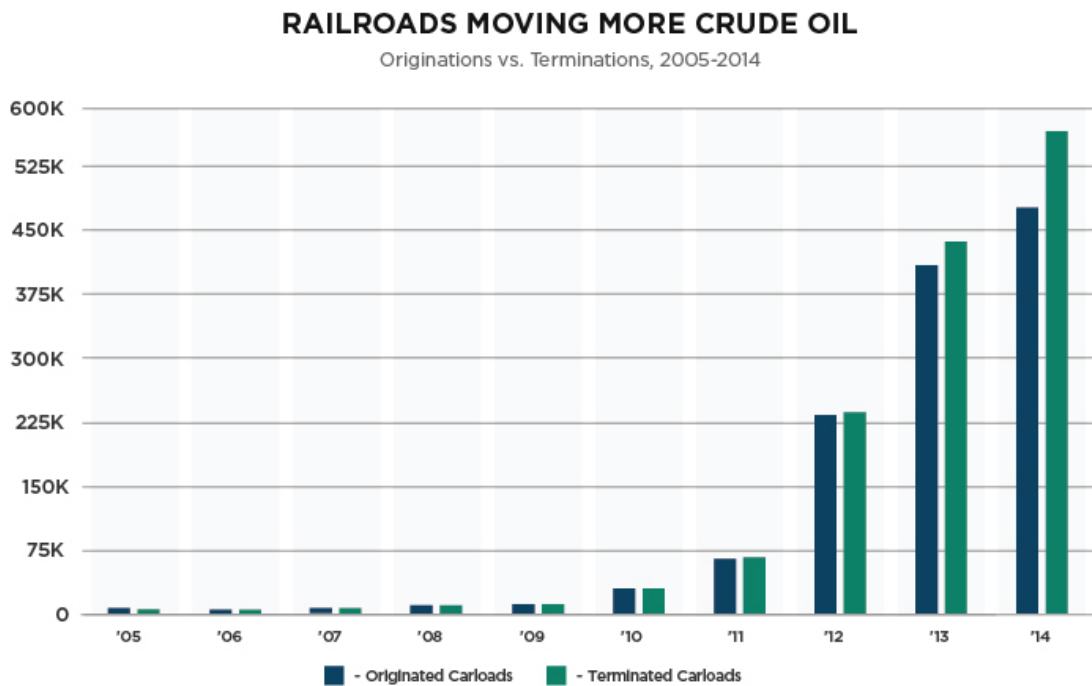
²¹ See Association of American Railroads, “AAR Reports 2014 First Quarter Crude Oil Carloads, Increased Traffic for May and for the week,” June 5, 2014,

<https://www.aar.org/newsandevents/Press-Releases/Pages/2014-06-05-railtraffic.aspx>.

²² See Brian Nearing, “Oil train decline in Albany not permanent, energy consultant says,” TIMES UNION (October 16, 2015), *available at* <http://www.timesunion.com/business/article/Oil-train-decline-in-Albany-not-permanent-energy-6573033.php>; Exh. 18 North Dakota Pipeline Authority, Monthly Update – August 2015, *available at*

<https://ndpipelines.files.wordpress.com/2012/04/ndpa-monthly-update-october-13-2015.pdf>.

Figure 1:²³



America's freight railroads are supporting the nation's energy renaissance by moving domestic energy resources such as crude oil. In fact, rail shipments of crude oil have skyrocketed in recent years with railroads originating a record 493,146 carloads in 2014. In light of increased volumes of crude oil moving by rail, freight railroads have implemented new operational protocols and advocated for stronger tank car design standards, while federal regulators have issued new regulations to help ensure this important commodity is moved safely.

Notes: Data are for U.S. Class I railroads

Source: Association of American Railroads



Unit trains are long freight trains composed of at least fifty and sometimes 100 or more cars used to transport single bulk products between two points. Unit trains are unloaded on arrival and returned for another load. Unit trains cut costs (and save time) by eliminating the need for intermediate yarding and switching between origin and destination. These cost savings, combined with the boom in mid-continent production of crude oil have driven a corresponding boom in the construction of rail terminals designed to handle unit trains. According to one industry analysis:

The number of rail terminals in producing regions loading crude oil onto rail tank cars has increased from a handful at the end of 2011 to 88 and growing today. A

²³ Association of American Railroads, Railroads Moving More Crude Oil, <https://www.aar.org/Pages/Crude-Oil-Rail-Traffic.aspx>.

further 66 crude oil unloading terminals have been built or are under construction.²⁴

Predictably, the rise in crude transportation by rail has resulted in soaring numbers of crude oil releases to the environment in the form of both accidents and “non-accident” releases such as leaks. The growing number of reported “incidents” involving crude oil transportation by rail are listed in Table 1. From 1975 to 2012, federal records show, railroads spilled 800,000 gallons of crude oil.²⁵ An approximate total of 1.5 million gallons of crude oil was released during only 2009-2015, the result from the 426 incidents that have been reported to the Pipeline and Hazardous Materials Safety Administration (“PHMSA”).²⁶ PHMSA records nearly \$47 million in damages resulting from these incidents.²⁷ These incidents do not include the incidents that have occurred across the border in Canada, such as the catastrophic Lac-Mégantic derailment.

Table 1²⁸

Year	Crude-by-Rail Incidents
2009	1
2010	9
2011	34
2012	88
2013	119
2014	144
2015 (January-June)	31
TOTAL	426

Because Bakken crude is unusually flammable, the consequences of spills are particularly severe. On July 6, 2013, in Lac-Mégantic, Canada, a train carrying Bakken crude oil derailed

²⁴ Fielden, Sandy, RBN Energy, “Crude Loves Rock’n Rail,” <http://www.rbnenergy.com/154-terminals-operating-bnsf-the-dominant-railroad>, May 12, 2013; *see also* U.S. Energy Information Administration, “Crude by rail accounts for more than half of East Coast refinery supply in February” (May 5, 2015), *available at* <http://www.eia.gov/todayinenergy/detail.cfm?id=21092>; U.S. Energy Information Administration, “Crude-by-rail transportation provides Bakken Shale production access to major markets” (June 10, 2015), *available at* <http://www.eia.gov/todayinenergy/detail.cfm?id=16631>.

²⁵ Clifford Krauss and Jad Mouawad, “Accidents Surge as Oil Industry Takes the Train,” *THE NEW YORK TIMES* (Jan. 25, 2015), *available at* http://www.nytimes.com/2014/01/26/business/energy-environment/accidents-surge-as-oil-industry-takes-the-train.html?_r=0.

²⁶ Data derived from PHMSA incident reports, <http://www.phmsa.dot.gov/hazmat/library/data-stats/incidents>. This data is largely self reported by the railroads and likely underestimates the numbers and magnitude of incidents.

²⁷ *Id.*

²⁸ *Id.*

and exploded, killing forty-seven people and destroying fifteen acres in the center of the town.²⁹ On October 19, 2013, in Edmonton, Canada, a fireball erupted as a Bakken train derailed, burning several homes to the ground. On November 8, 2013, twenty cars of a Bakken unit train derailed in Alabama, burning and sending a fireball 300 feet into the air, also polluting wetlands and a river. On December 30, 2013, a mushroom-shaped fireball erupted in Casselton, North Dakota, followed by heavy plumes of toxic smoke, when twenty-one cars of a Bakken unit train derailed and burned. The town was evacuated, and evacuation was urged for everyone in a five-mile radius. On January 7, 2014, in Plaster Rock, New Brunswick, Canada, 150 people were evacuated from their homes when seventeen cars derailed. On January 20, 2014 in Philadelphia, Pennsylvania, seven cars of a 101-car train from Chicago derailed on a bridge over the Schuylkill River. Six of the derailed cars were carrying Bakken crude. On February 13, 2014, a 120-car train carrying Canadian crude derailed in western Pennsylvania, spilling oil and smashing into an industrial building. On April 30, 2014, a train carrying crude oil derailed and burst into flames in downtown Lynchburg, Virginia, with some 300 people in the area evacuated, huge flames and black plumes of smoke shooting high into the sky, and reports of several tank cars spilling oil into the nearby James River.

The list of accidents to date in 2015 is startling. Between February 14 and 16, three major crude-by-rail accidents occurred in Canada and the United States, with the last derailment culminating in an enormous fireball that forced the evacuation of a West Virginia town and threatened local drinking water. On March 5, a BNSF oil train with 103 tank cars carrying explosive Bakken crude oil from North Dakota derailed just south of Galena, Illinois. Twenty-one cars derailed and a black-plumed fire continued to burn a day later. On March 7, a Canadian National Railway train carrying Alberta crude oil derailed outside of the tiny town of Gogama in northern Ontario, and five of the thirty-eight cars that came off the tracks fell into the Mattagami River. The accident caused a massive fire and leaked oil into waterways that are used by locals, including a nearby indigenous community, for fishing and drinking. The overall increase in crude-by-rail derailments and spills has resulted in an increase in public awareness and reporting on the issue.³⁰

²⁹ Transportation Safety Board of Canada, "Railway Investigation R13D0054," <http://www.bst-tsb.gc.ca/eng/enquetes-investigations/rail/2013/R13D0054/R13D0054.asp#sal>, Sept. 11, 2013.

³⁰ See Ralph Vartabedian, "Why are so many oil trains crashing? Track problems may be to blame," *LA TIMES*, October 7, 2015, *available at* <http://www.latimes.com/nation/la-na-crude-train-safety-20151007-story.html>; Clifford Krauss and Jad Mouawad, "Accidents Surge as Oil Industry Takes the Train," *THE NEW YORK TIMES*, January 25, 2015, *available at* http://www.nytimes.com/2014/01/26/business/energy-environment/accidents-surge-as-oil-industry-takes-the-train.html?_r=0; Ralph Vartabedian, "Crude-oil train wrecks raise questions about safety claims," *LA TIMES*, March 12, 2015, *available at* <http://www.latimes.com/nation/la-na-oil-train-explosions-20150313-story.html>; Shane Ferro, "US oil train accidents won't go away any time soon," *BUSINESS INSIDER*, March 20, 2015, *available at* <http://www.businessinsider.com/crude-oil-train-derailments-2015-3>.

Western Washington has not avoided accidents. In June of 2014, an oil train heading to the Tesoro refinery derailed under the Magnolia Bridge in central Seattle.³¹ While no oil spilled in that event, given the location of the derailment it would have been a catastrophe if a fire had resulted. Similarly, a train carrying Bakken crude to the BP refinery derailed in Montana, resulting in a significant oil spill but not a fire.³² Additional accidents involving trains carrying crude oil to Western Washington are only a matter of time.³³

Additional information regarding the costs of these accidents is provided in Exhibit 19, “Analysis of the Potential Costs of Accidents/Spills Related to Crude by Rail.”³⁴ This analysis demonstrates that the costs of crude-by-rail incidents are often enormous, and that a major unit train incident could cost \$1 billion or more for a single event. As explained in Exhibit 19, the Lac-Mégantic rail disaster will likely have costs on the order of \$500 million to \$1 billion, excluding any civil or criminal damages. Damages for a similar incident could have been substantially higher had it occurred in a more populated area. Lac-Mégantic is also relevant in that it shows the devastating consequences of an accident involving highly flammable light crude (such as the Bakken crude) in a small town, both in terms of loss of human life and widespread explosion and fire damage to surrounding property.

Exhibit 19 also analyzes the spill of tar sands dilbit from Enbridge’s Line 6B in Marshall, Michigan. This rupture in 2010 had costs of approximately \$1 billion for Enbridge. The spill volumes at Marshall (840,000 gallons) were within the range of the amount of spill possible (and, in fact, substantially less than the maximum spill) if a crude by rail unit train released much of its cargo. Once again, damages for similar incidents could have also been substantially higher had they occurred in a more populated area. Marshall is also relevant in showing the high potential cost of dilbit spills into water (and rail lines are often highly proximate to water).

Unfortunately, the pattern of oil train accidents and explosions is unlikely to end soon. On May 8, 2015, the U.S. Department of Transportation published long-awaited new standards for oil tank cars and oil train safety.³⁵ These rules, too long in coming, are woefully inadequate. While the new rules establish stronger standards for newly built tank cars, they set weaker standards for retrofitting existing tank cars, and DOT is allowing these hazardous tank cars to

³¹ See <http://www.komonews.com/news/local/Oil-train-derails-under-Seattles-Magnolia-Bridge-268442612.html>.

³² See <http://fuelfix.com/blog/2015/07/20/officials-oil-train-didnt-speed-before-montana-derailment/>.

³³ Leaks from oil trains have already drawn fines; in March 2015, Washington state regulators recommended BNSF be fined up to \$700,000 for failing to properly report more than a dozen hazardous materials spills in recent months despite prior reminders. See <http://www.bellinghamherald.com/news/local/article22282506.html>.

³⁴ Exh. 19. This analysis was prepared by The Goodman Group, Ltd, a consulting firm specializing in energy and regulatory economics, on behalf of Oil Change International.

³⁵ PHMSA/DOT, Hazardous Materials: Enhanced Tank Car Standards and Operational Controls for High-Hazard Flammable Trains, 80 Fed. Reg. 26644 (May 8, 2015).

continue shipping explosive crude for almost a decade, with even the most dangerous tank cars remaining in service until 2018.³⁶ The rules have been challenged in federal circuit court both by some of the Commenting Organizations, as well as industry groups seeking even weaker challenges. *See American Petroleum Industry v. United States*, Nos. 15-1131, 15-1132, 15-1182, 15-1194, 15-1195, 15-1199 (consolidated) (D.C. Cir.). That case will take at least a year to resolve. And relatedly, a recent report highlighted dangers of oil trains crossing over old and unsafe rail bridges. *See* Exh. 20, Waterkeeper Alliance, Riverkeeper, and ForestEthics, *Deadly Crossing, Neglected Bridges & Exploding Oil Trains* (Nov. 2015).

9.1 FLAWS IN ANALYSIS OF INCREASED RAIL TRAFFIC AND IMPACTS.

As presented in the expert report of Dr. Fred Millar, attached as Exh. 2, the DEISs contain a variety of errors and flaws that undermine their conclusions. In sum,

- The DEISs fail to adequately consider potential major crude-by-rail derailment hazard events by (1) omitting analysis of shipper or carrier worst case scenarios, (2) failing to use available models to estimate potential consequences, and (3) failing to summarize recent federal reports of ranges of expected crude-by-rail accident consequences.
- The DEISs make only a brief and pro forma acknowledgement of significant risks from crude-by-rail oil spills and fire/explosion events. The DEISs lack any substantive discussion or focus on the consequences to human health and safety of potentially serious crude-by-rail releases, either on the PS&P line or in the extended BNSF rail haul.
- The DEISs significantly underestimate the likelihood of significant human health and safety impacts from crude-by-rail derailments.
- The DEISs fail to consider local route and infrastructure conditions.
- The DEISs rely on data and models likely to be biased and uses non-relevant data.
- The DEISs improperly default to reliance on existing and future rail safety regulations, without acknowledging current baseline conditions or regulatory gaps and deficiencies.

³⁶ Earthjustice, *Analysis of 7 Hidden Dangers in the New Federal Oil Tank Car Rule*, available at <http://earthjustice.org/sites/default/files/files/7%20Things%20CBR%20Rule%205%2013.pdf>; see also Tate, Curtis, *Speed rules didn't apply to train in ethanol spill*, <http://www.mcclatchydc.com/news/nation-world/national/economy/article45226446.html> (noting new federal rules don't apply to all trains carrying crude oil).

- The proposed mitigation measures are inadequate.³⁷

Additionally, Table 5 in Appendix M presents numbers as “probabilities” with no explanation. No formula is provided to explain how these numbers were calculated even though rail release events could be described as probability per rail mile or probability per time. The last paragraph in that section (at page 4-6) compares the national average accident rate (2.475 / million miles [Table 6]) to the PS&P rate (22.325 / million miles [Table 6]) and notes that the PS&P rate was approximately ten times the national rate. The DEISs then halve the PS&P rate based on unspecified “improvements.” A correct analysis would be to use the observed 22.325 rate since the effect of “improvement” is speculative, analysis should provide a table of values based on the observed rate and a range of speculated rates, and because of that failure the expected accident rate may actually be twice as high as that calculated and discussed in the DEISs and in Table 7 of Appendix M.

Likewise, the first paragraph of section 4.3 describes Table 7 as “frequency of accidents.” The “frequency of accidents” may equal number of miles times accident rate, but there is no formula, explanation, or data reference in the text of section 4.3 or in the Table 7 heading. Each Table should be labeled with formulas and data reference and a clear explanation of what the numbers mean. Table 8 presents additive probabilities for all 3 sensitive areas but the sum is incorrect ($5\% + 3\% + 10\% = 18\%$; Table 8 sums as 17%); the length of miles is also summed incorrectly ($3 + 2 + 6 = 11$; Table 8 sums as 10). If these are rounding errors, Table 8 should include at least 1 significant digit so the summation is clear.

In addition, Table 7 in Appendix M and accompanying text do not present the additive probabilities and expected oil spill frequencies (the probability of expected frequency of a small, medium, or large release from any source). The DEIS must include a consideration of the additive probabilities of a release anywhere since the specific type of spill is less important to consider than how frequently a spill of any size can be expected.

Rail Table 16 also fails to provide an accurate picture of the probability of an accident. The probability of accident / mile in this table are useful for comparison but additive probabilities are absent (the probability of accident / mile in from any size). In addition, the parameter “releases / mile” is not intuitive because the result is extremely small. Because the relevant concern is probability of release the “release / mile” should be multiplied by the number of miles the trains will be traveling. In Table 16_revised the probabilities are multiplied by 100 miles to show the increased likelihood of a spill of any size on any 100 mile stretch. The final

³⁷ These comments are explained in detail in the attached report of Dr. Fred Millar (Exh. 2). Additional comments with respect to the hazardous rail transportation of crude oil are found in Exh. 21, Millar Comments on DEIR for Valero Benecia CBR Project; Exh. 22, California Attorney General comments on Valero Benecia DEIR; and Exh. 23, Testimony of Fred Millar, filed in RE Sources for Sustainable Communities v. Equilon Enterprises, PL14-0396 (Skagit County Hearing Examiner).

row shows the probabilities become noticeably larger and present the true risk in a transparent way.

Table 16_revised. Predicted Rail Transport Releases on Per 100 Mile Per Year Basis— Proposed Actions and Cumulative Projects

Event	# Cars		Predicted Increase in Releases / Mile				Cumulative	
			Westway 2017	2037	Imperium 2017	2037	2017	2037
			Probability per 100 miles					
Minor collision/derailment		1,000 gallons (24 barrels) spill	0.01700	0.01600	0.02700	0.02600	0.05800	0.05400
Collision/derailment with release	1	30,000 gallons (714 barrels)	0.04700	0.03900	0.07500	0.06200	0.16000	0.13000
Collision/derailment with release	3	90,000 gallons (2,143 barrels)	0.00690	0.00460	0.01100	0.00730	0.02300	0.01500
Collision/derailment with release	5	150,000 gallons (3,571 barrels)	0.00035	0.00015	0.00056	0.00024	0.00120	0.00051
Collision/derailment with release	15-30	450,000 to 900,000 gallons (10,710 to 21,420 barrels)	0.00002	0.00001	0.00004	0.00002	0.00008	0.00004
		Column Probability totals	0.07127	0.05976	0.11360	0.09556	0.24228	0.19955

It is not clear from the DEISs why Westway estimates substantially fewer train trips per oil received than Imperium. Westway estimates 458 yearly unit train trips to transport a throughput of 806.4 million gallons of oil. Westway DEIS at 1-1, 2-9. That means each of Westway’s arriving trains would carry 880,349 gallons of oil [806.4 million gallons / (458 train trips / 2)]. Imperium, on the other hand, estimates 730 yearly unit train trips to transport a throughput of 1.26 billion gallons of oil. Imperium DEIS at 1-1, 2-13. That means each of Imperium’s arriving trains would carry 863,014 gallons of oil [1.26 billion gallons / (730 train trips / 2)]. This discrepancy of nearly 20,000 gallons per train trip estimate must be explained.

9.2 THE DEISs DETERMINE, EVEN WITH THE FLAWS DISCUSSED ABOVE, THAT THE PROJECTS’ INCREASED RAIL TRAFFIC WOULD INCREASE THE RISK OF A DERAILMENT, SPILL, FIRE, OR EXPLOSION.

Even with these serious flaws, the DEISs find that the risk of an oil spill from rail cars cannot be fully mitigated, and if a spill occurred, the environmental damage would be significant. Westway DEIS at S-19 to -22. Additionally, the DEISs determine that the projects’ increased rail traffic increases the risk of a derailment, spill, fire, or explosion. *Id.* at S-23. These risks cannot be fully mitigated and if a spill occurred, environmental damage would be significant. *Id.* at S-25. *See also* Westway DEIS at S-39, S-49, S-51, S-63 (on-site operations, increased rail traffic, and cumulative increased rail traffic increased potential for an incident involving a spill, fire, or explosion, a significant, adverse environmental impact that mitigation cannot address).

9.3 UNEXAMINED IMPACTS ON OTHER RAIL USERS

The Washington State Department of Transportation Freight Rail Plan 2010-2030, Exh. 40, indicates that a number of critical sections of track, including the Columbia Gorge, were at or near capacity in 2008 and predicted further congestion by 2028. Other key chokepoints are identified in the Plan, the Washington State Transportation Commission's Statewide Rail Capacity and System Needs Study, December 2006 (Exh. 25), and the *Heavy Traffic Ahead* study (Exh. 24). Additional critical bottlenecks include the Columbia Gorge and the Spokane-Sandpoint Corridor (known in railroad parlance as "the Funnel," due to the fact that most major east-west rail corridors converge there). This project would contribute to additional congestion, yet the DEISs fail to address traffic beyond the PS&P line.

The DEISs should fully analyze the impacts on northwest shippers if inbound and outbound freight traffic is diverted or eliminated due to the competition with crude oil trains. Unless mitigated with significant capacity additions, the addition of the increases of oil train traffic is likely to present significant adverse impacts on other users of the rail line, including grain and fruit shippers, intermodal users, ports, industries, aircraft manufacturers and passenger rail—all of whom are critically dependent on timely and affordable access to the rail system.

Oil-by-rail traffic is already displacing and harming other economic sectors. Rail costs are a significant factor affecting the lack of competitive status of Washington Ports as compared to others on the west coast due to the prioritization of higher freight rates paid by oil shippers. In March 2015, the Washington Department of Ecology released the *Marine and Rail Oil Transport Study-Preliminary Findings & Recommendations*.³⁸ The report includes a section describing oil-by-rail traffic blocking or slowing other Freight train traffic. The report states:

The addition of crude by rail trains is causing concerns about slowdowns or temporary blockages of other freight trains carrying grains and other perishable food commodities. This is mainly due to a lack of locomotives, freight cars, and other factors, in addition to congestion on the rails. BNSF and UP have stated that the increase in crude by rail trains will not impact other freight train traffic, however, some stakeholders are concerned. Decisions on the use of locomotives and railroad lines are based on commercial market factors. The issue of train capacity affecting transportation of various commodities is not a new one. At some times of year, anhydrous ammonia shipments (for fertilizer used in spring planting) are given priority, for example.

Id. at 41. News outlets from the New York Times to Bloomberg News report on the significant toll of oil-by-rail traffic on other commodities and port business.

The DEISs fail to analyze impacts, mitigation measures, and potential funding relating to the use of passenger rail on these same lines. As Exh. 27 discusses, the Amtrak Cascades Mid-

³⁸ Exh. 26.

Range Plan (2008), Washington and passenger rail advocates have significant plans for increases of passenger rail capacity, including adding additional high-speed passenger trains on the I-5 corridor. The DEISs must analyze how existing and expanded passenger rail uses will be impacted if freight traffic increases.³⁹ The DEISs should also consider existing and prospective public funding for rail capacity to purchase passenger rail service. The public has spent billions of dollars in rail improvements to ensure that passenger rail fits with existing capacity, and it is imperative that the DEISs fully analyze the past and prospective investments to ensure that public funds are not spent for private purposes.

The DEISs must also account for the demand for public investment spurred by this project. Rail infrastructure improvements are anticipated, although it is far from clear how those improvements will be funded. Rail lines and infrastructure will also need to be regularly maintained, and there will be mitigation costs for structures such as overpasses, tunnels, and railroad crossings. The DEISs must also address whether the public will be expected to bear any costs for infrastructure constructed for private benefits. Federal and state governments commonly bear a significant share of the costs of freight rail capacity improvement projects.⁴⁰ The DEISs should include all needed capacity improvements that will be required to address at least those areas where the planned oil train traffic will exceed the capacity of the existing system.

9.4 INCREASED RAIL TRAFFIC AT CROSSINGS MEANS DELAYS AND HARM TO EMERGENCY RESPONSE.

The increased rail traffic associated with these proposals threatens to delay and frustrate area drivers, as well as cause real harm to emergency services and responses. As explained by Public Health expert Dr. Frank James (Exh. 7), frequent long trains at rail crossings will mean delayed emergency medical service response times, as well as increased risk of accidents, traumatic injury, and death.

The Washington Department of Transportation, in its May 22, 2014 scoping comments “identified 25 state highway intersections and one limited access interchange ... where operations may be adversely impacted due to delays at nearby highway-railroad grade crossings.” In Skagit County, where oil trains are already traversing the county en route to three oil refineries, a draft study is in progress to analyze impacts of trains at crossings. See http://www.goskagit.com/skagit/study-examining-impact-of-more-trains-at-skagit-county-railway/article_95be7d57-d4b9-5472-b190-5189c02fdc3c.html (“Trains already cause traffic delays that add up to about an hour every day at intersections in Mount Vernon and Burlington.

³⁹ Passenger service that may be affected would include, among others, Sound Transit Sounder Commuter services as well as Amtrak intercity service and Empire Builder service between Seattle and Chicago. The Empire Builder service also utilizes “The Funnel” in Spokane, which is expected to see the greatest increase in freight rail traffic because of the coal shipments.

⁴⁰ See Sightline, January 2013, *Who Pays for Freight Rail Upgrades?* available at <http://daily.sightline.org/2013/01/18/who-pays-for-freight-railway-upgrades/>.

... Vehicle backups at rail crossings can do more than frustrate drivers. Ambulances, fire trucks and police cars on their way to emergencies also have to wait.”).

The DEISs find significant, adverse impacts due to traffic delays, including harm to emergency service from those traffic delays. Westway DEIS at S-45 (“Increased rail traffic related to the proposed action could result in substantial increases in vehicle delay at the Olympic Gateway Plaza and between Poynor Yard and the project site compared to the no-action alternative.”); *id.* (“Increased rail traffic related to the proposed action could block vehicular access, including emergency service access, to the Olympic Gateway Plaza and between Poynor Yard and the project site for a substantial period compared to the no-action alternative.”). Ecology and Hoquiam should use these findings to deny the requested permits.

9.5 EMERGENCY SERVICES AND PREPAREDNESS

When a crude oil spill from a rail car occurs, local response assets are generally the first ones on scene. These assets will include those provided by police departments, fire fighters, and emergency managers. Many times however, these response individuals are unaware of the nature of, and the threat posed by, the materials that are being transported through their communities.

SEPA requires consideration of emergencies and accidents, and does not allow their impacts to be ignored simply because they are uncertain to occur in any specific time frame. WAC 197-11-794 (“An impact may be significant if its chance of occurrence is not great, but the resulting environmental impact would be severe if it occurred.”). SEPA’s significance regulation explicitly calls for consideration of “unique and unknown risks” of projects, and the extent to which they “may affect public health or safety.” WAC 197-11-330; *accord San Luis Obispo Mothers for Peace v. Nuclear Regulatory Comm’n*, 449 F.3d 1016, 1031 (9th Cir. 2006) (agency needs to consider threat of terrorist attack in NEPA process).

Here, the DEIS fails to adequately disclose the state of preparedness both on the PS&P line and the mainline across the state. Additionally, the DEIS fails to analyze detailed oil spill response plans to cover all scenarios on and offsite, including “worst case” spills. Without this analysis, the public and decisionmakers are unable to understand the potential risks and costs of this project or make an informed choice about whether the project should proceed.

As an example of the type of report that has focused on Bakken crude oil spills and emergency response, Exhibit 28 was prepared by the Massachusetts Department of Environmental Planning to provide a reference for first responders and emergency planners as the local, state, and federal level, including entities in the private sector.⁴¹ The Massachusetts report stresses that “catastrophic accidents and large-scale releases remain a cause for concern,”

⁴¹ Exh. 28, Bakken Crude Oil Spills—Response Options and Environmental Impacts, Massachusetts Dep’t of Environmental Planning (June 2015).

and “it is imperative that first responders receive information and training to properly respond.” *Id.* at E-1.

The DEISs find significant, adverse impacts that cannot be mitigated due to “an incident involving the spill of crude oil ... that would exceed the capacity of the local emergency service response services.” Westway DEIS at S-53. Ecology and Hoquiam should not accept this threat to public health and safety.

10.0 GRAYS HARBOR MARINE IMPACTS

The DEISs’ evaluation of the increased risk of conflicts with existing vessel and barge traffic in Grays Harbor, including the increased risk of catastrophic accidents, is one of the most important aspects of the environmental review.

There has been no comprehensive vessel traffic risk analysis done for Grays Harbor, although one has been repeatedly called for,⁴² and the analysis in the DEISs do not come close to being such a comprehensive traffic analysis.

10.1 THE DEIS ANALYSIS OF OIL SPILL RISK AND RESPONSE IS SIGNIFICANTLY FLAWED.

Attached as Exhibit 1 is a technical review of the oil spill risk and response preparedness sections of the DEISs, prepared by Nuka Research and Planning Group. The summary of DEISs’ flaws are reproduced below; the flaws, errors, and omissions identified in this report undermine all DEIS findings about significance of impacts and the real risks to people and the environment that these projects present.

- The DEIS documents present both qualitative and quantitative analyses of risk. The qualitative scales characterize oil spill likelihood and impacts on a continuum from “unlikely” to “likely.” When the qualitative scales are compared to quantitative data, they appear to misrepresent the results.
 - For example, the qualitative scales represent the likelihood of a 105,000 gallon marine vessel oil spill from the no action alternative as roughly equal to the likelihood of a 1.2 million gallon spill from the Westway expansion. In fact, the likelihood is 2.5 times higher for the 1.2 million gallon spill at Westway. Similar discrepancies exist for the Imperium risk analyses.
 - In the rail car risk assessments, the qualitative sliding scales show only slight differences between risks from the no action to the proposed actions, even though the current risk of a crude oil rail car spill is zero.

⁴² Exh, 26, Marine and Rail Oil Transportation Study (March 2015) at 21, *available at* <https://fortress.wa.gov/ecy/publications/documents/1508010.pdf>.

- The DEISs do not distinguish between the broad range of petroleum products that would be transported. The DEISs identify the following products that could be moved via vessel or rail in the proposed projects: Bakken crude oil, bitumen, ethanol, naphtha, gasoline, vacuum gas oil, jet fuel, No. 2 fuel oil, No. 6 fuels oil, kerosene, renewable jet fuel, renewable diesel, used cooking oil, and animal fat. The potential consequences of spills from this wide range of products would vary significantly, as would the ability to contain and recover the different types of product.
- The DEISs characterize the risk of major marine vessel oil spills reaching water as highly “likely” but not absolutely certain. It is implausible that a 1.2 million gallon oil spill from a vessel that hits a dock or jetty would not result in oil reaching water, yet the qualitative scale appears to show that there is some chance that the 1.2 million gallons would not impact the water.
- The DEISs lack sufficient information about the methods used to evaluate potential environmental impacts from the three large marine vessel oil spills described. The qualitative risk evaluation does not distinguish between potential environmental impacts based on spill size, location, or volume spilled. The Risk Assessment Technical Report does not present a consequence analysis, despite the fact that the Modeling Report (Appendix N) shows that for a 15.1 million gallon marine vessel spill, up to 11.2 million gallons is estimated to reach the shoreline within 24 hours. This is an Exxon Valdez-sized spill volume that would impact the Grays Harbor coastline. The potential consequences of such a catastrophic event are not considered.
- The manner in which oil spill frequency estimates and return rates are presented in the DEISs obscures the basic fact that these projects, if approved, would significantly increase the oil spill risk in Grays Harbor. The quantitative analysis presented in the DEISs estimates that the frequency of large spills from the Westway expansion would increase by 8-fold and at Imperium, spill frequency would increase to 30 times the no-action level. Oil spill frequency would be close to 40 times current levels if both projects proceed, and even higher if the U.S. Development project also moves forward.
- The DEISs discuss and present the project risks in a very compartmentalized manner. Individual probabilities are calculated for spills from rail, terminal, or vessel operations for each project. Cumulative risks are described for specific scenarios for each phase of operations, but these probability estimates are never aggregated. Spill probabilities are also never considered from the perspective of the potentially impacted environment. Based on the information presented in the DEISs, the chance of any size oil spill impacting the marine environment from vessel or terminal operations is 0.44/year. The expected frequency of any type of oil spill (2,100 gallons or more) impacting the marine environment is one spill every 2.2 years. The DEISs do not present this information, and does not consider the potential consequences to the marine environment from one oil spill every 26 months.
- The DEISs for Westway and Imperium cite an identical set of mitigation measures for marine vessel operations, which were presumably developed in tandem with the vision that these mitigation measures would be jointly funded and implemented. It is unclear whether there would be a reduction to mitigation measures if one but not both projects proceed. If the

proposed mitigation were reduced, there could be a corresponding increase in the probability or consequences of marine oil spills.

- A simple arithmetic approach is used to estimate potential impacts of rail car incidents to sensitive habitats based on the percentage of the rail corridor that is proximate to sensitive areas. This is not a valid consequence analysis method.
- The modeled oil spill scenarios use medium crude oil as a proxy for a range of project oils, including Bakken crude and diluted bitumen; in reality, the chemical and physical properties of these and other potentially transported oils vary widely. Modeled behavior of medium crude oil may not accurately describe how a diluted bitumen or Bakken crude spill would behave.
- The modeled oil scenario trajectory maps are not informative about the scale of potential impacts, and the trajectory models are not used to evaluate potential consequences of a major marine oil spill. A consequence analysis that considered the spill trajectories against local wildlife, human use, and environmental sensitivities would inform the overall project risks.
- The escort fleet proposed to support the expansions will likely be inadequate to support the cumulative increases in large commercial vessel traffic.
- A vessel management system is proposed as a mitigation measure with no corresponding discussion of how it would be operated or funded.
- The significant increase in potential spill frequencies described in the DEIS should warrant a critical examination of the capacity of oil spill response resources available to respond to a Grays Harbor area spill.

Additionally, section 5.3 in Appendix M assumes no interaction between vessels. The probability of vessel allisions or collisions are estimated independent but this is obviously untrue. If multiple vessels are in Grays Harbor at the same time (or clustered on the open ocean) the probability of collision or allision will increase. This obvious reality does not appear to have been considered. That section also does not employ any data indexing the relative safety of Grays Harbor. Pilots typically describe some ports as more or less difficult to navigate than others but information regarding relative port navigability is not included.

10.2 THE DEISs GREATLY UNDERCOUNT POTENTIAL VESSEL TRAFFIC.

The estimated vessel trip numbers vastly understate the number of vessels these projects would generate. The Imperium DEIS states that it estimated the number of vessel trips based on barges “because it results in the highest number of trips, based on tank barges having smaller capacity than tankers.” Imperium DEIS at 2-13 n.12; Westway DEIS at 2-10 n.8 (“The higher number of trips assumes all tank barges. Because tank barges have smaller capacity than the tankers, more trips would be required.”). However, it is evident from the vessel trip estimate that the DEIS assumes the largest possible size of tank barges, those holding 6.3 million gallons

each.⁴³ Imperium DEIS at 2-13; Westway DEIS at 2-10 (doing the same calculation for Westway results in 256 yearly trips, which is actually higher than the estimates in the DEIS).⁴⁴

If the DEISs used smaller barges for their calculations, such as those listed in the DEISs that only hold 1.05 million gallons, the yearly number of vessel trips would balloon to 2400 total trips for Imperium alone.⁴⁵ The same calculation for Westway results in 1536 yearly vessel trips for Westway. The combined total would be 3936 trips, a far higher estimate than the 638 contained in the DEISs and illustrating a substantial underestimate; a mix of tank barge sizes—some 6.3 million gallon capacity barges and some with a 1.05 million gallon capacity—would also yield a result higher than the DEISs' estimates.

Additionally, the risk assessment appendix purports to analyze a range of possible vessel types and trip numbers, but it is capped at 238 trips for Westway and 400 for Imperium, as in the body of the DEISs. Westway DEIS App'x M at 5-1; Imperium DEIS App'x M at 5-1. The DEISs must correct this discrepancy and, at the very least, explain the rationale behind using the largest tank barges for estimating vessel trips. This is a crucial step because almost all impact assessments—from spill likelihood to fishing impacts—depends on accurate assessments of the number of vessels arriving and departing the facilities.

Moreover, the DEISs fail to address the impacts of associated vessels for these facilities, such as fuel bunkering in Grays Harbor and additional trips for escort tugs, both of which add to the traffic and transportation of petroleum products resulting from the oil terminals. Some of these vessels with shallower drafts may be able to operate beyond channel restrictions which could interfere with gill nets and crabbing in some areas.

⁴³ $(1.26 \text{ billion gallons total throughput} / 6.3 \text{ million gallons per trip}) * 2$ to include empty inbound trips = 400 vessel trips total.

⁴⁴ As with train trip estimates, there is a similarly unexplained discrepancy between the Westway Imperium vessel transit estimates, where Westway estimates substantially fewer trips per oil received. Westway estimates 238 yearly vessel trips to transport a throughput of 806.4 million gallons of oil. Westway DEIS at 1-1, 2-10. That means each of Westway's departing vessels would carry an average of 1.69 million gallons of oil, i.e. $806.4 \text{ million gallons} / (238 \text{ vessel trips} / 2)$. Imperium, on the other hand, estimates 400 yearly vessel trips to transport a throughput of 1.26 billion gallons of oil. Imperium DEIS at 1-1, 2-13. That means each of Imperium's departing vessels would carry an average of 1.58 gallons of oil, i.e. $1.26 \text{ billion gallons} / (400 \text{ train trips} / 2)$. Westway and Imperium must explain why Westway estimates its vessels would carry substantially more than Imperium's, resulting in fewer vessel trips.

⁴⁵ $(1.26 \text{ billion gallons total throughput} / 1.05 \text{ million gallons per trip}) * 2$ to include inbound empty trips = 2400 vessel trips total.

10.3 EVEN WITH THESE SERIOUS FLAWS, THE DEISs FIND SIGNIFICANT, ADVERSE ENVIRONMENTAL IMPACTS THAT CANNOT BE MITIGATED.

Even with the above significant errors and omissions, the DEISs find significant adverse impacts from increased marine oil transportation that cannot be mitigated. Westway DEIS at S-39 (“The risks of larger spills of crude oil from vessel loading could adversely affect sensitive plant and animal species.”); *id.* at S-56 (“Increased vessel traffic related to the proposed action would increase the likelihood of an incident involving the spill of crude oil within Grays Harbor compared to the no-action alternative.”); *id.* at S-58 (“Increased vessel traffic related to the proposed action would result in increased potential for environmental damage from an incident involving the spill of crude oil compared to the no-action alternative”); *id.* at S-63 (“Under cumulative conditions, there could be an increase in the likelihood of incidents involving a spill, fire, or explosion of crude oil compared to the no-action alternative”). Ecology and Hoquiam should use these findings to deny the requested permits.

11.0 TYPES OF CRUDE OIL

The DEISs fail to fully disclose the various risks and consequences associated with different types of crude oil. This could include either light, sweet crude from the Bakken formation, or the heavy, toxic tar sands bitumen produced in Alberta.

Assessments of crude oil properties indicate the serious pernicious toxic properties of crude oil when released into air, water, and soil and its potential effects on fish, the aquatic environment, and wildlife. Crude oil spills are more difficult to clean-up than refined oil products. Crude oil is heavier and thicker; it lasts longer in the environment, coating vegetation, debris, and wildlife. Crude oil can also get trapped in sediments, rocks, and other debris, which allows the oil to be remobilized into the environment days, weeks, and even decades after a spill incident such as occurred in the cold waters of Prince William Sound, Alaska. An EIS must review the environmental impacts of different types of crude oil that may be shipped by Westway and Imperium and what cleanup problems they could create. Exh. 30, Jeffrey W. Short, *Fate and Effect of Oil Spills from the Trans Mountain Expansion Project in Burrard Inlet and the Fraser River Estuary Prepared for Tsleil-Waututh Nation et al. at 10 (May 2015)* (“Fate and Effect of Oil Spills”) is an in-depth review of the current science on the effects of oil spills in marine and estuary environments. The DEISs should be amended to address this information.

Much of the public’s attention has been focused on the unique risks posed by the highly flammable Bakken crudes, which have been the cause of the series of dramatic accidents across the nation in crude-by-rail derailments. However, a spill involving tar sands bitumen, while less likely to result in fires and explosions, presents its own unique spectrum of risks. Diluted bitumen (including railbit, synbit and dilsynbit) derived from Alberta tar sands crude is even more difficult to clean up once it is spilled in an aquatic environment, for after the lighter ends evaporate the heavier components can sink. Those risks have been documented by the U.S.

Environmental Protection Agency after a pipeline spill in 2010 in Marshall, Michigan of Alberta tar sands crude:

We have learned from the 2010 Enbridge spill of oil sands crude in Michigan that spills of diluted bitumen (dilbit) may require different response actions or equipment from response actions for conventional oil spills. These spills can also have different impacts than spills of conventional oil. We recommend that these differences be more fully addressed in the Final EIS, especially as they relate to the fate and transport of the oil and the remediation that will be required.... We recommend that the Final EIS more clearly acknowledge that in the event of a spill to water, it is possible that large portions of dilbit will sink and that submerged oil significantly changes spill response and impacts.⁴⁶

These are the kinds of risks that need to be fully considered so that mitigation options can be considered. For example, if response capabilities are not adequate to deal with a bitumen spill, the County could consider prohibiting that source of crude for this project. Despite recent modifications to the contingency plans implemented by Ecology, responders are only required to improve their ability to detect sunken oils for there are no current technologies to recover sunken oil from depth.⁴⁷

The DEISs fail to address the types of crude oil shipped and their unique properties for health risks, spill clean-up, and climate impacts. The DEISs also fail to disclose the destination of the oil, be it to refineries in Washington and California or for international export.

12.0 IMPACTS ON WATER QUALITY

The DEISs provide no quantitative analysis of the potential impacts to water quality, and resulting impacts to aquatic species.

12.1 SURFACE WATERS

Grays Harbor currently has several water quality issues for which it is listed as an impaired water under the Clean Water Act Section 303. Both the Chehalis and Grays Harbor have “inadequate controls” on point and nonpoint sources of pollutants. It has been shown in countless studies that aquatic organisms become increasingly vulnerable as they are subjected to multiple stressors in their environment. “Organisms living under conditions close to their environmental tolerance limits appeared to be more vulnerable to additional chemical stress” (Heugens, 2001). Aquatic ecosystems can change abruptly in response to accumulation and interaction of multiple stressors. Biodiversity has been shown to decrease in the face of multiple

⁴⁶ Exh. 29, EPA Letter of April 22, 2013 on Keystone XL DSEIS at 3-4.

⁴⁷ Exhs. 45 and 46 are two comprehensive oil spill response studies for San Juan County, Washington, and British Columbia, Canada that illustrate the type of analysis missing in the DEISs.

stressors as well (Vinebrooke, et. al., 2004). The DEISs do not seem to take into account that the aquatic organisms living in Grays Harbor and the Chehalis River may already be living at or around their tolerance limit, and additional stressors could push them over the edge making their habitat unlivable.

The DEISs fail to consider impacts to tribal resources from increased propeller wash. DEISs state *“Overall, any water quality impacts caused by propeller wash and vessel wake would likely be short term. Both Terminal 1 and the Cow Point Turning Basin are located in a portion of Grays Harbor that has a high existing baseline for turbidity (U.S. Federal Highway Administration and Washington Department of Transportation 2010:3.1–3-3). Consequently, vessel operations under the proposed action are not expected to increase turbidity levels substantially above existing conditions.”* Westway and Imperium DEISs at p. 3.4-17.

Existing turbidity does not mean that increases in turbidity from vessel traffic will not cause environmental damages. If anything, existing high turbidity could exacerbate future increases and cause damage to marine animals and plants. Damage to marine plants and animals would affect tribal fishing and gathering activities and impair the Quinault Indian Nation’s federally-protected treaty rights.

The Westway DEIS does not address the issue that historical accumulation of dioxin has been found in the sediment surrounding the project site, and admittedly will be released/deposited into the water during construction. There is no analysis of the cumulative impacts from past and future releases from these project sites and the general area on aquatic ecosystems.

Until TMDLs are developed for identified pollutants, and TMDLS are implemented effectively, promises about heightened awareness and diligence of pollutants entering the water from this project are neither reliable nor adequate mitigation.

12.2 WETLANDS

On a national scale, the highest and most biologically significant concentrations of contaminants in NOAA’s National Status and Trends Program occur predominantly in urbanized estuaries (Kennish, 1994). This is true in Grays Harbor. Estuaries are particularly sensitive ecosystems. The DEISs do not indicate whether BMPs will address the potential damage done to these fragile ecosystems that provide so many valuable functions to aquatic organisms.

12.3 GROUNDWATER

The document identifies numerous groundwater resources within the Chehalis basin and acknowledges the potential for contamination should a spill occur. It does not analyze the potential effects on these groundwater resources should a spill occur.

12.4 WATER FLOW

The DEISs do not address that the Chehalis Basin suffers from serious flood hazards (significant floods occurred in 2007 and 2009) that would jeopardize the rail transport of oil on the PS&P line. There is no analysis of the risk of such events on either the rail lines or the upland facilities and terminal docks proposed to be used for the storage and offloading of crude oil.

13.0 IMPACTS ON PLANTS

The DEISs mention plant impacts from increased exposure to pollutants, but only discuss spills and leaks. Increased exposure to diesel particulates may also harm plant species,⁴⁸ and there are four special status plants along the rail lines.

The DEISs discuss possible impacts from vessel wakes: *“It is anticipated that the potential for impacts could be roughly proportional to the anticipated increase in vessel traffic.”* This indicates potential for erosion in critical habitats such as snowy plover and streaked horned lark habitat in the Oyhut Wildlife Recreation Area and on Damon Point. The possible impacts are not discussed in mitigation measures or as significant and unavoidable impacts. Further, the DEISs mention that impacts should be low because turbidity is already high, without support to back up this dismissal of impacts.

The DEISs do not address or analyze the risk or potential impacts of invasive species from rail traffic resulting from the proposed projects. Railways are a corridor for invasive species and increased railway activity could increase the distribution and rate of spread of invasive species. This could have an impact on the unique habitats, tribal resource plants, and special-status plants.

The DEISs mention the risk of introducing aquatic invasive species via ballast water and the monitoring measures that will be undertaken; however, there is no analysis of the risk or likely impacts. Ballast water is one of the principal vectors of aquatic invasive species (Carlton, 1999) with invasive species being the second leading cause of extinction and loss of biodiversity in aquatic habitats. (US EPA, 2012). “Should an introduced species become a successful invader in a new environment, it can cause a range of ecological impacts. These include competing with native species and altering environmental conditions (e.g., increased water clarity due to mass filter-feeding), altering food web and the overall ecosystem and displacing native species, reducing native biodiversity and even causing local extinctions.” (Ibrahim and el-Naggar 2012).

⁴⁸ Bignal, K., et al. 2008. Effects of air pollution from road transport on growth and physiology of six transplanted bryophyte species. *Environmental Pollution*. 156(2): 332-40. Jayaratne, E.R., et al. 2010. Ions in motor vehicle exhaust and their dispersion near busy roads. *Atmospheric Environment*. 44(30): 36440-3650.

The DEISs should analyze the economic and ecologic impacts of the likely introduction and spread of terrestrial and aquatic invasive species.

13.1 WEEDS

There is no indication of where weeds will be deposited when they are removed from the project sites due to construction, or whether BMPs will be followed in order to reduce the risk of spreading invasive species. The Quinault Indian Nation recommends imposing this requirement.

13.2 MITIGATION MEASURES INADEQUATE

Only impacts from invasive species introduction via ballast water are addressed in the mitigation proposed. The DEIS does not, but should, address mitigation for the other additional impacts on plants from the proposed project activities. The mitigation measure to monitor for invasive species via ballast water should also include a protocol to respond to a detection of an invasive species.

Because the spread of invasive species by rail is not addressed in these DEISs, the proposed mitigation fails to take into consideration the adverse impact invasive species has on unique habitat, special-status plants, and tribal treaty resource plants. These adverse impacts are unavoidable and lack mitigation.

14.0 OIL SPILL AND OPERATIONAL IMPACTS ON FISH AND WILDLIFE

These proposed projects will harm biological, marine, and aquatic resources on both public and private lands and waters. The harmful impacts run from the drilling of the oil in the middle of the North American continent, transport through the rail corridor to the Westway and Imperium projects, to the loading and shipping of the oil through the Grays Harbor estuary, past Bowerman Basin National Wildlife Refuge and other protected areas, to the final, and currently unknown, destination, and ultimate burning. These impacted resources include marine and terrestrial mammals, game and non-game resident and migratory bird species, raptors, songbirds, amphibians, reptiles, fish, shellfish, aquatic invertebrates, wetlands, and vegetative communities. Even in the best case scenario, one without a major oil spill, these projects will harm fish and wildlife through traffic, noise, and invasive species impacts. An oil spill would devastate the surrounding area and animal life. The DEISs acknowledge many of these harms but, shockingly, fail to concede their unavoidable and significant nature.

14.1 THE PROJECTS WILL HARM FISH AND WILDLIFE IN GRAYS HARBOR.

Risks to aquatic health in the vibrant Grays Harbor estuary—including potential harm to important Grays Harbor and Chehalis salmon populations—stem from oil spills from bulk carriers, impacts during construction (seafloor disturbance, increased turbidity, noise, lighting), impacts during operation (endemic oil spills, shading from pier and wharf, toxics from terminal's

outfall pipes, night lighting, noise), chosen shipping routes and shipping traffic along those routes, and climate change itself.

There are numerous species in the area that would be affected by these proposed projects given their locations. The location on the shoreline of Grays Harbor is home to riverine and estuary fish like salmon along with bull trout, green sturgeon, coastal cutthroat trout, and Pacific eulachon. Grays Harbor itself is designated critical habitat for endangered sturgeon and threatened eulachon, and it is designated as critical habitat for the coastal-Puget Sound bull trout. Grays Harbor is also a nursery ground for sixgill and sevengill sharks. Grays Harbor is also a major nursery for Dungeness crab, oyster culture, soft-shell clams, horse clams, Manila clams, and cockles. The outer area of Grays Harbor is home to forage fish like surf smelt, Pacific herring, and sand lance. Wash. Dep't Natural Res. Scoping Letter at 3.

The Grays Harbor National Wildlife Refuge is also at risk from these proposals. From late April through early May, hundreds of thousands of shorebirds concentrate on the muddy tideflats of Grays Harbor estuary—one of only four major staging areas for shorebirds in North America and one of the largest concentrations of shorebirds on the west coast, south of Alaska. Likewise, the Oyhut/Damon Point area is one of only three nesting areas in Washington for federally threatened Snowy Plover. Washington Department of Fish and Wildlife Comments at 3 (“WDFW Comments Letter”). Grays Harbor is also home to bald eagles, great blue herons, and peregrine falcons. This area is a shorebird site of world significance, with up to one million birds in the area each spring.

Grays Harbor is inhabited and used by many species of marine mammals. Migrating and resident Gray Whales feed in the Grays Harbor. Thousands of harbor seals and California sea lions live and pup in Grays Harbor. Sea otters also live in Grays Harbor and are at risk from these projects.

There are many and various risks from these projects to fish and wildlife in Grays Harbor, from routine operation at the sites, to vessel traffic, including the possibility of spills. Grays Harbor is especially sensitive to spills. Between salt marshes and tidal flats that are vital to salmon, birds, and marine mammals, a spill would be catastrophic. Indeed, the majority of the shoreline habitat in Grays Harbor is the shoreline type most severely impacted by an oil spill. National Oceanic and Atmospheric Admin. Office of National Marine Sanctuaries Scoping Letter at 2 (“NOAA Letter”). Crude oil is extremely toxic to fish and wildlife. Past oil spills have caused documented harm to aquatic fish and shellfish. Oil spills release polycyclic aromatic hydrocarbons (“PAHs”) into surrounding waters. (Oliveira M.B., 2009). PAHs include phenanthrene, anthracene, fluoranthene, pyrene, but, in general, low molecular weight PAHs can be directly toxic to aquatic organisms and harmful to humans, even due to chronic exposure to small amounts of crude oil. *See* Exh. 6, Schumacker Testimony at ¶¶ 13-15, 18, 19; Exh. 5, Jorgensen Testimony at ¶¶ 29, 32, 34, 35; Aas, 2000; Heintz, et al., 2000. Mastrangelo G. 1996. The metabolites of higher molecular weight PAHs are known carcinogens in humans. Previous studies and reviews of oil spills have documented PAH's rapid build-up in tissues of finfish and shellfish to levels dangerous for human consumption following spills of varying size. Seepage

and small leaks over time may cause resident fish and shellfish to suffer chronic exposure to PAHs and allow these chemical compounds to accumulate in animal tissues. *Id.* Additionally, the use of oil dispersants will increase the exposure of fish to hydrocarbons in crude oil (Ramachandran, et al., 2004), though this was also not addressed in the DEISs.

A study of oil spill risks related to the Kinder Morgan pipeline expansion proposal in Canada concluded that a severe oil spill could kill more than 100,000 sea- and shorebirds.⁴⁹ Different types of oil, of course, have different effects on the environment. Diluted bitumen may partially evaporate, float, and sink, depending on conditions, *id.*, whereas Bakken crude typically floats, Westway DEIS at 3.14-8. Either would have devastating effects. For example, the catastrophic spill scenario killing 100,000 birds would cause tremendous direct oiling harm to species and leave the ecosystem entirely unbalanced, having unpredictable but long-lasting consequences. Fate and Effect of Oil Spills at 12.

A recent study shows that salmon and herring embryos exposed to even trace levels of crude oil grow into juveniles with abnormal hearts and reduced cardiorespiratory function.⁵⁰ Even very low embryonic exposure to very low amounts of crude oil, causes permanent structural and functional changes to the fish heart. Exh. 38, Incardona at 7. Cardiorespiratory function is a key determinant of survival and population recruitment, *id.*, meaning that even small amounts of crude oil can pose dramatic risks to these at-risk species.

But even routine operation, without spills, would cause substantial harm to Grays Harbor and its fish and wildlife. For example, increased large vessel traffic will impact Pacific eulachon by harming larval fish that have recently been confirmed to be present in the waters of the lower Chehalis River. Larval eulachon will inevitably be killed by large propellers associated with tankers and tugs that are part of this proposed project. Similarly, Gray whales are particularly susceptible to ship strikes, Washing Dep't of Fish and Wildlife Scoping Comments at 7, and the burrowing shrimp they feed on are susceptible to toxicity, also passed on to Gray whales, *id.*

Likewise, Dungeness crabs are hatched as minute, free swimming larvae that must shed their shells (molt) in order to grow. Grays Harbor has key refuges for juvenile crab in eelgrass, oyster shells, woody debris, and piling areas. But during their early years, Dungeness crabs remain extremely vulnerable to environmental stressors. Crab is the most valuable resource harvested on the Washington coast and Grays Harbor is an integral part of that production by acting as a juvenile crab refuge before they go to the open ocean. Exh. 6, Schumacker Testimony at ¶¶ 7, 15, 17, 19; Armstrong, et al, 2003. Without the Grays Harbor juvenile

⁴⁹ Exh. 30, Jeffrey W. Short, Fate and Effect of Oil Spills from the Trans Mountain Expansion Project in Burrard Inlet and the Fraser River Estuary Prepared for Tsleil-Waututh Nation et al. at 10 (May 2015) (“Fate and Effect of Oil Spills”).

⁵⁰ Exh. 38, John P. Incardona, Very low embryonic crude oil exposures cause lasting cardiac defects in salmon and herring at 1, Scientific Reports (2015).

nursery, crab production on the outer coast would suffer significant impacts and recovery could take many years.

The DEISs acknowledge the tremendous risk of harm from invasive species as thousands of cubic meters of ballast water are discharged each visit. Westway DEIS at 3.4-16. The DEISs, however, have only required that the project proponents prepare an invasive species monitoring plan, *id.* at 3.5-31, without indicating what that plan must consist of or how it will reduce harms from invasive species.

The only other mitigation measure to protect Grays Harbor and its animal life is equally ineffective. Westway and Imperium have agreed to cease vessel-loading operations for a two-week period each year during the Grays Harbor Shorebird Festival. *Id.* at 3.5-21. Shorebirds do not confine their use of Grays Harbor to the Shorebird Festival—they live in and around the area at all times and are always present at high numbers. Rather than a mitigation measure to protect shorebirds, this requirement appears more like one to avoid displeasing birders during the festival. More is needed to be counted as mitigation.

Additionally, stormwater is another critical concern, given the toxicity of the material being shipped. The surrounding water bodies are already listed as impaired under the state's § 303(d) list, and under Ninth Circuit precedent, any additional discharge to such impaired waters is prohibited. The provisions in the construction and industrial stormwater general permit are not adequate to the task of controlling toxic runoff from facilities into sensitive and impaired water bodies. This is particularly ominous given the DEISs acknowledgement of a substantial likelihood of spills occurring at the facility.

It goes without saying that a major spill would devastate marine and bird life in Grays Harbor. But that risk, and the risks from routine operations, goes far beyond the species to the people who have fished and gathered in this area since time immemorial. *See supra* Section 7. The Quinault and others use Grays Harbor to harvest Dungeness crab, Pacific halibut, Pacific whiting, salmon, lingcod, sablefish, nearshore flatfish and rockfish, forage fish, oysters, and razor clams. The Quinault Indian Nation holds treaty rights to 50% of the harvestable fish and shellfish within their treaty area, including Grays Harbor. For the Quinault, that harvest is critical, totaling on average value of \$12,688,000. Exh. 6, Testimony of Ervin Joseph Schumacker at 3. The Quinault language has names for many of these species including “komólnil” (surf smelt) and “páagwáls” (eulachon). *Id.* Harm to these species and treaty resources can be caused both through natural mortality or toxin accumulations that make the fish unsafe for human consumption. *Id.* Again, the treaty impacts have not been adequately addressed and cannot be adequately mitigated.

14.2 SPECIFIC IMPACTS NOT ADDRESSED

Washington Department of Fish and Wildlife recommended in previous scoping comments that the DEISs should include a series of status determination studies for key fish and wildlife populations in Grays Harbor and nearshore Pacific Ocean waters to establish a baseline

prior to the expansion of the facilities. The DEISs failed to meet WDFW's recommendations and there is a need for additional information. The proponent should consult with Washington Department of Fish and Wildlife, USFWS, and the Quinault Indian Nation (a co-manager of fish species along with the state) to formulate a comprehensive analysis to determine the impacts on animals. Accurate mitigation measures cannot be identified without a complete agreed upon analysis.

- Birds

The Migratory Bird Treaty Act (MBTA) is the primary legislation in the United States that was established to protect migratory birds. It prohibits the taking, killing, or possession of migratory birds or parts, nests, eggs of such birds unless permitted by regulation. Take under the MBTA is defined to take, capture, or kill, possess, offer for sale, sell, offer to barter, barter, offer to purchase, purchase, deliver for shipment, ship, export, import cause to be shipped, exported, or imported, deliver for transportation, transport or cause to be transported, carry or cause to be carried, or receive for shipment. The species of birds that are protected under the MBTA all appear in Title 50, Section 10.13 of the Code of Federal Regulations (50 C.F.R. 10.13) and include all avian families in North America.

The proposed action areas occur in Grays Harbor, which supports a wide variety of birds and their habitats. The DEISs proposed actions will occur in ecologically diverse habitats utilized by seabirds such as alcids, shearwaters and gulls, shorebirds such as herons and sandpipers, and waterfowl such as ducks and geese. Vessel movements on the ocean surface have the potential to affect birds by disturbing or striking individuals and flocks. The increased vessel traffic will lead to both direct and indirect effects of migratory birds. There are several factors including presence and density of bird numbers, types of vessels, speeds, protective measures and time of year that will affect the probability of a ship and seabird collisions occurring in Grays Harbor. None of these impacts were assessed in the DEISs. The vessel strike sections only cover marine mammal strikes but do not mention avian strikes, which could result in a taking under the MBTA.

Take of a migratory bird will likely increase with the increase of vessel traffic in the harbor. Direct collisions with birds could occur in the water or flight with a vessel's rigging, wires, poles or masts. In addition, vessel transits will likely increase the probability of nighttime collisions, especially with common inclement weather such as fog or clouds common in Grays Harbor. There is no mitigation proposed to address these impacts to migratory birds.

The increase of vessel traffic will also lead to an increased presence of artificial light. Research (Black 2005) indicates that lighting on vessels may attract some birds and cause them to become disoriented. As the proposed action will occur in the Pacific Flyway for migratory birds this is a major concern not addressed. The DEISs have not properly analyzed what effects the increased artificial lights will have on migratory birds nor do they propose any mitigation to address these impacts.

The proposed DEISs acknowledge an increase of vessel traffic in Grays Harbor. The increase of vessel traffic will lead to an increase of expended materials that are being transported, including, but not limited to, crude oil. Birds of all sizes such as sea birds, shore birds and waterfowl are known to ingest a wide variety of marine debris that is commonly mistaken for prey. Because vessel traffic will pass by Damon Point, Bowerman Basin National Wildlife Refuge and the Grays Harbor Estuary, all of which are habitats of significance on the Pacific Flyway, the DEISs should have analyzed the likelihood and extent of expended materials impacts on migratory birds. In addition there is no proposed mitigation to address expended materials that might lead to direct take of migratory birds.

One federally endangered species not mentioned in the DEISs is the California Brown Pelican (*Pelecanus occidentalis californicus*). Briggs et al. (1983) stated that large numbers can be found roosting during the winter season on sandy islands, protected from predators and winds, in Oregon and Washington. The total metapopulation of California Brown Pelicans has been estimated at 70,000 breeding pairs. (Stinson 2014). California Brown Pelicans disperse north seasonally along the Pacific coast from nesting areas in search of food, with small numbers dispersing as far as southern British Columbia. These birds are found in Washington's coastal waters, mainly from April through November with a peak in late July to early September; their numbers decline in October and November with the onset of stormy weather. *Id.* Areas of congregation during this season include Grays Harbor. Wahl and Tweit 2000 published a paper that conducted offshore surveys 1972-1998 from the mouth of Grays Harbor and recorded 32,533 California Brown Pelicans. They also found that 97% of the observations were recorded in channel or littoral waters that were less than 65 ft. deep.

The Washington Department of Fish and Wildlife confirmed the Brown Pelican (*Pelecanus occidentalis*) is currently listed as Endangered by the State of Washington. The DEISs fail to acknowledge this. Brown Pelicans present seasonally in Washington and belong to the California subspecies. (Stinson 2014). They nest on islands in the Gulf of California and along the coast of Baja California in Mexico north to Channel Islands National Park in southern California. In Washington, Brown Pelicans gather in communal roosts on sandy islands, exposed shoals, and a few artificial structures in the Columbia River, Grays Harbor, and Willapa Bay estuaries, and rocky islands off the coast of the Olympic Peninsula." *Id.* Stinson noted, "Oil spills and oil pollution remain a potential threat to Brown Pelicans." There is no analysis conducted in the DEISs to assess the potential impacts to the California Brown Pelican or Brown Pelican.

- Marine Mammals

The DEISs fail to include or address sea otters (*Enhydra lutris*) that are protected under the Marine Mammal Protection Act and Endangered Species Act ("ESA") (listed as threatened in 1997). The primary reason sea otters were listed under the ESA was due to the risk of oil spills in its geographically constricted Range (USFWS 1997). Sea otters occupy most coastal habitats including bays, estuaries and rocky shores that include Grays Harbor. Sea otters were historically and culturally harvested by the Quinault Indian Nation for pelts.

The DEISs have no assessment of the potential impact of oil spills or vessel collisions that might impact sea otter populations. The Exxon Valdez that ran ashore in Prince William Sound Alaska proved to have a drastic impact on sea otter mortality estimated mortalities from 500-5,000. (Garrott, et al., 1993.) The DEISs fail to properly address or analyze the potential impacts to sea otter populations in Grays Harbor.

The DEISs state the greatest likelihood of striking marine mammals is in the shipping lanes but do not acknowledge the presence of Gray Whales, Harbor porpoise, Stellar Sea Lions, CA Sea Lions, Harbor Seals, all of which frequent Grays Harbor. It is incorrect that larger whales do not frequent Grays Harbor; Gray Whales are common, according to the Department of Ecology. See http://www.ecy.wa.gov/programs/sea/coast/animals/gray_whale.html.

- Fish

The DEISs do not accurately describe the animals found in the study area:

- The timing of Chinook migration was mischaracterized. Fall-run adults return to the freshwater rivers and streams to spawn and pass through Grays Harbor from mid-August to mid-October, not in September as stated. Spawning of fall Chinook occurs from mid-October into late November. Spring-run adults are likely to pass through Grays Harbor in April (entering the fisheries from April through August) on their return trip to spawn in upper tributaries (from late August to mid-October).
- Steelhead Trout actually enter the fishery from November to mid-April and spawn from mid-March until the beginning of June, not between January and March as indicated in the DEISs.

The DEISs fail to assess the potential affects from photo-enhanced toxicity. Photo-enhanced toxicity occurs when some of the compounds in bitumen dissolve into water and are absorbed by translucent embryos. This mechanism has been shown to negatively affect species such as Pacific herring embryos by burning them. (Short, 2015).

The DEISs fail to acknowledge the potential negative impacts from the project to macroinvertebrates on which salmonids feed upon in fresh and brackish waters. Ort et al., found Mayfly survival reduced upon a 21-day exposure to oil-contaminated sediments. Furthermore they found the persistence effects of freshwater oil spills should be thoroughly investigated when determining the length of time required to assess the extent of environmental injury following a spill.

The DEISs fail to identify or analyze impacts and mortality resulting from propellers and prop-wash from tankers and tugboats on small fish, larval crab and other treaty resources. Propeller turbulence from tankers and tugboats will inevitably kill small fish and crab larvae within and outside the Harbor. There is no feasible method for excluding small fish and crab

larvae from the prop-wash and therefore some will be killed as a direct result of increasing large vessel traffic. Fish killed would likely include out-migrating salmonids and various forage fish including the ESA-listed Pacific eulachon. Exh. 6, Schumacker Testimony, ¶ 24.

The DEISs address underwater vessel noise by stating that impacts from vessel noise on animals can be severe, then go on to say that impacts will "...increase somewhat under the proposed action, as a result of increased vessel trips." There is no evidence in the discussion to justify the use of "somewhat." In fact, the preceding information indicates probable significant impacts, yet vessel noise is not mitigated or mentioned in the significant and unavoidable impacts.

14.3 INCREASED SEDIMENTATION

The DEISs identify the potential water quality impacts from increased sedimentation caused by increased vessel traffic, on site construction activities, dredging activities, oil spills, and fire hazards from the proposed actions. Yet the DEISs fail to analyze the effects of increased sedimentation on animals, in particular fish life. Increased sedimentation causes high turbidity and suspended sediment levels, which is associated with negative effects on the spawning, growth, and reproduction of salmonids (Bash et. al., 2001).

The DEISs acknowledge the fact that bioaccumulative toxins are present in sediments near the project site and could be released during dredging activities. The DEISs fail to include the fact that six individual chemical criteria were exceeded at the Grays Harbor Paper Mill in an investigation conducted by the Department of Ecology in 1999 (Norton, 1999). The DEISs fail to analyze how the release of these contaminants could affect animals and treaty-protected resources. For example 4-methylphenol was detected by Ecology but not reported in the DEISs. A report by the USFWS found that when dredging occurs, winds and tides re-suspend sediment throughout the harbor which remain in the food chain and negatively affect salmonids. The applicant must meet WAC 173-204 Sediment Management Standards, these standards are set in place to protect federally listed species. The DEISs should include a full Sediment Evaluation with procedures and tests compliant with WAC 173-204.

14.4 THE PROJECTS WILL HARM FISH AND WILDLIFE ON THE MARINE ROUTE BEYOND GRAYS HARBOR.

Like Grays Harbor itself, the areas on the marine route are the vibrant homes to many species that would be put at risk from these projects. The nearshore Pacific ocean is critical habitat for species listed under the ESA, including leatherback sea turtle, green sturgeon, and Eulachon. It is essential fish habitat for West Coast salmon, ground fish, forage fish, and coastal pelagic sharks. It is also important for thresher sharks and juvenile and adult rockfish.

Vessels going north out of Grays Harbor would pass Olympic National Park and offshore colonies of nesting seabirds, rocky haul-outs for seals and sea lions, and the Washington Maritime National Wildlife Refuge Complex. It is also home to bull trout, steelhead, and

Chinook, chum, coho, sockeye, and pink salmon. That area is also frequented by orcas, and it is designated as critical habitat for the southern distinct population segment of green sturgeon. It is the site of the Olympic Coast National Marine Sanctuary, including hundreds of islands where the largest seabird breeding colonies in the region live under federal protection by the Washington Islands National Wildlife Refuges. NOAA Letter at 1. The coastal area north of Grays Harbor is also part of the Quinault Indian Nation's treaty area and contains the primary harvest for Dungeness crab, razor clams, troll-caught salmon, lingcod, various rockfish species, and many species of intertidal organisms such as anemones and limpets also consumed by Quinault. Schumacker at 8.

As the DEISs acknowledge, many ESA-listed whale species live off the Washington coast near Grays Harbor, including blue, fin, and sei whales, sperm whales, orcas, and humpbacks. Other whale species like the pygmy sperm whale and the common minke also live in the area. Many species of turtles also live near the ocean coast, including leatherbacks, loggerheads, and olive ridleys.

A spill in Grays Harbor could flush out and devastate these areas and wildlife. Effects from the *Nestucca* oil spill affected areas all the way from the Oregon coast to Vancouver Island. WDFW Comments at 2. A repeat would be disastrous as high mortality rates are seen as results of major oil spills, such as the *Exxon Valdez* spill. WDFW Comments at 4. Any oil spill in this area could devastate a number of fisheries and cultural resources. For example, Quinault consider the Pacific razor clam a part of their cultural identity, and they have harvested them for millennia in this area. Large middens of razor clam shells have been uncovered in archaeological excavations on the shores north of Grays Harbor. These clams reside in sandy beaches in the intertidal and subtidal nearshore areas of the coast. Schumacker Testimony at 8. Indeed, recent studies have shown that razor clams may be particularly vulnerable to oil spills. *Id.* at 8-9.

14.5 THE PROJECTS WILL HARM FISH AND WILDLIFE ON THE RAIL ROUTE TO THE PROJECTS.

The rail routes from the extraction points in Alberta and North Dakota to the projects are home to numerous species that would be harmed by the increased rail traffic and threat of spills. The Chehalis, Humptulips, Wishkah, Johns, Elk, and Hoquiam rivers provide vital habitat for all life stages of salmonids and other fish; the effects to fish habitat from a crude spill could be irreversible. Local, state, federal, and tribal entities contribute millions of dollars a year to protect and restore declining estuarine and freshwater habitat, yet the cumulative effects over time of these projects could directly compromise these efforts. The rail route crosses streams with habitat for federally threatened bull trout, including the Wishkah River, Satsop River, and Wynoochee River—all of these are designated as critical habitat for the species. Westway DEIS at 3.5-7. The rail route also crosses habitat for state species of concern westslope cutthroat trout. The DEISs acknowledge that there are many other special-status species that live along the PS&P rail line, including northern spotted owls, marbled murrelets, and pocket gophers.

Westway DEIS at 3.5-6. The rail route would also likely affect National Parks and the animals living in them, including grizzlies. National Park Service Scoping Comments at 2-3.

Oil spilling into waters along the train routes would have a significant impact on resident and anadromous fish runs, potentially devastating them. Additionally, grizzlies and other wildlife are at risk from collisions, and this can lead to secondary mortality when adult animals are become unable to care for their young.

Growing infrastructure also results in the fragmentation of wildlife habitat, which can result in the decline of wildlife populations and ecosystem diversity (Hansen & DeFries 2007). Building or increasing the use of rails can hinder the movement of wildlife and thus ecological process. The increase of rail traffic from the proposed projects will cause stress and contribute to increased mortality rates in wildlife populations. Decreased wildlife movement will result in lower immigration rates that will lead to more habitat fragmentation and support lower wildlife populations which can lead to lower reproduction, lower genetic diversity and even possible local extinction. The proposed rail line was not analyzed for wildlife connectivity. Yet Grays Harbor and the Olympic Peninsula contain recently reintroduced and proposed candidate species Fisher (*Martes pennati*) and contains high quality wolf (*Canis lupus*) habitat (Olympic National Park). Wolves were classified as Endangered in 1973 federally and Endangered in 1980 by the State of Washington under ESA. The current wolf recovery plan in the State of Washington calls for the recovery of wolves in a diverse geographic range including the Western third of the State. The DEISs do not analyze the potential impacts on wildlife connectivity from the proposed rail operation increases and have no proposed mitigation measures to address such impacts.

Based on the foregoing errors, inadequacies, and omissions, the Quinault Indian Nation disagrees with the assertion that “there would be no unavoidable and significant adverse impacts” on fish and wildlife.

15.0 PUBLIC HEALTH

Ecology and Hoquiam have not prepared a Health Impact Assessment (“HIA”) for this project. As the Washington Department of Health explained in reference to a similar crude-by-rail project on the Columbia River:

A Health Impact Assessment is a tool that communities and decision-makers can use to objectively evaluate the potential health effects of a project before it is built. A Health Impact Assessment includes a process for bringing together public input and project-relevant data to make recommendations that minimize adverse health effects.⁵¹

⁵¹ Exh. 39, Comments from the Washington Department of Health to EFSEC regarding Scope of the EIS for Tesoro-Savage (Dec. 17, 2013).

A Health Impact Assessment can evaluate the significant public health impacts outlined in the Washington Department of Health's SEPA scoping comment letter to EFSEC for the Tesoro-Savage project, which include the impacts of: diesel exhaust; passenger vehicle emissions; greenhouse gas emissions; noise; rail traffic and access to emergency care; spills and drinking water systems and supplies; train derailments; rail traffic and pedestrian safety; rail traffic and recreation; and rail traffic and community wellness impacts.⁵²

The DEISs do not present a full public health impact analysis. While the DEISs present some public health information, *see, e.g.*, Imperium DEIS at 3.2.5 (potential impacts on air quality) and at 3.7 (noise and vibrations), impacts are discussed in separate sections which makes it difficult to comprehend the complete public health impacts involved with these projects, as well as the way these impacts interact to affect public health. As another example, while the impacts of delays at rail crossings is discussed, those delays are not linked to public health concerns for emergency responders (although the DEIS does identify significant, adverse impacts to emergency response services, Westway DEIS at S-45). The DEISs must be revised to consider the information presented in a literature review report prepared by the Oregon and Washington chapters of Physicians for Social Responsibility and disclose these impacts to the public.⁵³ The report highlights the significant body of research demonstrating the significant, negative impacts of oil-by-rail pollution on public health.

15.1 NOISE

Noise in particular can be an overlooked public health issue. "Excessive noise seriously harms human health and interferes with people's daily activities at school, at work, at home and during leisure time. Noise can disturb sleep, produce cardiovascular and psycho-physiological effects, reduce performance, and provoke annoyance responses and changes in social behavior'. Studies have shown that as environmental noise increases, children's performance on tests of reading ability and memory decreases. Research also shows that noise from road traffic and airplanes can negatively affect cardiovascular health in adults, and may influence blood pressure in children. Studies have also found links between environmental noise exposure and feelings of well-being."⁵⁴

The DEISs find significant adverse impacts to public health from noise that cannot be mitigated. Westway DEIS at S-40 ("Increased rail traffic related to the proposed action could increase noise levels for residents and other sensitive groups along the PS&P rail line.") *id.* at S-60 (same for cumulative impact analysis, calling the increase "substantial").

⁵² *Id.*

⁵³ Exh. 40, Washington Physicians for Social Responsibility and Oregon Physicians for Social Responsibility, Position Statement on Crude Oil Transport and Storage to Governors of Washington and Oregon (May 2015).

⁵⁴ *Id.* See also Exh. 7, Direct Testimony of Frank James.

15.2 AIR QUALITY

While DEIS section 3.2.5.2 describes air quality impacts that could occur in the study area as a result of construction and routine operation of the proposed action, it omits impacts indirectly caused by the projects, such as the increase in traffic on roads, rails, and by water. The following information is needed to provide a complete picture of the proposals' air quality impacts: (1) emissions from vehicles idling at rail crossings; (2) emissions from backup power generation; and (3) all indirect changes in locomotive activity (e.g. idling of non-project-related locomotives) due to increased rail congestion caused by this project.

On the issue of sensitive receptors (defined as members of the population who are particularly sensitive to the effects of air pollutants, such as children, the elderly, and people with illnesses), the DEISs list a disturbing number of schools, hospitals, day care centers, convalescent facilities, senior centers, and parks or recreational facilities located near the project site, along the PS&P rail line between Centralia and the project site, and along the shoreline of Grays Harbor.

The DEISs lack data regarding how individuals who live in and around these areas may be specifically affected by anything other than a risk of cancer. For example, asthma is listed as a possible health effect associated with this project. According to the Washington State Department of Health, more than 600,000 people in Washington have asthma and the U.S. Centers for Disease Control and Prevention have identified Washington's asthma prevalence as among the highest in the nation, and steadily increasing. Asthma results in days lost at school and work, high medical costs, loss of income, and other detrimental outcomes. More information is needed regarding the health effects associated with increased ambient concentrations of pollutants to be caused by the projects including but not limited to asthma, respiratory, and cardiac illnesses. This analysis should include evaluation of impacts on communities already burdened by air-related health impacts and/or other identified environmental justice communities.

A valid SEPA analysis must consider air pollution impacts that specifically accompany transporting oil. Transportation of crude oil long distances creates harmful air emissions from diesel locomotives. These effects will have a significant impact on the ability of air quality control regions through which the trains pass to meet the National Ambient Air Quality Standards—standards which are set to protect public health. As trains journey from North Dakota or Canada to Grays Harbor, they will pass through numerous non-attainment and maintenance areas. The DEISs omit this information because they artificially restricted their scope of review, as discussed above.

The DEISs also downplay the impacts of criteria air pollutants (Imperium DEIS at p. 3.2-11 to -12) because they are not modeled to violate the national ambient air quality standards (NAAQS). Public health problems can persist, even without air quality standard violations. The DEISs should particularly review fugitive emissions of VOCs (volatile organic compounds) escaping from tank cars and from the unloading and loading processes. Especially for Bakken

crude, VOC emissions at other crude-by-rail facilities have been higher than predicted or modeled.

The Quinault Indian Nation recommends requiring the installation of monitoring equipment near the proposed facilities to monitor air quality. If levels are found to exceed the standards, actions to reduce the emissions must be required. The Quinault Indian Nation recommends that air quality monitoring data be available in real time in a way that would be reasonable and convenient for a fisher or gatherer, and the public, to access.

16.0 SEISMIC HAZARDS

This is another area where the DEIS, even with flaws in its analysis discussed below, finds the risk of an oil spill cannot be fully mitigated and if a spill occurred, the environmental damage would be significant. Westway DEIS at S-37.

The Cascadia Subduction Zone, where the eastward-moving Juan de Fuca tectonic plate plunges beneath the westward-moving North American plate close to the Oregon coast,⁵⁵ creates a severe hazard for earthquakes of magnitude 9.0 or even higher.⁵⁶ Experts estimate the recurrence time for earthquakes in the southern region of the Cascadia Subduction Zone, comprising Northern California and the Oregon coast, at 240 years over a period of 10,000 years.⁵⁷ Because the last event occurred in 1700, experts estimate the likelihood of a severe seismic event within a reasonable 50 year lifetime of the facility at up to 42%.⁵⁸

Additionally, since the subduction zone is located offshore, a tsunami of devastating proportions would follow. Experts predict a tsunami similar to the tsunami that inundated Japan's coast immediately following the 2011 Tohoku magnitude 9.0 megathrust earthquake.⁵⁹ The tsunami wave height at Fukushima crested at 49 feet,⁶⁰ consistent with early modeling

⁵⁵ Oregon Department of Land Conservation and Development, *Oregon Coastal Zone Management Program Tsunami Guide*, <http://www.oregon.gov/LCD/OCMP/docs/Publications/TsunamiGuide20140108.pdf> (April 2014).

⁵⁶ Goldfinger, Christopher *et al.*, *Turbidite Event History—Methods and Implications for Holocene Paleoseismicity of the Cascadia Subduction Zone*, U.S. Geological Survey Professional Paper 1661-F, <http://pubs.usgs.gov/pp/pp1661f/>, (2014)

⁵⁷ *Id.* at 3.

⁵⁸ *Id.* By the year 2060, within the lifetime of the proposed facilities, the southern portion of the Cascade Subduction Zone will have exceeded 85% of recurrence intervals if no major earthquake has yet occurred.

⁵⁹ Oregon Department of Land Conservation and Development, *Oregon Coastal Zone Management Program Tsunami Guide* at 5-6.

⁶⁰ Charles B. Miller, Notes on Potential Effects of a Subduction Earthquake and Tsunami Sequence on a Jordan Cove LNG Terminal at 9. http://350corvallis.org/wp-content/uploads/2013/01/LNG-in-Tsunami-Zone_all.pdf.

studies showing that offshore mega-earthquakes in the Pacific U.S. region can trigger tsunamis with wave heights of 30 to 70 feet.⁶¹ In Tohoku, the wave surged inland to a distance equivalent to 128 feet above sea level, traveled up to 6 miles inland, and killed over 15,000 people.⁶² This is the context in which Westway and Imperium propose to construct their terminals.

Adding to this risk, Westway and Imperium's proposals sit on soils (and fill) that are highly susceptible to liquefaction. Liquefaction is a soil behavior phenomenon in which saturated soil softens and loses strength during strong earthquake ground shaking and ultimately flows like a liquid. The Washington State Department of Natural Resources has designated the Port of Grays Harbor and the surrounding area as a zone of high liquefaction hazard.⁶³

As explained in the accompanying expert report of Dr. Joseph Wartman (Exh. 4), the DEIS "largely focuses on earthquake potential and associated secondary seismic effects including strong ground shaking, soil liquefaction, coseismic tectonic subsidence, and tsunamis" and finds that "over a 50-year period (i.e., the typical design life of an engineered facility), there is a 2% chance that an earthquake will cause ground shaking ... expected to result in moderate to heavy structural damage to the facility."

Dr. Wartman points out, however, that the DEISs fail to discuss "the more likely case of moderate shaking ... which can likewise cause significant structural damage to port facilities (there is about a 10% chance of PGA exceeding 0.3g during a 50-year design life of the facility)."⁶⁴ For example, during the 1995 Great Hanshin, Japan earthquake, local ground shaking of PGA = 0.31g caused major damage to the port of Kobe, a modern industrial harbor facility. Included among the many effects at the port of this earthquake were damage to quay walls, breakwaters, pile-supported structures, and industrial equipment such as large cranes.⁶⁵

Dr. Wartman's report addresses earthquake-associated tsunami risks, finding that the DEISs themselves show that the earthen berm proposed as mitigation could be overtopped by tsunami waves. For landslide hazards, the DEIS considers precipitation-caused landslides, but

⁶¹ Dr. Hal Mofjeld, NOAA Center for Tsunami Research. Pacific Marine Environmental Laboratory, http://nctr.pmel.noaa.gov/faq_display.php?kw=1998%20Interview%20with%20Dr.%20Hal%20Mofjeld#9

⁶² Becky Oskin, Japan Earthquake and Tsunami of 2011: Facts and Information, <http://www.livescience.com/39110-japan-2011-earthquake-tsunami-facts.html>.

⁶³ Earthquake-induced landslide and liquefaction susceptibility and initiation potential maps for tsunami inundation zones in Aberdeen, Hoquiam, and Cosmopolis, Grays Harbor County, Washington, for a M9+ Cascadia subduction zone event, (2013) by S. L. Slaughter et al. Wash. State Dept. of Nat. Res. Invest. 36.

⁶⁴ USGS Seismic Hazard Curve Application, <http://geohazards.usgs.gov/hazardtool/application.php>.

⁶⁵ Werner, S. and Dickenson, S. (1996) *Hyogo-Ken Nanbu Earthquake of January 17, 1995: A Post-Earthquake Reconnaissance of Port Facilities*, ASCE Press.

not landslides accompanying a seismic event. Wartman Report at 3 (“The DEISs do not recognize that even moderate magnitude earthquakes (i.e., Magnitude 5 and above) are capable of simultaneously triggering many coseismic landslides across wide region.⁶⁶”). Mitigation measures for these risks are either inadequate or inadequately disclosed. “Nevertheless, no mitigation measures are capable of fully mitigating the geologic hazards and associated risks posed to the facilities.” Wartman Report at 4.

Dr. Wartman concludes:

While I also agree that potentially high levels of ground shaking (PGA of 0.7g or greater) may result in heavy damage to the facility, I believe that the more likely case of even lower intensity earthquake motions (PGA = 0.3g or greater) may cause significant damage. In addition to strong ground shaking, secondary earthquake hazards such as soil liquefaction, subsidence, and tsunamis pose significant threats to the facility that may result in release of hazardous materials, among other adverse consequences.

Wartman Report at 4.

The recent effects of the January 2015 storm are a good example of landslide and slope instability issues that affect Grays Harbor. Storm events are expected to increase in frequency and intensity due to climate change. (Mantua, 2015; Sandell & McAninch, 2013). These hazards should be fully analyzed and mitigation measures provided in order for the DEISs to be complete.

The DEISs use WSDOT data but fail to use DNR’s Statewide Landslide database. For a complete environmental analysis, the proponents must implement the Department of Natural resources recommendations (*see* Comment 000000339-3, Appendix A) and consult with DNR scientists to ensure the correct methodology is implemented for all aspects of the project (operations, construction, rail, and vessel).

The rail analysis also contains incorrect data. For example the DEISs attempt to calculate the likelihood that an unstable slope event could hit or derail a train. The DEISs claim “*Specifically, operation of the proposed action at maximum throughput would result in approximately one unit train trip per day, on average, along the PS&P rail line, compared to an average of three train trips per day under the no-action alternative.*” Westway DEIS at p. 3.1-21. This is an inaccurate statement. The DEISs do not include the additional train trip per day for a total of four daily train trips that should be analyzed under this action alternative. Therefore, the earthquake and related hazards need to be reassessed and the quantitative methodology needs to be included in the DEISs.

⁶⁶ Keefer (1984) Landslides caused by earthquakes, *Bull. of the Geol. Soc. of America*.

The Westway DEIS *claims* “prior to receiving the final building permits, the applicant would need to ensure the geotechnical evaluation considered the most current applicable information and standards.” Westway DEIS at p. 3.1-19. The full potential effects of geologic hazards cannot be fully analyzed without the geo-technical report and structural design included in the DEIS.

17.0 ECONOMIC IMPACTS

Issues that generate economic questions include the impacts of dramatic increases in oil train traffic on real estate values and damage to property from diesel emissions, vibration, and noise. There are also serious concerns relating to the impact of such a massive increase in oil rail traffic on other non-oil shippers of freight by rail, including shippers of agricultural products. These same issues may dramatically affect passenger rail interests. These significant rail traffic increases are likely to create major impacts on communities affected by vehicle traffic problems related to delays at non-grade separated railway crossings, which will affect non-rail freight mobility, access to ports, retailers, tourist centers, and employers. In short, however, due to the truncated scope of review and inadequacies discussed below, the DEISs fail to adequately analyze economic impacts.

Resource Dimensions conducted an independent review of the DEISs “to assess the quality and credibility of the DEIS decision documents.” Resource Dimensions, Exhibit 3, at 4. See review at Exhibit 3 for details, but in sum, the major flaws of the DEISs’ economic review are:

1. DEISs fail to include a cumulative impact analysis as a component of the economic impact analysis.
2. Limited scope of economic impact analysis creates a misleading picture of total economic impacts.
3. Limited usefulness of the cost-benefit analysis conducted.
4. Failure to employ appropriate methods to determine monetary or quantitative estimates for certain impacts.
5. No attempt to quantify economic impacts or negative externalities of an oil spill.
6. DEISs fail to adequately address impacts of proposed projects on the Quinault’s use of treaty resources.
7. Numerous inconsistencies, omissions, and errors.
8. Several erroneous conclusions are drawn about impacts on tribal resources and low income and minority populations.
9. Limited usefulness of discussion of climate change.

18.0 GREENHOUSE GAS EMISSIONS

The GHG analysis contained in the DEISs is flawed in at least three respects. First, the DEISs failed to consider the rail emissions that will occur between North Dakota and the Washington border. Second, the DEISs fail to give a complete picture and accurate analysis of

the lifecycle GHG impacts from extracting and burning the oil related to these projects. And lastly, the DEISs offer no effective mitigation, ignore possible mitigation, and do not acknowledge the resulting unavoidable and significant adverse environmental impacts.

18.1 SEPA STANDARDS FOR GHG EMISSIONS REVIEW

SEPA and its implementing regulations explicitly require consideration of direct and indirect climate impacts. *See* RCW 43.21C.030(f) (directing agencies to “recognize the world-wide and long-range character of environmental problem); WAC 197-11-444 (listing “climate” among elements of the environment that must be considered in SEPA review). SEPA regulations also explicitly direct that environmental impacts outside the jurisdiction of the deciding agency should be considered. WAC 197-11-060(c). Crucially, agencies are required to assess both the direct and indirect impacts of the proposal.

In 2008, a governor-appointed working group provided a list of recommendations on how to ensure that climate change is considered in meeting SEPA’s directives.⁶⁷ Notably, those recommendations identified the following categories of greenhouse gas (“GHG”) emissions to be considered pursuant to SEPA: a) off-site mining of materials purchased for the project; b) transportation of raw materials to the project, and transport of the final product offsite; c) use of products sold by proponent to consumers or industry, including “emissions generated from combustion of fuels manufactured or distributed by the facility.” *Id.* at App. D.

Ecology has issued SEPA Guidance for its own consideration of GHG emissions.⁶⁸ Accordingly, the Guidance makes clear that SEPA requires climate to be considered in its environmental analysis. Ecology’s Guidance proposes that SEPA documents consider whether the proposal will significantly contribute to GHG concentrations, and states that “[i]f the emissions are proximately caused by the project, they should be disclosed regardless of their location.” *Id.* at 4. The Guidance proposes that projects qualitatively disclose GHG emissions of at least 10,000 metric tons/year and quantitatively disclose GHG emissions for projects expected to produce an average of 25,000 tons/year of carbon dioxide equivalent.

Ecology has also provided a “table of tools” that can be used to calculate emissions from projects.⁶⁹ That Table, in turn, lists various sources of emissions from projects, methods to calculate those emissions, and options to mitigate them. Direct “Scope 1” emissions include trains and boats. *Id.* at 1. Scope 3 emissions include “emissions from the future combustion of fossil fuels,” which are defined to include “emissions that will result from the combustion of fossil fuels transported, distributed or imported as a result of the project (e.g., natural gas pipeline).” *Id.* at 2.

⁶⁷ Available at http://www.ecy.wa.gov/climatechange/docs/sepa/20110603_SEPA_GHGinternalguidance.pdf.

⁶⁸ Available at <http://www.ecy.wa.gov/climatechange/sepa.htm>.

⁶⁹ Available at <http://www.ecy.wa.gov/climatechange/sepa.htm>.

18.2 DIRECT GHG EMISSIONS

The DEISs' discussion of climate change is of limited usefulness. The Department of Ecology's Guidance on climate change analysis in SEPA documents includes the following statement: "*For projects with ongoing operations that include transporting products from outside the state, such as a port, a more thorough and perhaps more defensible analysis would include the transportation emissions from the source location outside of Washington to the final destination if either is known and the extent to which either is known.*"⁷⁰ The DEISs include a limited discussion of the proposed projects' impact on climate change that certainly does not meet the above criteria for a defensible analysis. Under Ecology's own Guidance, the climate change discussion is not defensible because it does not include analysis of total greenhouse gas emissions from crude oil sources to receiving ports and refineries.

The DEISs only analyzed rail GHG emissions from Spokane to Grays Harbor (rather than the source of the fuel in North Dakota or Alberta). *See* Westway DEIS at 3.2-19; Imperium DEIS at 3.2-20. SEPA requires an analysis of all GHG emissions, even those that would occur outside Washington State. This is a serious shortcoming since the DEISs acknowledge that rail emissions—even considering only emissions that would occur in Washington State—would be the biggest direct driver of direct emissions. Westway DEIS at 3.2-18; Imperium DEIS at 3.2-19. The rail emissions that would occur in Washington alone if all three projects go forward are 77,887 metric tons of CO₂ per year. Westway DEIS at 6-11; Imperium DEIS at 6-11. That would be a 7.79% increase in state rail emissions. *Id.* Given the distance from North Dakota to the Washington border, total rail emissions likely more than double that amount, but the DEISs have not disclosed that information.

Permitting of these projects is the decision point that could allow these projects and, therefore their direct emissions, whether they occur in Washington, Montana, North Dakota, or somewhere else. CO₂ is fungible in the atmosphere such that the impacts to Washington State and the rest of the world do not depend on where the emissions occur. For that reason, it is not acceptable to consider emissions from these projects compared to global emissions, while only considering a sliver of the total rail emissions. Westway DEIS at 3.2-19; Imperium DEIS at 3.2-20.

Similarly, the DEISs do not analyze greenhouse gas emissions from ocean transport to refinery, instead stopping the analysis at the edge of Washington's ocean waters. The DEISs fail to review and analyze the entire extent of the proposals' greenhouse gas emissions.

Finally, the DEISs state "*The largest contribution of GHG emissions would result from rail transport and represents an increase of approximately 7.8% in the statewide rail emissions of GHGs. Overall GHG emissions related to operation of the proposed action represent about a*

⁷⁰ DOE. 2011. Guidance for Ecology Including Greenhouse Gas Emissions in SEPA Reviews. Accessed September 1, 2015. Available at http://www.ecy.wa.gov/climatechange/docs/sepa/20110603_SEPA_GHGinternalguidance.pdf.

0.11% increase in statewide GHG emissions.” Westway and Imperium DEISs at p. 6-10. The conclusion that a 0.11% statewide increase in GHG emissions is insignificant is unsupported and unsupportable—this is a significant contribution to the State’s entire GHG level for only two projects. Also, DEIS summaries state the following: “Greenhouse gas emissions from the cumulative projects contribute to climate change at the global level.” Westway and Imperium DEISs at p. S-27. This is a quote from the DEIS, but no significant impacts are discussed in Chapter 6, Cumulative Impacts.

18.3 INDIRECT GHG EMISSIONS

The DEISs must do a full analysis of the lifecycle emissions of these projects.⁷¹ While the DEISs state that much of the oil received by rail will replace other domestic oil at U.S. refineries (presumably oil received by marine vessel), Westway DEIS at 6-13; Imperium DEIS at 6-13, the DEISs lack any analysis to support that claim. Absent such support, the DEISs must assess potential increases in GHGs associated with increased production or export of crude oil.

The DEISs fail to provide anything other than speculation as to whether these projects would mean more crude oil would be extracted and burned. In conclusory fashion, the DEISs state that “the cumulative projects would not likely affect the crude oil market.” Westway DEIS at 6-14; Imperium DEIS at 6-14. These projects alone would move 1.2% of the U.S. daily crude oil supply. *Id.* That is a far from trivial amount of oil. All markets are made up of smaller individual actors, all of which affect supply and demand. The DEISs’ speculation to the contrary ignores basic economic principles. The construction of these projects makes available a new source of oil to West Coast refineries via a new transportation method; these effects and their attendant results on the oil market and possible additive emissions cannot be ignored.

The picture is far more complicated than the DEISs reveal, as these projects and projects like them are indeed expected to result in increased tar sands production, increased fracking of Bakken oil, and increased overall GHG emissions.⁷² The DEISs failed to consider the GHG cumulative impacts of other, nearly identical, crude-by-rail projects proposed in the Pacific Northwest (both direct and indirect emissions). The cumulative impact of the U.S. Development project is considered, but not the others, which will cumulatively result in quadruple the current crude-by-rail capacity in the region. Tracking Emissions Report at 8, 13. Pacific Northwest crude-by-rail projects could make tar sands projects commercially viable that otherwise would not be, resulting in increased extraction and burning of that crude. Tracking Emissions Report at 30-32. Crude-by-rail terminals, including Westway’s and Imperium’s, would also increase

⁷¹ A lifecycle “well-to-wheel” GHG analysis was performed for the Keystone XL pipeline and could be used as a model. See Exh. 32, Appendix U to Keystone XL EIS, Lifecycle Greenhouse Gas Emissions of Petroleum Products from WCSB Oil Sands Crudes Compared with Reference Crudes, available at <http://keystonepipeline-xl.state.gov/documents/organization/221247.pdf>.

⁷² See Exh. 33, Oil Change International and Sightline Institute, Tracking Emissions: The Climate Impact of the Proposed Crude-By-Rail Terminals in the Pacific Northwest at 1-2 (Nov. 2015) (“Tracking Emissions Report”).

capacity to handle Bakken, and therefore, and could enable increased Bakken production. *Id.* at 38. The bottom line is that Pacific Northwest crude-by-rail terminals could mean unlocking new crude resources and would result in 41-168 additive metric tons of CO₂ emitted each year. *Id.* at 39.

Moreover, the lifecycle GHG impacts of various sources of crude are not the same. For example, lifecycle emissions of Bakken fracked light oil are likely to be higher than Alaskan or Canadian crude due to methane emissions during the process of obtaining the crude, and significant GHG profile of transporting the crude long distances.⁷³ Lifecycle emissions of tar sands oil are well known to be significantly higher than conventional crudes due to the high energy costs required to extract the crude and the way it combusts, and it is not clear if this is taken into consideration in Table 3.2-9. Unless tar sands bitumen is prohibited, the full lifecycle emissions of transporting it by rail to the refinery should be fully disclosed and analyzed. The costs of these additional GHG emissions should also be disclosed using tools like the federal government's "social cost of carbon" metric.⁷⁴

18.4 THE PROPOSED MITIGATION IS INADEQUATE, AND THESE PROJECTS WOULD RESULT IN UNAVOIDABLE AND SIGNIFICANT ADVERSE ENVIRONMENTAL IMPACTS.

The direct GHG impacts of these projects alone, even with the flaws described above, will be 0.11% increase in statewide emissions. Westway DEIS at 6-11. The DEISs do not propose any mitigation for GHG emissions other than requiring Westway and Imperium to submit vehicles for routine maintenance and to minimize idling. Westway DEIS at 6-17 to -18; Imperium DEIS at 6-17 to -18. The idling mitigation requirement is independently inadequate because it does not provide substantive requirements, only urging that some plan be created, but the combination of these mitigation measures is laughably inadequate in light of the tremendous impacts these projects will have.

All GHGs should be mitigated, and the final EISs must consider various mitigation options beyond the idling and maintenance measures proposed in the DEISs. Idling is only a small fraction of the GHG emissions these projects would directly release. Mitigation options must include: denial of the project outright; prohibition on high-GHG sources like tar sands; and requirement to purchase credits from a legitimate and verified source to offset all net GHG emissions on an annual basis, including lifecycle well-to-wheel emissions that are proximately caused by the project. These projects would be responsible for a tremendous increase in GHG

⁷³ See Exh. 31, Carnegie Endowment, Global Coal-Oil Index (Mar. 2015), available at <http://carnegieendowment.org/2015/03/11/know-your-oil-creating-global-oil-climate-index>; see also Exh. 34, Schneising et al., *Remote sensing of fugitive methane emissions from oil and gas production in North American tight geologic formations*, Earth's Future (2014)), available at <http://acmg.seas.harvard.edu/publications/aqast/articles/schneising2014.pdf>.

⁷⁴ <http://www3.epa.gov/climatechange/EPAactivities/economics/scc.html>

emissions, and without mitigation, these emissions create unavoidable and significant adverse environmental impacts.

19.0 ENVIRONMENTAL JUSTICE

The DEISs show that the Westway and Imperium projects will have a disproportionate impact on people of color and low-income communities. This includes impacts on the Quinault Indian Nation and its members, as well as significant adverse impacts to other communities largely made up of low-income individuals and members of racial and ethnic minority groups. While the DEISs acknowledge many harms to communities surrounding the projects and along the rail-routes, they have failed to address that these harms will be disproportionately borne by those communities, an outcome unacceptable under state and federal law. Likewise, despite these serious impacts to individuals and communities, the DEISs erroneously rely on a finding that there will not be significant adverse impacts, Westway DEIS at 7-25;⁷⁵ but that is not the standard for environmental justice impacts—any impact, whether found to be significant or not, must not be inflicted so as to have a racially disproportionate impact. The disproportionate impacts of these harms is another reason the Westway and Imperium projects should be denied in their entirety.



Cropped from Westway DEIS at 3.9-13.

19.1 DISPROPORTIONATE AND ADVERSE IMPACTS ARE ILLEGAL.

A number of laws prohibit disproportionate impacts from falling on communities of color and low-income communities. For example, the 1994 Environmental Justice Executive Order requires federal agencies to ensure that its actions do not have disproportionate impacts on low-income and/or minority populations. Exec. Order No. 12,898, 59 Fed. Reg. 7,629 (Feb. 11, 1994). In Washington State, Ecology has an agreement with EPA to effectuate environmental

⁷⁵ As discussed above, this finding is not accurate for a number of impacts.

justice in the state. Environmental Performance Partnership Agreement, Washington State Department of Ecology and U.S. Environmental Protection Agency at 12-15 (rev. July 2015).

Importantly, disproportionate and adverse impacts are also prohibited by Title VI of the Civil Rights Act and EPA's implementing regulations. EPA's regulations prohibit disproportionate impact from environmental harms. 40 C.F.R. § 7.35. If a disproportionate and adverse impact occurs, EPA may withhold federal funds from the state authorizing the activity, here Ecology. *Id.* at § 7.130(a).

19.2 MINORITY AND LOW-INCOME COMMUNITIES LIVE IN THE AREAS THAT WOULD BE AFFECTED.

The DEISs looked at block groups that will be affected by the projects and found that 31 of 57 have minority populations exceeding their counties'. Westway DEIS at 7-15; Imperium DEIS at 7-15. This trend is true immediately surrounding the project areas and along almost the entire length of the rail servicing the projects. Westway DEIS at 7-16; Imperium DEIS at 7-16. The three census block groups and 72% of the block groups along the rail corridor have minority population percentages above their counties. *Id.* The one-mile radius around the projects has a minority population percentage of 31%, *see* Exh. 41, EJScreen ACS Summary Report, but the area immediately surrounding the proposed projects have minority population percentages up to 46%. *See* Exh. 42, EJScreen Blockgroup Data Combined.⁷⁶ As the DEISs found, the "minority and low-income populations in the census block groups near the project site are much higher" than for the county as a whole. Westway DEIS at 7-25; Imperium DEIS at 7-25. Similar percentages of minority populations are found along much of the rail corridor. Westway DEIS at 7-16; Imperium DEIS at 7-18.

The county-wide poverty rate in Grays Harbor is 20%, yet that figure is exceeded in the areas that will be most affected by the proposed projects. Westway DEIS at 7-2; Imperium DEIS at 7-2. The DEISs also note that 25 of the 57 census block groups assessed have low-income populations exceeding their county levels. Westway DEIS at 7-15; Imperium DEIS at 7-15. The block groups immediately surrounding the projects have poverty percentages up to 48%. Exh. 42, EJScreen Blockgroup Data Combined.

The area immediately surrounding the project is already a hotspot for environmental impacts, which will be compounded if these projects are allowed to go forward. For example, the communities surrounding the project sites already are in the 73rd percentile statewide for

⁷⁶ The DEISs use language that devalues the communities assessed by the environmental justice and broader analysis, systematically referring to people as "receptors." That term—regardless of its pervasive use—does not give full humanity and respect to the people, families, and communities who will be harmed by these projects. Likewise, the DEISs say that minority and low-income populations "occur" in certain areas, Westway DEIS at 7-16; this is another dehumanizing characterization of individuals and communities—people live in or reside in areas and undertake many other activities.

particulate matter and 74th percentile for ozone. They are also in the 87th percentile for proximity to major water dischargers and in the 80th percentile for traffic proximity volume. *See* Exh. 43, EJSscreen Report.

19.3 THESE PROJECTS WOULD CAUSE MAJOR AND DISPROPORTIONATE IMPACTS TO COMMUNITIES OF COLOR AND LOW-INCOME COMMUNITIES.

Essentially all of the impacts from these two crude-by-rail projects would fall disproportionately on low-income communities and communities of color. Yet the DEISs proceed from the false starting point that only impacts rising individually to a significant adversity level are of concern. Westway DEIS at S-31; Imperium DEIS at S-31 (“Routine onsite operations are not anticipated to result in significant environmental impacts and would, therefore, not be expected to disproportionately affect minority and low-income populations.”); Westway DEIS at 7-25; Imperium DEIS at 7-25 (“However, as noted above, potential impacts from routine onsite operations are not anticipated to result in significant environmental impacts and would therefore, not be expected to significantly adversely affect minority and low-income populations around the project site.”). Effects to be avoided, however, include all impacts with disproportionate impacts, and allowing impacts to proceed that fall largely on low-income and minority groups is unacceptable. Ecology and Hoquiam are obligated to prevent exactly these sorts of disproportionate impacts. The DEISs do acknowledge, however, that minority and low-income populations will be disproportionately affected by numerous impacts including noise, air emissions, delay, and increased exposure to risks of spills, fires, and explosions. Westway DEIS at S-32; Imperium DEIS at S-32.

The DEISs acknowledge that there will be harmful air emissions resulting from the Westway and Imperium projects. For example, concentrations of NO₂ could exceed the 1-hour NO₂ standard when all three projects are considered. Westway DEIS at 6-7; Imperium DEIS at 6-7. The communities that immediately surround these projects would bear the primary burden of these impacts, and even in the absence of violations of the 1-hour standard, the same communities will endure the routine emissions. The DEISs also acknowledge that portions of residential areas will fall within the 10-per-million risk for cancer area for particulate matter. Westway DEIS at 6-9 to -10; Imperium DEIS at 6-9 to -10. As described above, these neighborhoods surrounding the project site—those that would be significantly and adversely affected by cancer-causing particulate matter—have higher minority population percentages.



Cancer risk overlay cropped from Westway DEIS at 6-9.

Other impacts from the proposed projects would also have a disproportionate impact on minority and low-income communities. For example, the noise impacts from the increased rail transportation will affect people living near the site, along with the people living along the rail routes. The DEISs acknowledge that 31 of 43 census block groups along the rail route are considered minority and/or low-income populations. Westway DEIS at 7-26 to -27; Imperium DEIS at 7-26 to -27 (“it is possible that minority and low-income populations closest to the rail line could be disproportionately affected by increases in noise depending on the proximity of noise-sensitive receptors (residents) to the line”). The DEISs go on to acknowledge that this will result in disproportionate impacts but do not propose any additional ways to mitigate that harm or discuss how the disproportionate nature of these impacts will be addressed. The same is evident for traffic impacts, which are also expected to have a disproportionate and negative effect on the populations living closest to the project site. Westway DEIS at 7-26 to -27; Imperium DEIS at 7-27 (“These impacts could disproportionately affect minority and low-income populations in communities immediately surrounding the affected areas.”).

As far as vessel impacts, the DEISs contain two stunning (but accurate) admissions: 1) vessel-related impacts would disproportionately harm low-income and minority people, and 2) would conflict with tribal access to fishing areas, have environmental health and safety impacts, and would occur with some frequency. Westway DEIS at 7-27; Imperium DEIS at 7-27.⁷⁷ As the DEISs concede, these routine and expected impacts “would be unavoidable and significant.”

⁷⁷ The DEISs apparently attempt to downplay these impacts by stating that “While any impacts would disproportionately affect minority and low-income populations, as stated previously, vessel-related impacts are anticipated to be relatively low with two exceptions: the potential for conflicts with tribal access to usual and accustomed fishing areas and the potential for environmental health and safety impacts.” Westway DEIS at 7-27; Imperium DEIS at 7-27. But these impacts are tremendous, and, as the DEISs note, significant and unavoidable.

Id. This, of course, is impact additional to the threat of catastrophic spills, which could devastate the Quinault Indian Nation's fisheries and way of life or harm the communities surrounding the site. Westway DEIS at 7-26; Imperium DEIS at 7-26 ("Any large releases with the potential to enter the harbor from the project site could also disproportionately affect minority and low-income populations in these areas."). A careful look at the risk assessment shows that these are not idle concerns. *See* Westway DEIS at 6-53, -55; Imperium DEIS at 6-53, -55 ("The chance of a collision or derailment resulting in a loss equivalent to one rail car is predicted to be once in 11 years An extreme grounding resulting in the loss of the entire contents of vessel could occur every 128 years."). As discussed above, the aggregate marine spill risk is 44% each year.

Rather than address these disparate impacts through further mitigation, the DEISs do little more than point to the mitigation already planned as adequate. Westway DEIS at 7-27 to -28; Imperium DEIS at 7-28. The DEISs discuss appointing community and tribal liaisons, but there is no indication that those liaisons would have the authority to actually minimize or reduce impacts. These projects would violate civil rights and other laws because of these disproportionate impacts that are acknowledged to be unavoidable, and on that basis alone they should be denied.

20.0 THE DEIS FINDS SIGNIFICANT IMPACTS THAT CANNOT BE MITIGATED.

20.1 SUBSTANTIVE SEPA REQUIREMENTS

SEPA is more than a purely "procedural" statute that encourages informed and politically accountable decision-making. In enacting SEPA, the state legislature gave decision-makers the affirmative authority to condition or even deny projects where environmental impacts are serious, cannot be mitigated, or collide with local rules or policies. This authority, like all government authority, is not boundless: the denial of a project must be made on the basis of policies adopted by the relevant government body in light of significant adverse impacts that cannot be reasonably mitigated. This authority has been exercised relatively sparingly. Indeed, in some cases, decision-makers are unaware that they even have it, and incorrectly believe that as long as proposals comply with all applicable development codes, then agencies have no choice but to approve the project. To the contrary, SEPA, in and of itself, contains the power to say no.

In adopting SEPA, the state legislature declared the protection of the environment to be a fundamental state priority. RCW 43.21C.010. SEPA declares that "[t]he legislature recognizes that each person has a fundamental and inalienable right to a healthful environment and that each person has a responsibility to contribute to the preservation and enhancement of the environment." RCW 43.21C.020(3). This policy statement, stronger than a similar statement under the National Environmental Policy Act ("NEPA"), "indicates the basic importance of environmental concerns to the people of the state." *Leschi v. Highway Comm'n*, 84 Wn.2d 271, 279-80 (Wn. 1974). At the heart of SEPA is a requirement to fully analyze the environmental impact of government decisions that have a significant impact on the environment. RCW 43.21C.031(1). Under SEPA, a full environmental impact statement ("EIS") is required for any action that has a significant effect on the quality of the environment. WAC 197-11-330.

Significance means a “reasonable likelihood of more than a moderate adverse impact on environmental quality.” WAC 197-11-794.

Under SEPA’s governing regulations, a SEPA document must fully evaluate all of the direct, indirect, and cumulative effects of projects. WAC 197-11-060(2)(c). While SEPA itself does not define direct, indirect, and cumulative impacts, NEPA does, and these definitions have been borrowed for use in interpreting SEPA. *See Quinault Indian Nation v. City of Hoquiam*, 2013 WL 6637401 (Shorelines Hearings Board, Dec. 9, 2013) (borrowing NEPA definition of cumulative effects for SEPA analysis of crude-by-rail terminal). Indirect impacts are “caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable.” 40 C.F.R. § 1508.8(b). Cumulative impacts include “the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.” 40 C.F.R. § 1508.7; WAC 197-11-060(4)(e) (requiring consideration of cumulative effects in determining whether significance threshold has been crossed); WAC 197-11-330(3)(c) (“Several marginal impacts when considered together may result in a significant adverse impact.”). Also important in the context of fossil fuel transportation are impacts with a low likelihood but high consequences, like spills from rail or marine transportation. WAC 197-11-794 (“An impact may be significant if its chance of occurrence is not great, but the resulting environmental impact would be severe if it occurred.”). Importantly, the regulations specifically direct that an “agency shall not limit its consideration of a proposal’s impacts only to those aspects within its jurisdiction, including local or state boundaries.” WAC 197-11-060(4)(b).⁷⁸

The requirement to study indirect impacts associated with oil terminals is equally clear under SEPA’s federal analogue, NEPA. For example, in *Mid-States Coalition for Progress v. Surface Transp. Bd.*, 345 F.3d 520 (8th Cir. 2003), the Eight Circuit Court of Appeals agreed that an EIS for a rail project was required to study the potential increased long-term demand for coal that could arise if the project was built. Similarly, in *Border Plant Working Group v.*

⁷⁸ Indeed, SEPA constitutes a ringing affirmation of the connectedness of Washington with the rest of the planet. It speaks of “humankind” and “human beings” rather than just citizens of this state. RCW 43.21C.010. SEPA explicitly calls on responsible agencies to “recognize the world-wide and long-range character of environmental problems” and take steps to cooperate in “anticipating and preventing a decline in the quality of the world environment.” RCW 43.21C.030(f); *Eastlake Comm. Coun. v. Roanoke Assoc.*, 82 Wn.2d 475, 487 (1973) (observing “unusually vigorous statement of legislature purpose ... to consider the total environmental and ecological factors to their fullest in deciding major matters”) (emphasis added). Those regulations also recognize that environmental impacts do not end at the state’s borders, and explicitly require consideration of the impacts of projects outside of the state’s jurisdiction. WAC 197-11-060(c); *Cathcart-Maltby-Clearview Comm. Council v. Snohomish Cty.*, 96 Wn.2d 201, 209 (Wash. 1981) (SEPA “also mandates that extra-jurisdictional effects be addressed and mitigated, when possible.”).

Department of Energy, 260 F. Supp. 2d 997 (S.D. Cal. 2003), a court invalidated an EIS for power transmission lines because the decision-maker failed to consider the impacts of the operation of the Mexican power plants linked to the lines.⁷⁹ Recent EISs for controversial projects like the Tongue River Railroad and the Keystone XL evaluate potential market impacts on fossil fuel production and consumption.

Moreover, the purpose of SEPA is not to generate the information for its own sake. Rather, the purpose of SEPA is to inform an underlying substantive decision; e.g., whether or not to grant some underlying permit or authorization to take action that potentially affects the environment. WAC 197-44-400. Accordingly, the information developed under SEPA on indirect and cumulative impacts of fossil fuel projects is intended to inform the ultimate permitting decision.

And on this point, SEPA is explicit. It provides substantive authority for government agencies to condition or even deny proposed actions—even where they meet all other requirements of the law—based on their environmental impacts. RCW 43.21C.060. As one treatise points out, when this premise was challenged by project proponents early in SEPA’s history, “the courts consistently and emphatically responded that even if the action previously had been ministerial, it became *environmentally discretionary* with the enactment of SEPA.” Richard Settle, *SEPA: A Legal and Policy Analysis* (Dec. 2014) at §18.01[2] (emphasis added).

Courts have repeatedly recognized that this denial authority exists, even where projects otherwise comply with all relevant applicable codes. Indeed, the Washington Supreme Court explicitly affirmed that “under the State Environmental Policy Act of 1971 a municipality has the discretion to deny an application for a building permit because of adverse environmental impacts even if the application meets all other requirements and conditions for issuance.” *West Main Associates v. Bellevue*, 106 Wn.2d 47, 53 (1986). An appeals court similarly affirmed that “counties therefore have authority under SEPA to condition or deny a land use action based on adverse environmental impacts even where the proposal complies with local zoning and building codes.” *Donwood v. Spokane County*, 90 Wash. App. 389 (1998). Decision-makers have denied

⁷⁹ See also *Ocean Advocates v. Corps of Engineers*, 402 F.3d 846, 867-68 (9th Cir. 2005) (requiring EIS for dock construction project to consider “increased vessel traffic” that would be proximately caused by project); *S. Fork Band Council of W. Shoshone v. DOI*, 588 F.3d 718, 725 (9th Cir. 2009) (“The air quality impacts associated with transport and offsite processing of the five million tons of refractory ore are prime examples of indirect effects that NEPA requires to be considered.”).

permits under this authority in a number of other contexts, many of which are similar to those of proposed crude oil terminals.⁸⁰

The complete text of the applicable language is:

The policies and goals set forth in this chapter are supplementary to those set forth in existing authorizations of all branches of government of this state, including state agencies, municipal and public corporations, and counties. Any governmental action may be conditioned or denied pursuant to this chapter: PROVIDED, That such conditions or denials shall be based upon policies identified by the appropriate governmental authority and incorporated into regulations, plans, or codes which are formally designated by the agency (or appropriate legislative body, in the case of local government) as possible bases for the exercise of authority pursuant to this chapter. Such designation shall occur at the time specified by RCW 43.21C.120. Such action may be conditioned only to mitigate specific adverse environmental impacts which are identified in the environmental documents prepared under this chapter. These conditions shall be stated in writing by the decision maker. Mitigation measures shall be reasonable and capable of being accomplished. In order to deny a proposal under this chapter, an agency must find that: (1) The proposal would result in significant adverse impacts identified in a final or supplemental environmental impact statement prepared under this chapter; and (2) reasonable mitigation measures are insufficient to mitigate the identified impact. Except for permits and variances issued pursuant to chapter 90.58 RCW, when such a governmental action, not requiring a legislative decision, is conditioned or denied by a nonelected official of a local governmental agency, the decision shall be appealable to the legislative authority of the acting local governmental agency unless that legislative authority formally eliminates such appeals. Such appeals shall be in accordance with procedures established for such appeals by the legislative authority of the acting local governmental agency.

RCW 43.21C.060 (emphasis added); *see also* WAC 197 197-11-030(1) (“The policies and goals set forth in SEPA are supplementary to existing agency authority.”). This authority is amplified in Ecology’s SEPA regulations, which lay out additional procedures and requirements for

⁸⁰ *Polygon Corp. v. City of Seattle*, 90 Wn.2d 59, 69-70 (1978) (upholding denial of high-rise project based on aesthetic, property values, and noise impacts); *Victoria Tower P’ship v. City of Seattle*, 59 Wash. App. 592, 602 (1990) (upholding denial of 16-floor tower and mitigation to 8-floors); *State v. Lake Lawrence Pub. Lands Prot. Ass’n*, 92 Wn.2d 656, 659 (1979) (upholding denial of development of 14-acre parcel because of effects on bald eagles); *Cook v. Clallam Cnty.*, 27 Wash. App. 410, 414 (1980) (upholding permit denial of commercial development in rural area); *W. Main Associates v. City of Bellevue*, 49 Wash. App. 513, 521-23 (1987) (upholding denial of permits based on historic/cultural impacts, view impacts, shadow impacts, traffic impacts, and air impacts).

conditioning or denial pursuant to SEPA's substantive authority. WAC 197-11-660. For example, in order to deny a proposal under SEPA, an agency must find that "reasonable mitigation measures are insufficient to mitigate the identified impact." WAC 197-11-660(f)(ii).

In other words, communities that are reviewing proposed projects have the discretion to deny those projects, as long as: (a) the denial is based on an appropriate policy that is incorporated into local codes or rules; (b) the community finds that the project would result in significant adverse impacts; and (c) "reasonable mitigation measures" cannot mitigate those impacts. These criteria are likely to be scrutinized closely by the courts when entities use their substantive SEPA authority to deny a project.⁸¹ Even so, in the case of major fossil fuel infrastructure projects, like the Westway and Imperium oil shipping terminals, these criteria are satisfied.

With respect to the first criterion, Hoquiam has already identified a number of policies to protect the public's health, safety, and welfare that may be used to deny or condition these terminals under SEPA. Hoquiam Municipal Code § 11.10.220. The adopted policies are sweeping, including a "fundamental and inalienable right to a healthful environment" for all people, a goal of "[a]chiev[ing] a balance between population and resource use which will permit high standards of living and a wide sharing of life's amenities," and a commitment to "enhance the quality of renewable resources and approach the maximum attainable recycling of depletable resources." *See also* RCW 43.21C.020 ("The legislature recognizes that each person has a fundamental and inalienable right to a healthful environment."). Hoquiam's substantive SEPA authorities explicitly incorporate its development, health, and safety codes, as well as its comprehensive plan and Shorelines master program. These explicit SEPA authorities include—among many other things—its shoreline management plan and its zoning ordinances.

Importantly, in 2015, Hoquiam amended its city code to explicitly address the public health, safety, and welfare risks of crude oil shipping terminals. Hoquiam first enacted a moratorium on new crude oil storage facilities and then went through its complete code amendment process to adopt new provisions banning crude oil wholesale storage facilities as a "response to safety and environmental concerns raised by the public and Hoquiam City Councilmembers about 'crude-by-rail' operations at the Port of Grays Harbor." Exh. 35, Hearing Examiner Recommendation, Re: Hoquiam City Council Resolution No. 2015-09, (TA #15-01) at 2 (Aug. 17, 2015). At the public hearing, the Hearing Examiner probed the purpose behind the proposed code amendments:

The Hearing Examiner then requested that [Hoquiam City Administrator] Mr. Shay clearly articulate the public purpose behind the proposed amendments. Specifically, how would the proposed prohibition of bulk crude oil storage and transfer serve the public's health, safety and welfare? Mr. Shay responded that

⁸¹ Settle, at § 180.01[2] ("Substantive SEPA authority is alive and well but must be exercised in strict compliance with all pertinent requirements, which must be supported by thorough documentation and convincing evidentiary support in the administrative record.").

train derailments and explosions across the nation in recent years underscored the health and safety risks to communities posed by crude-by-rail operations, and that the Council wanted to protect its citizens from such dangers. By preventing new applications for bulk crude oil storage facilities, the City would effectively be precluding the movement of crude oil within the City of Hoquiam. He also indicated that there were legitimate concerns about the environmental damage that might be occasioned by a crude oil spill in Grays Harbor.

The Hearing Examiner questioned Mr. Shay as to whether the safety concerns identified were unique to crude oil storage and handling and could be distinguished from refined or partially refined products that might be stored in bulk. Mr. Shay responded that unrefined crude oil presented a much greater safety concern, principally because of the large-scale movement of crude oil via railroad.

Hearing Examiner Decision at 6.

On Sept. 14, 2015, Hoquiam adopted its zoning code amendments to “substantially advance[] the public health, safety and welfare of the citizens of the City of Hoquiam,” Hearing Examiner decision at 17, and rescinded the March moratorium as no longer necessary. Exh. 36 (code amendment language); Exh. 37 (moratorium rescission).

As to the second criterion, the DEISs, even with all the flaws and gaps identified above, find a wide range of serious concerns associated with these projects, including the substantial risk of derailments, spills, and explosions from unit trains carrying crude oil, heightened risks of oil spills and accidents from marine shipping of fossil fuels, and contribution of the projects to greenhouse gas pollution. These are significant and cumulative impacts that the community has recognized.

Finally, as to the third criterion, the DEISs themselves find many of the significant adverse impacts incapable of mitigation. *See, e.g.*, Westway DEIS at S-37, S-39, S-40, S-41, S-45, S-49, S-51, S-53, S-56, S-58, S-60, S-61, S-63. Many of the impacts of these projects—vast increases in train and marine vessel traffic, and attendant increases in local oil spill hazards, for example—are intrinsic to the projects themselves, and it would presumably not be “reasonable” to limit them in a way that doesn’t dramatically alter the project itself. Moreover, limitations on local government’s ability to directly mitigate some effects means that some potential mitigation measures to promote safety may not be “capable of being accomplished,” unless the proponent agrees to them.

21.0 OTHER REQUIREMENTS

The DEISs should also include an analysis of the likelihood that Westway and Imperium will comply with mitigation measures. For example, there has been substantial concern that these companies will not be able to demonstrate the requisite financial responsibility before

operation of these projects commences, pursuant to RCW 88.40.025. There is nothing preventing the companies from making this demonstration before permits are issued, *Quinault Indian Nation v. Imperium Terminal Servs., LLC*, No. 45887-0-II, --- Wash. App. ----, 2015 WL 6437694, at *6 (Wash. Ct. App. Oct. 20, 2015), and Ecology and Hoquiam should make that a requirement.

Likewise, the Ocean Resources Management Act (“ORMA”) exists to protect Washington’s ocean coast against impacts like those related to these projects. *See* RCW 43.143.010; *id.* at .030. Washington courts have yet to apply ORMA to these projects, but an ORMA analysis in the environmental review could aid decisionmakers in ultimate permitting decisions.

22.0 CONCLUSION

For the reasons set forth above, the DEISs are legally and factually inadequate. The DEISs miss key impacts and fail to take a hard look at all the direct, indirect, and cumulative impacts of the proposed project. Even with their flaws, the DEISs find significant adverse impacts and risks to the Quinault Indian Nation’s federally-protected treaty rights and to the environment and public health that cannot be mitigated. The adverse treaty resource, environmental, and public health aspects of the projects demonstrate that the projects should be denied. Ecology and the City of Hoquiam should first demand that the DEISs be amended and supplemented to correct their errors and omissions. Ecology and Hoquiam should then use the analysis and findings in revised draft and final EISs to reject these oil shipping terminals under their substantive SEPA authority.

Sincerely,



Kristen L. Boyles
Matthew R. Baca

Attorneys for the Quinault Indian Nation

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